



SAPIENZA
UNIVERSITÀ DI ROMA

mad architects

Laboratorio di Sintesi in Progettazione
Architettonica e Urbana
Prof. Arch. **Antonino Saggio**

Arch. **Marco Falasca**
MAD Architects

Arch. **Edoardo D'Angelo**
MAD Architects





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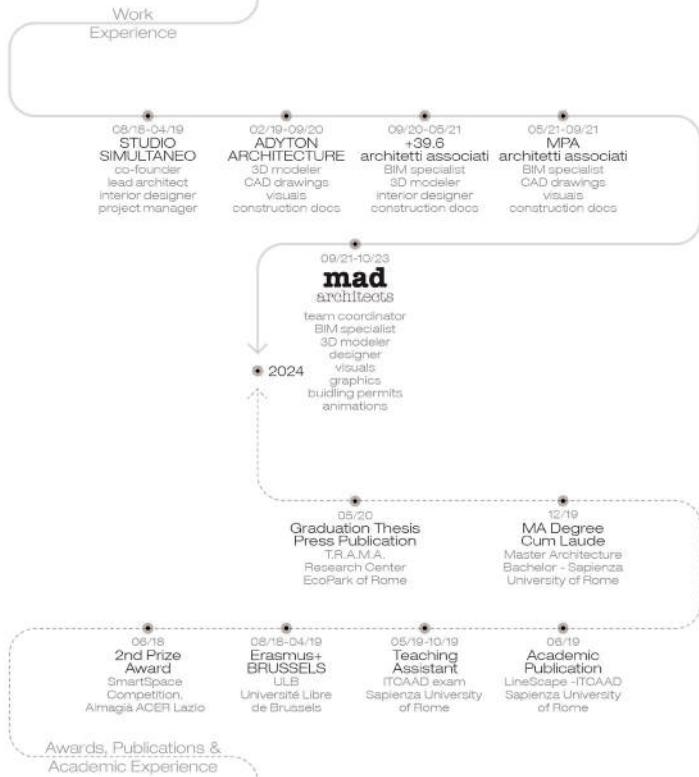
Marco Falasca
MAD Architects

Edoardo D'Angelo
MAD Architects

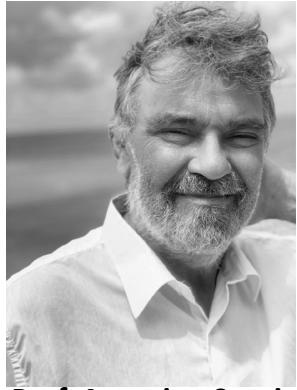


Marco Falasca

MAD Architects



**Laboratorio di Sintesi in Progettazione
Architettonica e Urbana**
Facoltà di Architettura "Sapienza" – Università di Roma

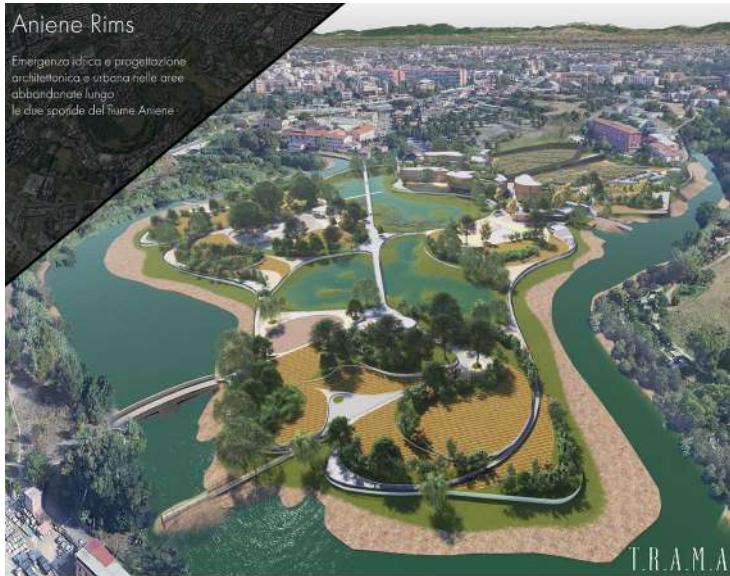


Prof. Antonino Saggio



Aniene Rims

Emergenza idrica e progettazione
architettonica e urbana nelle aree
abbandonate lungo
le due sponde del fiume Aniene



MAD Architects

Pechino – Los Angeles - Roma



Arch. Andrea D'Antrassi



Archibitly - Architecture News - MAD Architects Unveils Hollywood-Inspired "Office of the Future"

MAD Architects Unveils Hollywood-Inspired "Office of the Future"



Save this article



ARCHITETTURA

Mad Architects, da Roma la sfida di coniugare stile europeo ed estetica visionaria

Intervista ad Andrea D'Antrossi, partner di Mad Architects e direttore operativo della sede di Roma – la terza dopo Pechino e Los Angeles – da cui coordina i progetti attualmente in corso a Rotterdam, Roma e Milano, oltre a quello di Parigi, giunto a completamento nei mesi scorsi.

di Antonella Galli
22 marzo 2021



domus

MAD completes a remarkable experiment of land architecture in China

The brand new Yabuli Entrepreneurs' Congress Center is a building whose resolutely global aesthetics celebrates the achievements of Chinese entrepreneurship.



mad

dezeen

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MAD unveils sinuous conference centre nestled amongst Chinese mountains

CORRIERE DELLA SERA SCOPRI

Living[®]

CASE

TENDENZE

ARREDAMENTO

CITY GUIDE

CATALOGO

Tendenze / Architettura

Dentro una nuvola: la biblioteca di MAD Architects ad Haikou

10.000 libri custoditi in una grotta in cemento, modellata come spuma marina e costruita su un'isola nell'Oceano Pacifico. Apre al pubblico Cloudscape, l'ultima sfida dei guru dell'architettura organica

Testo Francesca Tagliabue - Foto Archizist

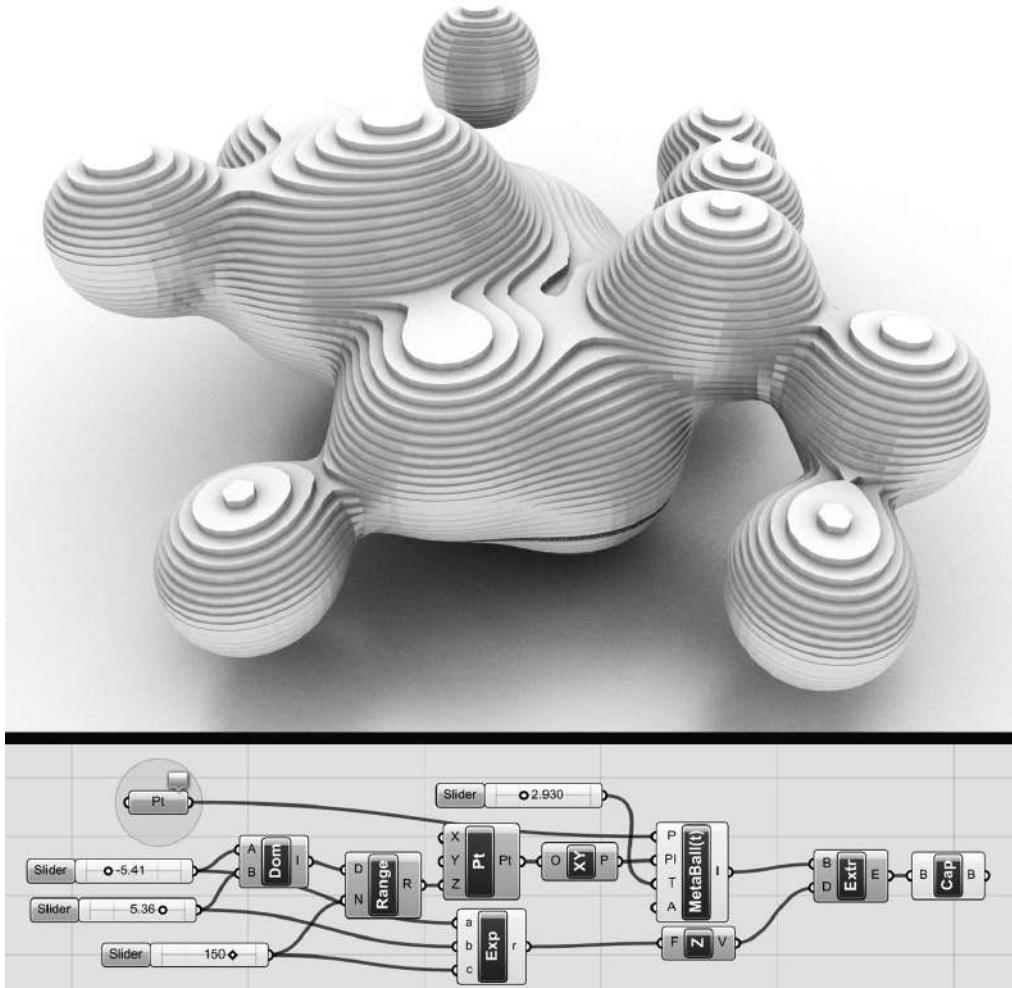


SCOPRI LA GALLERY

Grasshopper

Grasshopper è un linguaggio e un ambiente di programmazione visuale che viene eseguito all'interno dell'applicazione CAD (computer-aided design) **Rhinoceros 3D**.

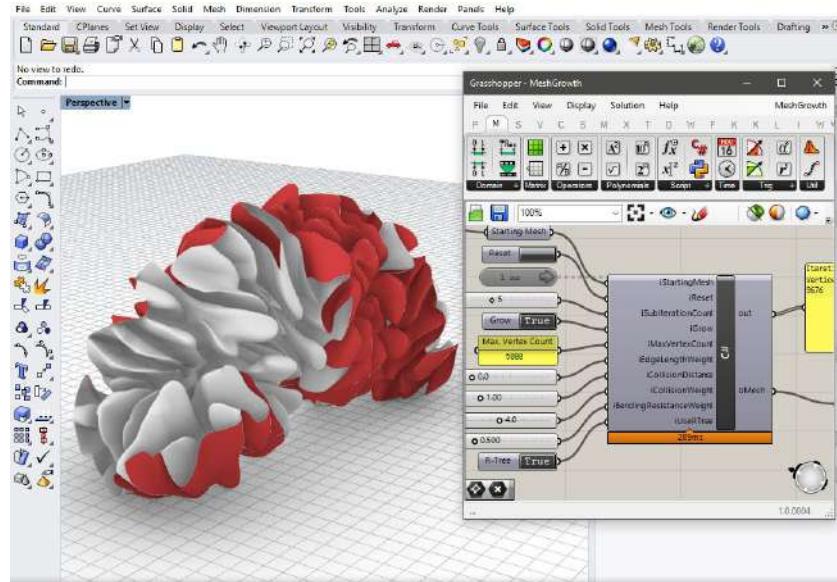
Il programma è stato creato da David Rutten
presso **Robert McNeel & Associates**.



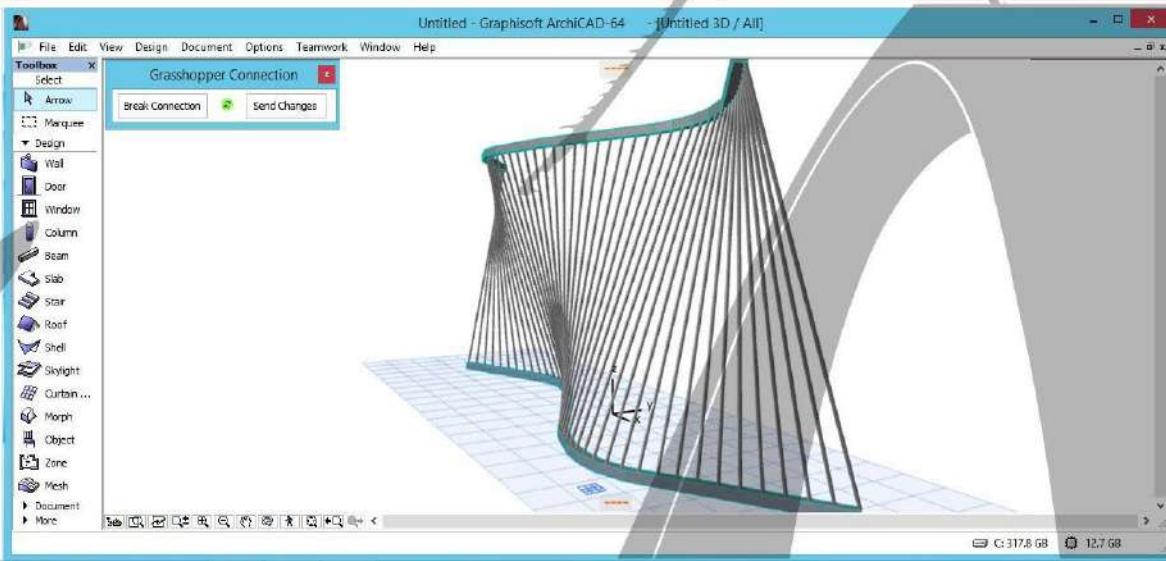
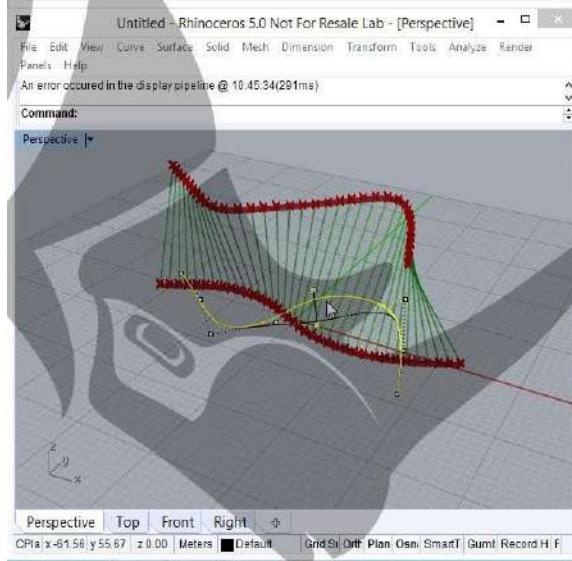
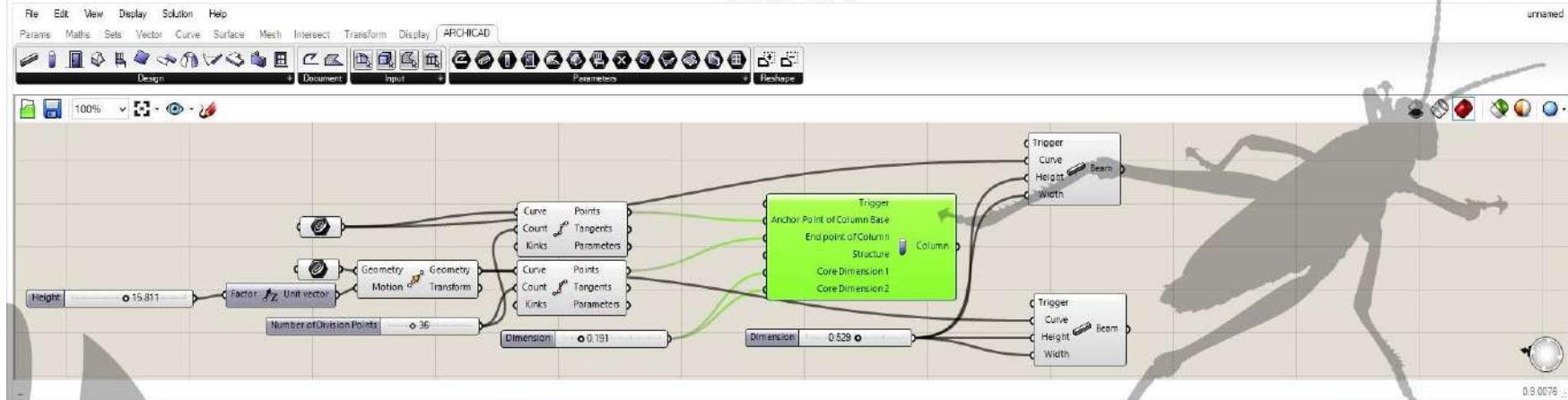
Grasshopper

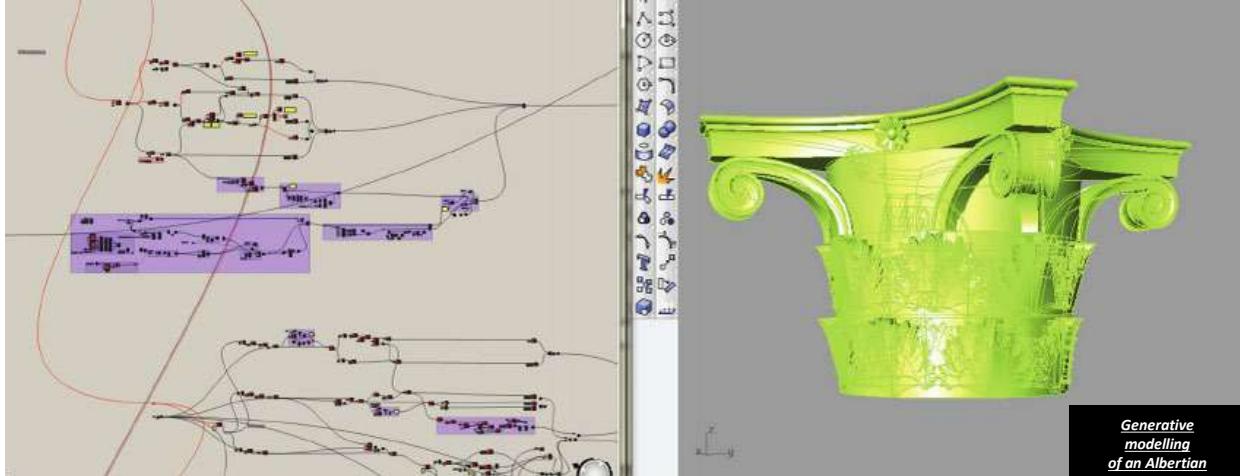
Grasshopper viene utilizzato principalmente per costruire **algoritmi generativi**, come per l'arte generativa. Molte delle componenti di Grasshopper creano geometrie 3D.

I programmi possono anche contenere altri tipi di algoritmi, tra cui applicazioni numeriche, testuali, audiovisive e aptiche.

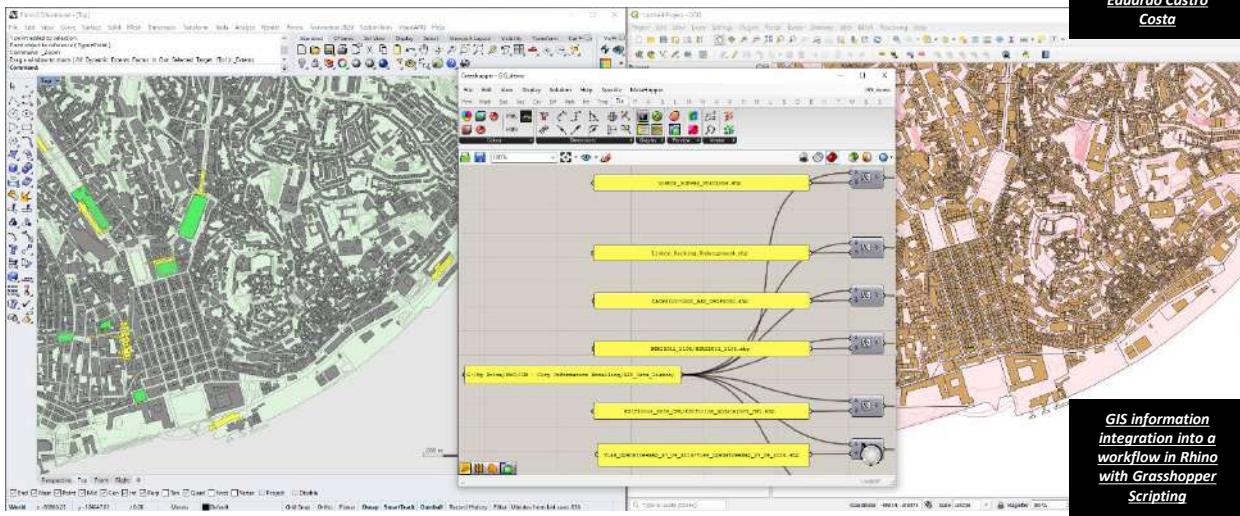


Grasshopper - unnamed





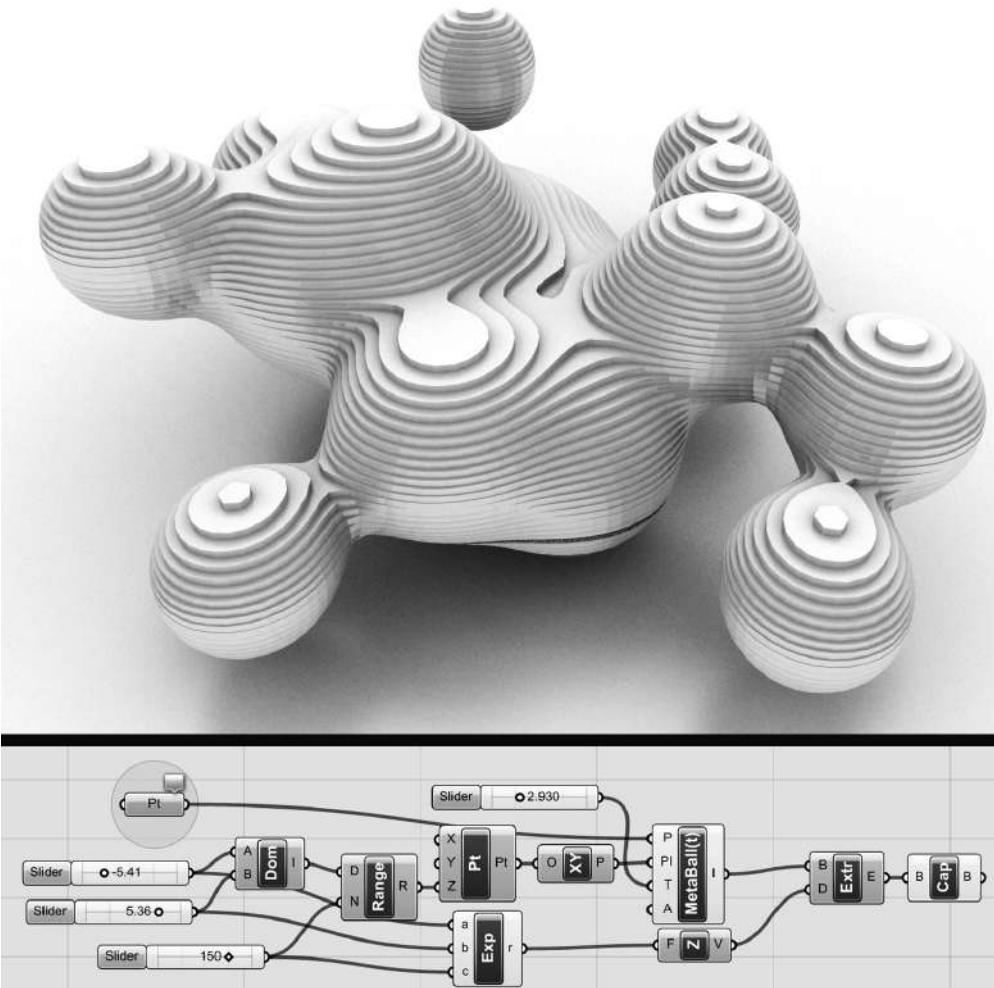
*Generative
modelling
of an Albertan
capital*
**Eduardo Castro
Costa**



*GIS information
integration into a
workflow in Rhino
with Grasshopper
Scripting*

Grassopper

RICERCA E SVILUPPO PERSONALE



ARTURO TEDESCHI

AAD_

ALGORITHMS- AIDED DESIGN

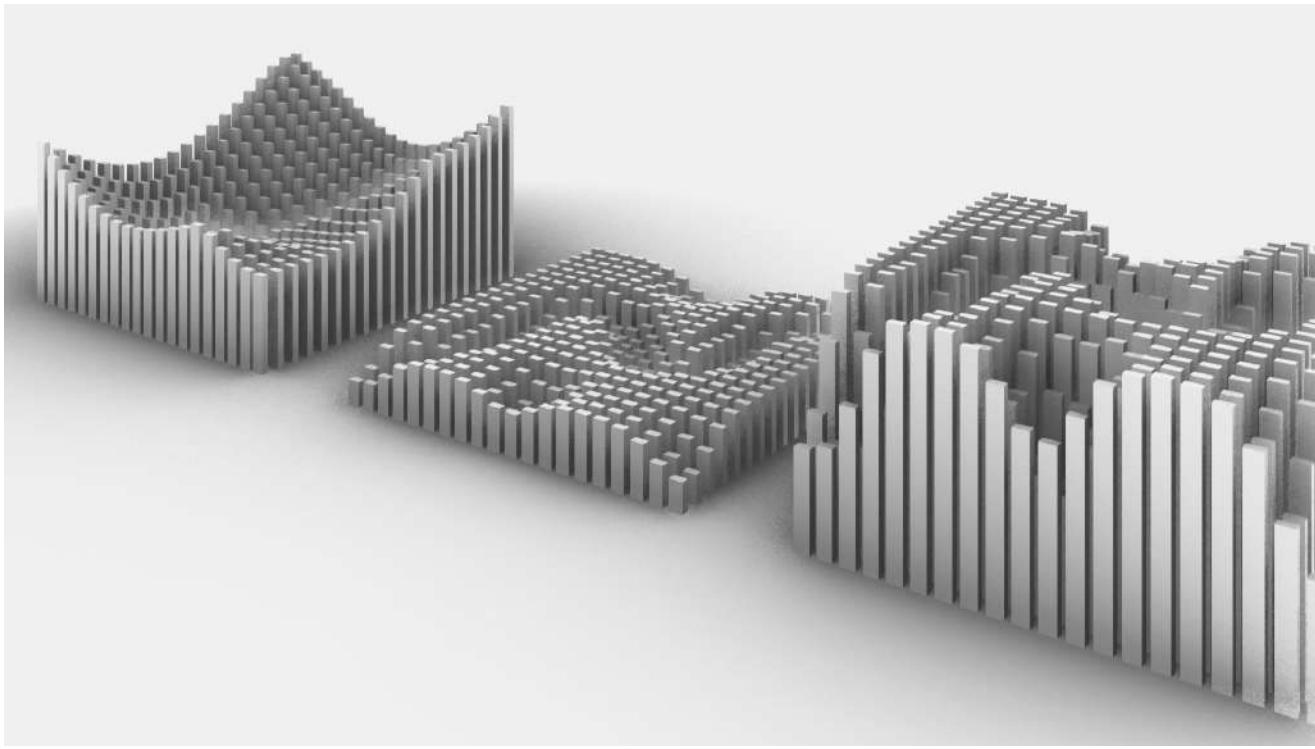
PARAMETRIC STRATEGIES USING GRASSHOPPER®

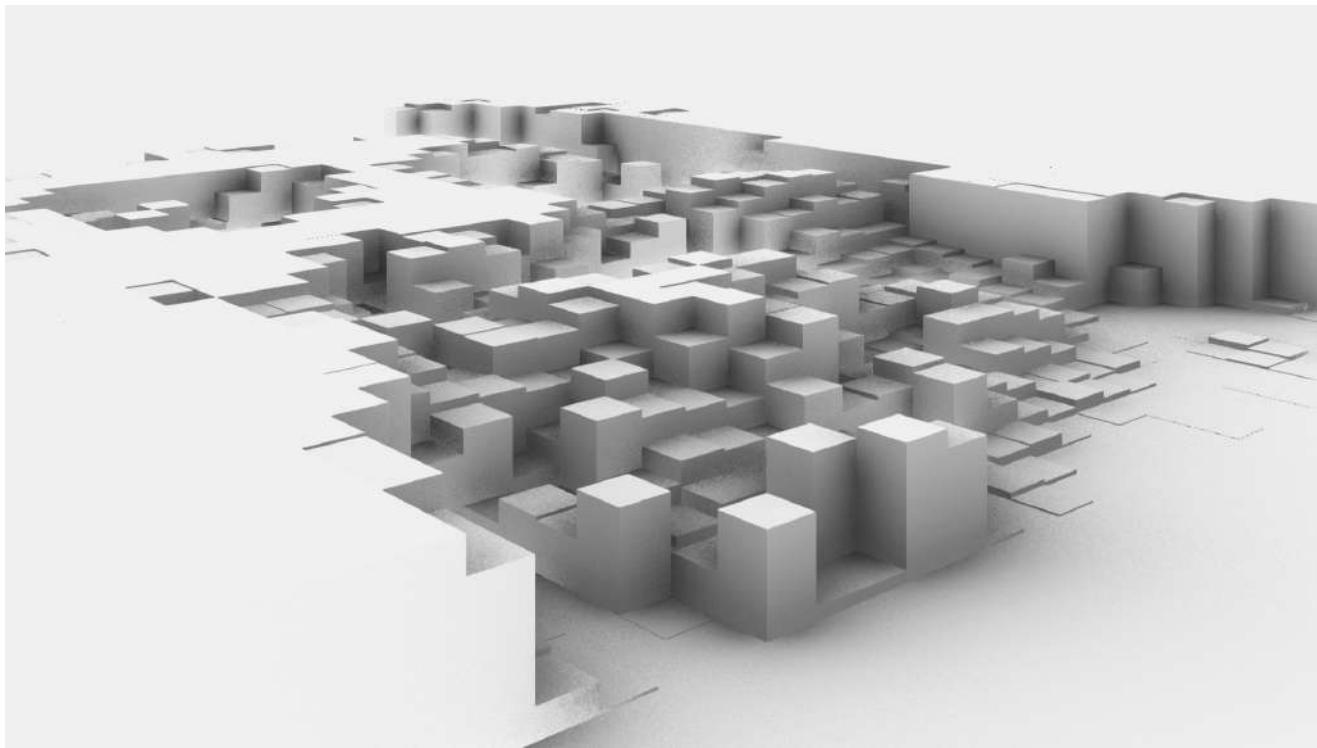
Foreword by JUANOS WIZZ

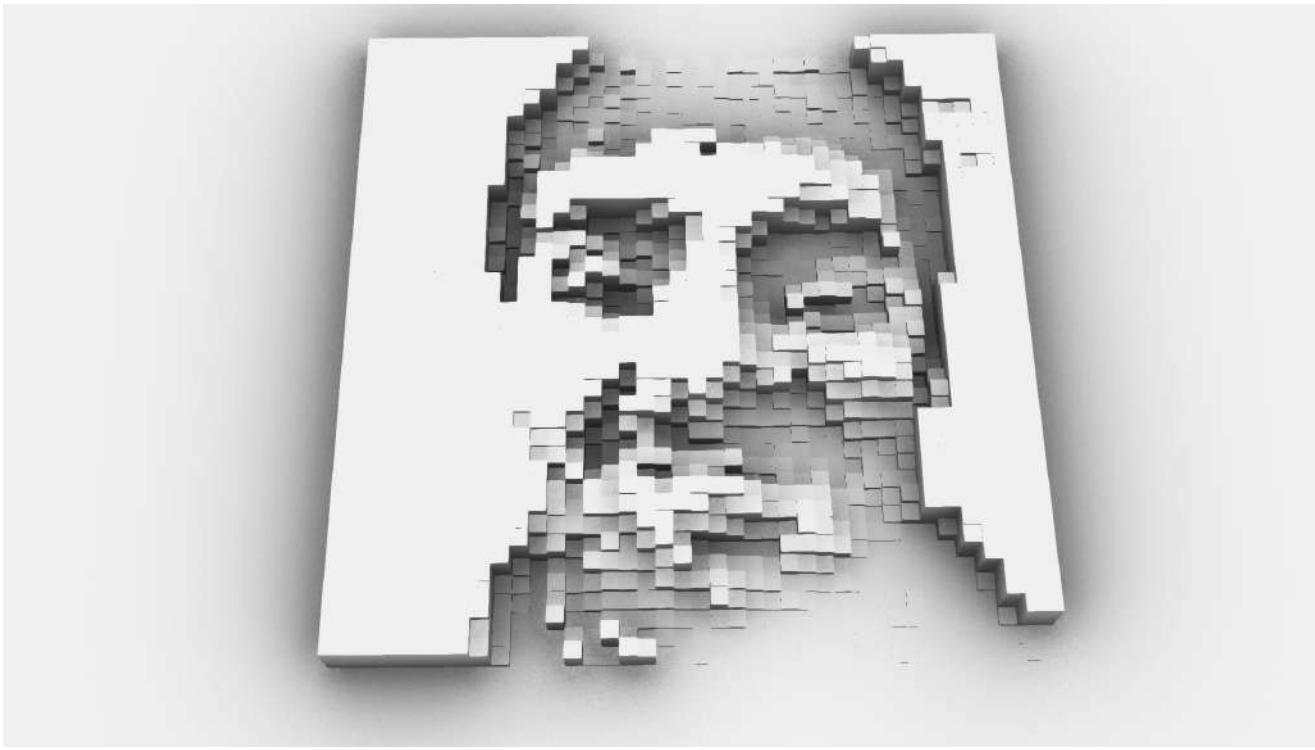
LE PENSEUR PUBLISHER

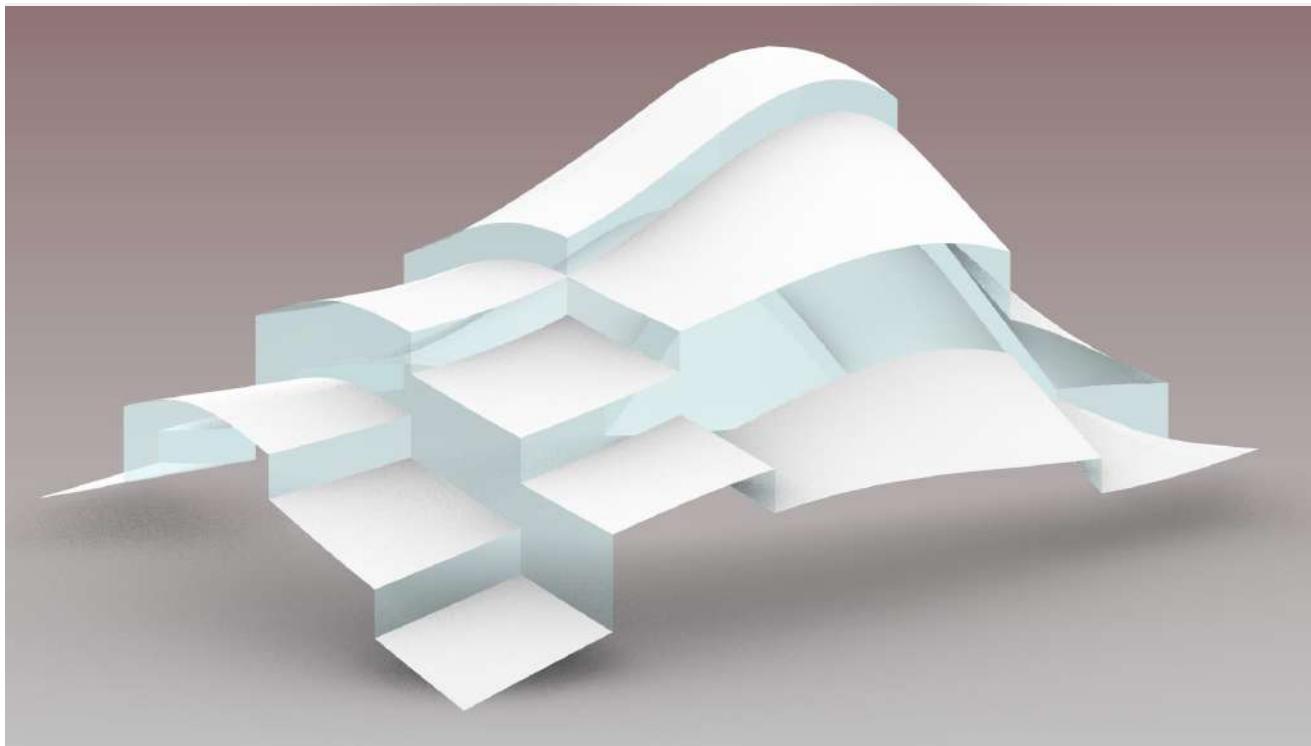


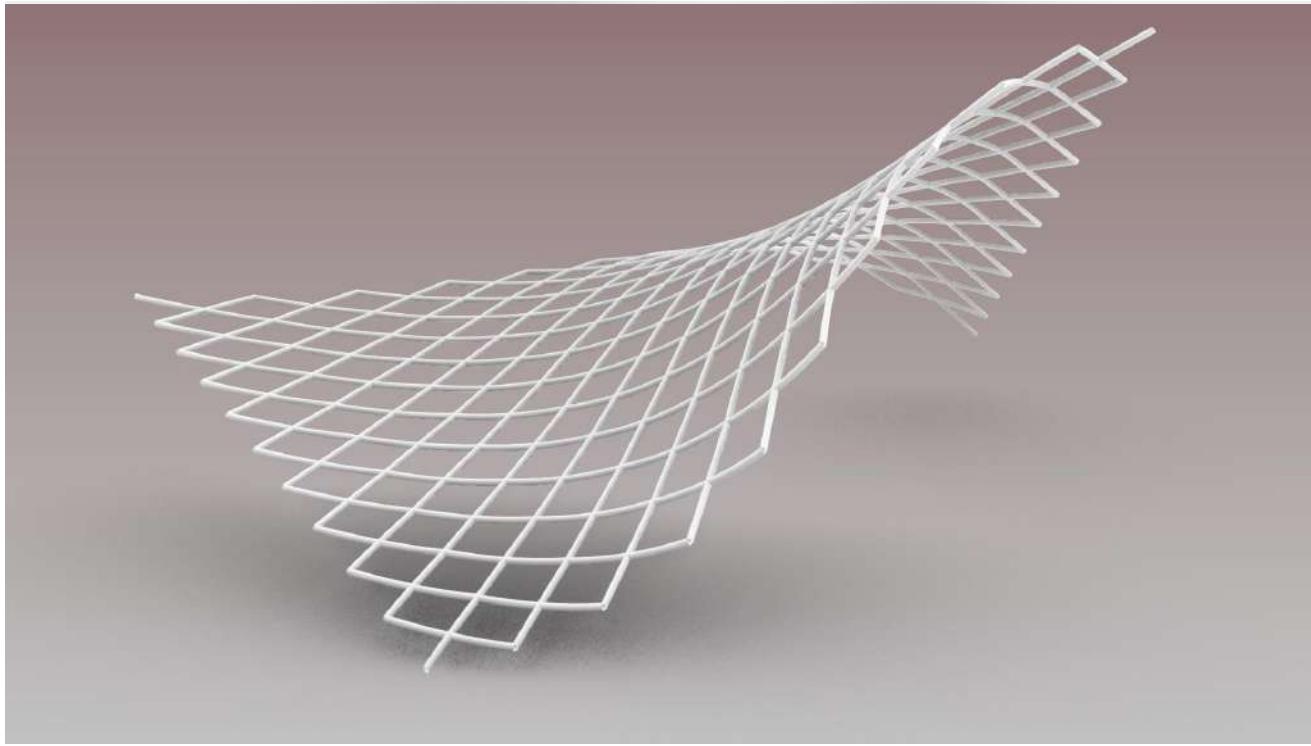
Oyster Chair
Arturo Tedeschi Design

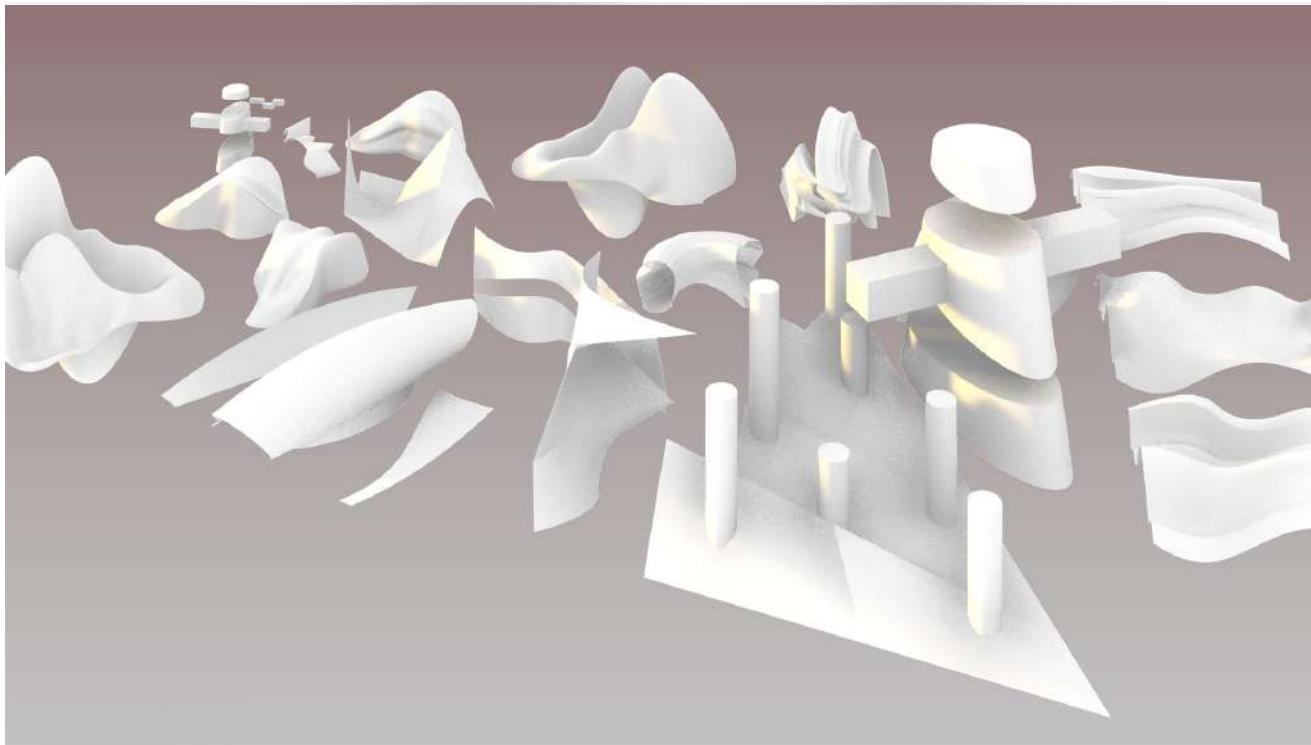


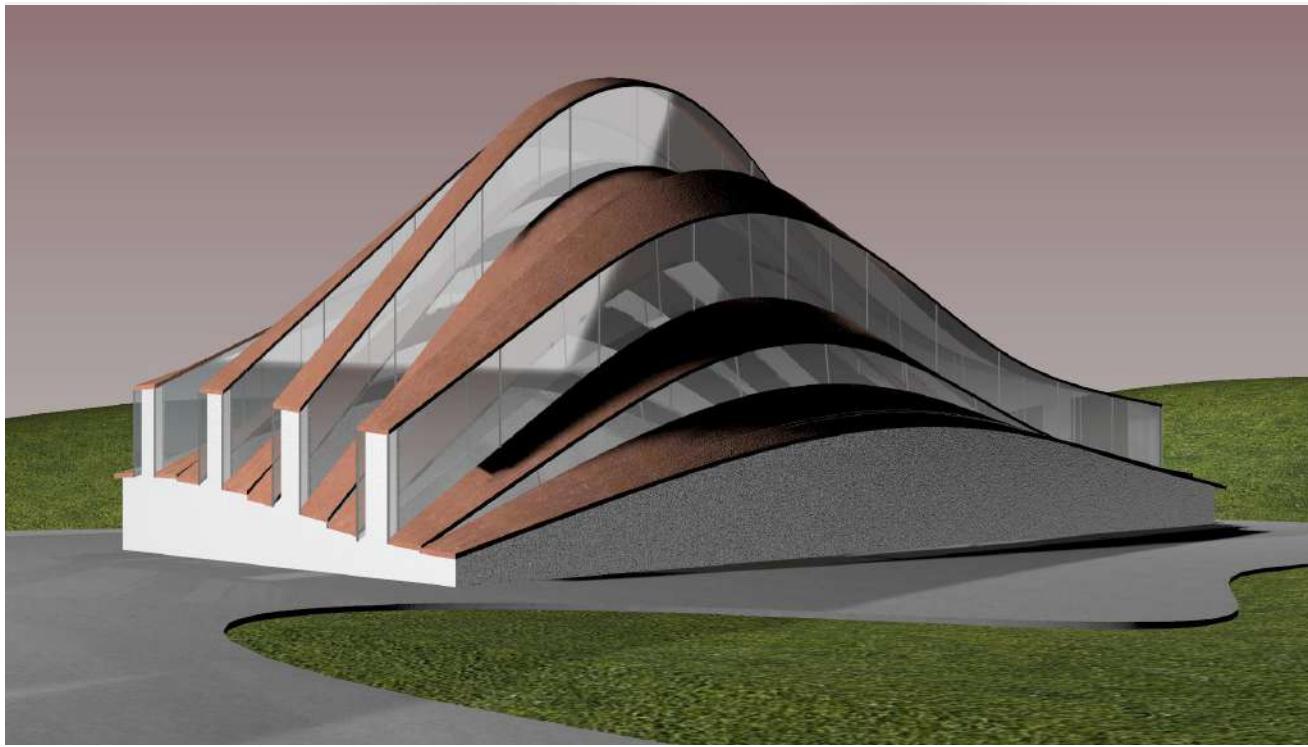


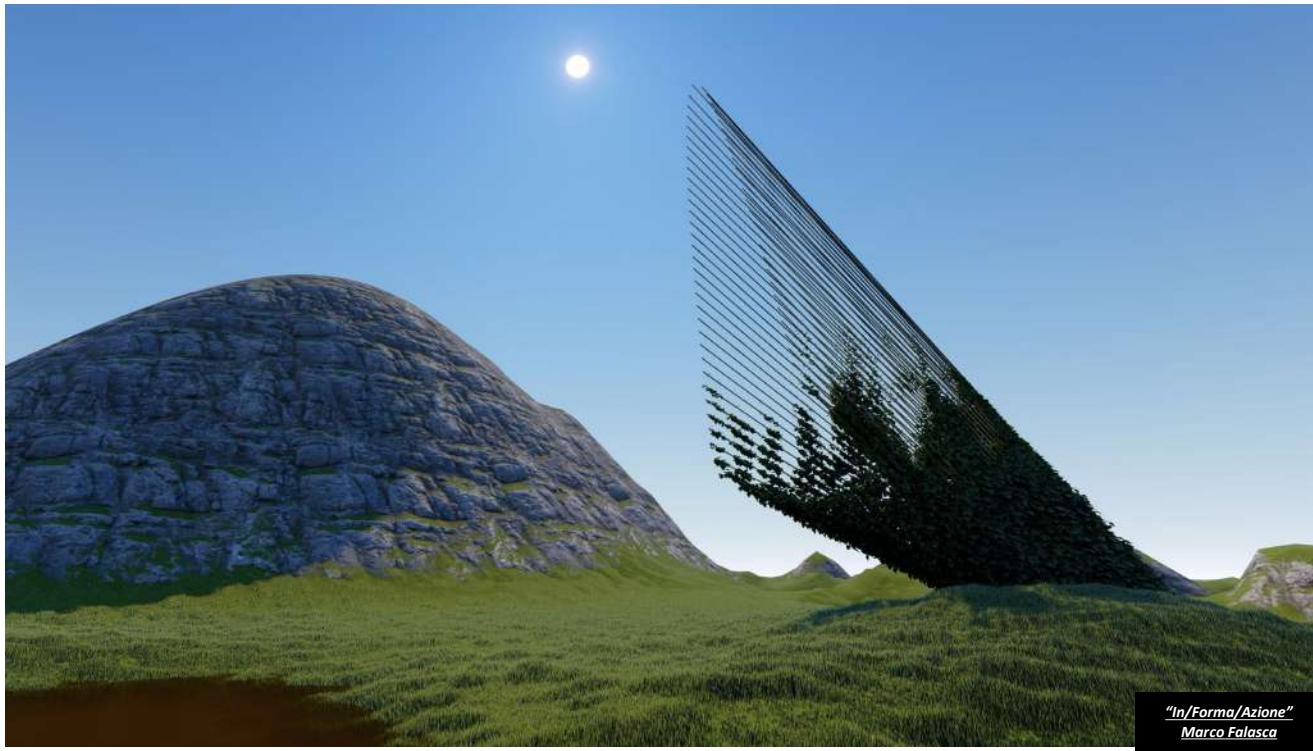






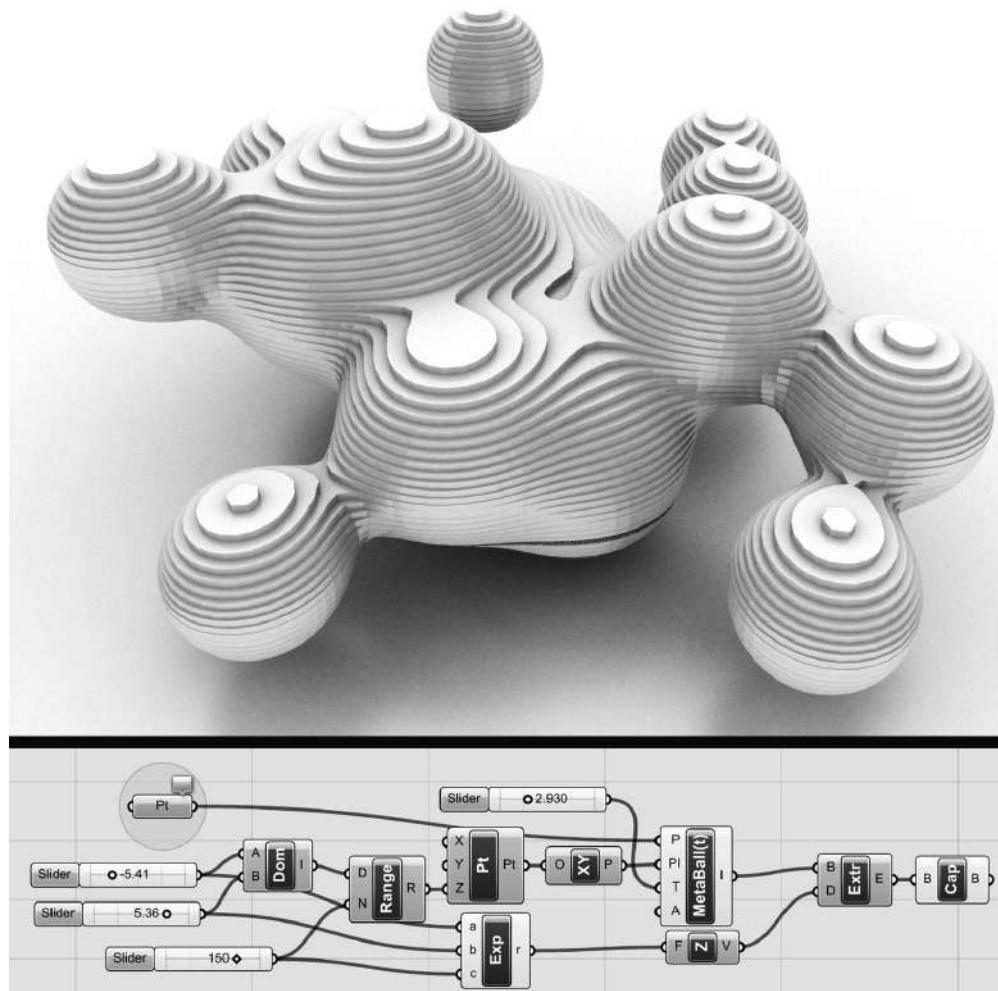


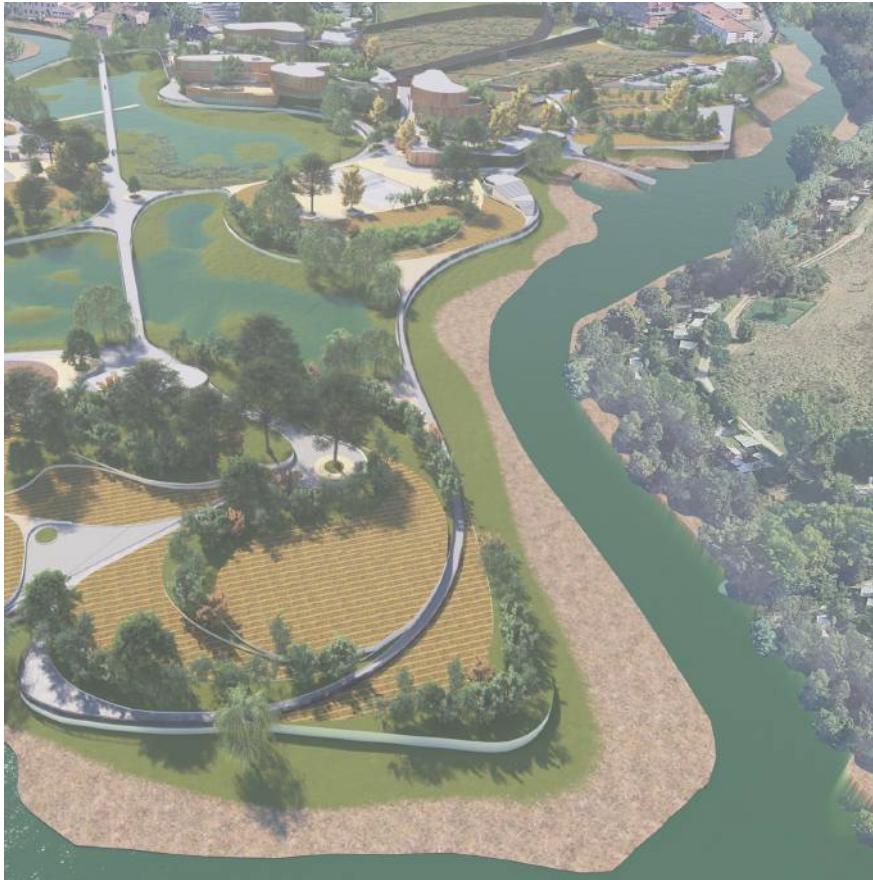




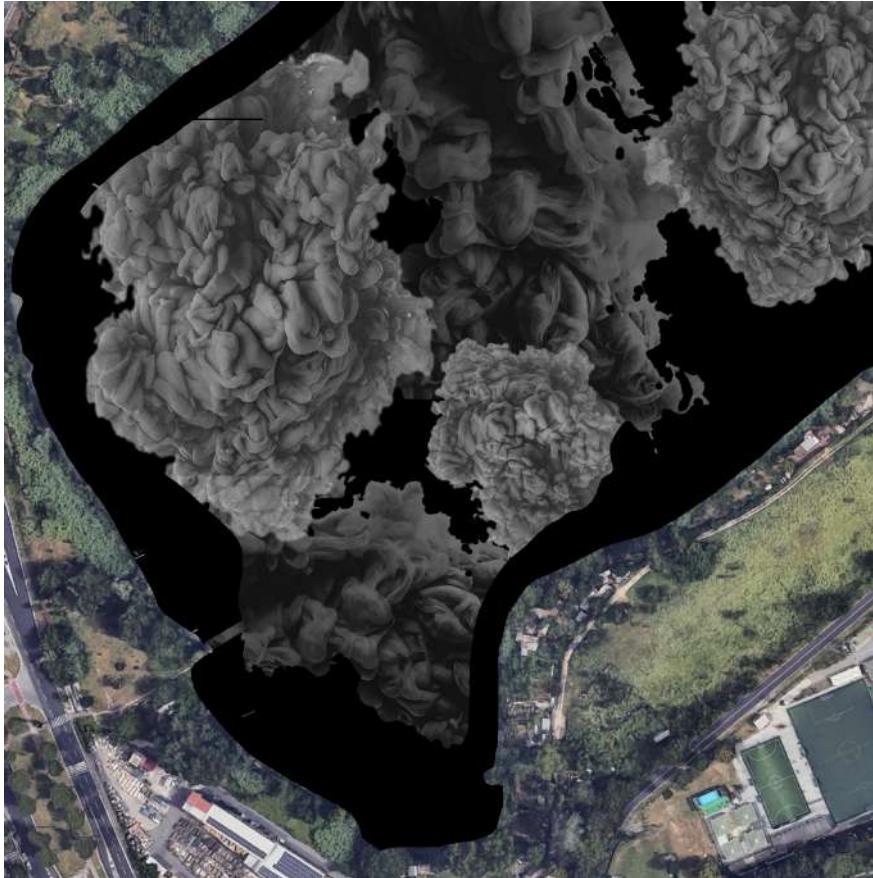
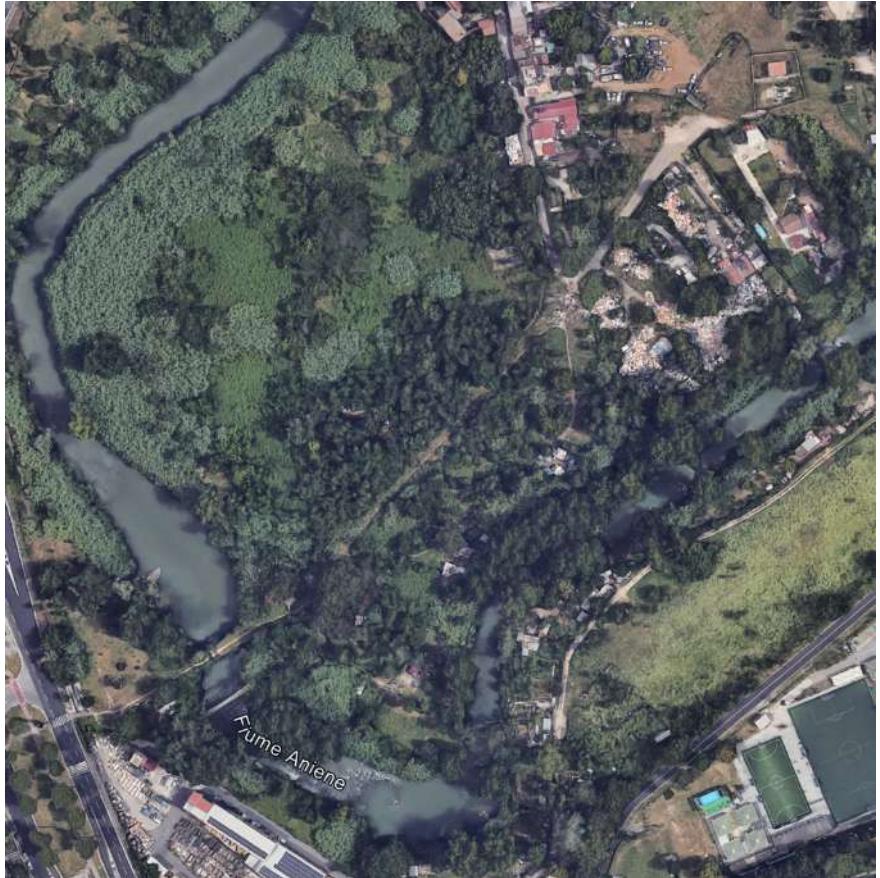
In/Forma/Azione
Marco Falasca

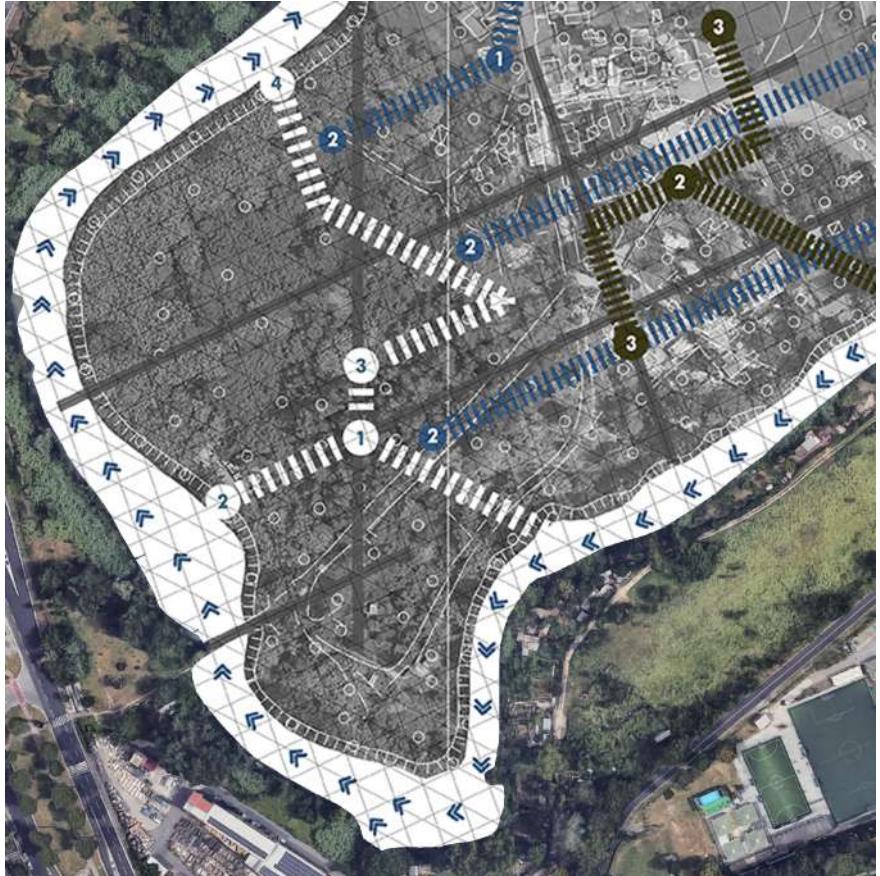
Grassopper

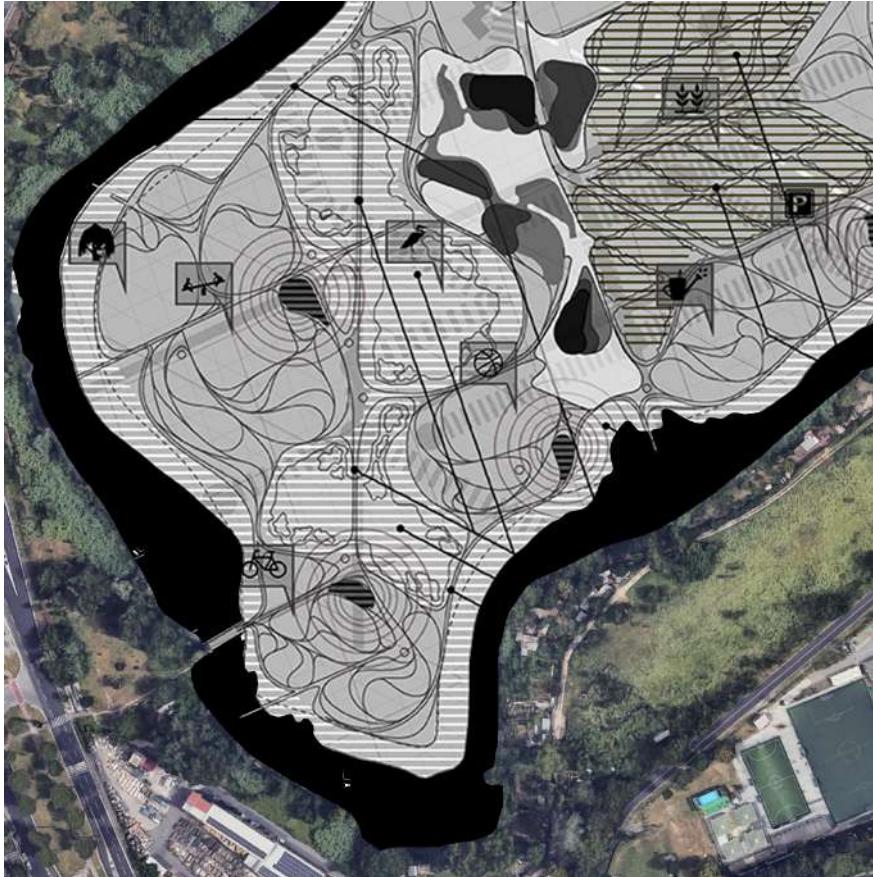


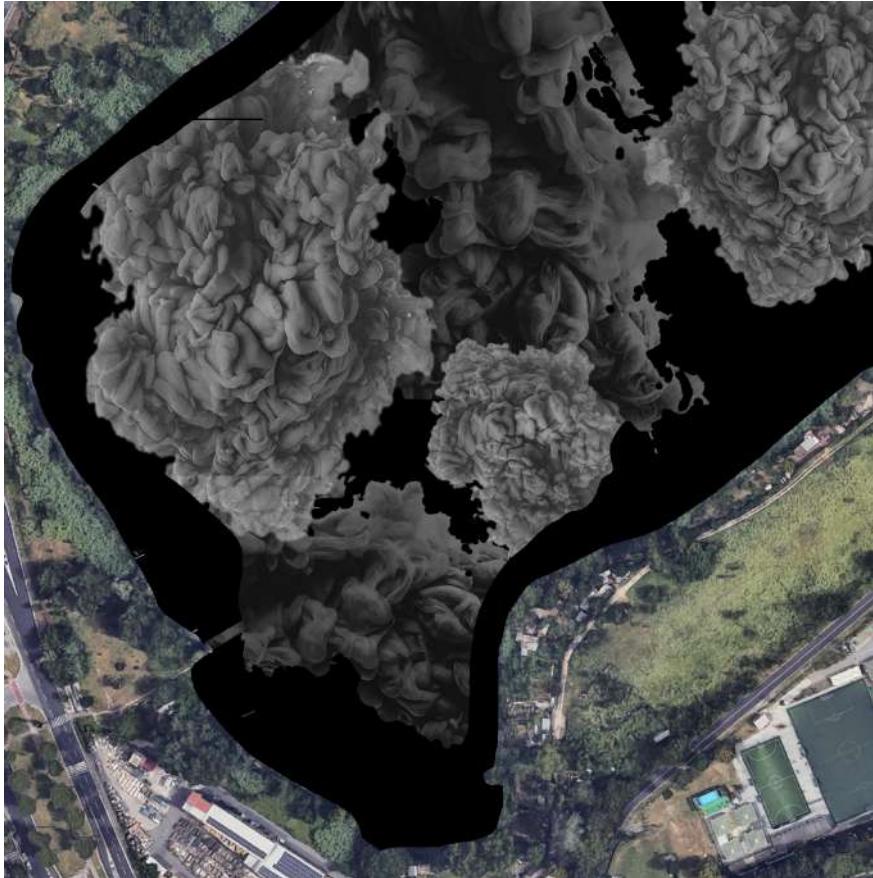


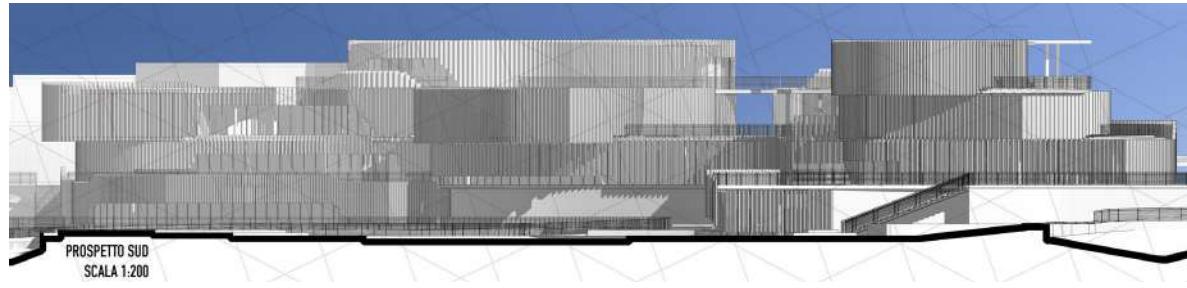
"T.R.A.M.A."
Marco Falasca





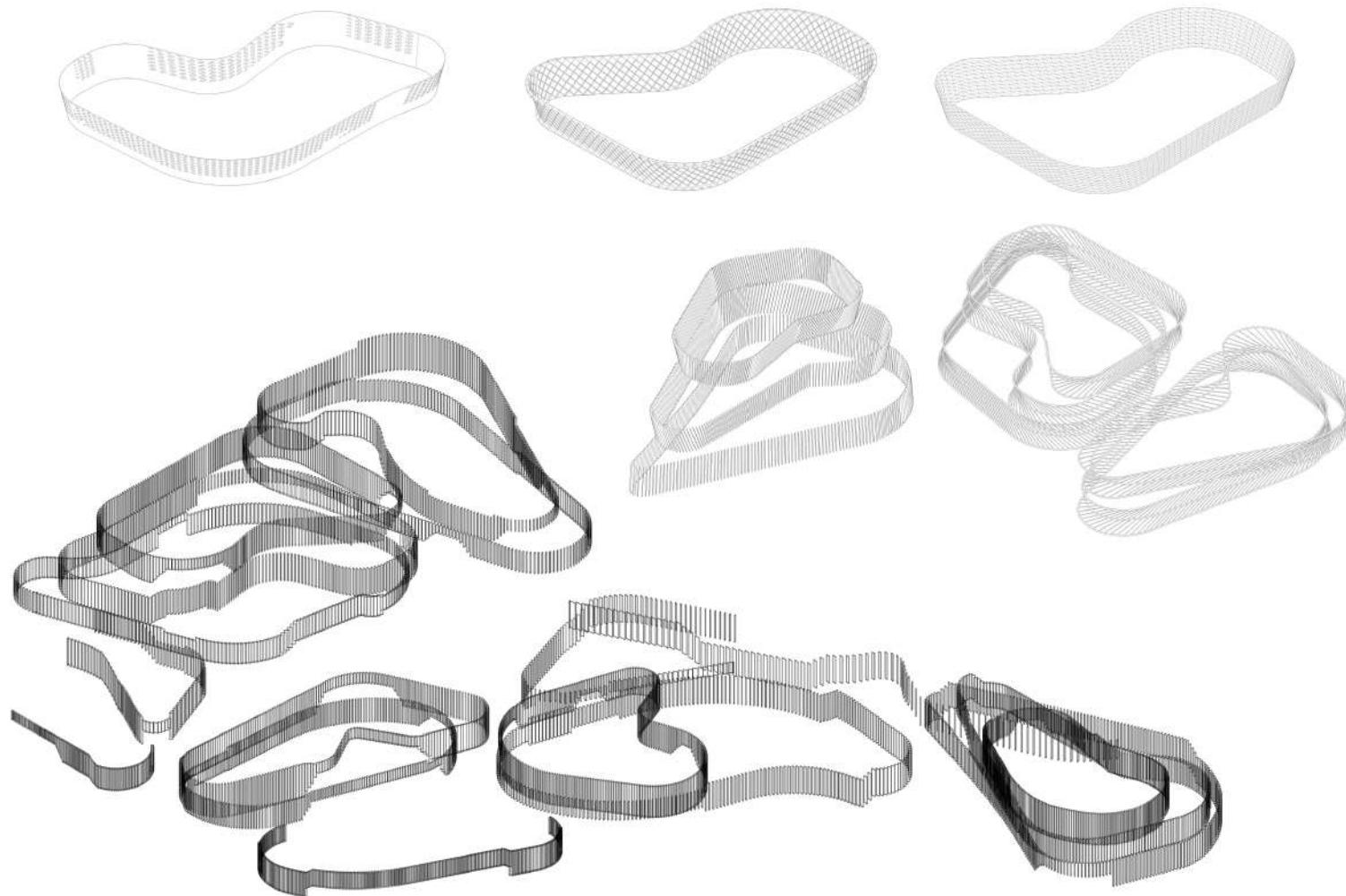








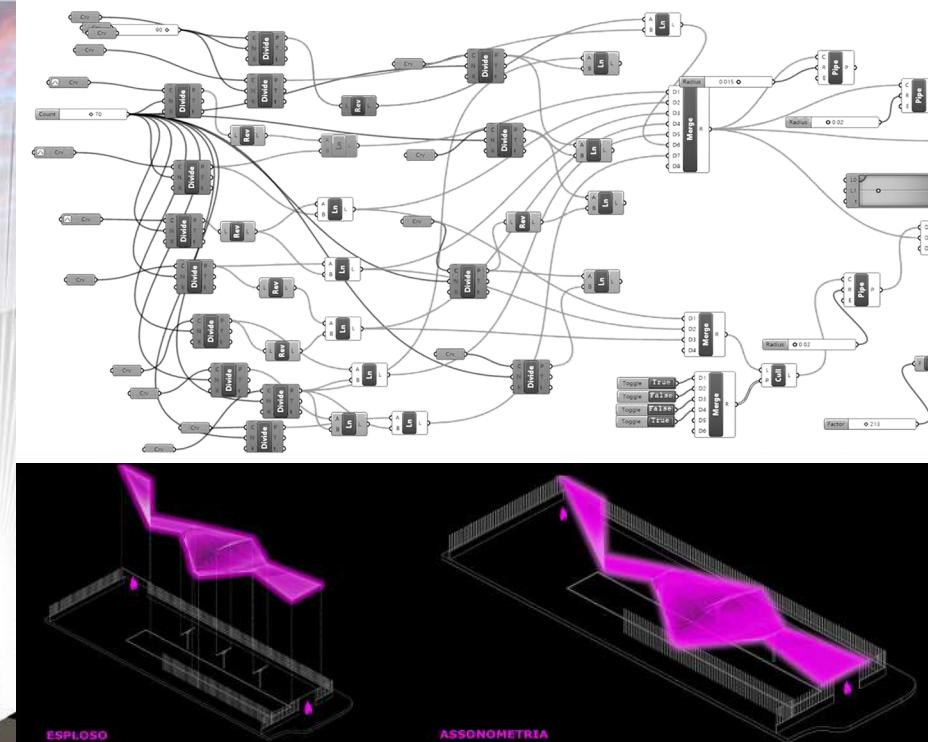
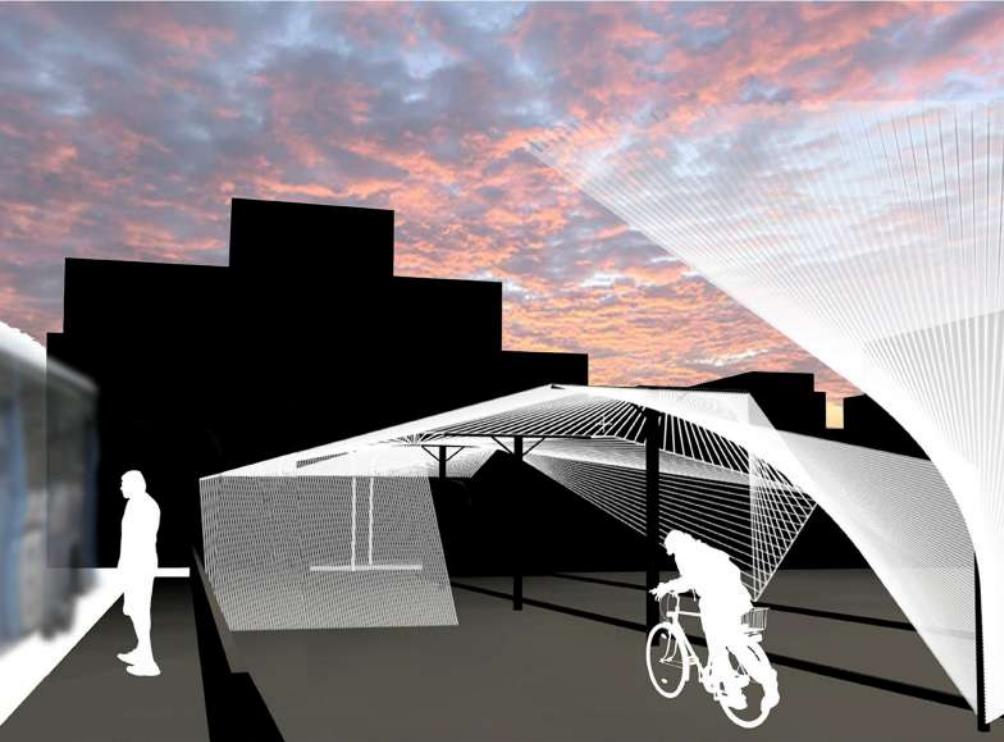








"Lines-Scape"
Marco Falasca

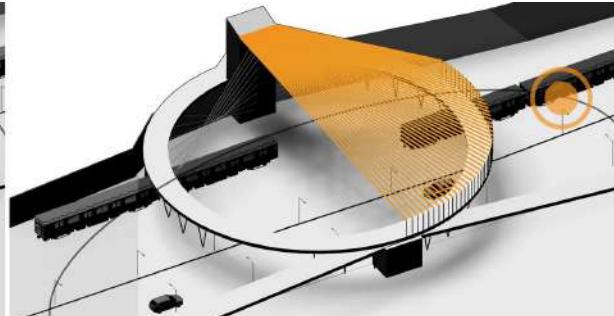
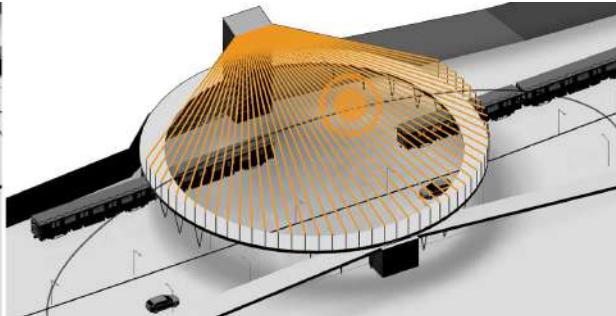
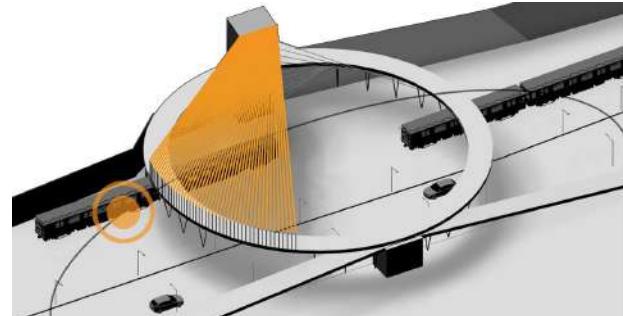
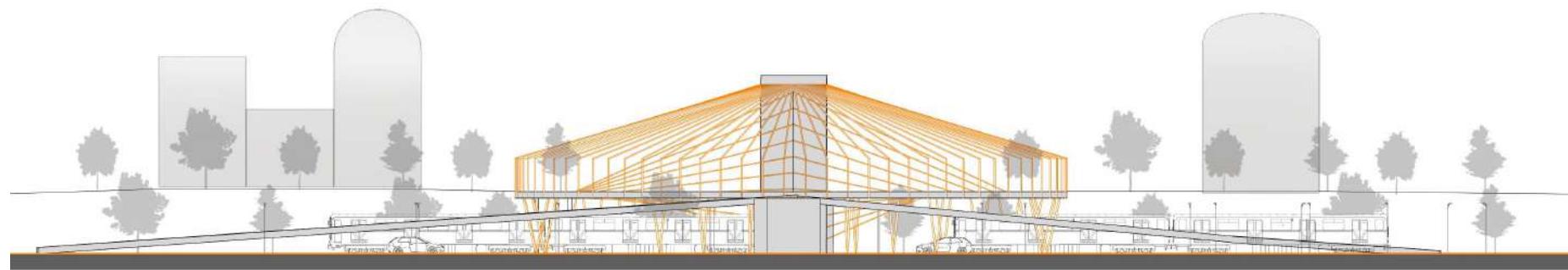




"Lines-Scape"
Marco Falasca



"Node-ON"
Marco Falasca





mad

SELECTED REALISED PROJECTS

山水之城



Shan Shui City



Ma Yansong
Founder & Principal Partner

Beijing-born architect Ma Yansong is recognized as an important voice in the new generation of architects. He is the first Chinese architect to win an overseas landmark-building project. As the founder and principal of MAD Architects, Ma leads design across various scales. In recent years, many of Ma's designs follow his conception of the "Shanshui City", which is his vision to create a new balance among society, the city and the environment. Since designing the "Floating Island" in 2002, Ma has been exploring this idea through an international practice. At MAD, Ma has created a series of imaginative works, including Absolute Towers, Hutong Bubble 32, Ordos Museum, China Wood Sculpture Museum, Fake Hills, etc. In 2014, Ma was selected as the principal designer for Lucas Museum of Narrative Art in Chicago, which made him the first Chinese architect to design overseas culture landmark. Parallel to his design practice, he has also been exploring with the public the cultural values of cities and architecture through domestic and international solo exhibitions, publications and art works.



Dang Qun
Principal Partner

Born in Shanghai, Dang Qun is a principal partner at MAD. She oversees project management and corporate operations of MAD Architects, a global architect firm with over 80 staff members. She is also a key member as other MAD principal partners are in MAD strategy development.

Dang is a steady practitioner and executor of MAD's design philosophy "Shanshui City" and has led technical innovation and green architecture for each project. Her outstanding abilities in cultivating a motivated team, driving operational efficiency, and her clear strategic direction enable projects to be realized with maximum respect to the firm's design aesthetic and ideology. Dang is closely involved in each process of MAD's series of projects, including the Absolute Towers, Ordos Museum, China Wood Sculpture Museum, Fake Hills, Chaoyang Park Plaza, Nanjing Zendai Himalayas Center, Harbin Cultural Island, and Lucas Museum of Narrative Art.

Dang holds a Master Degree in Architecture from Iowa State University and received a Certificate of Merit from the American Institute of Architects in 2000. Dang's academic career includes a visiting professorship in Pratt Institute, and assistant professorship in Iowa State University.



Yosuke Hayano
Principal Partner

Born in Aichi, Japan, Yosuke Hayano is a first class registered Architect in Japan. Being a principal partner in MAD, Yosuke oversees and supervises all design works at MAD. His extensive professional experience and strict attention to detail and standards enable him to lead project teams on concept design, design development, materials selection, construction methods, techniques and time management. Yosuke assures all stages of design meet and exceed MAD's high standards as they are transformed from design concepts into built structures.

Yosuke received his Bachelor of Materials Engineering from Waseda University in Tokyo in 2000, Associate degree in Architecture at Waseda Art and Architecture School in 2001, and his post Master in Architecture at the Architectural Association of London in 2003. He was the winner of the 2006 Architecture League of New York Young Architects Award, 2011 Design for Asia award and 2011 Kumamoto Artpolis Award. He was a visiting lecturer at Waseda Art and Architecture School from 2008 till 2012 and at Tokyo University from 2010 till 2012.



LIU HUIYING

Associate Partner

Liu Huiying is originally from Shanxi Province. He received his degree from Shenyang Architectural University in 2004. After graduation, he worked at the Shanxi Architectural Design and Research Institute.

He joined MAD in June, 2010 and has been responsible for various projects during their construction phases, namely Harbin Cultural Island, China Wood Sculpture Museum, Faka Hills, Conrad Hotel in Beijing, and Sanya Phoenix Island in Hainan.



KIN LI

Associate Partner

Kin works closely with Ma Yansong from each project's earliest stages to translate the MAD design philosophy and language into vivid models. He is extremely talented in art and design, and highly synchronized with Ma's vision. His combination of artistry and technical expertise come together to produce complex 3-D models that provide a solid base for the rest of the design and architecture teams to develop. After September 2011 to join MAD, as an important designers, he involved multiple projects with the concept of "Shanshui City" design philosophy, including Pingtan Art Museum, Huangshan Taiping Lake Apartments, Nanjing Zendai Himalayas Center, Beijing Chaoyang Park Plaza, Lucas narrative Art Museum.



ANDREA D'ANTRASSI

Associate Partner

Italy born architect Andrea D'Antrassi is a registered architect in Italy and Switzerland. He received his Master's Degree in Architecture from Accademia di Architettura di Mendrisio, Switzerland. With solid experiences gained from overseas projects in US, Italy, Australia and China, Andrea adds a valuable global vision to MAD.

Since he joined MAD in 2010, he has been involved with Boncompagni Residential Development in Rome Italy, Huangshan Mountain Village Development, Nanjing Zendai Himalayas Center, and recent Lucas Museum of Narrative Art. He also plays a key role in MAD's conceptual design competitions.



LU JUNLIANG (DIXON)

Associate Partner

Dixon is Associate Partner at MAD Architects' Los Angeles Office. This is Dixon's second stint with MAD, having acted as Head of Operations for their Beijing office from 2008 to 2011. Dixon helped to conceptualize and organize the firm's installation in partnership with Olafur Eliasson, "Feelings are Facts" at UCCA.

Since returning to MAD in 2014, Dixon has project managed the firm's first US Project, a commission for mixed-use complex with luxury condominiums in Beverly Hills. He is the Los Angeles office's leader, managing operations, projects, and overall strategy.



● Completed

● Under Construction

● OnGoing Projects

● MAD Office



ABSOLUTE TOWERS

2006-2012

Mississauga, Canada



ABSOLUTE TOWERS

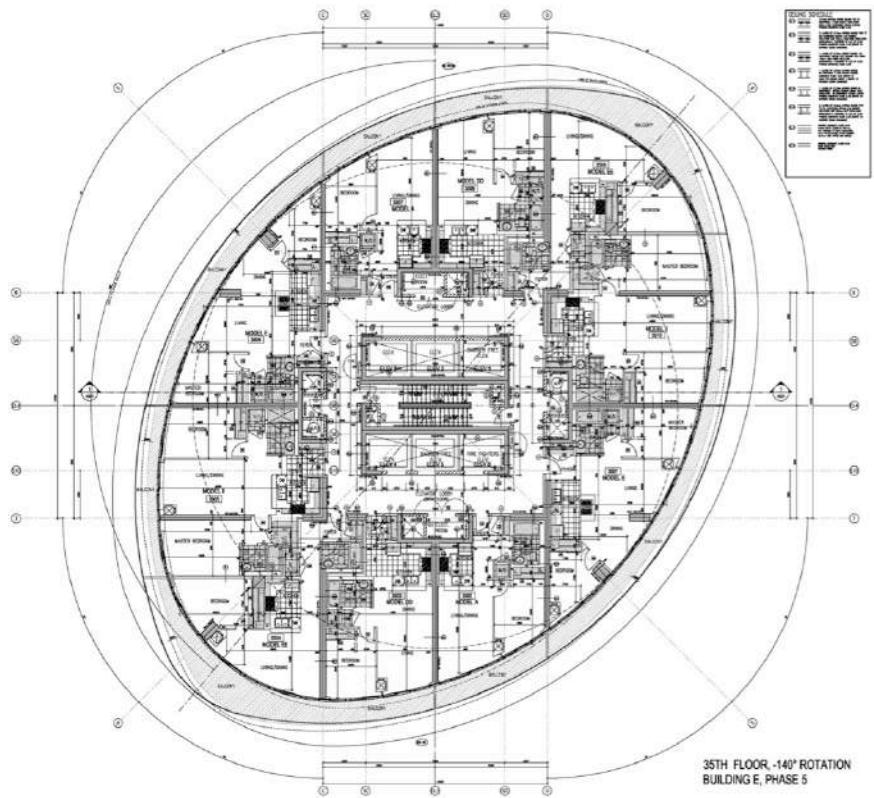
2006-2012

Mississauga, Canada









35TH FLOOR, -140° ROTATION
BUILDING E, PHASE 5

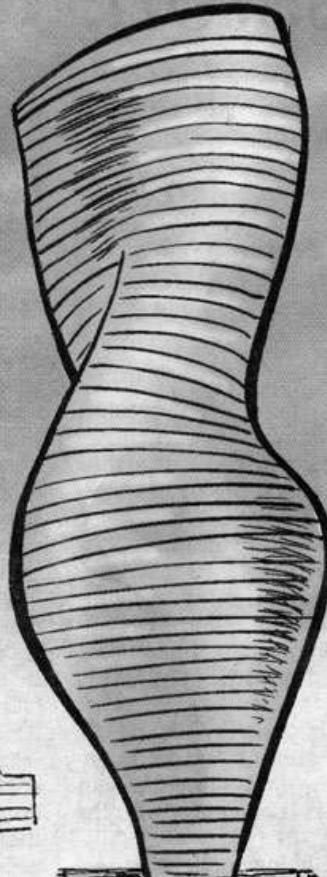




Hannah H

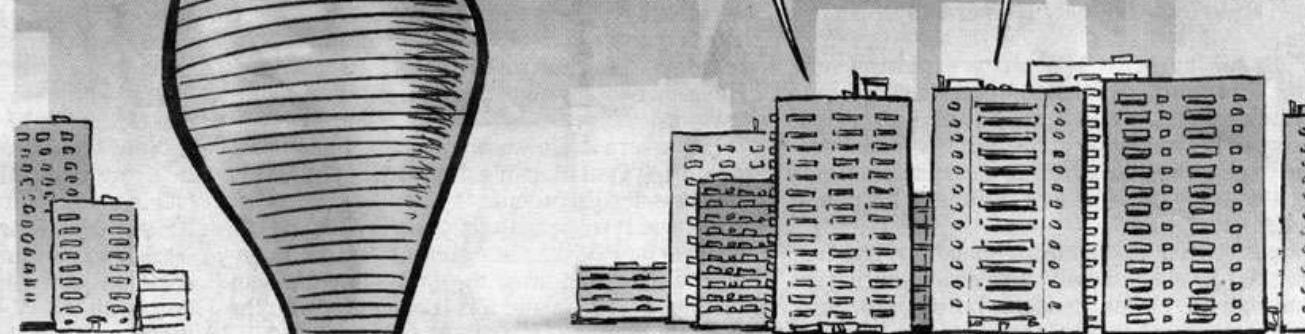
NEW MISSISSAUGA LANDMARK PLANNED...

CARTOON BY
RONALD D. TORONTO STAR



BOLD,
BRASSY,
BEGUILING!...

MIGHT AS
WELL JUST
CALL IT...
"THE HAZEL"

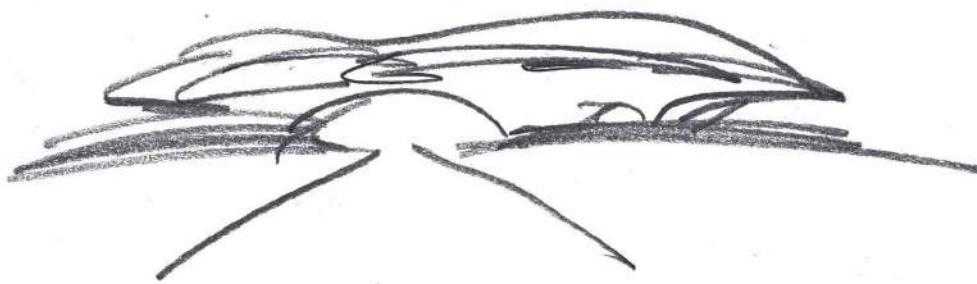






LUCAS MUSEUM OF NARRATIVE ART

Under construction
Los Angeles, USA



LUCAS MUSEUM OF NARRATIVE ART

Under construction

Los Angeles, USA













HARBIN OPERA HOUSE

2010-2015

Harbin, China





HARBIN OPERA HOUSE

2010-2015

Harbin, China

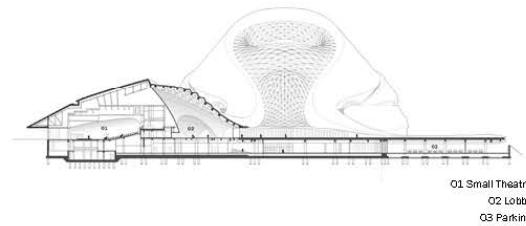








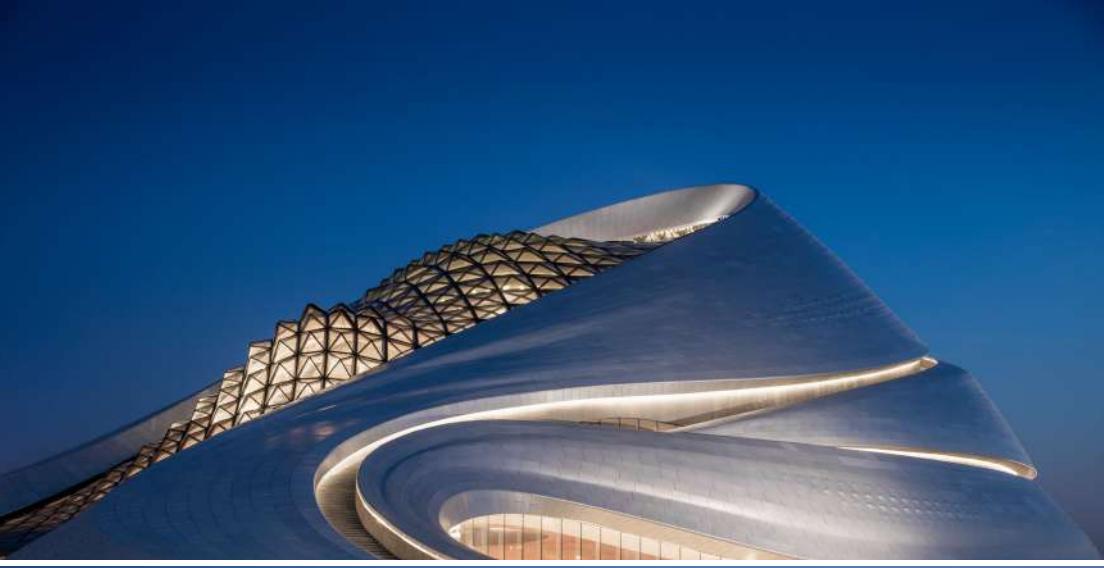




01 Small Theatre

02 Lobby

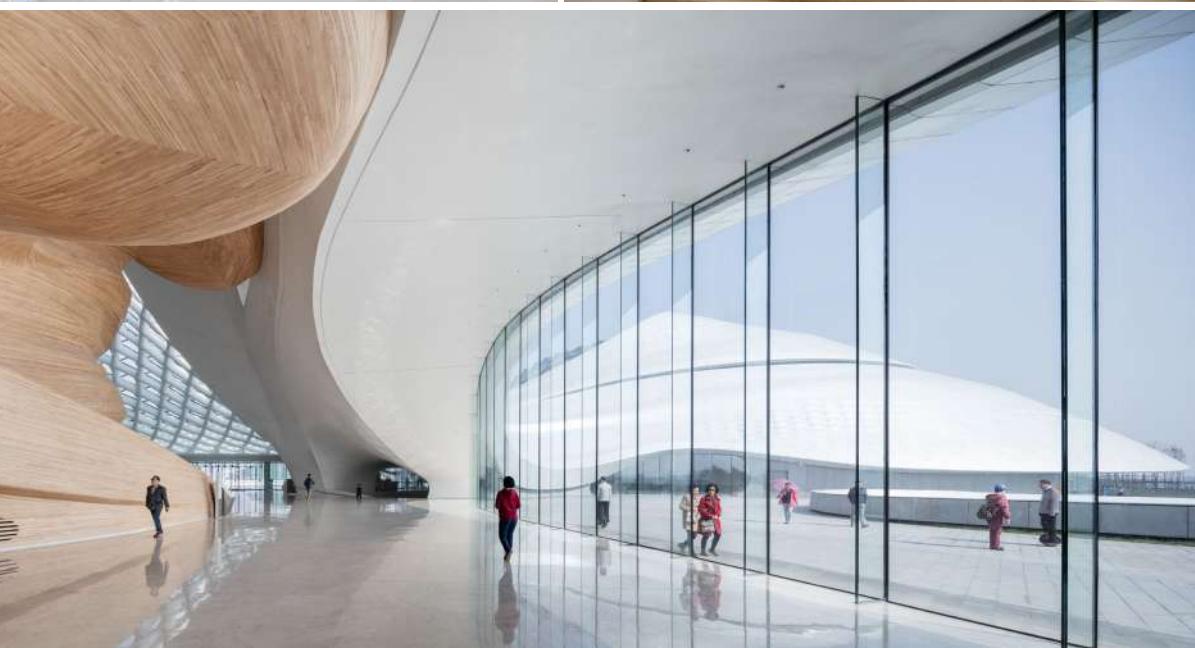
03 Parking



















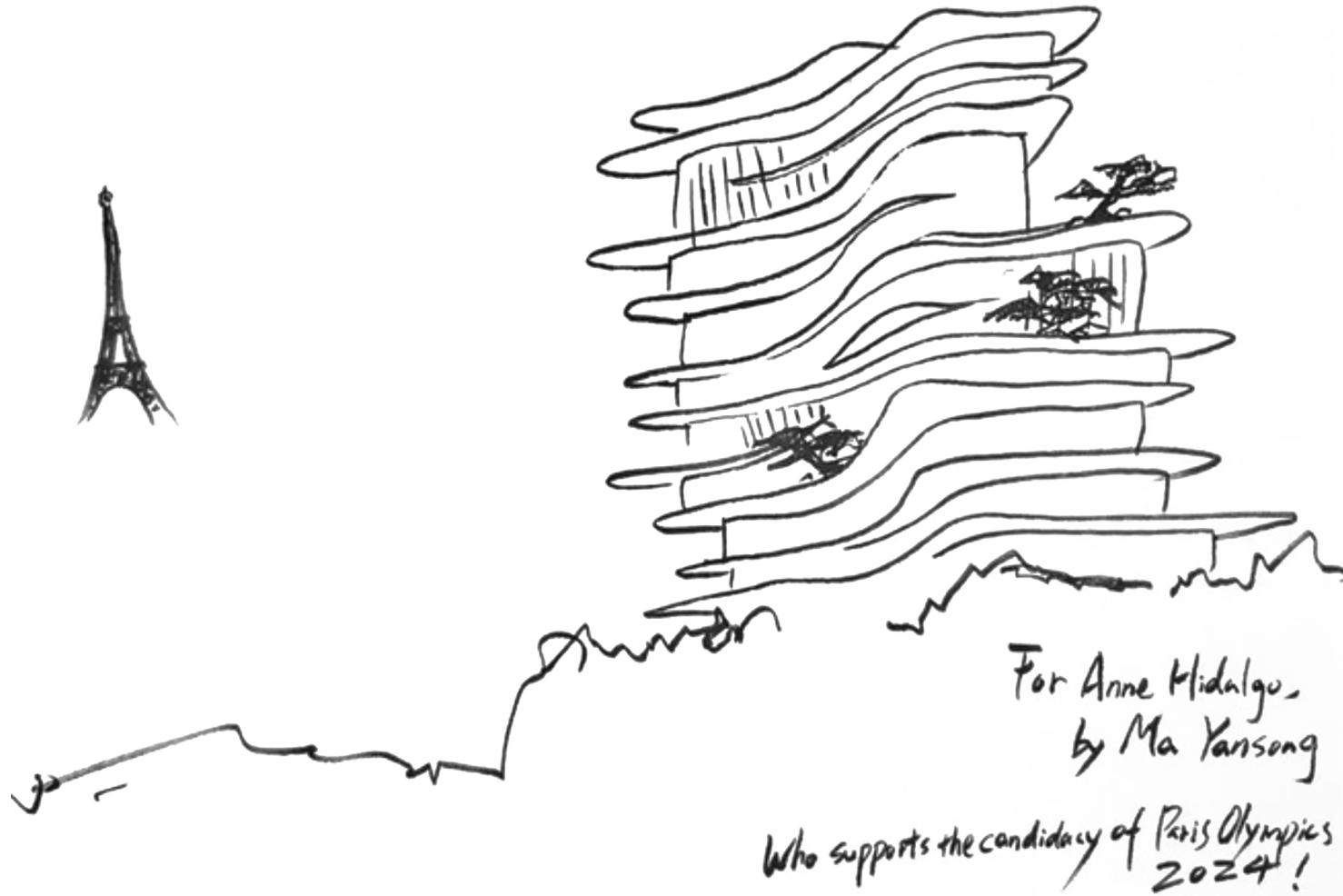




UNIC

2012-2021

Paris, France





UNIC

2012-2021

Paris, France











CHAOYANG PARK PLAZA

2012-2017

Beijing, China



CHAOYANG PARK PLAZA

2012-2017

Beijing, China









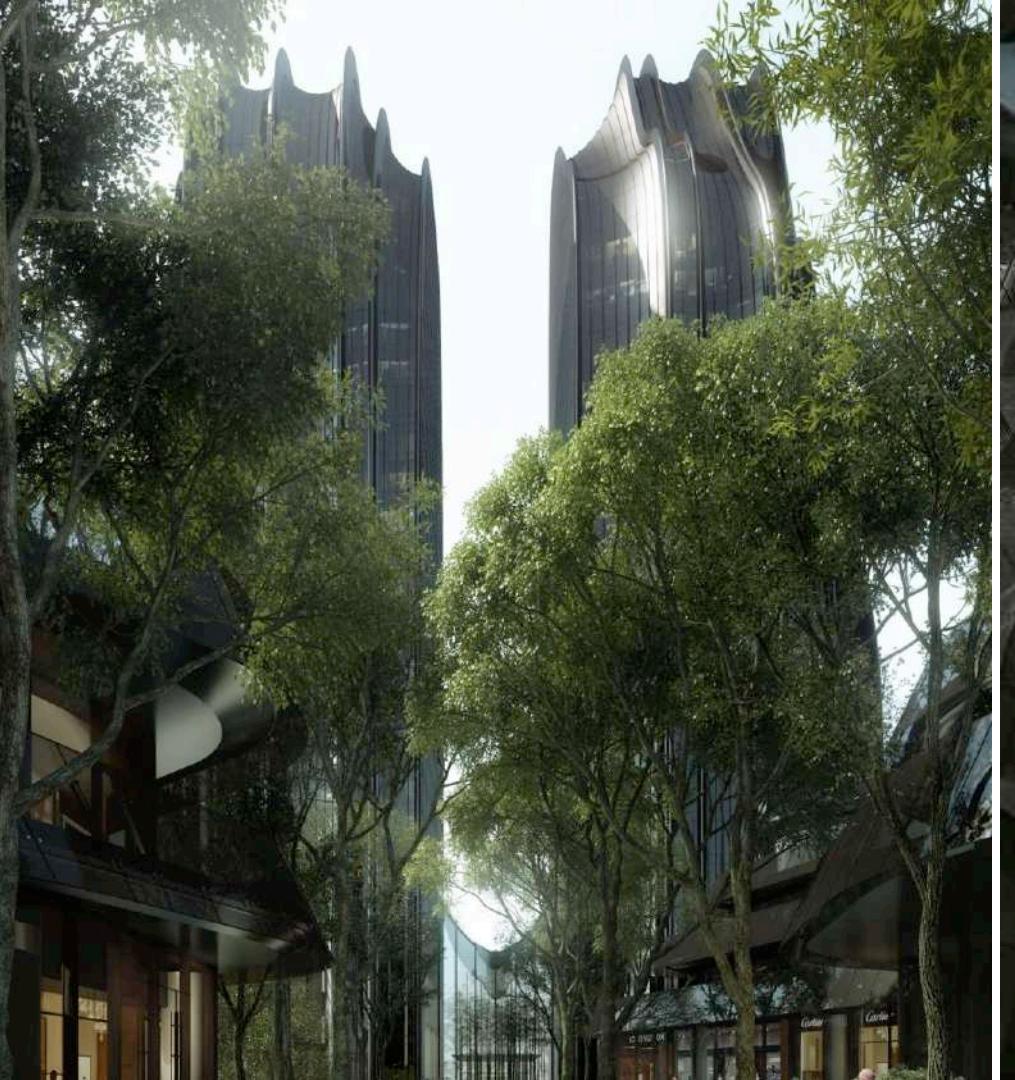


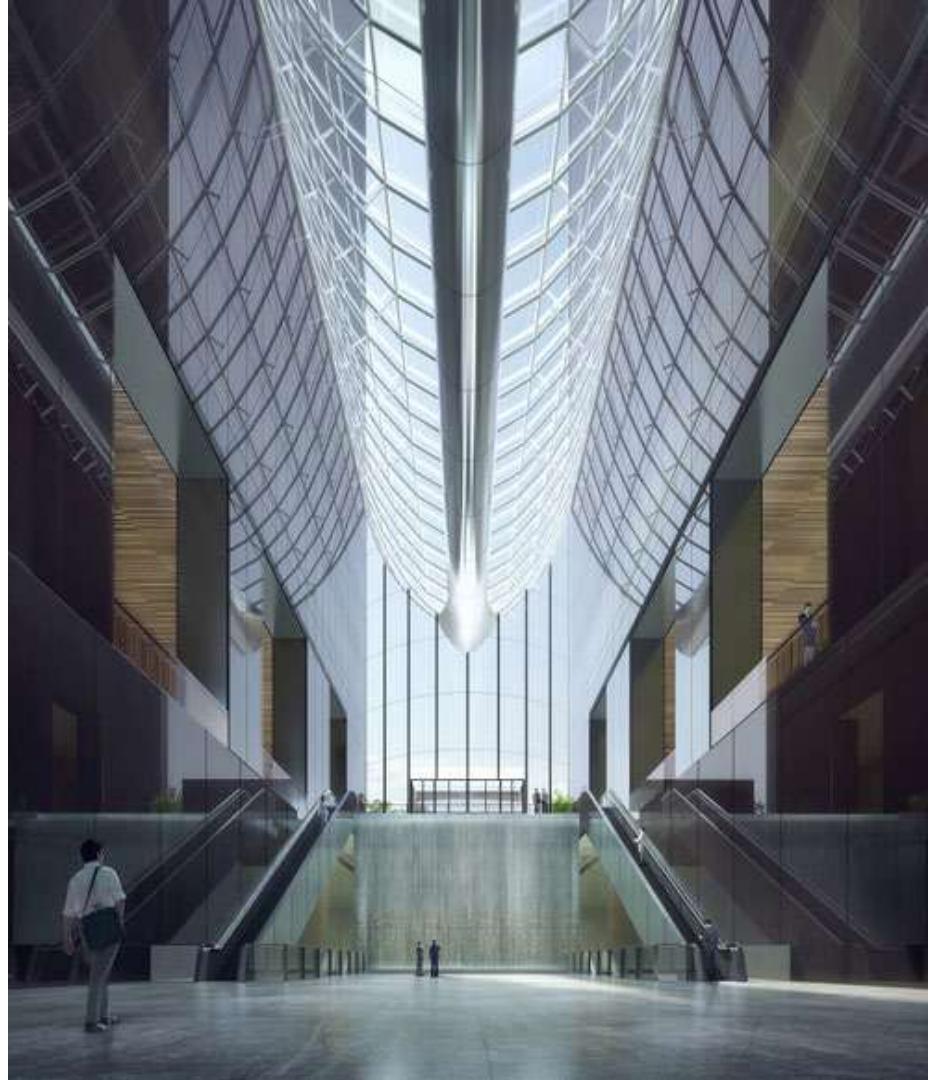




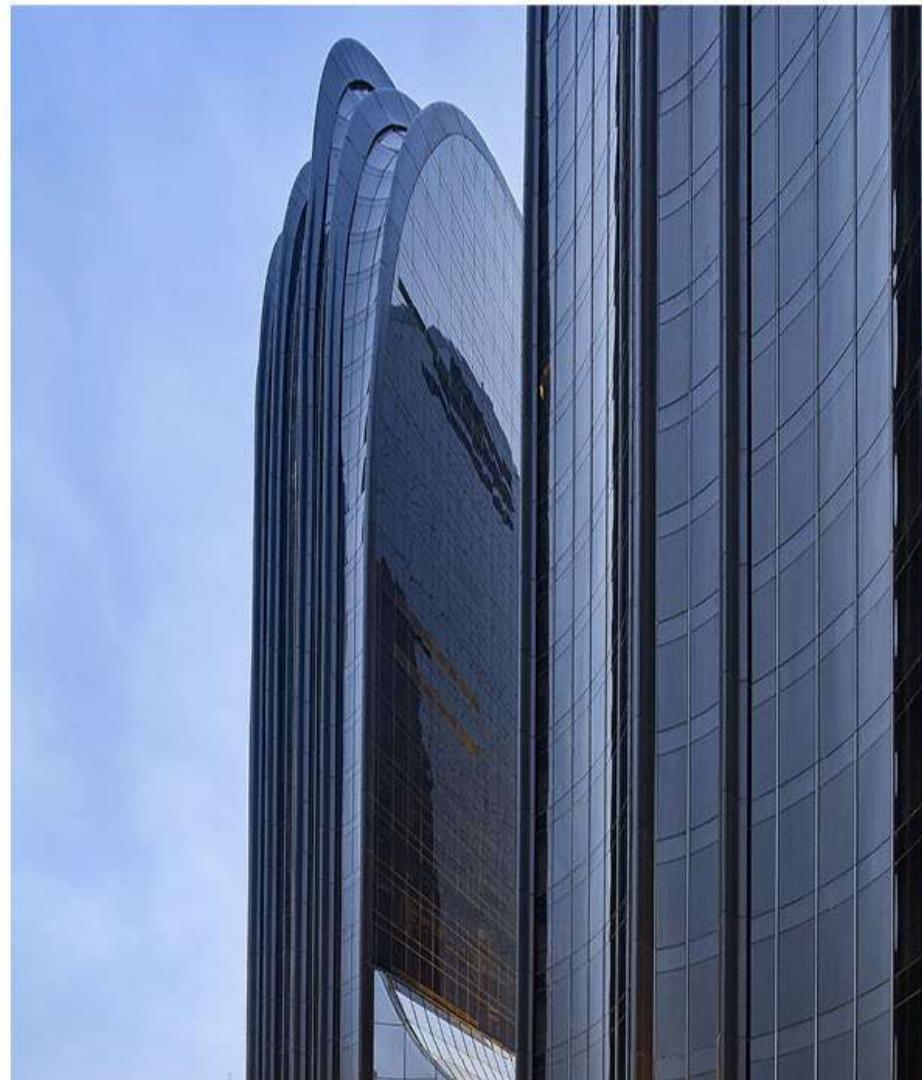






















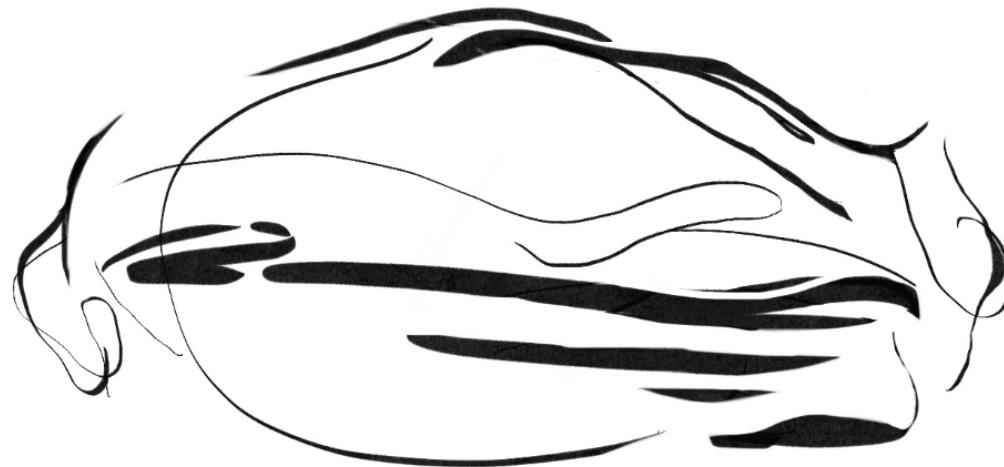




ORDOS MUSEUM

2005-2011

Ordos, China





ORDOS MUSEUM

2005-2011

Ordos, China









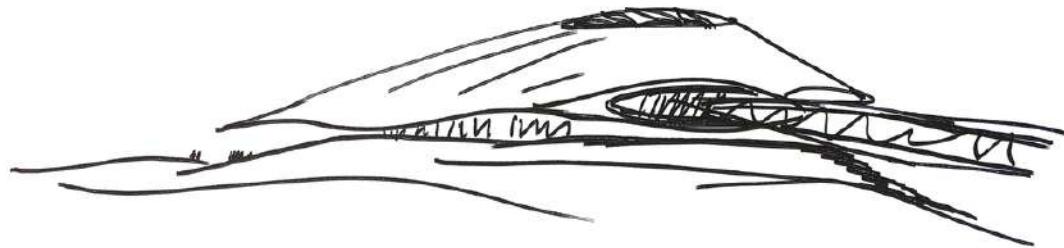




YABULI CONGRESS CENTER

2015-2022

Yabuli, China



YABULI CONGRESS CENTER

2015-2022

Yabuli, China

















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ART INSTALLATION

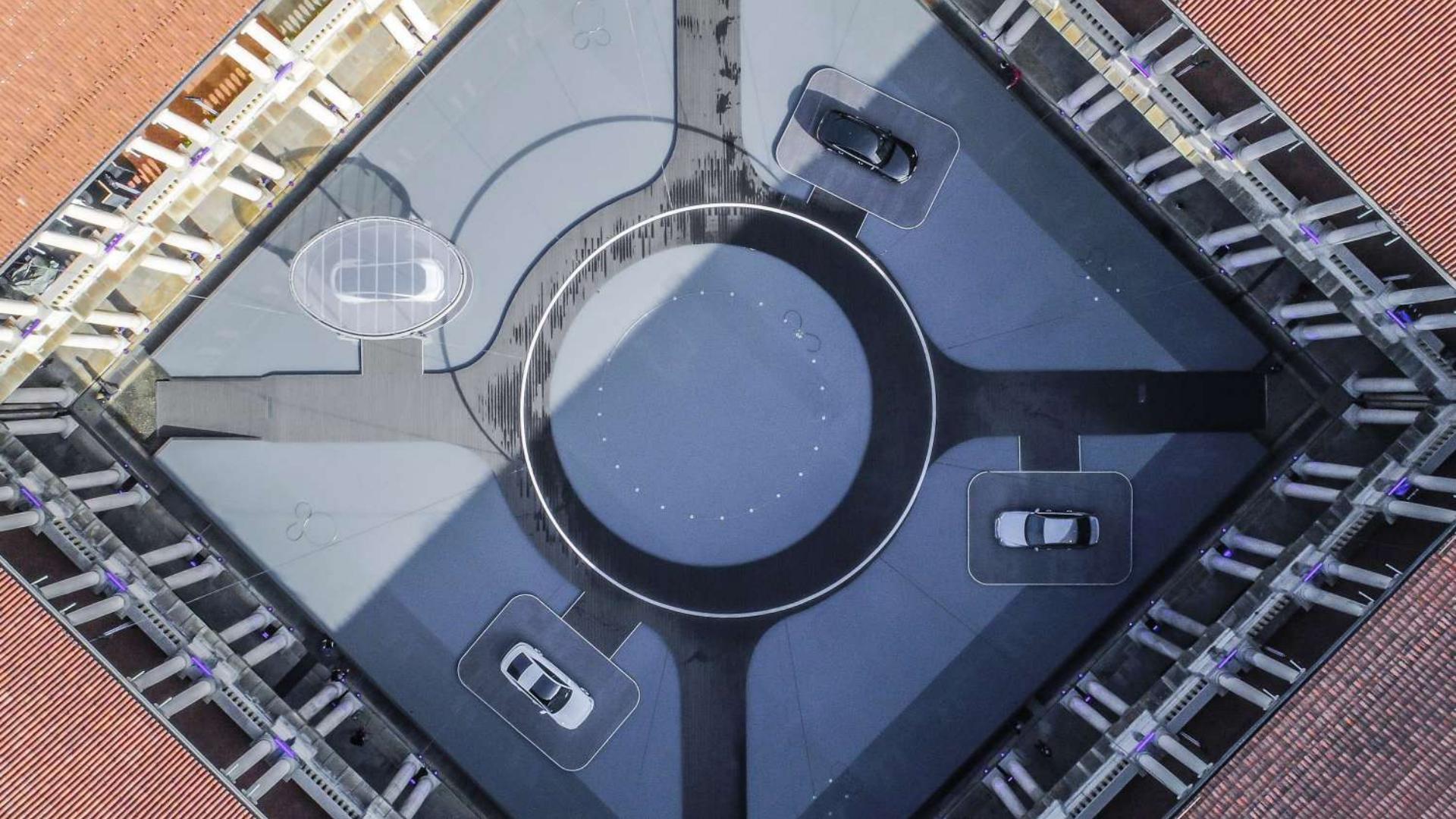
AUDI FIFTH RING

2018

Milan, Italy

















INVISIBLE BORDERS

2016

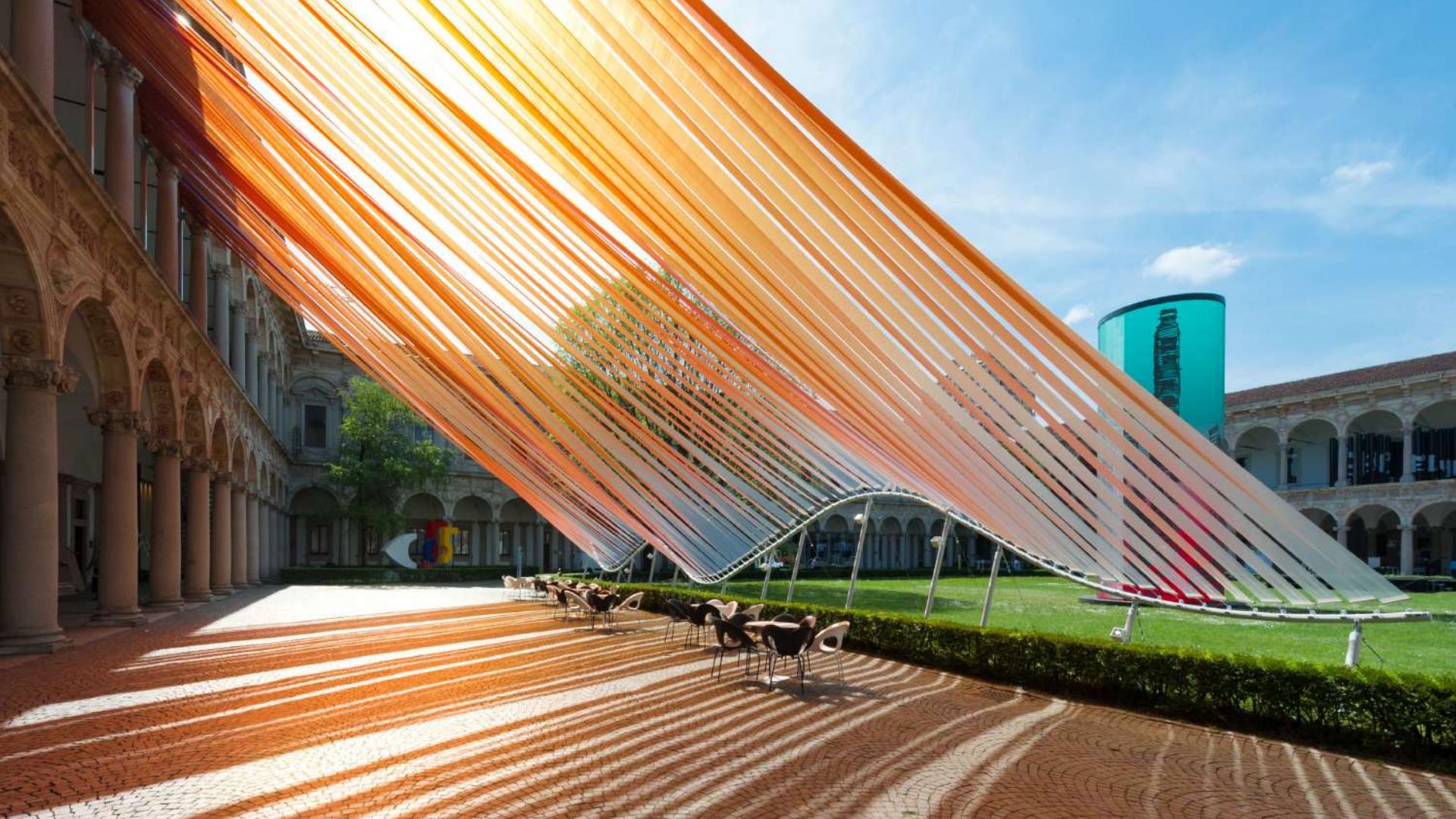
Milan, Italy















MOMENTUM

2023

Milan, Italy













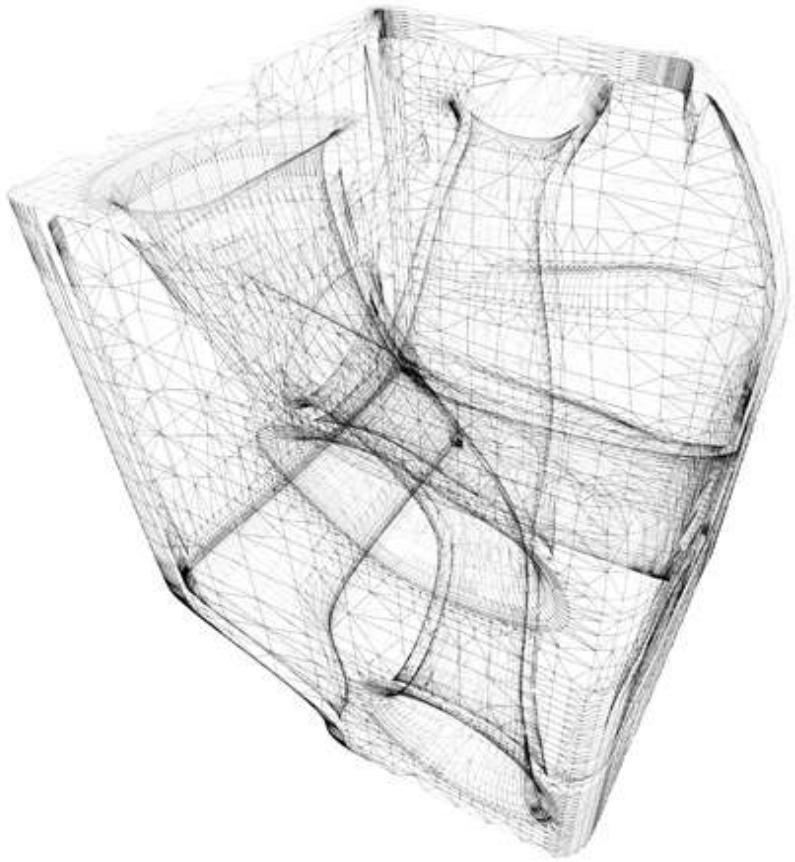
mad

PRODUCT DESIGN

FISH TANK









MARILYN

2016

Olivari







GU CHAIR

2022

Sawaya Moroni





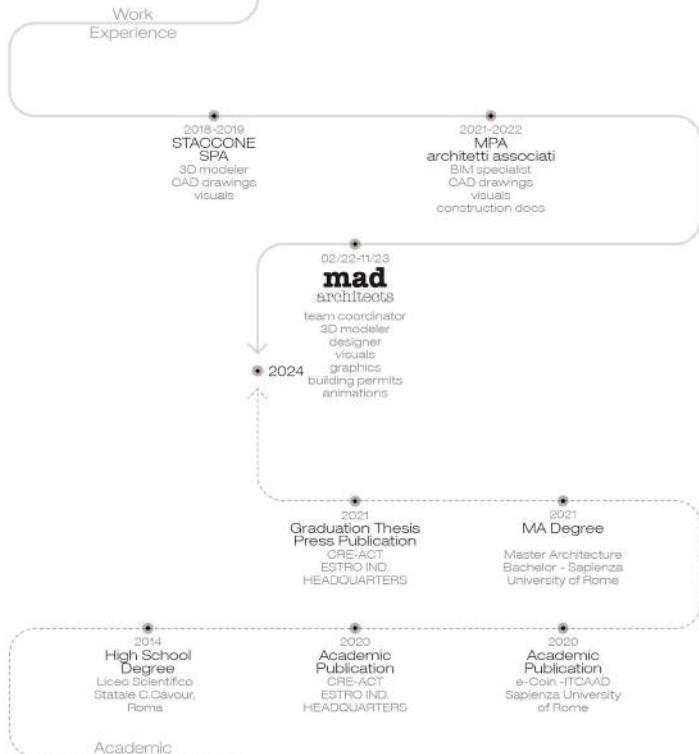






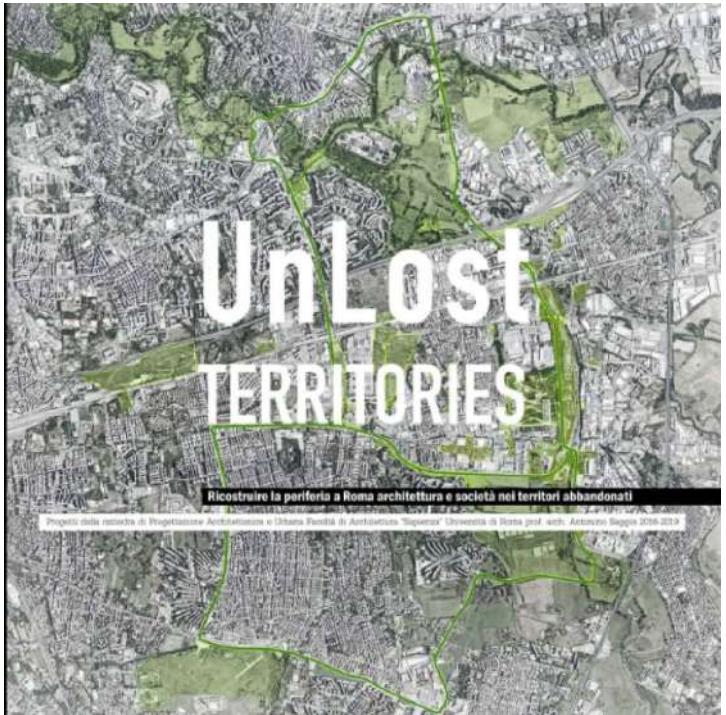
Edoardo D'Angelo

MAD Architects



LABORATORIO SINTESI 2019

Questo Laboratorio di Sintesi ha lo scopo di coinvolgere gli studenti nella progettazione di un edificio di media-alta complessità inserito in un vuoto urbano della città di Roma. La particolarità del Laboratorio di sintesi consiste nel rapporto che si deve instaurare tra il programma, l'area di progetto, i committenti, i previsti occupanti e l'insieme di aspetti teorici e pratici della progettazione architettonica e urbana. Da questo punto di vista il Laboratorio anticipa metodi di sviluppo del progetto che avranno la loro più completa elaborazione nell'ambito di una tesi in progettazione.



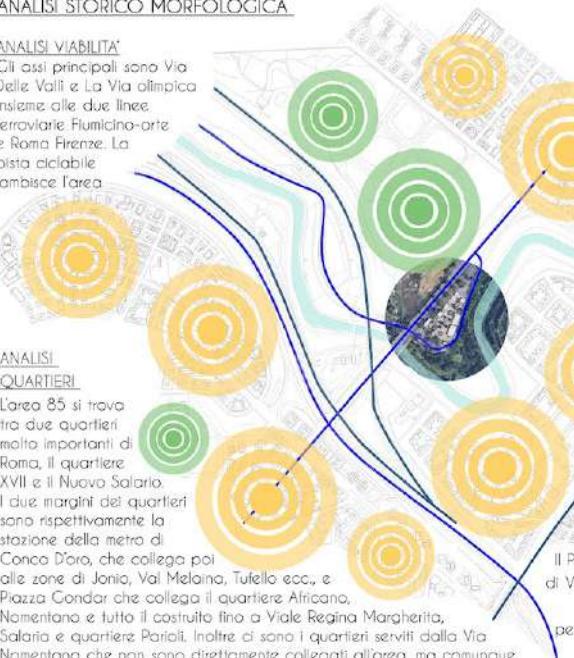
NQUADRAMENTO AREA



ANALISI STORICO MORFOLOGICA

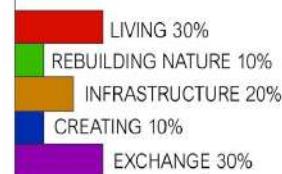
ANALISI VIABILITÀ

Gli assi principali sono: Via Delle Valli e La Via olimpica insieme alle due linee ferroviarie Flumicino-arte e Roma-Firenze. La pista ciclabile ambisce l'area



DRIVING FORCE
La driving force del progetto è il
“Centro culturale”.

GRAFICI MIXITè



LIVING 30%



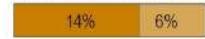
- Spazi esterni d'esibizione 20%
- Aree ristorazione 10%

REBUILDING NATURE 10%



- Spazi esterni d'esibizione 4%
- Percorsi per il fiume 6%

INFRASTRUCTURE 20%



- Connessioni città fiume 14%
- Percorsi d'accesso all'area 6%

CREATING 10%



-Laboratori 8%
-Aree ricreative 2%

EXCHANGE 30%



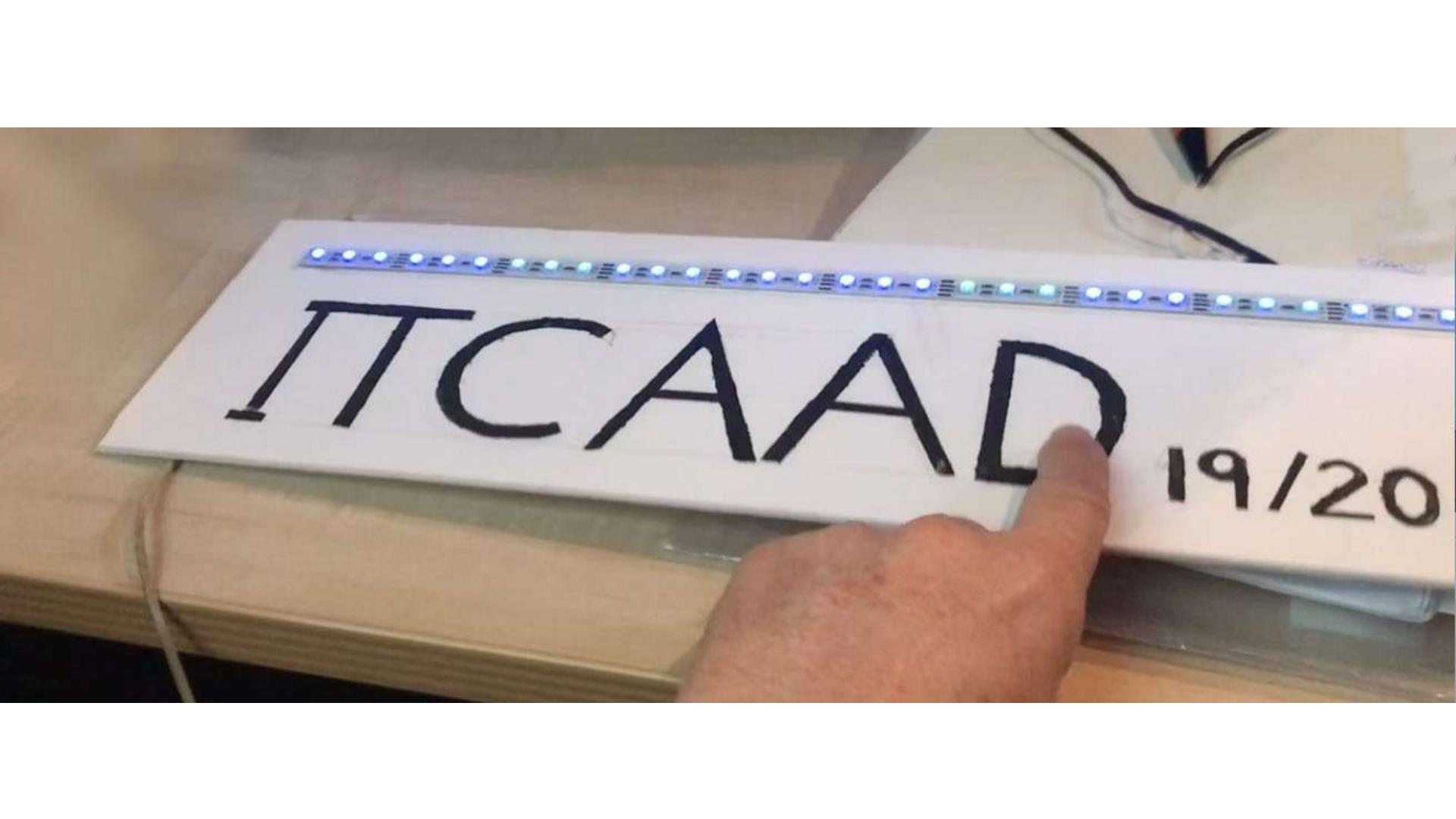
- Palcoscenico esterno 13%
- Aree commerciali 17%

BLACK HOLE CONCEPT

L'universo, secondo le ultime scoperte, e secondo la teorizzazione di Einstein nei primi del '900, è permeato da un tessuto (spazio-Tempo) che noi conosciamo come Gravità. Quest'ultima infatti è come se costituisse i percorsi dell'universo, in cui dove è più presente, devia l'andamento degli elementi che percorrono lo spazio. Ci sono alcuni punti in cui però queste forze di attrazione sono molto forti. Se i materiali attratti, tramite processi chimici, riescono ad equilibrare queste forze dette di gravità, nascono le comunemente chiamate "stelle". Se le forze di attrazione sono troppo forti si crea una sorta di falla nel tessuto dell'universo, un errore che porta alla creazione di buchi neri.

La gravità in essi è talmente forte da distorcere il tessuto dello spazio-tempo nell'intorno, così forte da non far scappare nulla, nemmeno la luce.





ITCAAD 19/20

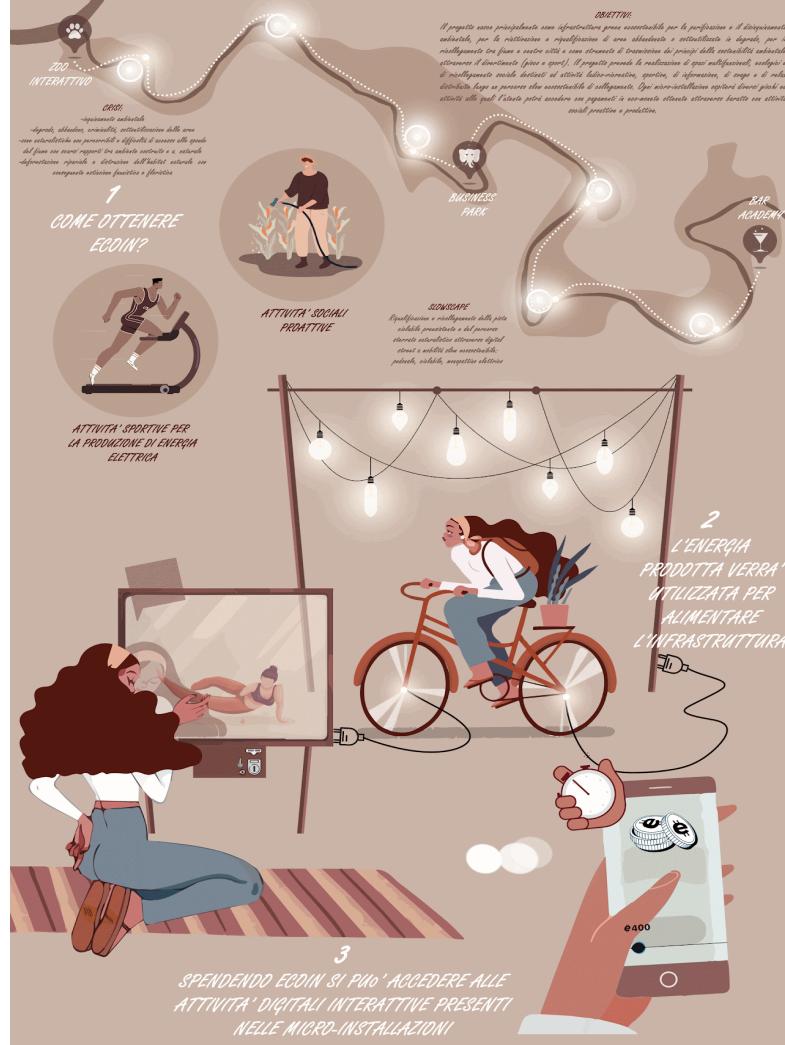


Autoritratto - frammentazione



Logo itcaad – decomposizione

**Earn ECO-in with social proactivity
Spend it in I.A. Attractions**



IL NUOVO ASSETTO DELL'ANSA

1:500



DISTRIBUZIONE QUARTIER GENERALE

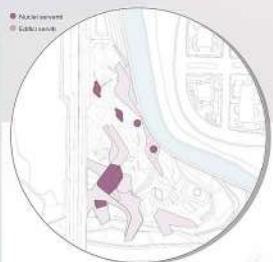
● ACCESSI E PERCORSI

- Percorsi
- Corridoi
- Percorsi



● DISTRIBUZIONE

- Nucleo residenziale
- Edifici sociali



● SERVIZI E PIAZZE

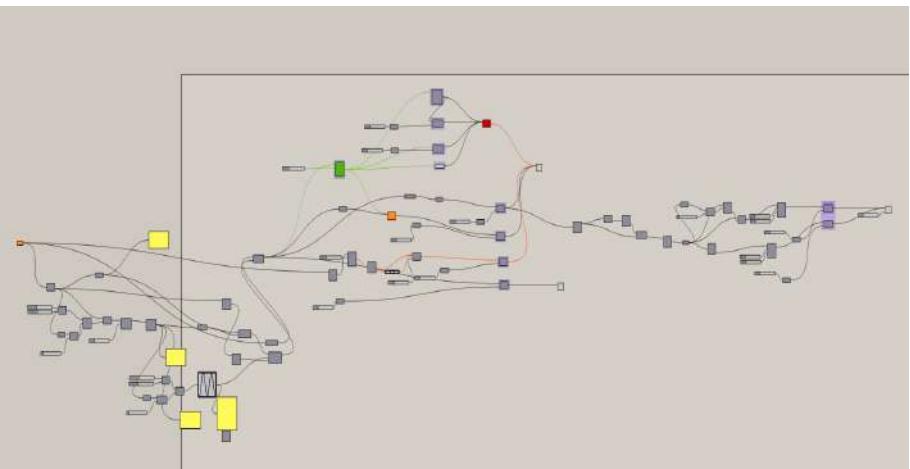
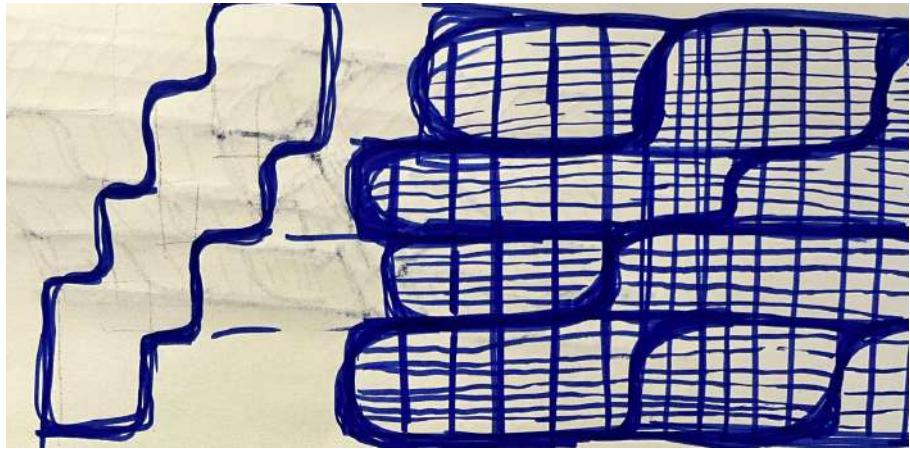
- Servizi
- Piazze



SEZIONE A-A' 1:500



SKETCH INIZIALE – SCRIPT - RENDER



TURBINE OLED: INTERATTIVITÀ, SOSTENIBILITÀ, ESTETICA.

• FACCATA RICERCA E SVILUPPO: TURBINE OLED - ALIAGGI

L'edificio Aliaggi è l'esempio più avanzato di edificio intelligente al mondo. L'edificio è dotato di una facciata interattiva, sostenibile e estetica. La facciata è composta da un gran numero di schermi OLED che si muovono in modo sincrono con il vento. Questi schermi sono utilizzati per visualizzare dati scientifici, immagini e video. La facciata è anche dotata di un sistema di illuminazione intelligente che si adatta alle condizioni ambientali.

• Dettaglio edificio ricerca e sviluppo: Doppia pelle 1/20

• Funzionamento pannelli OLED (David Obunens Architecture Technology)

1 POSIZIONAMENTO

ogni pannello OLED viene installato al di fuori di seguito ad un altro effettuando un angolo di 90° rispetto alla parete precedente. Questo consente di creare uno spazio per l'acqua necessario che scorre verso il basso. Nel caso di un solo pannello, questo deve essere installato come il primo verticale.

2 MECCANICA

ogni pannello OLED viene fissato con due viti. Ogni vetro contiene una testa di vite con un orlo per la serratura. I due viti sono inseriti nel vetro da una parte e dalla parte opposta dell'angolo, consentendo così una maggiore stabilità.

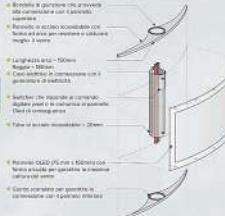
3 STOCCATO

ogni pannello OLED viene installato sulla parete interna della struttura. Questo consente di creare uno spazio per l'acqua che scorre verso il basso. Questo spazio può essere utilizzato per la raccolta delle acque.

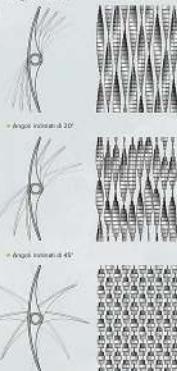
4 DINAMICA

ogni pannello OLED viene installato su un gabinetto esterno. Un sensore di temperatura, legato all'unità di controllo, monitora il vento e regola ogni pannello secondo le sue direttive.

• Explosione struttura di ancoraggio dei pannelli e tubo spirale



• Inclinazioni pannelli e creazione Pattern



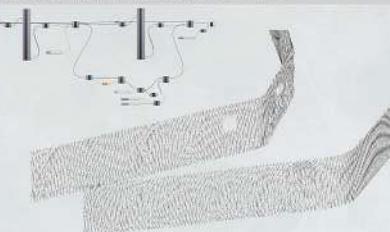
• Dettaglio assonometrico ancoraggio pannelli OLED



DESIGN PARAMETRICO

• GRASSHOPPER E IL RUOLO DELL'INFORMAZIONE

Per la realizzazione del progetto è stato utilizzato Grasshopper, un software parametrico che permette di creare modelli complessi basati su informazioni.



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DESIGN APPROACH PRINCIPLES

It all starts with a gesture

- Studio del progetto
- Elaborazione
- Comunicare con un gesto



Sketch Fenix - Rotterdam



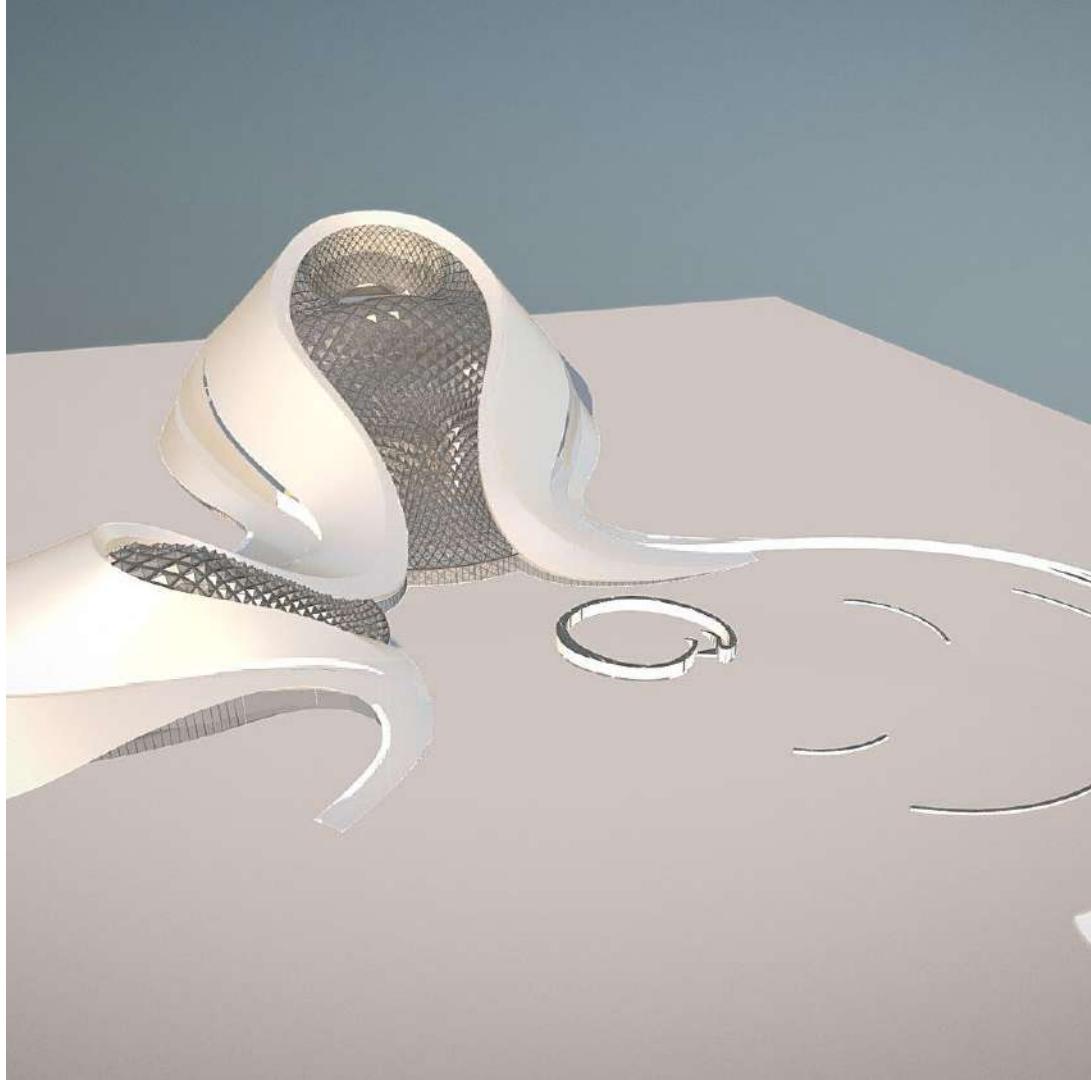


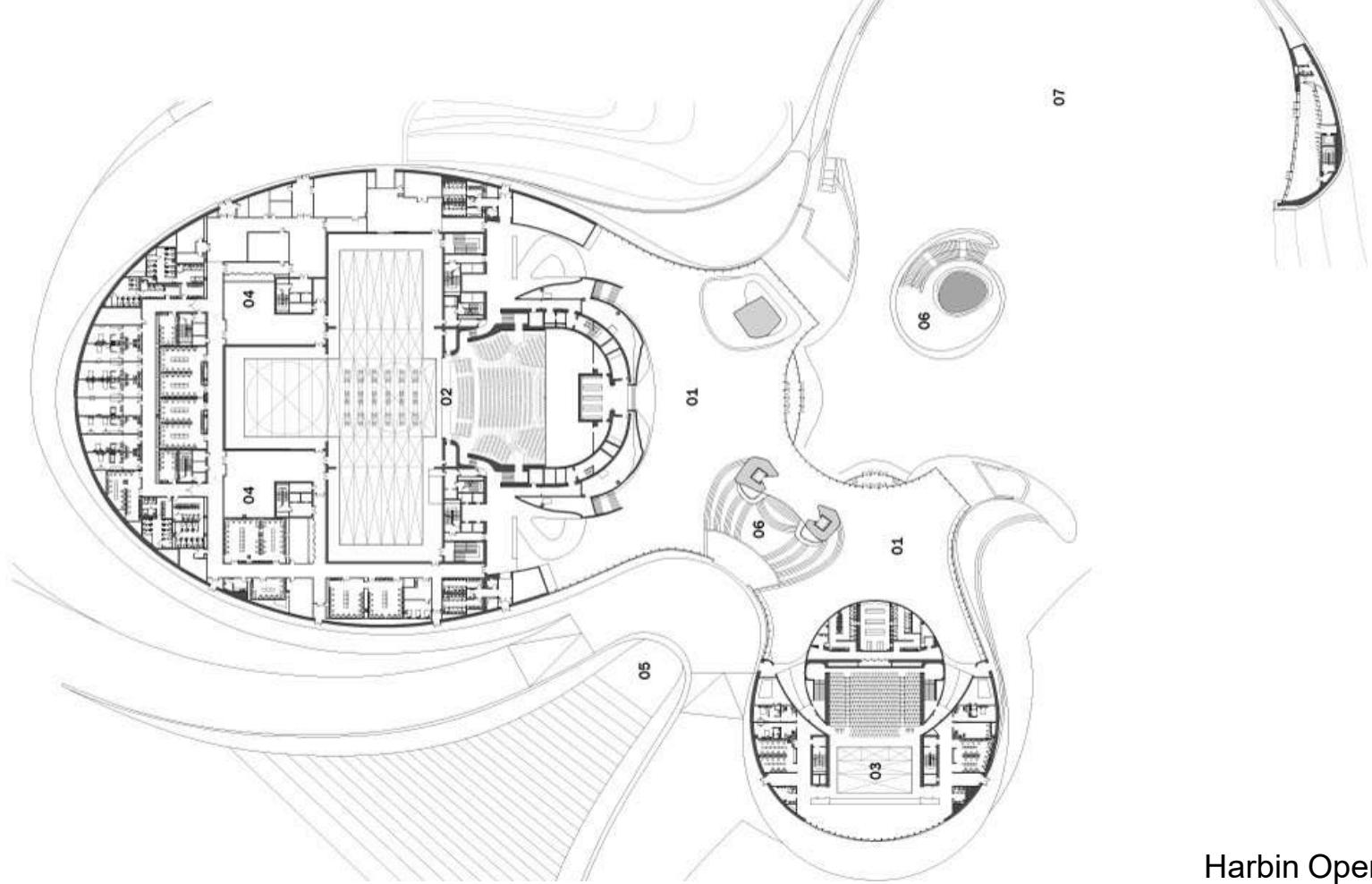


CSM
STEEL CONNECTIONS

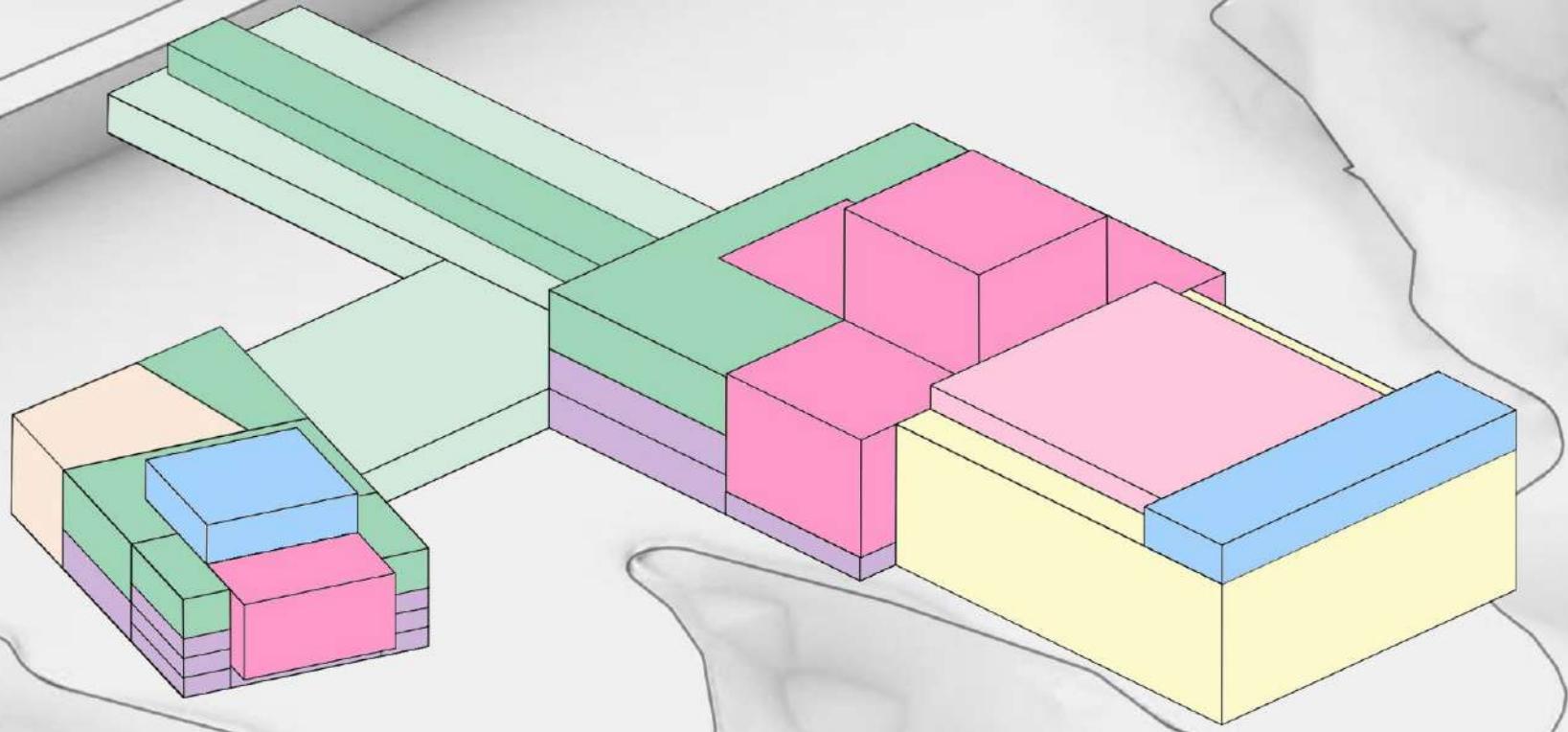
Massing studies

- Analisi delle funzioni
- Traduzione numeri in volumetrie
- Elaborazione del massing





Harbin Opera house





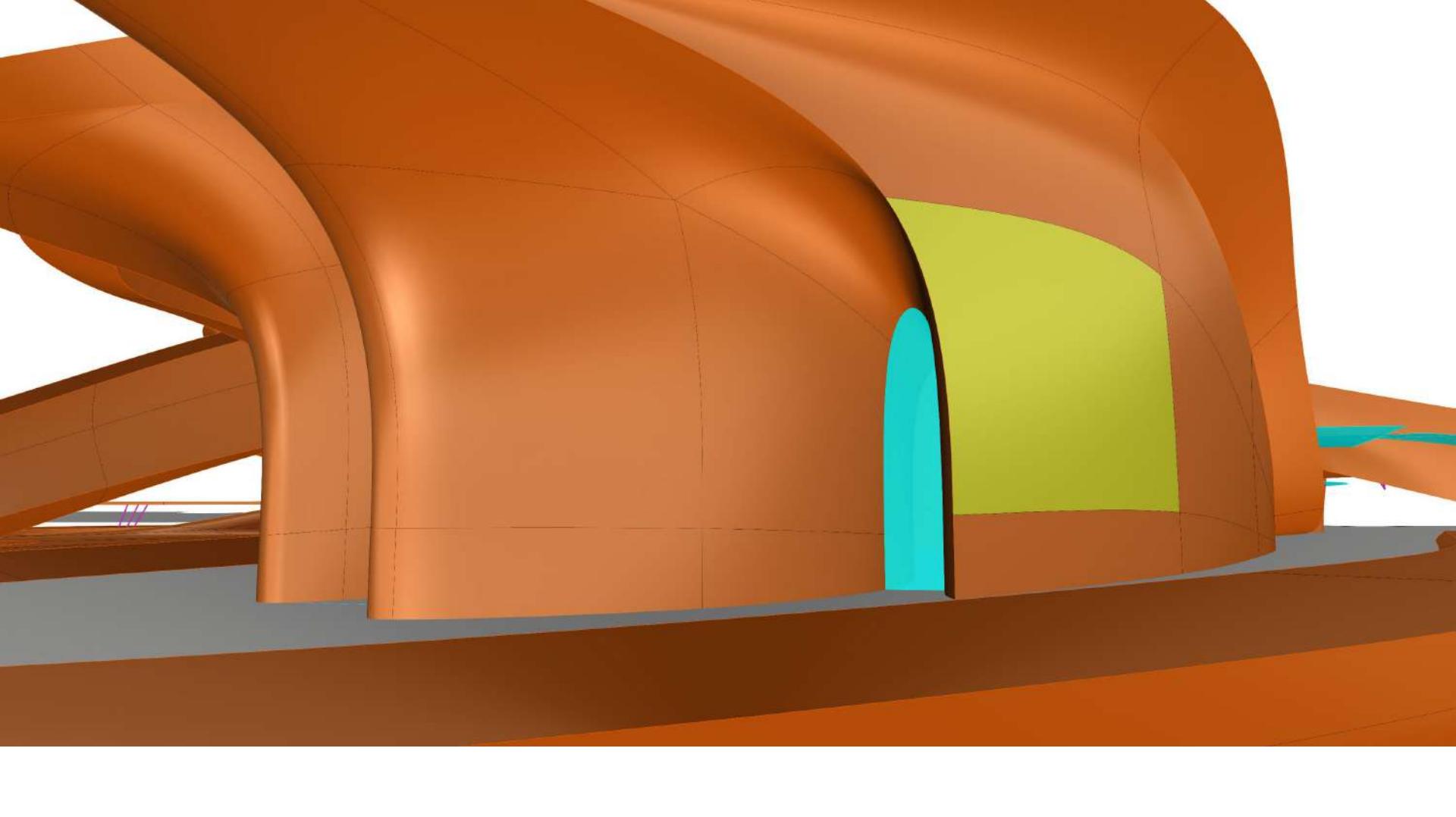




Design process

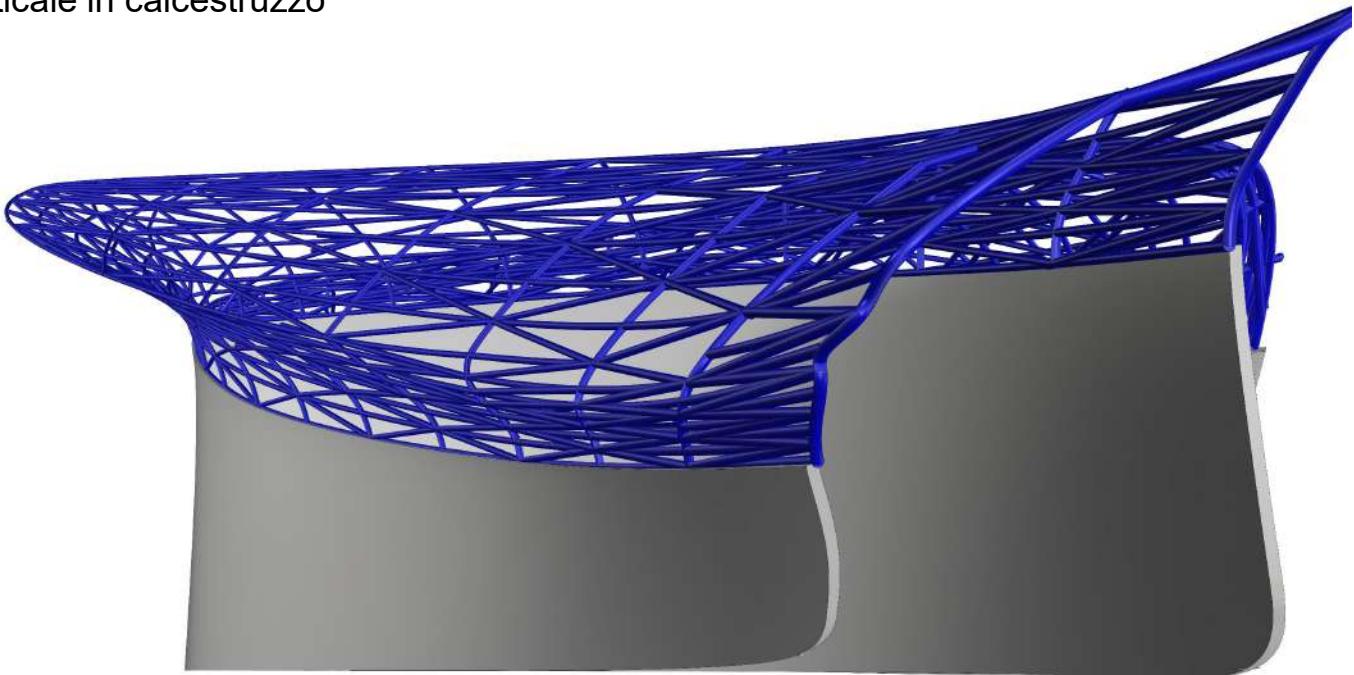
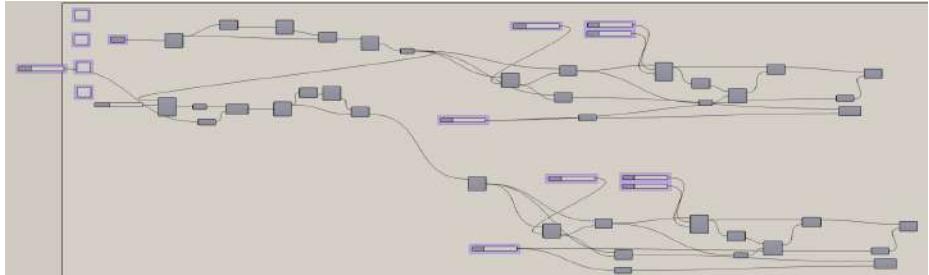
- La fase di Shaping (Rhino, SubD, Maya)
- Studio della Facciata
- Percezione e modellazione degli spazi





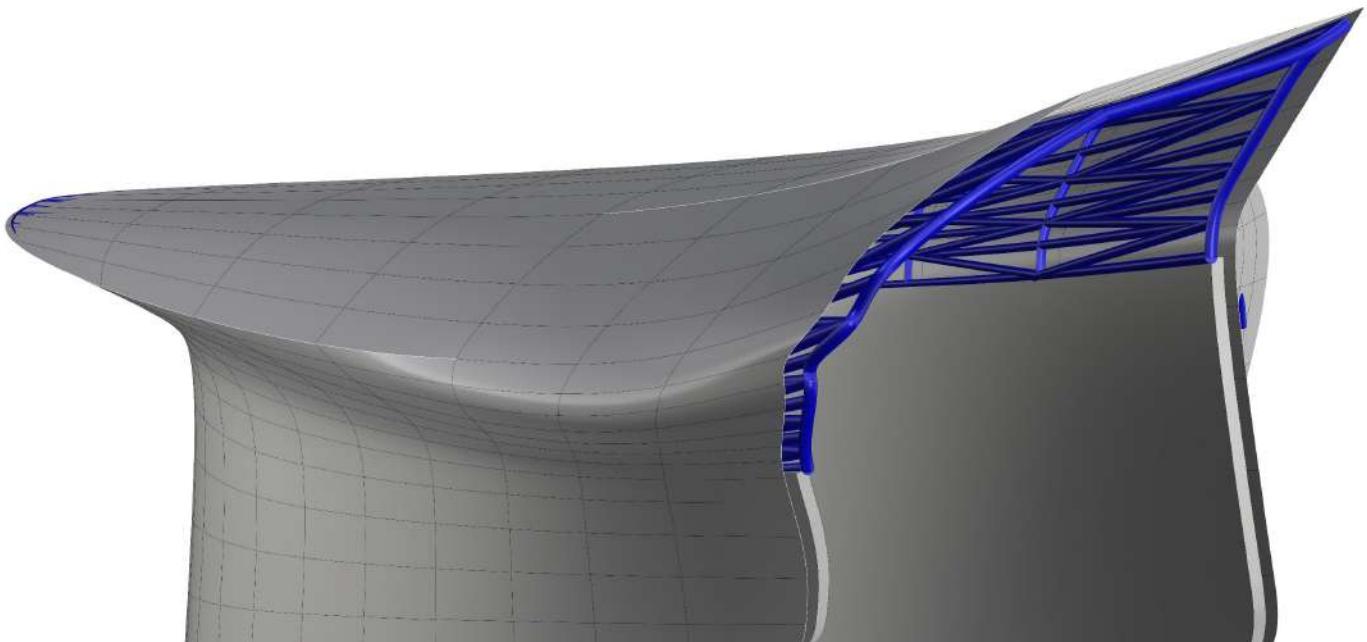
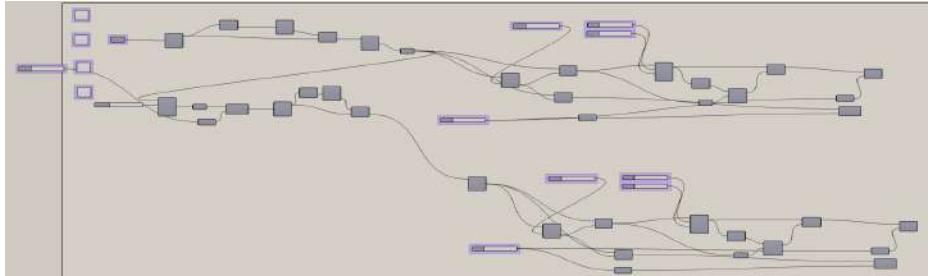
Struttura

- Script di Grasshopper che Permette il controllo della struttura
- Modello di sezione verticale in calcestruzzo e telaio in acciaio



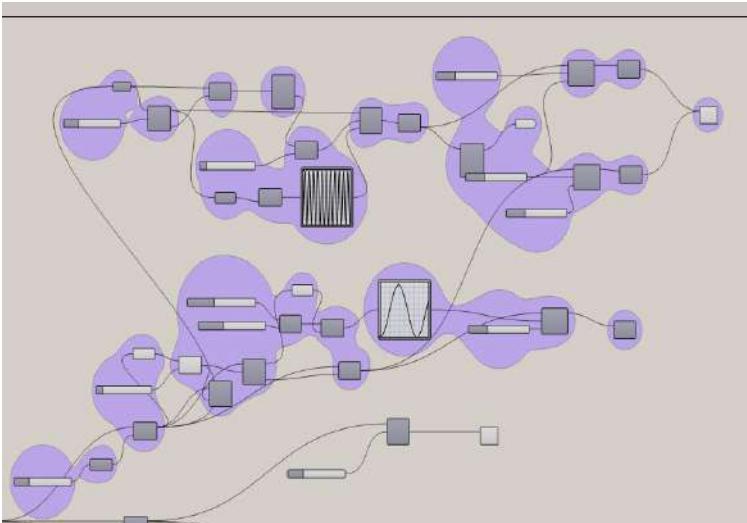
Paneling

- Script generatore per Paneling
- Modello per ingegnerizzazione struttura ancoraggio pannelli



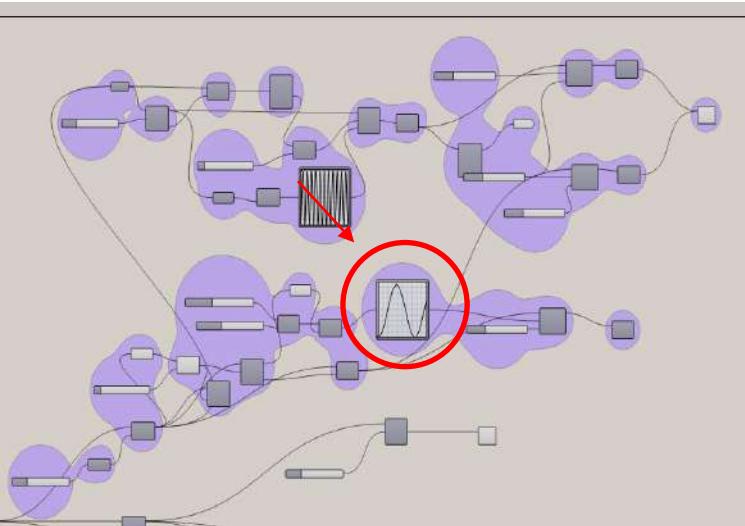
Facciata

- Script generatore facciata Unic Parigi
- Realizzazione Facciata



Facciata

- Script generatore facciata Unic Parigi
- Realizzazione Facciata



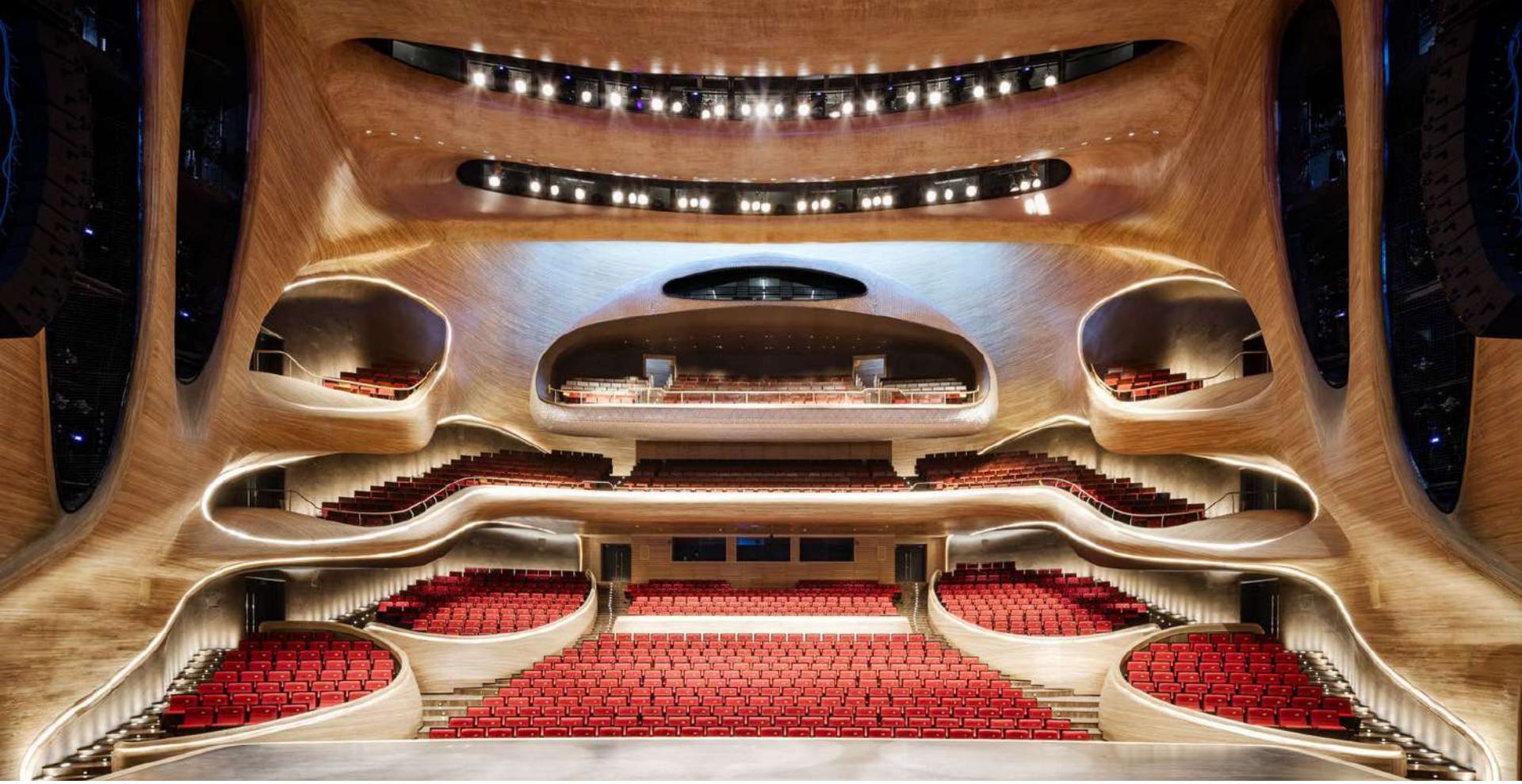


Gli spazi

- Studio della percezione dello spazio
- Empatia degli ambienti
- Progettazione degli interni





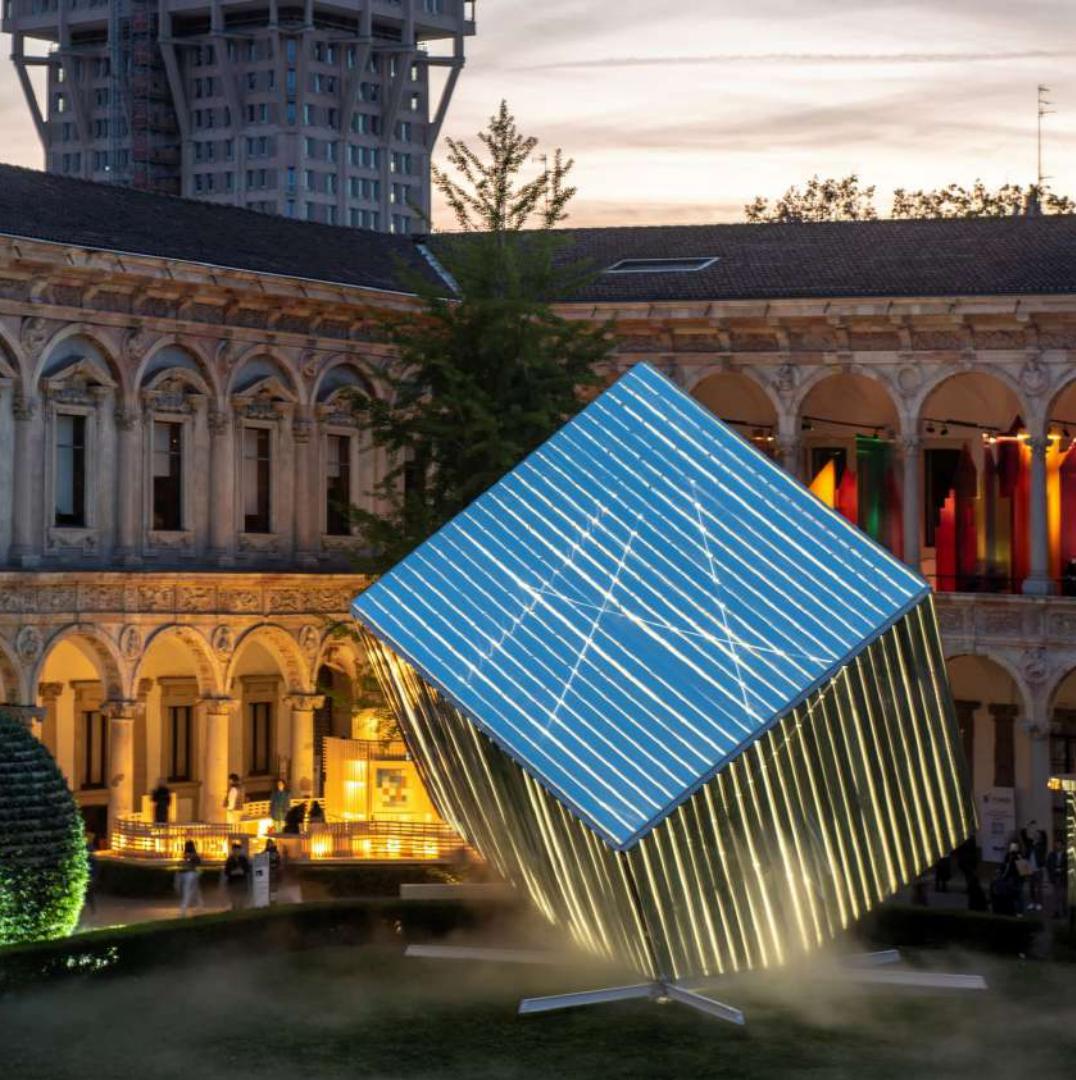






Nuovi strumenti

- Realtà aumentata
- Intelligenza Artificiale



Realtà aumentata

- Un nuovo modo di interagire con gli spazi

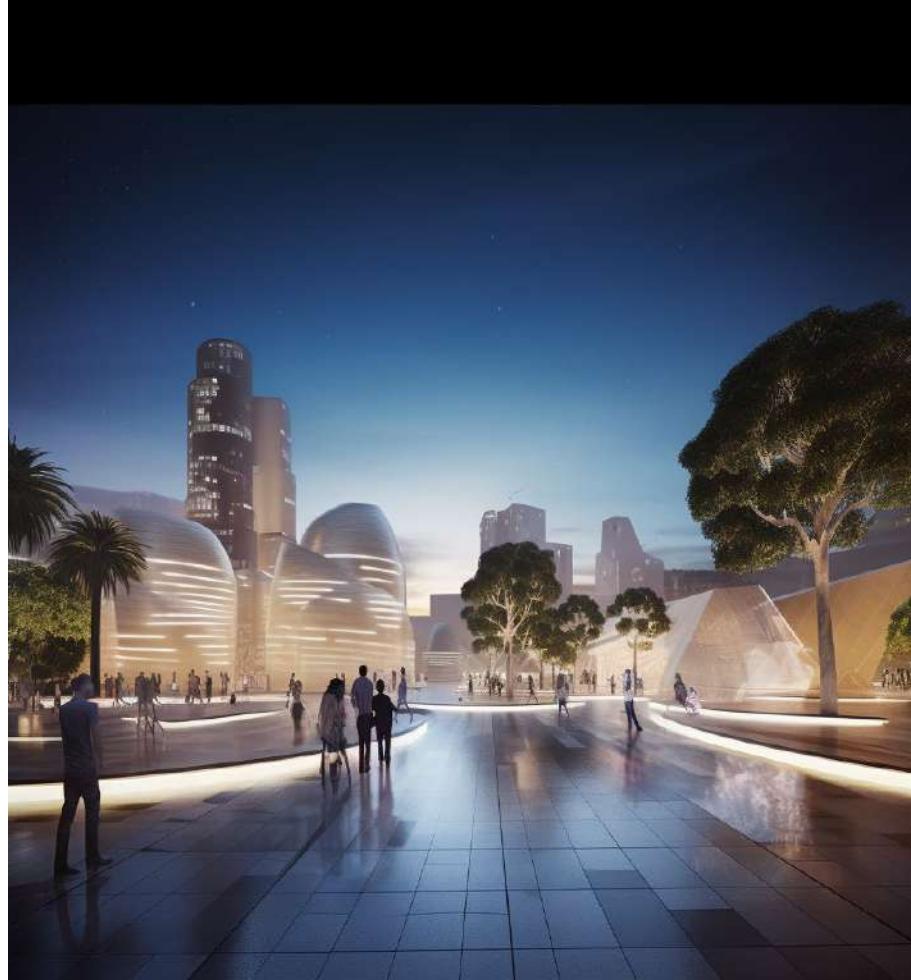


Intelligenza Artificiale

- Possibilità di indagare diversi processi creativi
- Un linguaggio di comunicazione adeguato
- Non controllare gli output finali







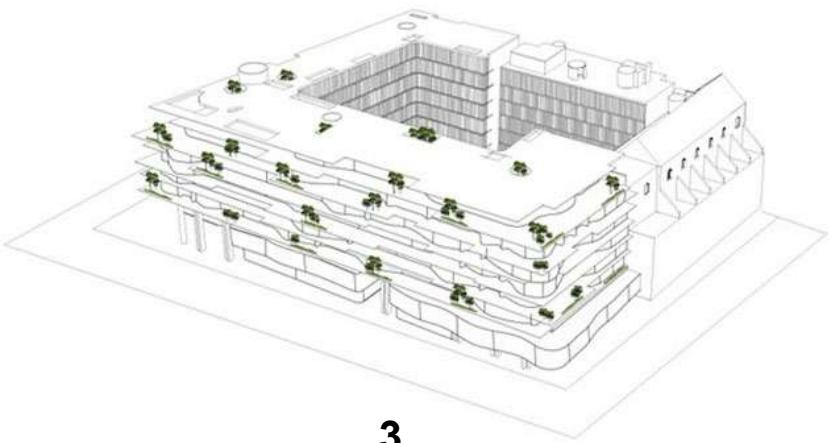
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EUROPE

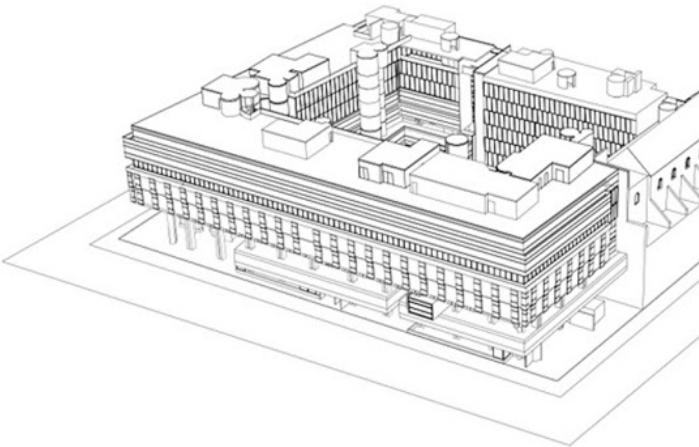
71 VIA BONCOMPAGNI

2011-2025

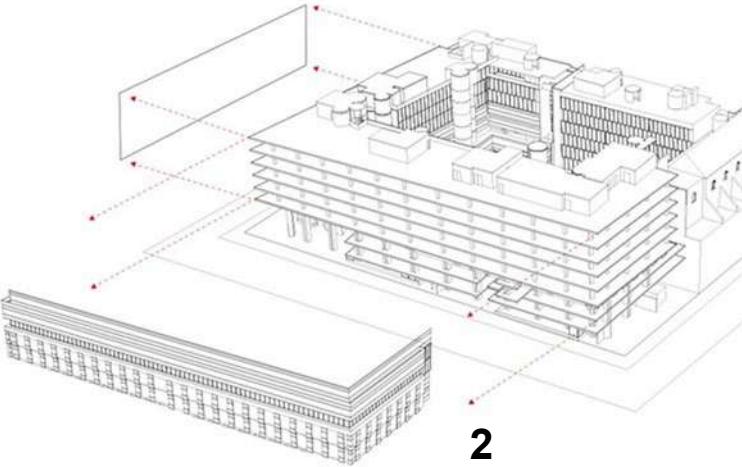
Rome, Italy



3



1



2

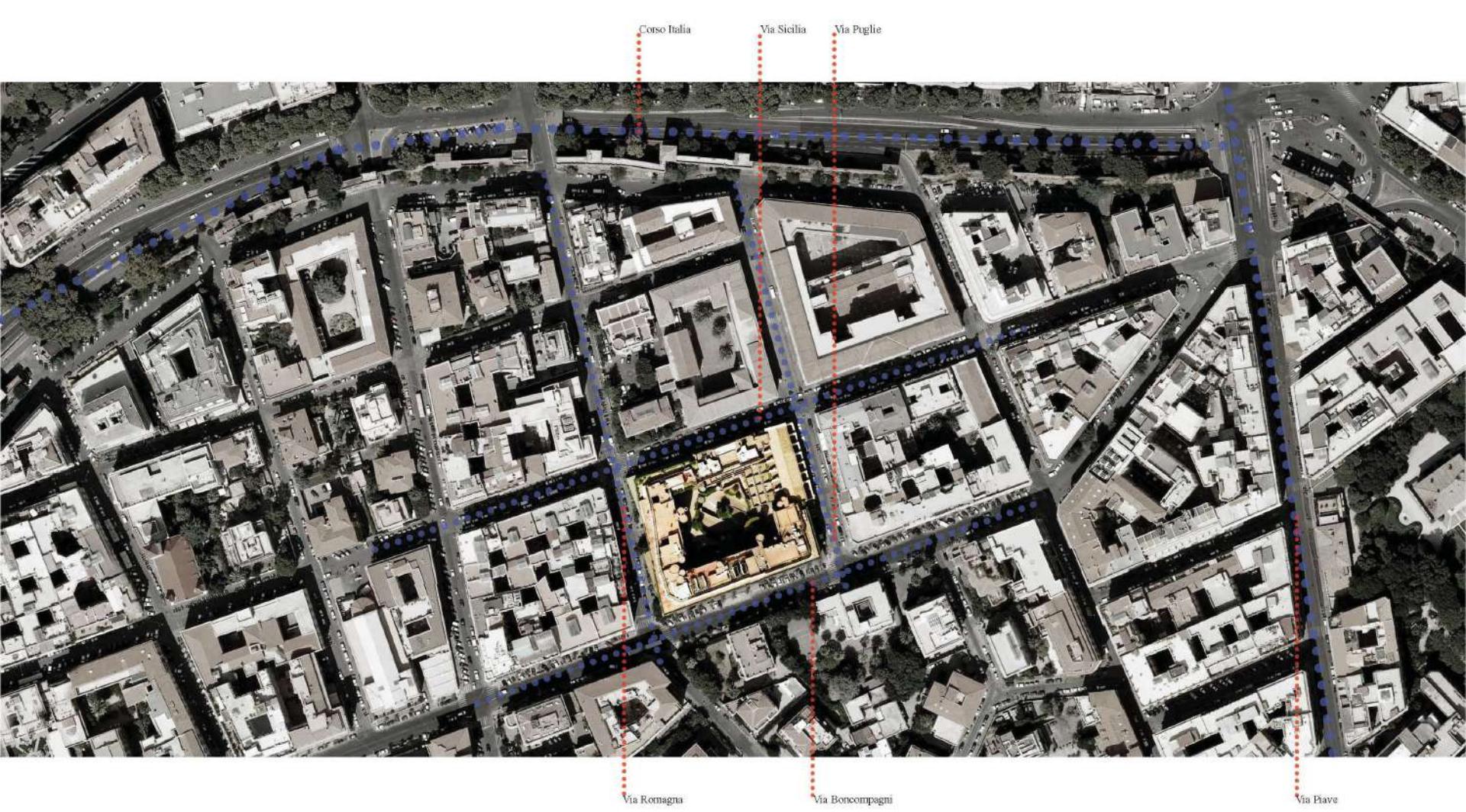
71 VIA BONCOMPAGNI

2011-2025

Rome, Italy

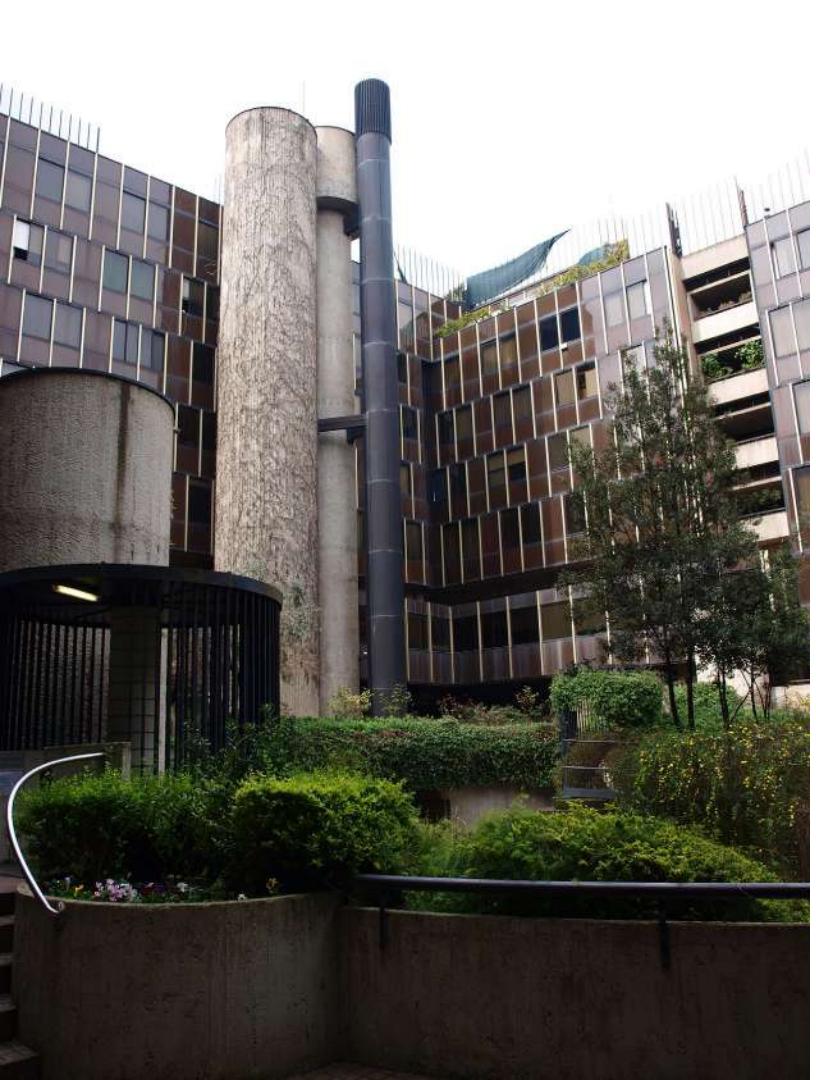


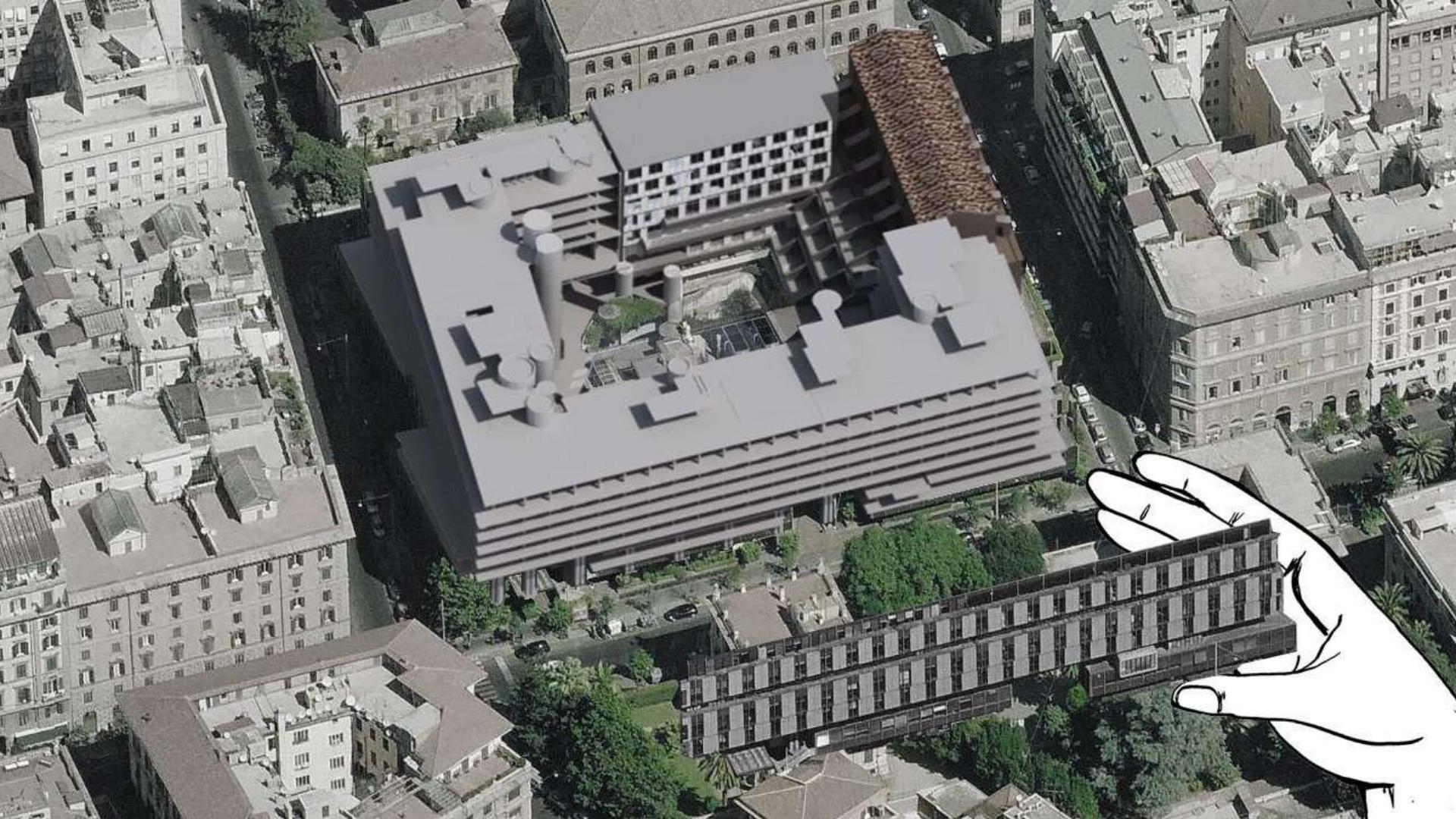






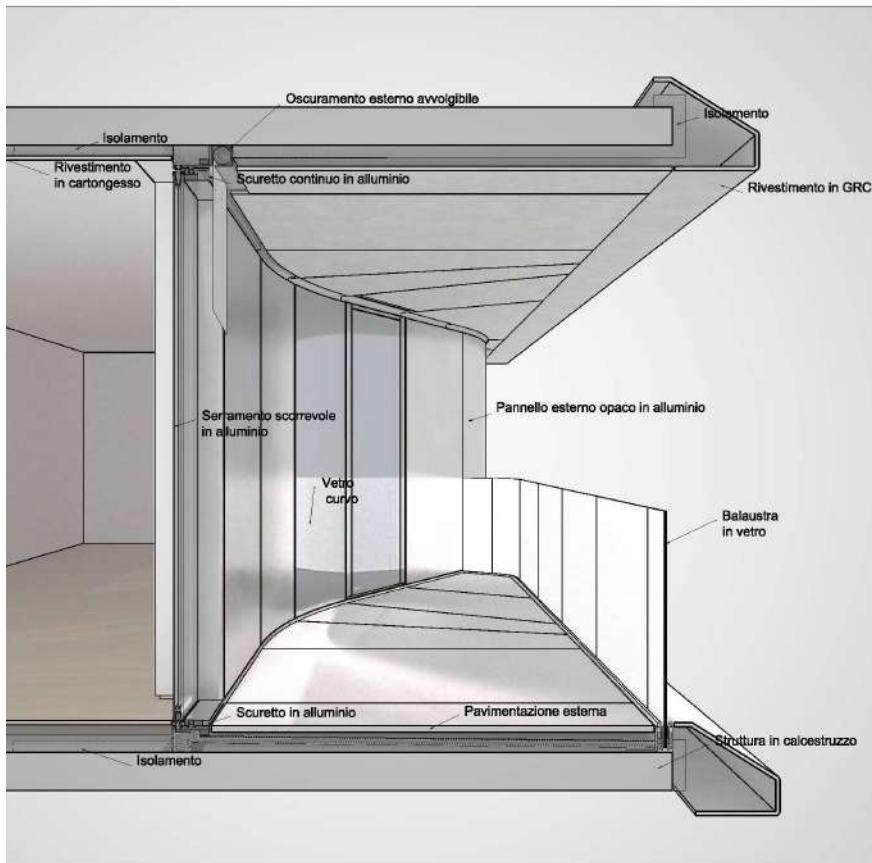


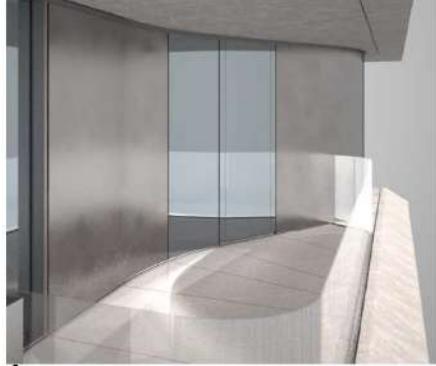




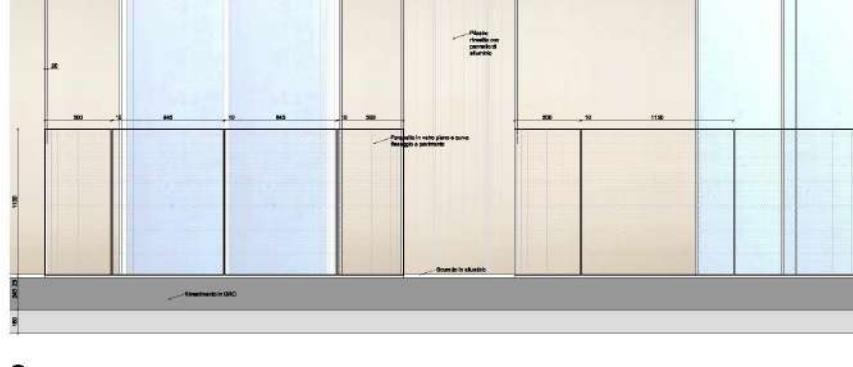




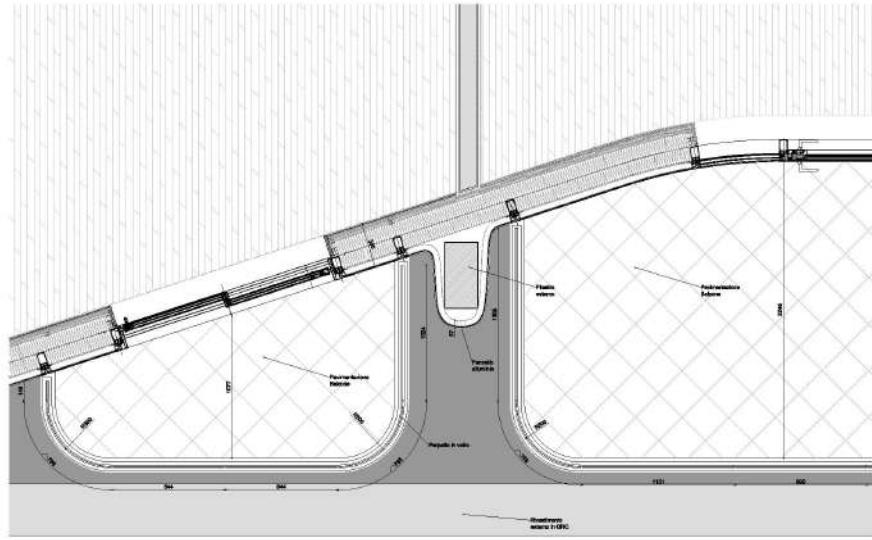
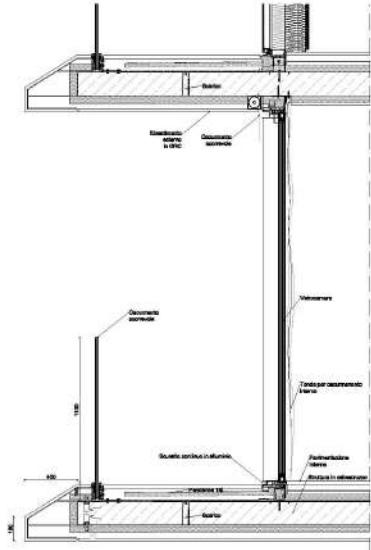




1 FACADE DETAIL - BALUSTRADE - RENDER



2 FACADE DETAIL - BALUSTRADE - ELEVATION















FENIX MUSEUM OF MIGRATION

Under construction

Rotterdam, Netherlands



FENIX MUSEUM OF MIGRATION

Under construction

Rotterdam, Netherlands















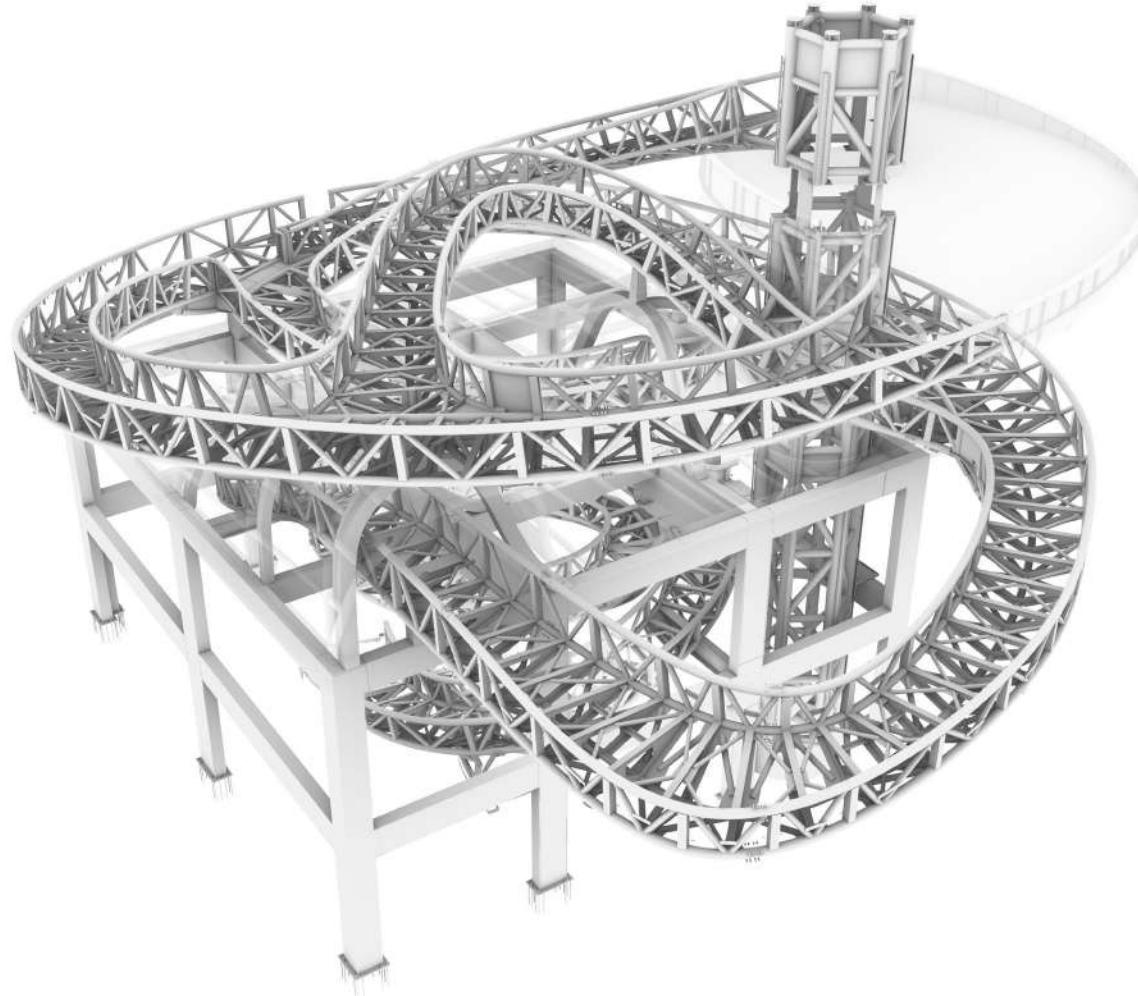




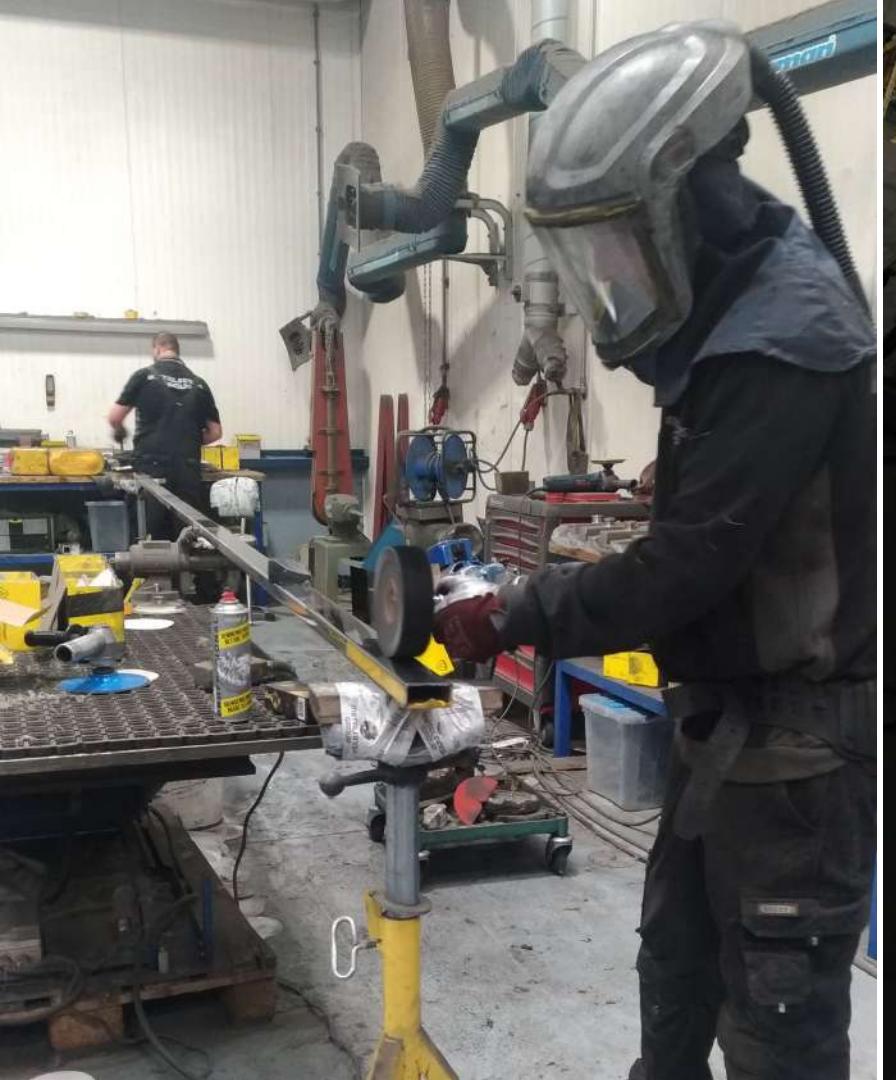




LOBBY BOX
LIFT SHAFT
SPACEFRAME











REICHENBACH
CRANE

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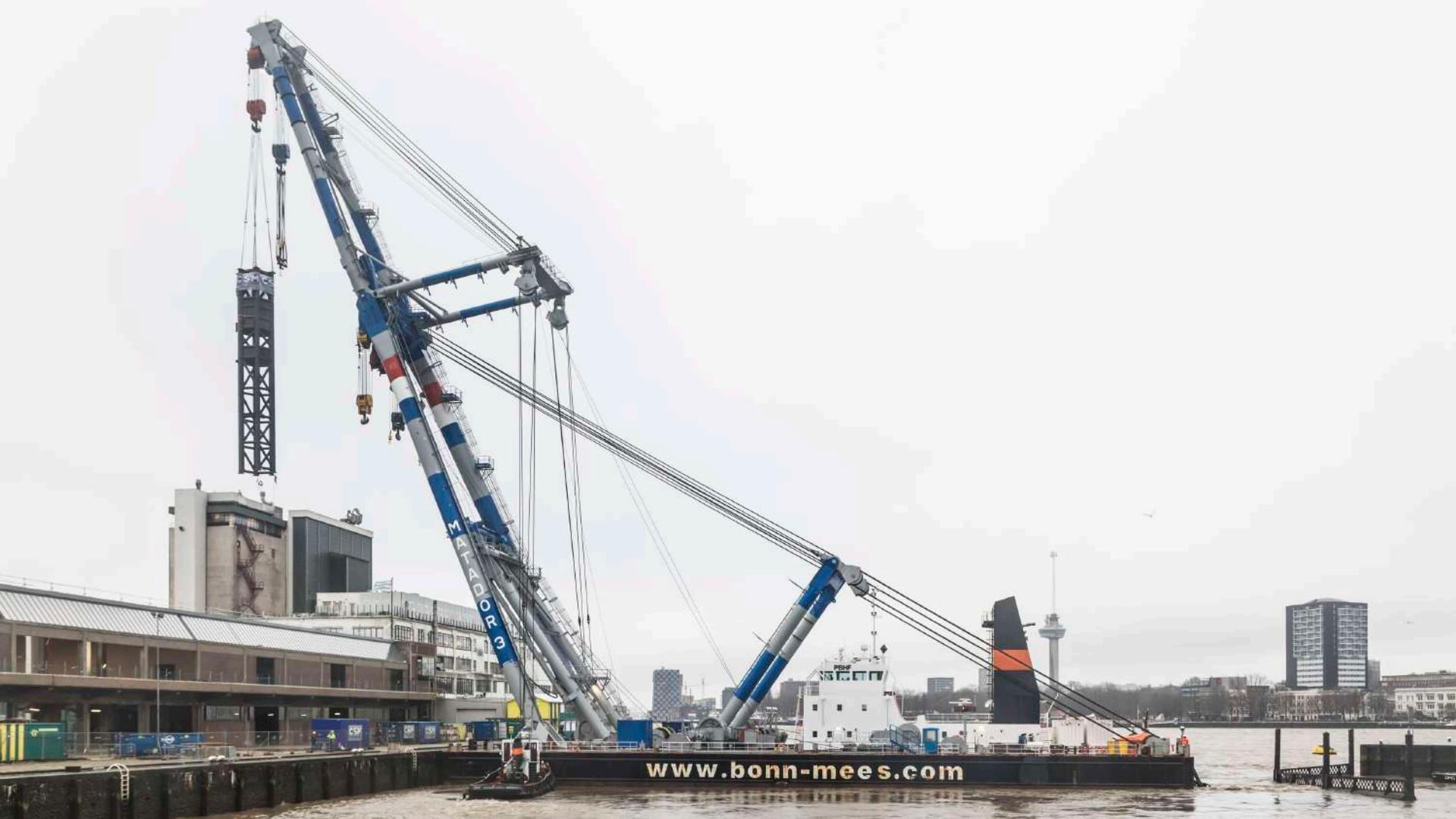
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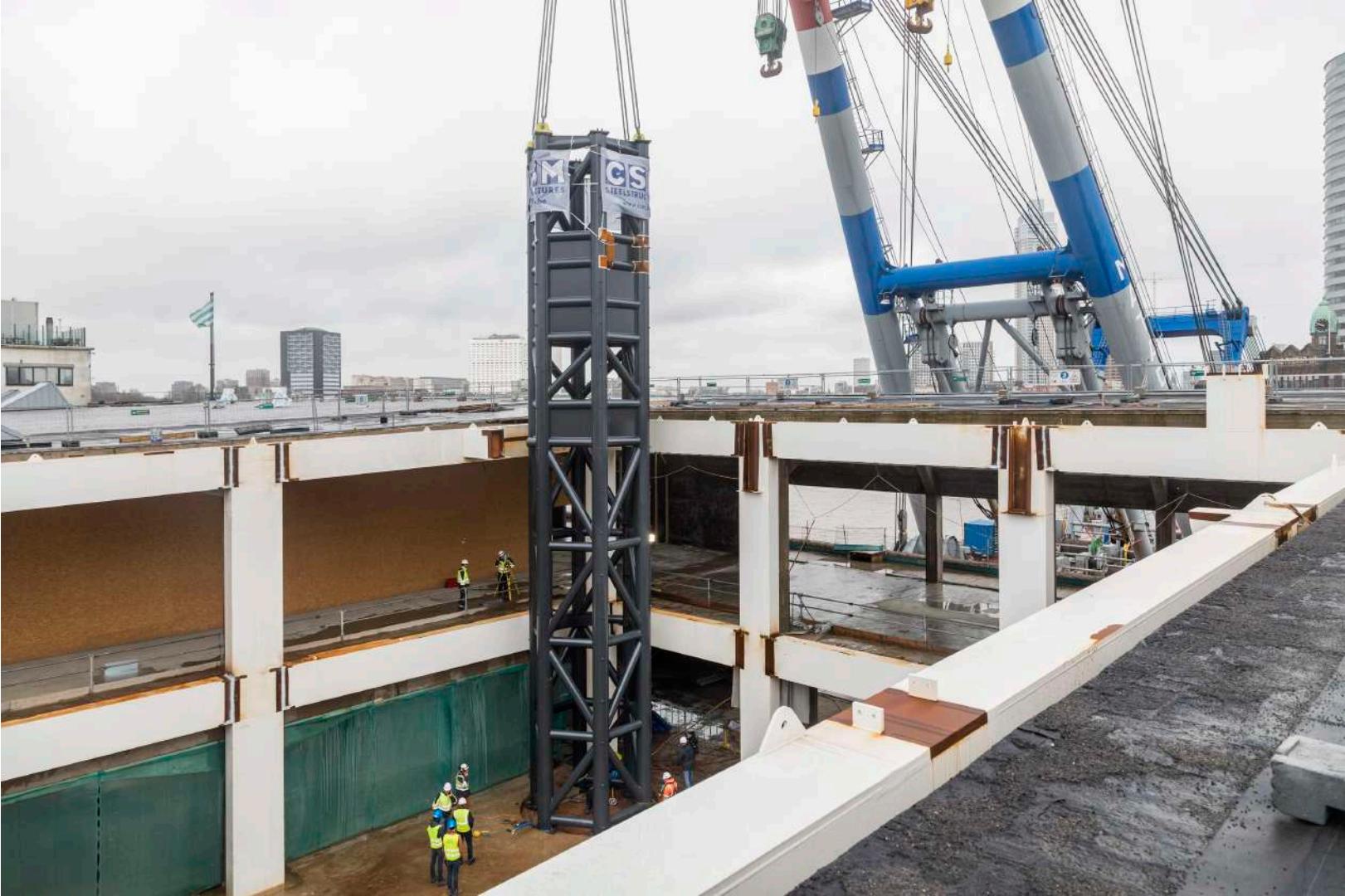


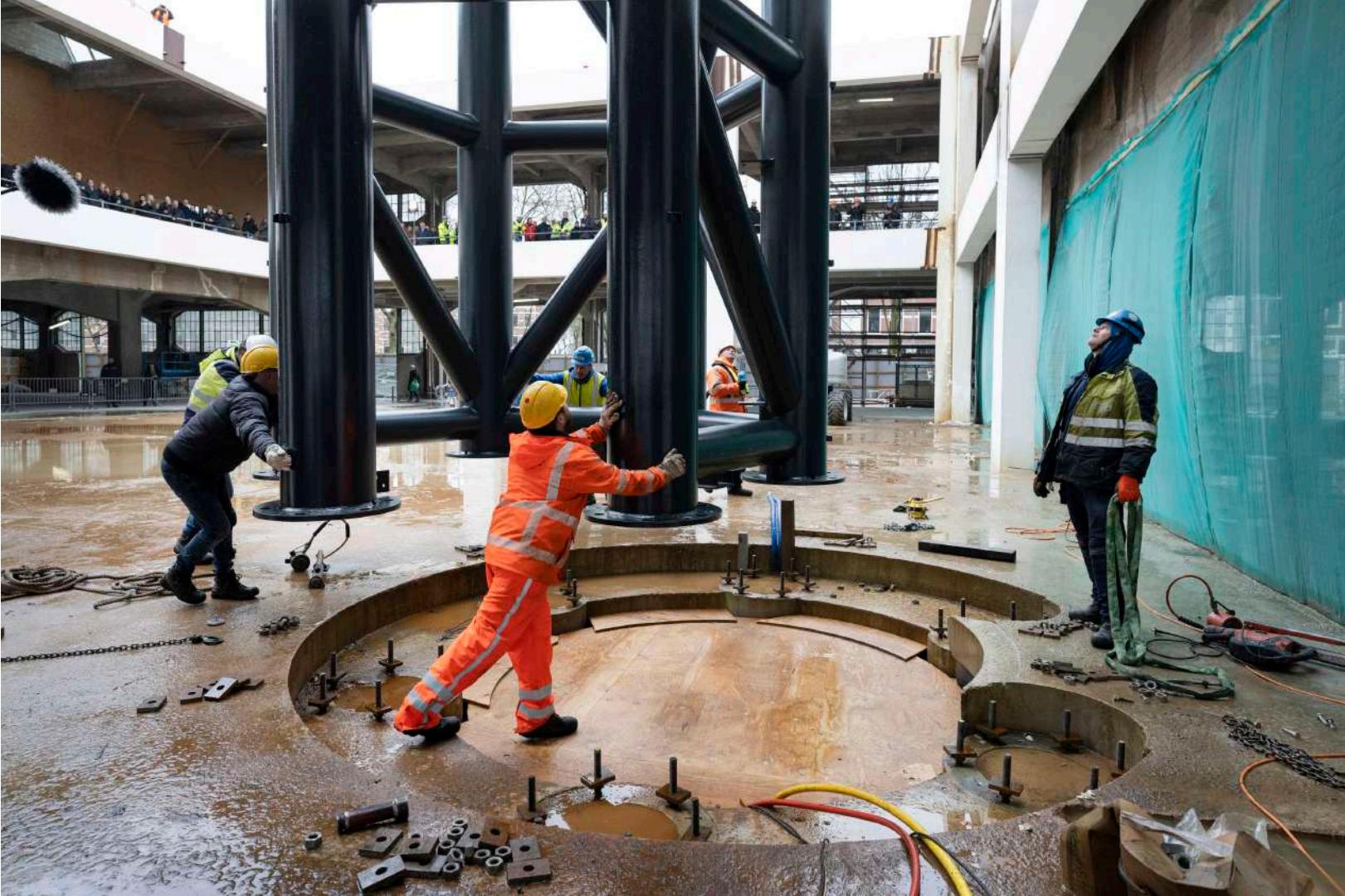






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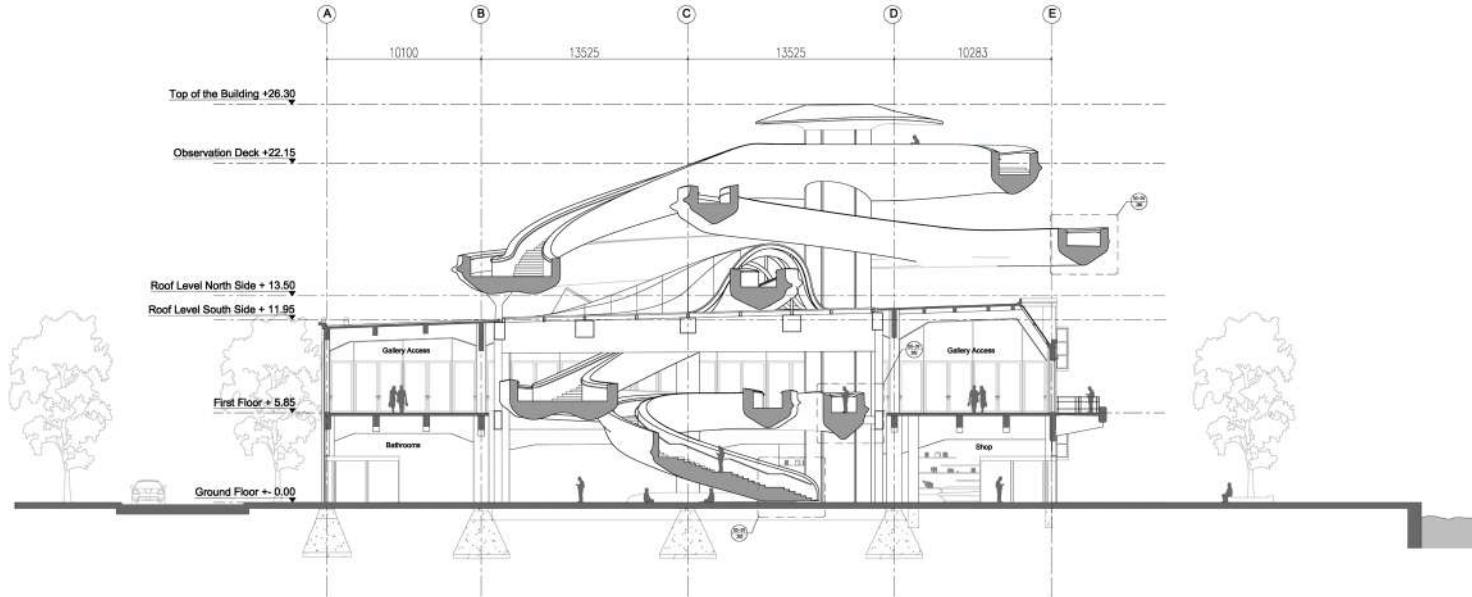


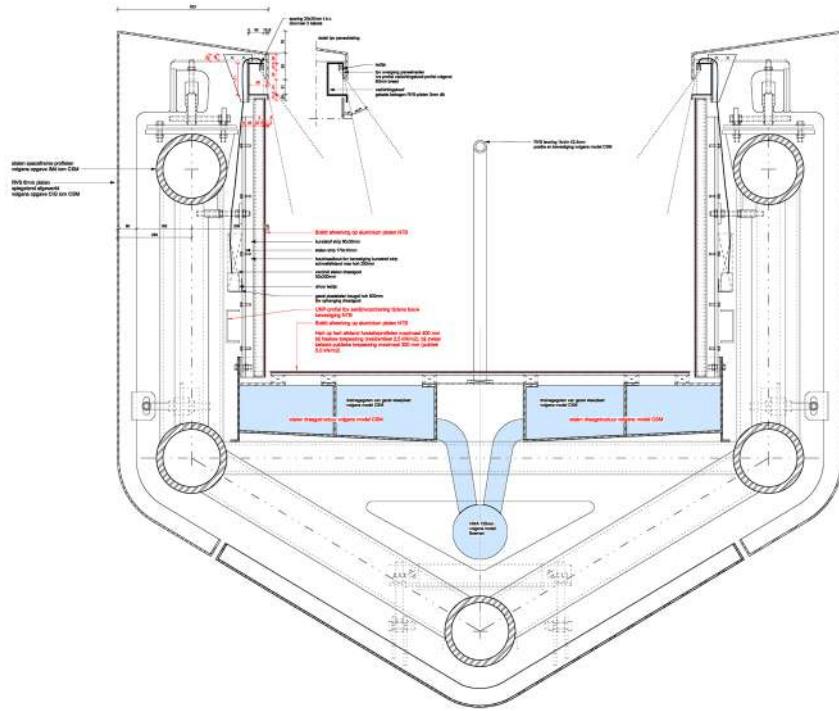
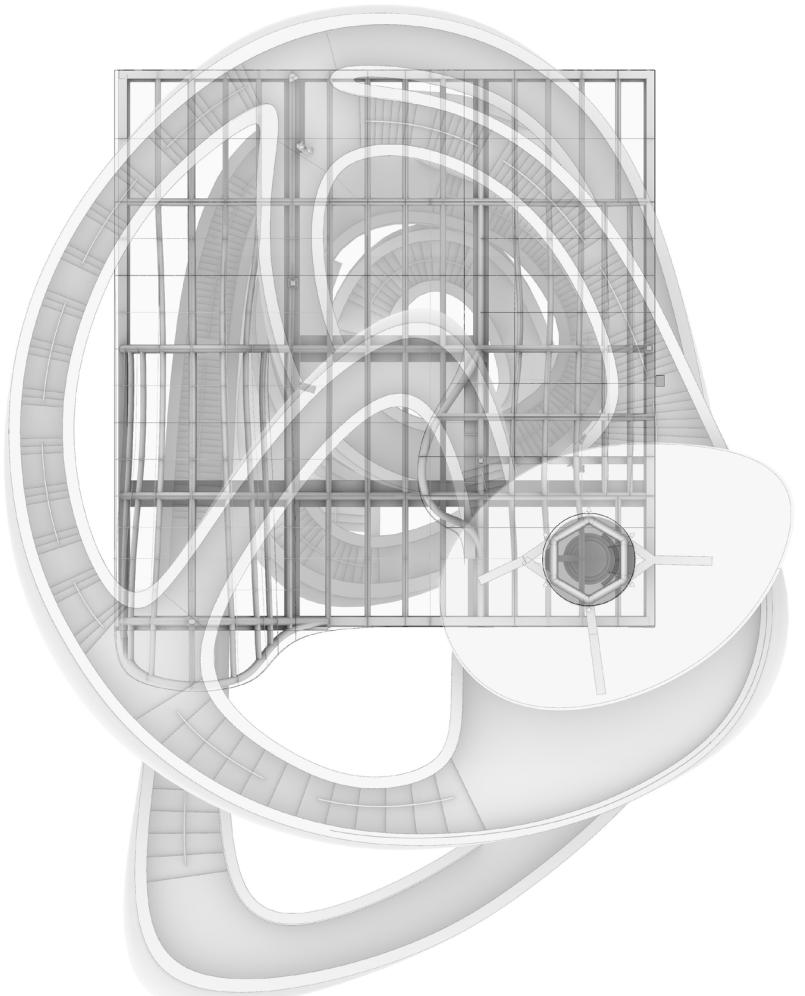




ICSM
STEEL ENGINEERING





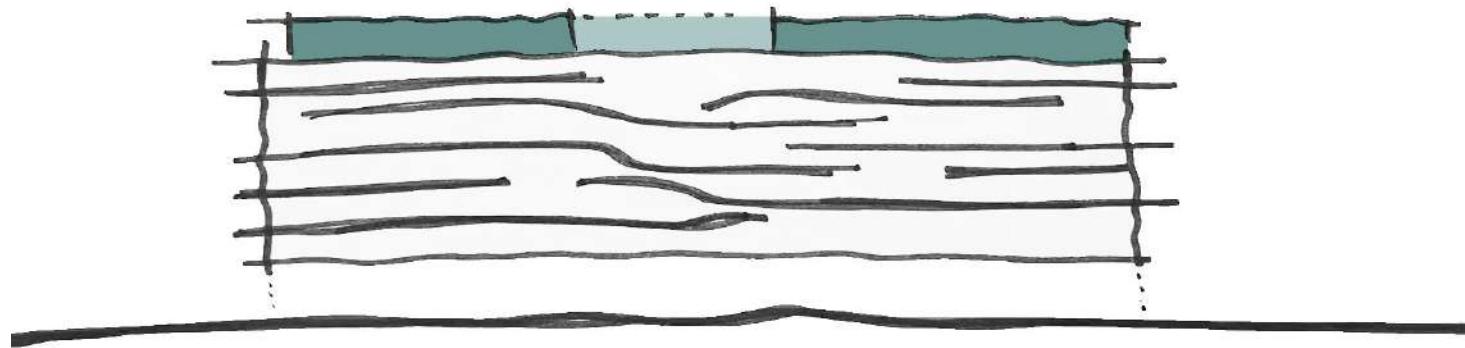




MoLo | Mobility and Logistic hub

Design Proposal

Milano, Italy



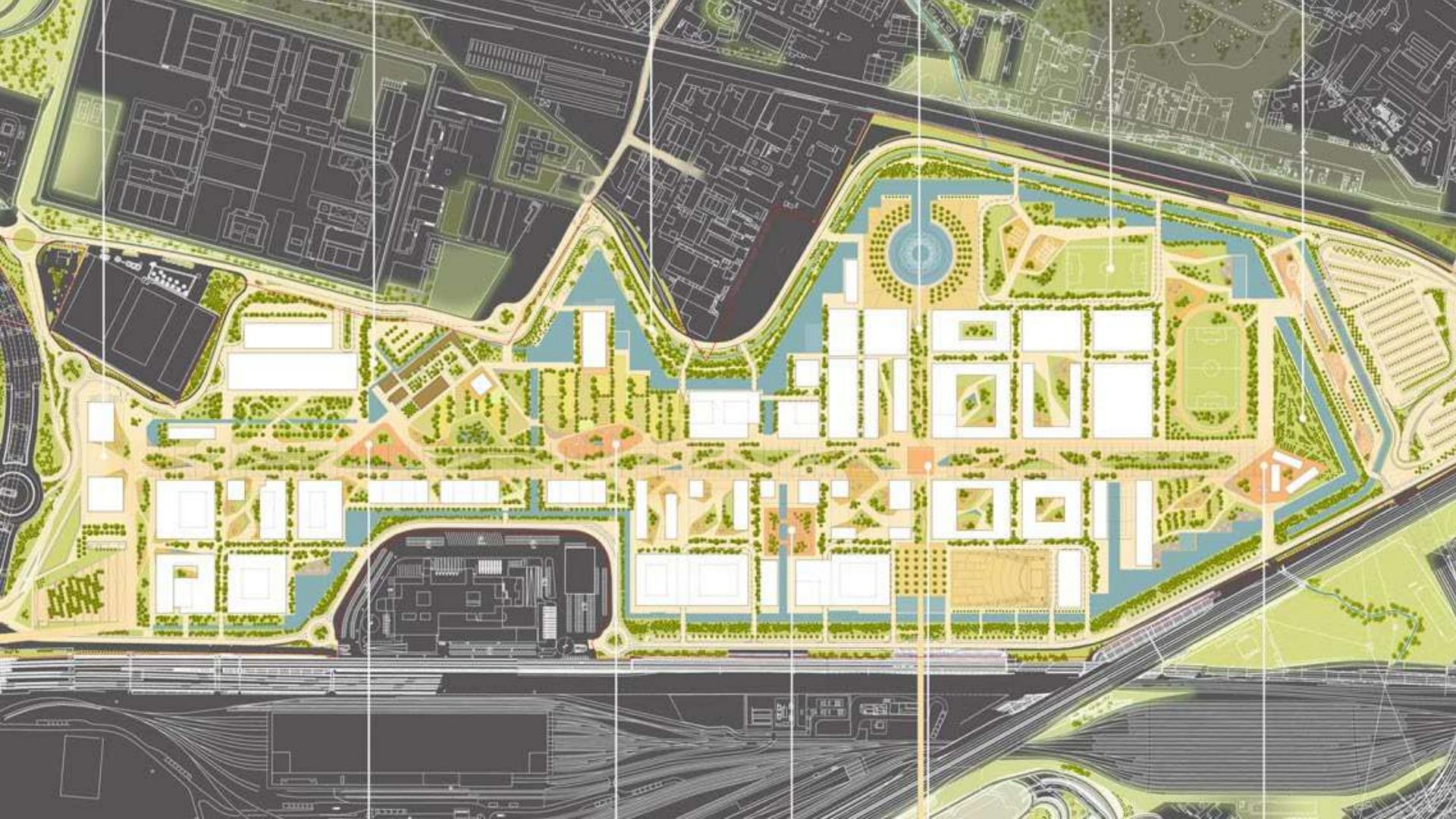
MoLo | Mobility and Logistic hub

Design Proposal

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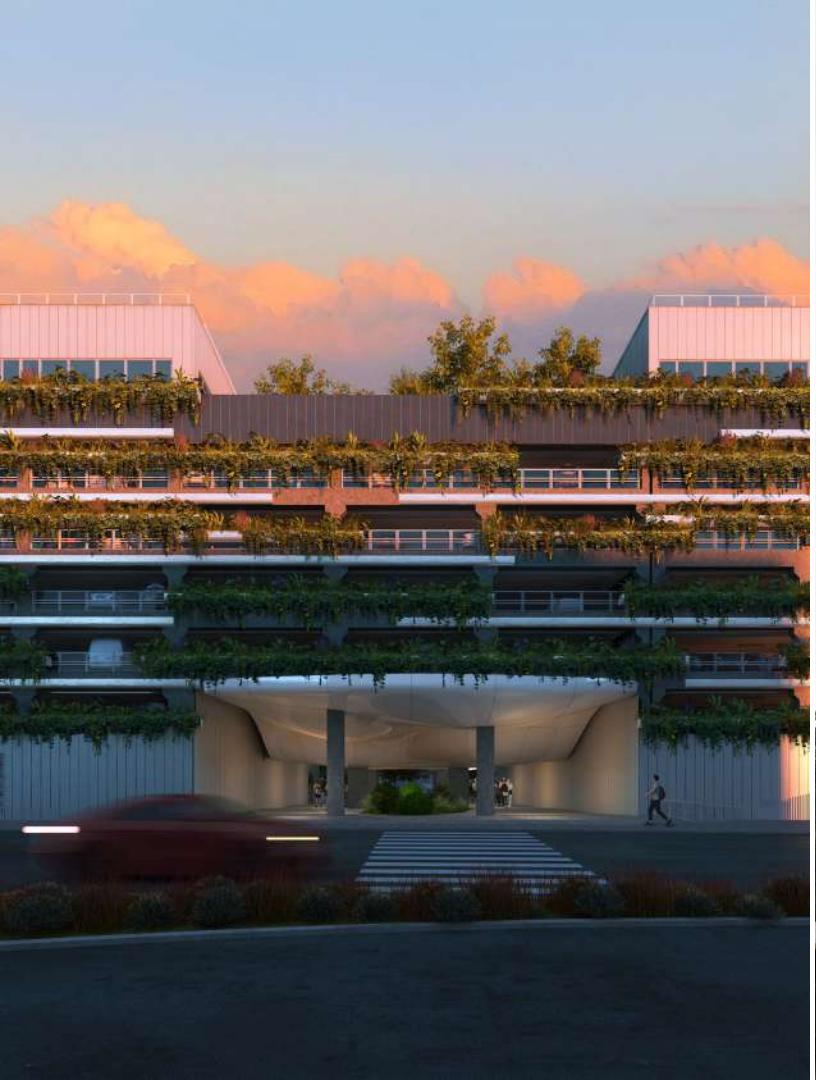














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ARCHITECTS

THANK YOU!