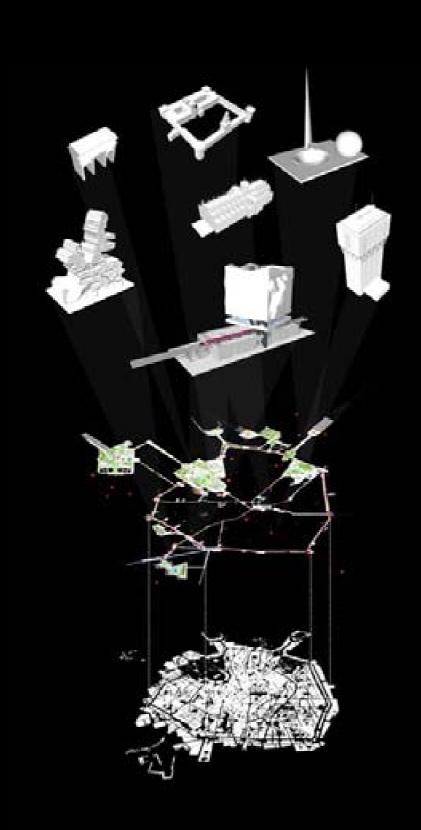
Ephemeral Archi-puncture



J.H.M. Smolenaers 2012 1367986

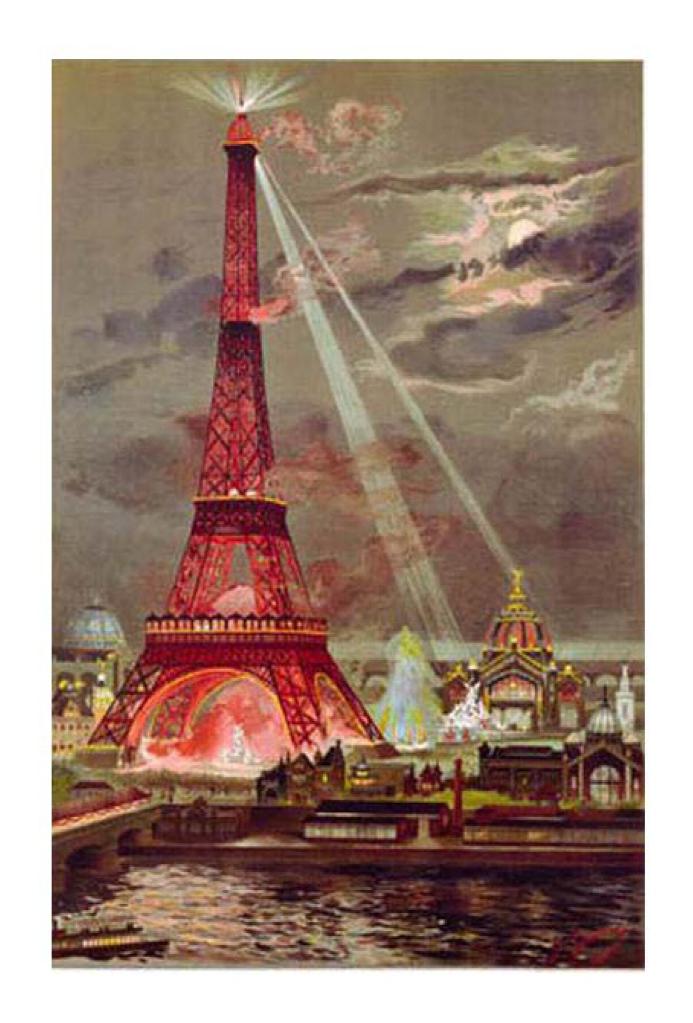
Studio: Urban Acupuncture & Hybrid Buildings

URBAN DESIGN

- 1. World Expo Milan 2015 the next edition
- 2. What can we learn from World Expositions in a spatial way (1851-2010)
- 3. The relevant case studies for Milan 2015.
- 4. Milan, the same after-use scenario?
- 5. How can the Expo program be an efficient tool in the development of the city?
- 6. Milan's spatial structures, problems, potentials.
- 7. Spreading the existing Expo program through Milan's inner city
- 8. Logistic consequences
- 9. The Urban Design

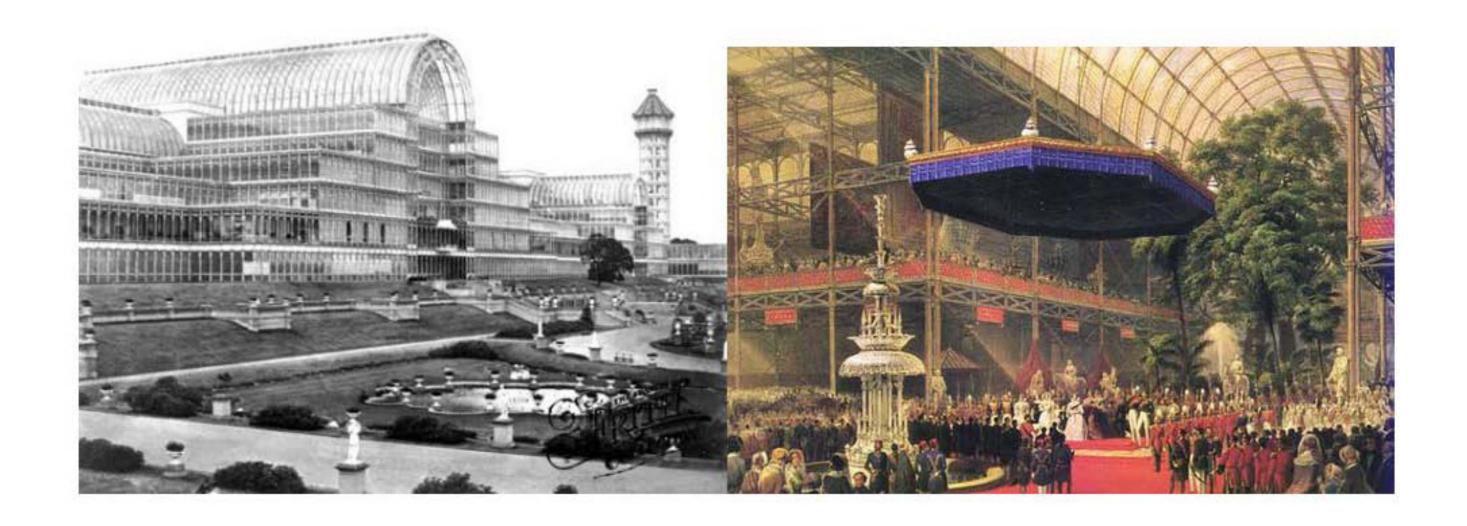
ARCHITECTURE

- 1. The Architectural Assignment
- 2. Vision
- 3. Program
- 4. Form Analysis
- 5. Urban Fitting
- 6. Part A (The Plinth)
- 7. Part B (The Box)
- 8. Afteruse
- 9. Materialisation



Paris 1889

The first World Exposition



'The Great Exhibitions of the Works of Industry of All Nations', London 1851

Ephemeral & Permanent (spatial) impact

According to Andranovich (2001), hosting large scale festivals like the Olympic Games or the World Expo is an increasingly popular tool for urban change.

It is an important motive for organizing a World Exhibition to give a region and city direct economic and planological injections (Wesemael, 2001).

And more specific it even seems that the most recent World Exhibitions have been primarily initiated to realize planological policy (Wesemael, 2001).

Concrete examples of these planological injections could be, city sanitation, improving infrastructure, city enhancement and city transformation (Vrijaldenhoven, 2007).

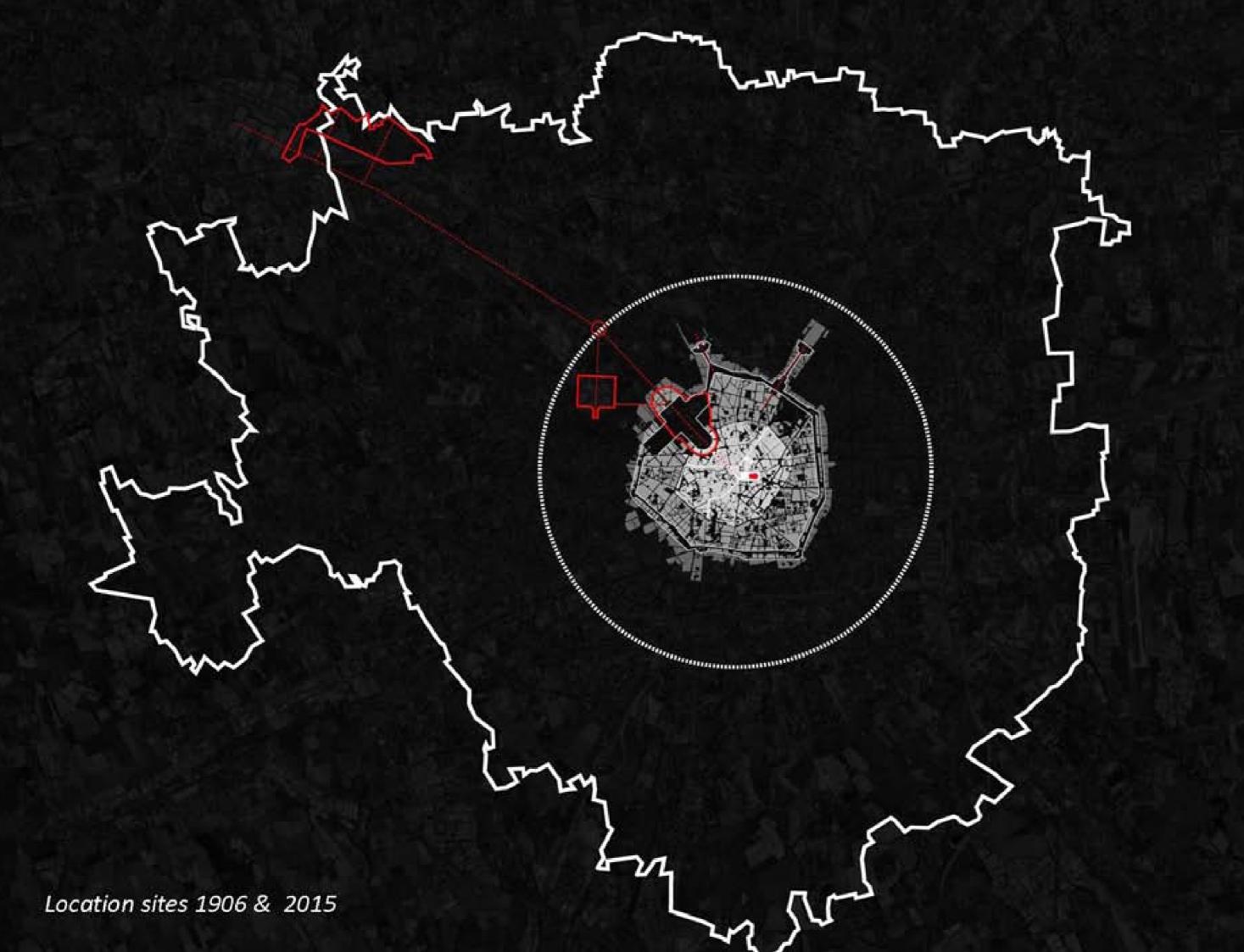


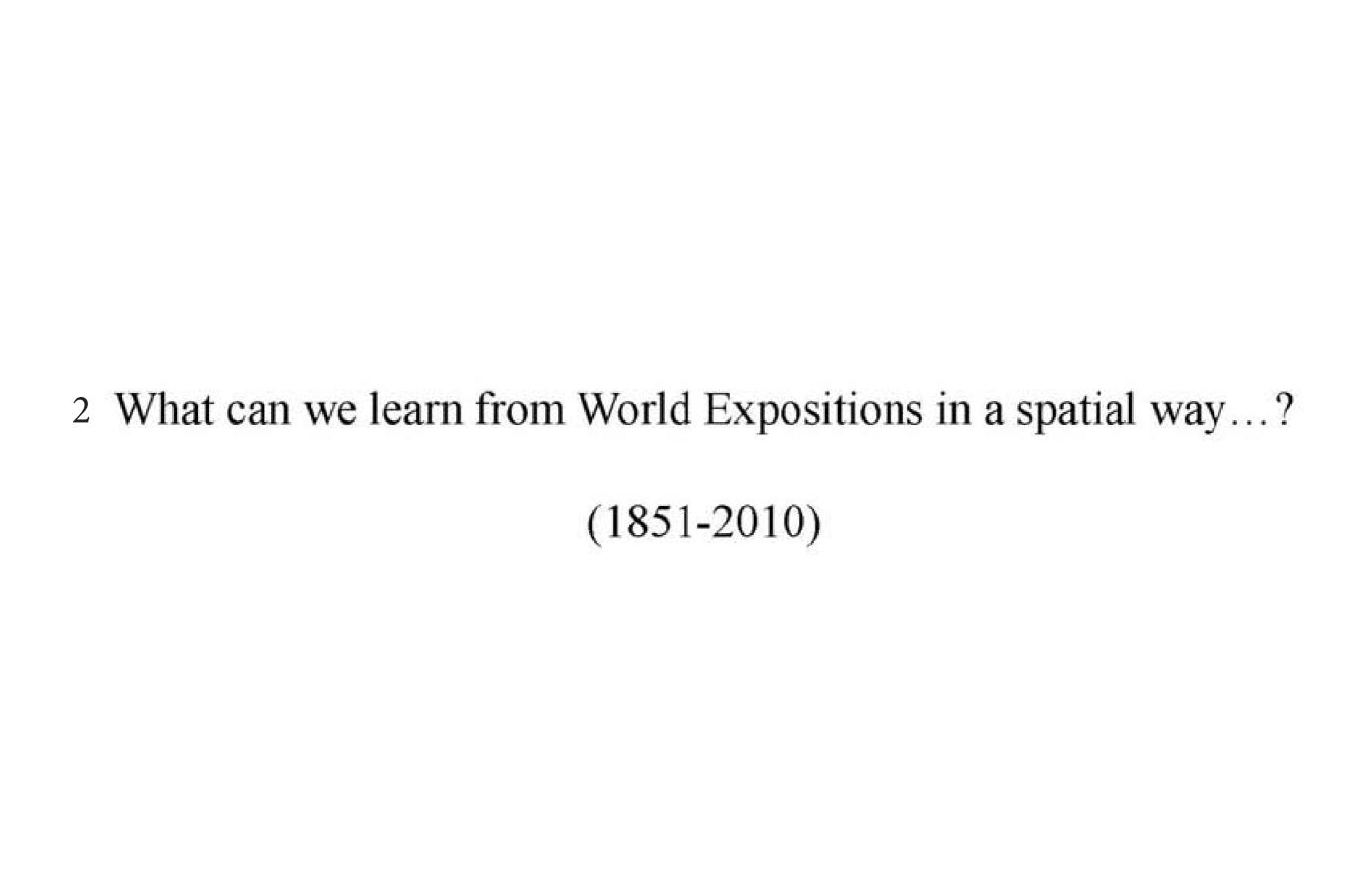


Source: Herzog & de Meuron | Mc. Donough

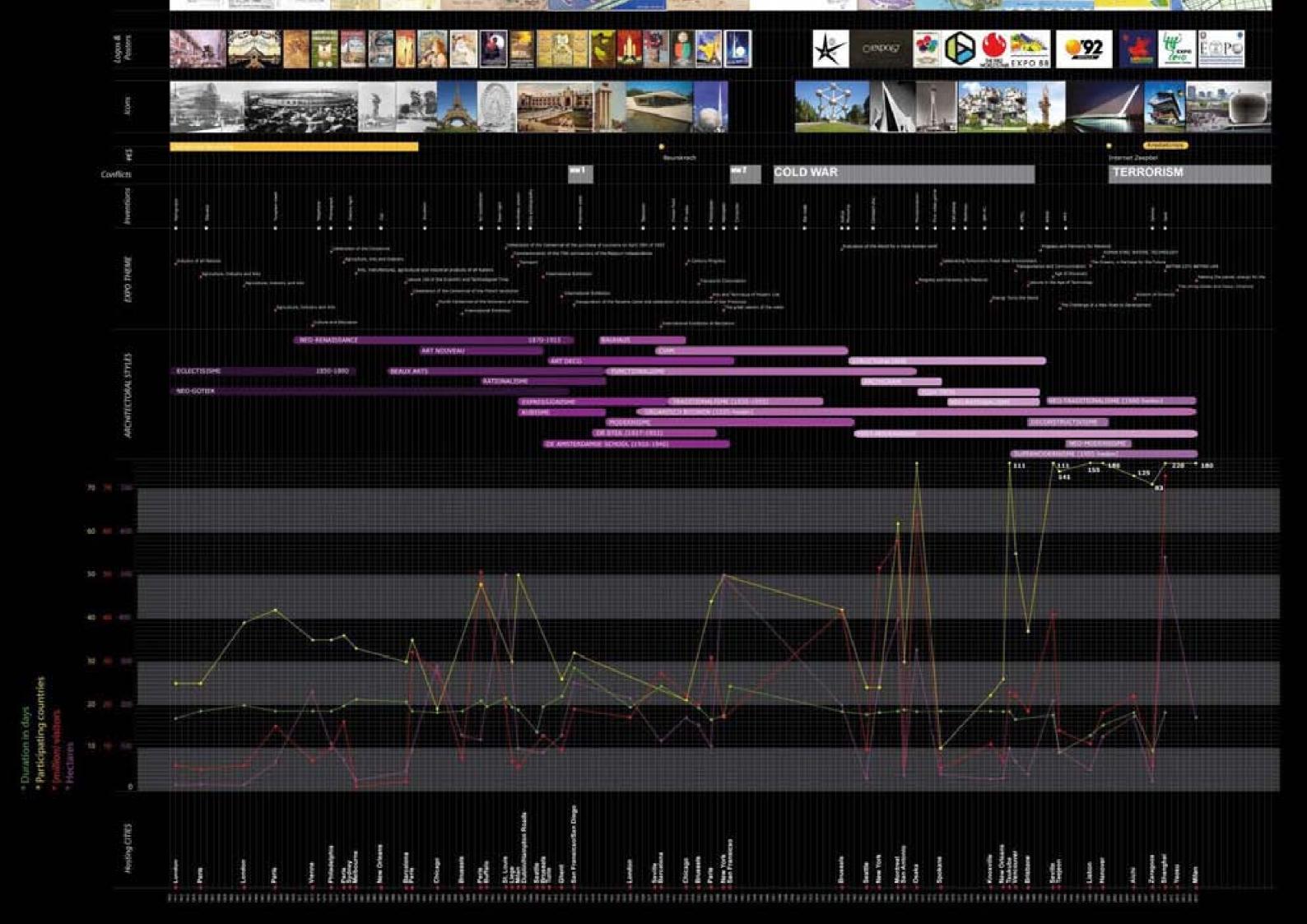


'TO CREATE A REVOLUTIONARY NEW CONCEPT OF THE WORLD EXPOSITION. WE ARE CONVINCED THAT A VISIONARY AND SUCCESSFUL EXPO HAS TO ABANDON THE OUTMODED IDEA OF AN EXPOSITION BUILT AROUND COMPLEX SYSTEMS OF REPRESENTATION AND GIGANTIC ARCHITECTURAL MONUMENTS WHICH OFTEN HAVE NO REAL PURPOSE AFTER THE EVENT'----



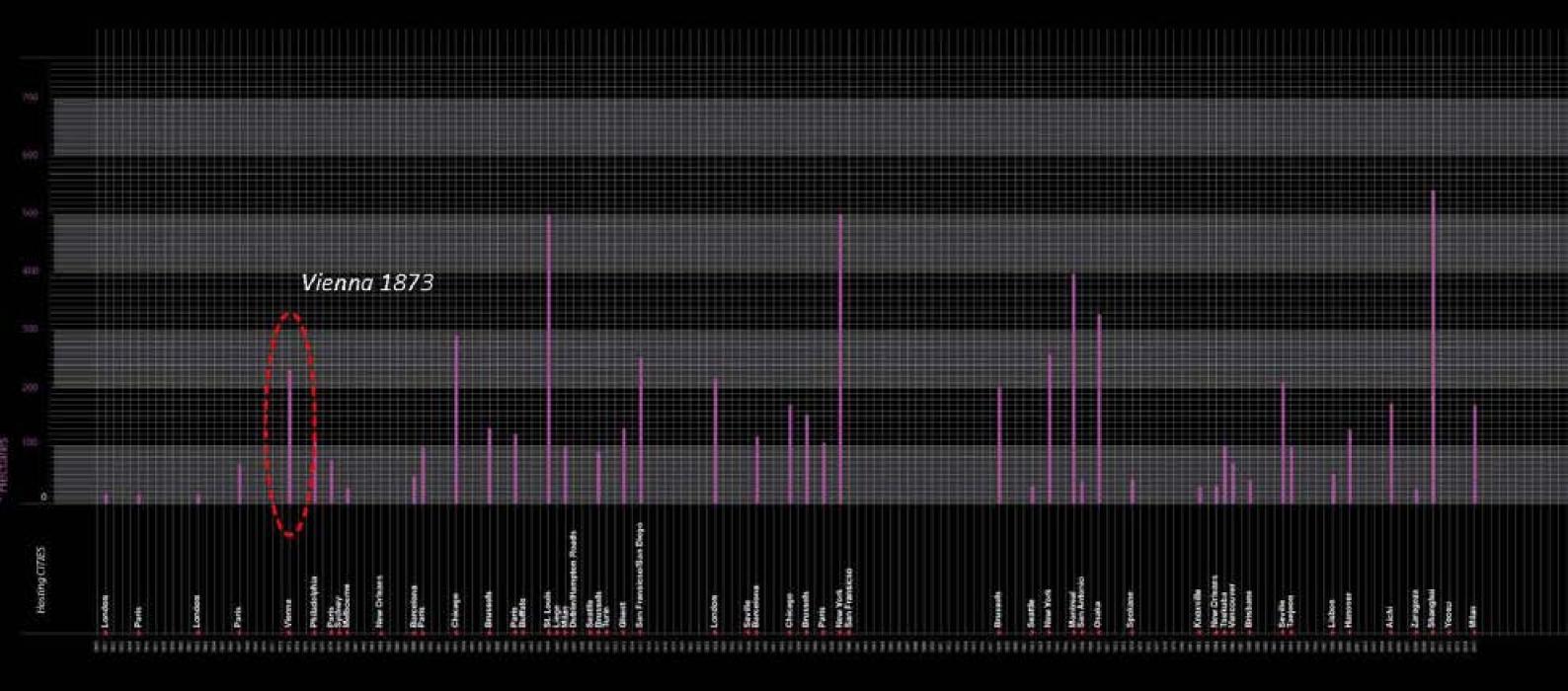




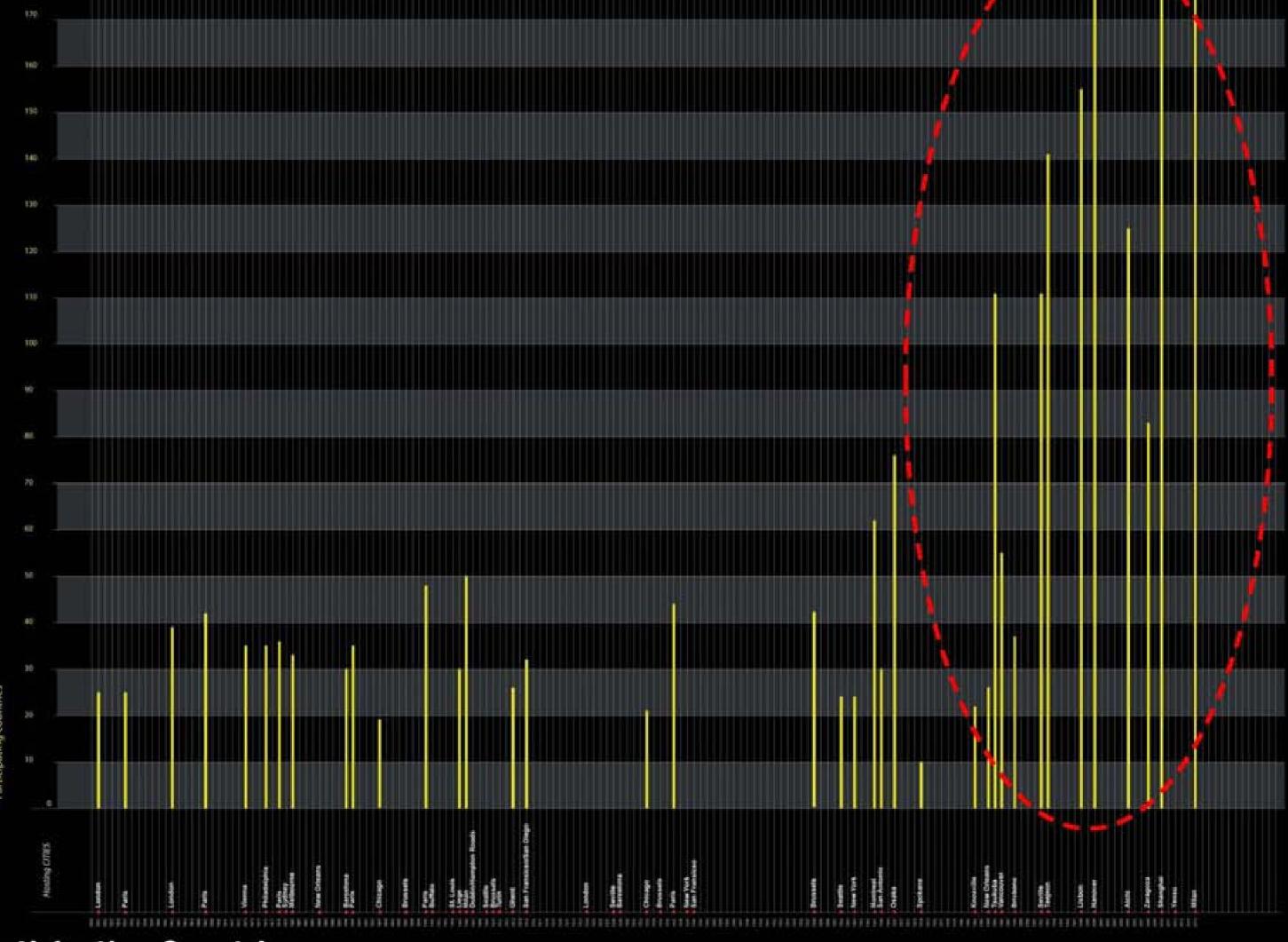




Visitors in millions



Size (Hectares)



Participating Countries

3. The relevant case studies for Milan 2015.

Post-war European World Expositions Amsterdam 1883 Amsterdam 1895 Hanover 2000 London 1851 London 1862 Antwerpen 1885 Gent 1913 Antwerpen 1893 Antwerpen 1930 Liege 1906 Brussels 1885 Brussels 1888 Brussels 1910 Charleroi 1911 Brussels 1935 Brussels 1958 Dublin 1907 Barcelona 1992 Barcelona 1883 Wenen 1873 Sevilla 1929 Sevilla 1992 Milano 1906 Torino 1911 Paris 1855 Paris 1867 Paris 1878 Paris 1889 Paris 1900 Paris 1925 Lisboa 1998 Paris 1931 Paris 1937

Sevilla

Site size: 531 acre



Hanover



Site size: 320 acres





Brussels



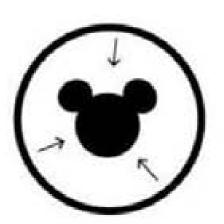
Site size: 500 acres

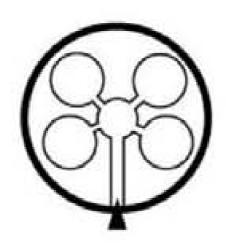
BRUSSELS 1958

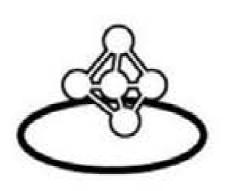
Disney?

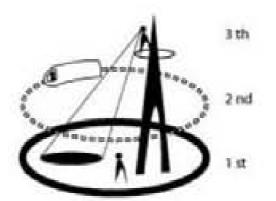
'AN EXPO IMPLIES A COMBINATION OF EDUCATION AND ENTERTAINMENT, OF NOVELTY, RESEARCH AND AMUSEMENT -WALT DISNEY AND THE UNIVERSITY IN ONE."











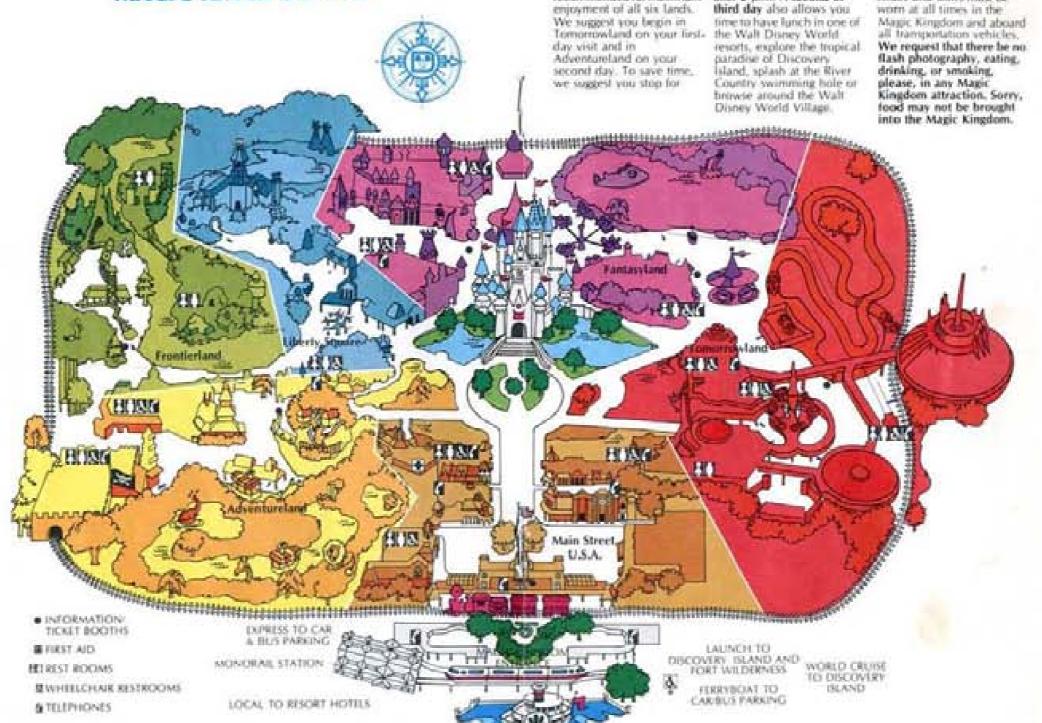


MAGIC KINGDOM MAP

A two-day visit is: recommended for maximum enjoyment of all six lands. we suggest you stop for

lunch either before noon or Flease Notes after 2 p.m. A second or third day also allows you Country swimming hole or browse around the Walt

Shoes and shirts must be worn at all times in the Maggic Kingdom and abound all tramportation vehicles. drinking, or smoking, please, in any Magic





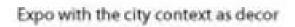










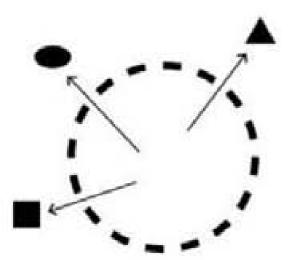


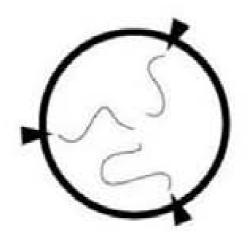
Different entrances to spread visitor flows

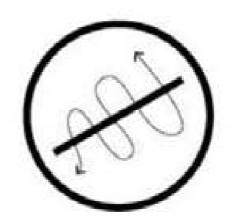
-cognizability by orientation axis ne)

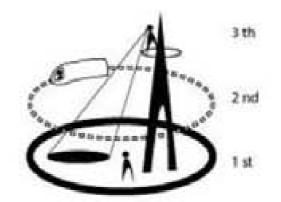
3 Dimensions

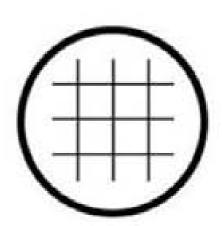
Equel organisation Pavilions By grid-structure (No hierarchy)











SEVILLA 1992







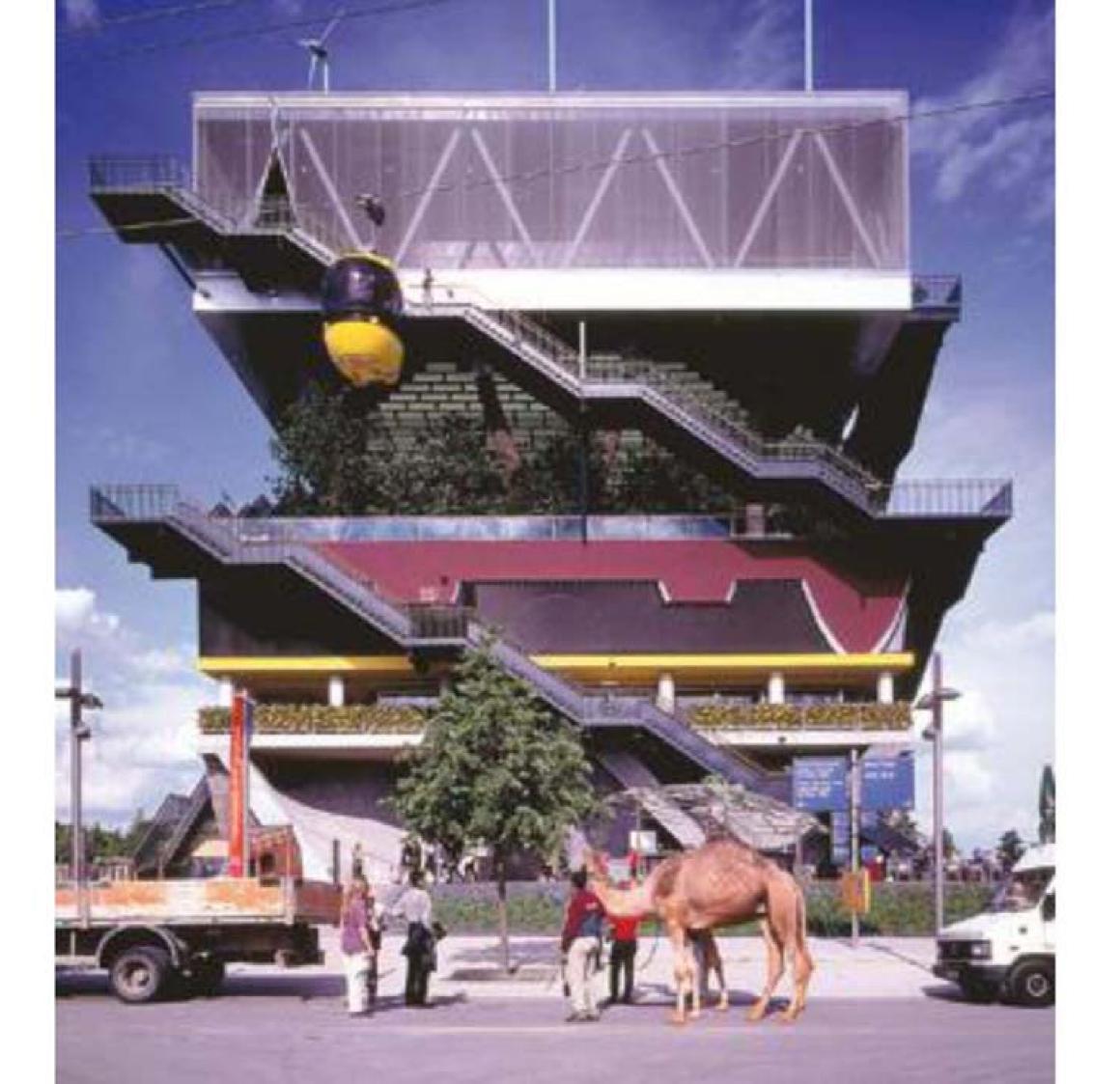






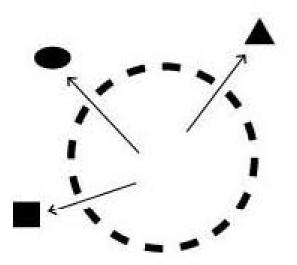


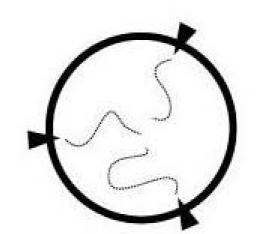


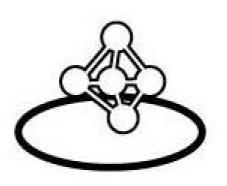


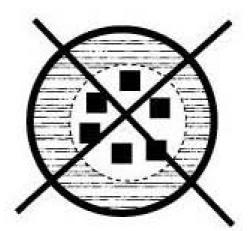


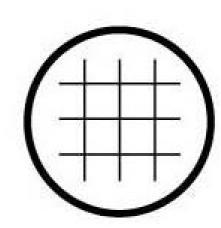






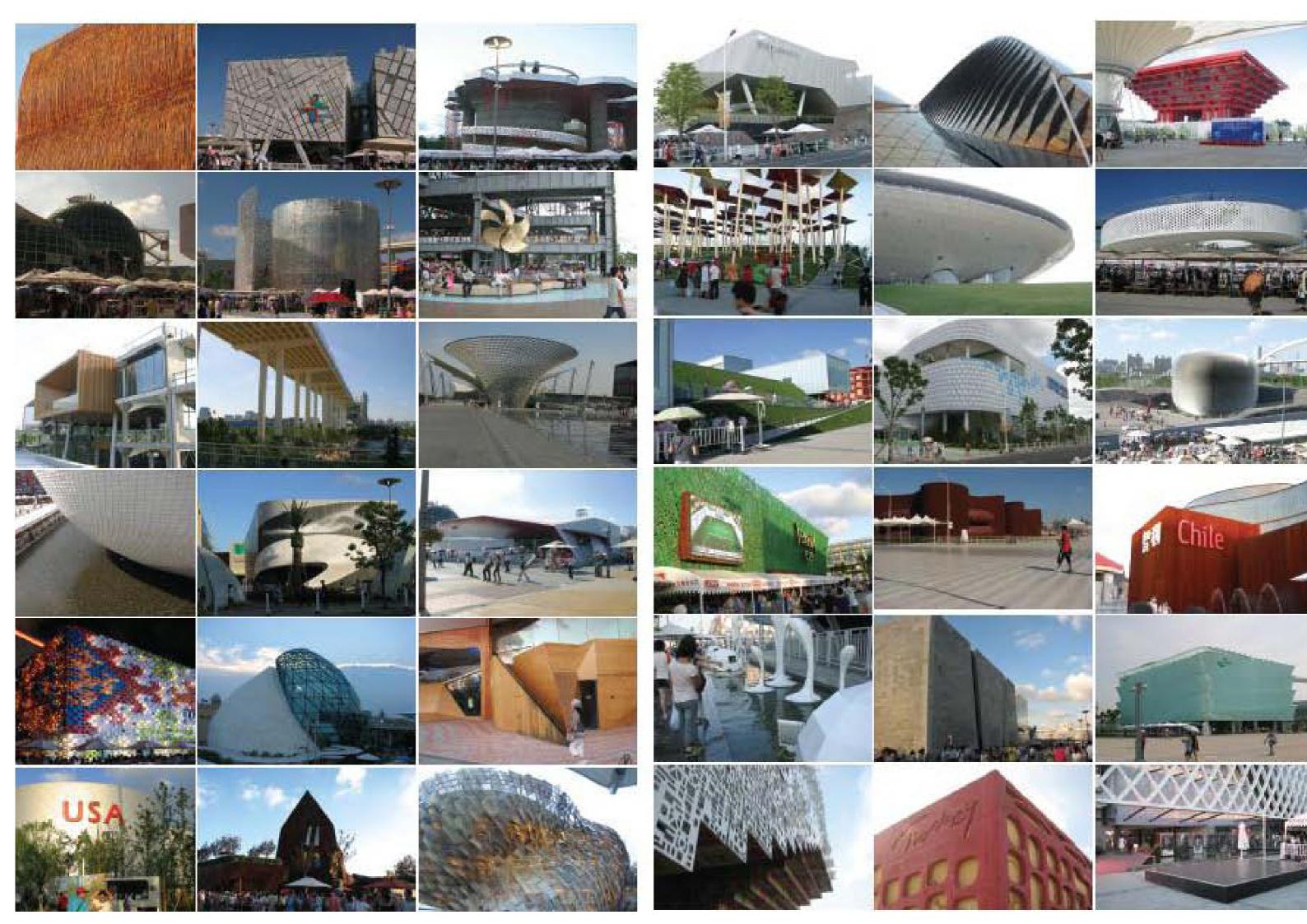






SHANGHAI 2010

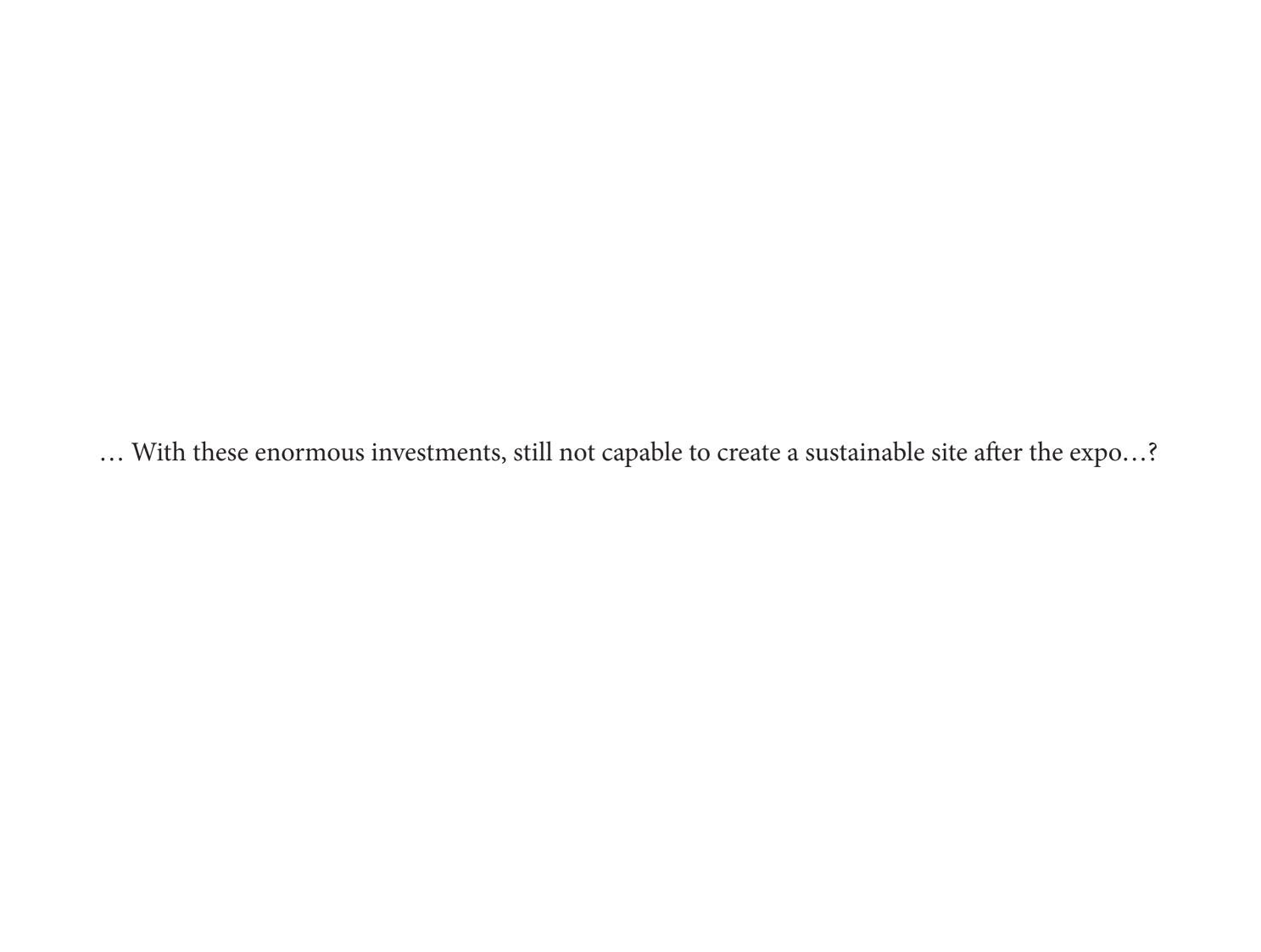




ADXRO

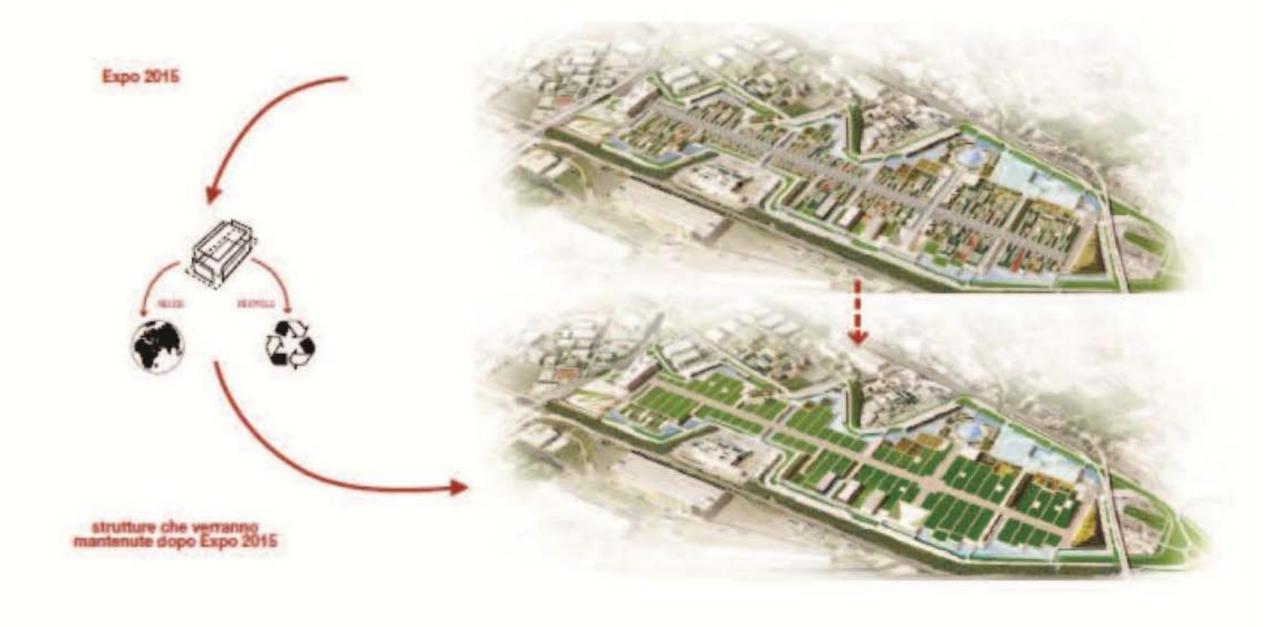




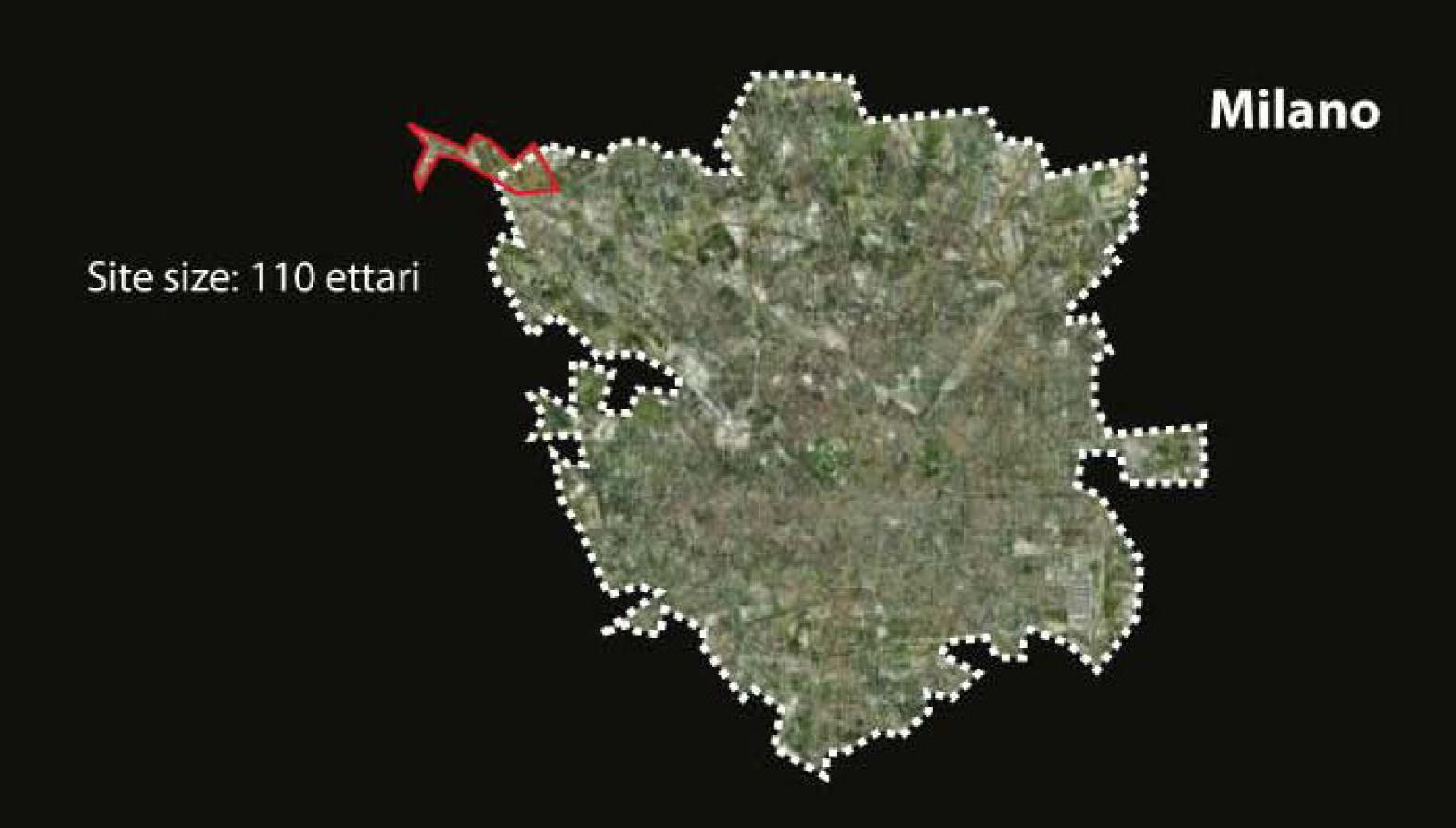


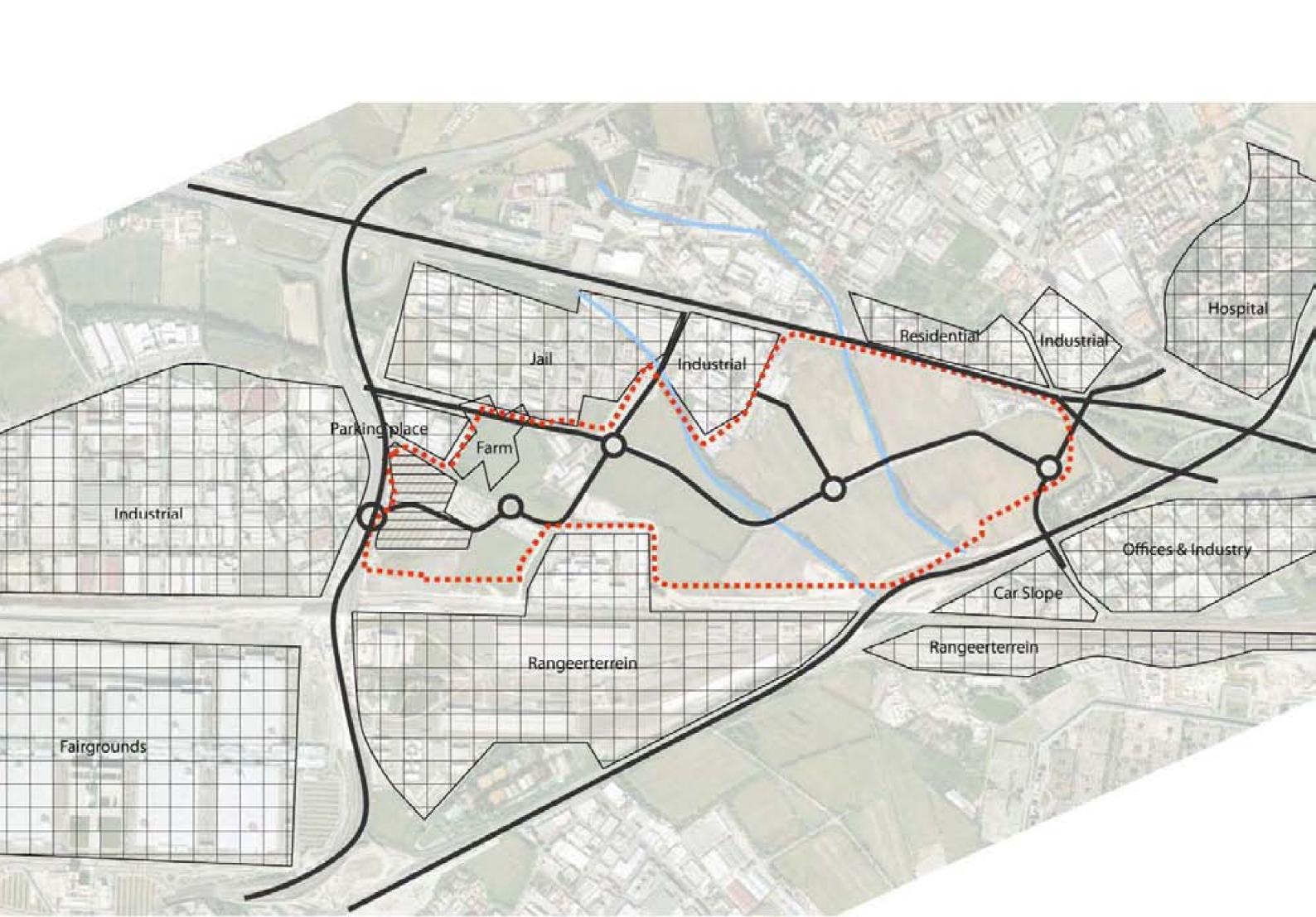
4. Milan Expo, the same after-use scenario...?

The buildings will be designed for easy disassembly so their materials can be reused or recycled. Resource and energy efficiency will be optimised through minimisation of non-recyclable waste, energy recovery from such waste, maximisation of source-separated recyclable wastes, rationalisation of consumption, use of groundwater for cooling, and "green" on-site electricity production. (source: H&M)



1,7 billion euros, site investments

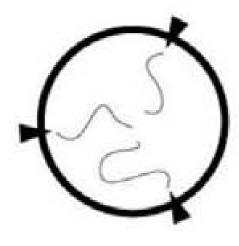


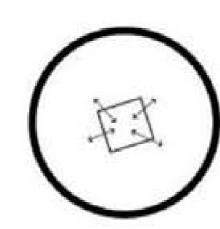


Recognizability by orientation squar

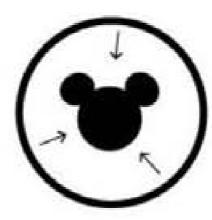
'A day out in this world' Straight route needs a wider path (Disney World principle) The composition of the site is important in relation to the 3th dimension

Equel organisation Pavilions By grid-structure (No hierarchy)



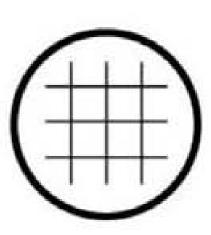


(Plane)



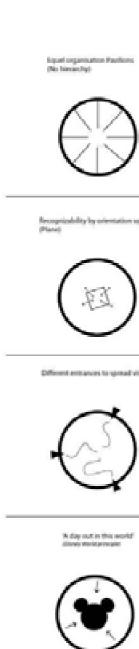


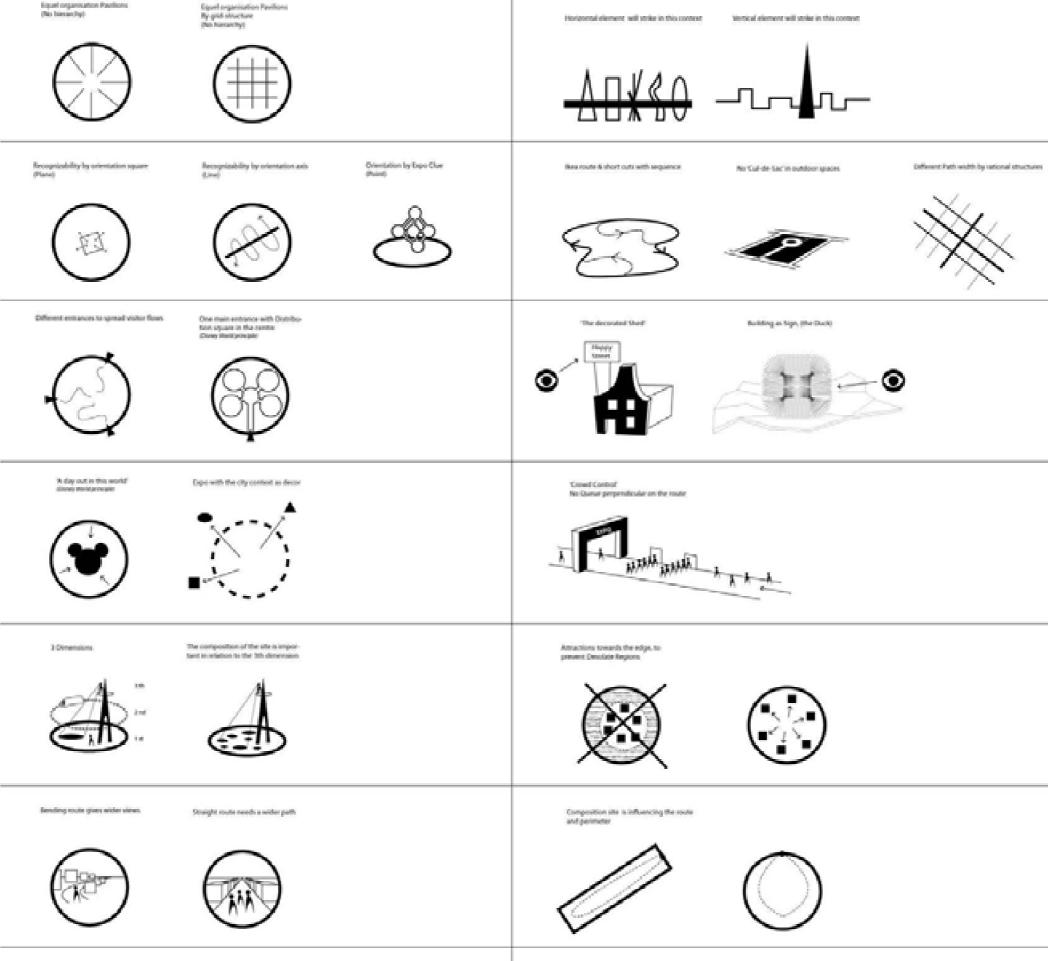












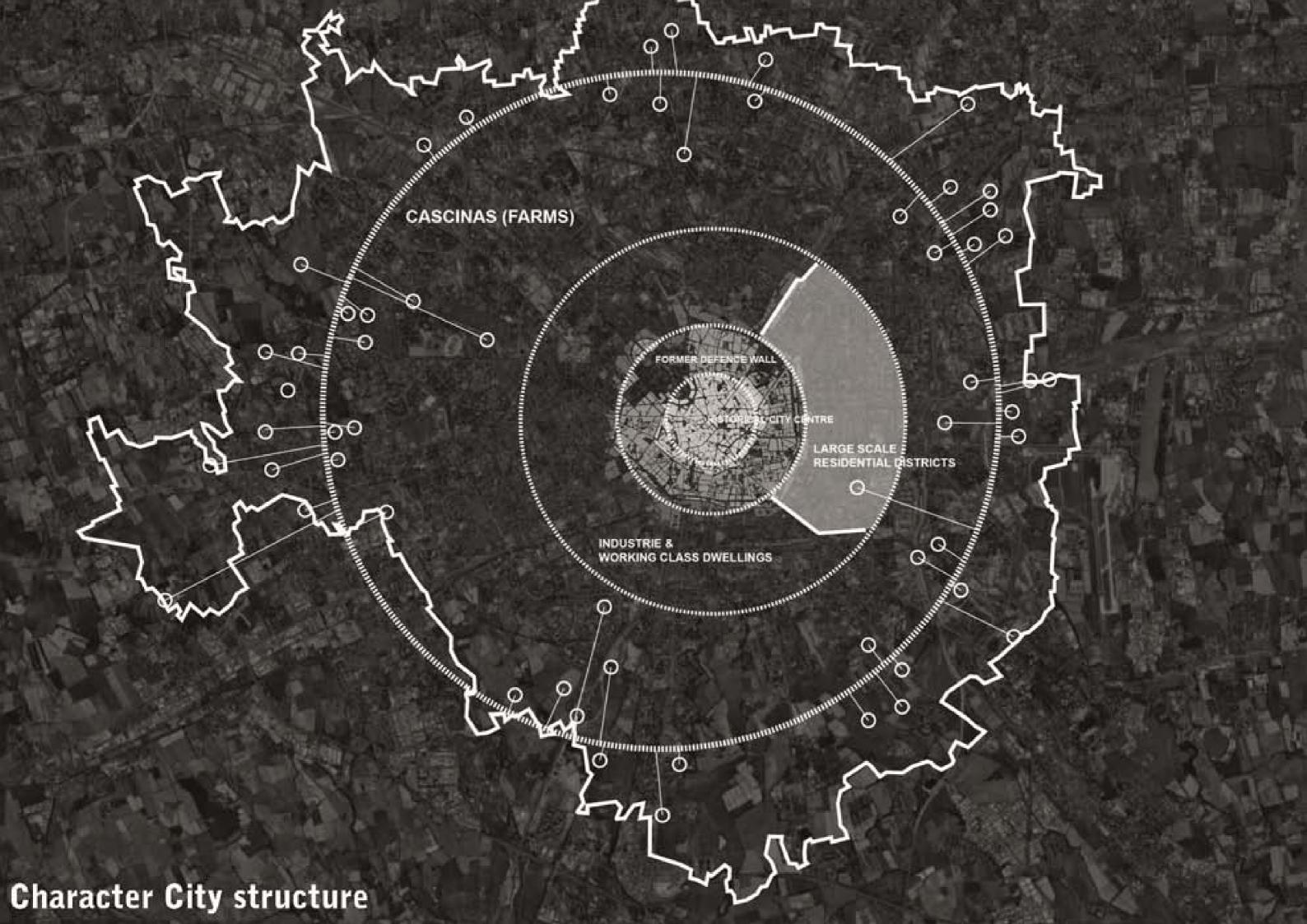
WORLD EXPO TOOLS

5. How can the Expo program be an efficien	nt tool in the development of the city?

Goal:

Transforming the upcoming World Exposition of Milan (2015), into a sustainable and useful urban ensemble for the long term by urban planning & architectural tools.

6. Milan: structures, problems, potentials...













Bastioni di Porta Venetzia



Viale Gabriele D'Annunzio



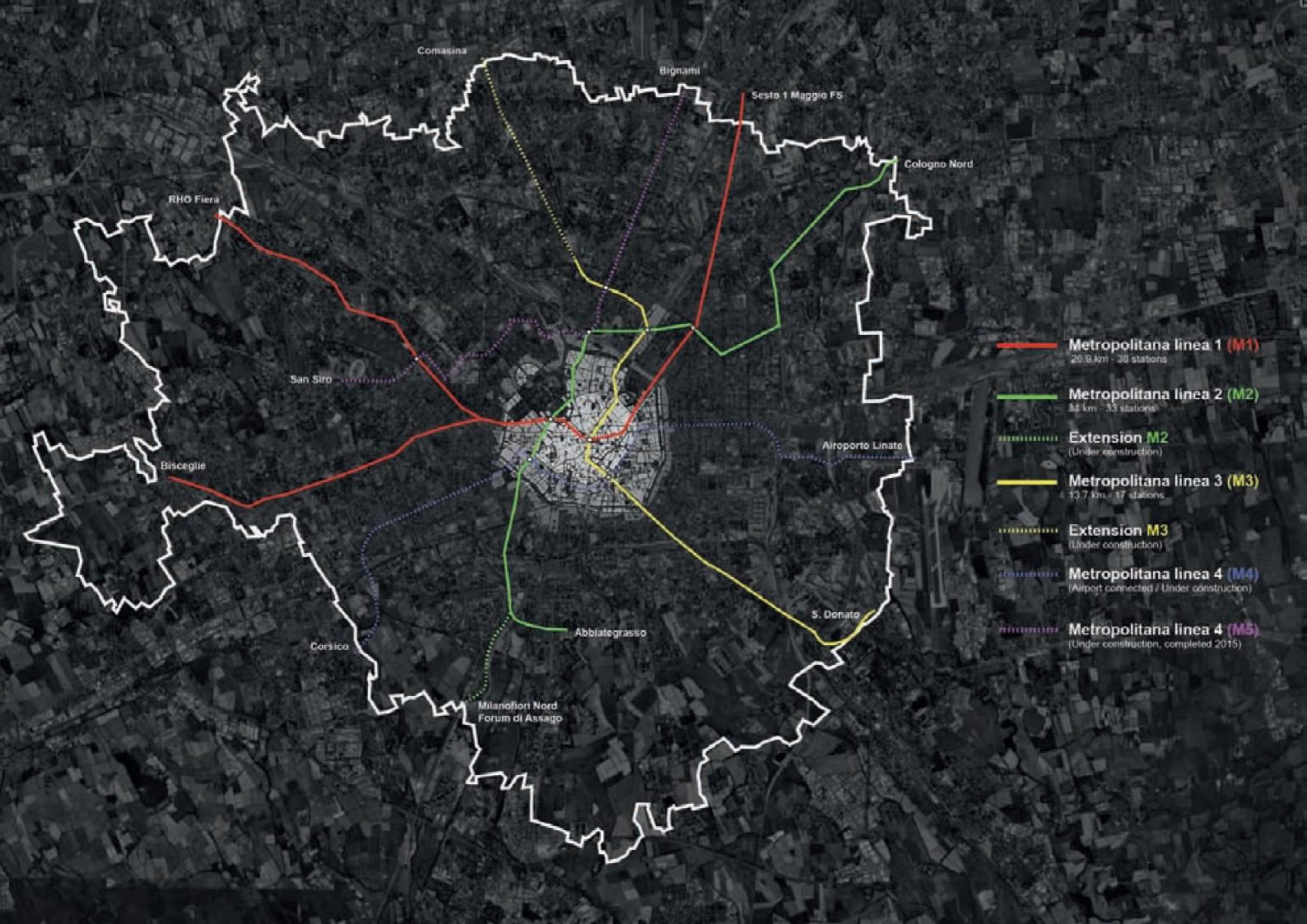
Viale Beatrice D'Este



Bastioni di Porta Volta







Parking places

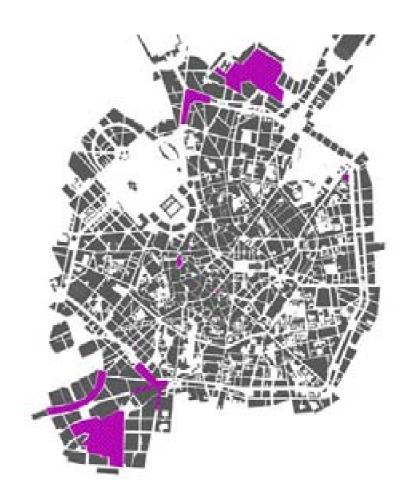








Places Left Over After Planning (P.L.O.A.P.)

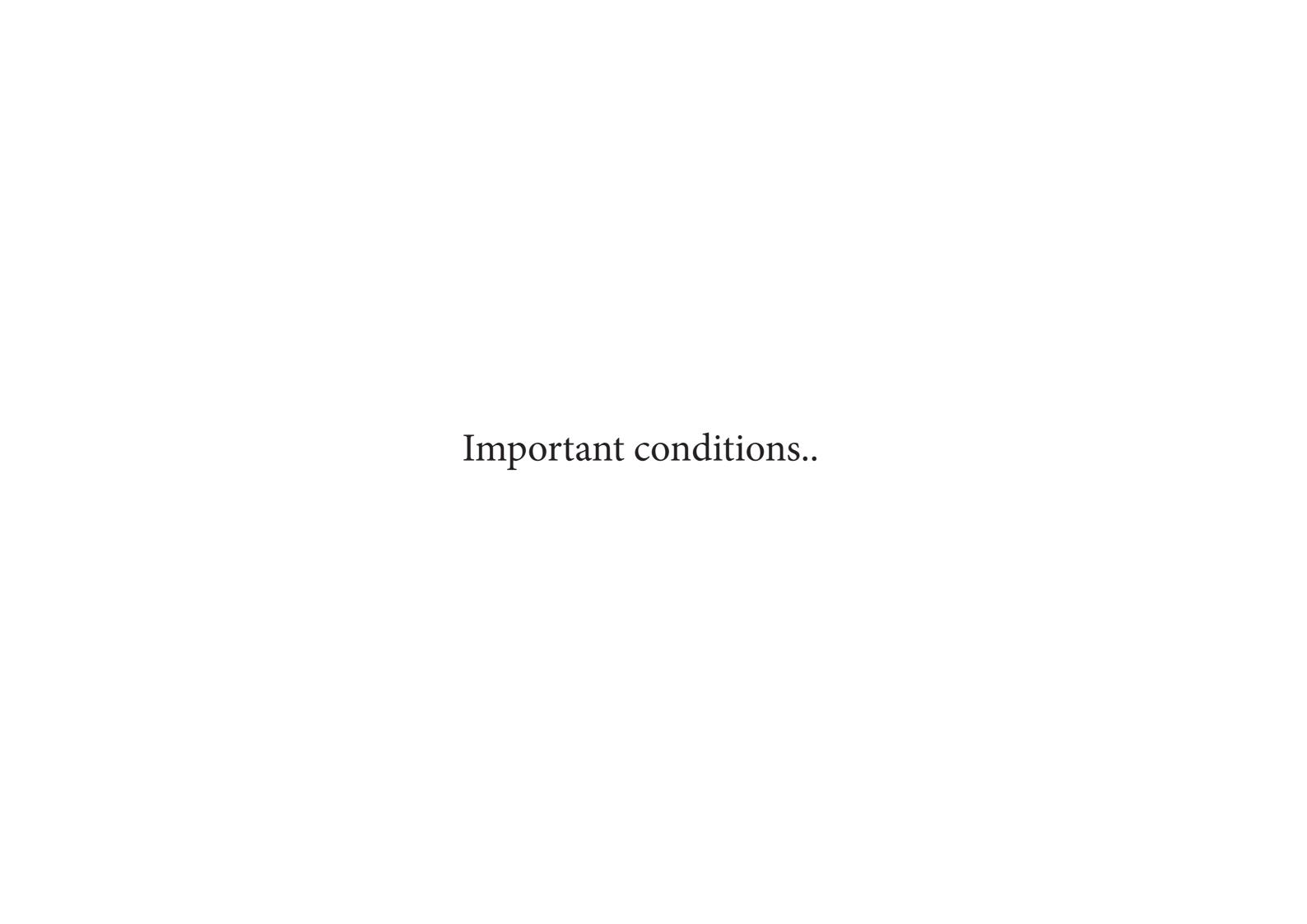


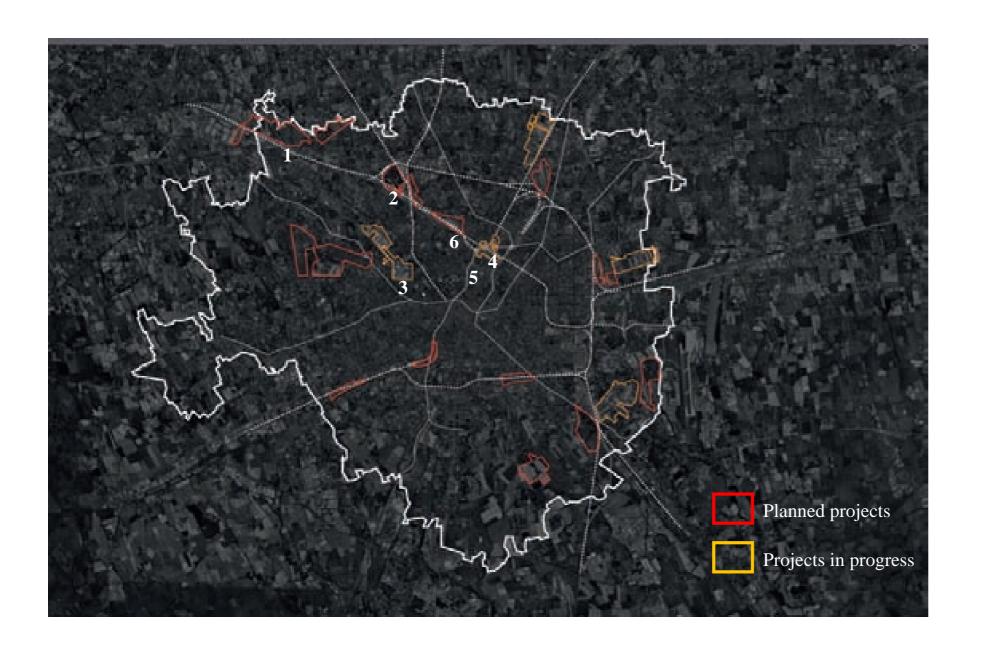




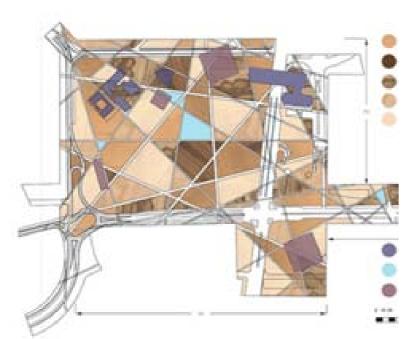








Urban design projects



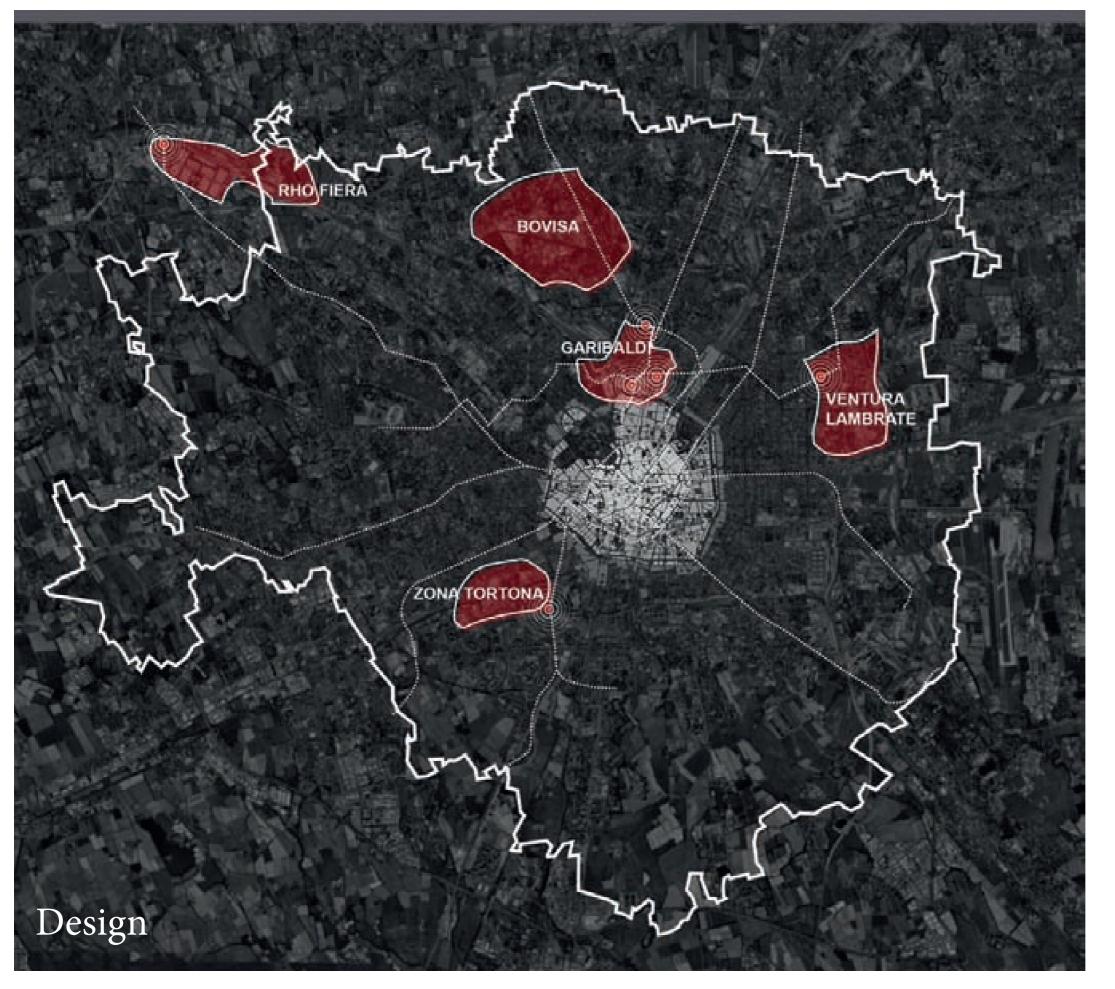
4. Inside Outside, Petra Blaisse Porta Nuova



5. Herzog & De Meuron Porta Volta



6. Student Proposal Farini railwaystation



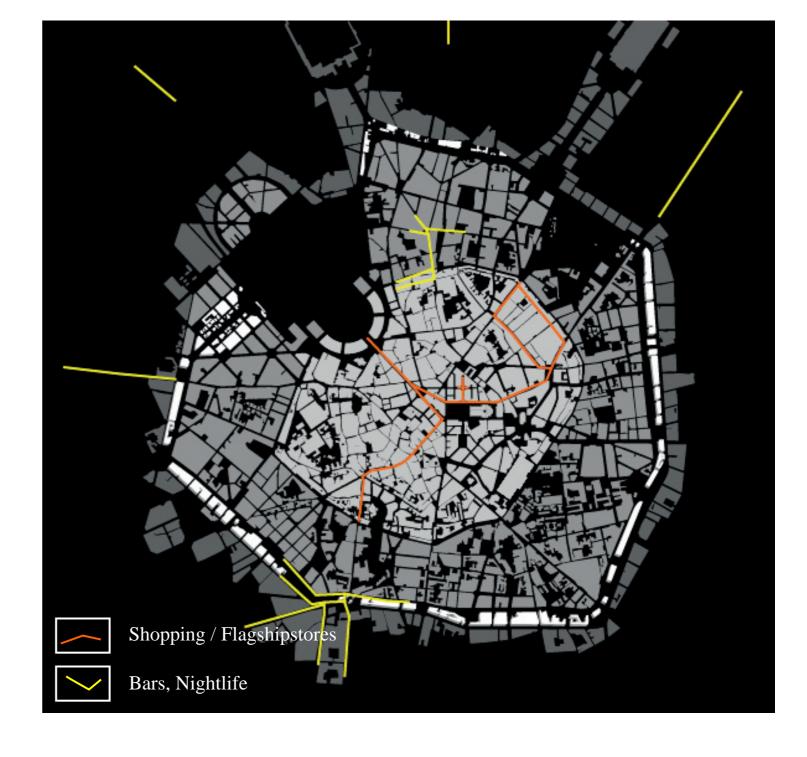












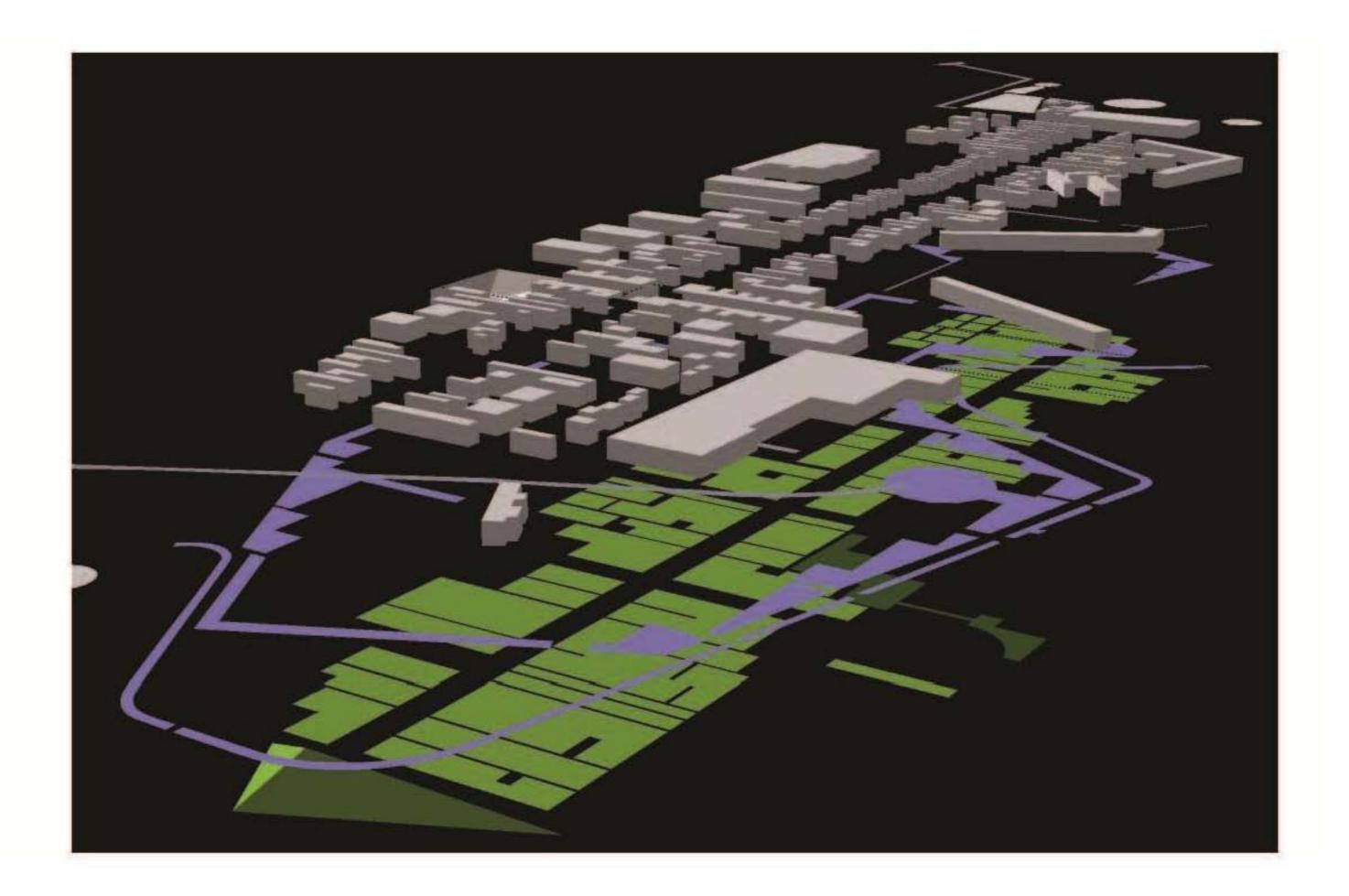


GUCCI

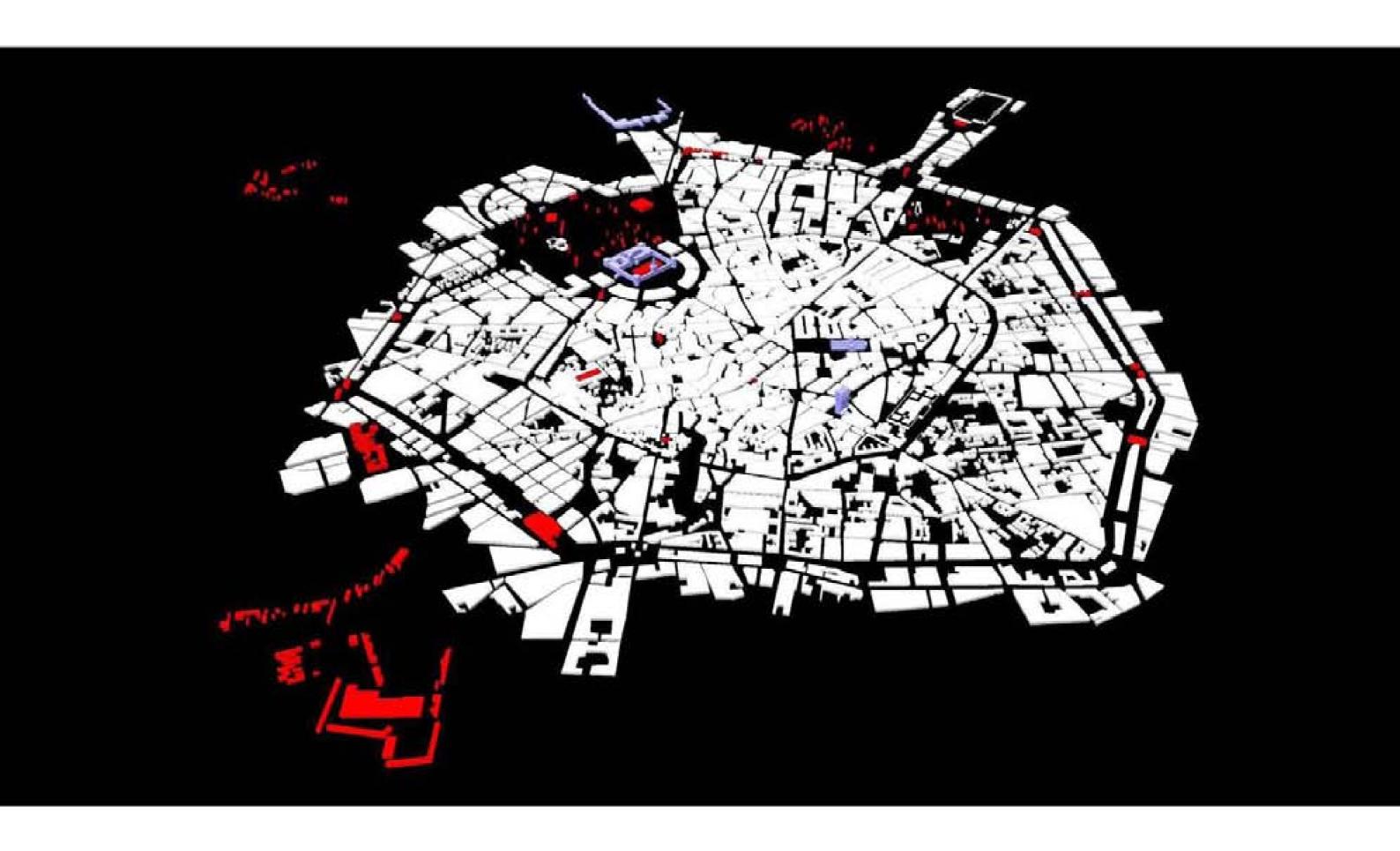
7. Point Expo, Urban Acupuncture..

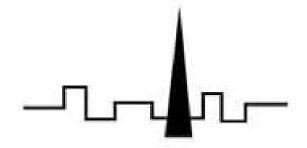
IF THE EXPO IS GOING TO HAVE ANY IMPACT BEYOND A SHORT-TERM IN-FLATION OF PROPERTY VALUES, THE EVENT'S PLANNERS WILL HAVE TO REEVALUATE WHAT THE EXPO MEANS BOTH TO THE CITY AND AS AN IN-TERNATIONAL EVENT. WITHIN THE CONTEXT OF GLOBALIZATION, THE NA-TIONAL PAVILION IS NO LONGER A VALID FORM FOR AN EXPO."



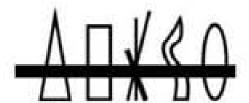


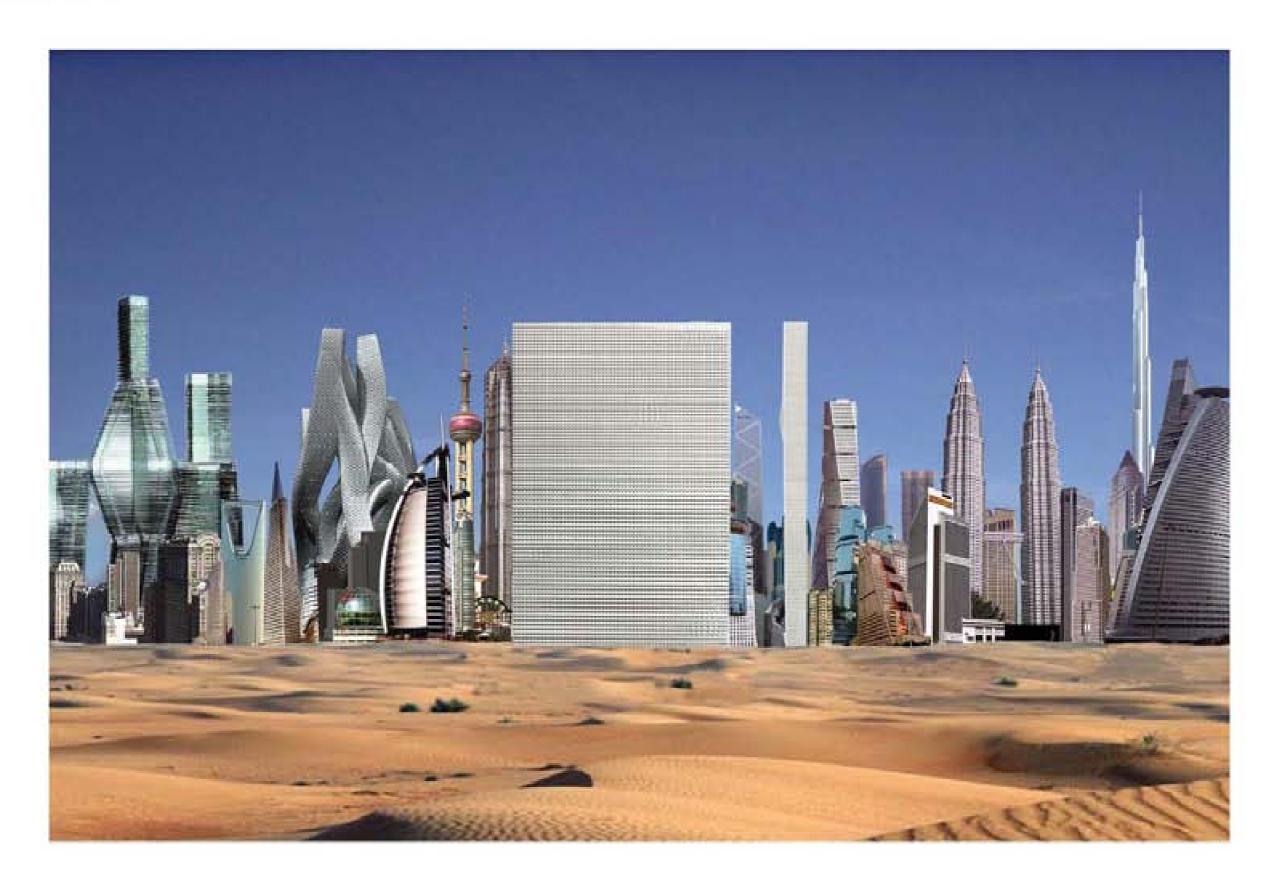




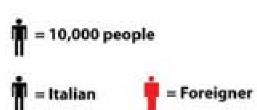








8. Logistic Consequences...



Average Expo visitors per day:





Population Milan:

1.301.759 million

Area: 182 km2

Density: 7,151 inh/km2

Tourists:

1.902.000 million in 2007 1.914.000 million in 2008

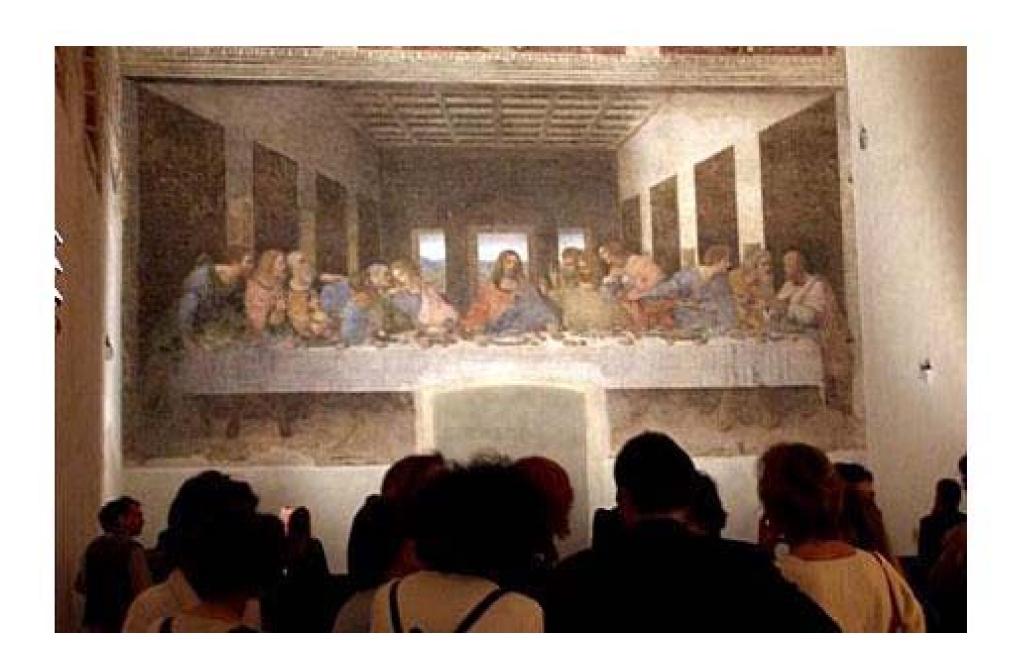
Average stay: 3,4 nights



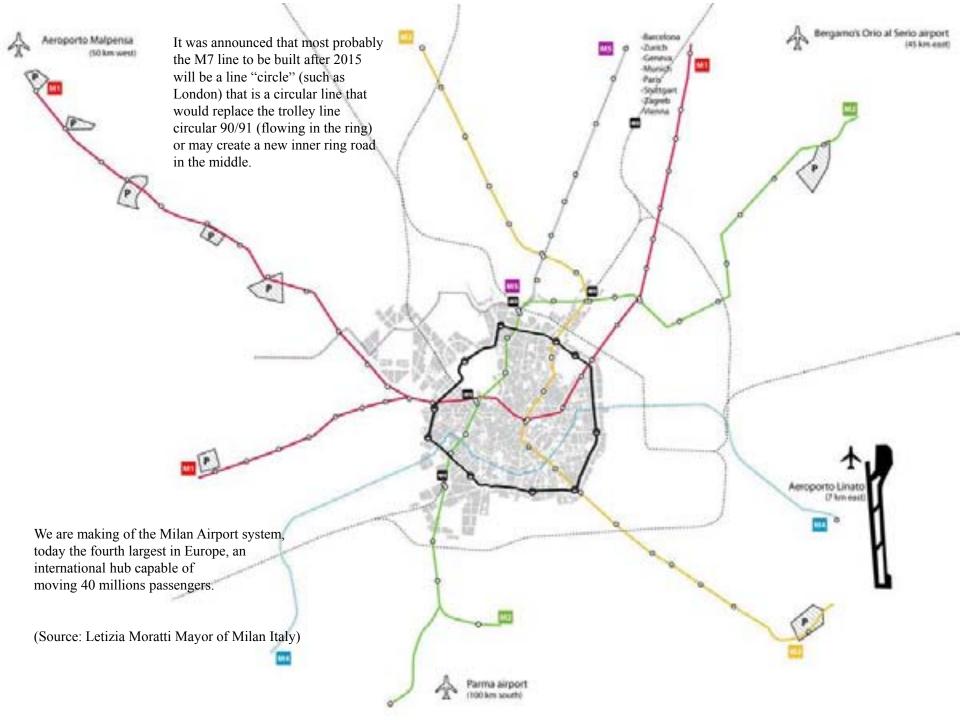
^{20,000,000 million} (30% foreign)

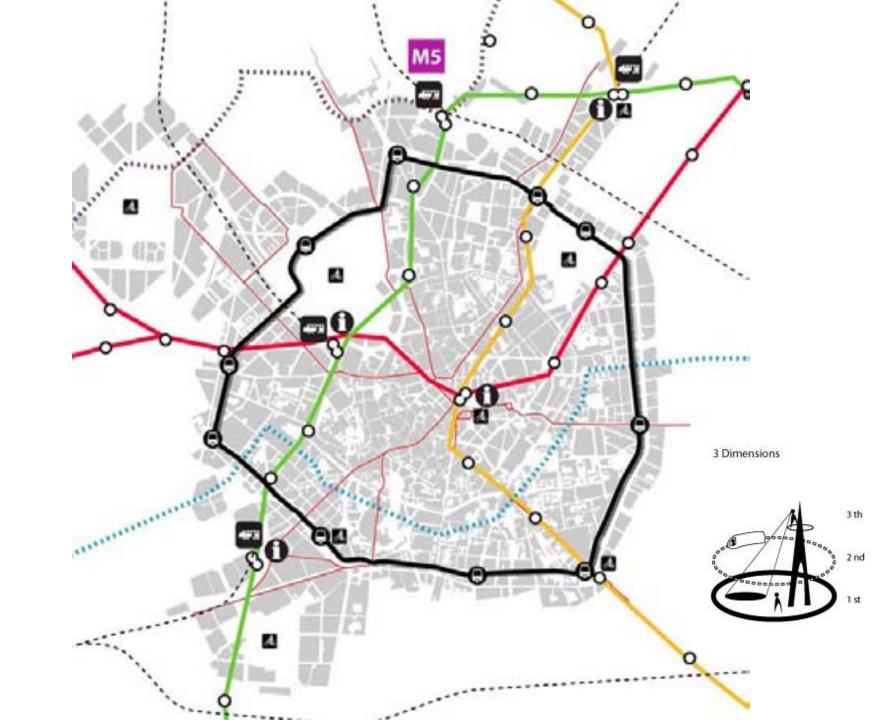
Duration: 184 days

Average Visit: 2 days



Way of transportation		Capacity per hour	Persons per day (grossmax)	🛊 = 10,000 people
€	1.500 cars per lane per hour 3 spectators per car	4,500 p /h	58,500 p / day	***
	60 busses per lane per hour 85 spectators per bus	5100 p /h	66,300 p / day	****
	40 trams per lane per hour 150 spectators per tram	6,000 p /h	78,000 p / day	****
	30 metros per lane per hour 800 spectators per metro	24,000 p /h	312,000 p/day	***************
<u></u>	12 trains per lane per hour 1200 spectators per train	14,400 p /h	187,200 p/day	******













Cars per vehicle: 7

Length of vehicle: 32.12 meters

Max Speed: 36 km/hour Max capacity: 170 passengers

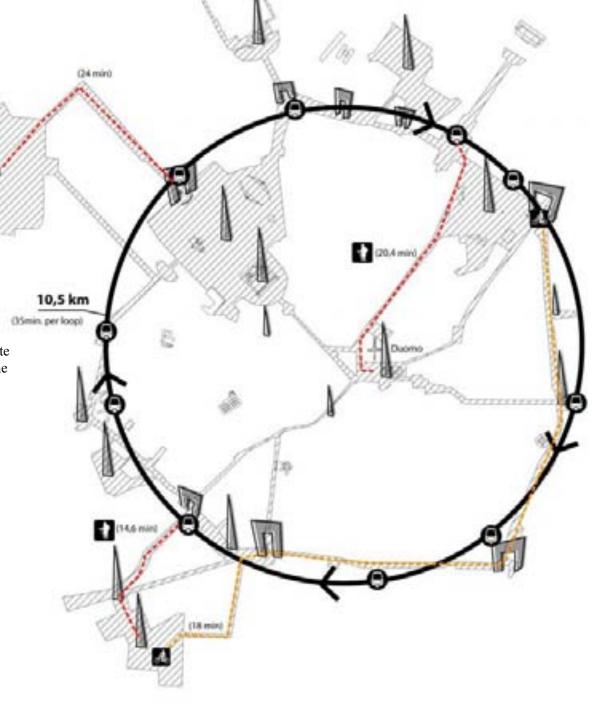
Spans: 30 meters Number of stations: 10 Circuits per hour: 2

There are ten stations on 10,5 km of track, with seven trains operating simultaneously

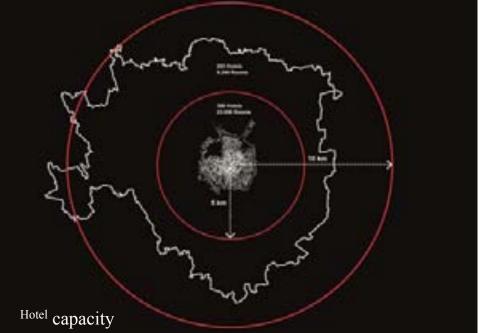
Each station stop takes 40 seconds, including the time to decelerate, board passengers, and accelerate again. A complete circuit of the route takes 35 minutes, and the total capacity of the system is 2380

passengers per hour.

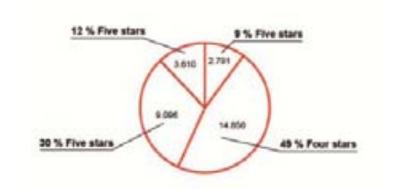








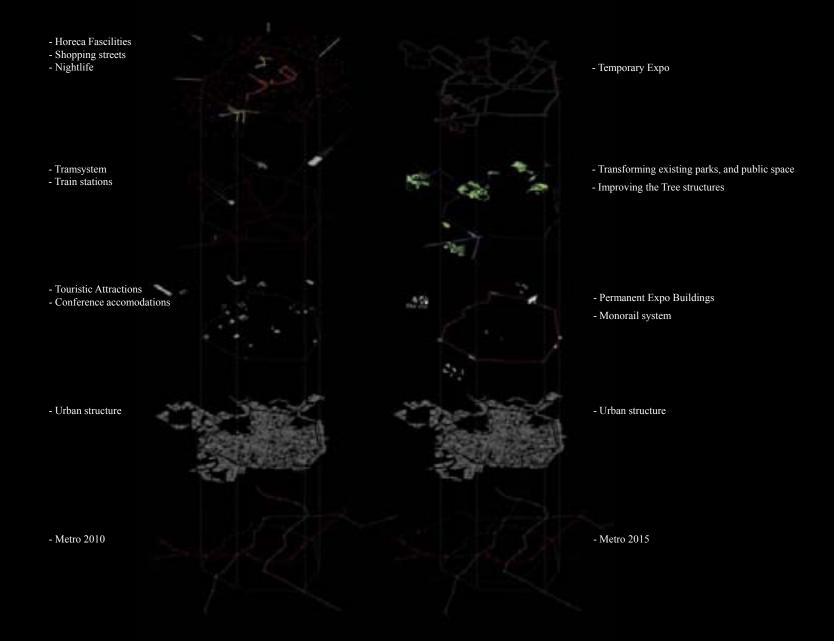
The average stay for a tourist in the city is of 3.43 nights

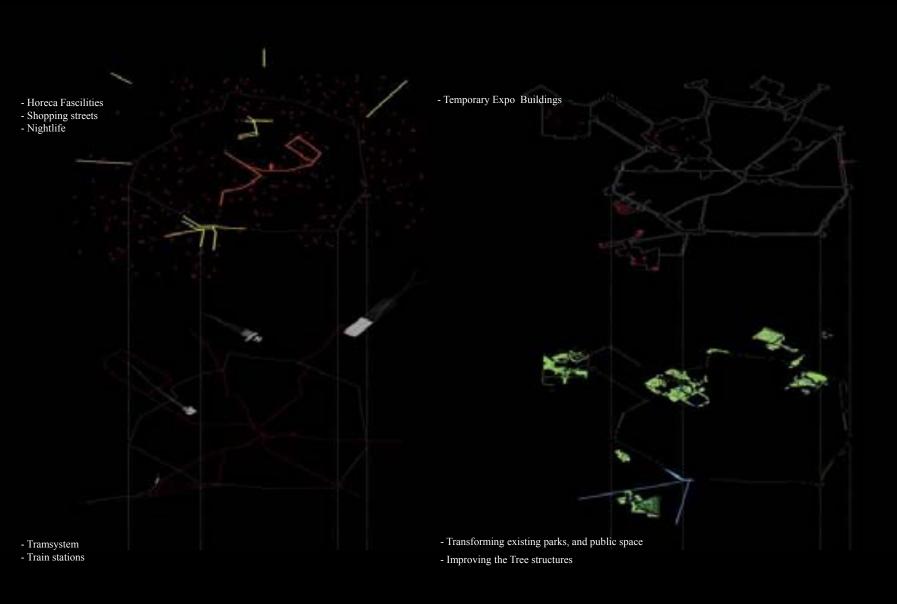


We are improving the hosting capacity of Milan and the surrounding areas, with more than 40.000 rooms for millions of visitors of every age and different purchasing power. (Source: Letizia Moratti Mayor of Milan Italy)

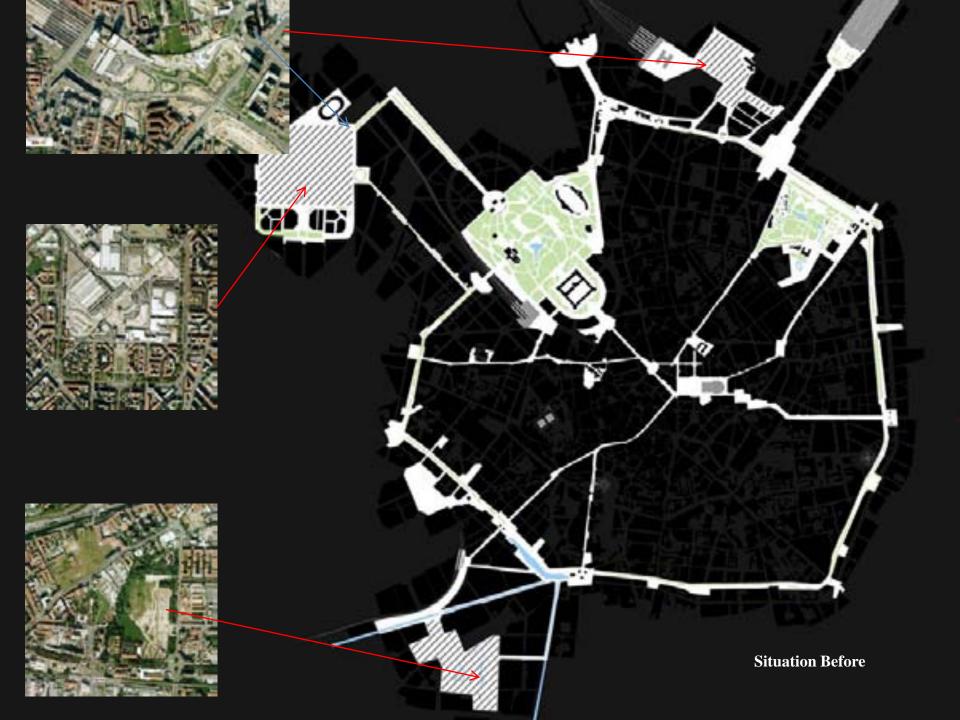
9. The Expo Design

The Layers











Equal repression Epilion (No fee policy)

Recognization by orientation causes (Plane)

Different automora to great visitor fixes

Exposed the dry content in Secur

Vertical element will little in the consent











1 Dimensions

Realling Balancian with sequence

Composition sits is influencing the course and polimeter

Sandings outsigned solder stores

Building in Figure (the Duck)



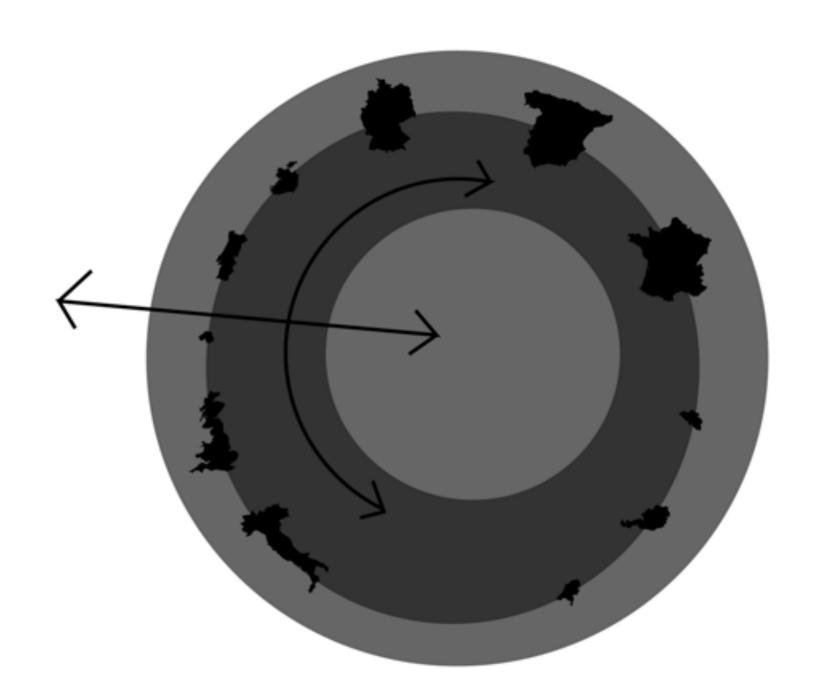


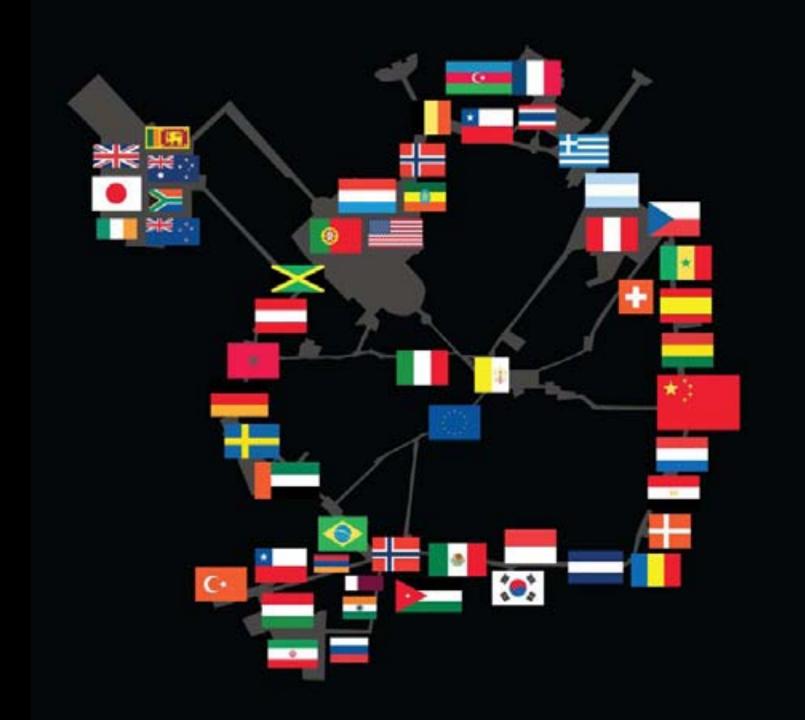






Rules governing Milan Expo







Milaan Major Catwalk

GUCCI







GIORGIO ARMANI



After Use

The after-use consists of three aspects:

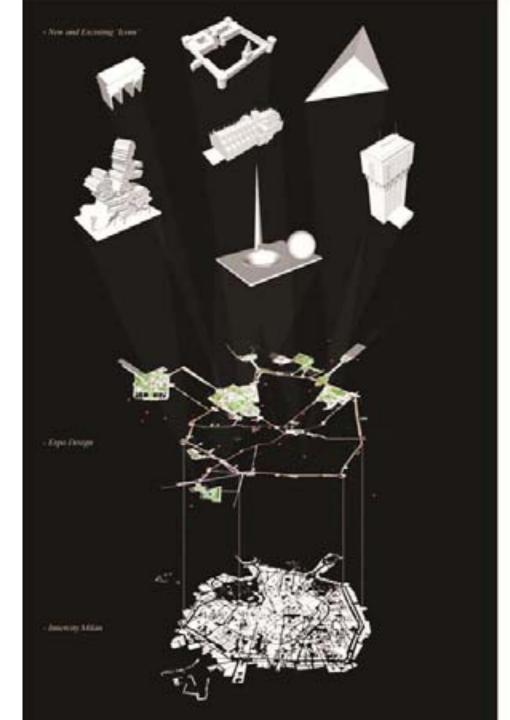
- (1) the after-use of the pavilions;
- (2) the re-development of desolate city parts
- (3) the continued use of the newly built infrastructure and service facilities.

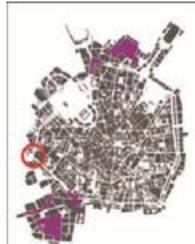
Adding:

BIG spotters Hill (3th dimension)

The Needle and the globe (two extremes of architectural choices)

Compressed European Pavilion

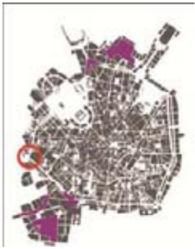




Impression Location 2

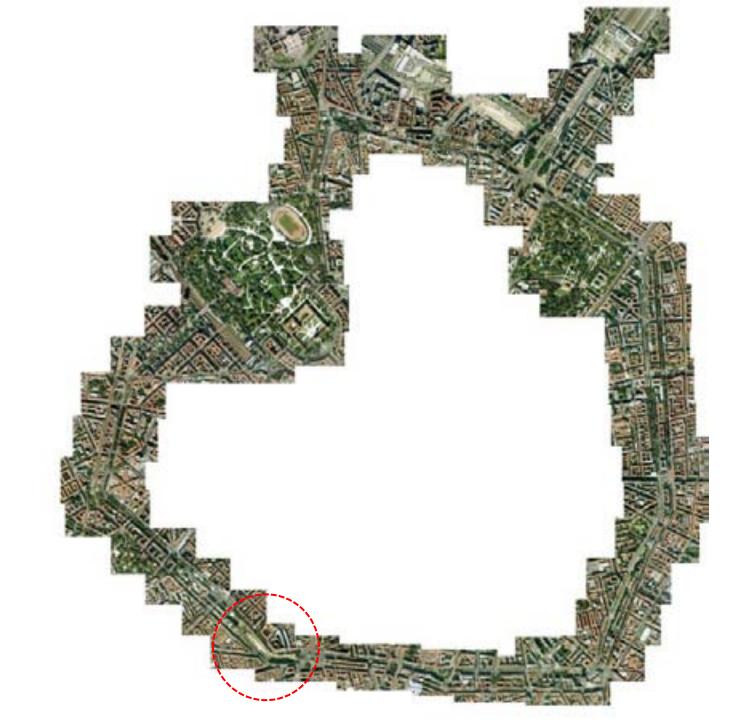


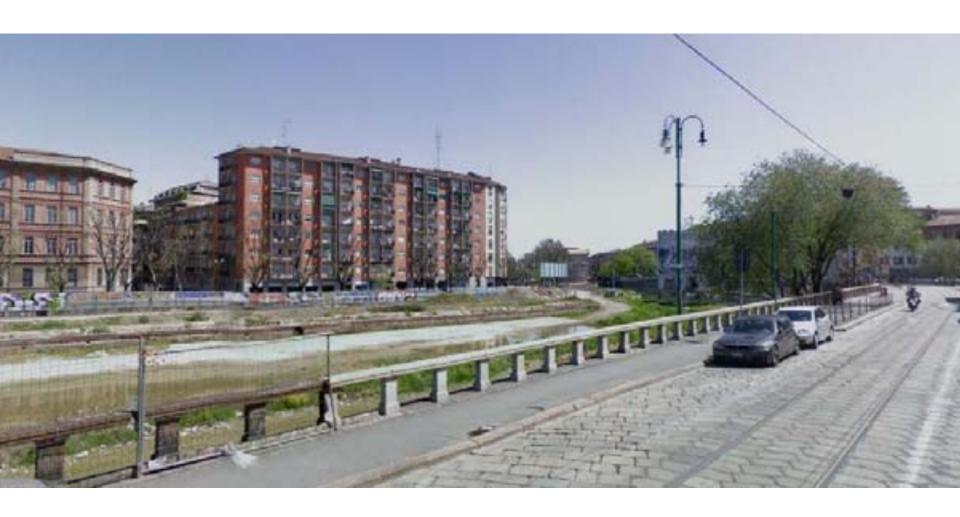
Before



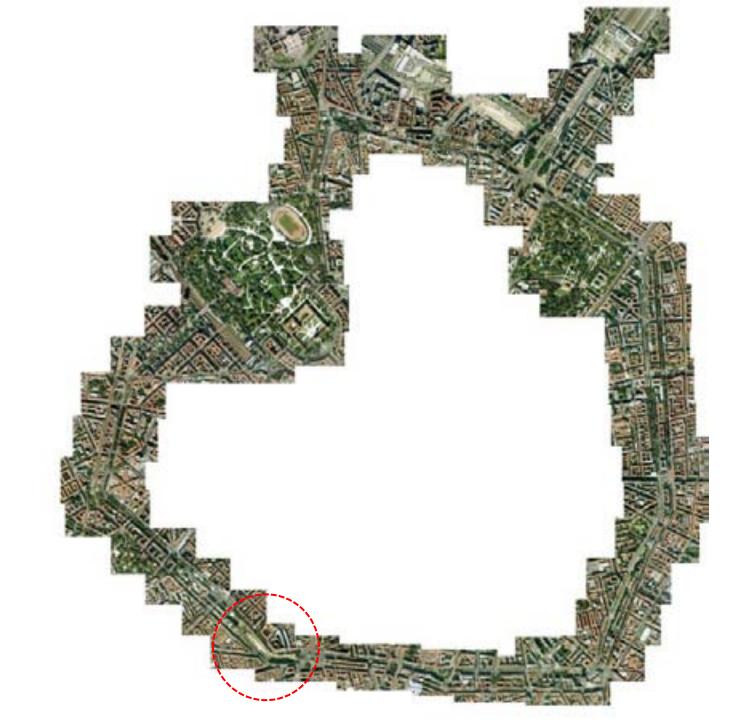


During









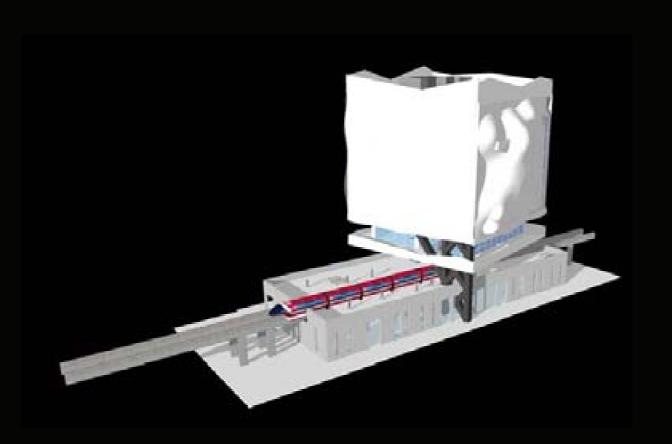






ARCHITECTURE

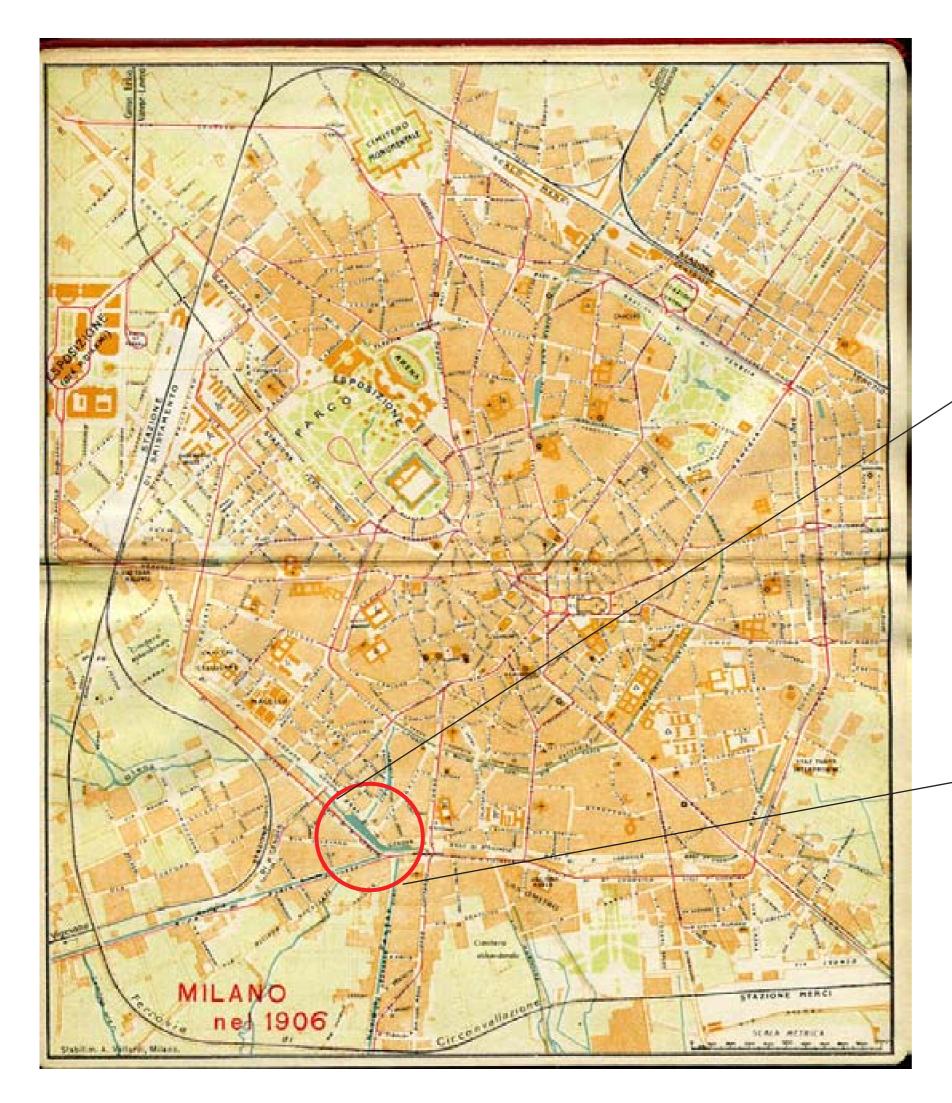
- 1. The Architectural Assignment
- 2. Vision
- 3. Program
- 4. Form Analysis
- 5. Urban Fitting
- 6. Part A (The Plinth)
- 7. Part B (The Box)
- 8. Afteruse
- 9. Materialisation



MILANO EXPO 2015 Part II | The Pavilion

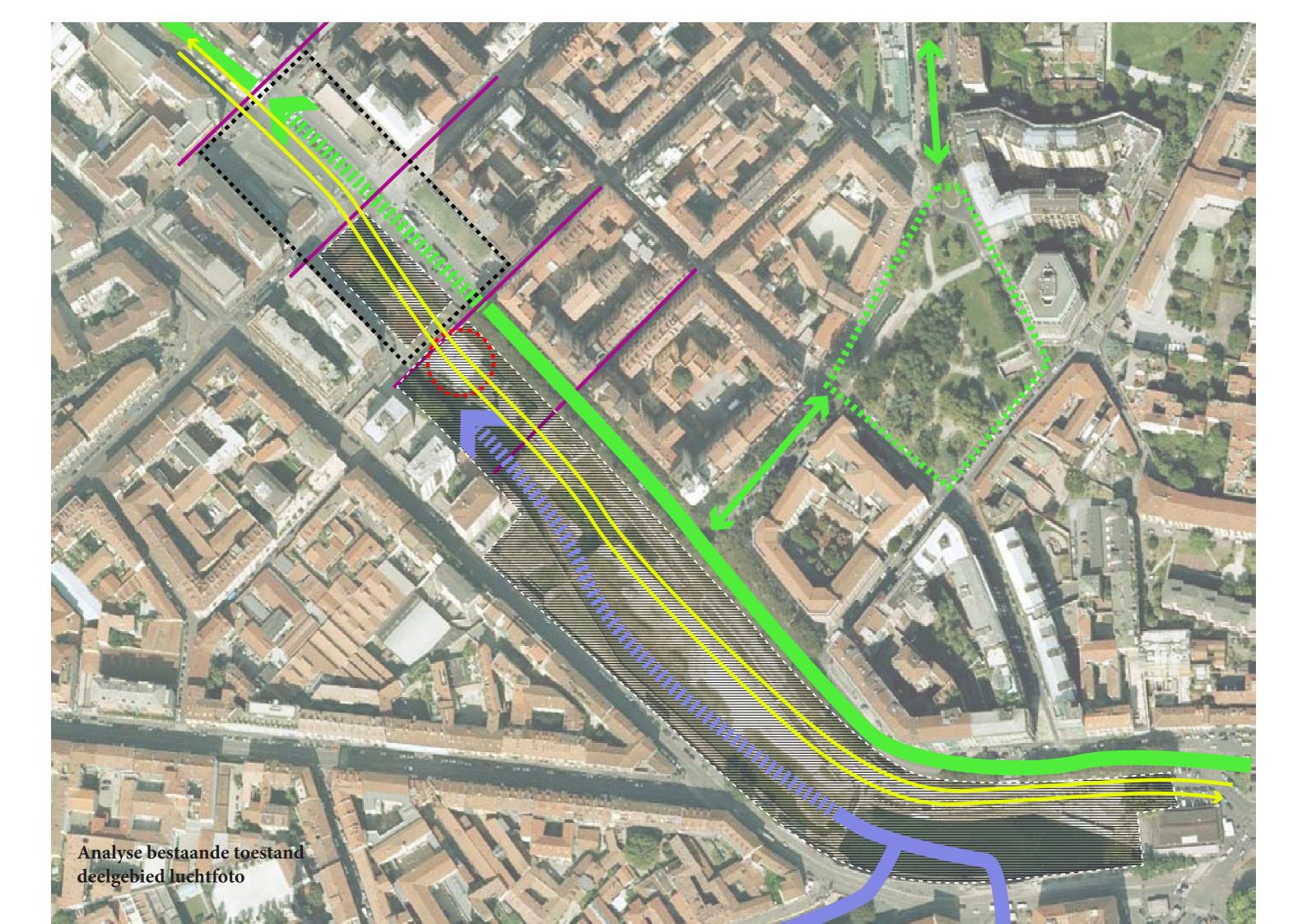
Urban Design World Exposition Milan





Historical background harbour









Location Pavilion | Former Harbour

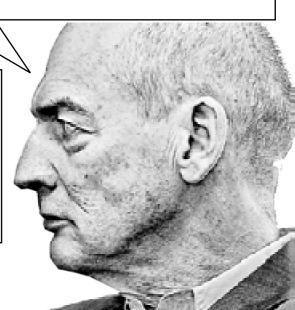
Bjarke Ingels: 'GLOBAL SCREAMING MATCH' NRC, Tracy Metz, 24 march. World Expo Shanghai.



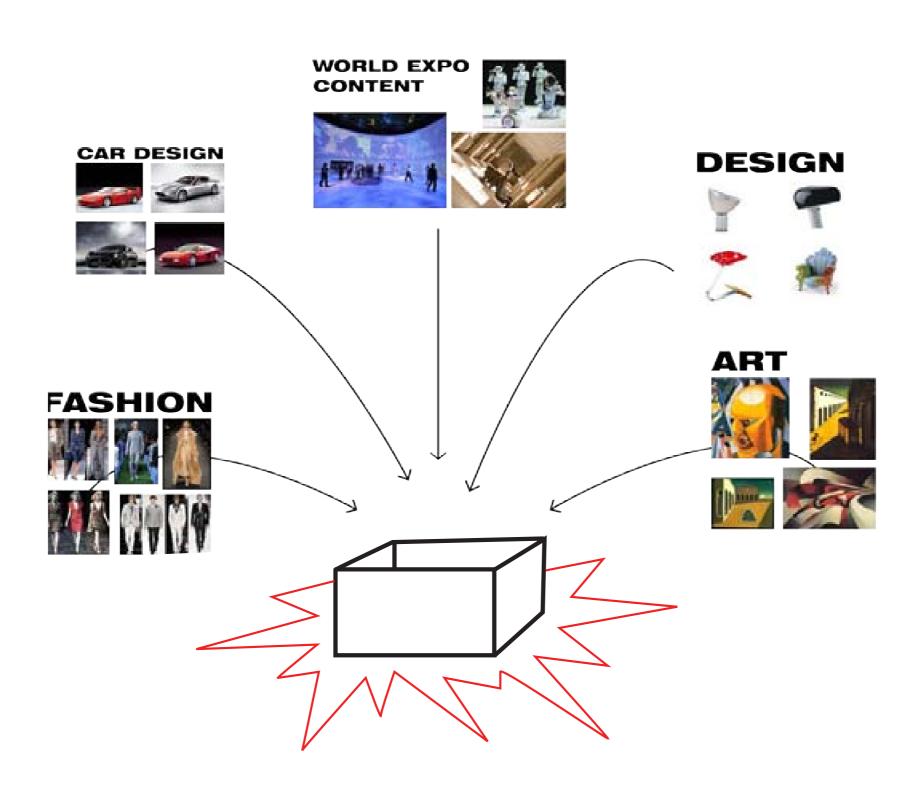




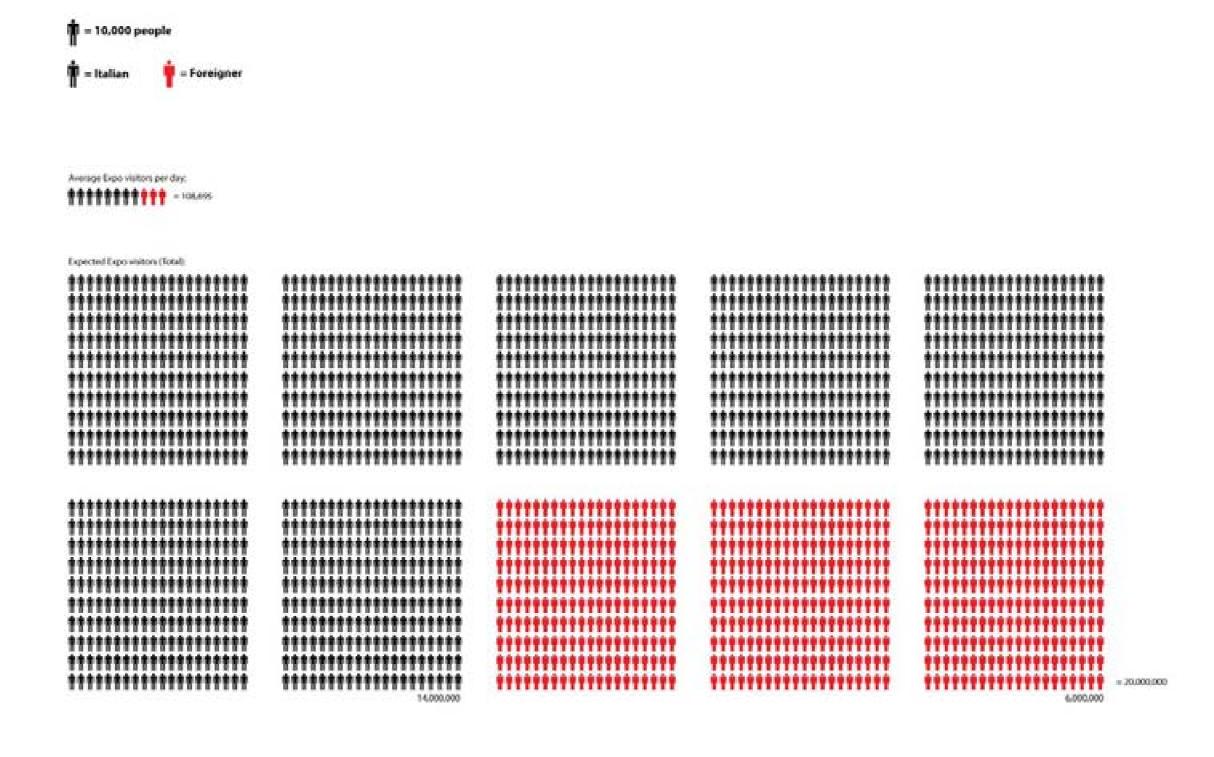
'TO CREATE A REVOLUTIONARY NEW CONCEPT OF THE WORLD EXPOSITION. WE ARE CONVINCED THAT A VISIONARY AND SUCCESSFUL EXPO HAS TO ABANDON THE OUTMODED IDEA OF AN EXPOSITION BUILT AROUND COMPLEX SYSTEMS OF REPRESENTATION AND GIGANTIC ARCHITECTURAL MONUMENTS WHICH OFTEN HAVE NO REAL PURPOSE AFTER THE EVENT'----



DISPLAY OF EXPO PLUS AFTERUSE FOR MILAN'S ART, FASHION & DESIGN...



GROSSMAX

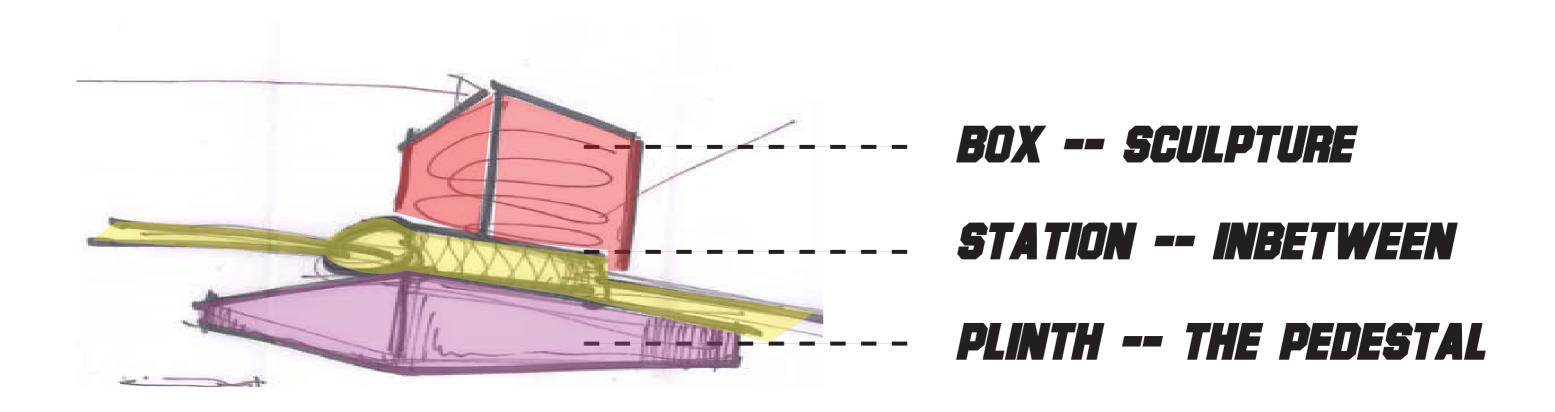


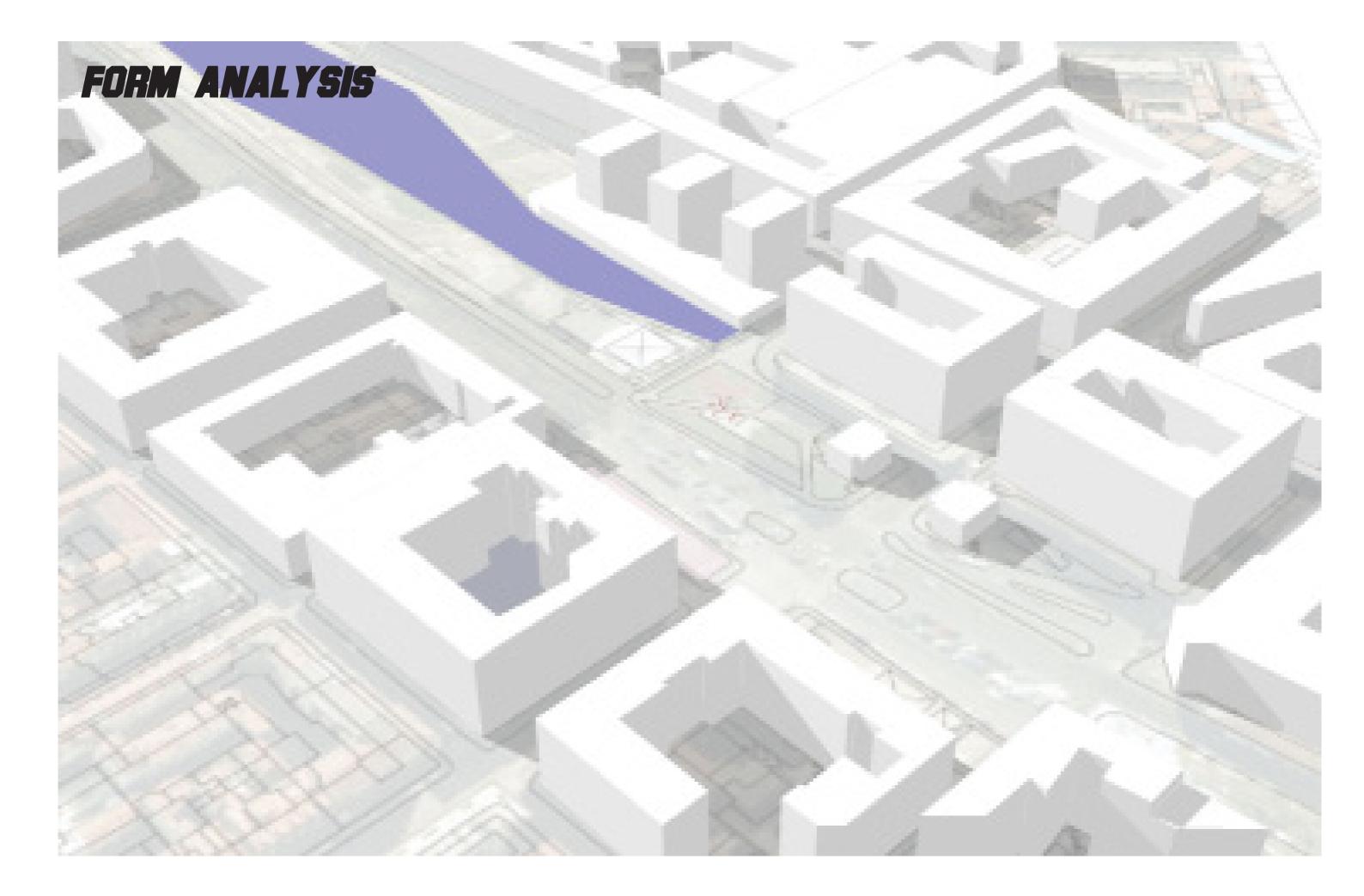
^{- 18,100} p /h (peak flow)

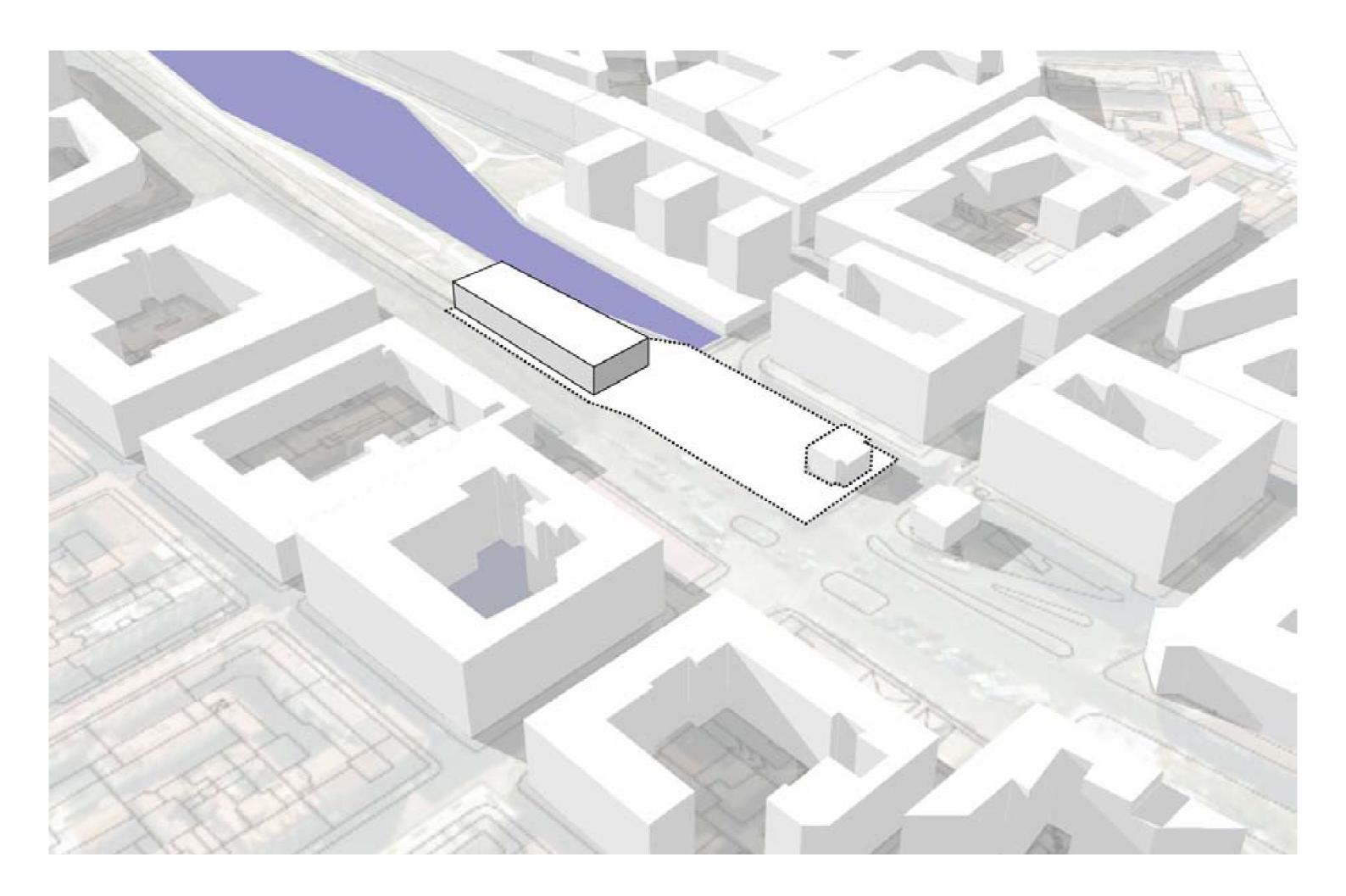


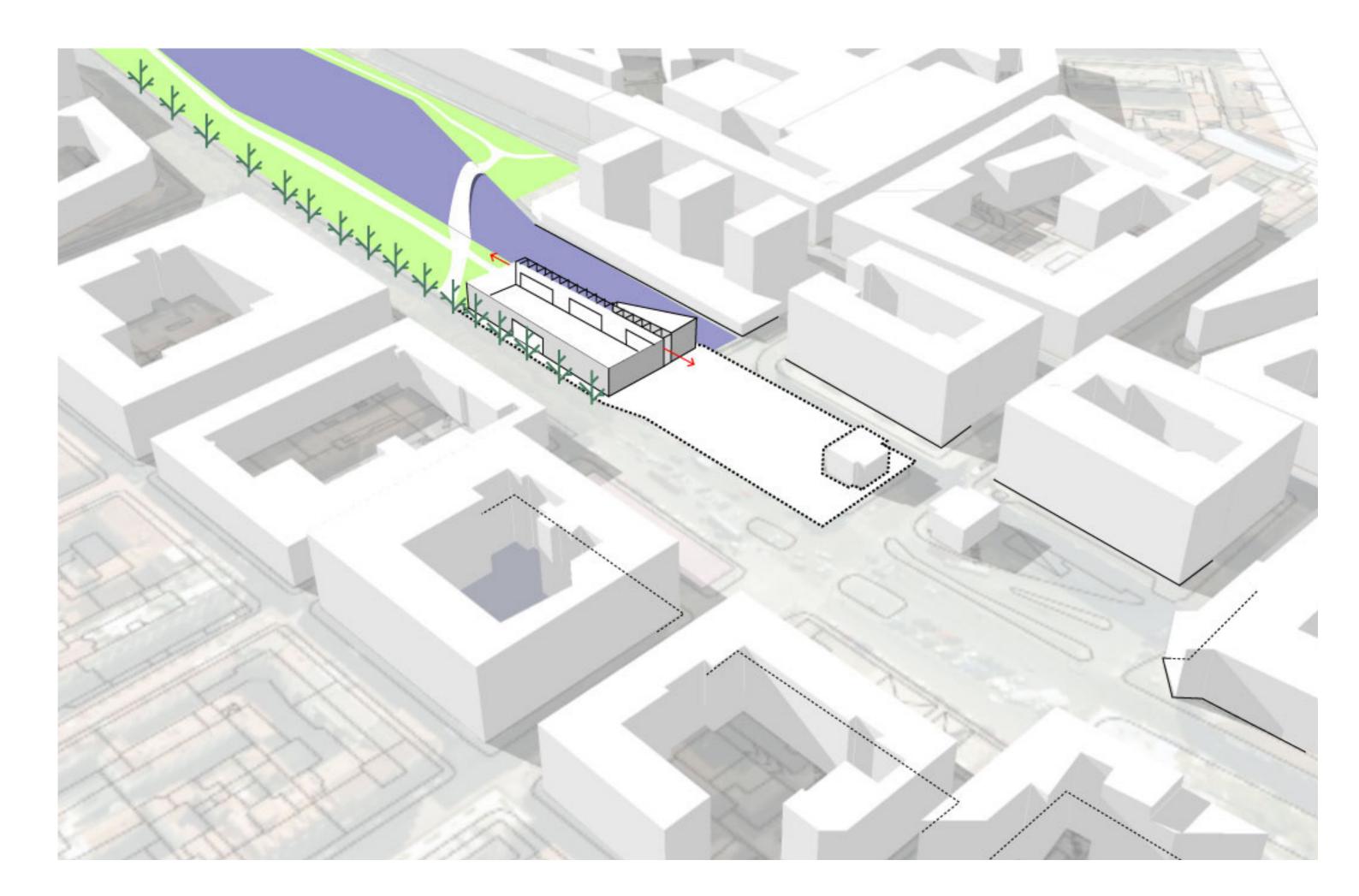
^{- 13} hours Expo opening per day (9.00 - 10.00)

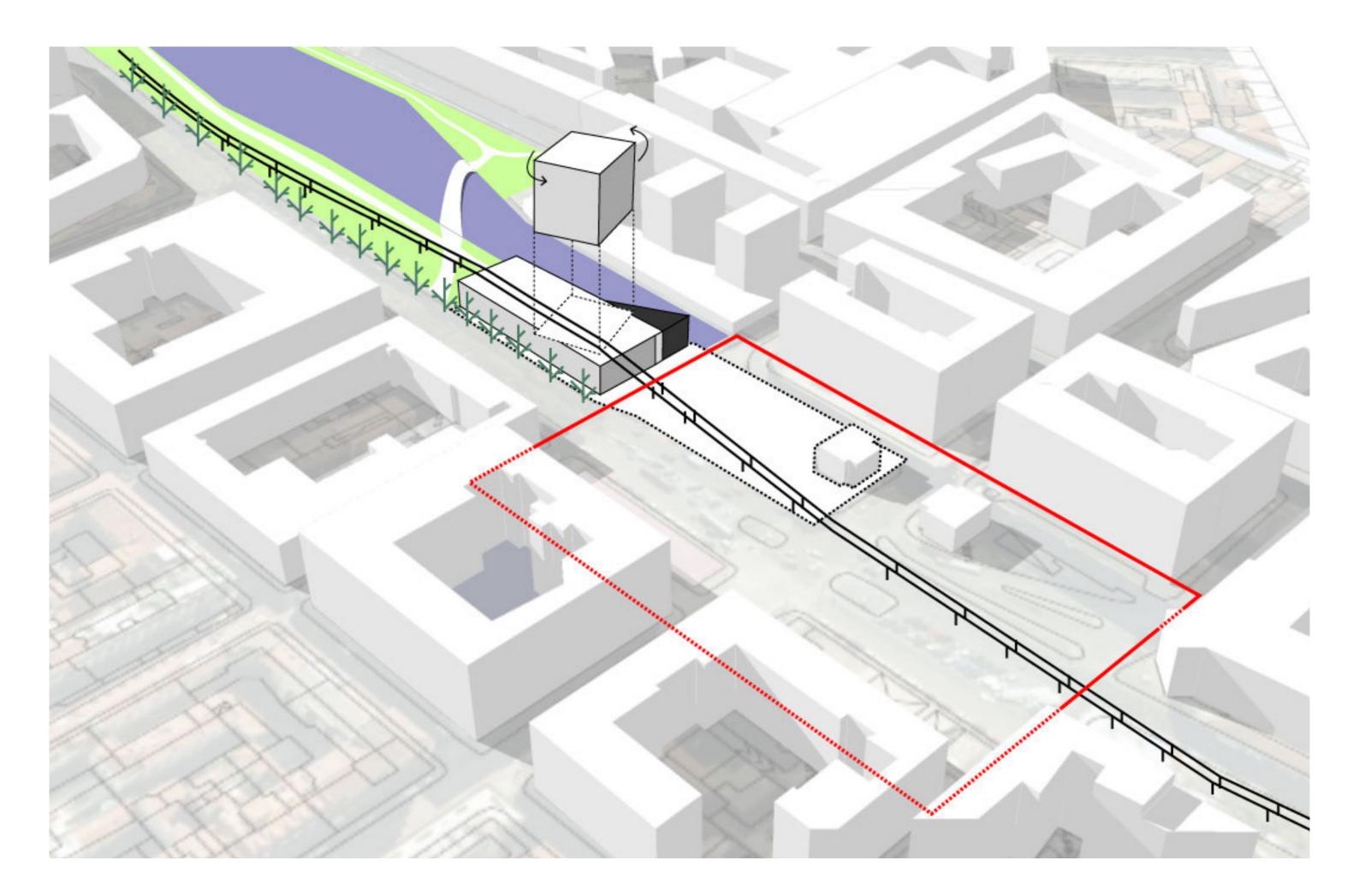
SPLITTING OF PROGRAM

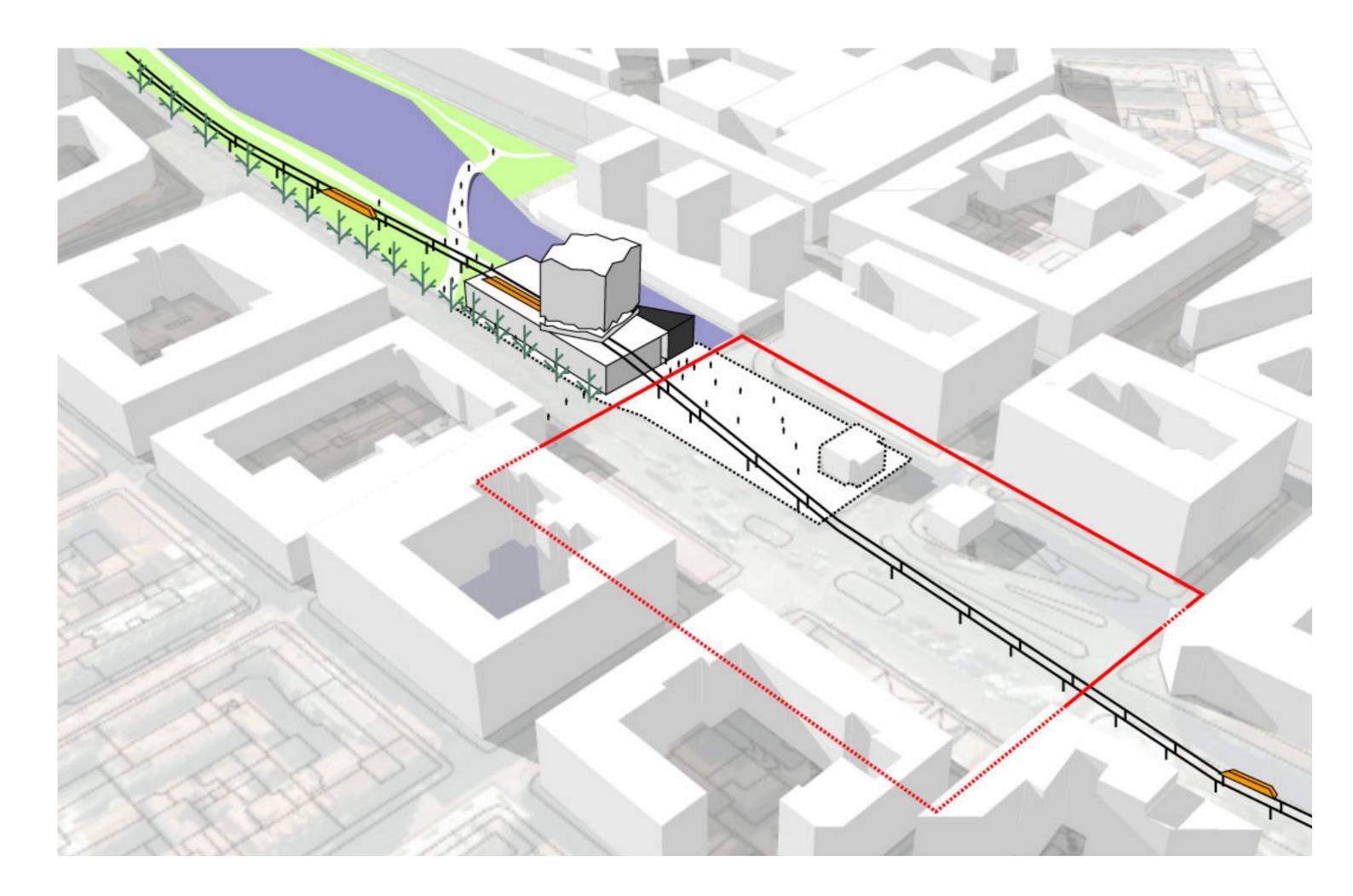


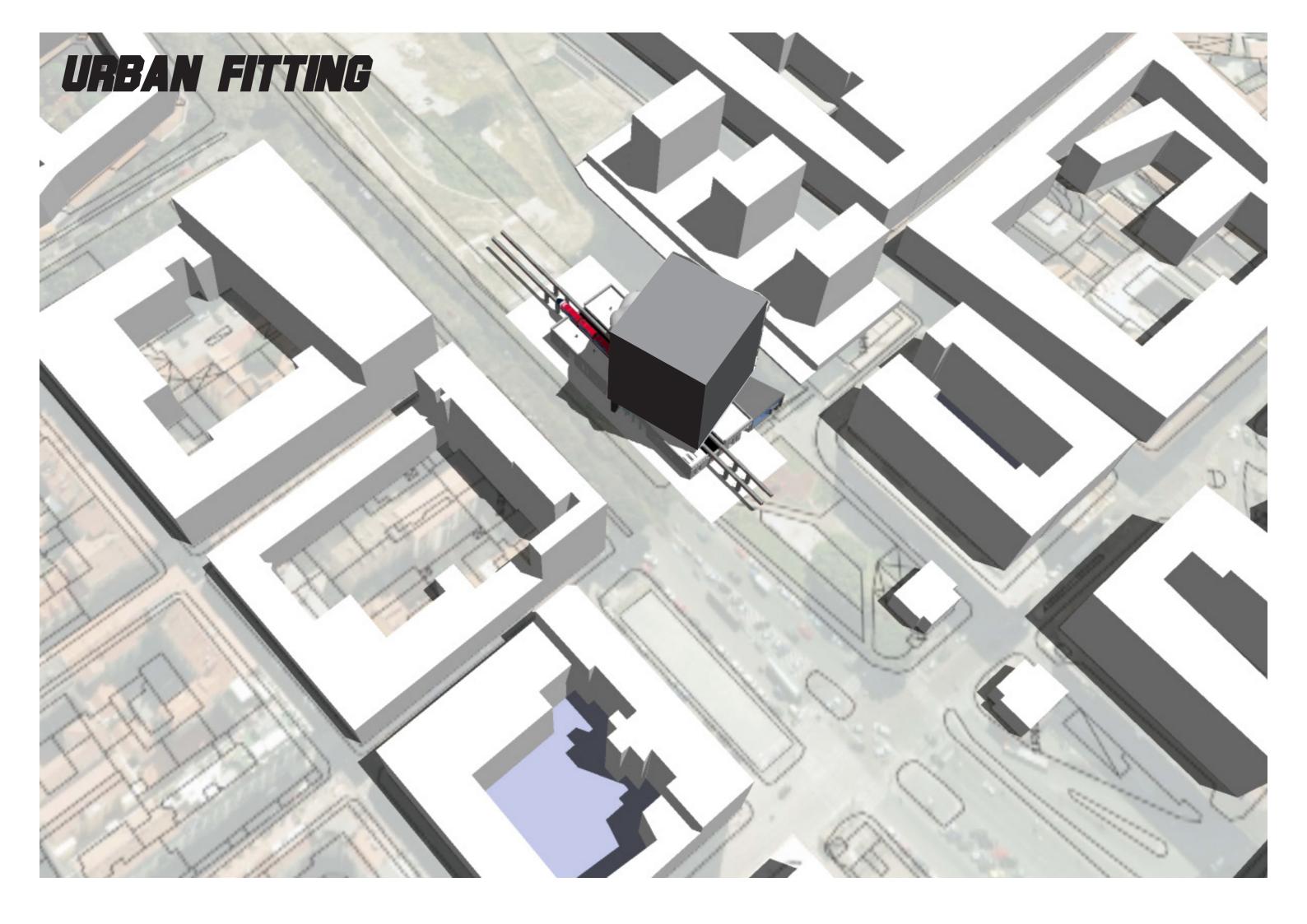












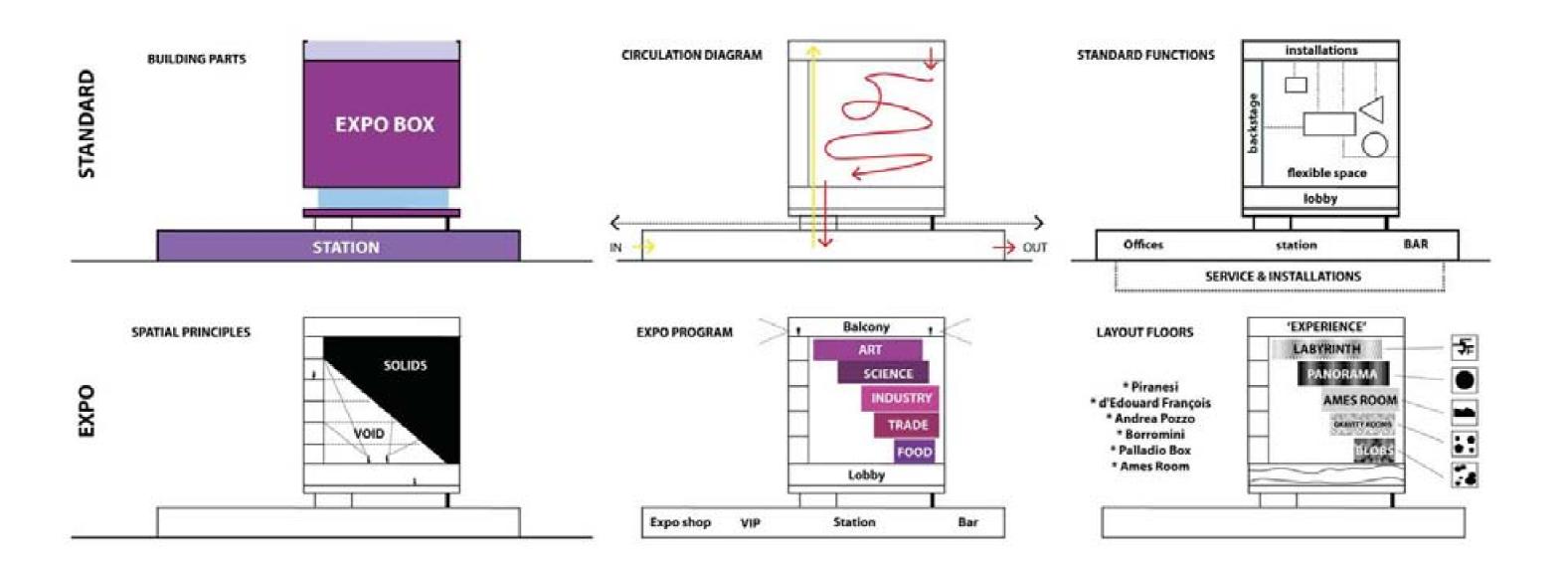
CONTEXTUAL ARCHITECTURAL LINK

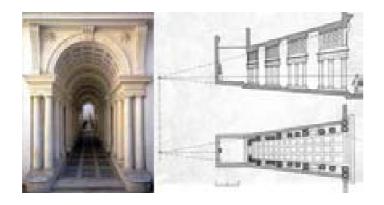


PROGRAMMATIC LOGIC

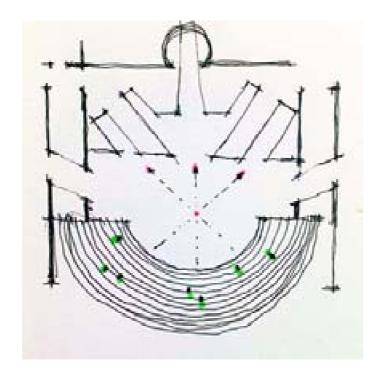


CONTENT





Borromini | Pallazo Spada



Palladio | Teatro Olimpico



Pozzo | S.Ignazio



Da Vinci | stairs Chambord



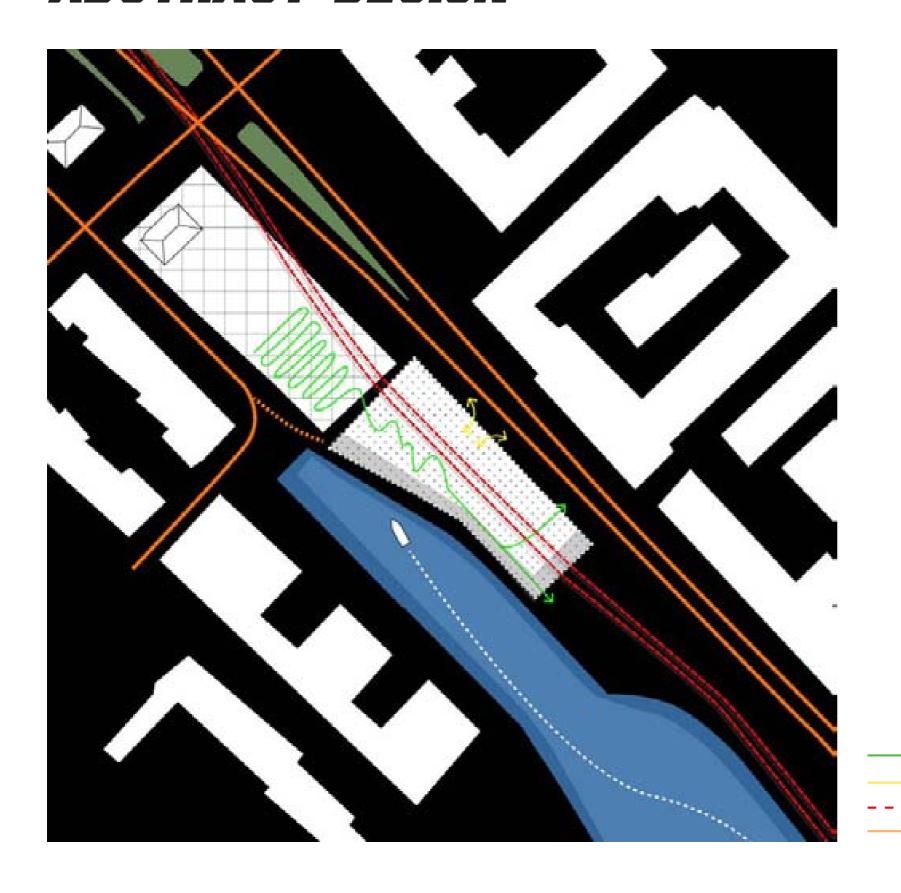
Bernini | St. Pieters sqaure



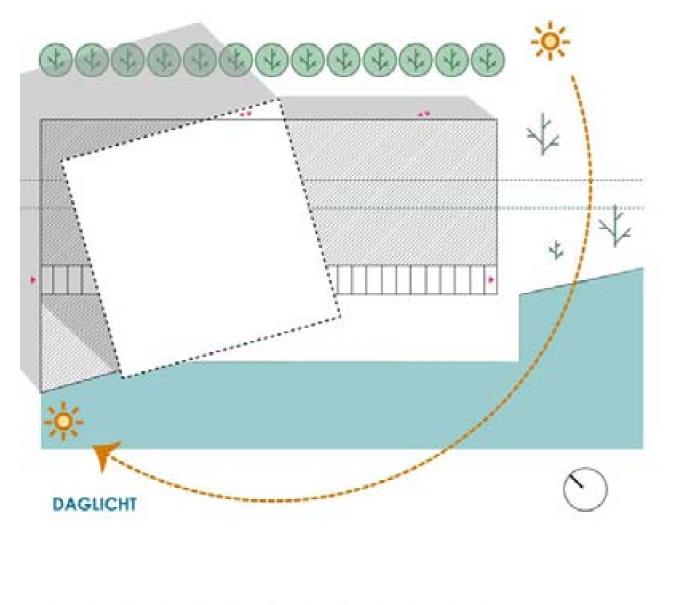
Pozzo | S.Ignazio

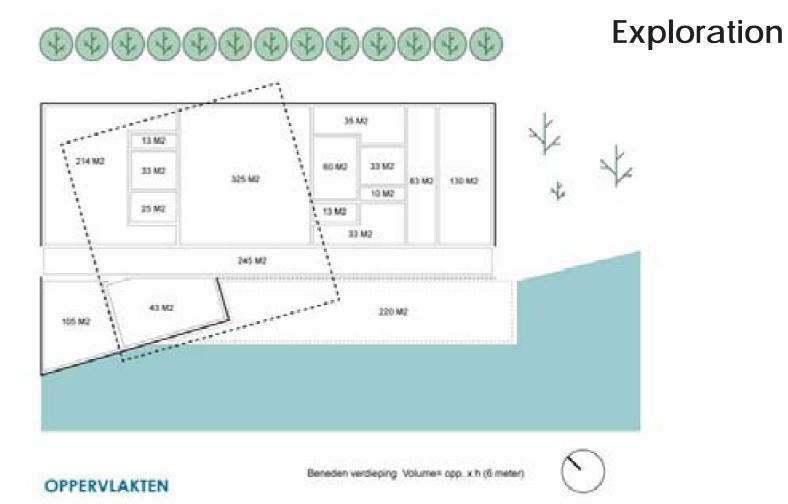


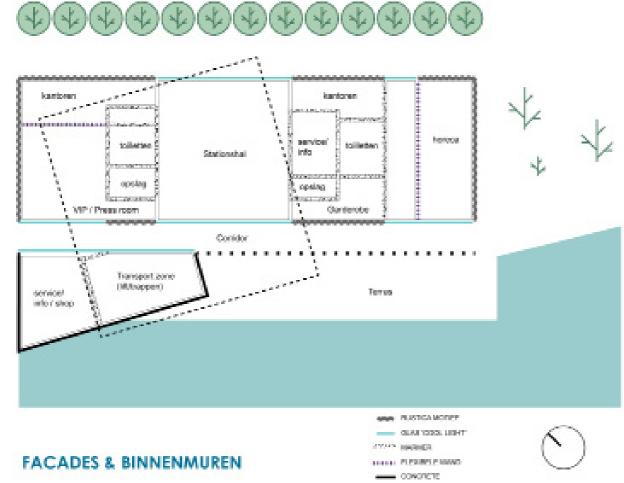
ABSTRACT DESIGN

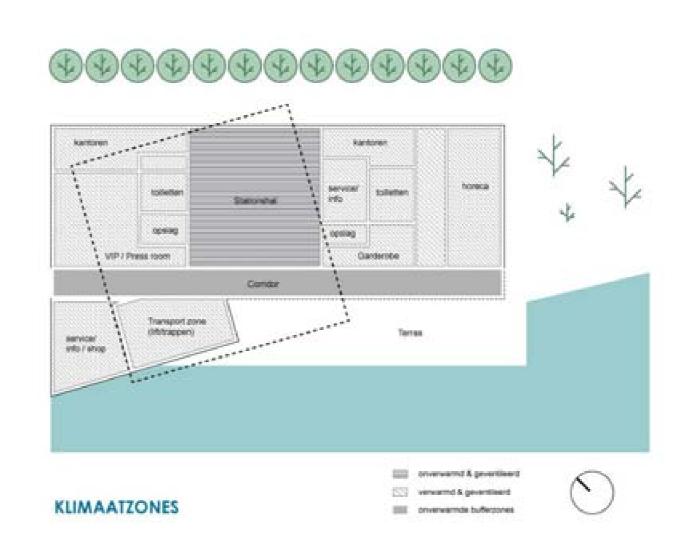


Expo bezoekers Paviljoen Station bezoekers Lightrail track Autoverkeer

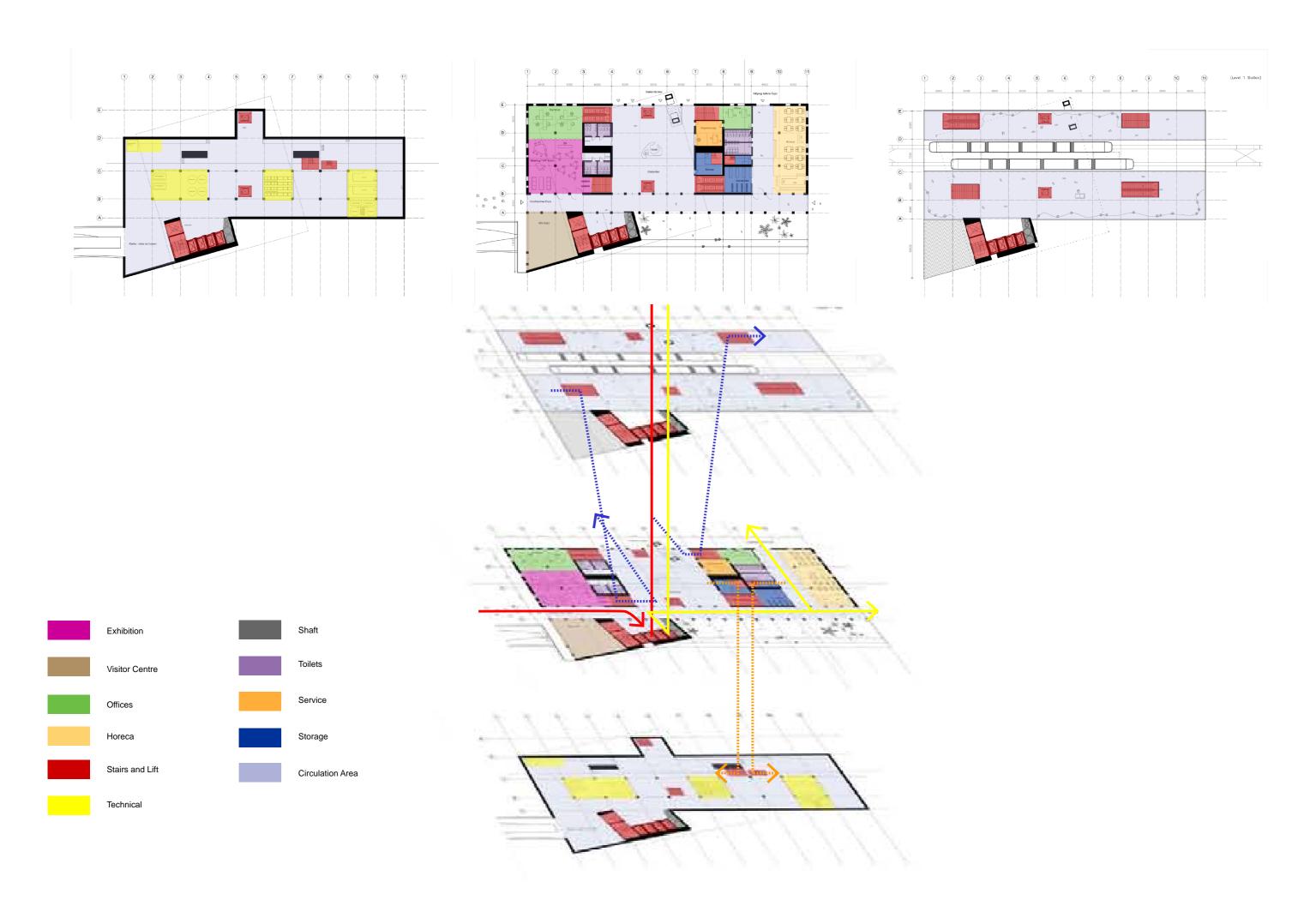




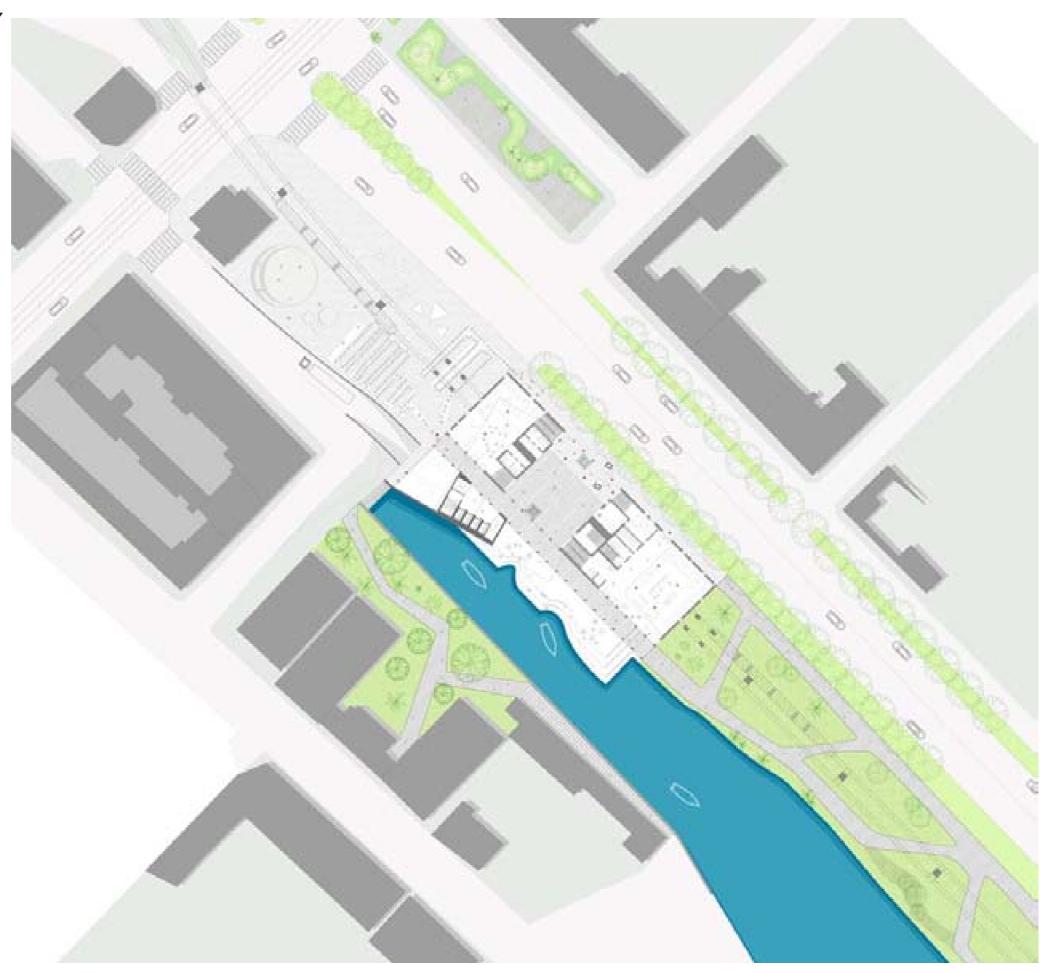




Programma & Routing Plint



URBAN SUMMARY



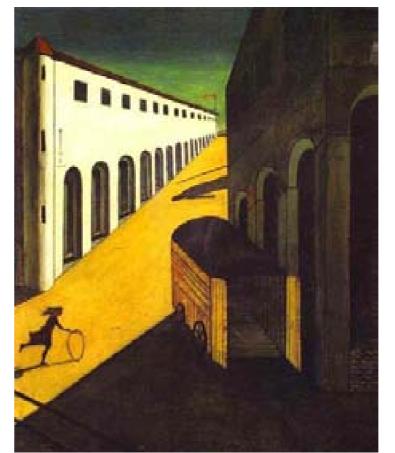
Context pavilion Scale: 1op500



GIORGIO DE CHIRICO



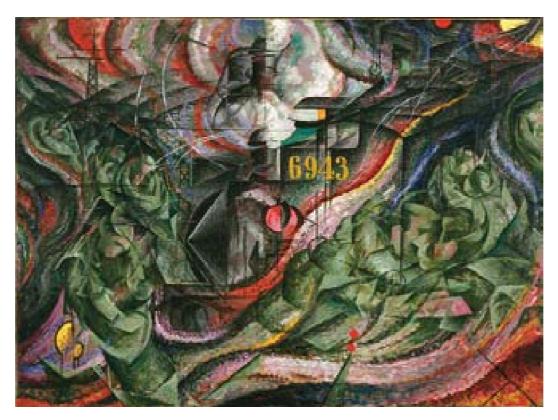






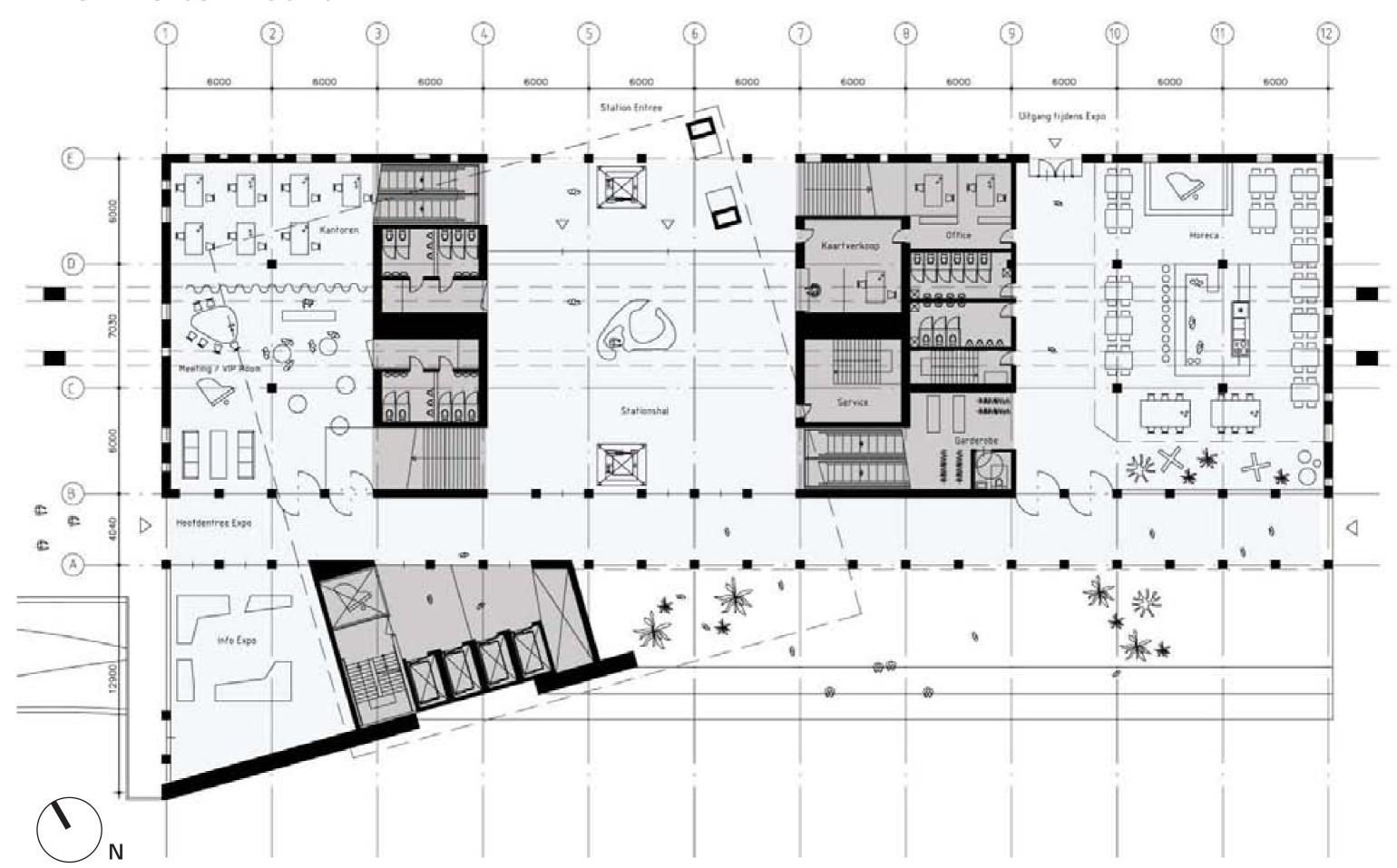
Tomaso Marinetti



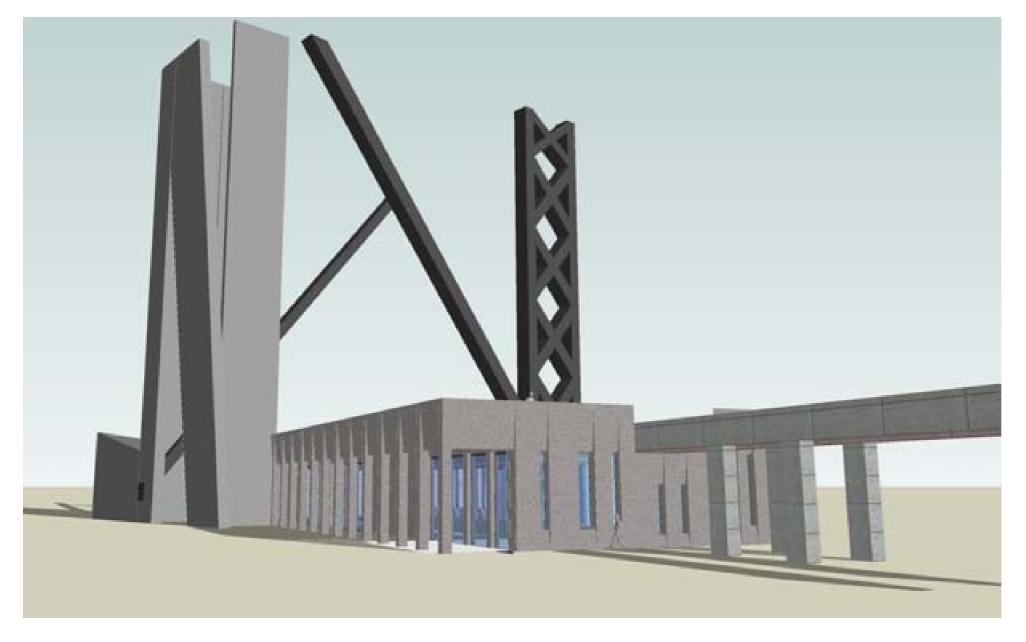


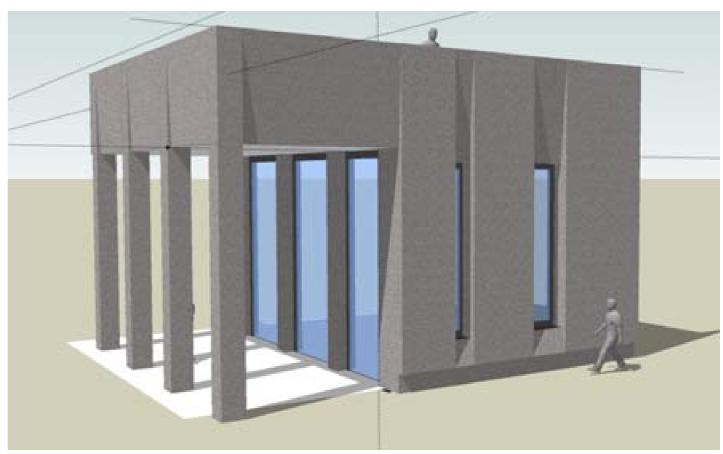


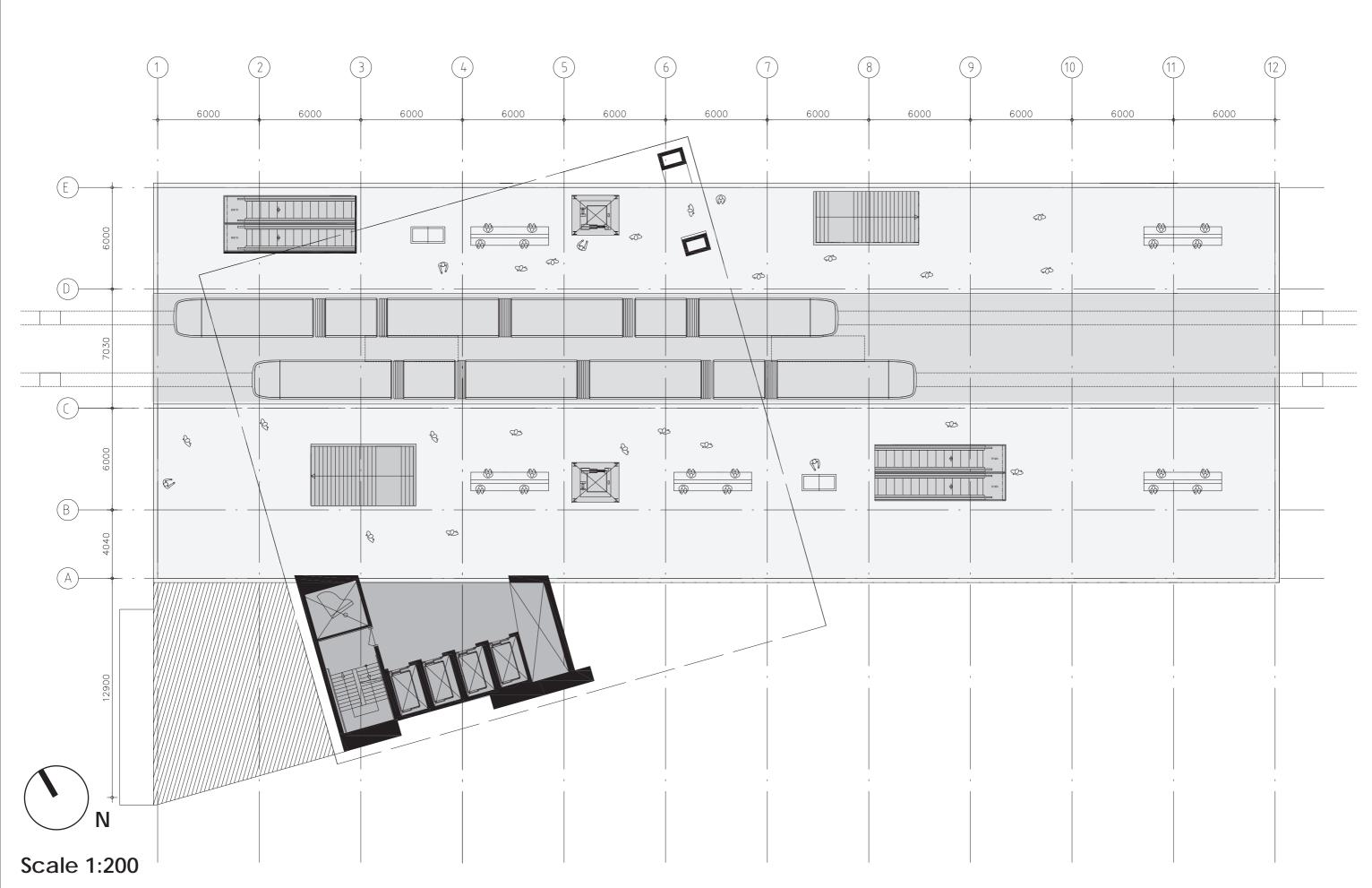
BG GROUNDFLOOR 0.2 -NAP

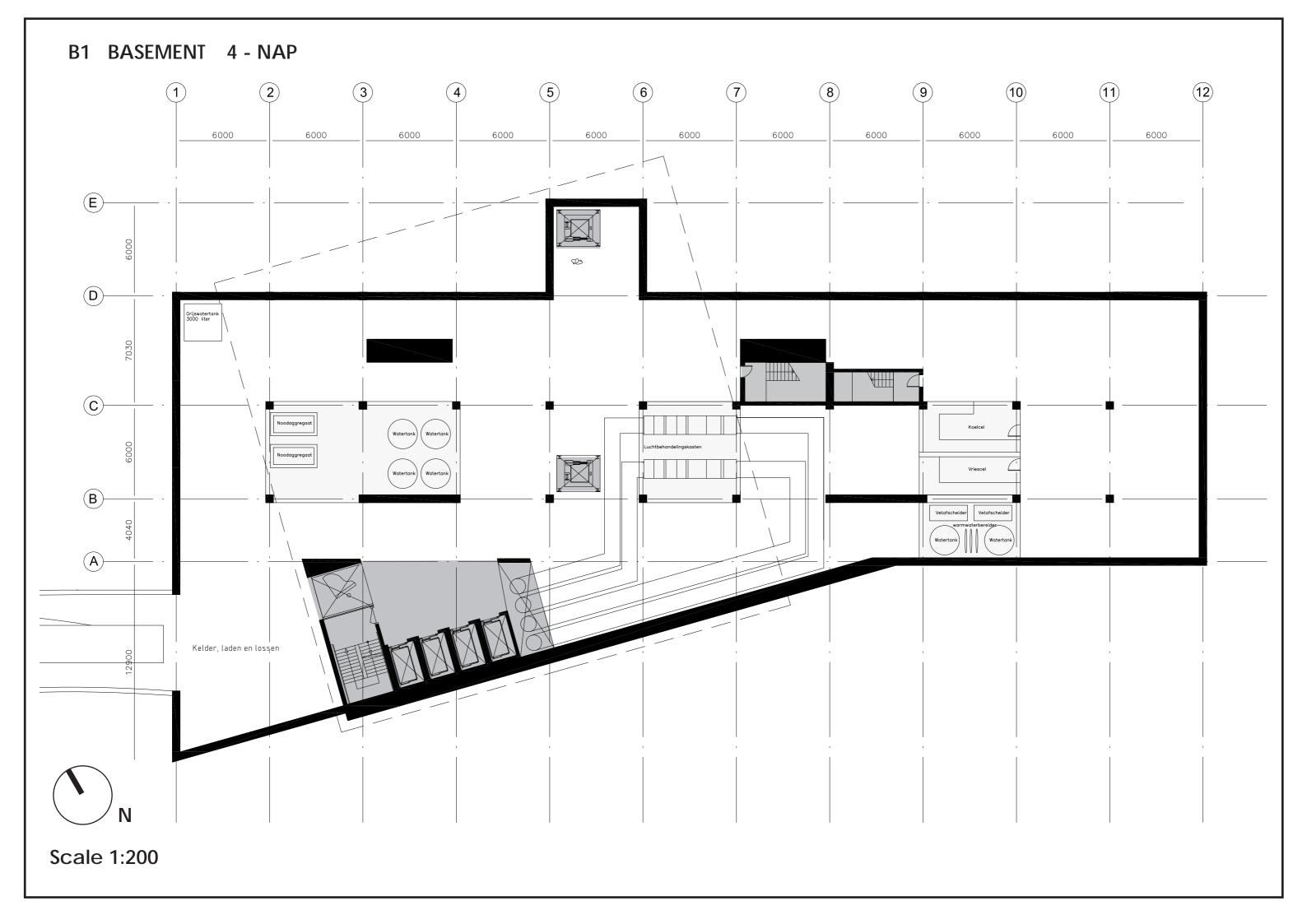


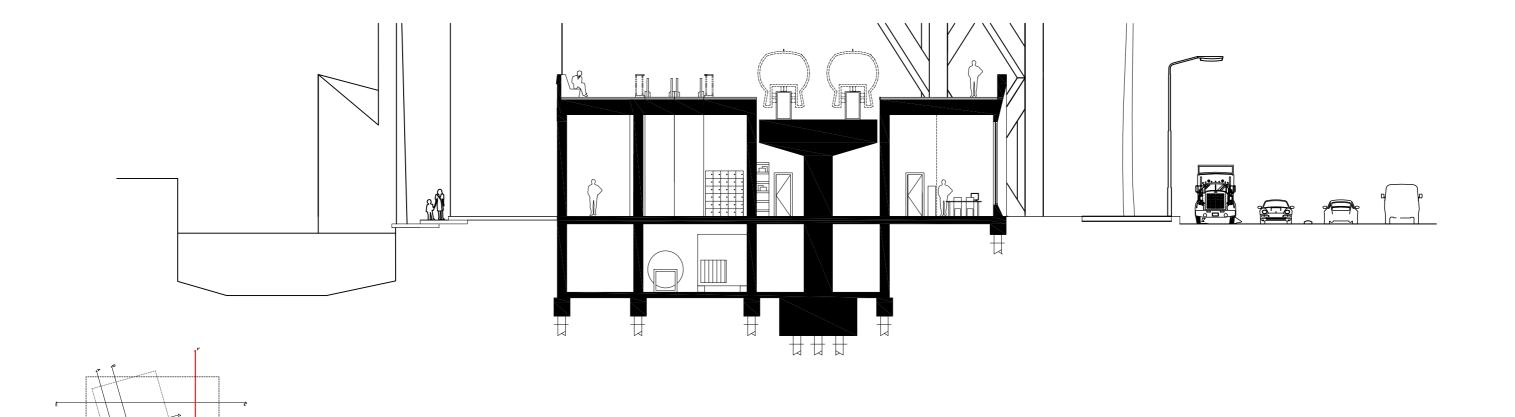
Scale 1:200





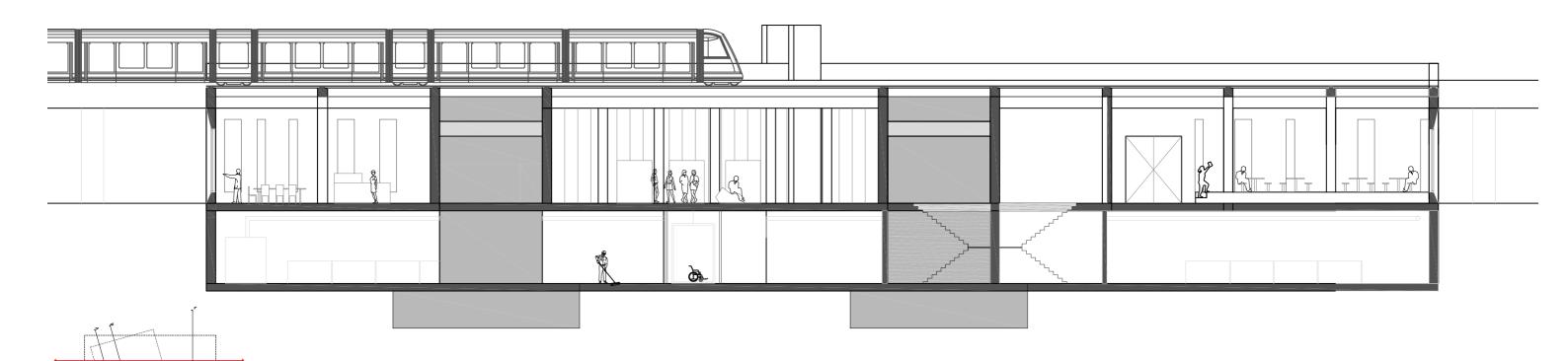






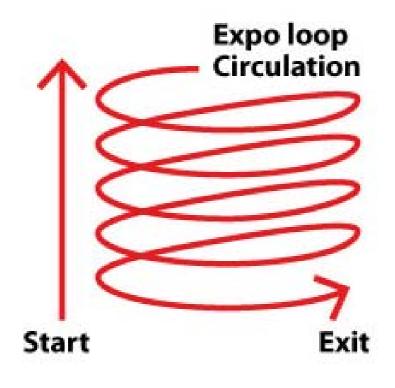
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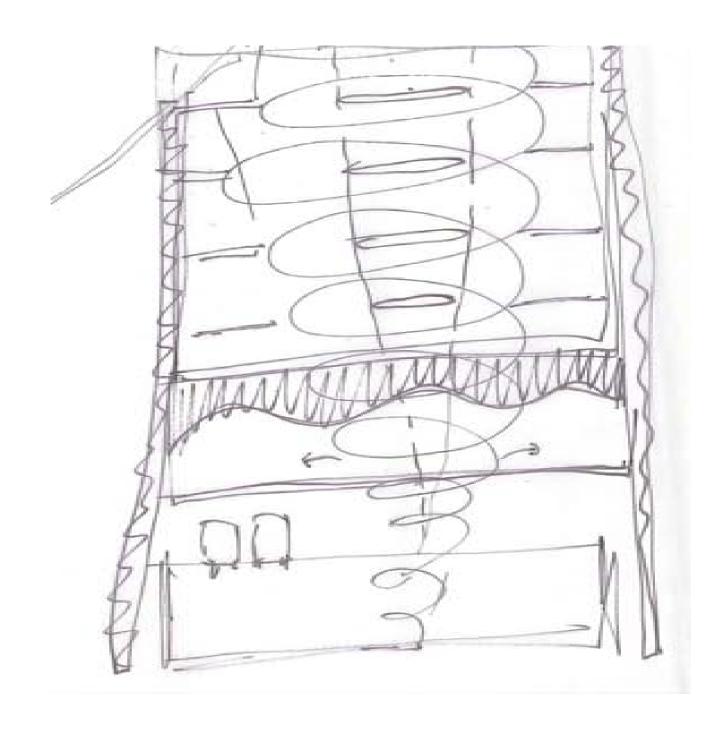
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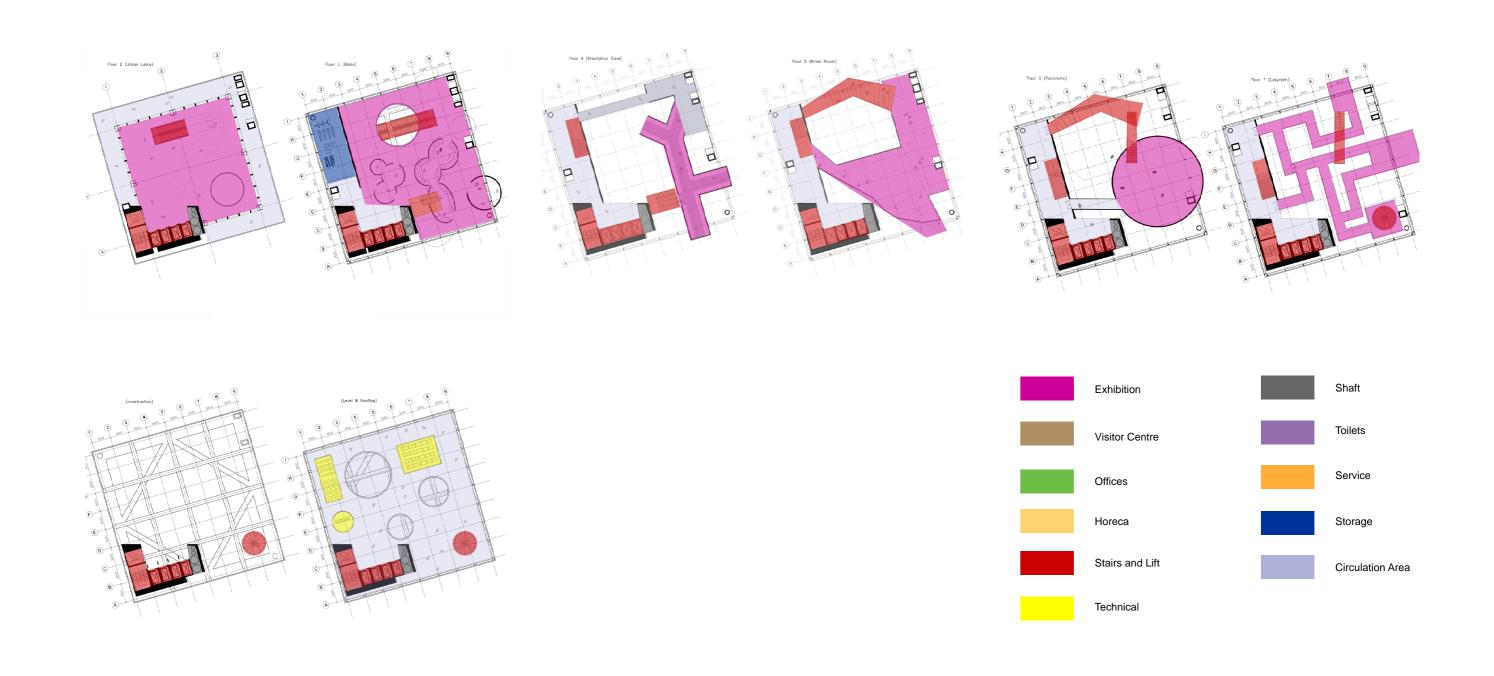
PART B: THE BOX DURING EXPO

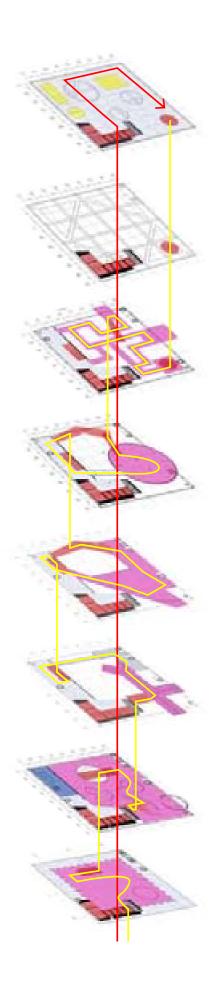
ABSTRACT ROUTING BOX





Programma & Routing Box



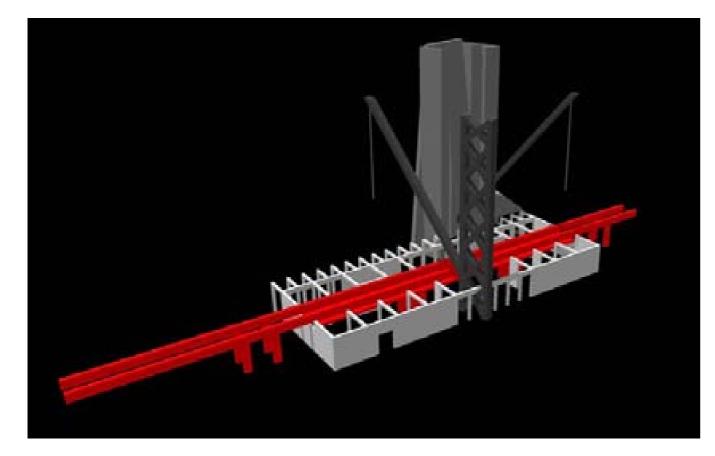




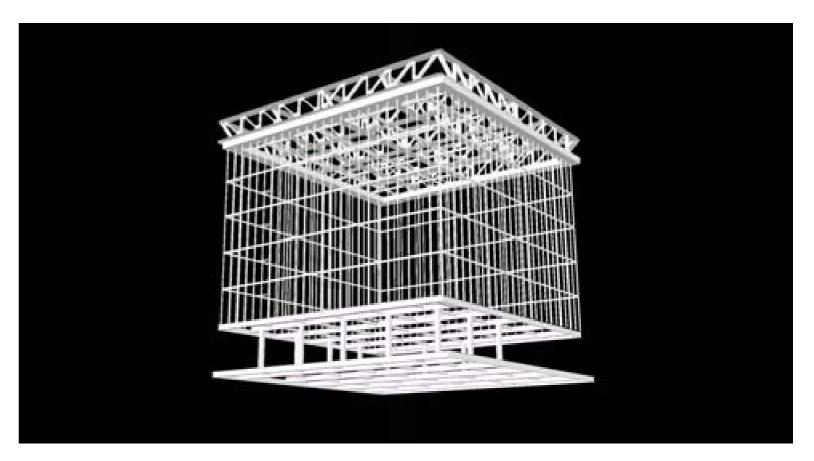


Rigid structure for flexible use.

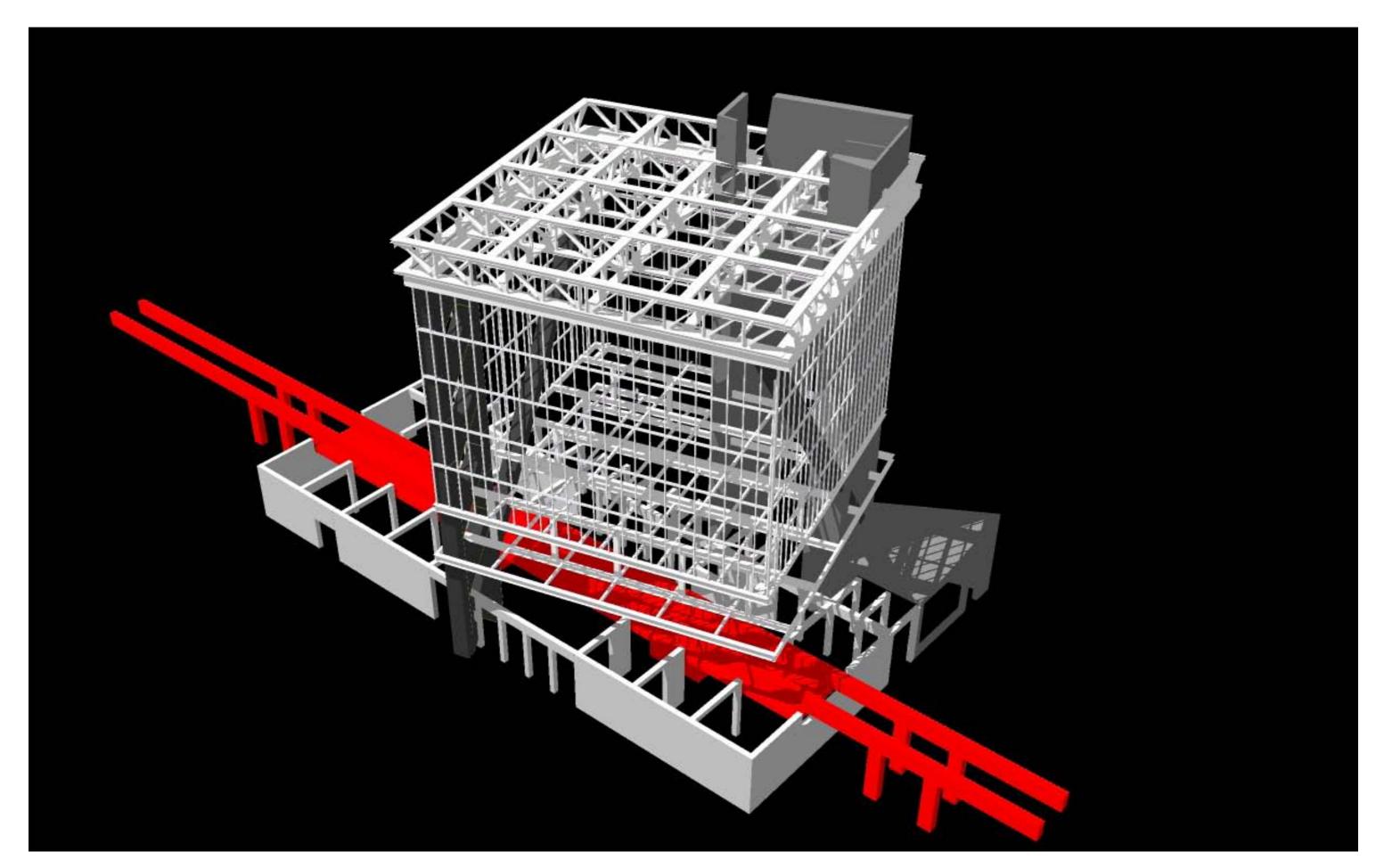
CONSTRUCTION



Structure plinth lightrail track & Cores



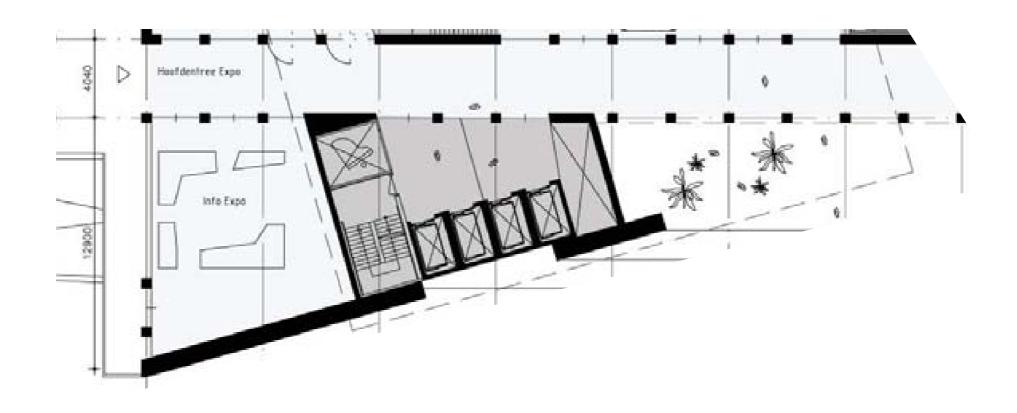
Structure for flexible Floorplans & Facade



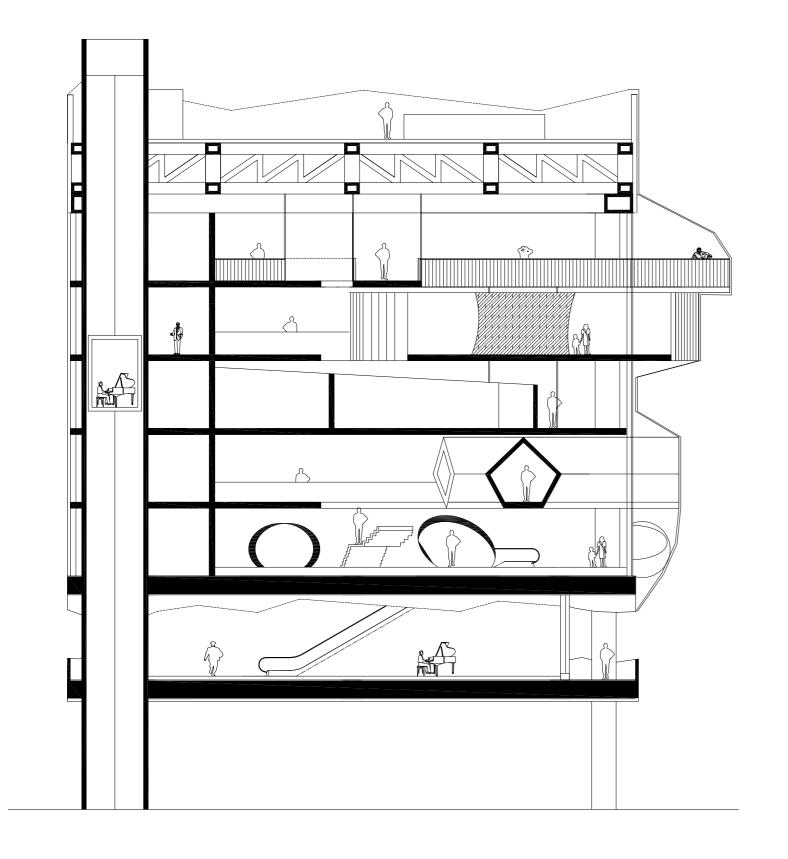
Construction Scheme 3D

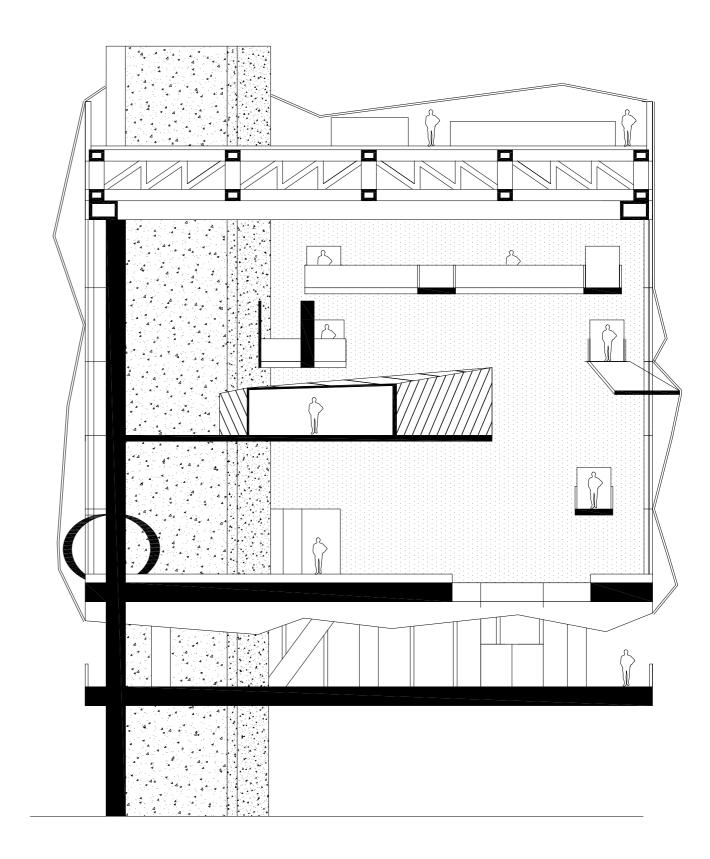
THE BOX EXPO FUNCTIONALITY

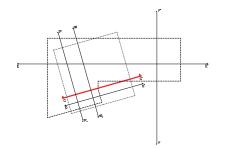
START

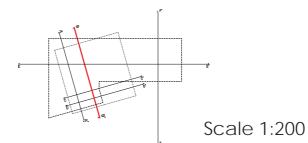


SECTIONS EXPO BOX

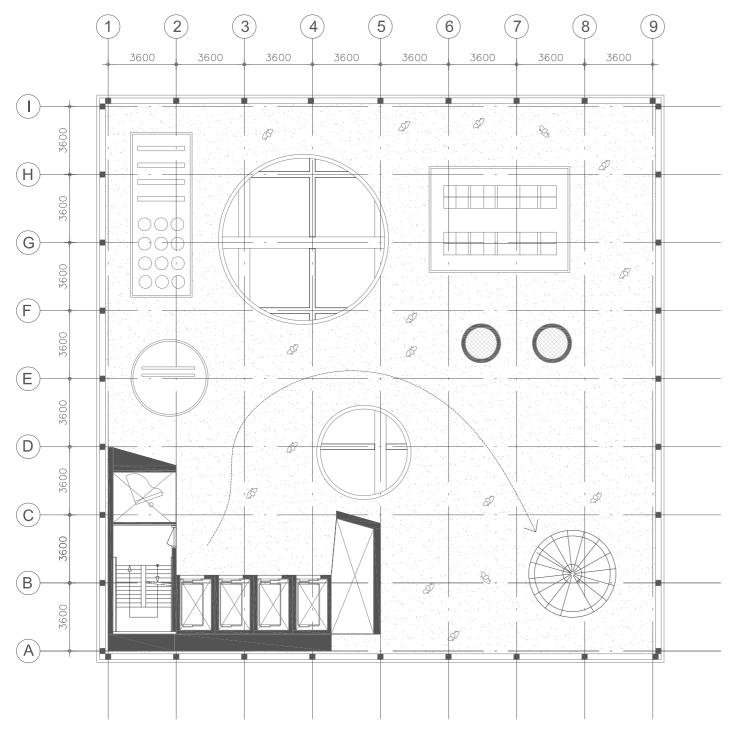


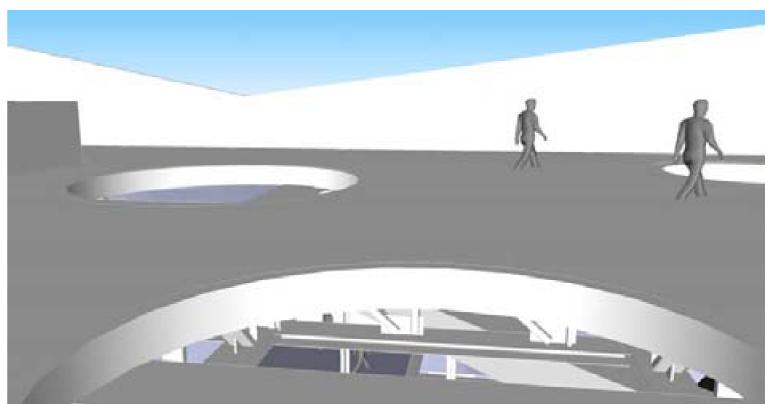




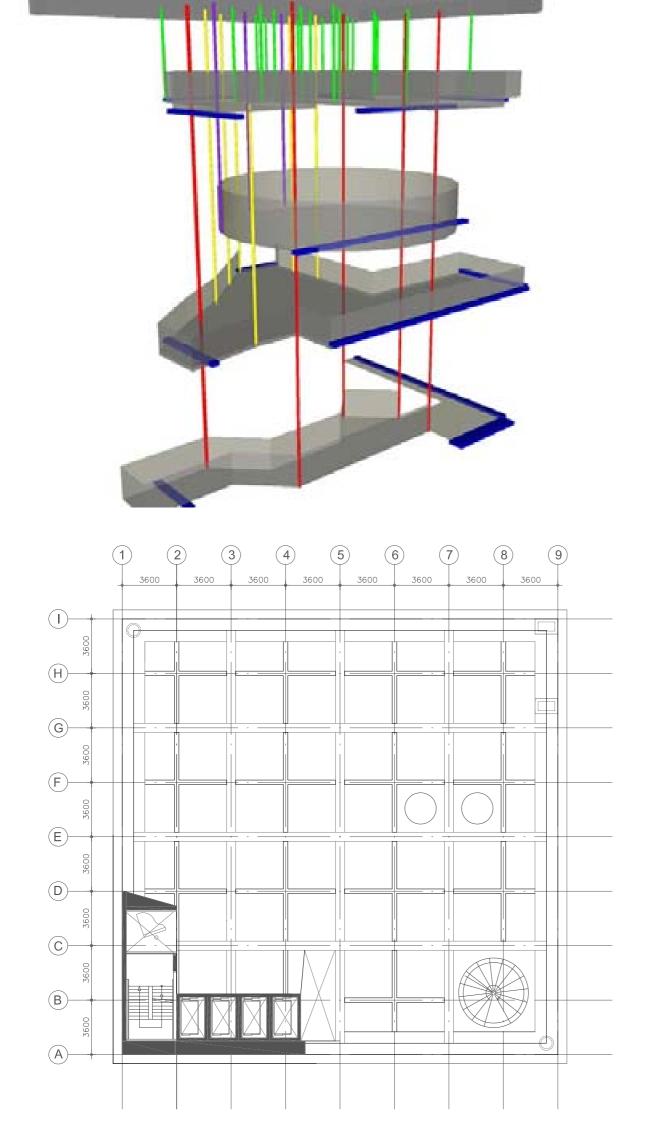


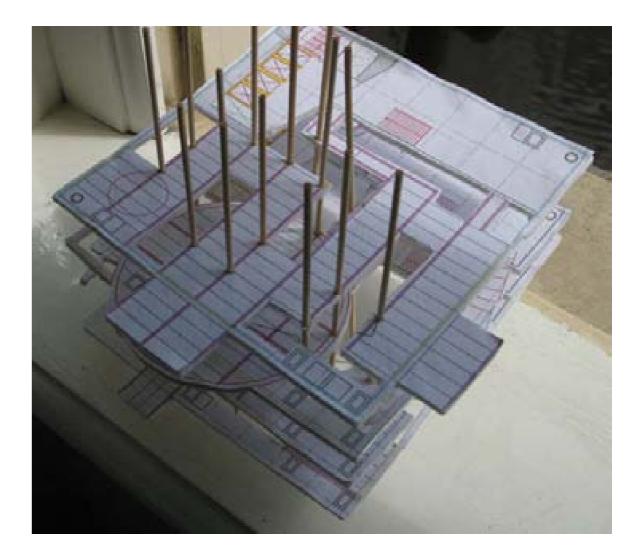
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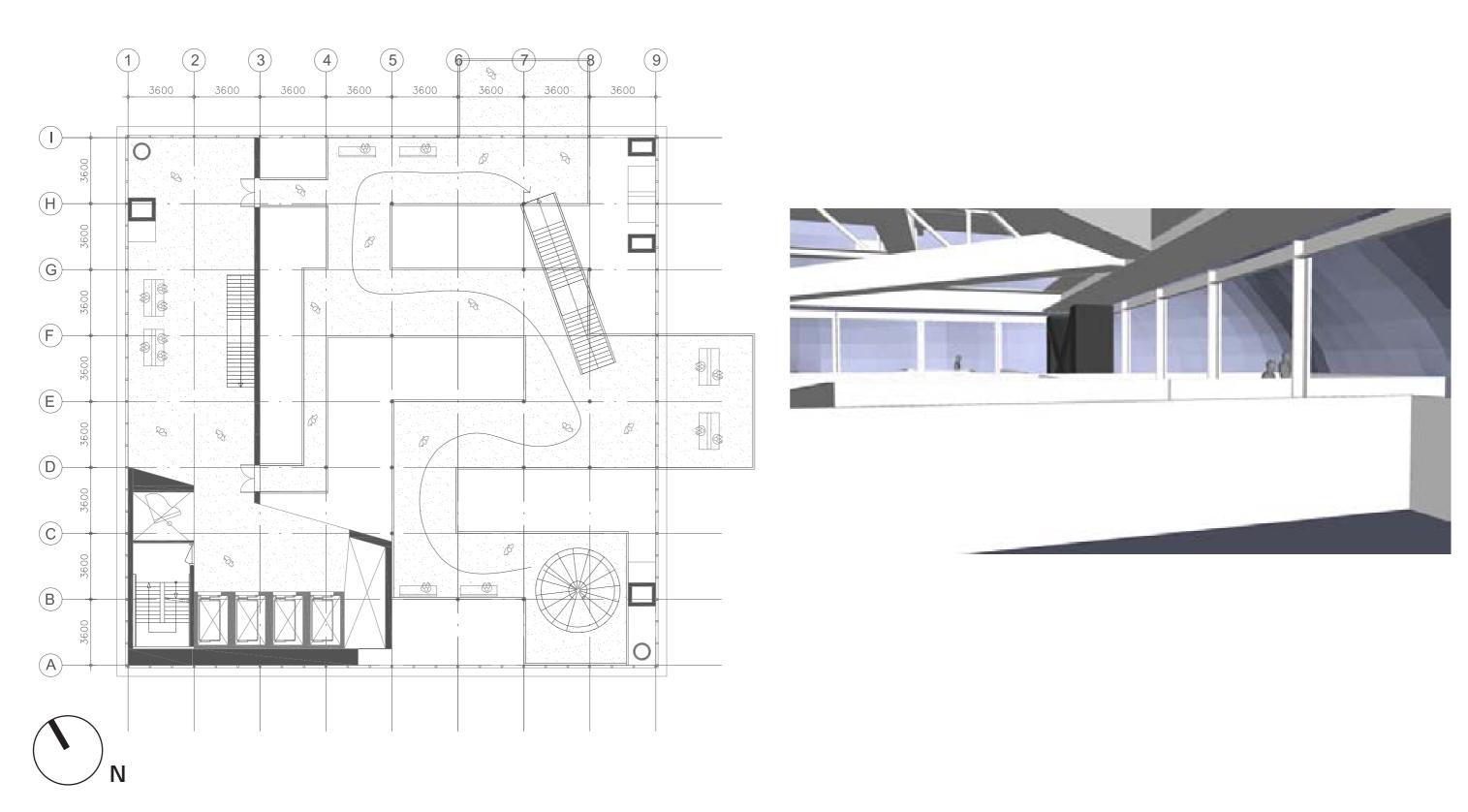






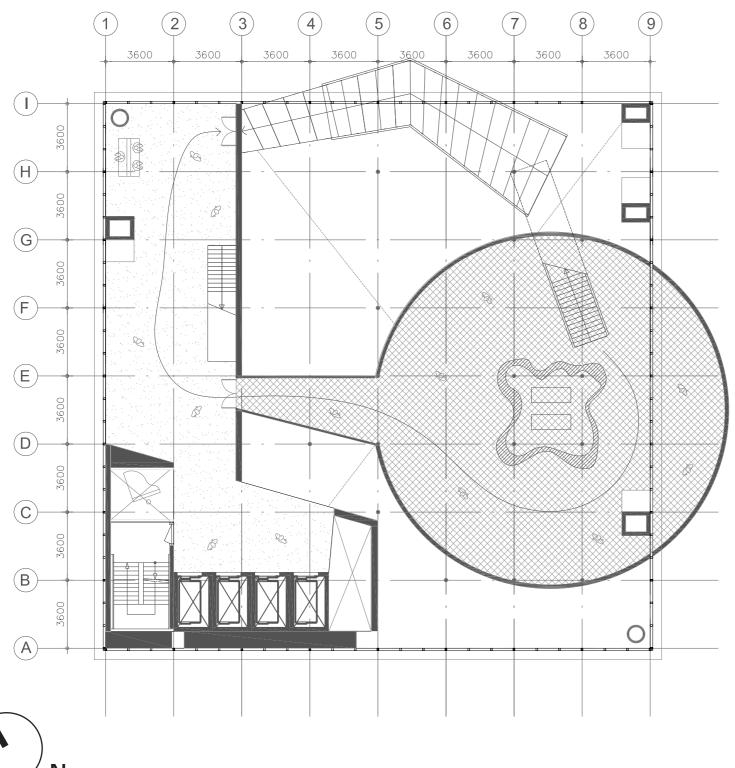


L7 LABYRINTH 32.30 +NAP

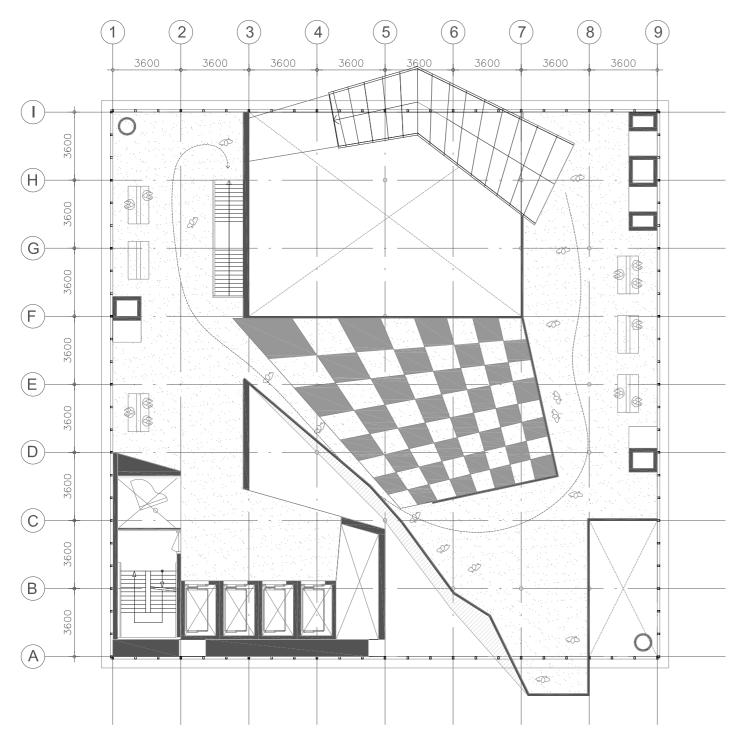


Scale 1:200

L6 PANORAMA 28.40 +NAP



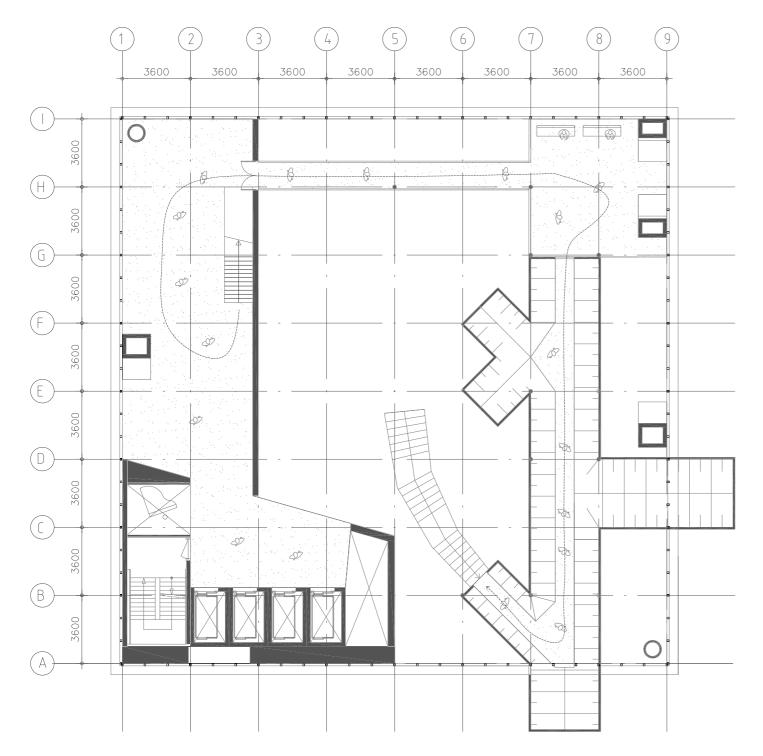








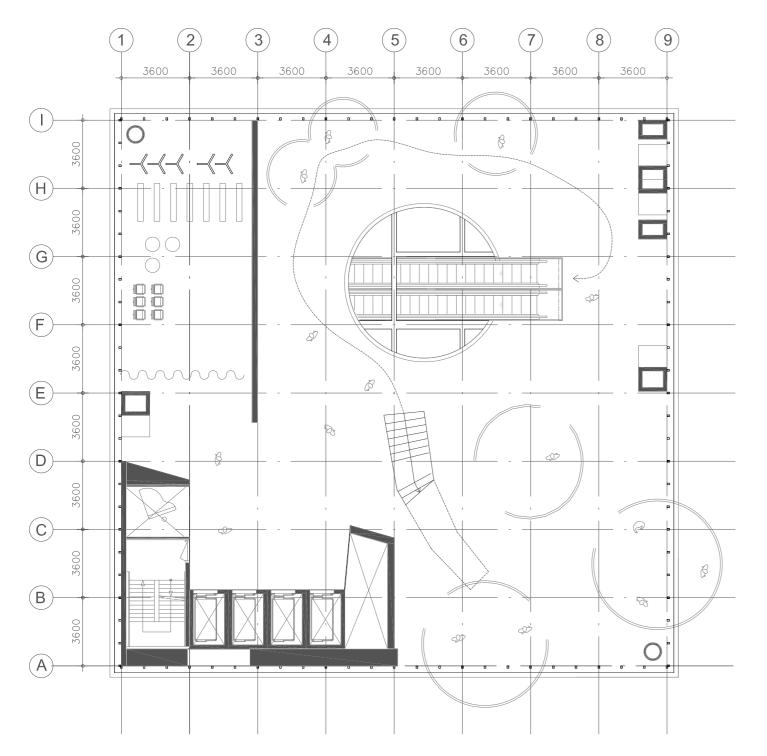
L4 GRAVITATION 20.60 +NAP

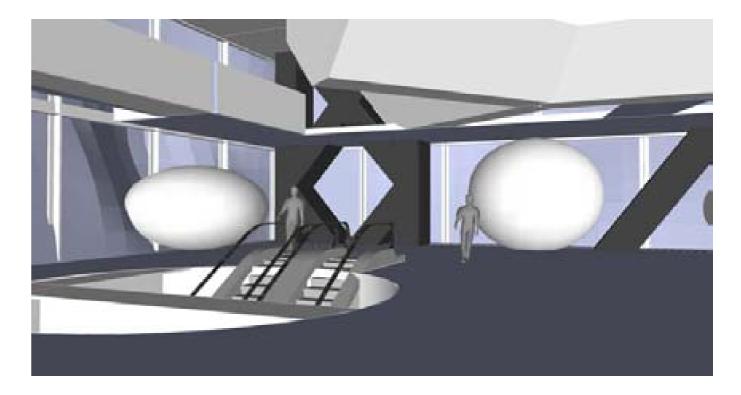






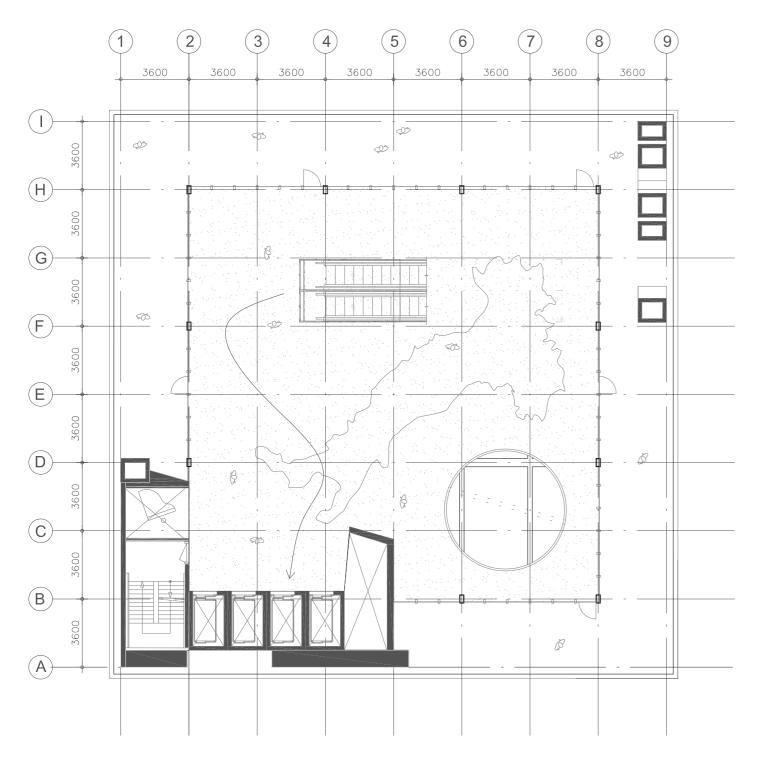
L3 STAGE 16.70 +NAP

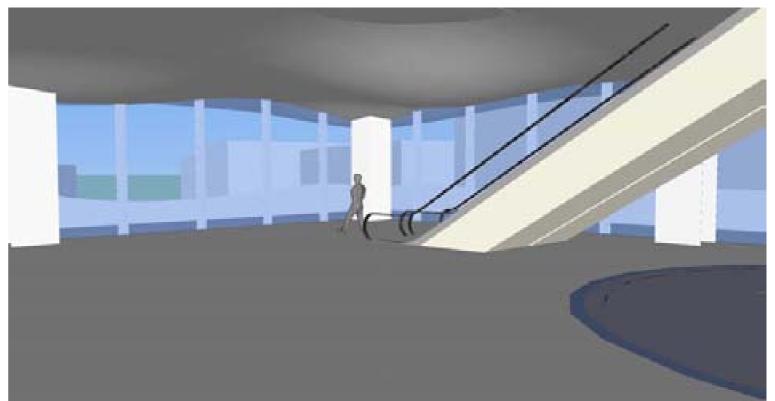






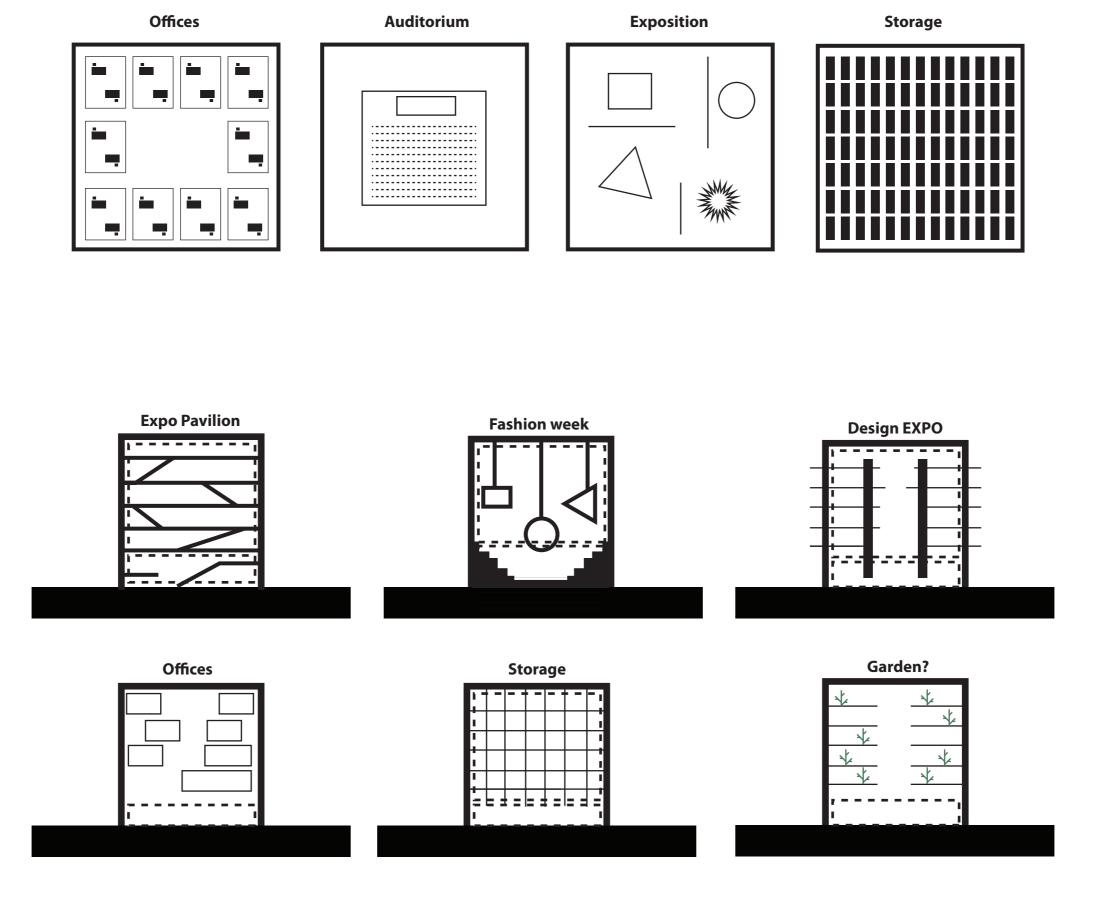
L2 LOBBY 11.10 +NAP







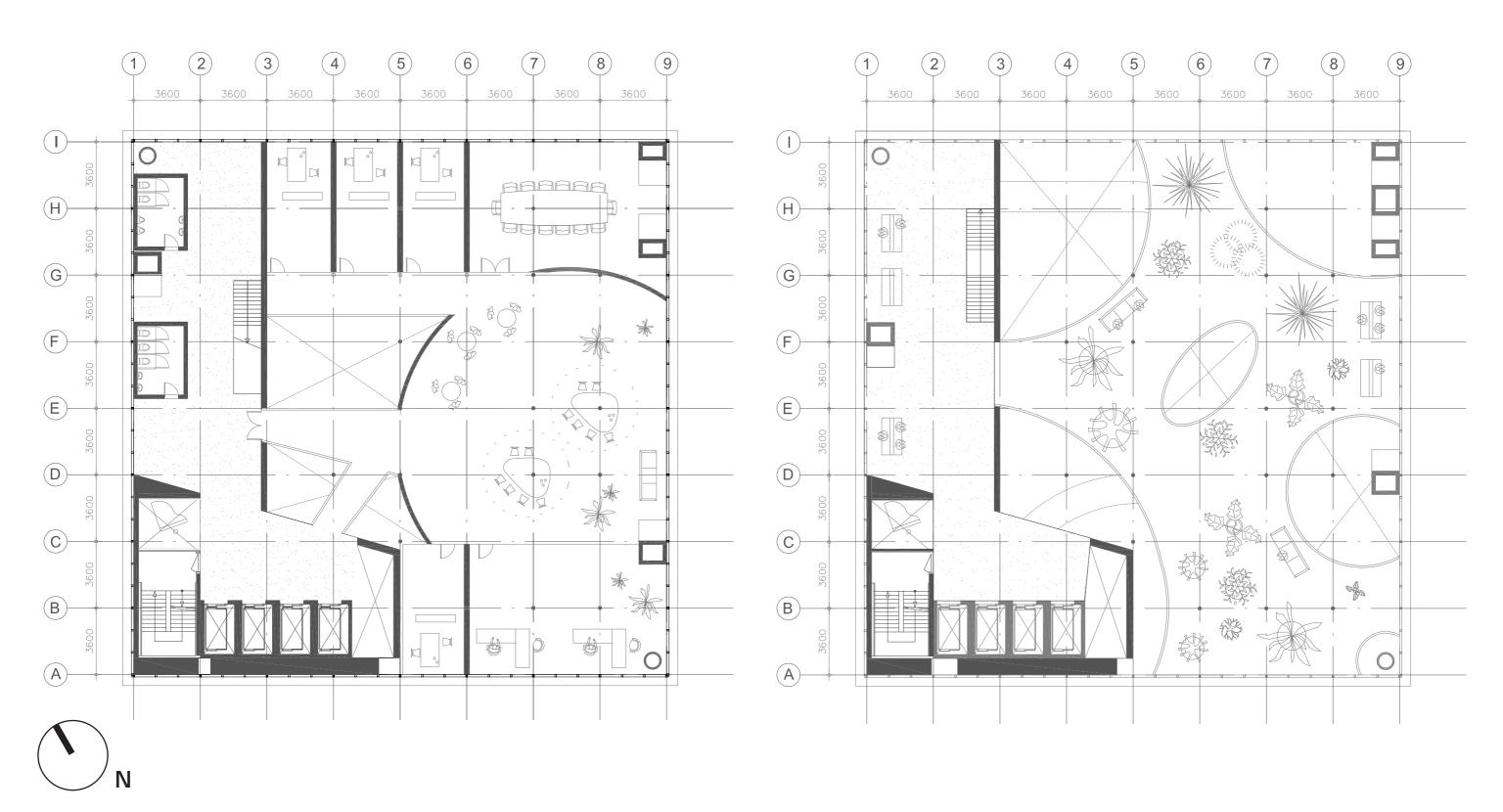
THE BOX AFTERUSE FUNCTIONALITY

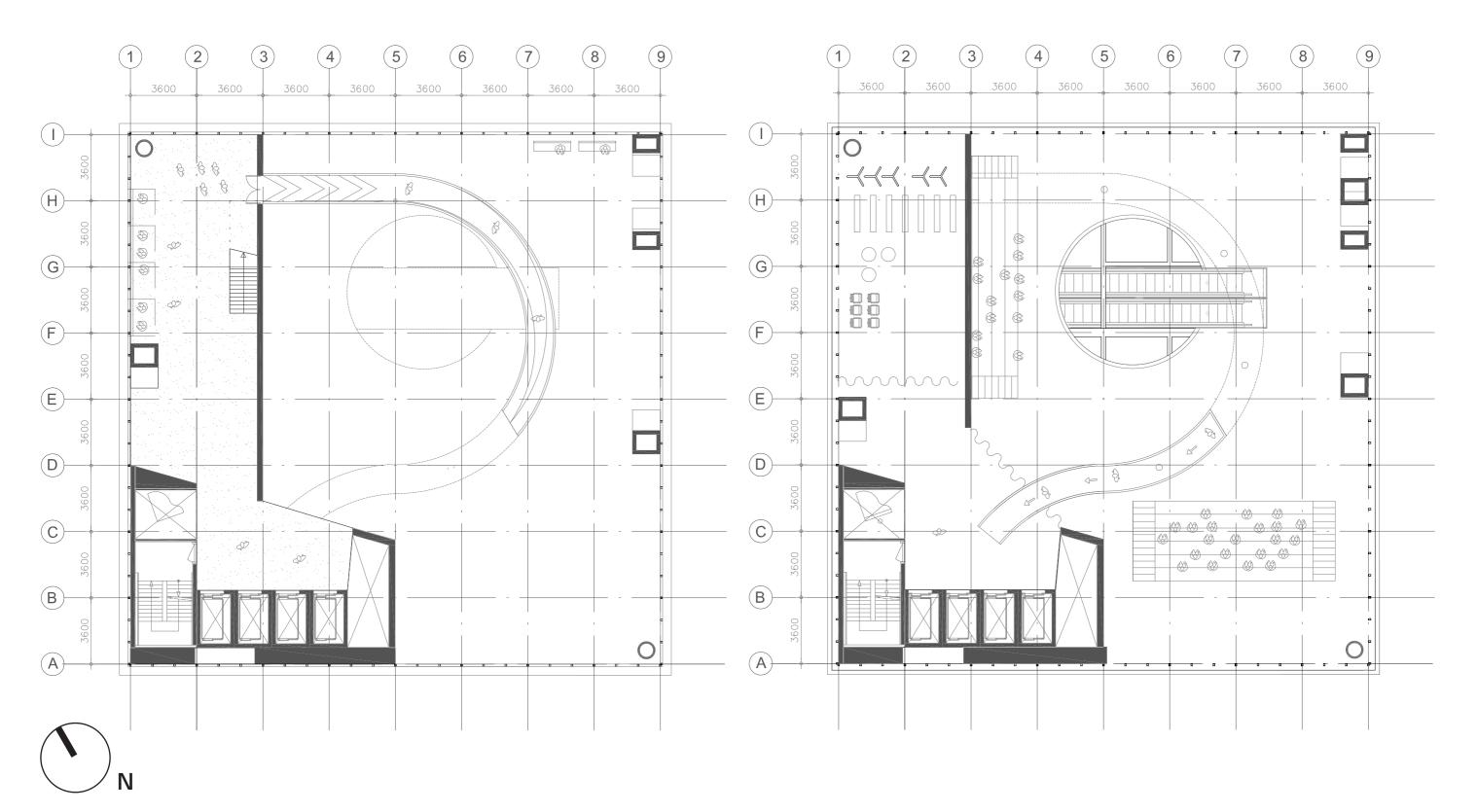


AFTER-USE EXAMPLES

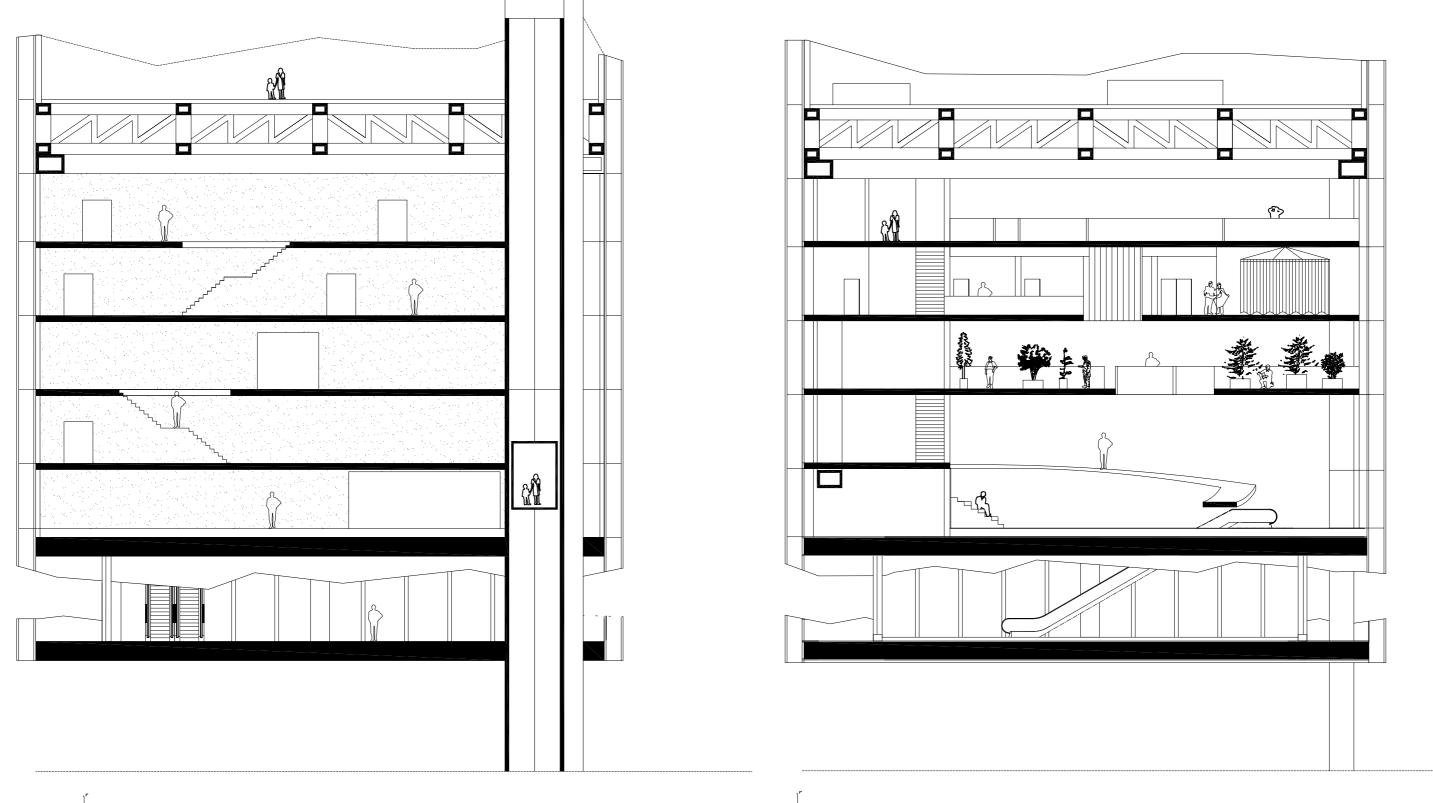
L6 OFFICE 28.40 +NAP

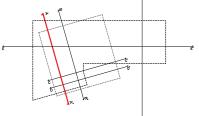
L5 ORANGERIE 24.50 +NAP





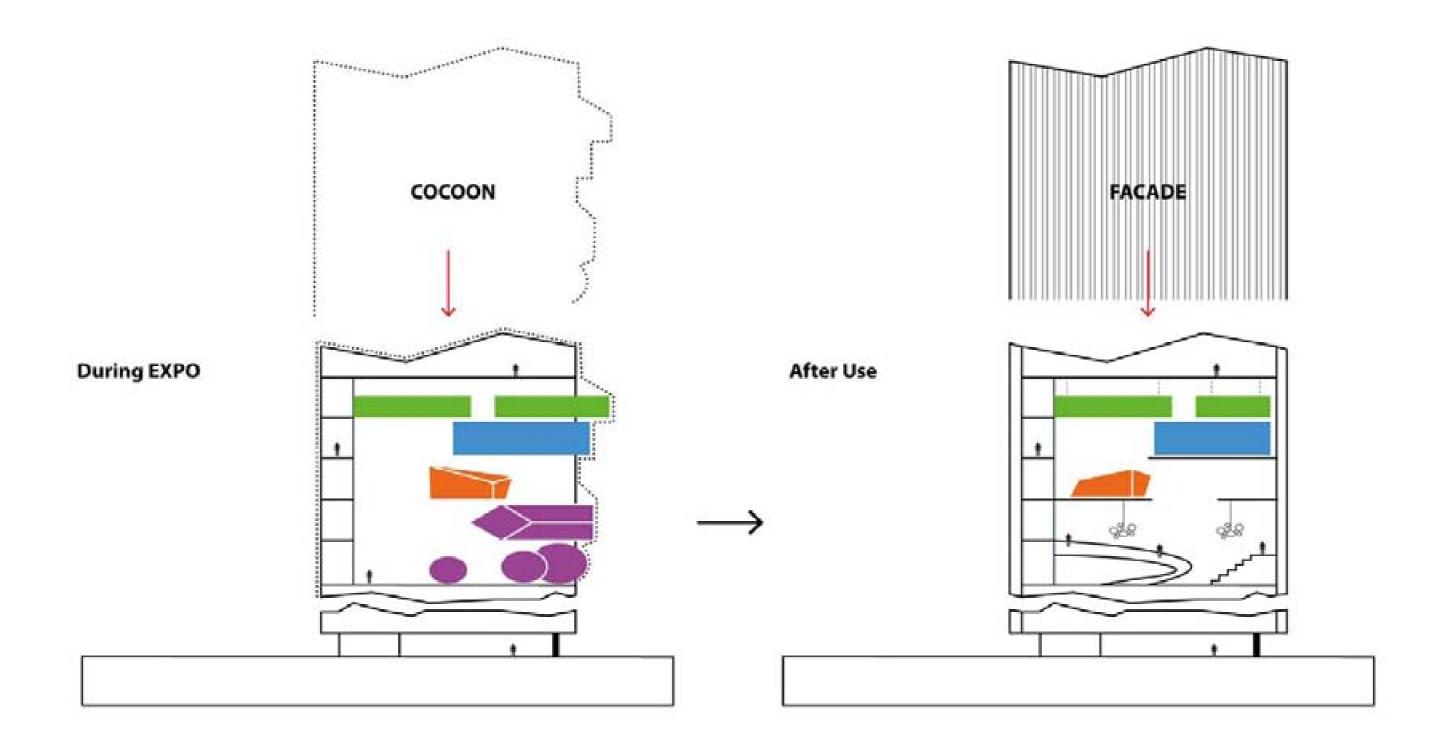
SECTIONS AFTERUSE

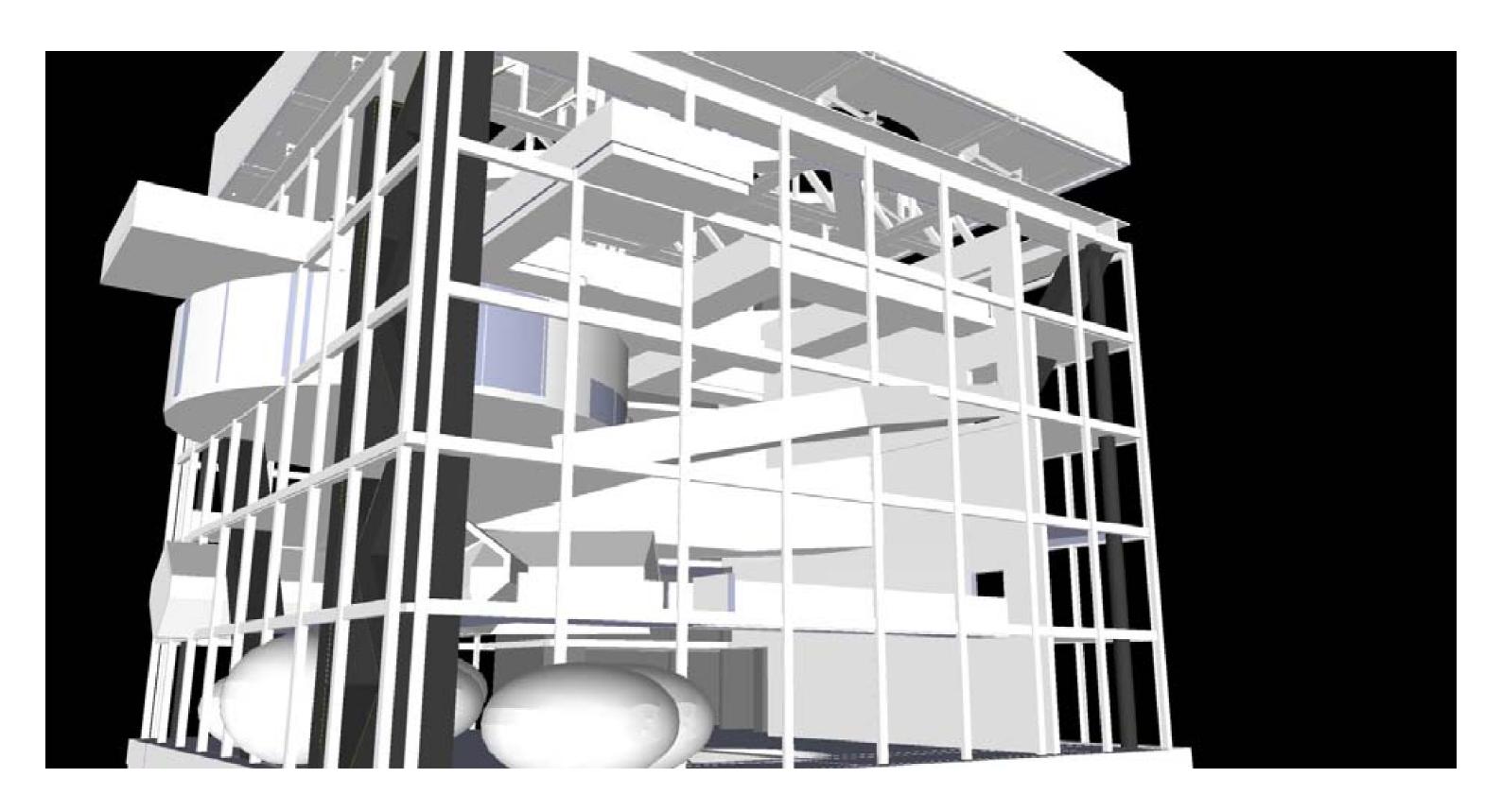




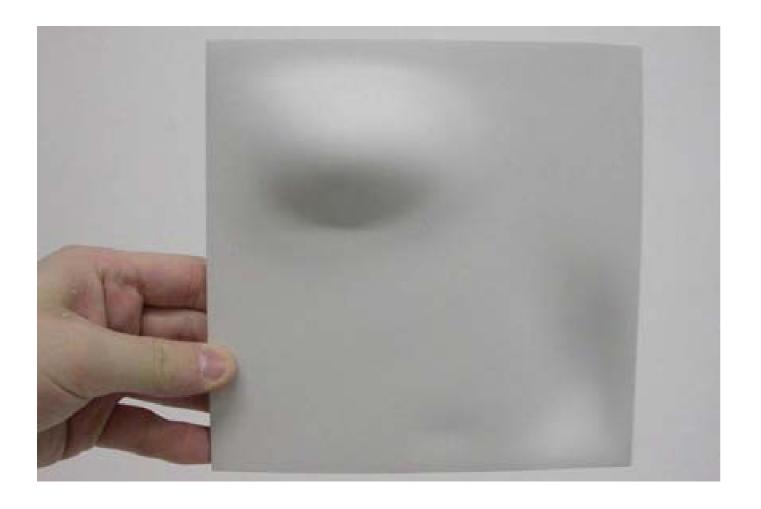


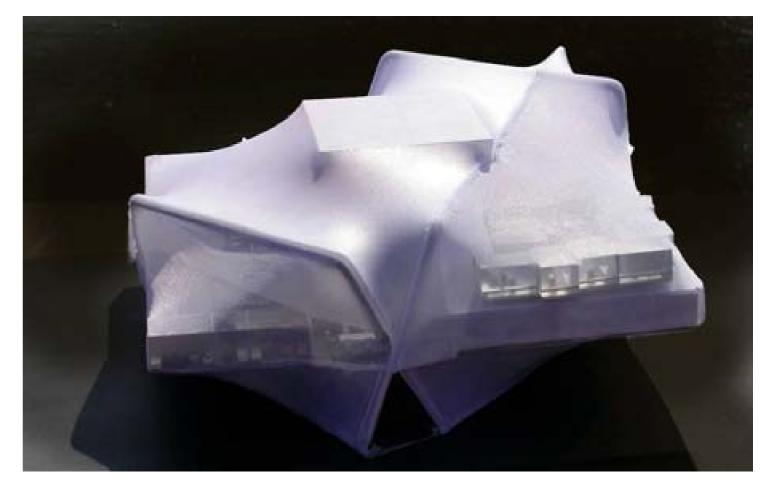
THE BOX MATERIALISATION

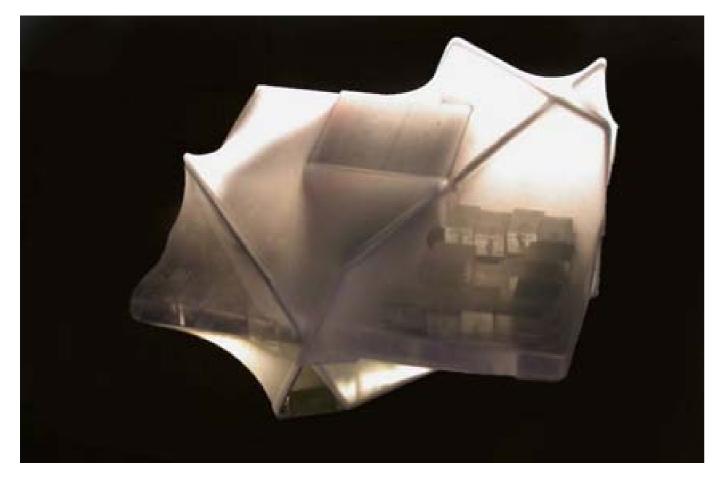




Box materialisation EXPO





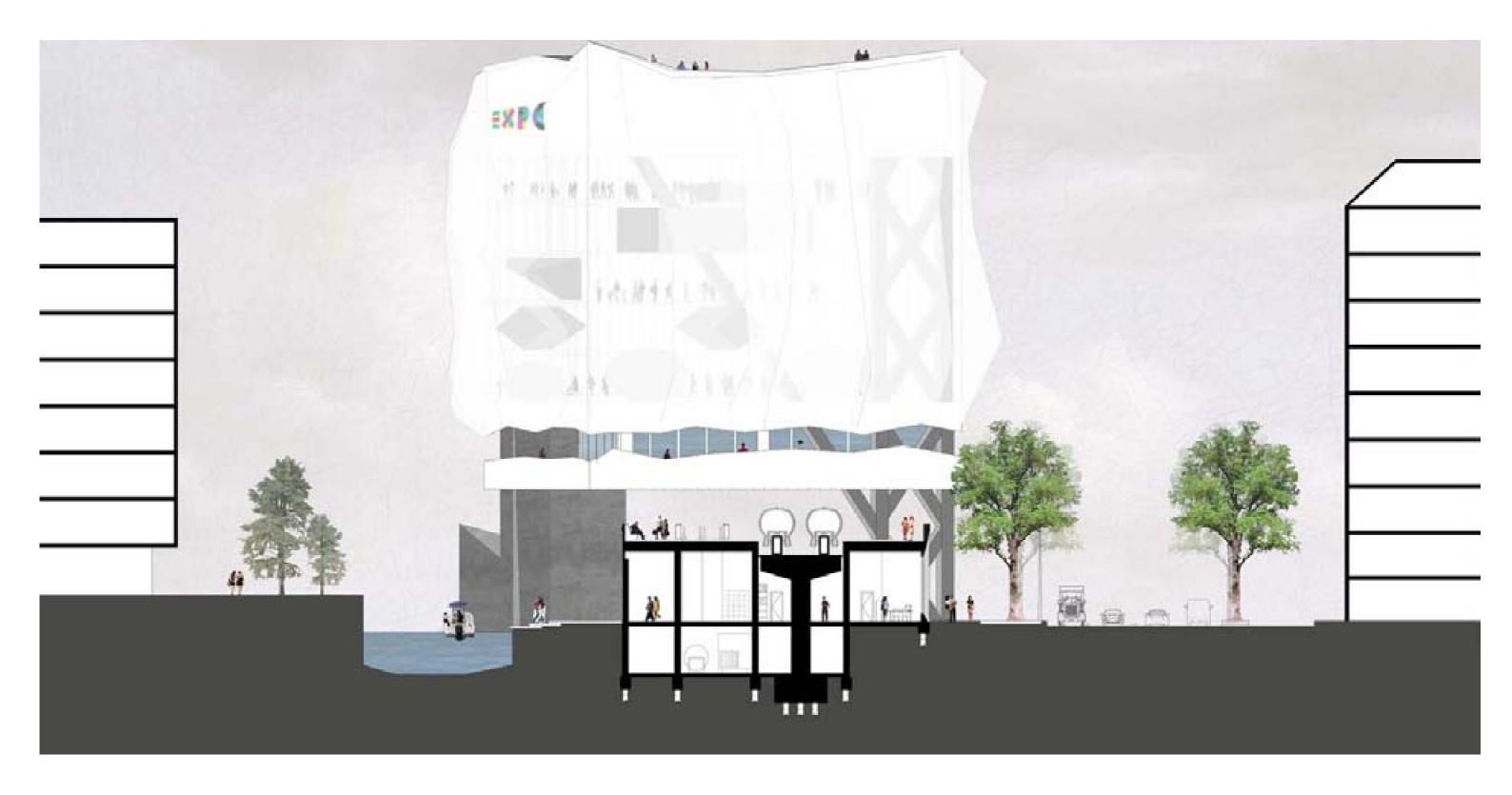








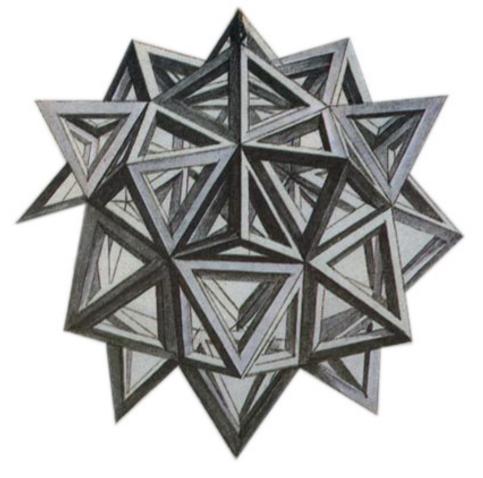
EXPO



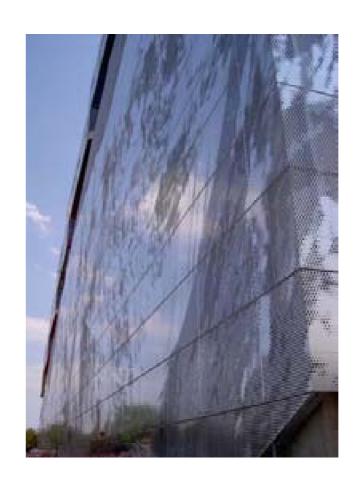


Aanzicht Facade entree Station_ Schaal 1:200

AFTERUSE









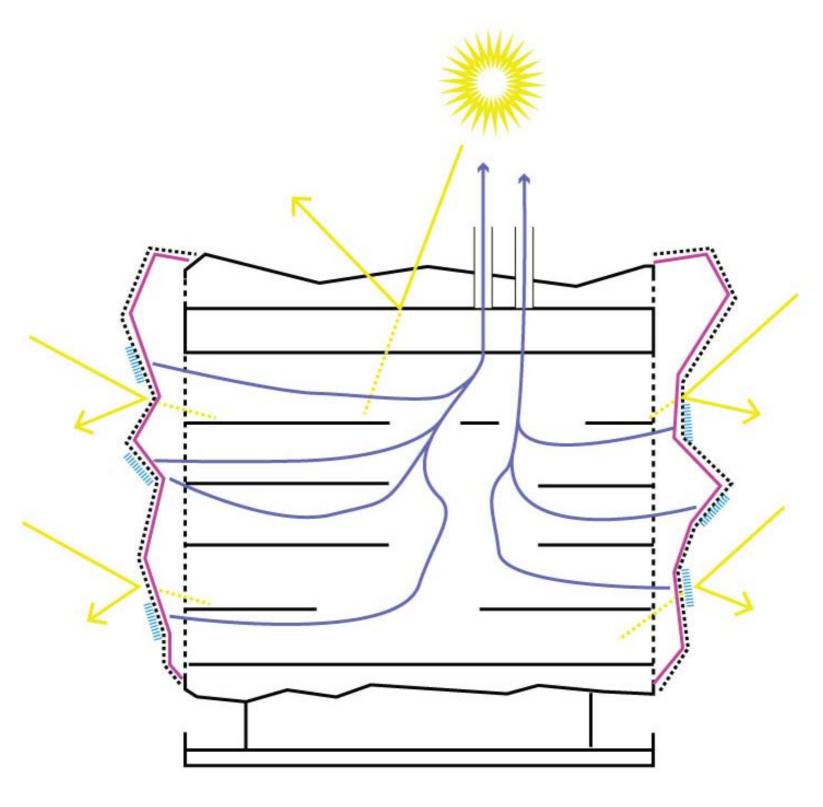
AFTERUSE



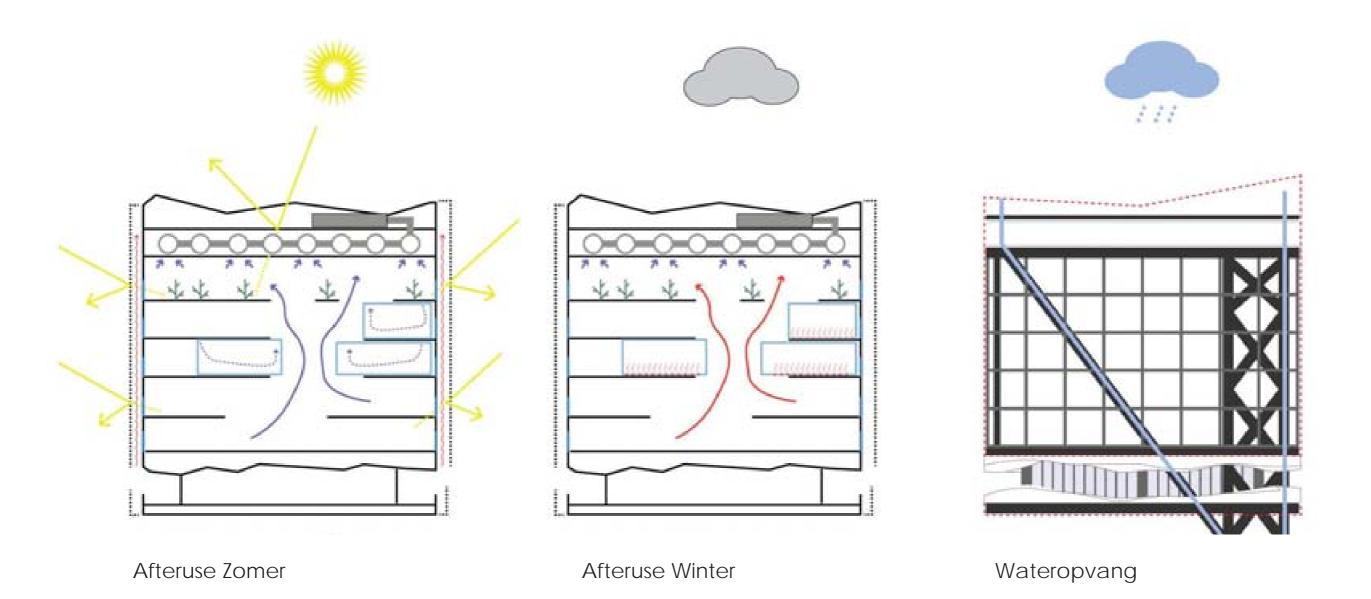
AFTERUSE



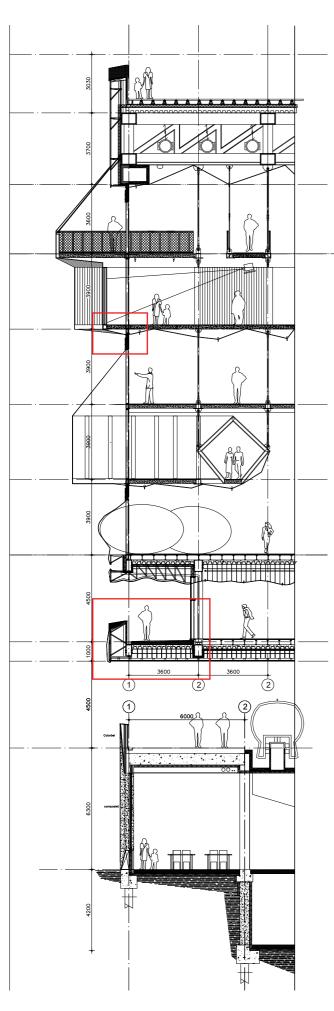


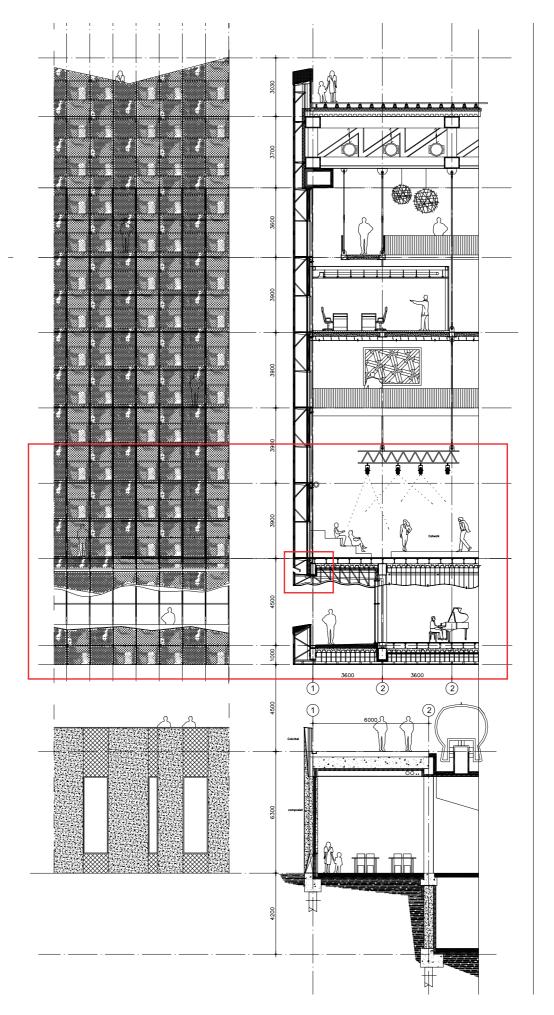


Expo situatie



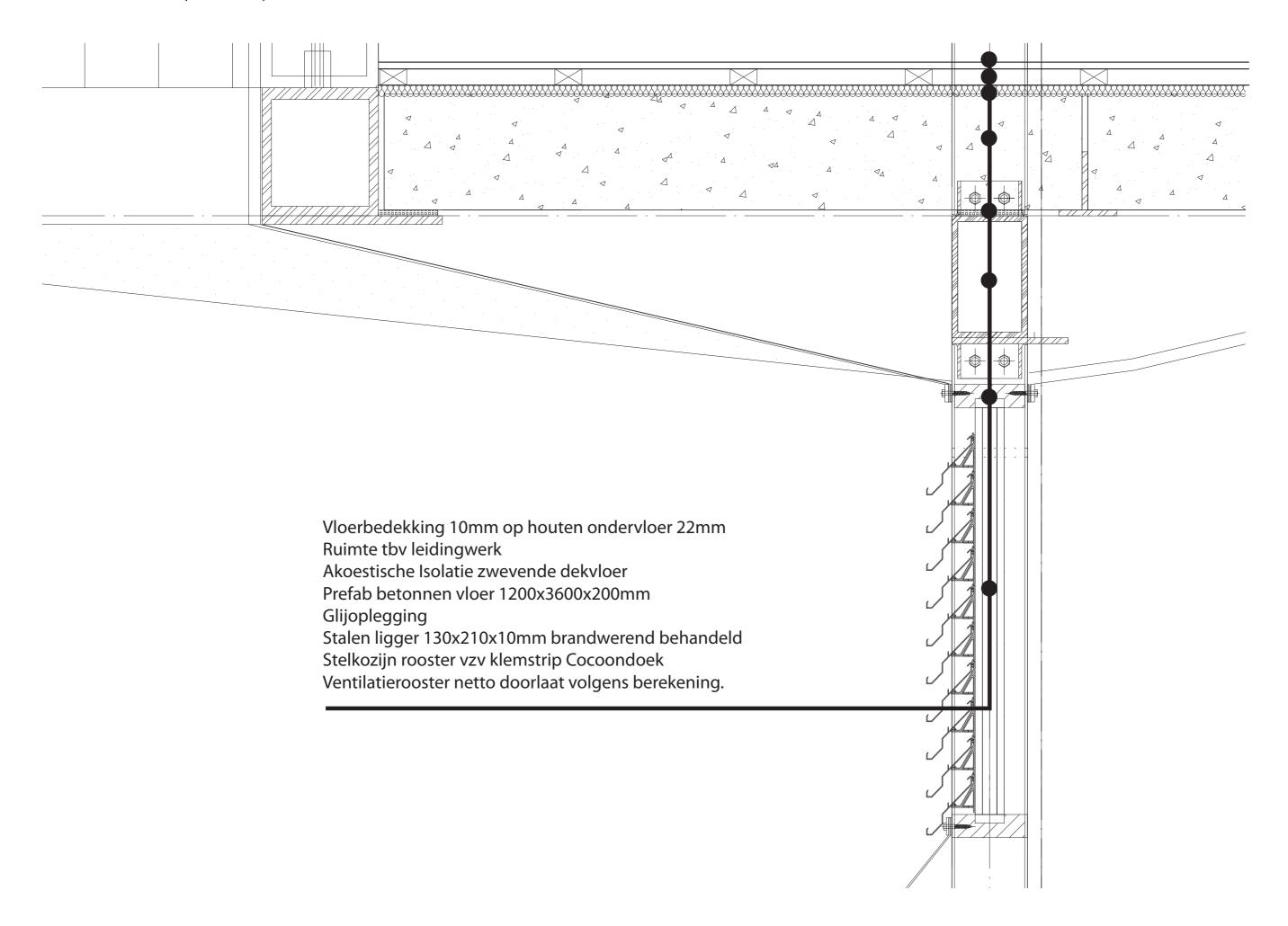
SECTIONS & DETAILS



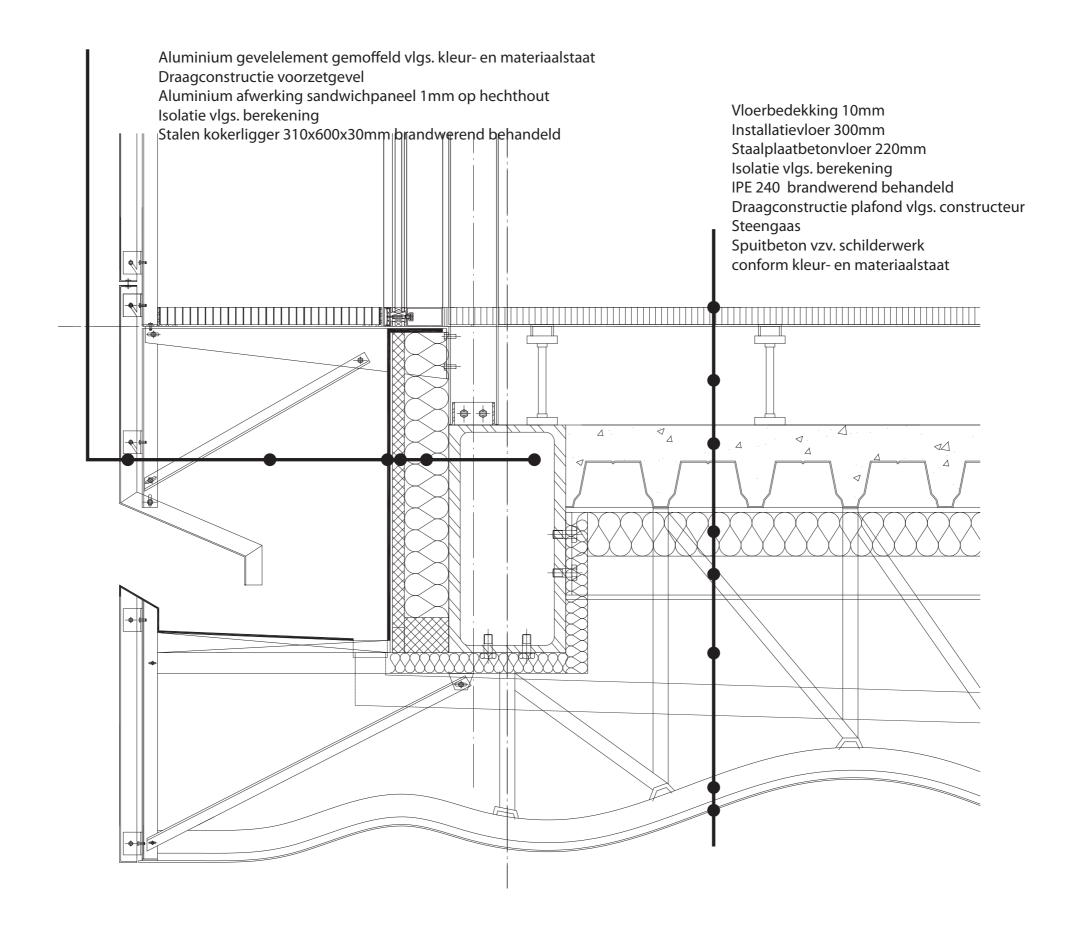


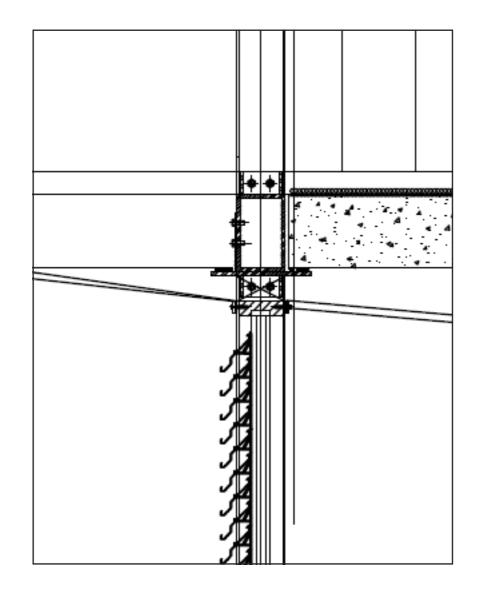
EXPO AFTERUSE

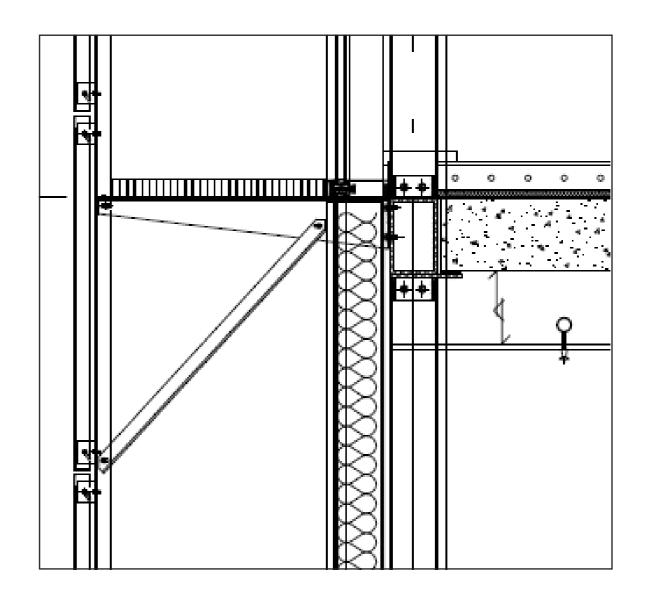
DETAIL V2 (EXPO)



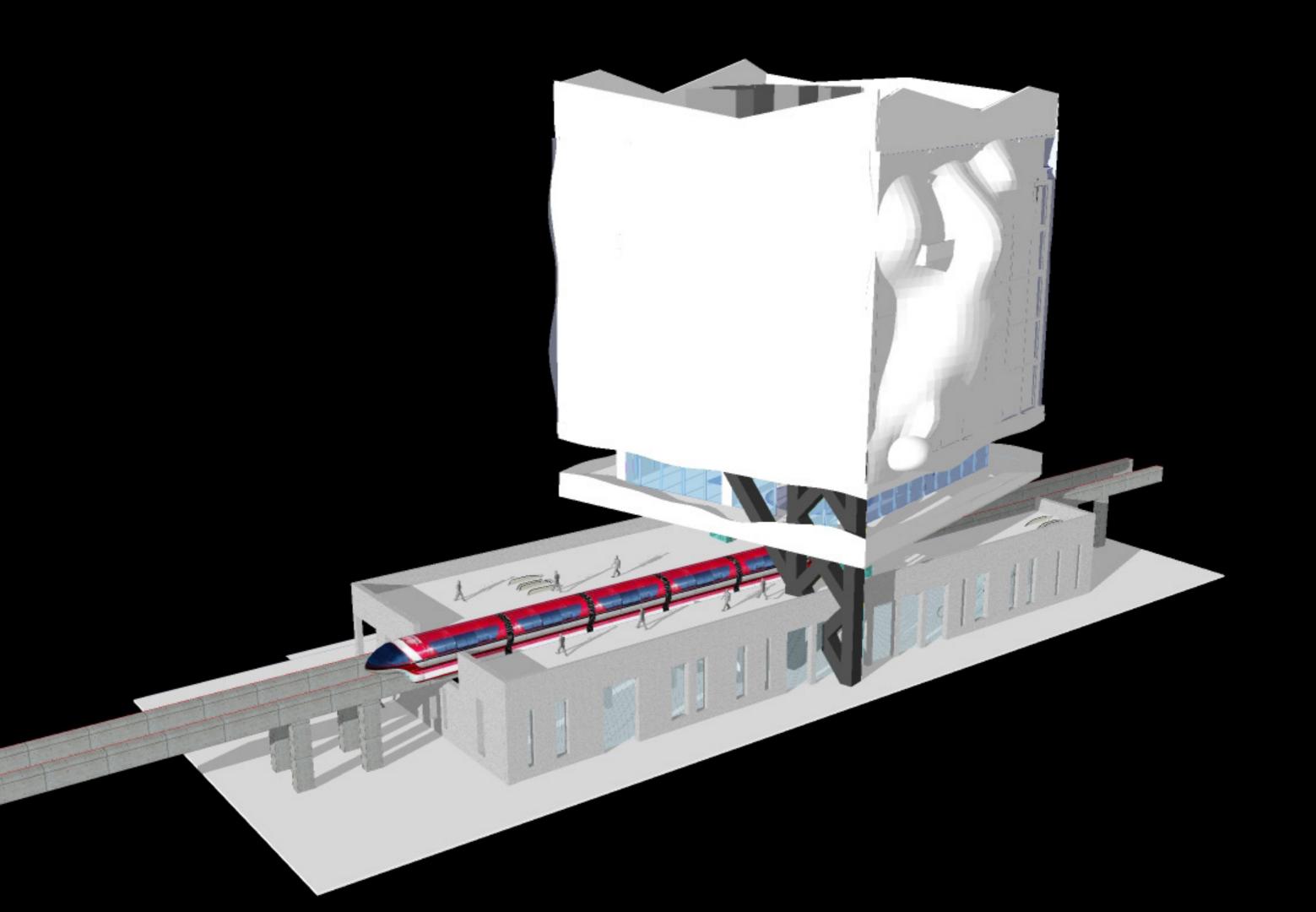
DETAIL V3 (AFTERUSE)



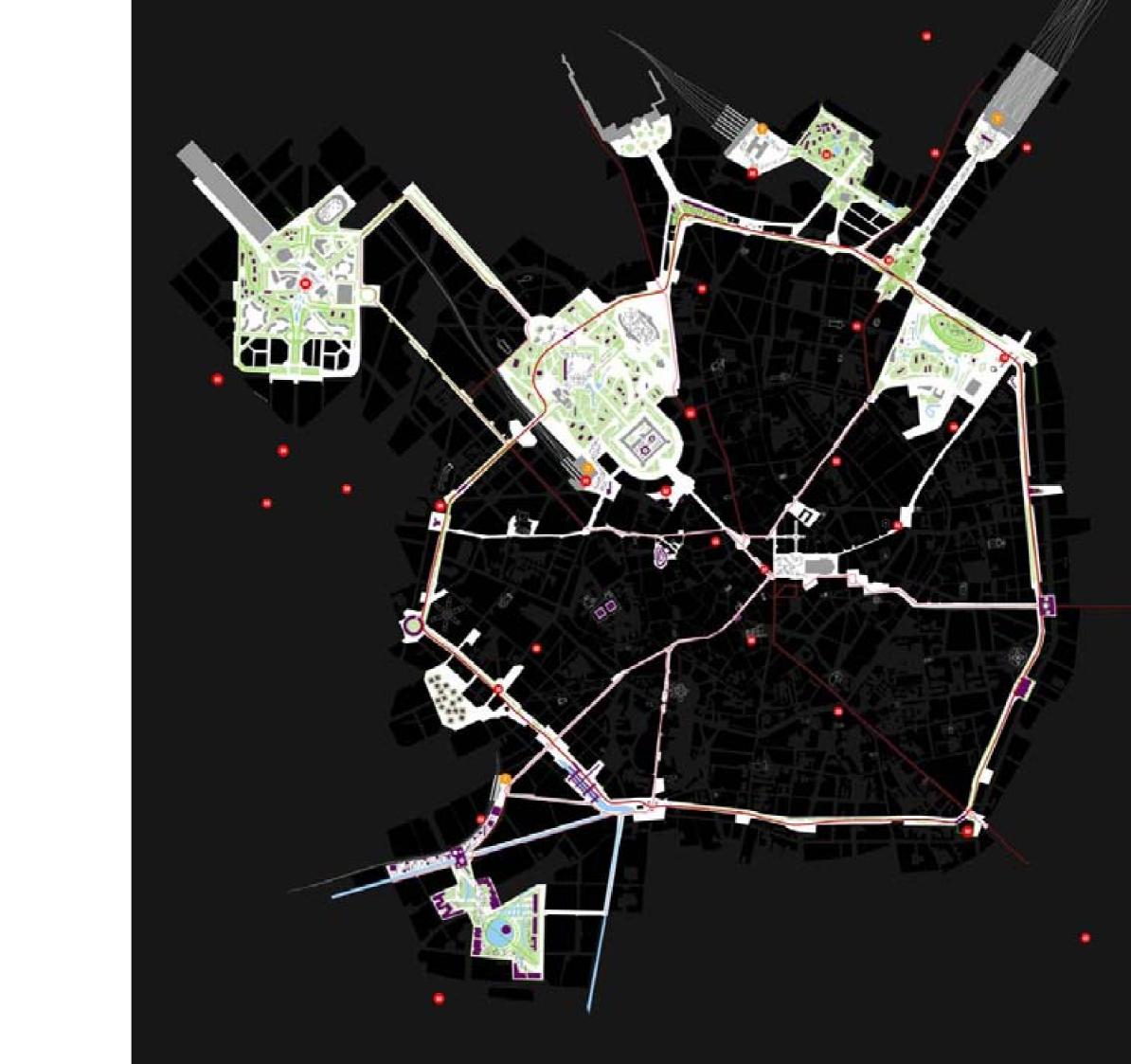




EXPO AFTERUSE







Scales: (City Parks, Amusement Parks)



Thanks for the attention

