FROM SITE TO FLIGHT

Idroscalo City Airport, Milan

02.07.2025

Joonas Castrén

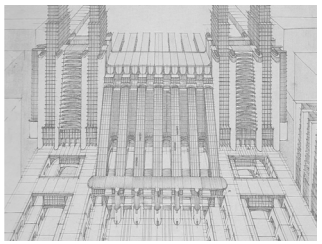
EXCITING
WALKWAY
EXIT

& GLAMOROUS...

...GENERIC
Milano Linate
ENTRATA

& ANONYMOUS

TERMINAL ARCHITECTURE



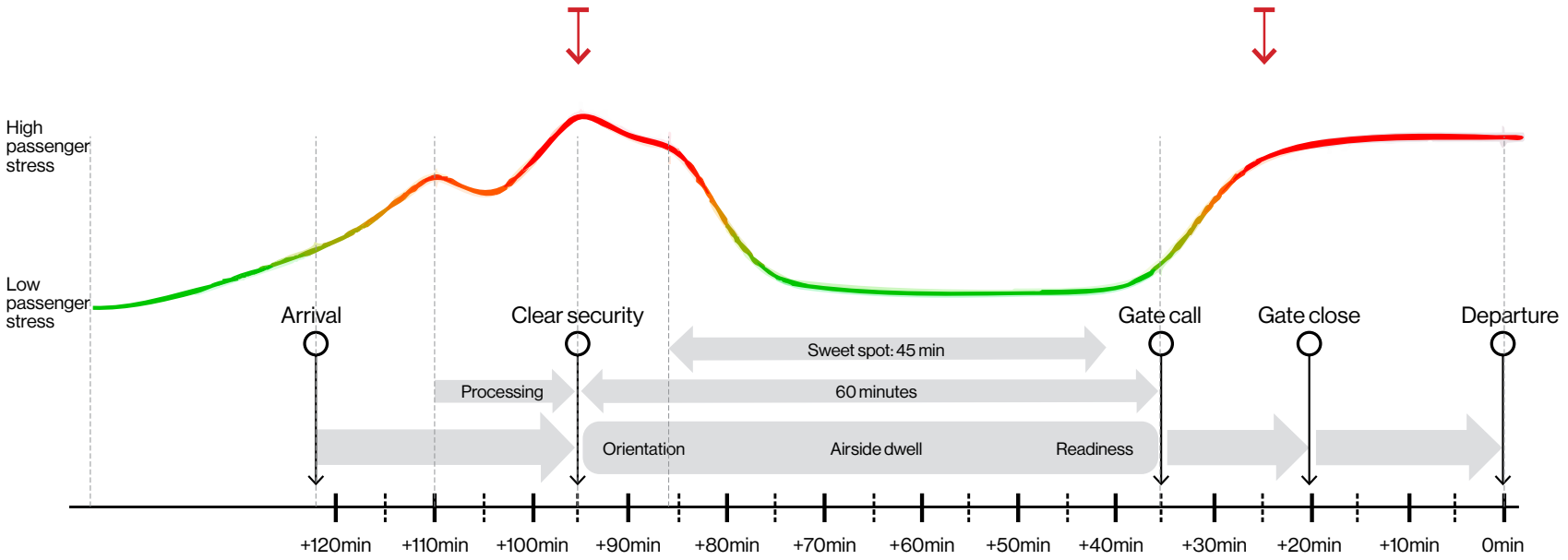
1900s | 1920s | 1930s | 1940s | 1950s | 1960s | 1970s | 1980s | 1990s | 2000s | 2010s

→ **Commercial-age**

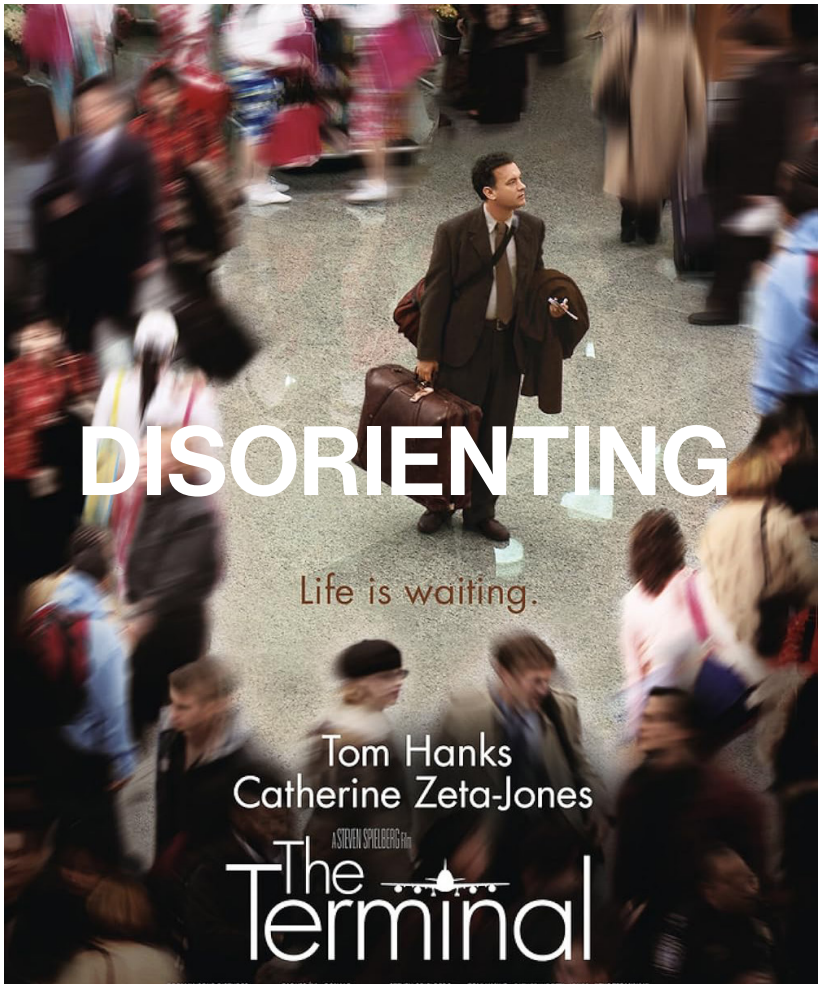
→ **Jet-age**

→ **Jumbo jet-age**

PASSENGER STRESS



CHAOTIC


DISORIENTING
Life is waiting.
Tom Hanks
Catherine Zeta-Jones
A STEVEN SPIELBERG FILM
The Terminal

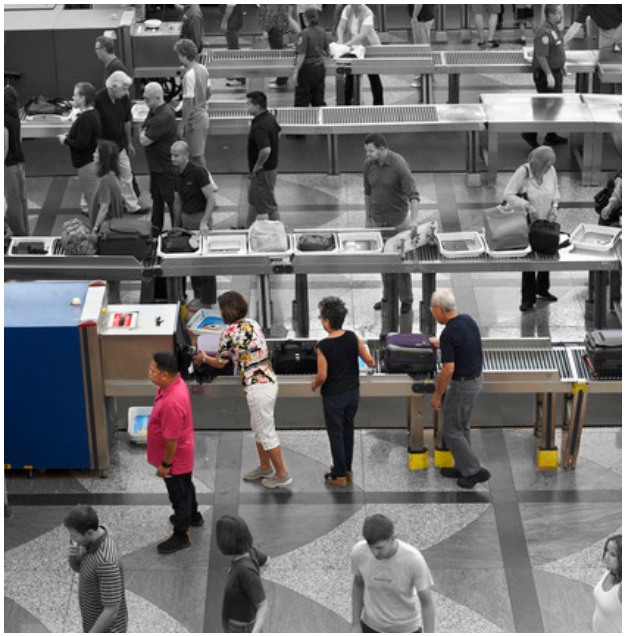
‘The Terminal Man’ lived in a Paris airport for 18 years. I’ll never forget the weeks I spent with him

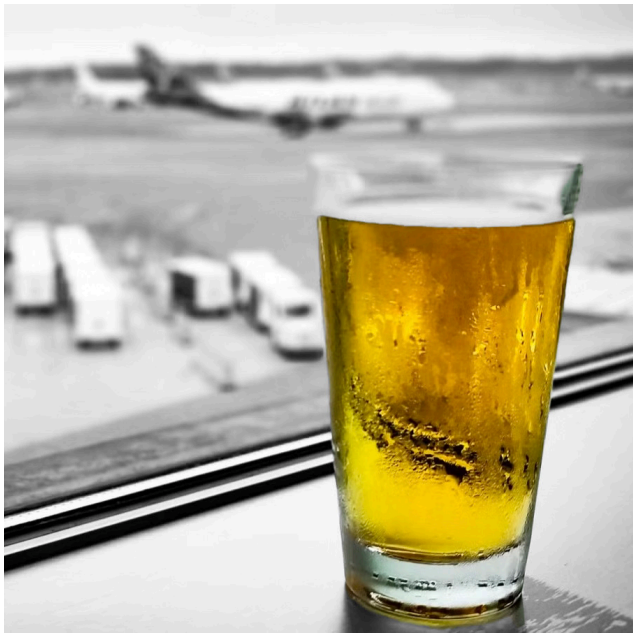
“NON-PLACE”

Mehran Karimi Nasseri, or ‘Sir Alfred’, on his home bench at Charles de Gaulle airport. Photograph: Eric Fou

Mehran Karimi Nasseri arrived without papers at Charles de Gaulle airport in 1988 and didn’t leave until 2006. We shared its metal benches, a bomb scare and many, many Filets-O-Fish

STRANGE ACTIONS





STRANGE ACTIONS

“WHERE AND WHEN AM I?”

RESEARCH QUESTION

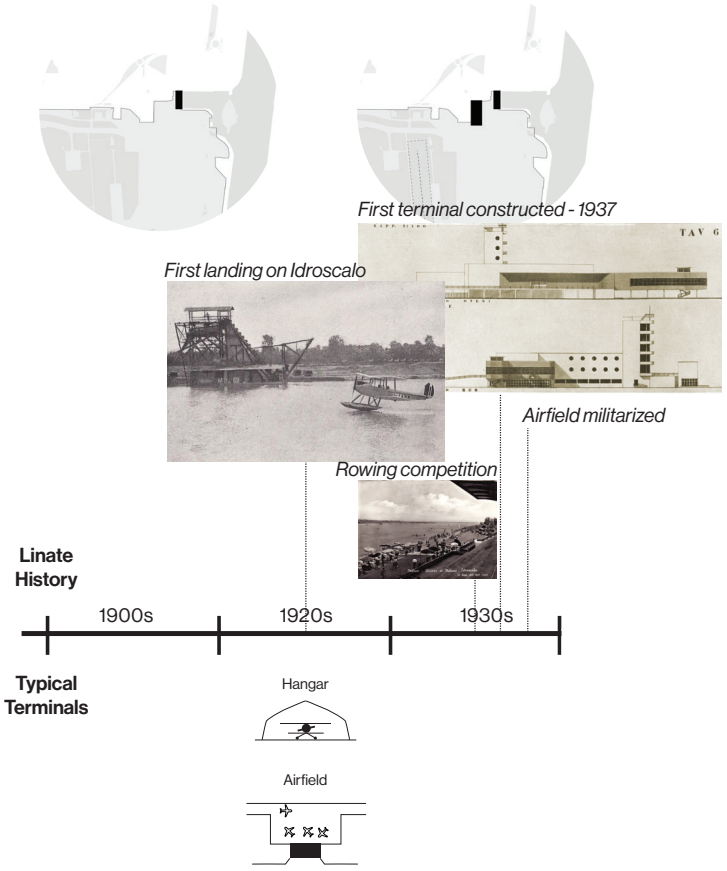
How can city airports balance **efficiency and security** with **placemaking** to foster a **distinct sense of time and place**?

Case study

LINATE AIRPORT

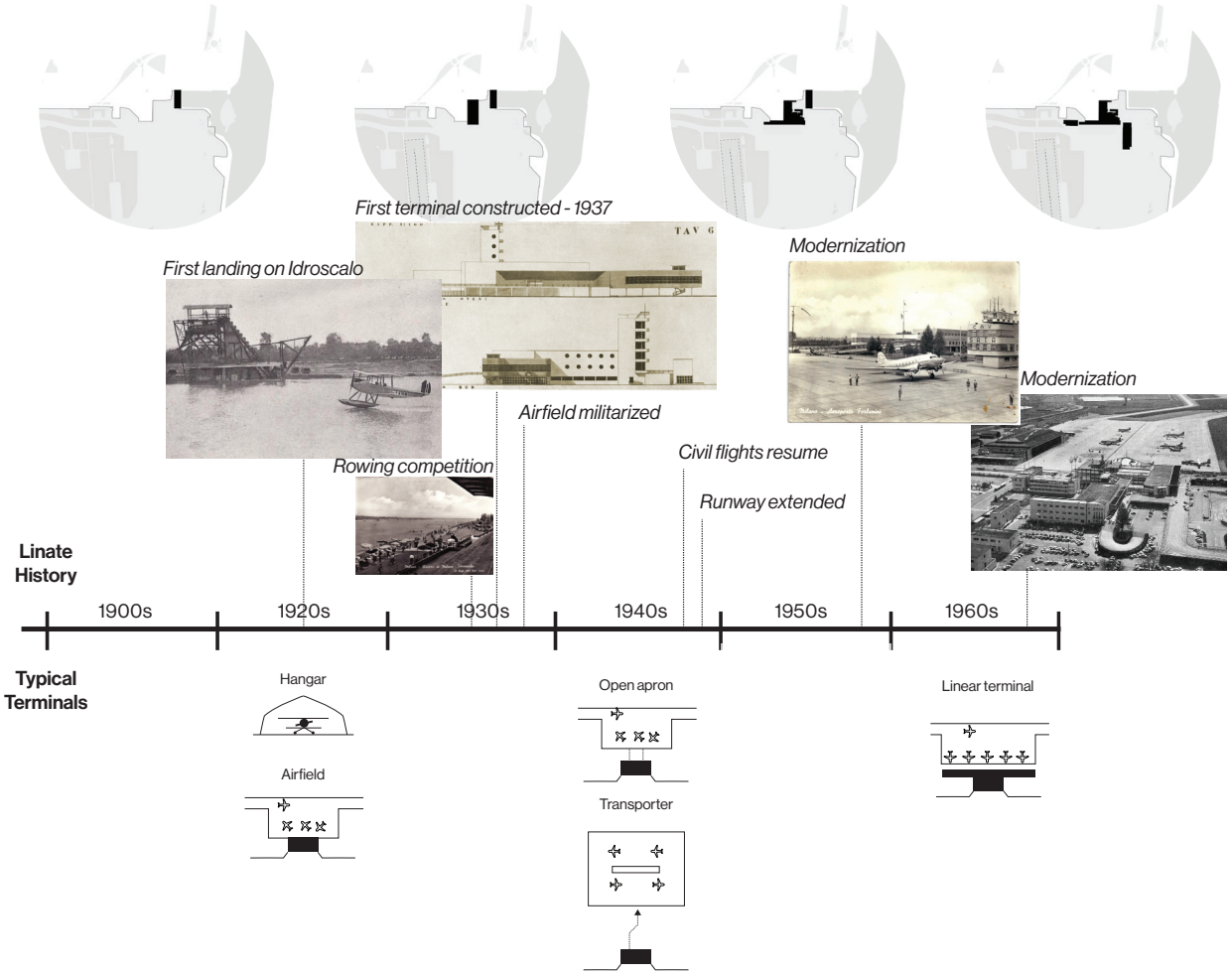
Case study

TERMINAL EVOLUTION



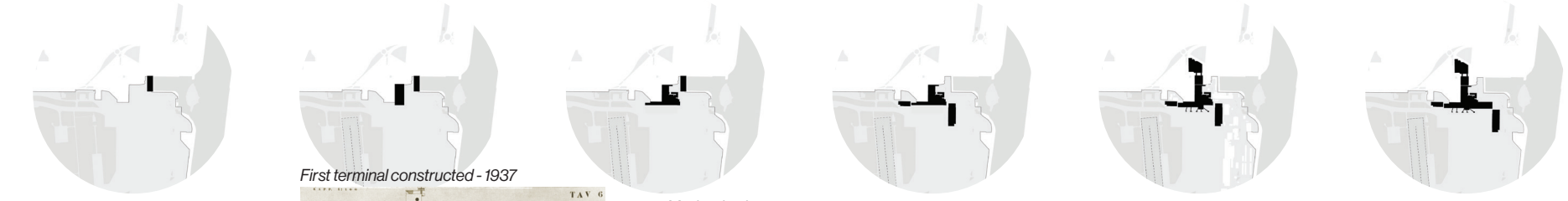
Case study

TERMINAL EVOLUTION

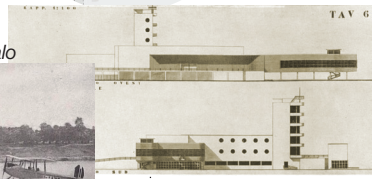


Case study

TERMINAL EVOLUTION



First terminal constructed - 1937



First landing on Idroscalo

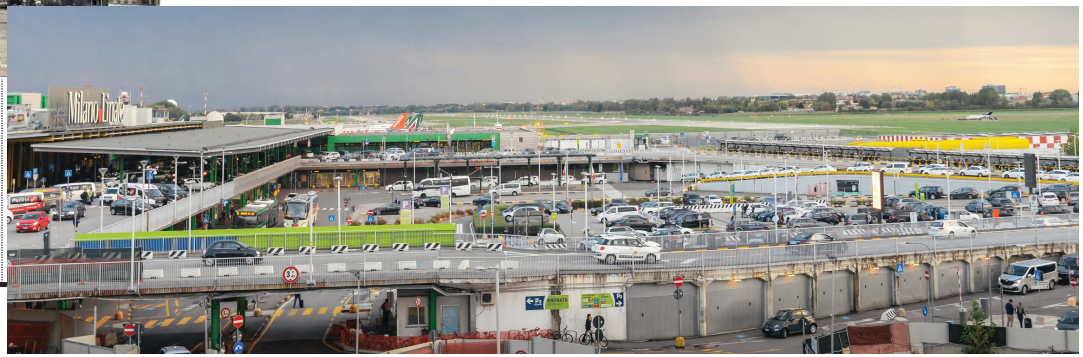
Modernization

Airfield militarized

Civil flights resume

Runway extended

Rowing competition



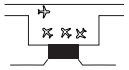
Linate History

1900s | 1920s | 1930s | 1940s | 1950s

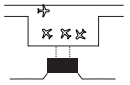
Typical Terminals

Hangar

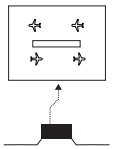
Airfield

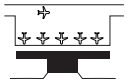


Open apron

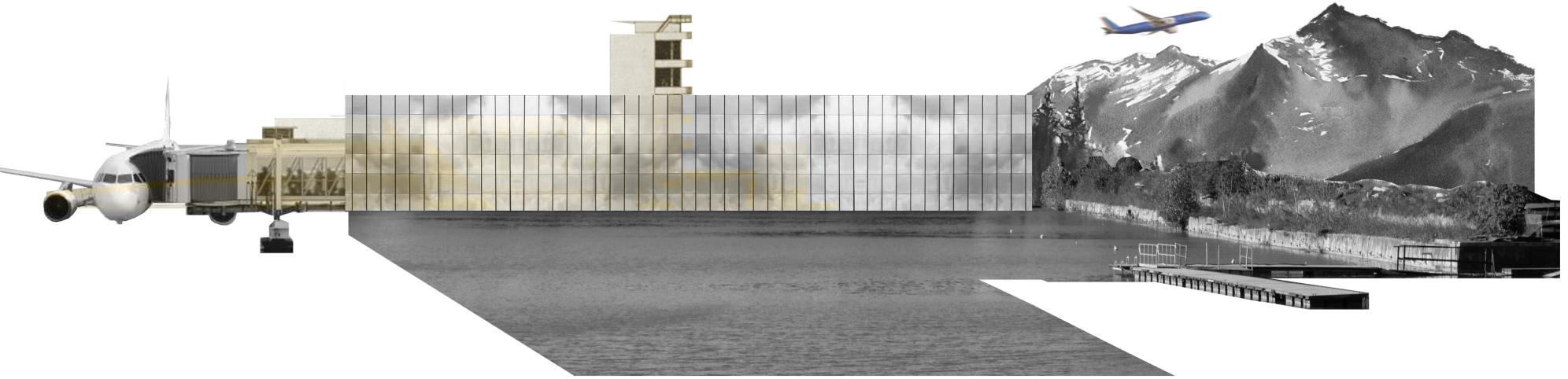


Transporter



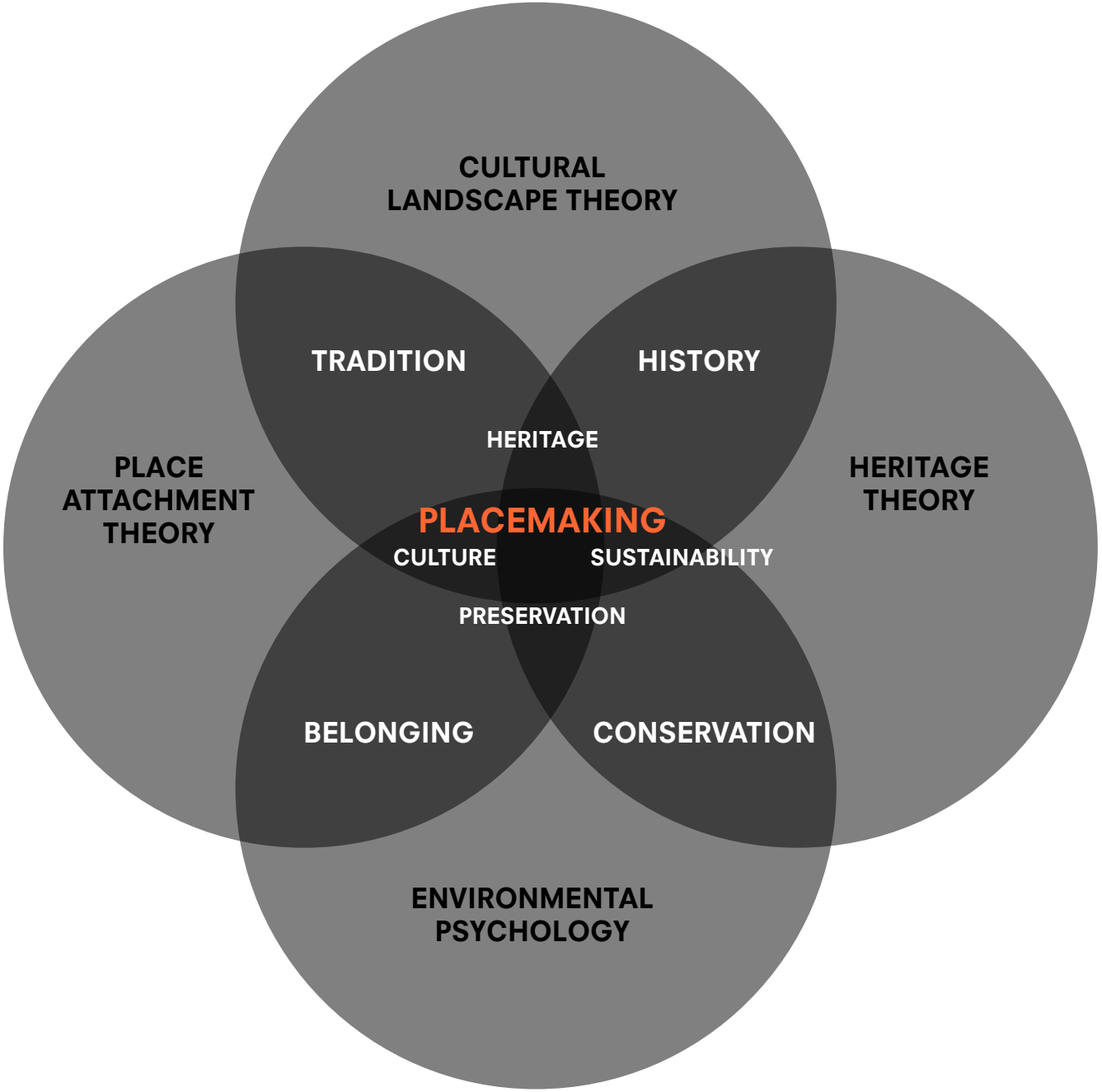


FROM INFRASTRUCTURE...

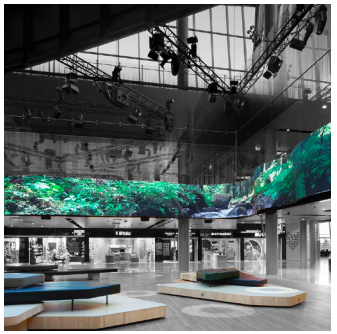


... TO A PLACE

PLACEMAKING THEORY



PLACEMAKING THEORY



Culture & art

Human-scale

Social spaces

Transparent

Vernacular

Accessible

PROJECT AMBITIONS

A PLACE

A. Site-specific

Relationship with Lambro River & Idroscalo.

B. Public

An airport that serves neighborhood & the Milan.

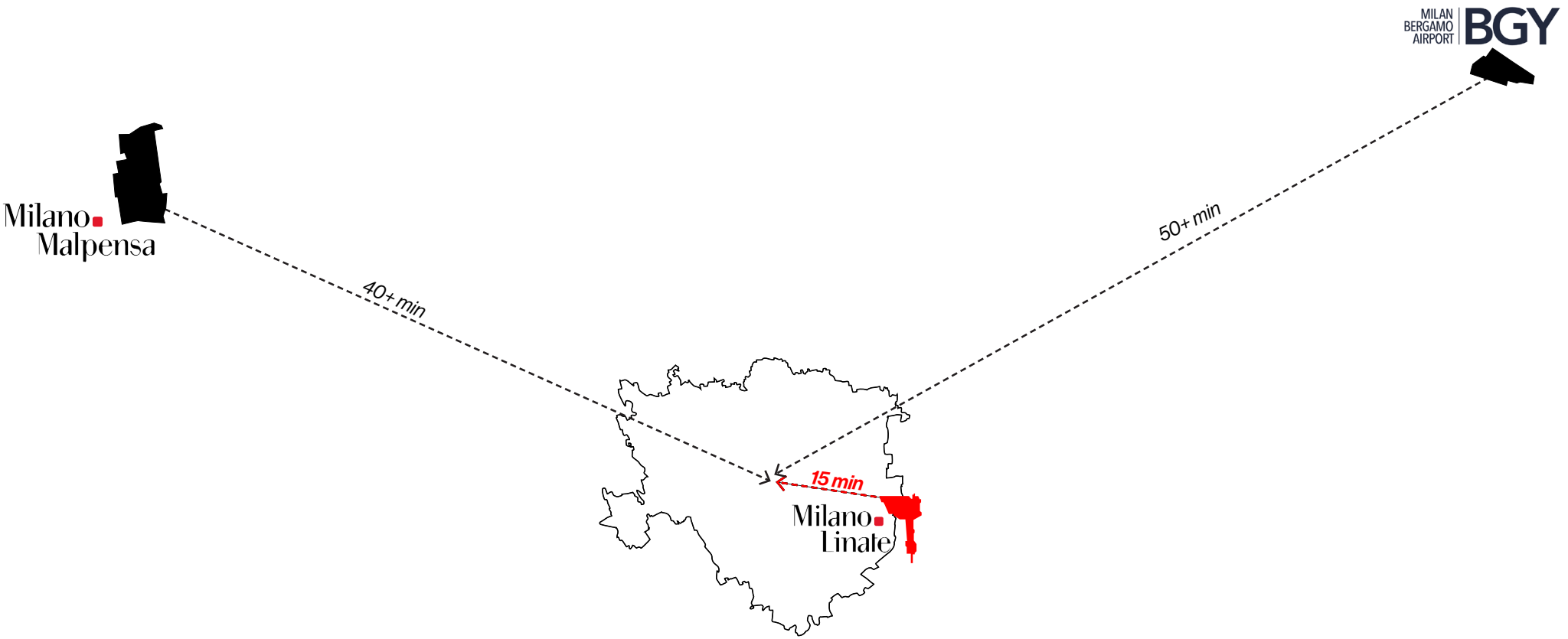
C. Recognizable

Distinct materials that anchor passengers to Milan & Lombardia.

SITE
research

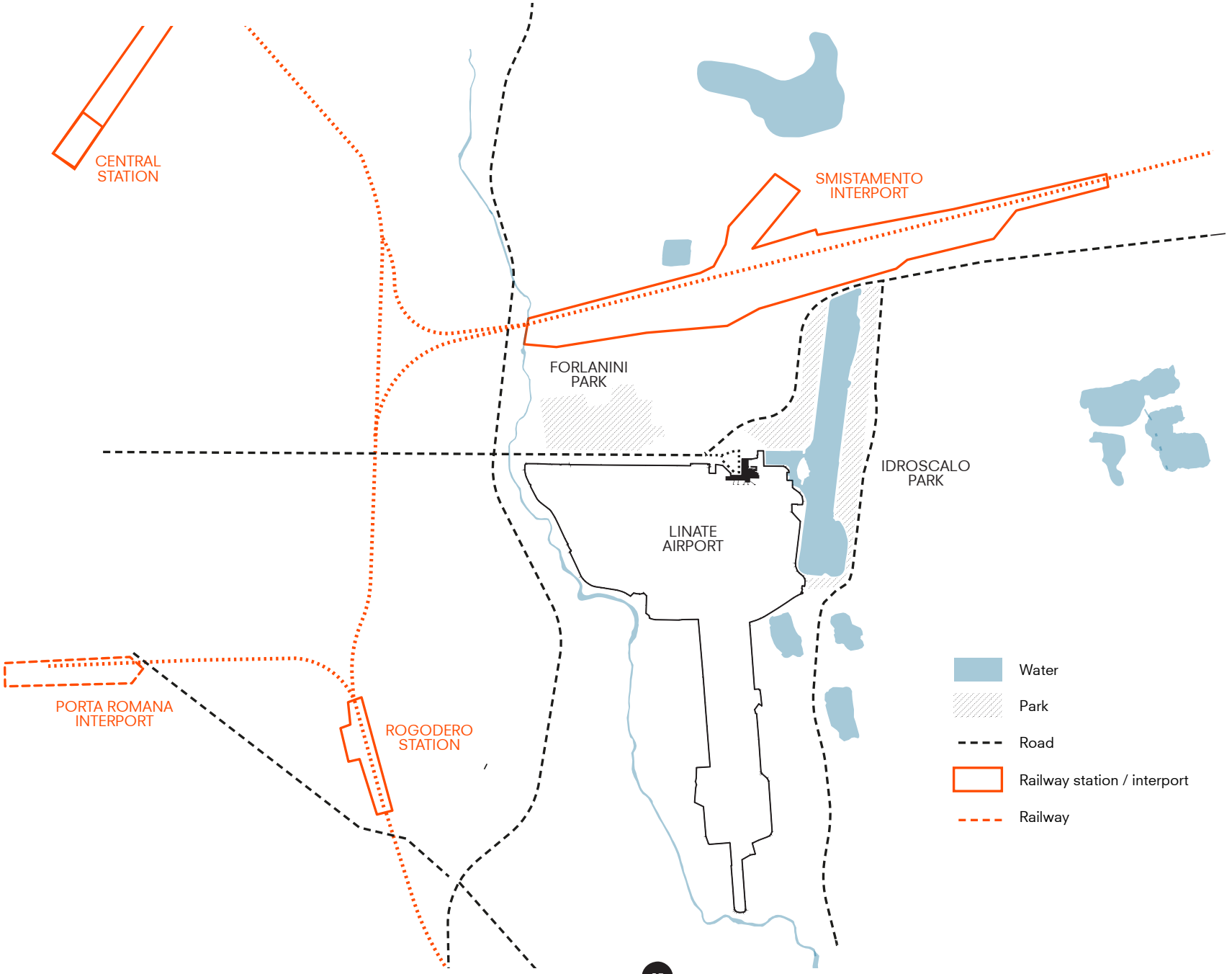
Site

MILAN AIRPORT SYSTEM



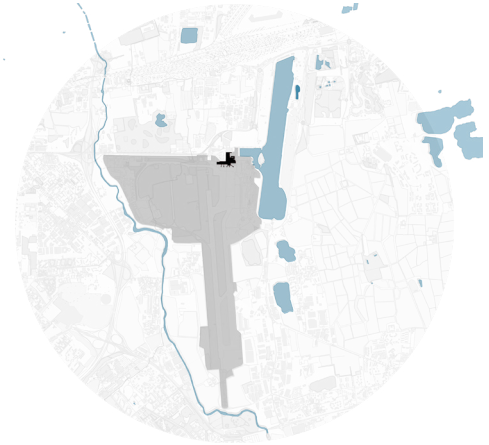
Site

TRANSPORT CROSSROAD



Site

CONTEXT



WATER

Site

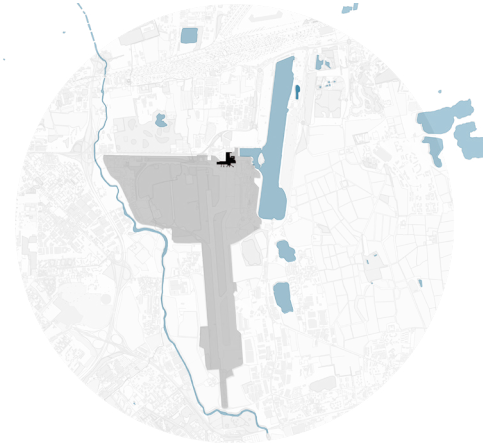
CONTEXT

WATER

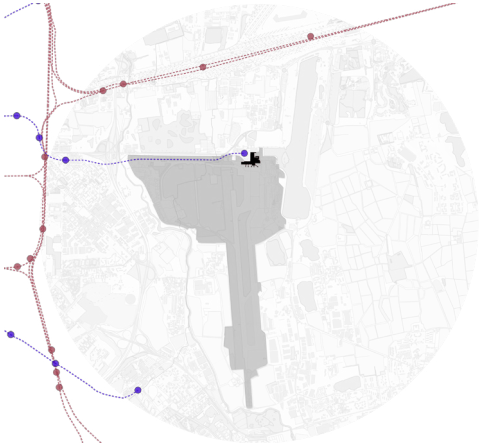
RAIL & METRO

Site

CONTEXT



WATER

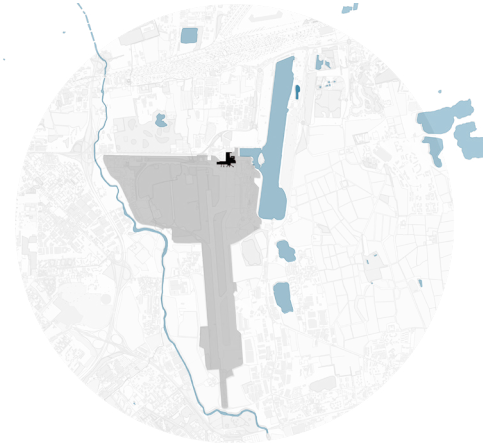


RAIL & METRO

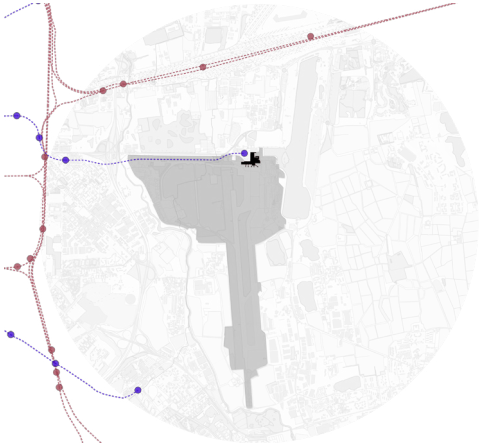
FARM & GREENERY

Site

CONTEXT

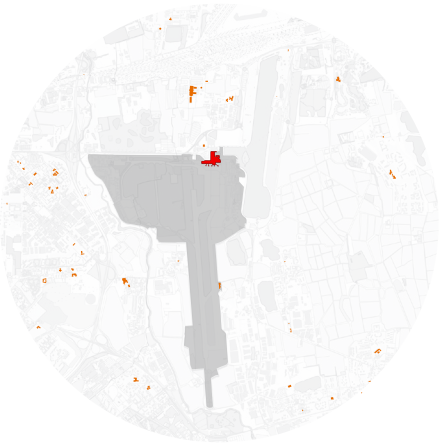


WATER



RAIL & METRO

FARM & GREENERY

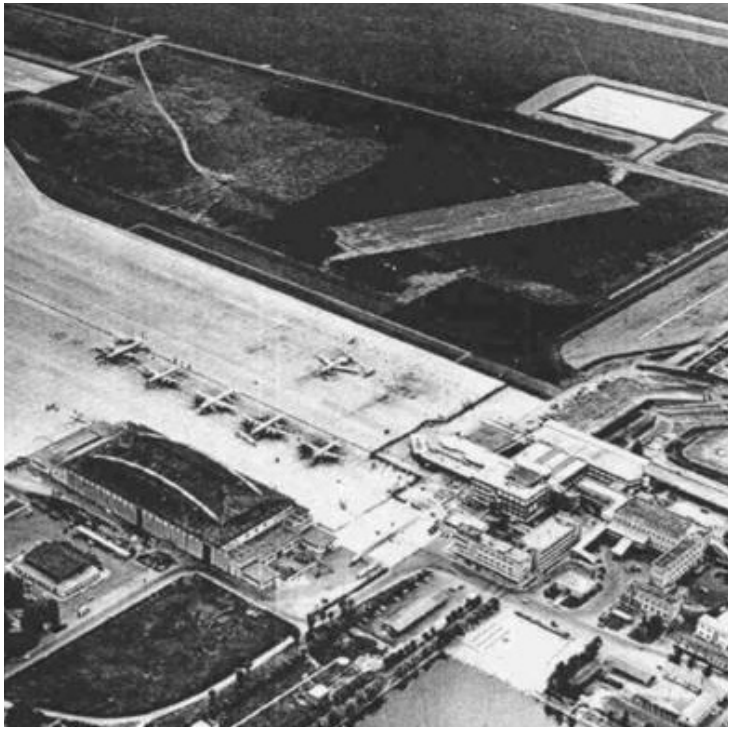


PUBLIC

Site

DUAL USE

+



Site

TODAY

GATHER

Site

TODAY

EXCERCISE

Site

TODAY

CALM

Site

TODAY

Site

TODAY

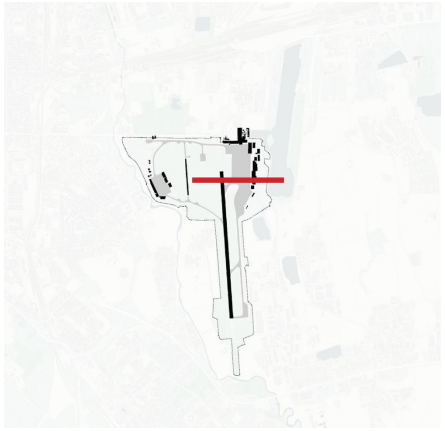
Site

TODAY

ATTENZIONE
CANCELLO
AUTOMATICO
É VIETATO SOSTARE
CANCELLO IN MOVIMENTO
OLMI

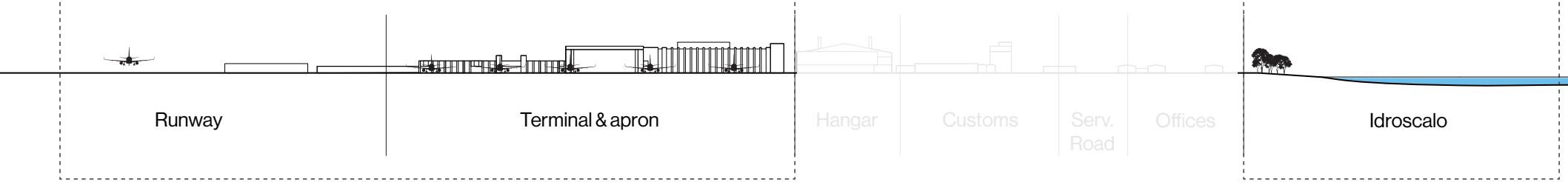
Site

HISTORY



0 50 100 m

Only 550 meters, but 20-30 minute walk

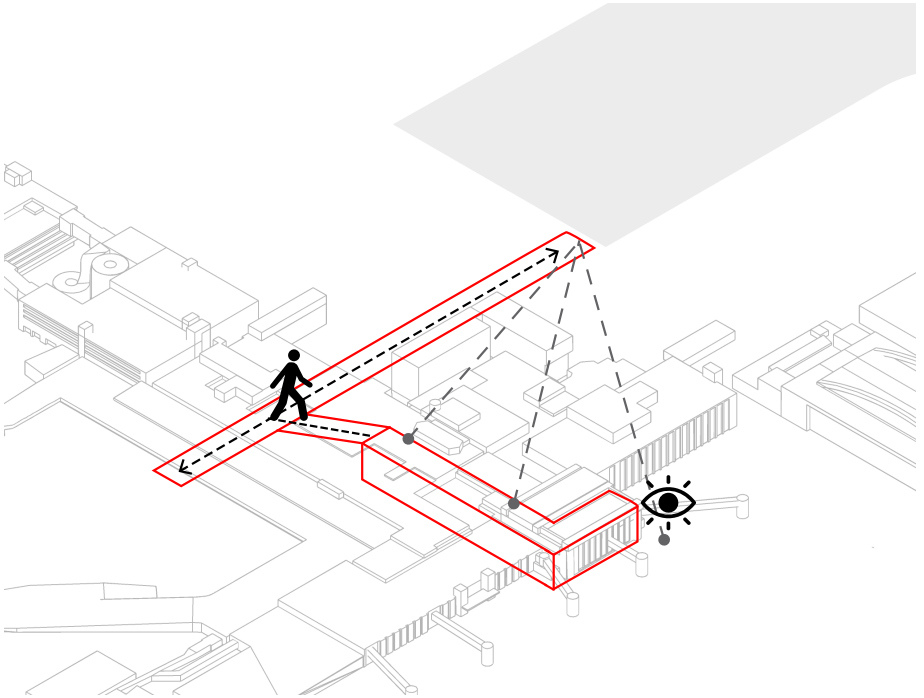


Site

CONCLUSION

SITE AMBITION:

VISUALLY AND PHYSICALLY CONNECT AIRPORT WITH WATER

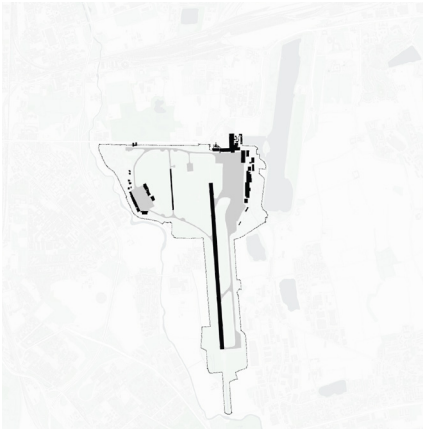


PROGRAM
research

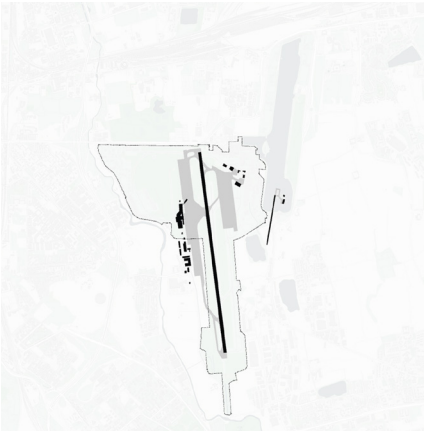
Program

BENCHMARKING

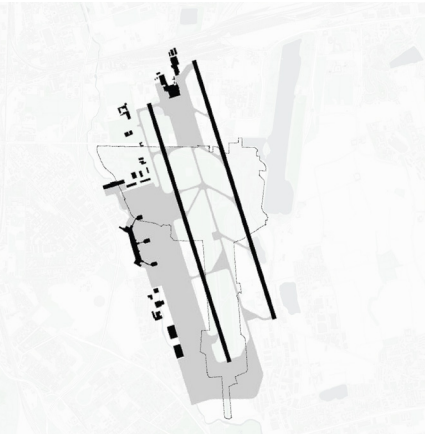
Milan precedents



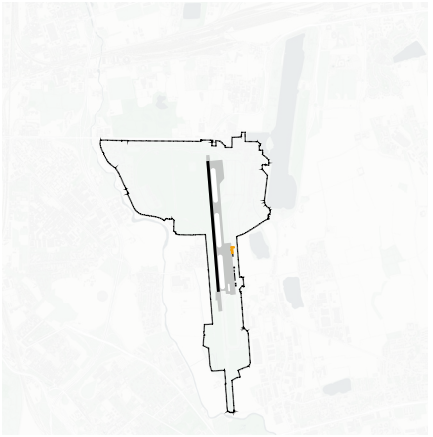
Linate (LIN)



Bergamo (BGY)



Malpensa (MXP)



Jackson Hole (JAC)

Function-oriented

Washington D.C (DCA)

City-oriented

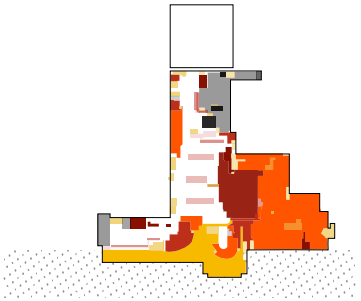
Spaceport America

Excitement-oriented

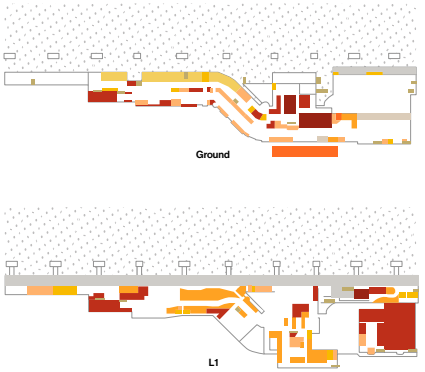
Program

PROGRAM BREAKDOWN

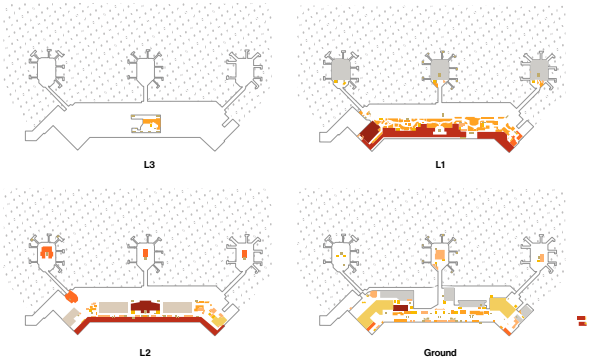
Milan precedents



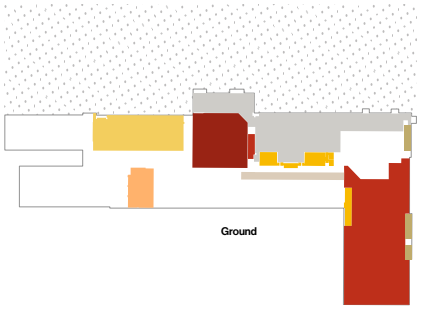
Linate (LIN)



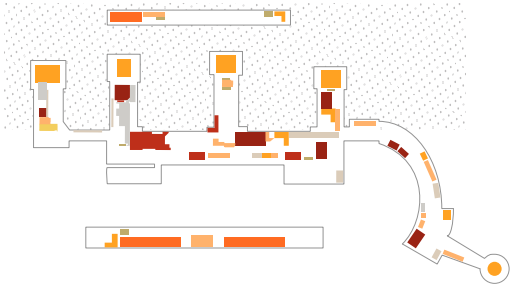
Bergamo (BGY)



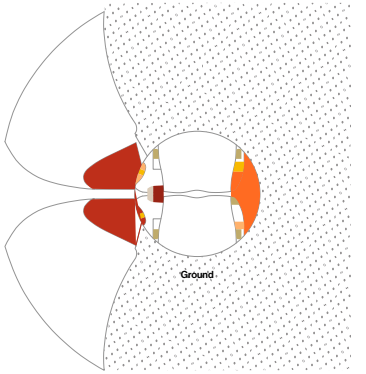
Malpensa (MXP)



Jackson Hole (JAC)



Washington D.C (DCA)



Spaceport America

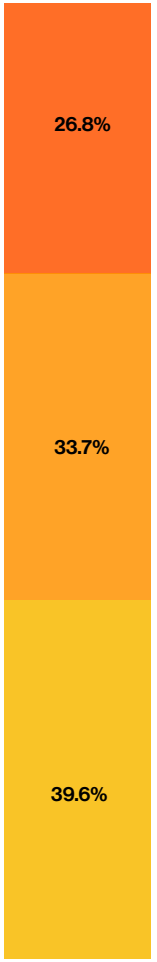
- Toilets
- Lounges
- Restaurants
- Office/private
- Retail
- Security
- Baggage operations
- Corridor
- Check-in/gate

MOST AIRPORTS PRIORITIZE
POST-SECURITY CONCOURSE SPACE

Program

(LIN) PROGRAM

(Existing)
Total terminal building GFA:
87,872 m²



Before-security
23,527 m²

After-security
29,575 m²

Operational
34,770 m²

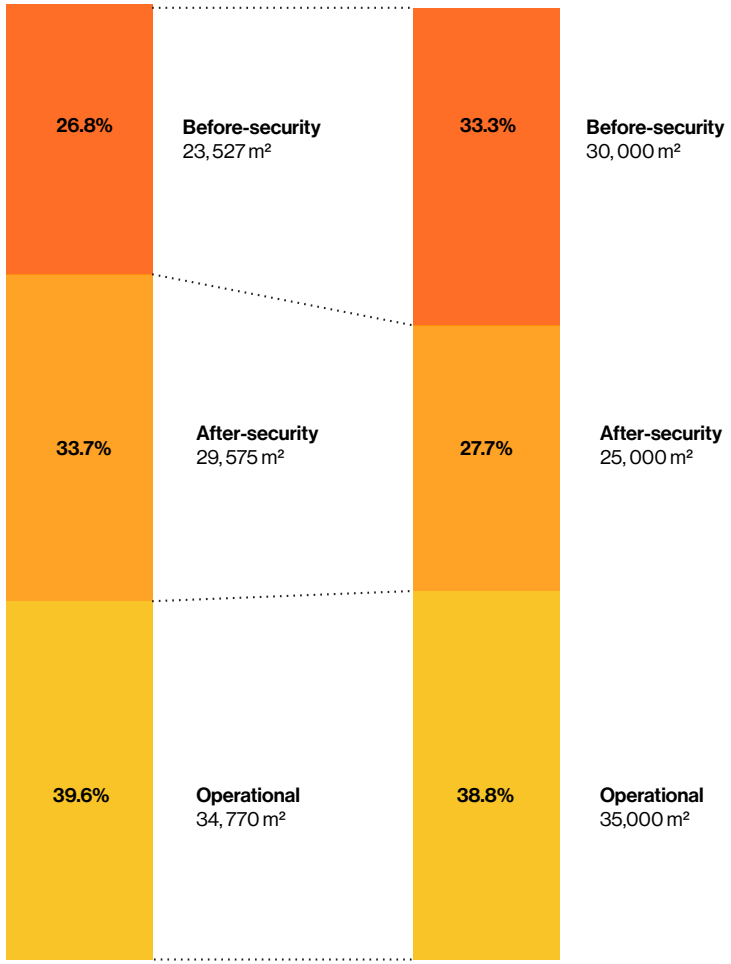
EXISTING

Program

(LIN) PROGRAM

(Existing)
Total terminal building GFA:
87,872 m²

(Proposed)
Total terminal building GFA:
90,000 m²

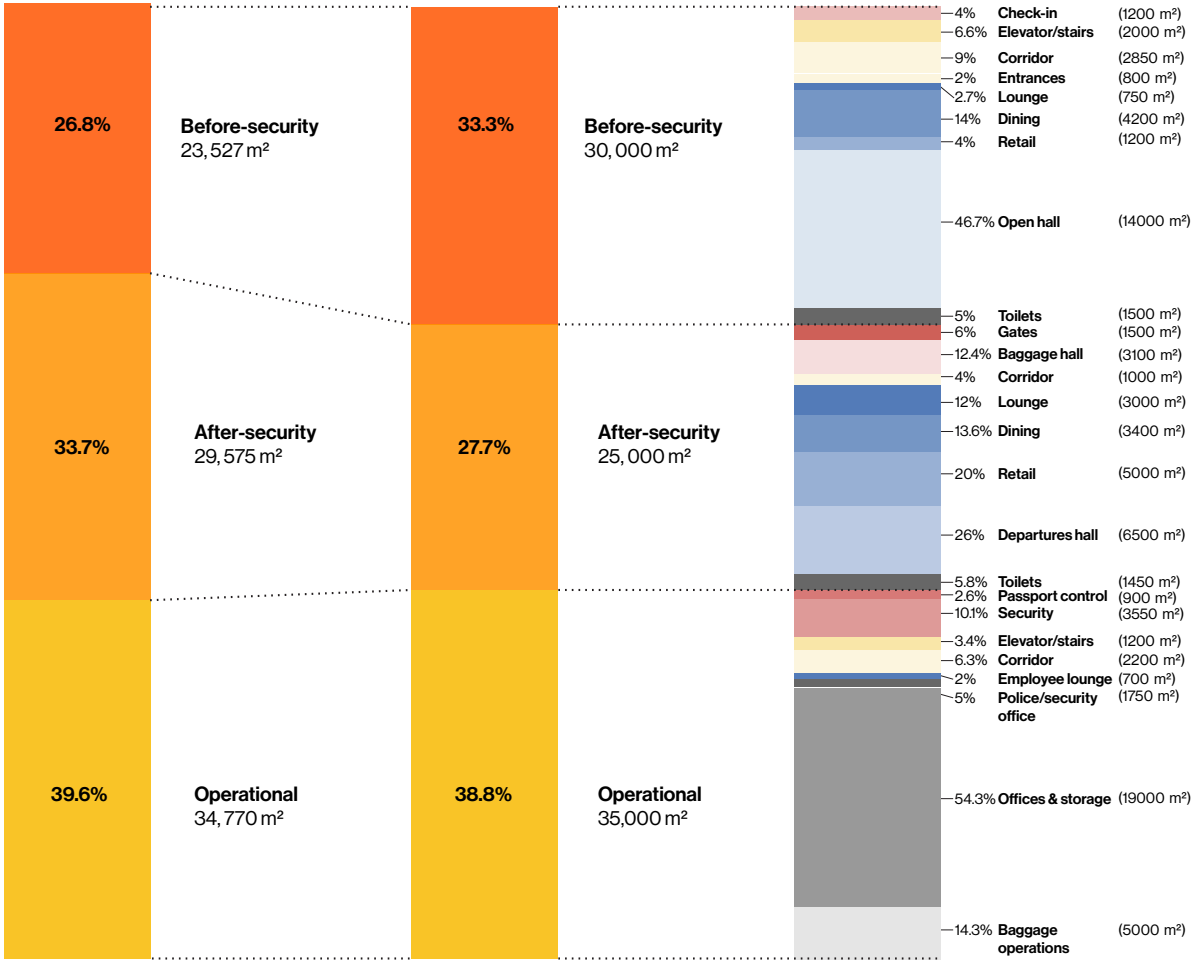


Program

(LIN) PROGRAM

(Existing)
Total terminal building GFA:
87,872 m²

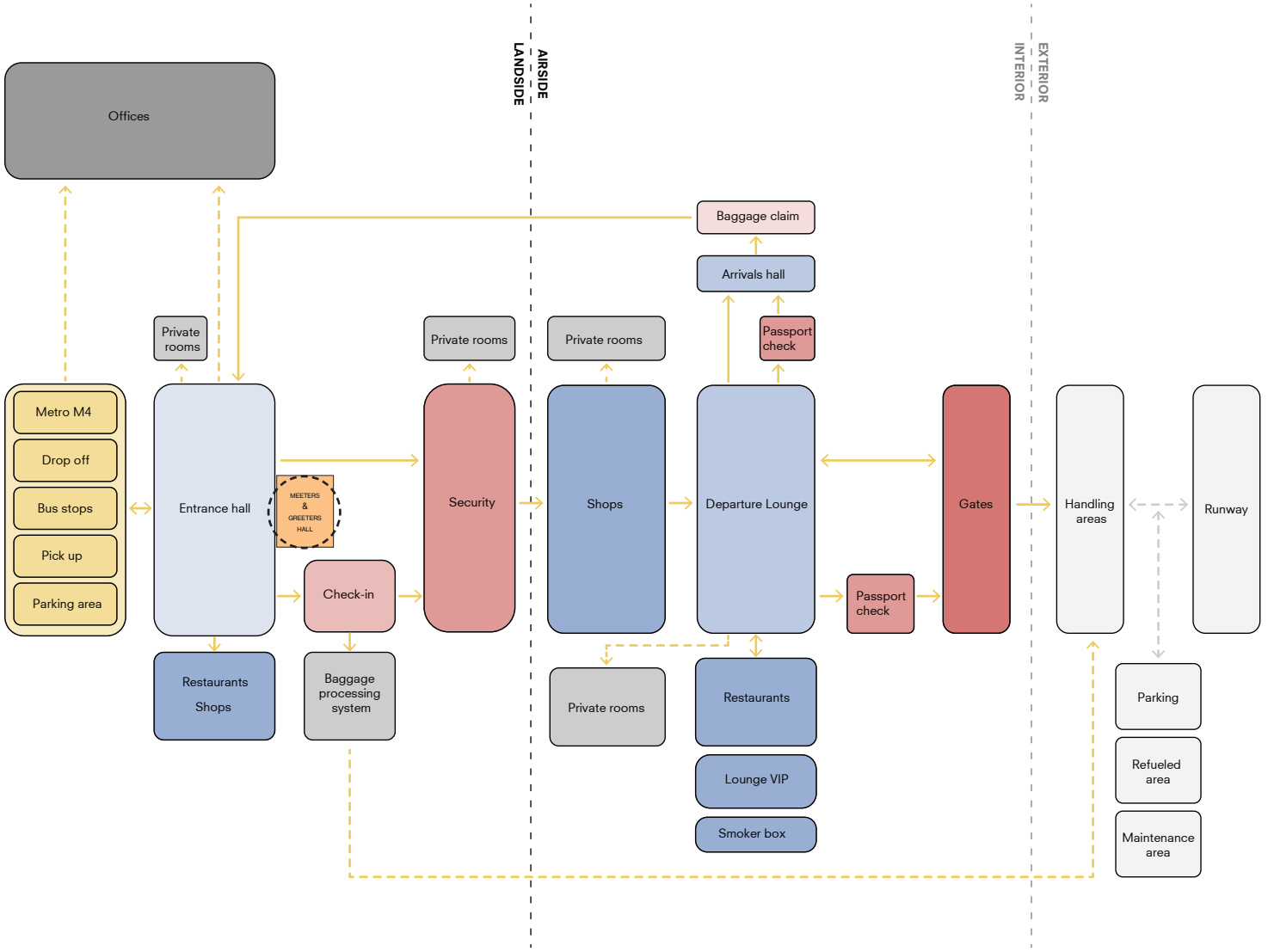
(Proposed)
Total terminal building GFA:
90,000 m²



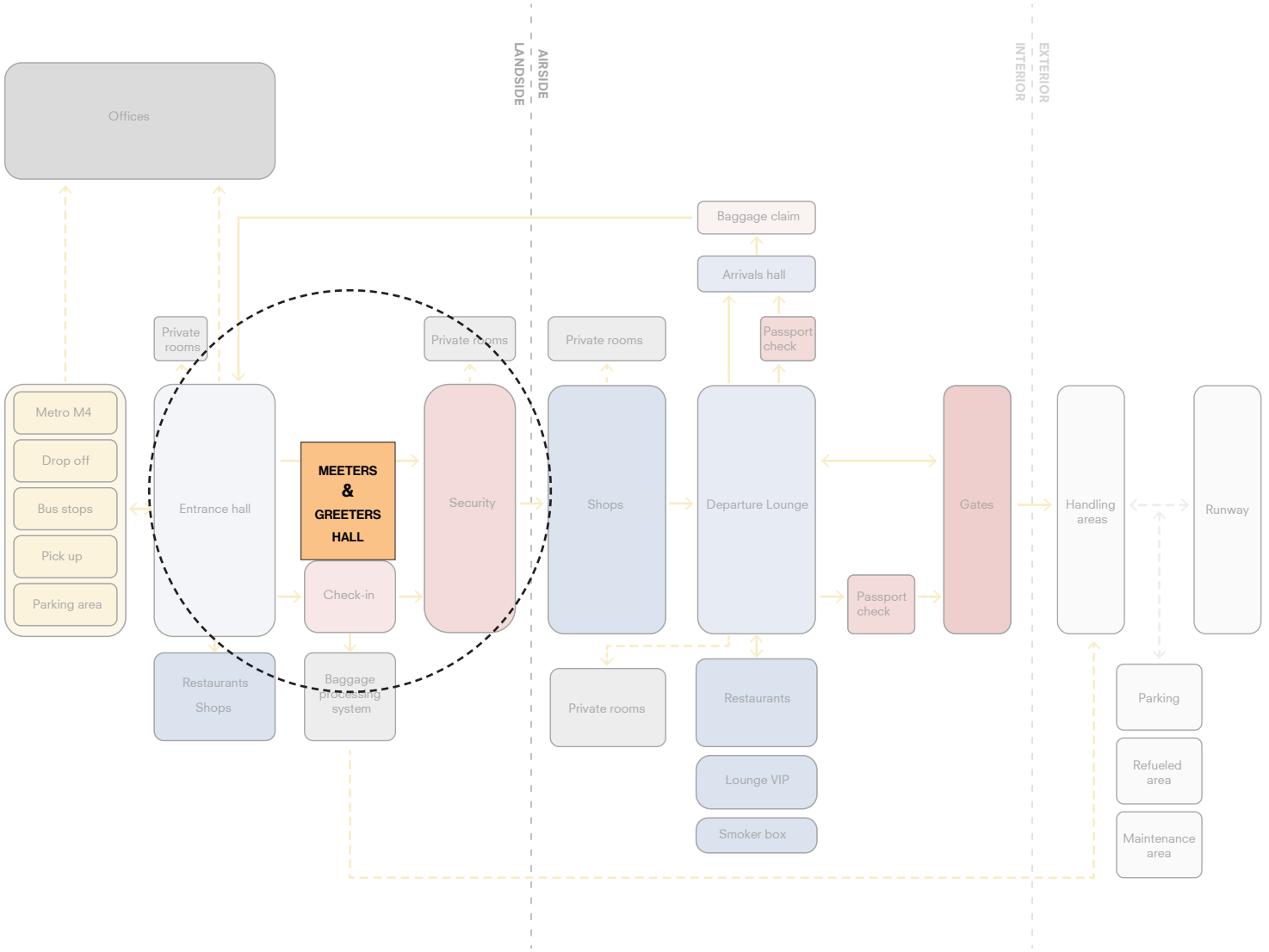
EXISTING **PROPOSED**

TYPICAL MEET AND GREET HALL

RELATION SCHEME (EXISTING)



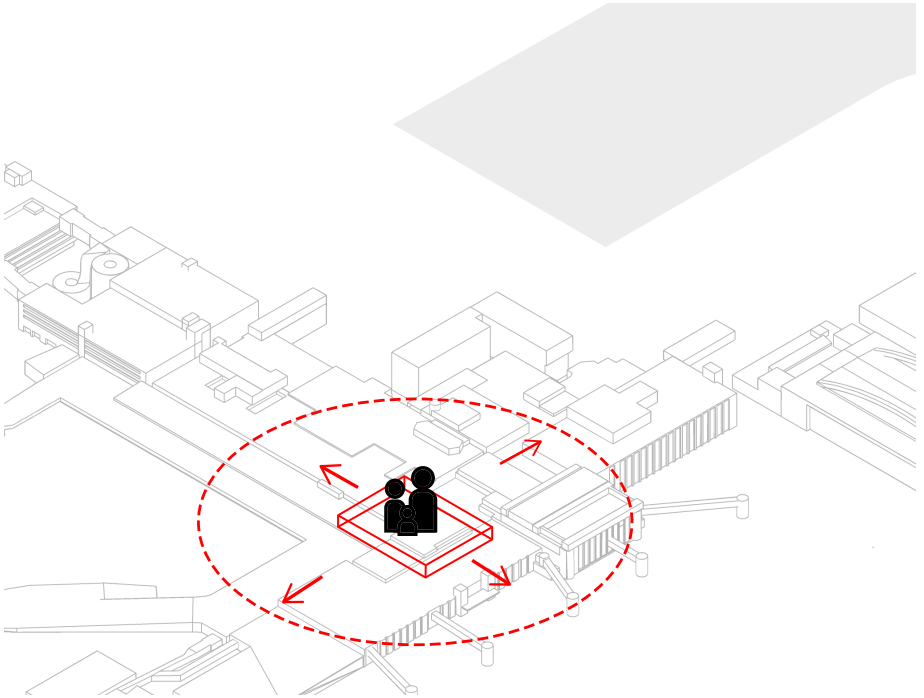
RELATION SCHEME (PROPOSED)



CONCLUSION

PROGRAM AMBITION:

MULTI-FUNCTIONAL, PUBLICLY ACCESSIBLE MEET AND GREET AREA



CLIENT
research

CLIENT REQUIREMENTS

OWNERS

SEA Milan Airports

Comune di Milano

BUSINESSES

ITA AIRWAYS

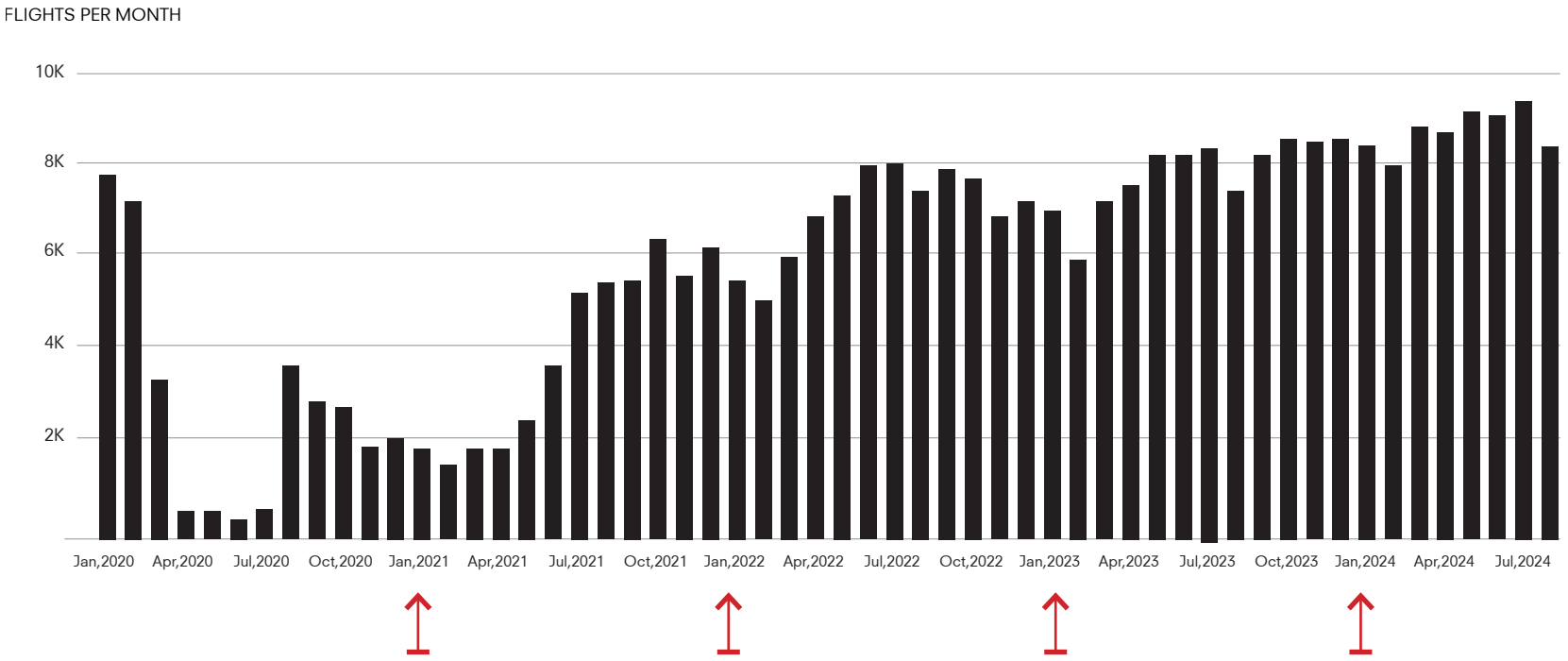
swissport

PASSENGERS

Client

SEASONAL BUSINESS

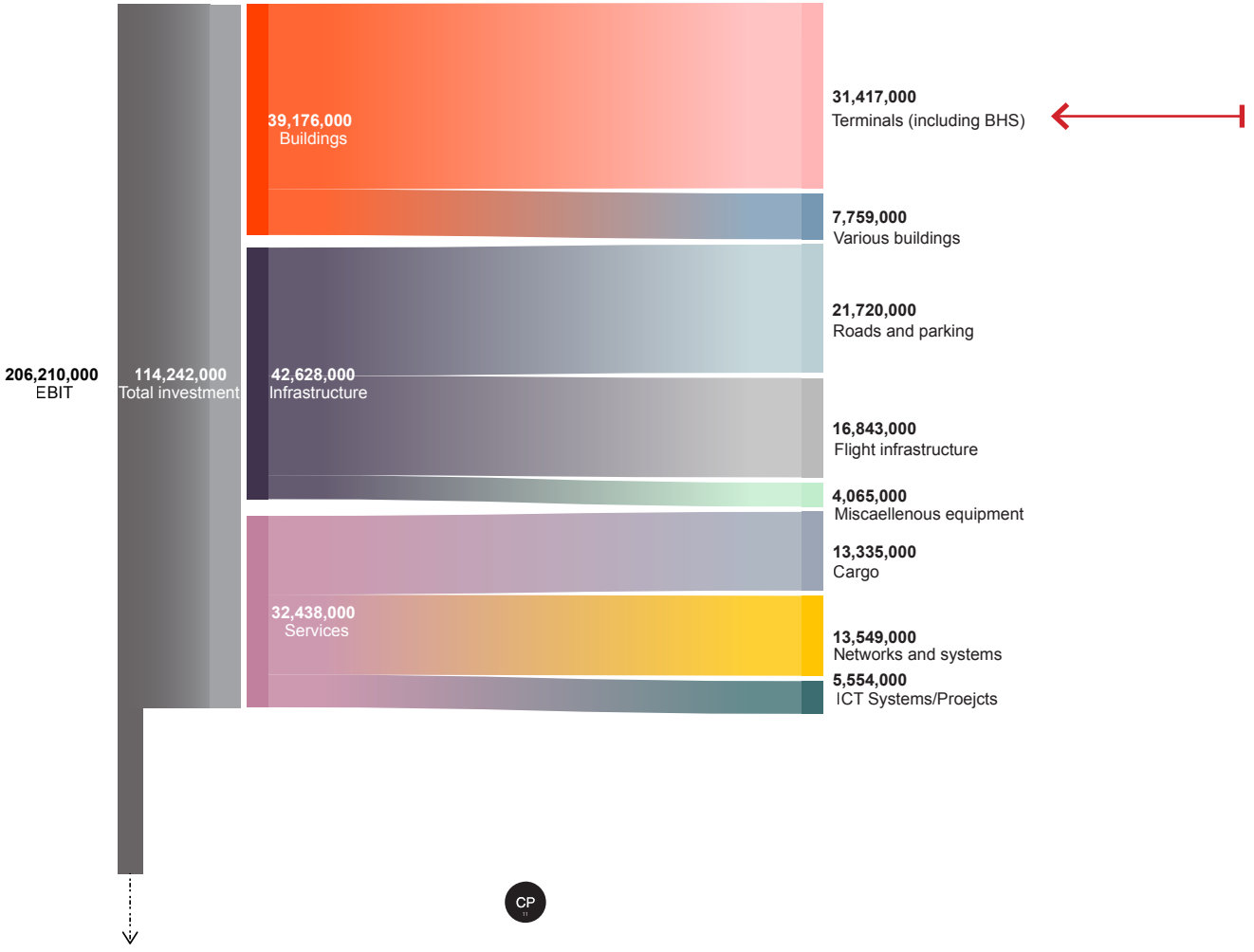
DIP IN TRAFFIC DURING WINTER MONTHS



Client

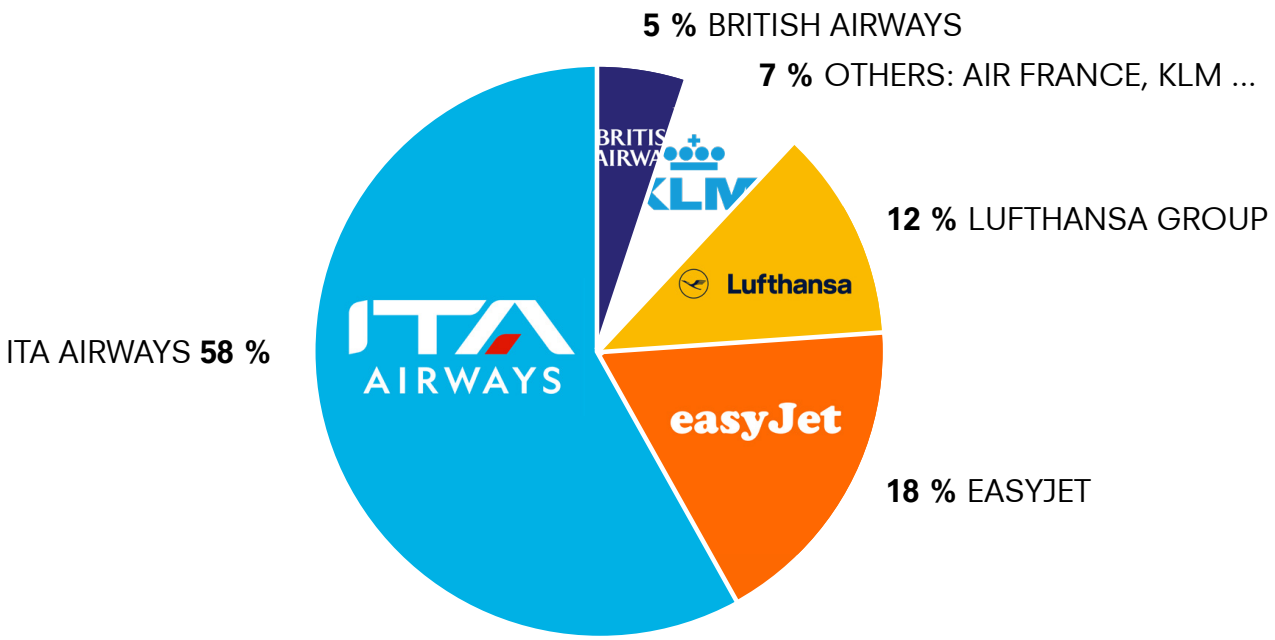
OWNER-OPERATOR

SEA Milan Airports



Client

ITA AIRWAYS HUB



A FRESH START

BTN BUSINESS TRAVEL NEWS EUROPE BY NORTHSTAR

NEWS FEATURES CONVERSATIONS RESOURCES EVEN

AIR TRAVEL

Alitalia to be renationalised under coronavirus strain

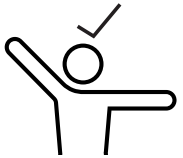
By Molly Dyson / 17 March 2020 / Contact Reporter

Client

FIRST ENCOUNTER

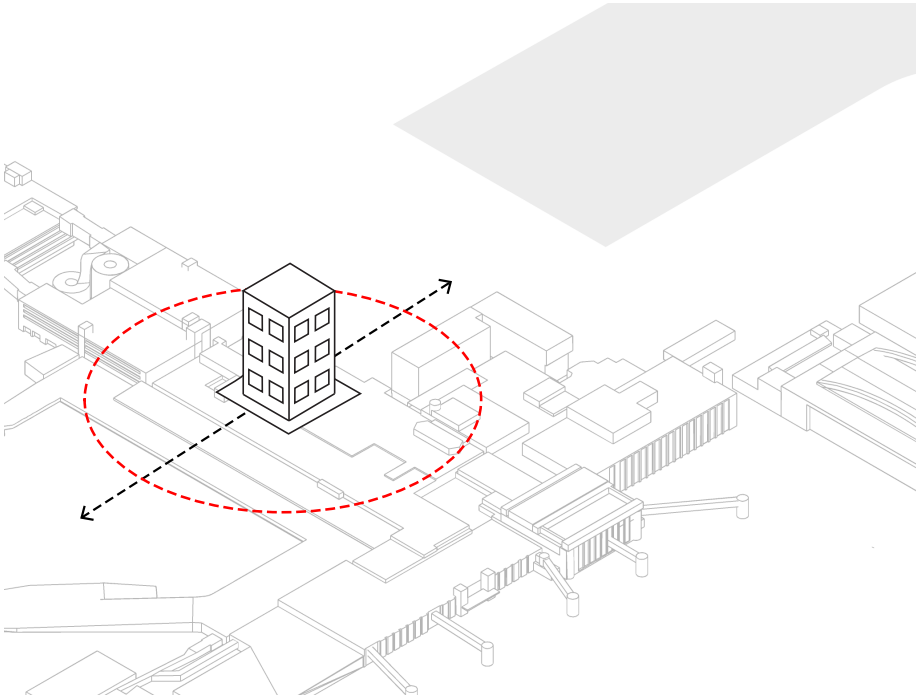
Client

CONCLUSION



CLIENT AMBITION:

BECOME A LANDMARK EXTENSION TO THE CITY OF MILAN



MATERIALS
OF MILAN

Group lens

NARRATIVE OF EXTRACTION

1400

Renaissance

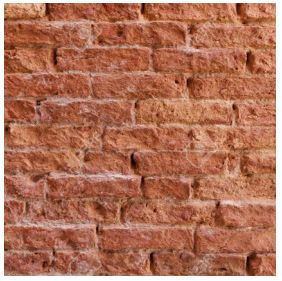
Terracotta

Timber

1600

The Birth of Modern Science

Stone

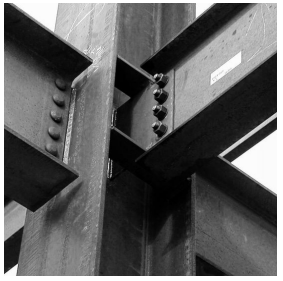


Bricks

1800

The Birth of Industrial Revolution

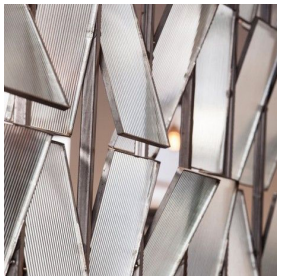
Concrete



Steel

1900

The Second Industrial Revolution

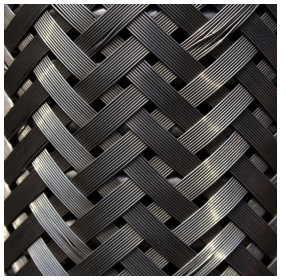


Glass

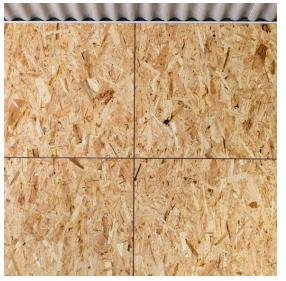
Reinforced Concrete

2000

Modern Technology



Carbon Fibre



Sustainable Wood

2100

Group lens

NARRATIVE OF EXTRACTION

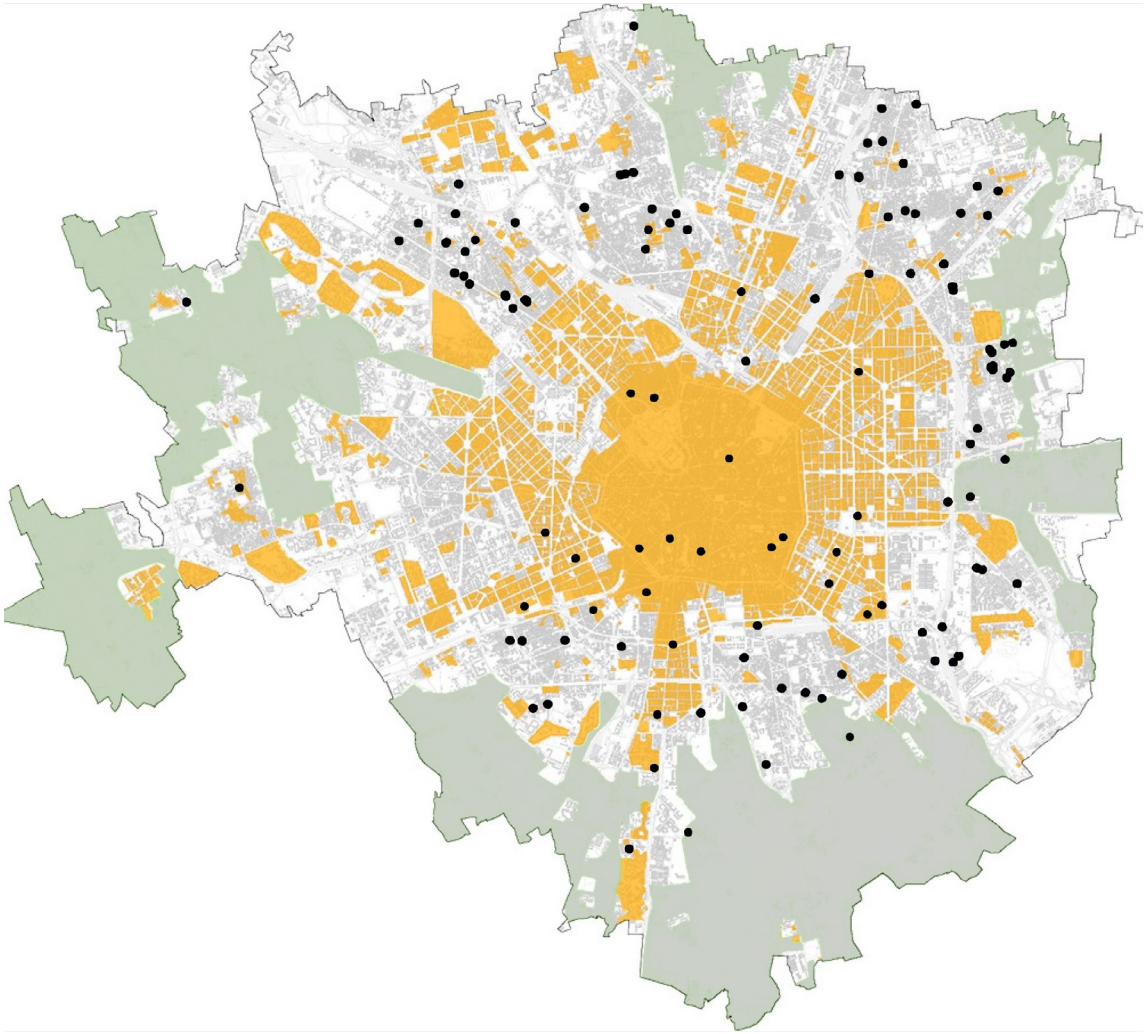
Artisan

Industrial

Innovative

Group lens

ABANDONED BUILDINGS



115 abandoned buildings, 2 years to present recovery proejct- otherwise **demolished**.

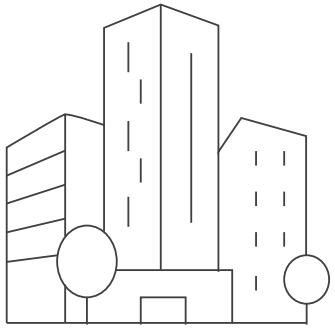
Total 25% volumetric bonuse by adding green space or reducing footprint.

Group lens

DESIGN REQUIREMENTS

URBAN SCALE:

"All primary materials must be sourced within **30 km** of the project site, with at least **30% recycled or reclaimed content"**



Group lens

DESIGN REQUIREMENTS

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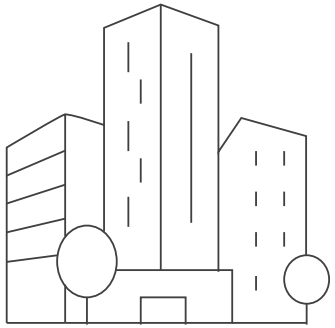
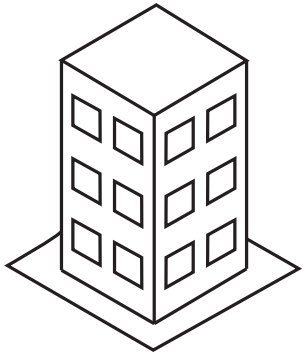


BUILDING SCALE:

"At least **50% of the building's structural and non-structural components** must be designed for easy **disassembly or repurpose**"



Group lens

DESIGN REQUIREMENTS

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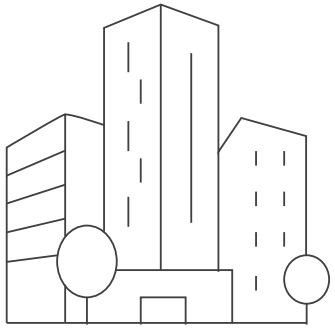

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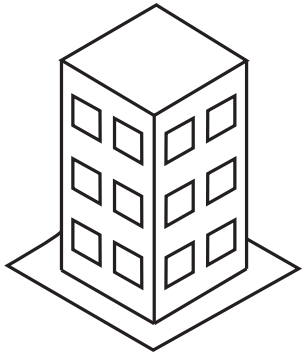
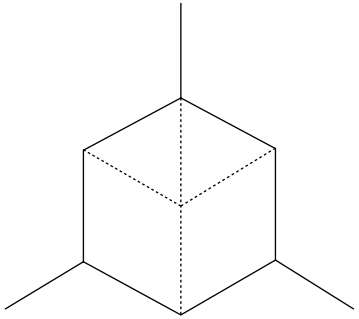


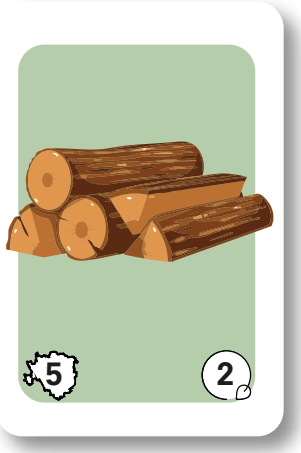
DETAIL SCALE:

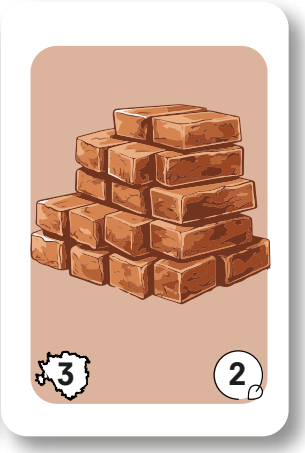
"Every project must feature **one prominently visible crafted element (entrance hall)** made from locally sustainably sourced materials"

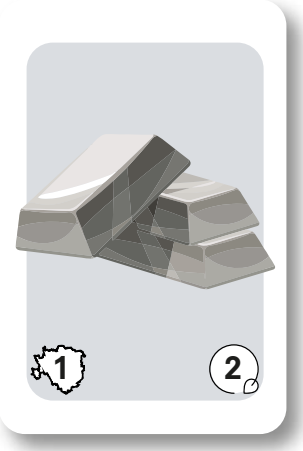


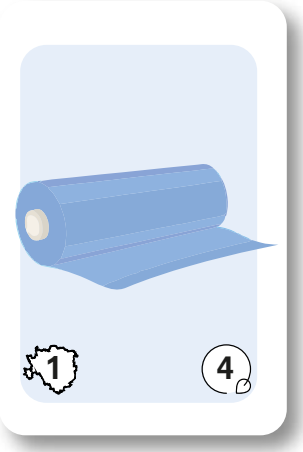
Group lens

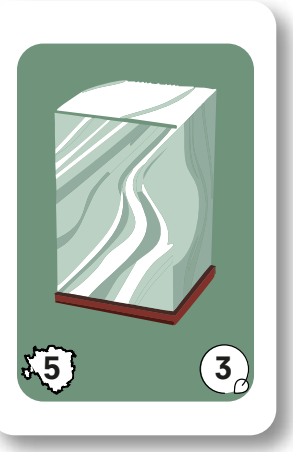
MATERIAL CARDS



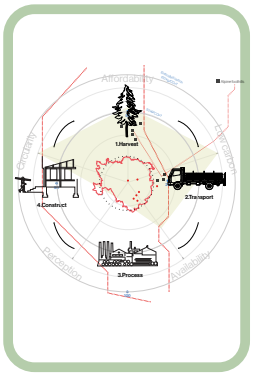




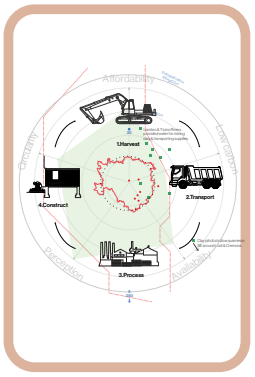




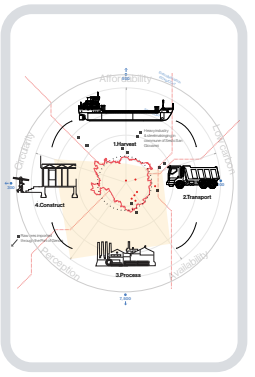
TIMBER



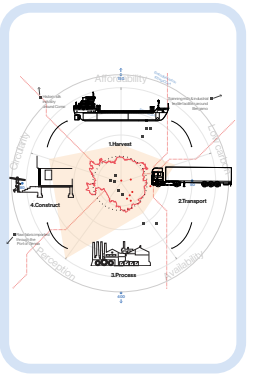
BRICK



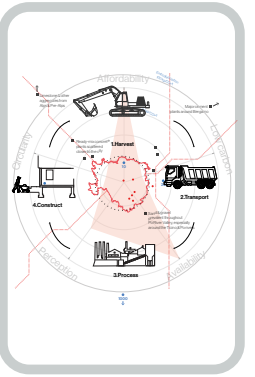
METAL



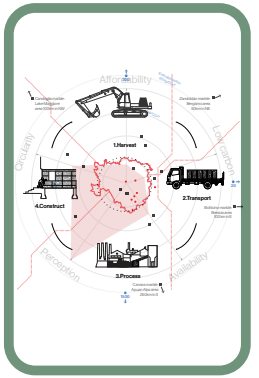
FABRIC



CONCRETE

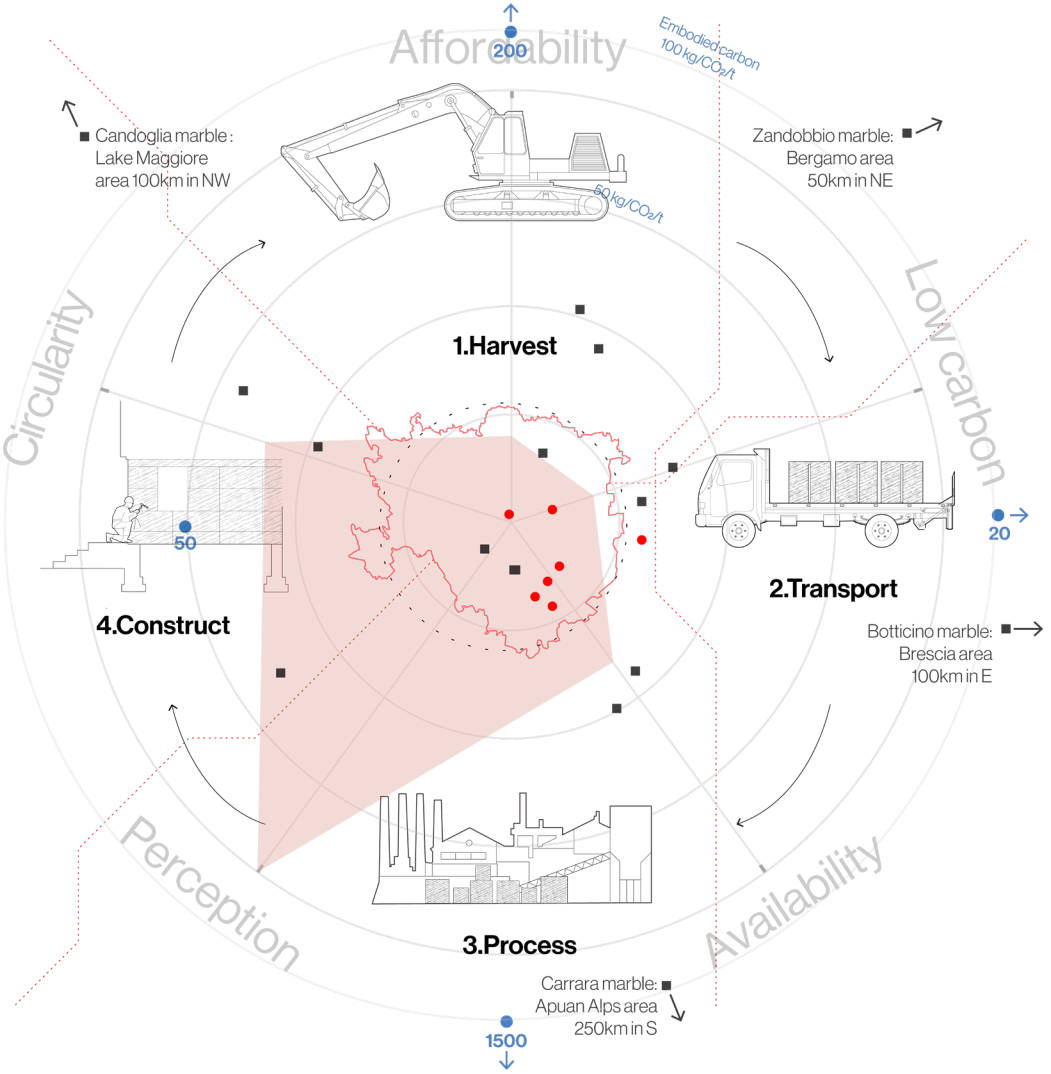


MARBLE



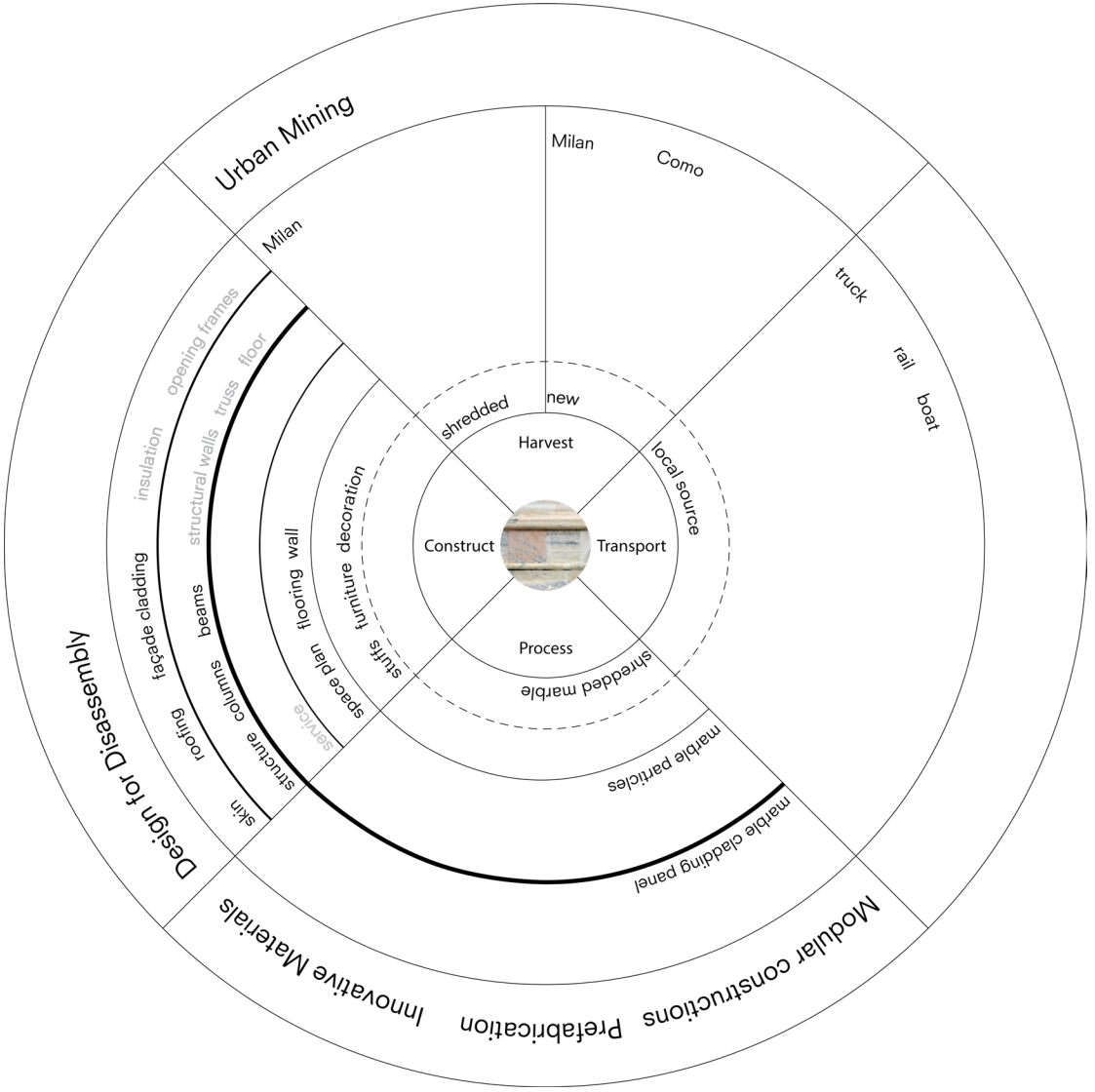
Group lens

MARBLE ANALYSIS



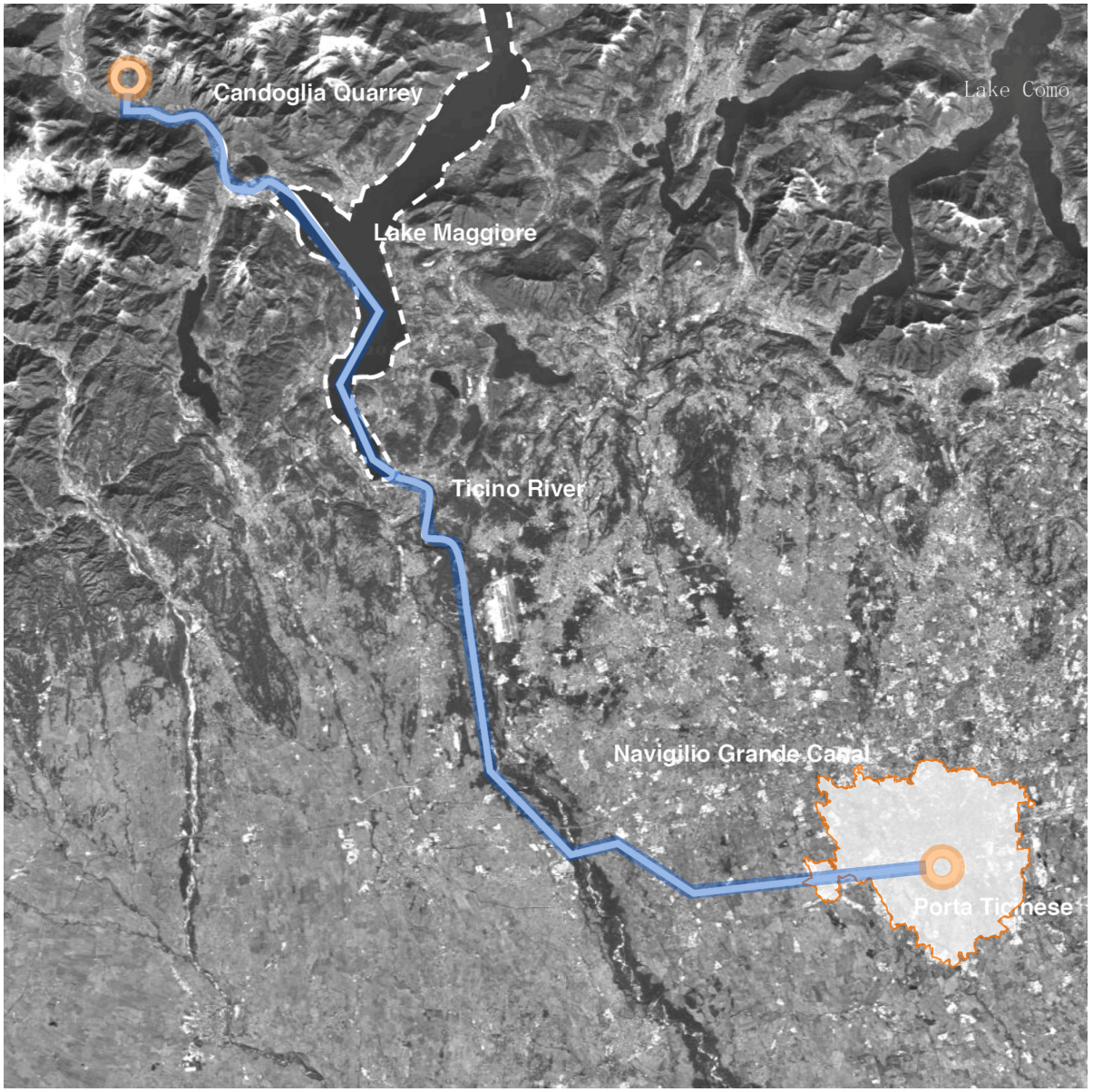
Group lens

LIFE-CYCLE ASSESSMENT



Group lens

MARBLE HARVEST MAP



DESIGN REQUIREMENTS

SITE AMBITION:

↓

REQUIREMENT

SIGHTLINES & WALKABLE LINK TO WATERFRONT

PROGRAM AMBITION:

↓

REQUIREMENT

PUBLICLY ACCESIBLE MEET & GREET HALL

CLIENT AMBITION:

↓

REQUIREMENT

LANDMARK EXTENSION TO THE CITY OF MILAN

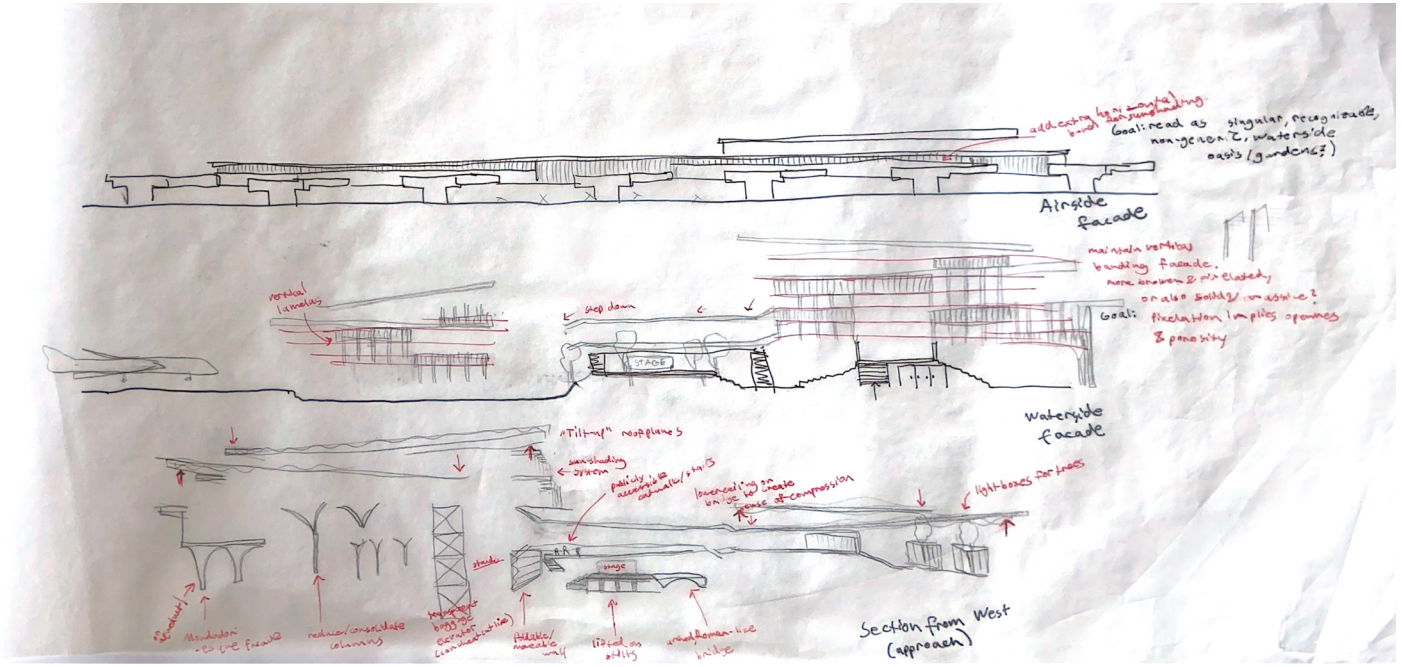
LENS AMBITION:

↓

REQUIREMENT

ILLUSTRATE THE STORY OF MARBLE EXTRACTION IN THE FACADE

DESIGN REQUIREMENTS

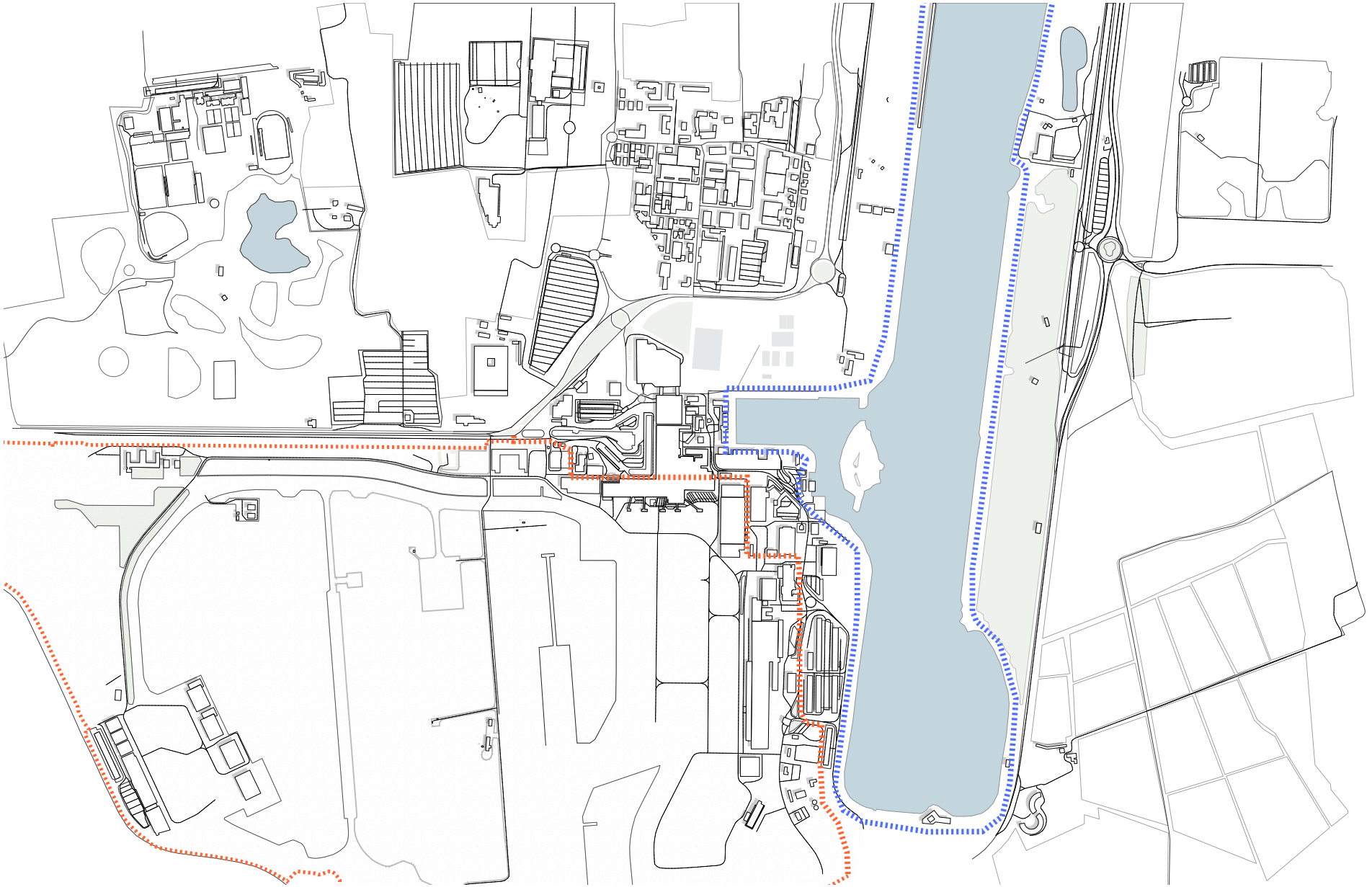


CONCEPT

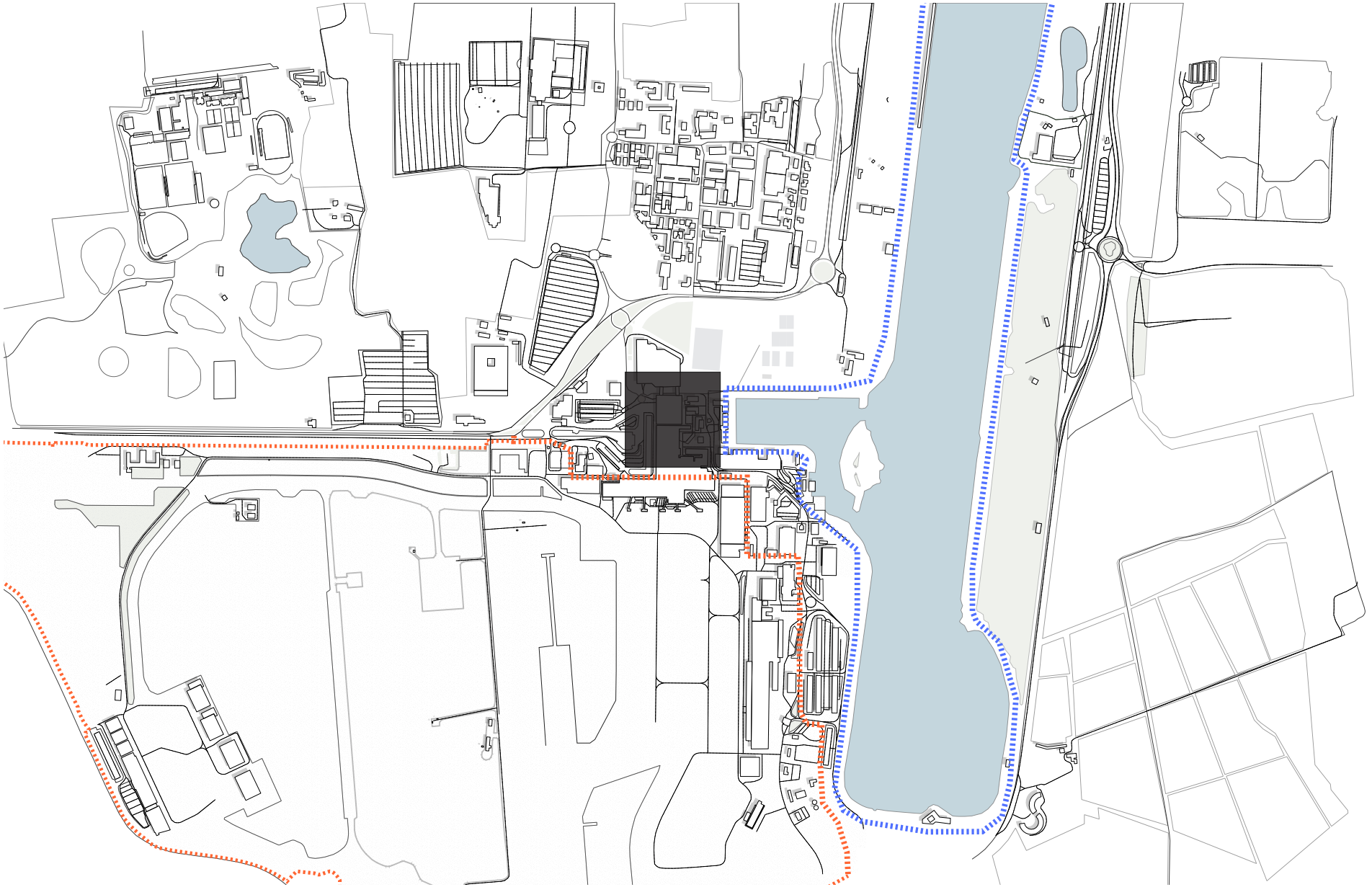
HARD EDGE

CONSOLIDATE

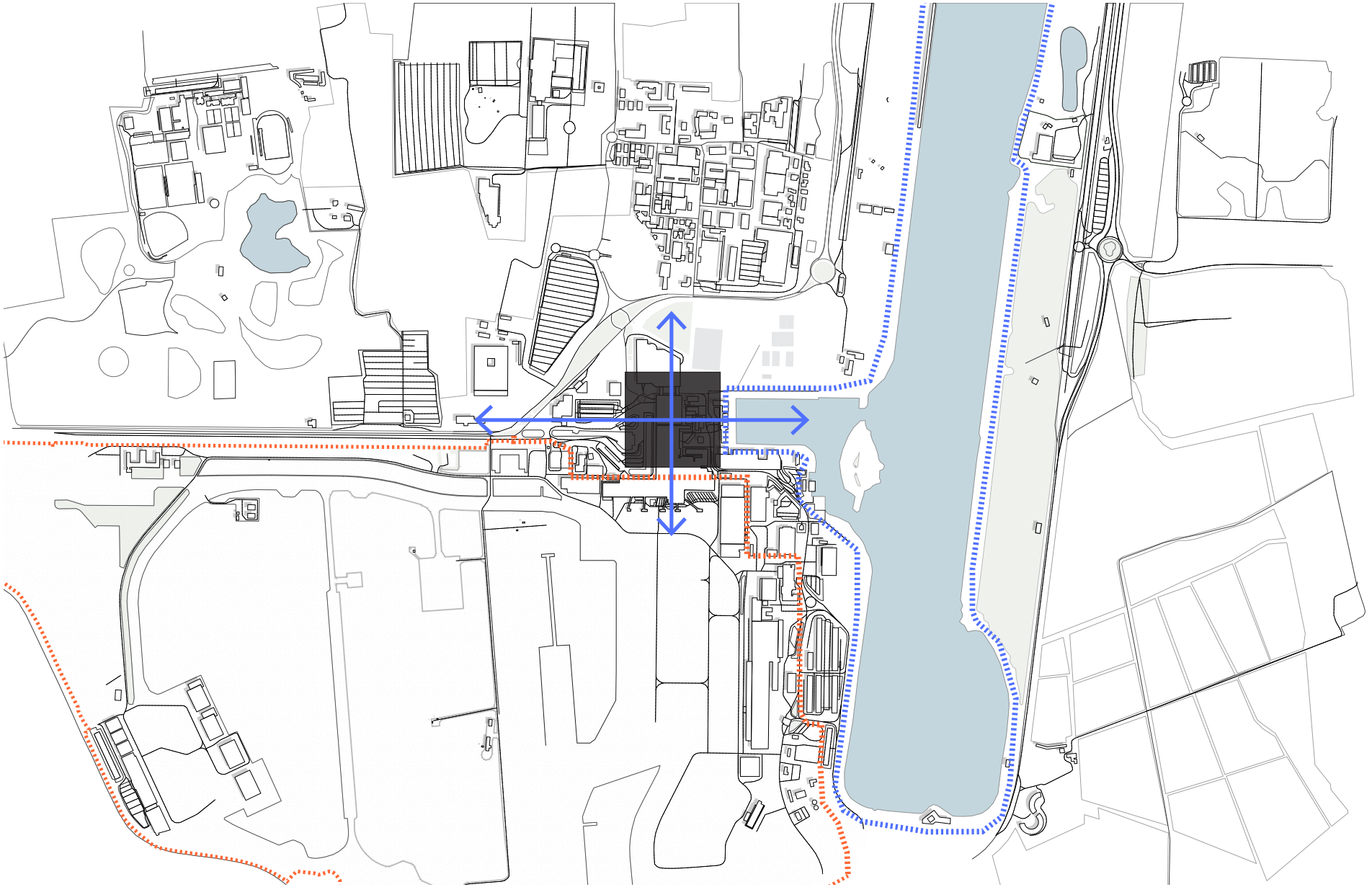
CONTINUE



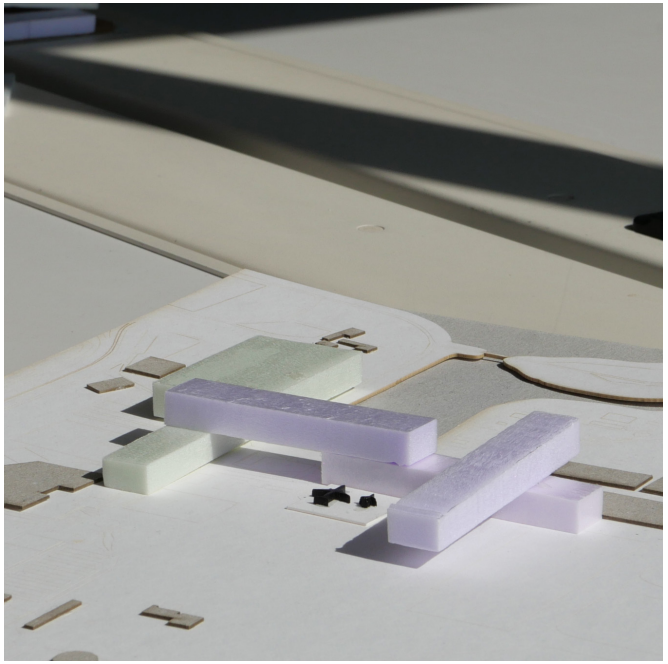
CENTER

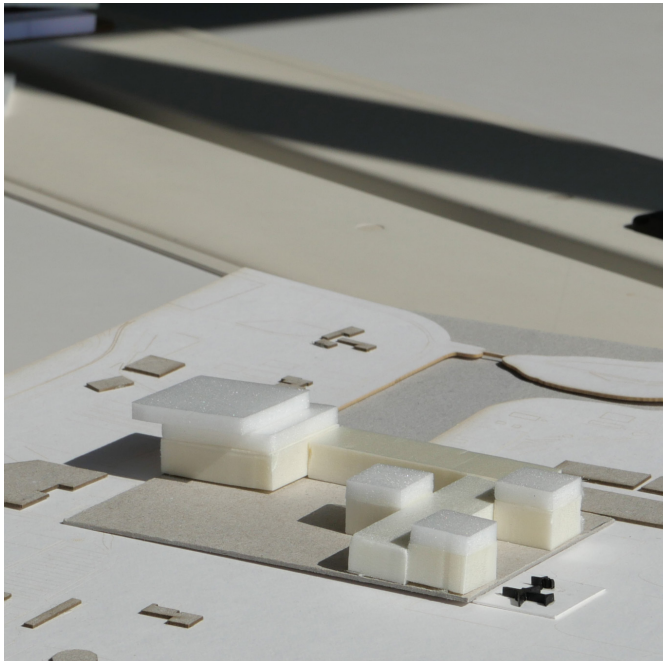


CONNECT

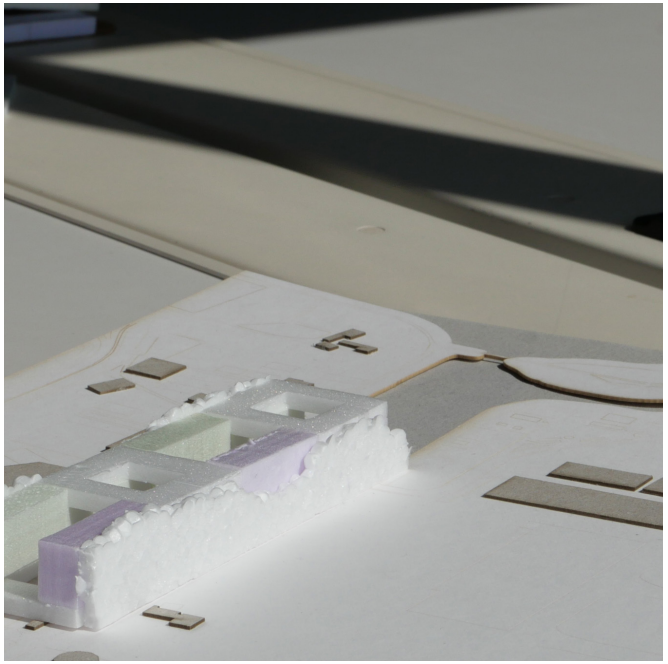


DIVIDE?

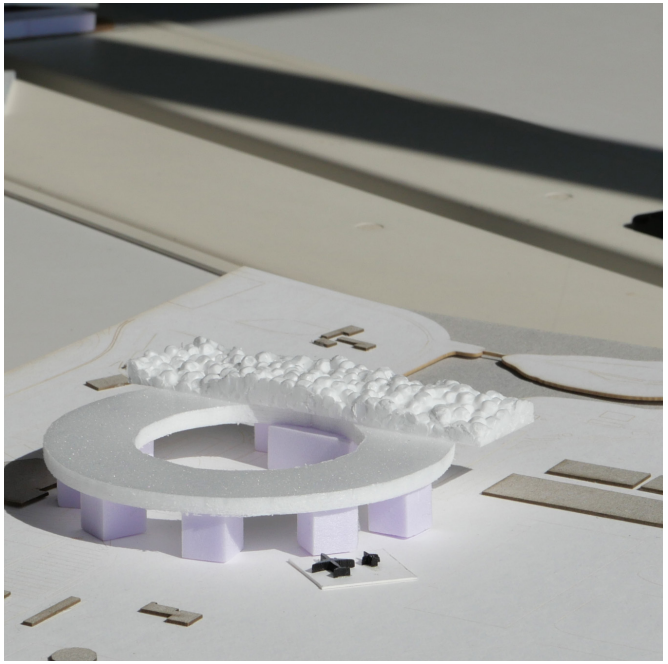


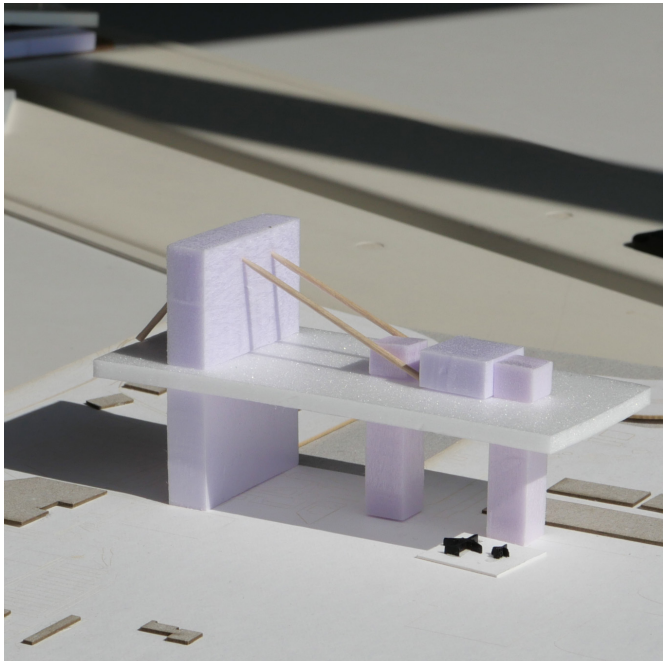


STRETCH?

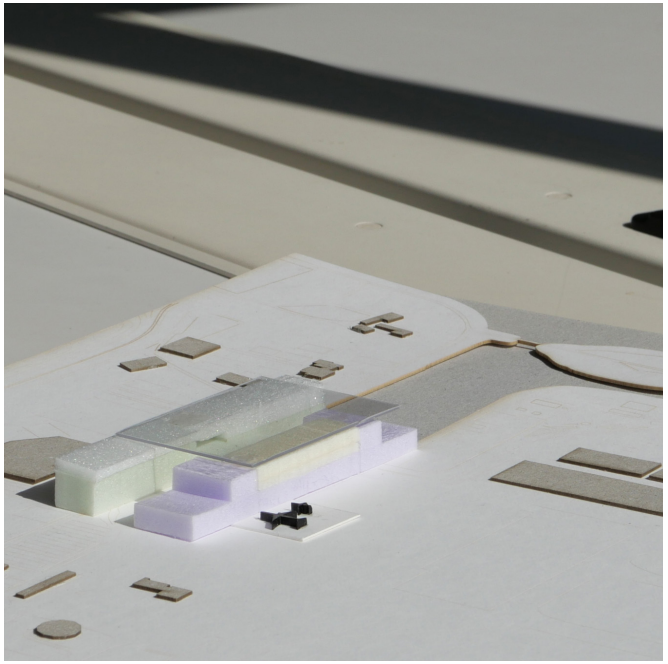


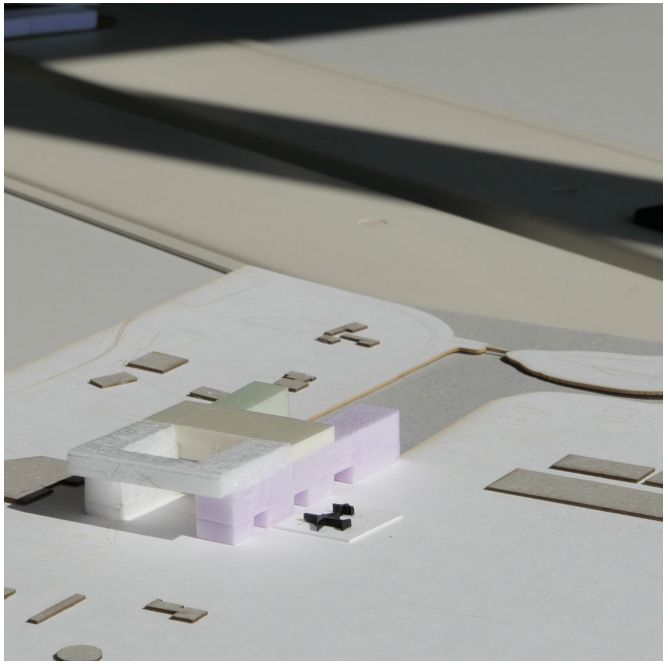
ELEVATE?



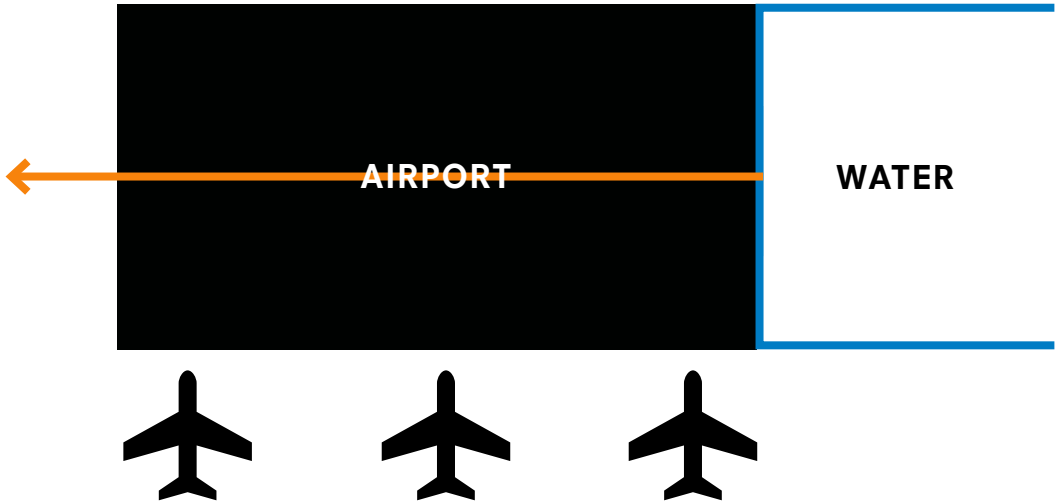


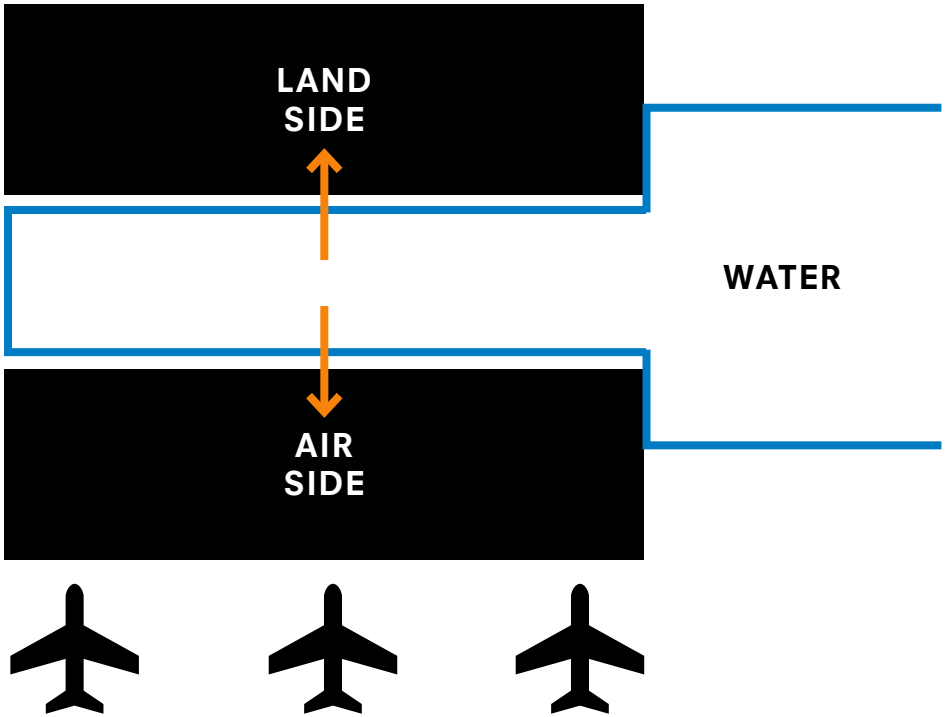
OR ALL OF THE ABOVE?

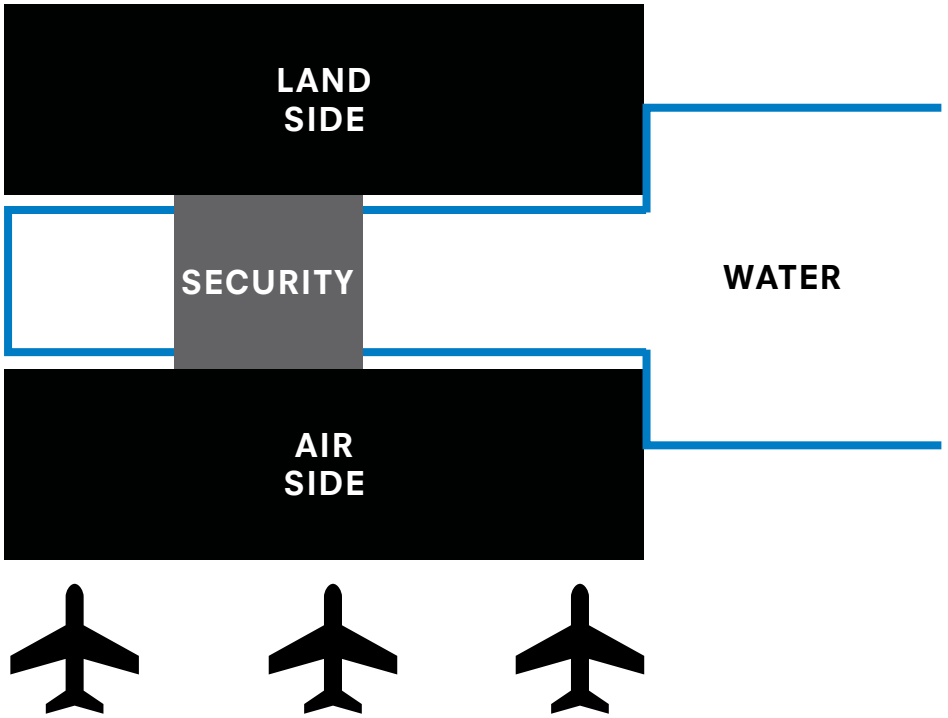


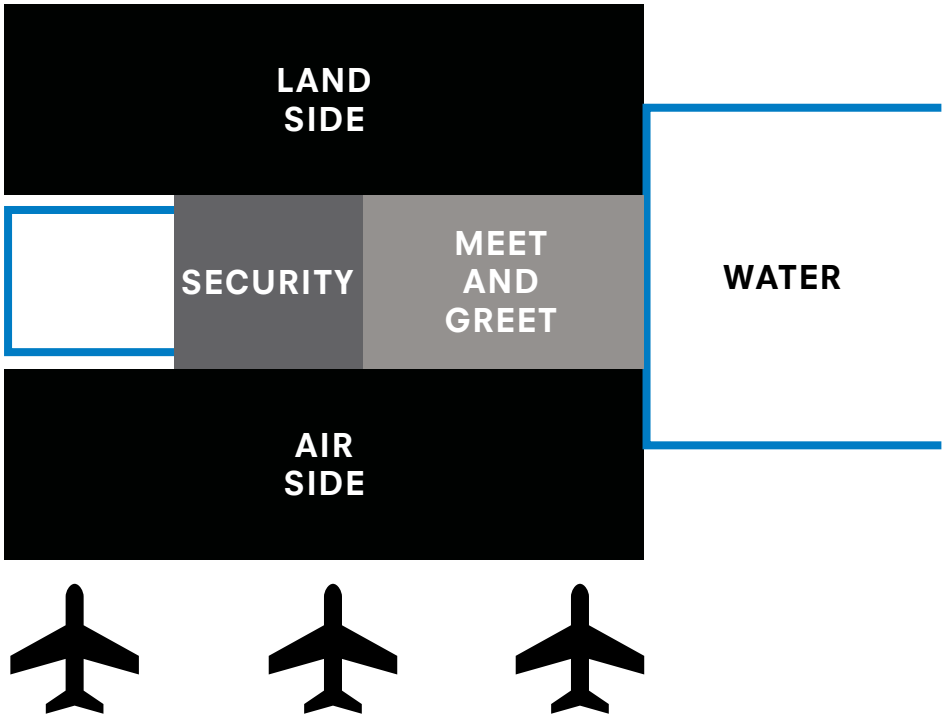


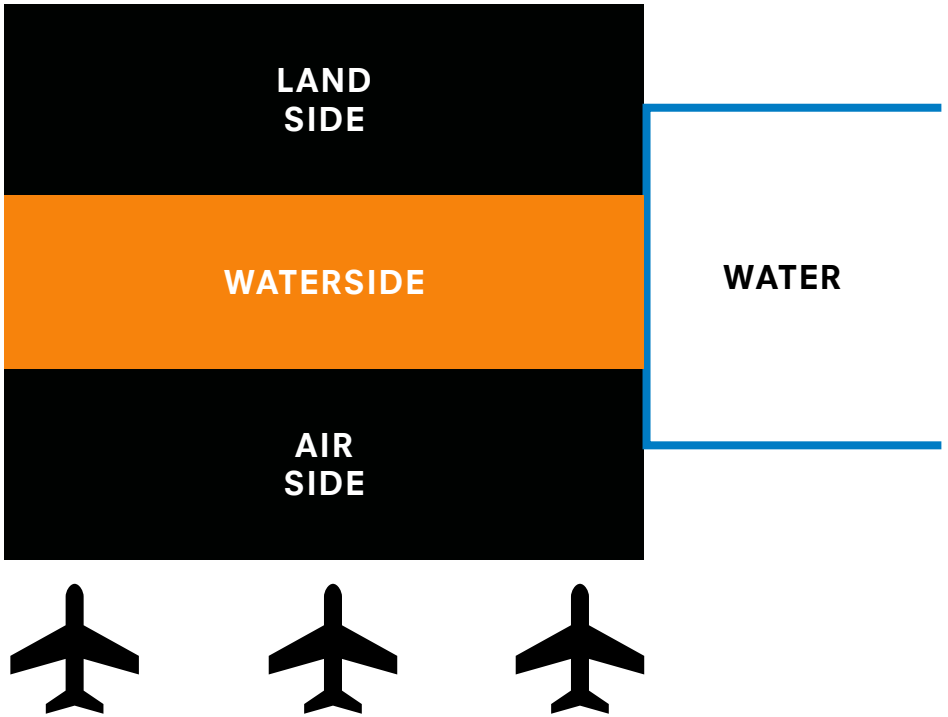
AIRPORT
WATER


AIRPORT
WATER

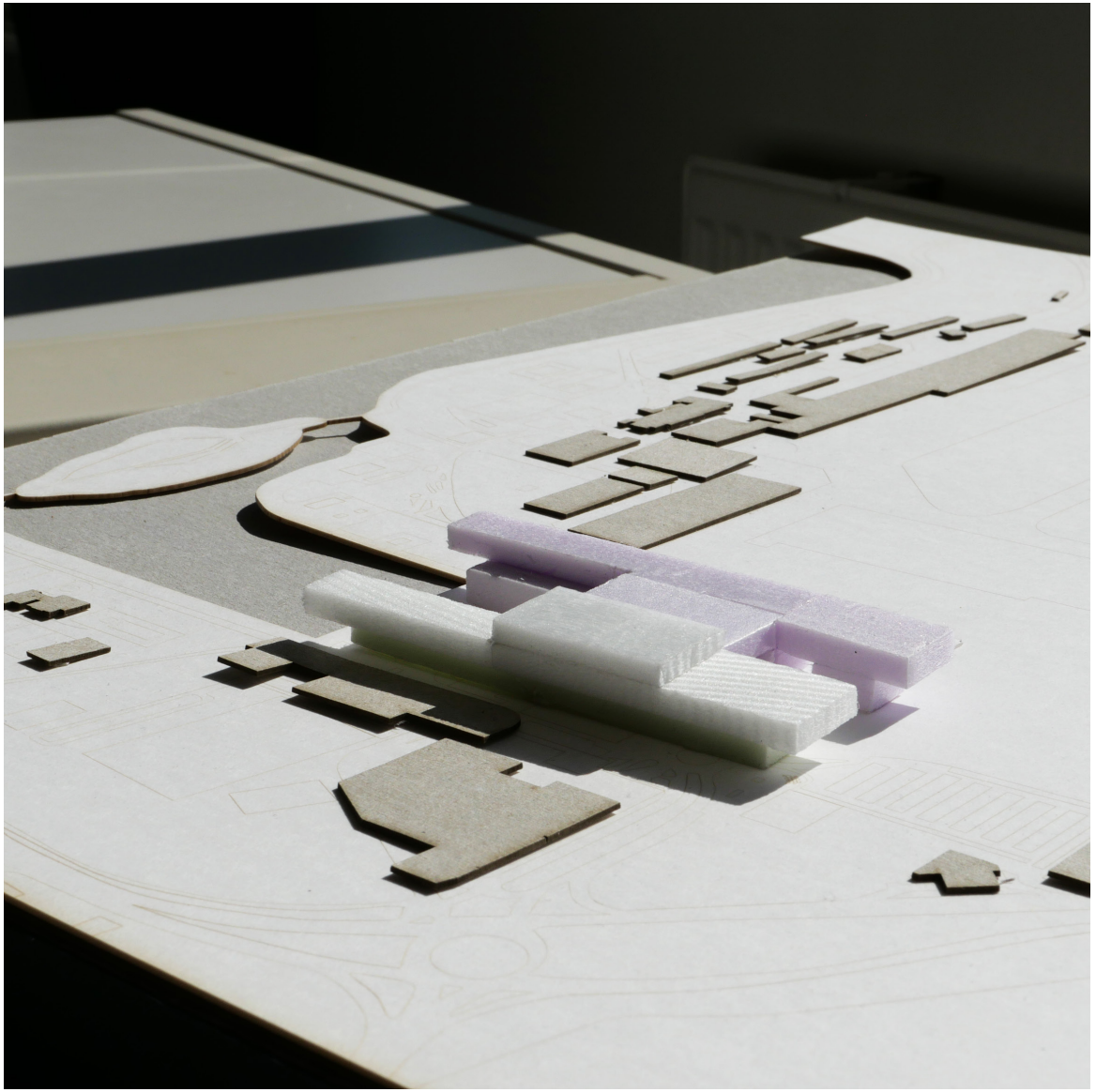

LAND
SIDE
WATER
AIR
SIDE


LAND
SIDE
SECURITY
WATER
AIR
SIDE


LAND
SIDE
SECURITY
MEET
AND
GREET
WATER
AIR
SIDE

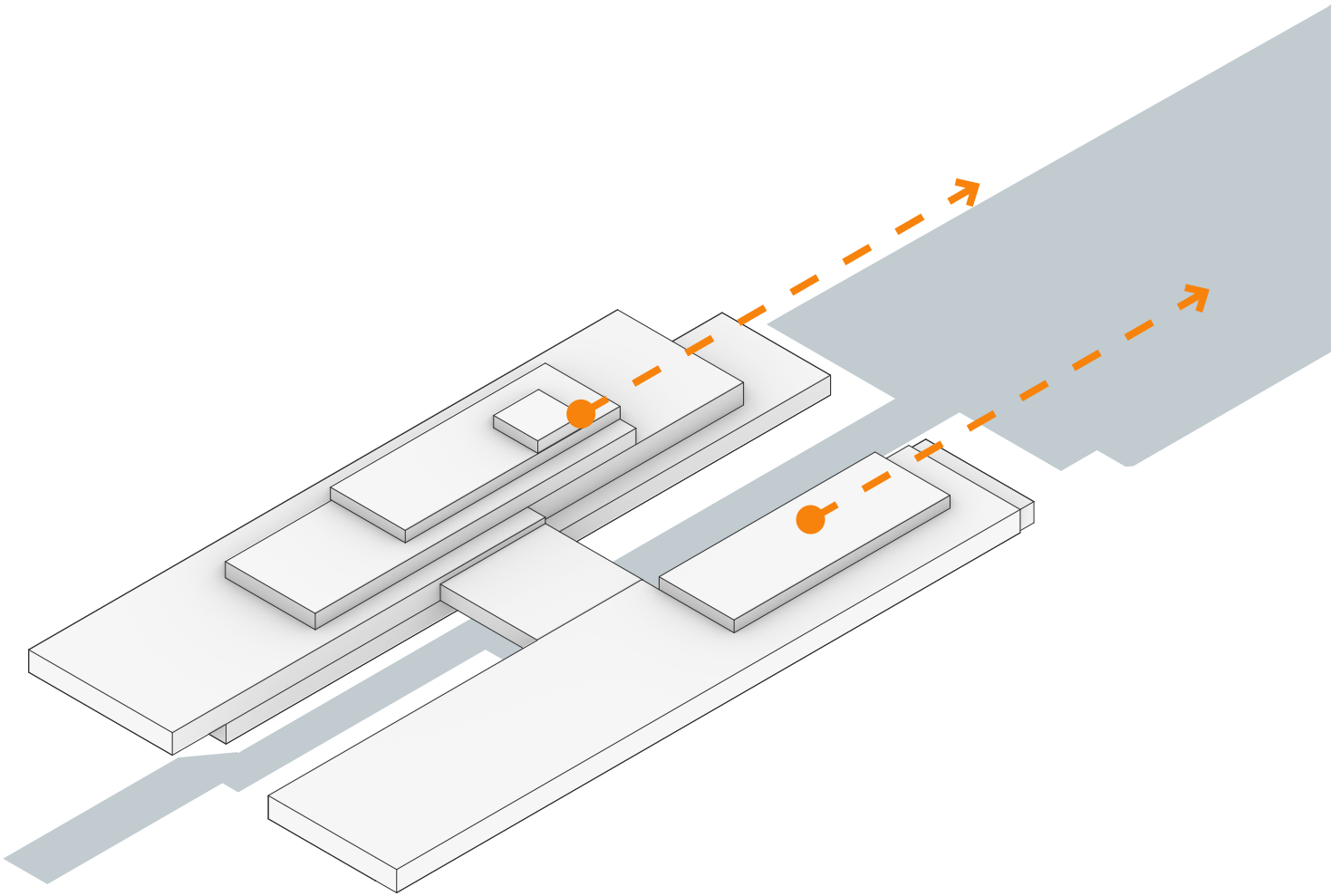

LAND
SIDE
WATERSIDE
AIR
SIDE
WATER

SITE-TO-FLIGHT



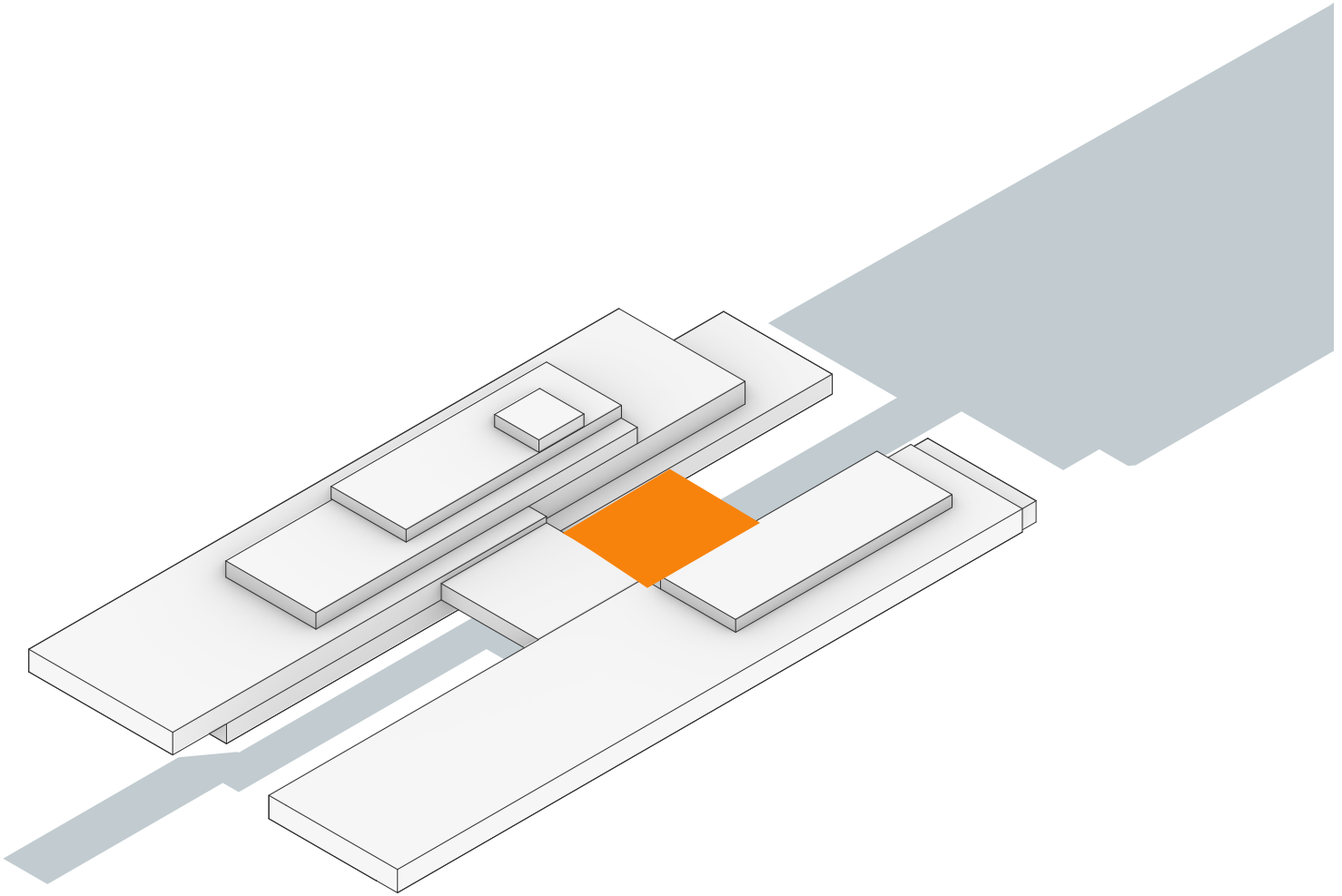
Site

LINK TO WATERFRONT



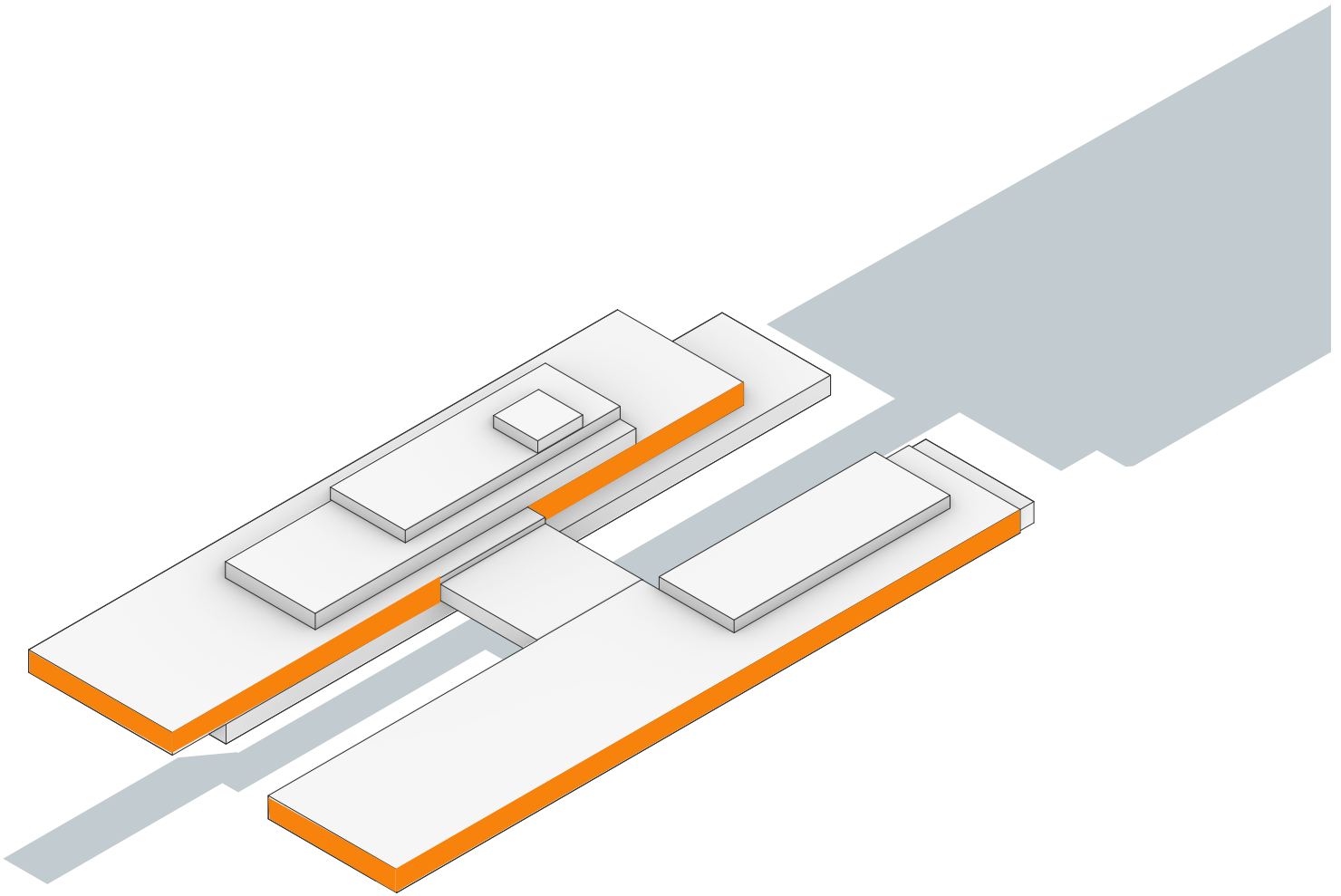
Program

MEET AND GREET HALL



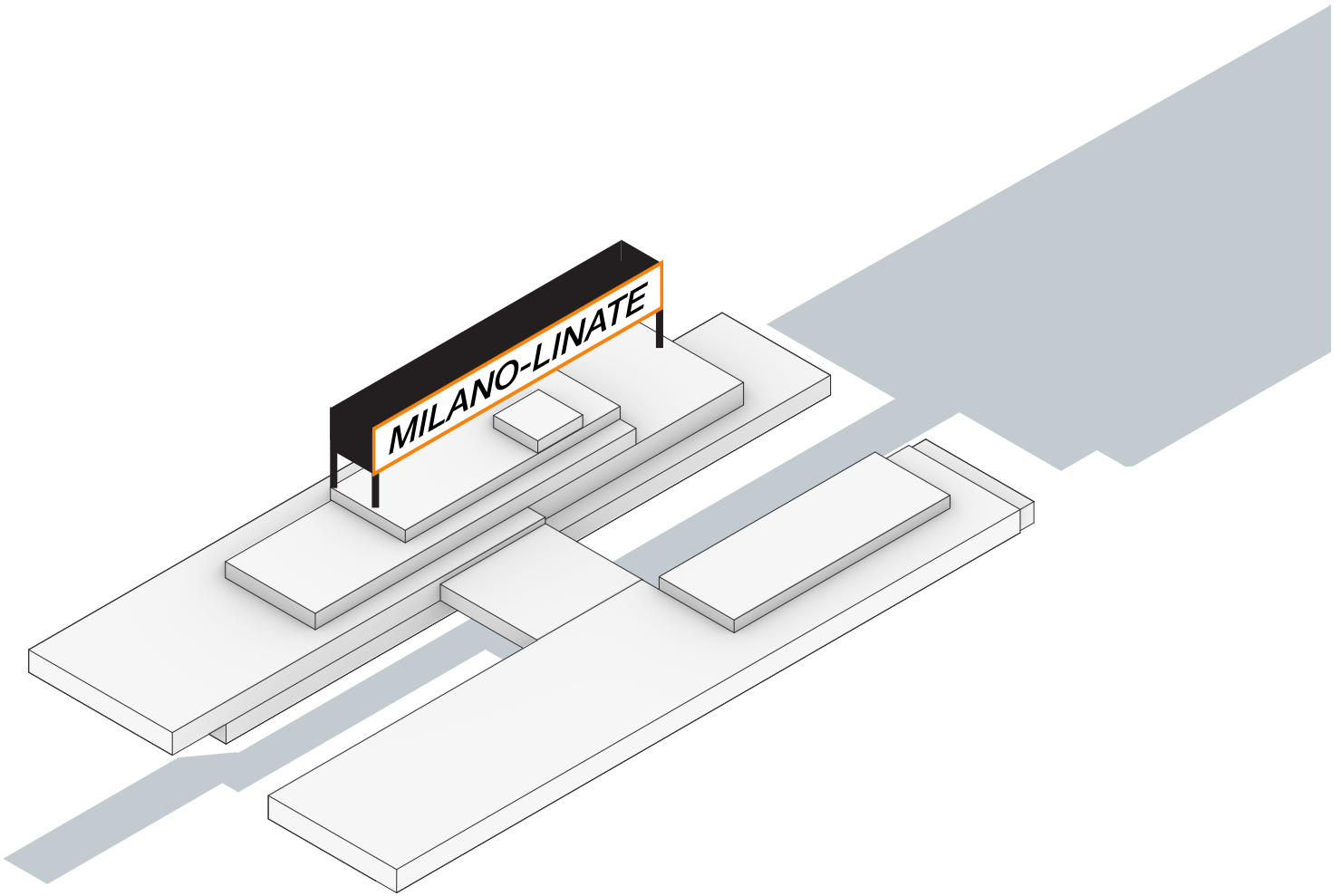
Group lens

MATERIAL IDENTITY



Client

LANDMARK EXTENSION

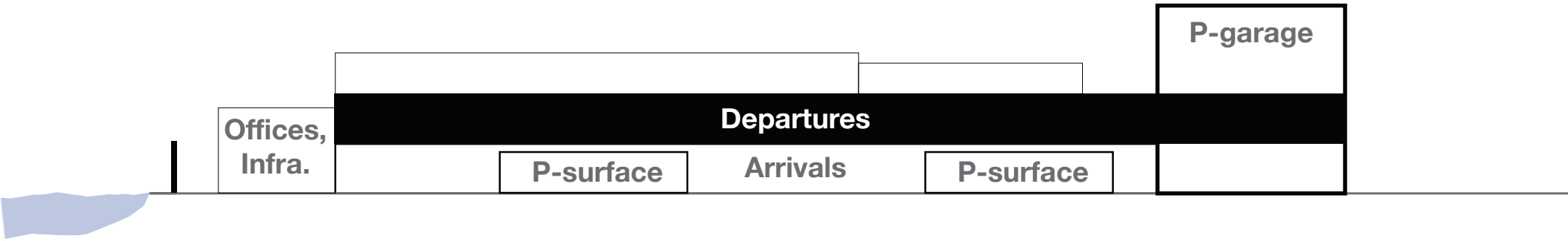


LINKING MILAN & IDROSCALO

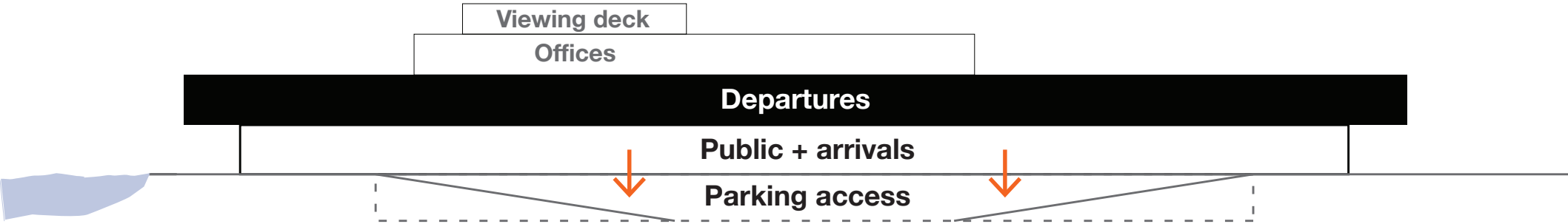
LINKING MILAN & IDROSCALO

DESIGN

TYPICAL TERMINAL



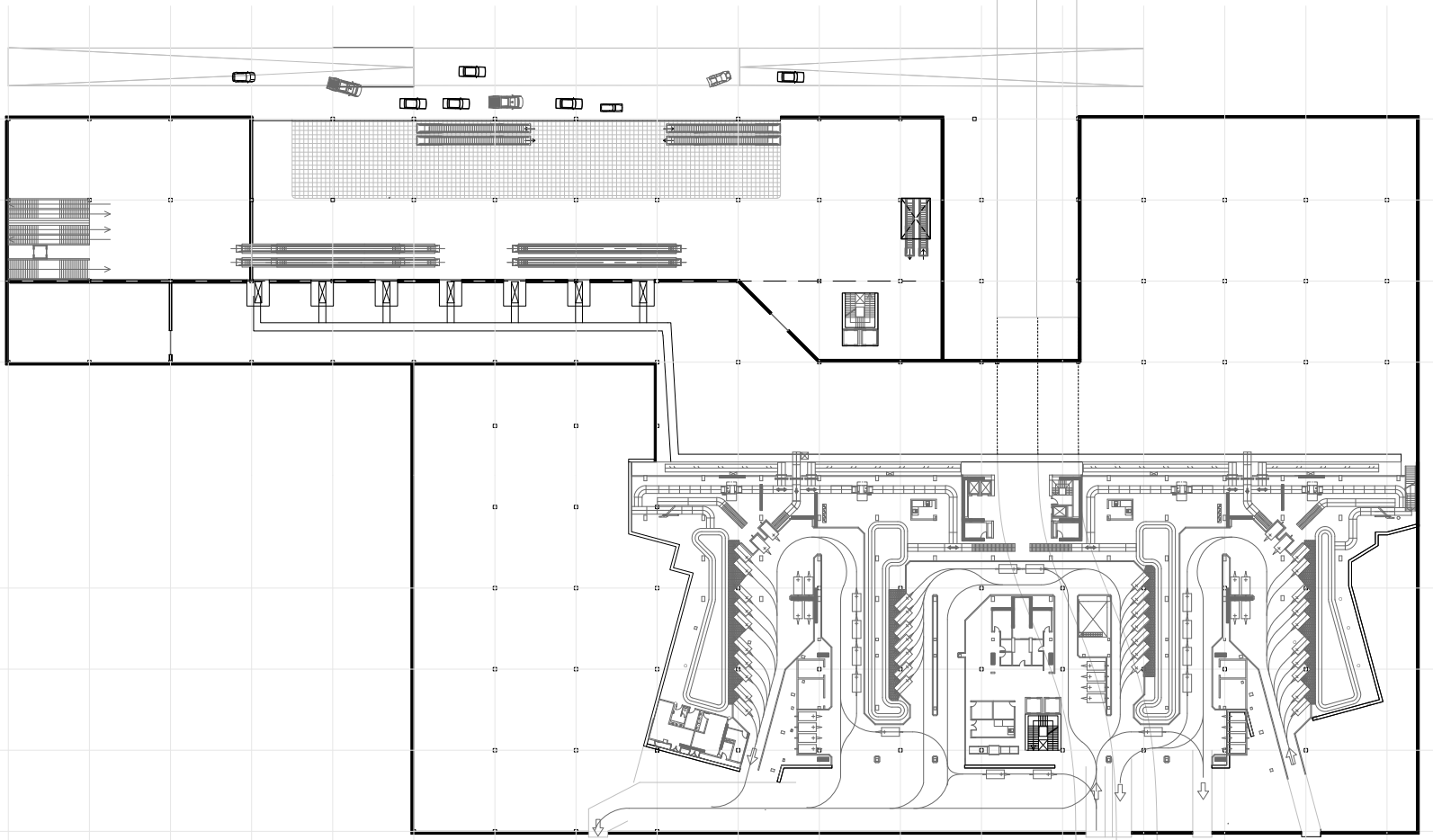
NEW TERMINAL



A LANDMARK

Basement

MACHINERY HIDDEN

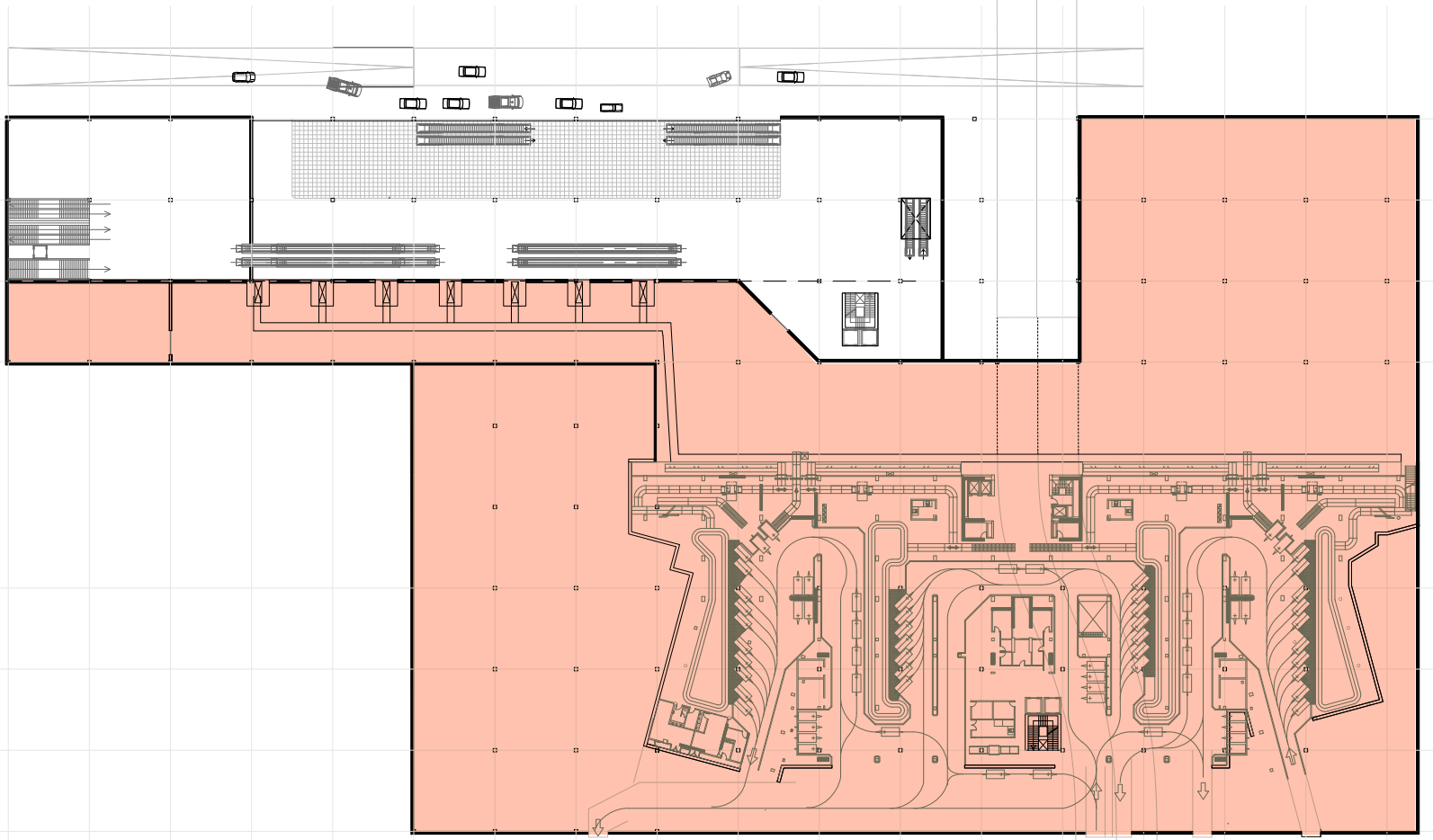


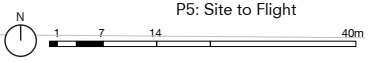
N

1 7 14 40m

Basement

MACHINERY HIDDEN





Lobby

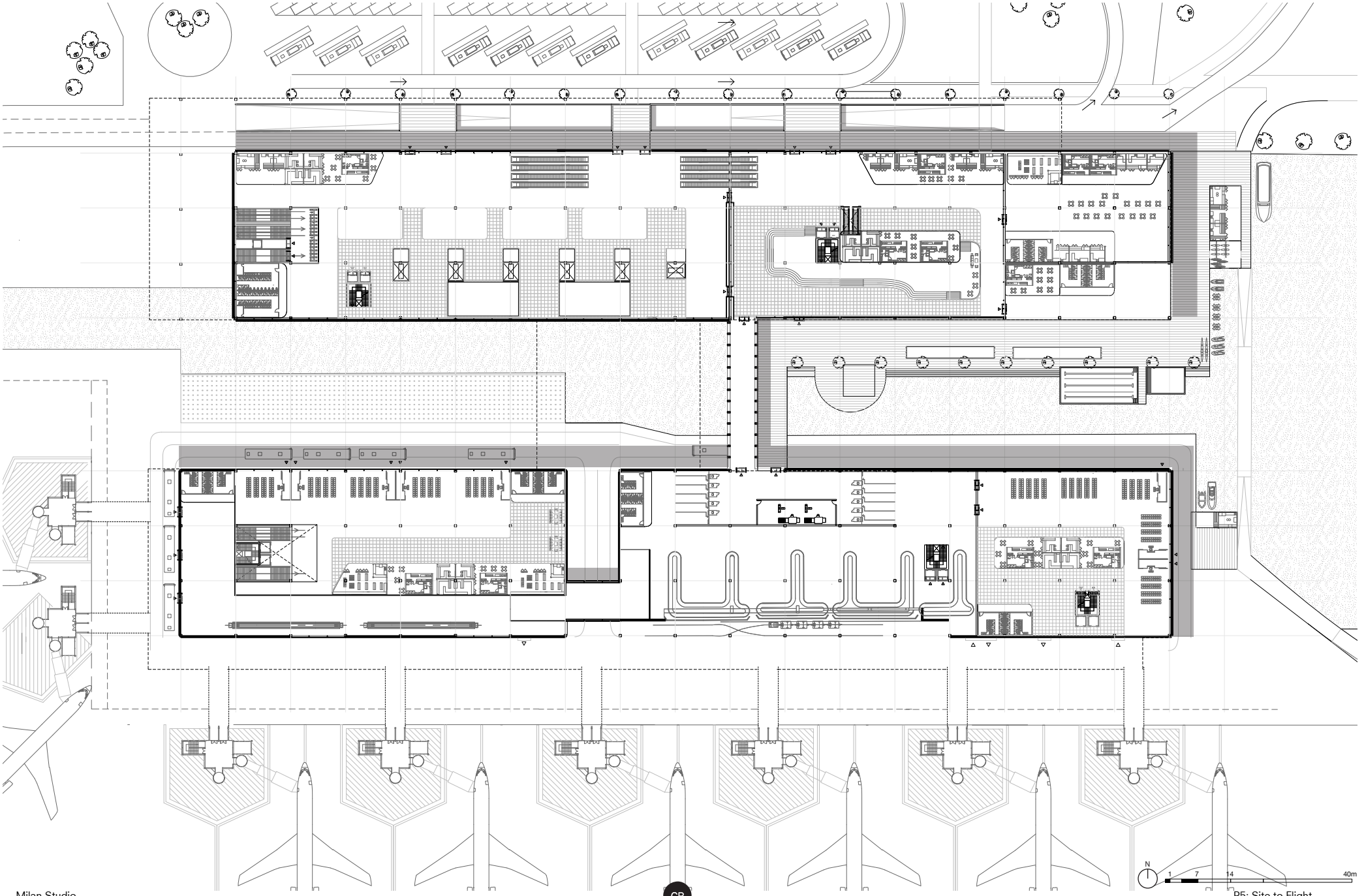
MACHINERY REVEALED

Lobby

MACHINERY REVEALED

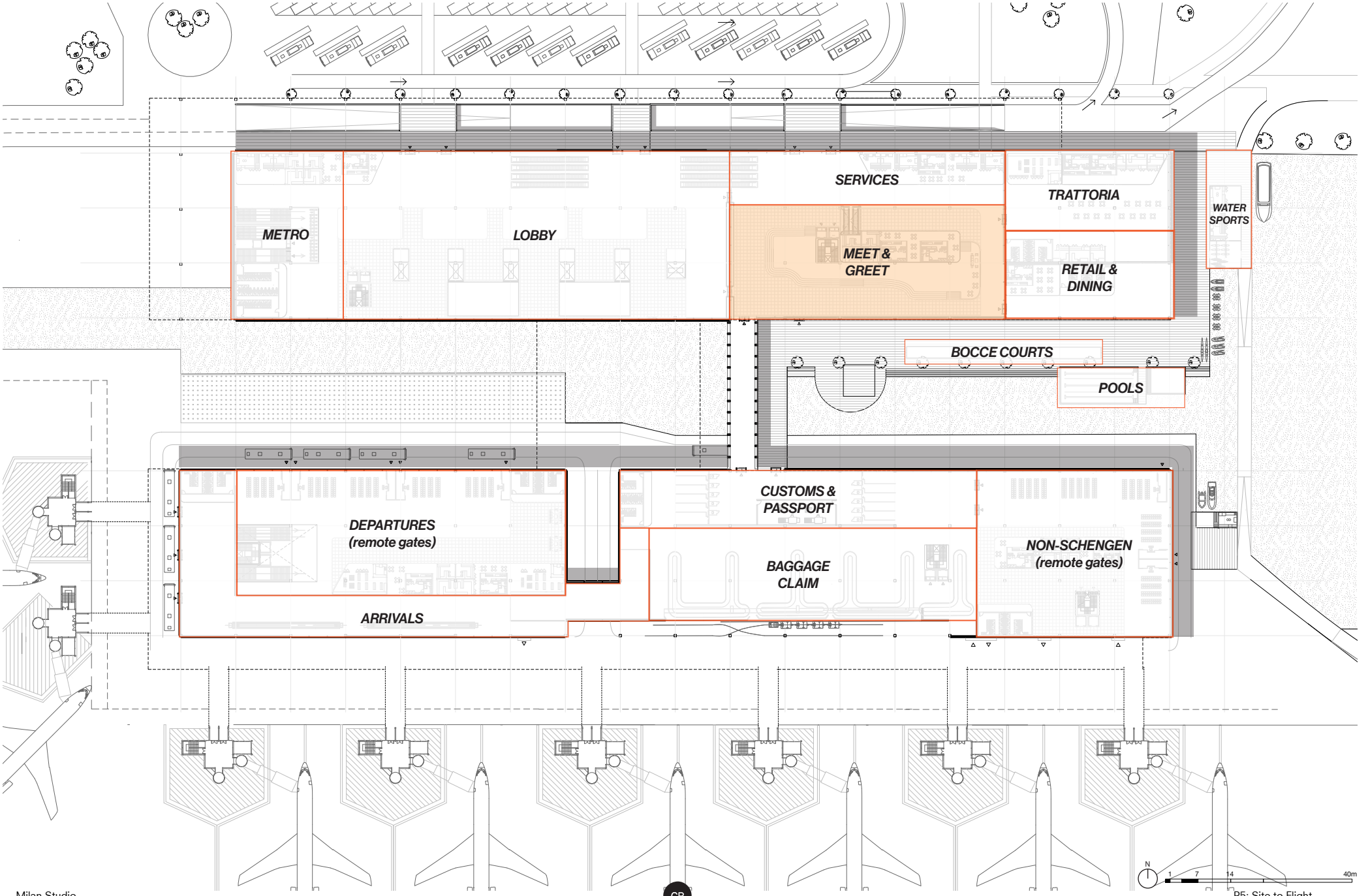
Ground level

A PUBLIC AIRPORT



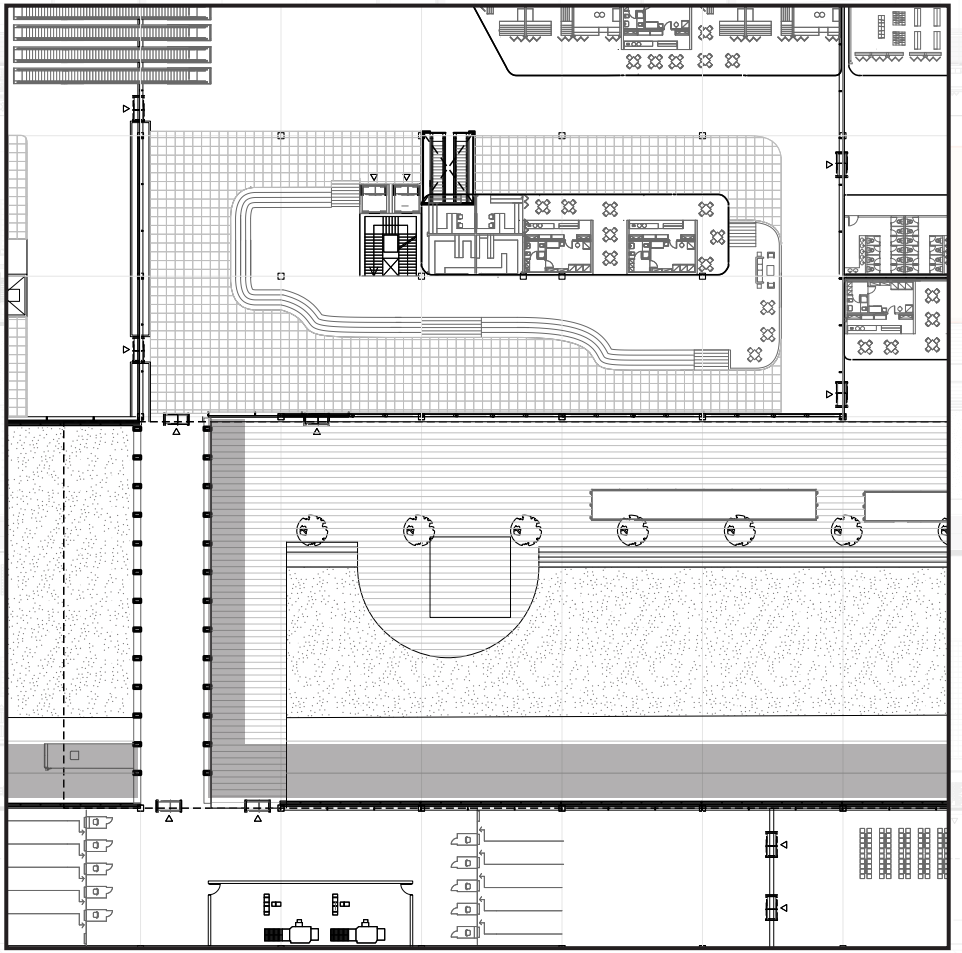
Ground level

A MULTI-USE AIRPORT



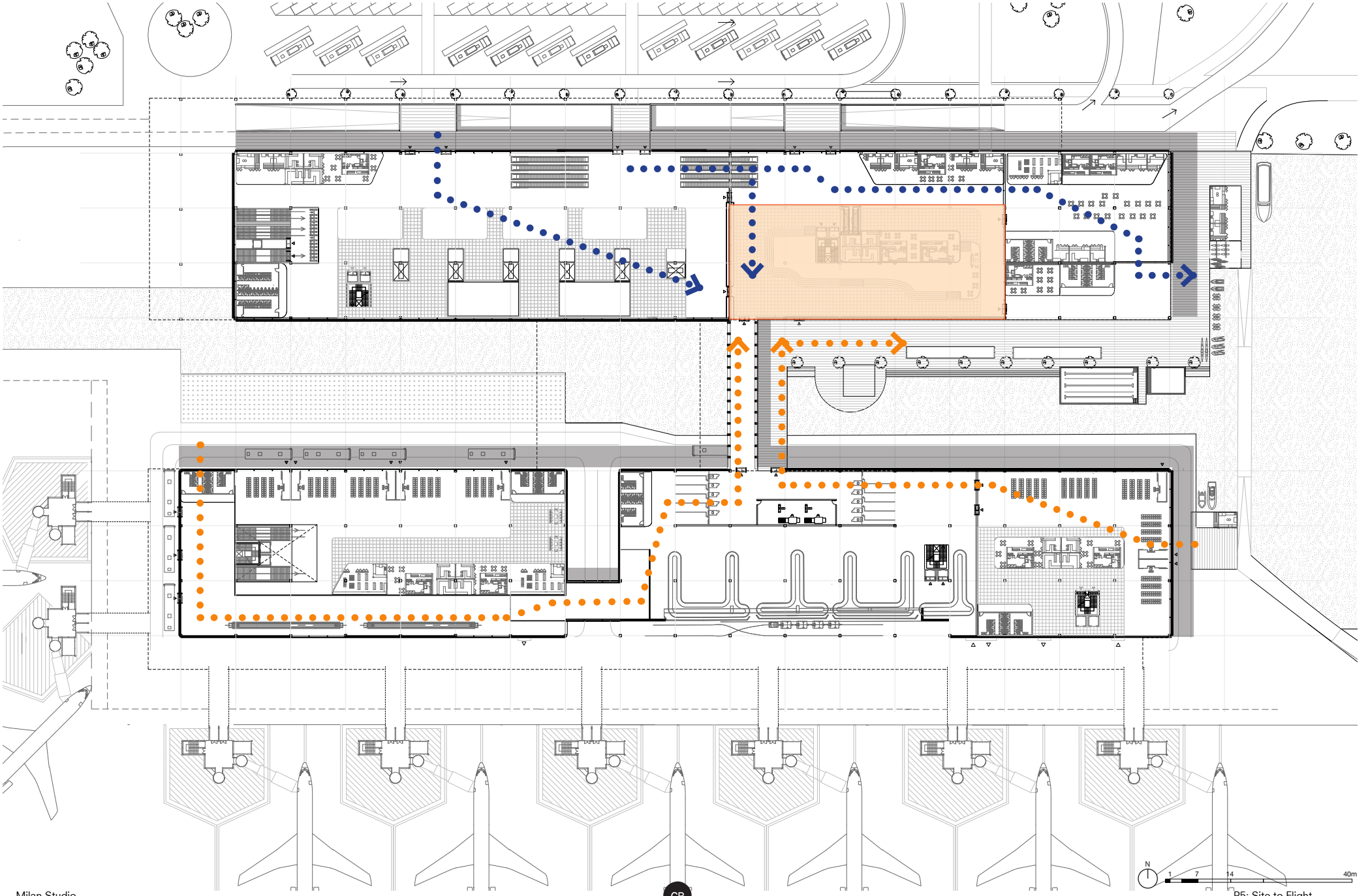
Ground level

MEET AND GREET



Ground level

MEET AND GREET

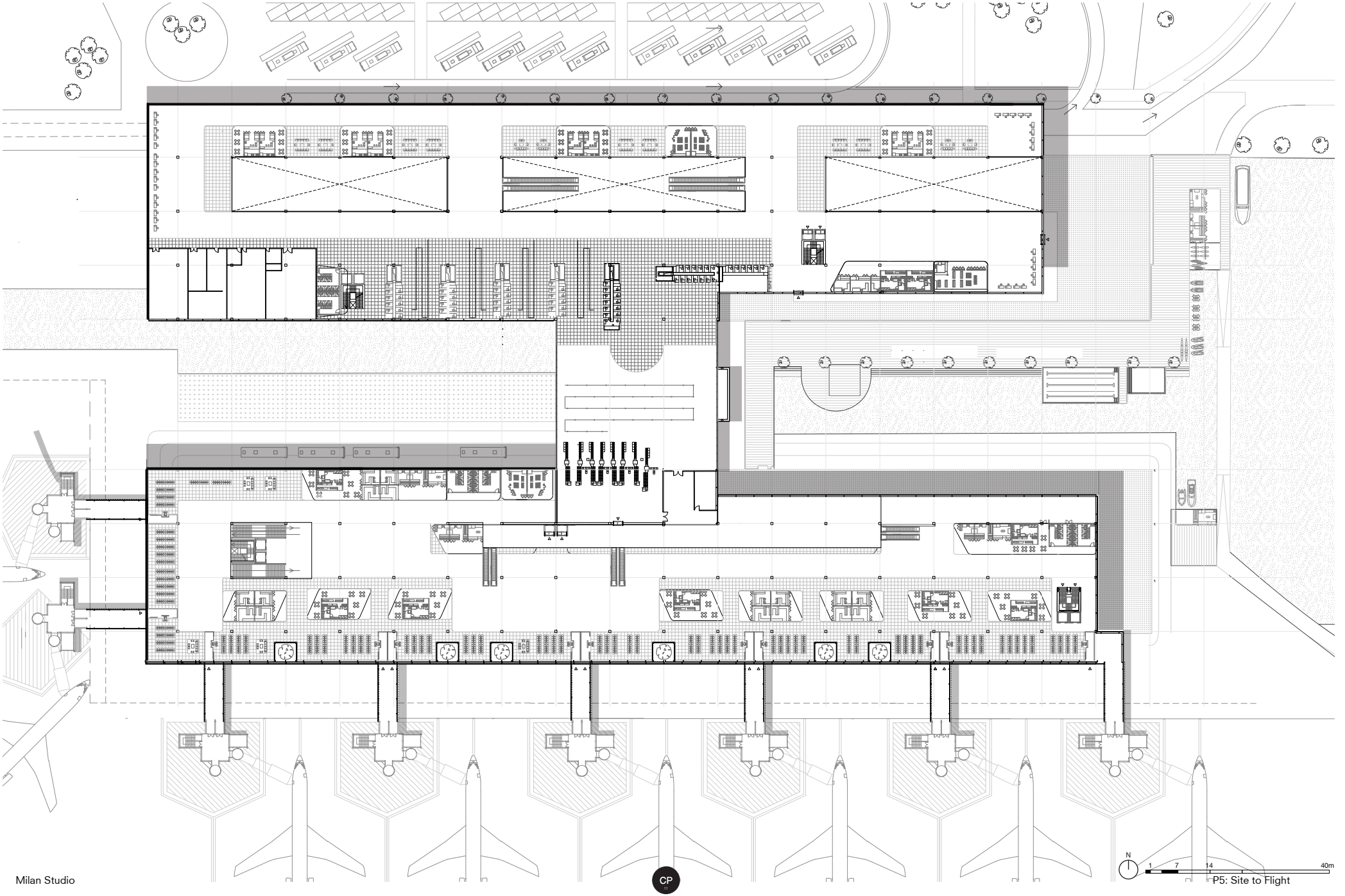


Ground level

MEET AND GREET

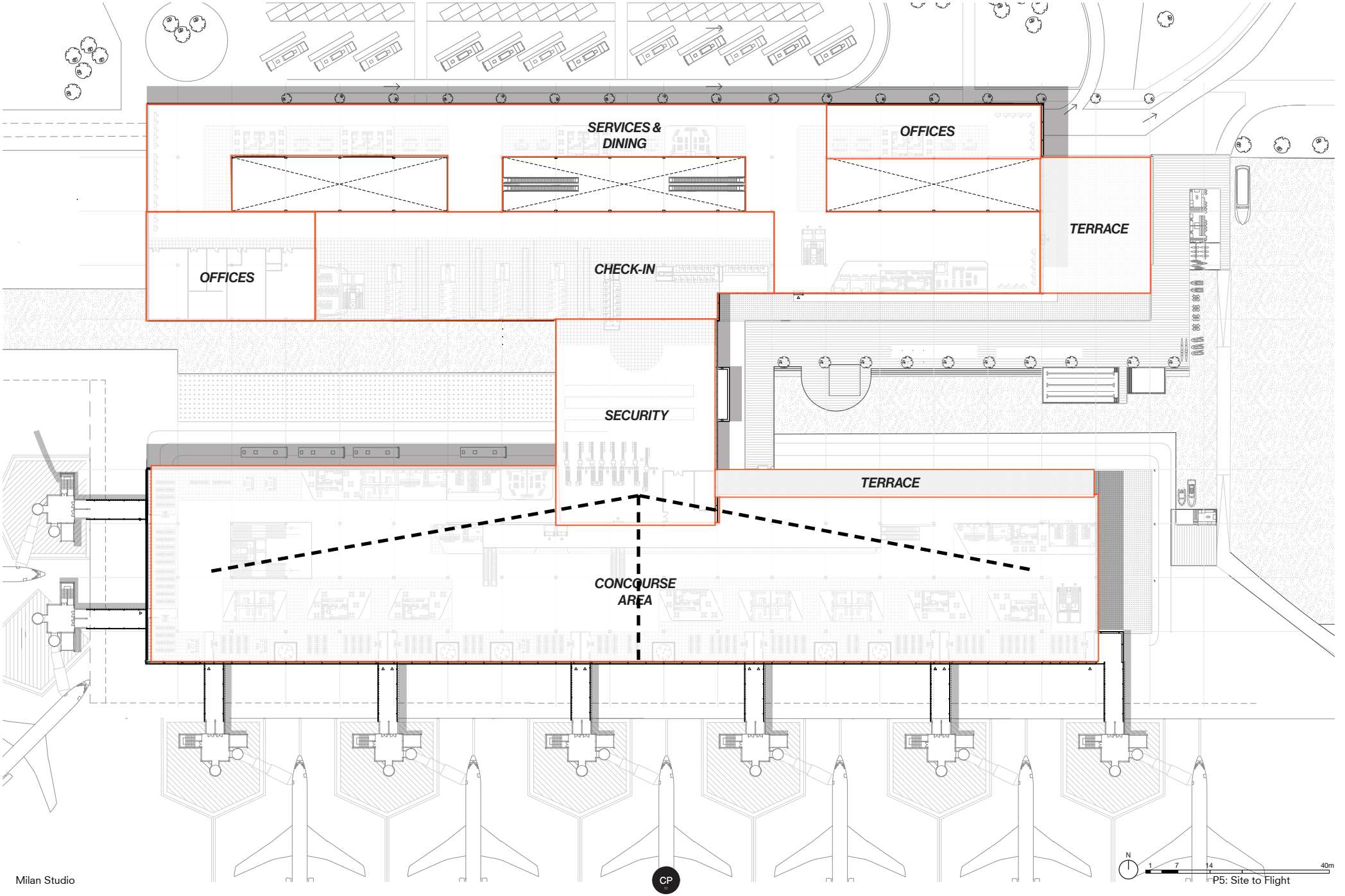
Level 1

A TRANSPARENT AIRPORT



Level 1

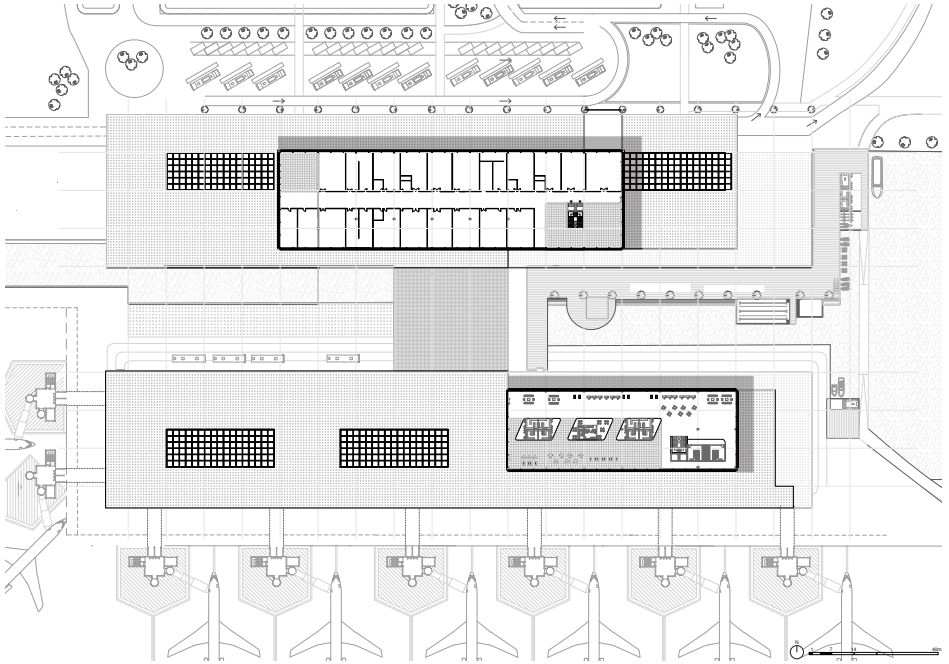
A TRANSPARENT AIRPORT



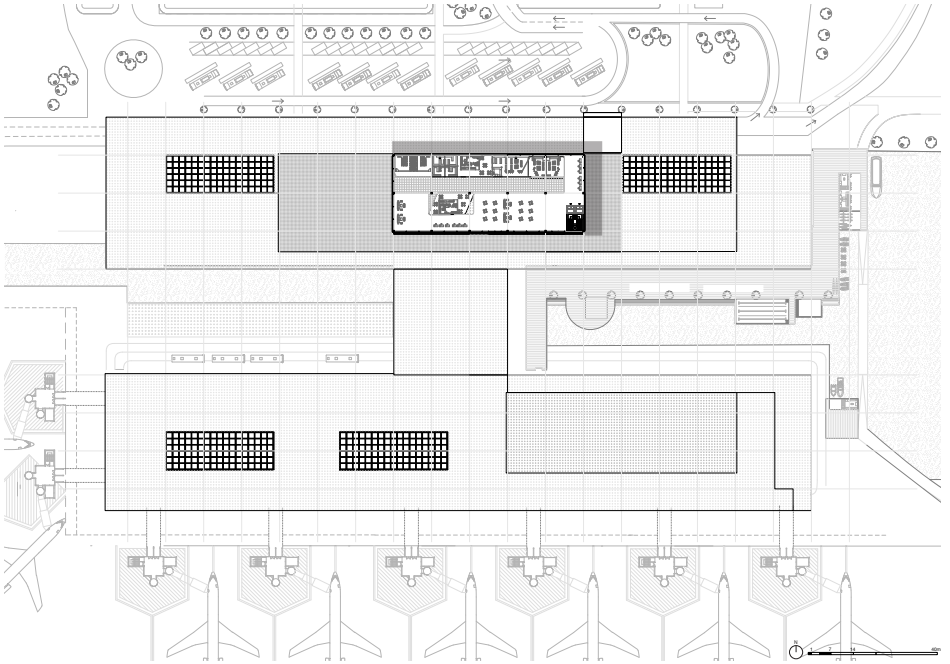
CONCOURSE

Levels 2 & 3

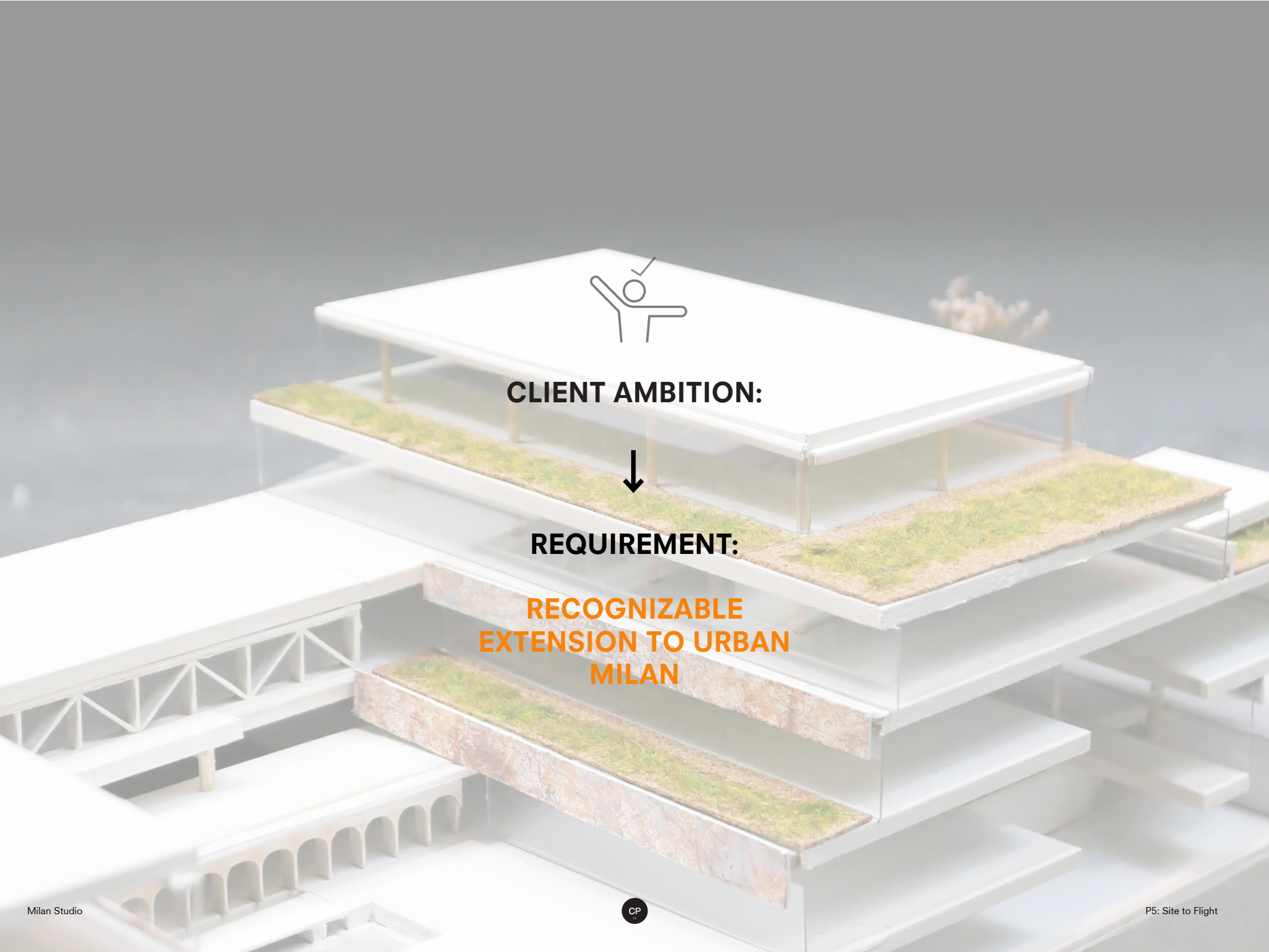
A MULTI-USE AIRPORT



Offices & lounge



Observatory



CLIENT AMBITION:

REQUIREMENT:

RECOGNIZABLE EXTENSION TO URBAN MILAN

INDUSTRIAL

LAYERED

MONOLITHIC

TYPICAL STREETSCAPE

Transparent
Solid
Perforated

TYPICAL STREETSCAPE

Transparent
Solid
Perforated

TYPICAL STREETSCAPE

Transparent
Solid
Perforated

CITY OF COURTYARDS

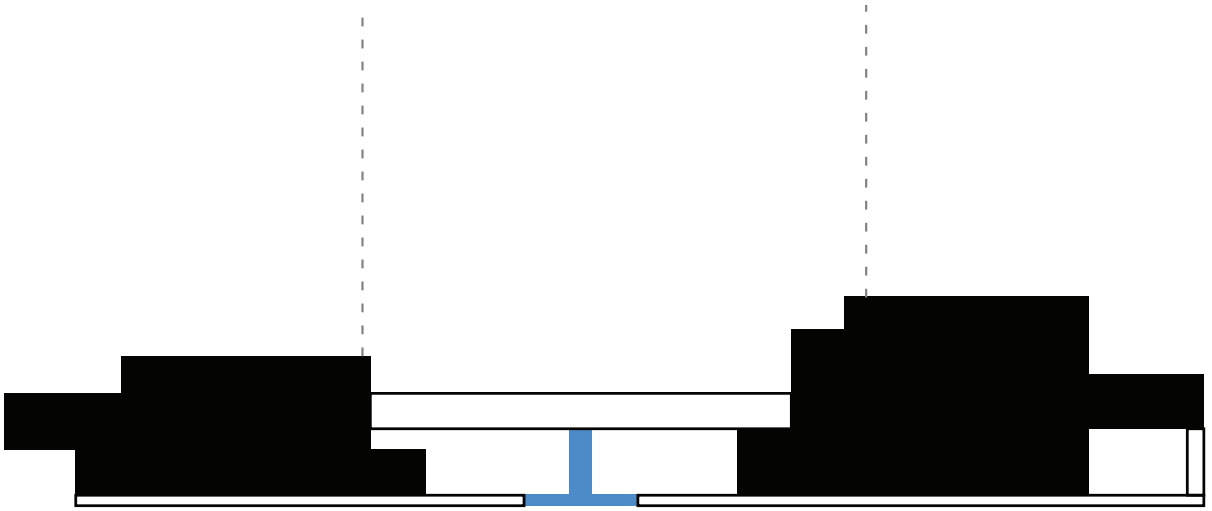
ATYPICAL STREETSCAPE

Transparent
Solid
Perforated

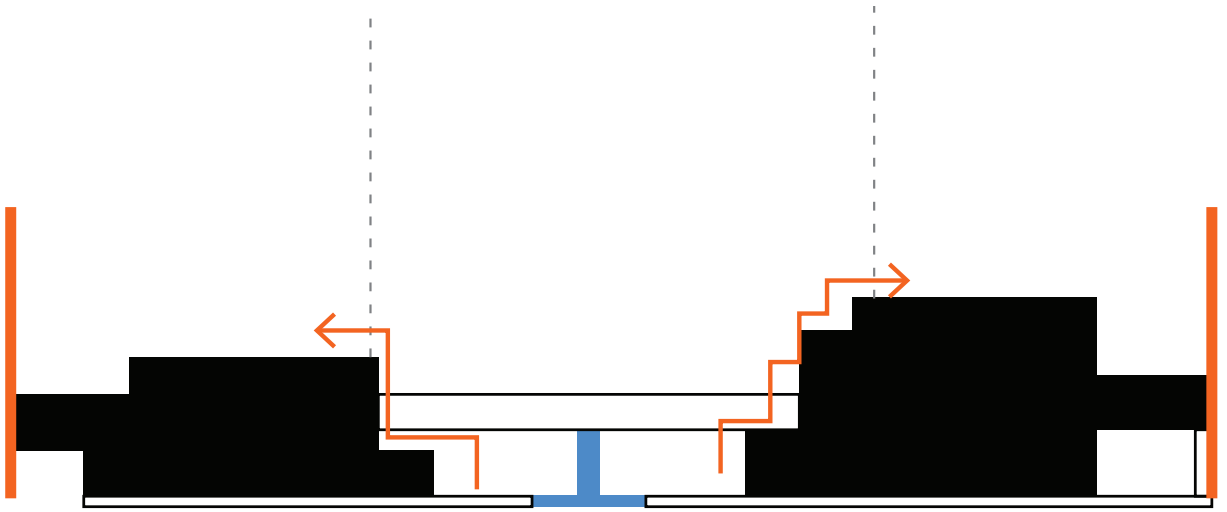
ATYPICAL STREETSCAPE

Transparent
Solid
Perforated

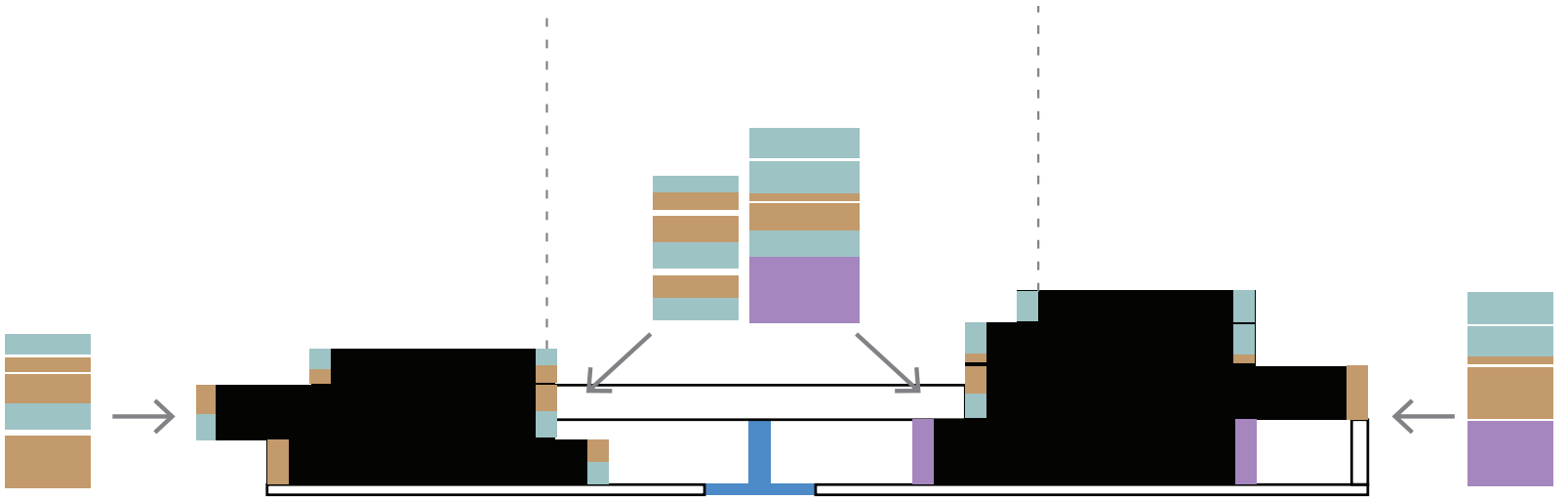
FACADE CONCEPT



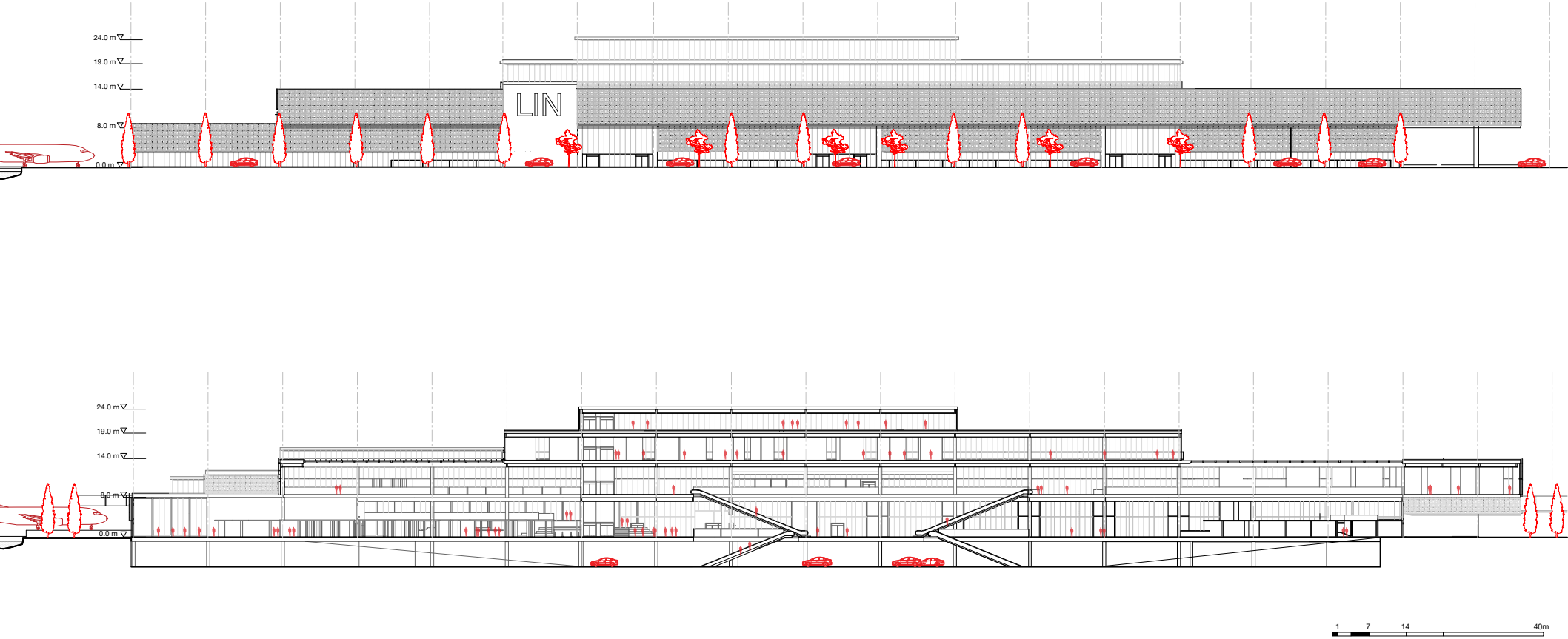
FACADE CONCEPT



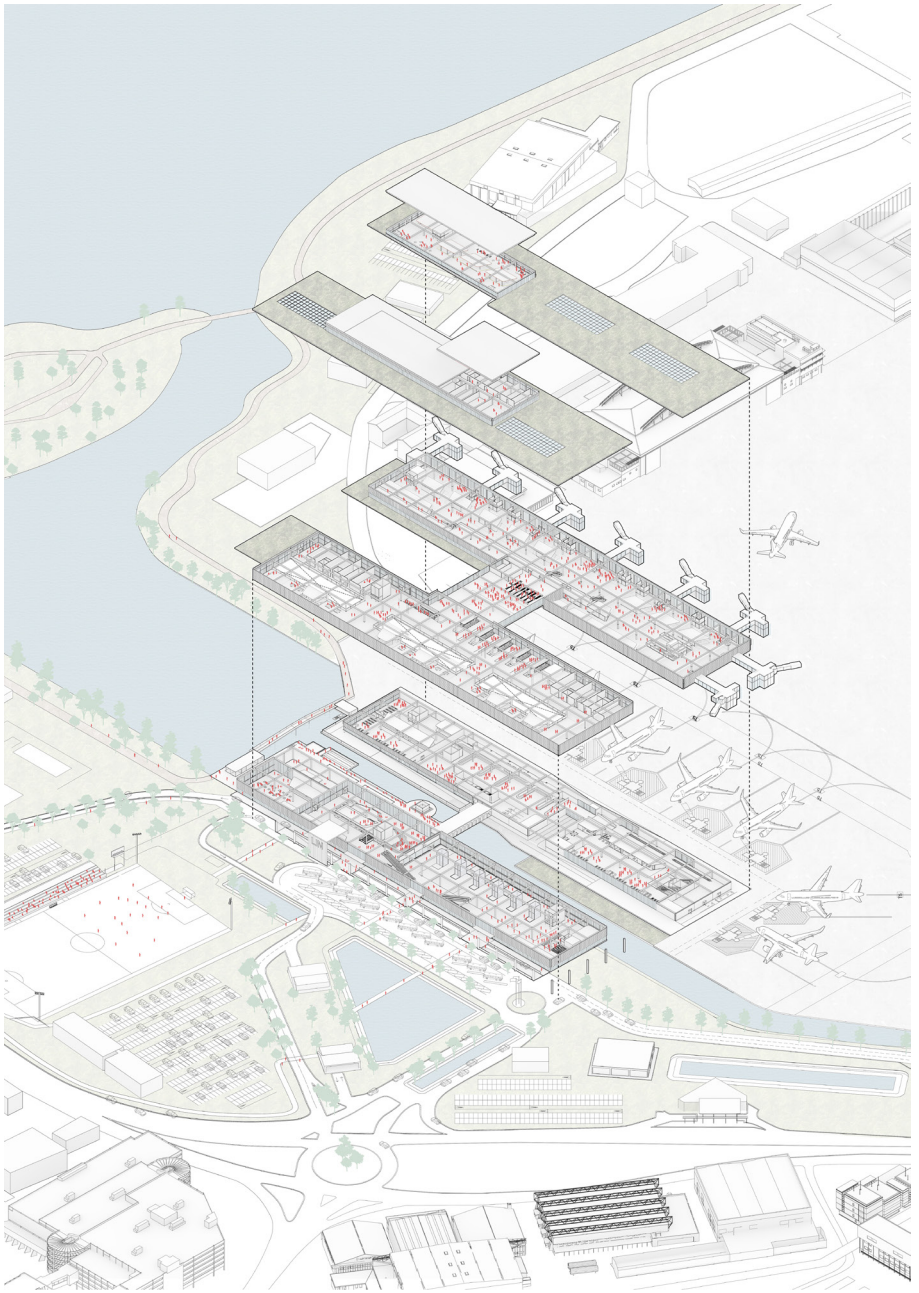
FACADE CONCEPT



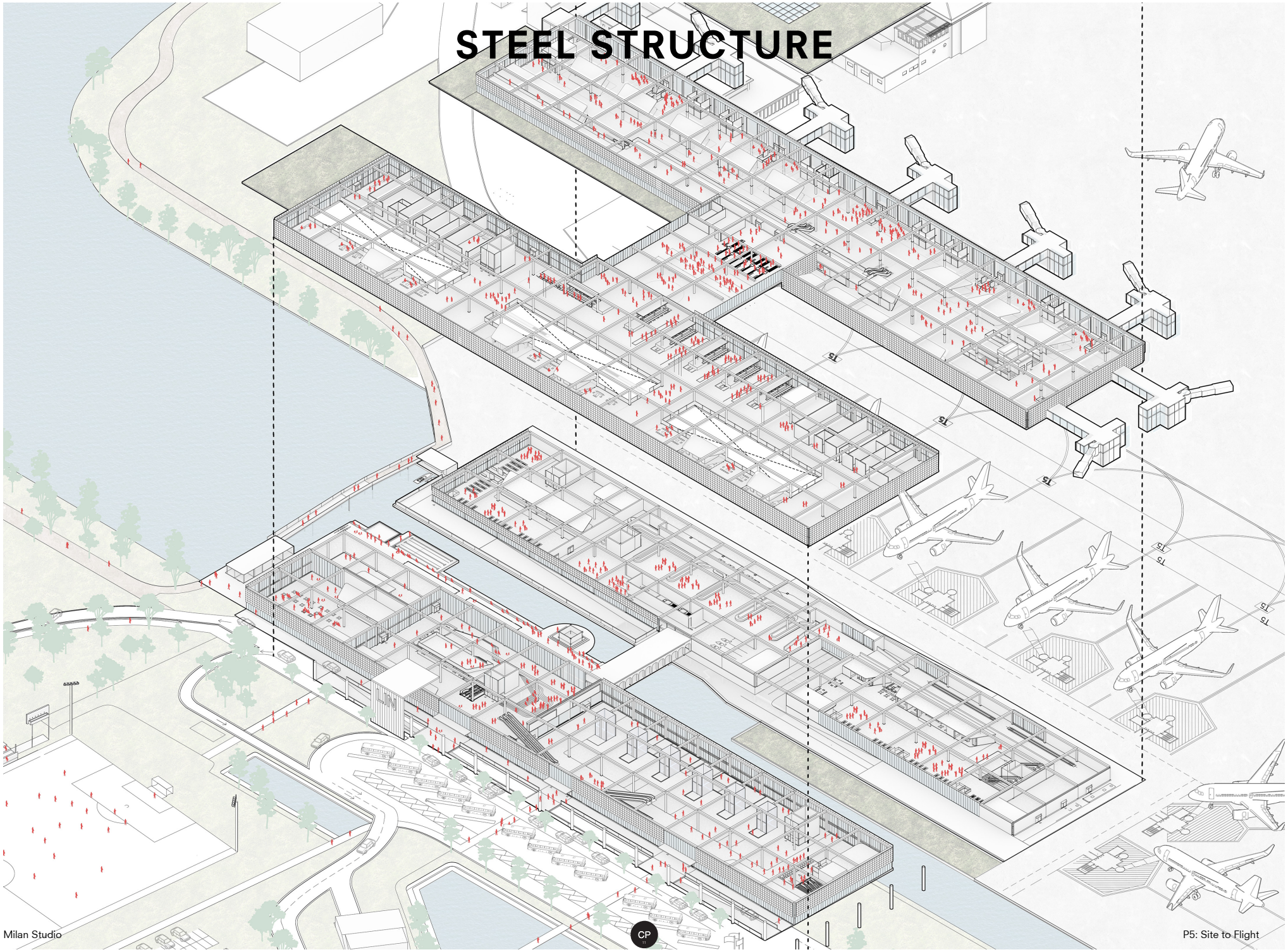
FLOATING MONOLITH



AIRPORT IN A PARK



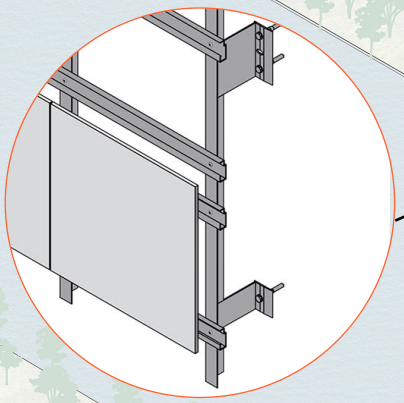
STEEL STRUCTURE



LIGHTWEIGHT FRAME

14m x 14m grid
- Composite floor decking
- Castellated beams: 750mm deep
- Flanged cruciform columns: Ø600 mm (wrapped)

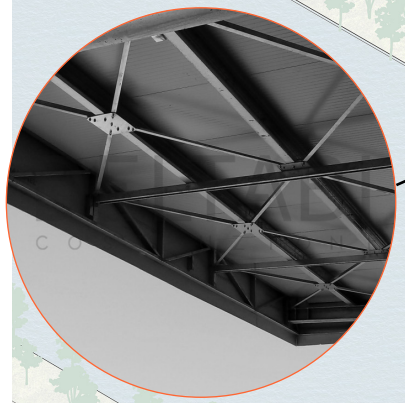
FLEXIBLE FACADE



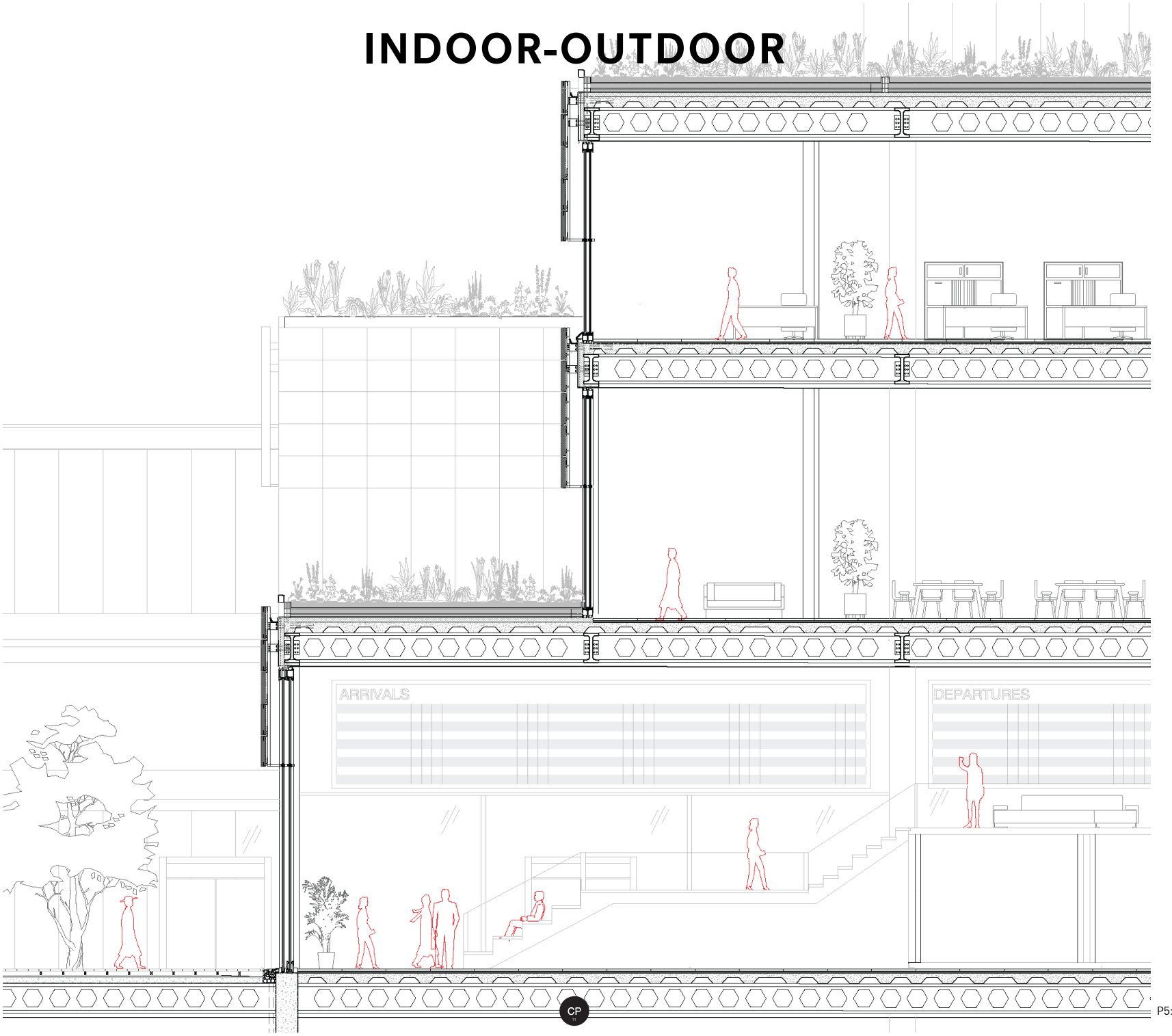
Facade:
- Glass curtain wall
- Modular aluminium framing

OPEN FLOOR PLAN

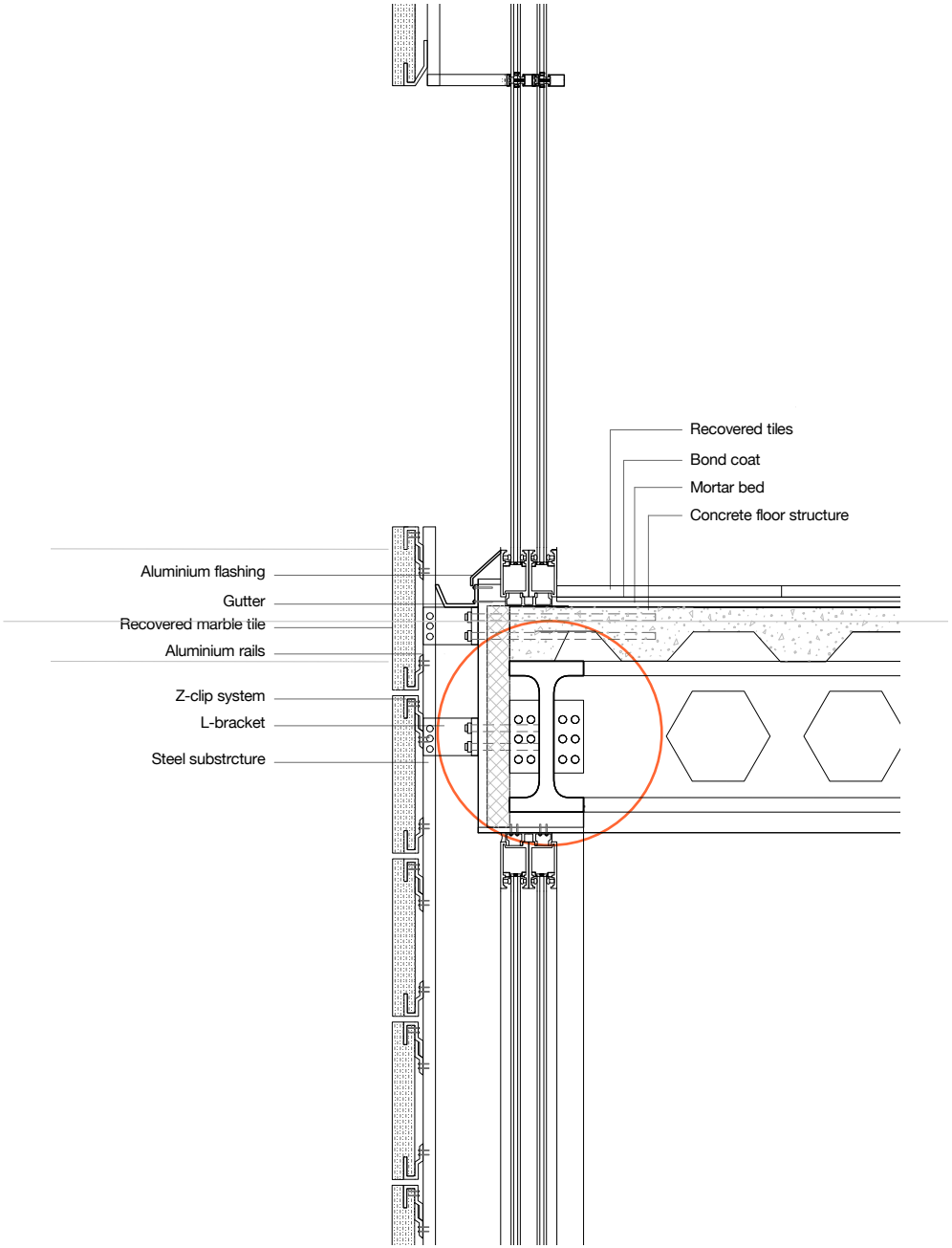
OVERHANGS

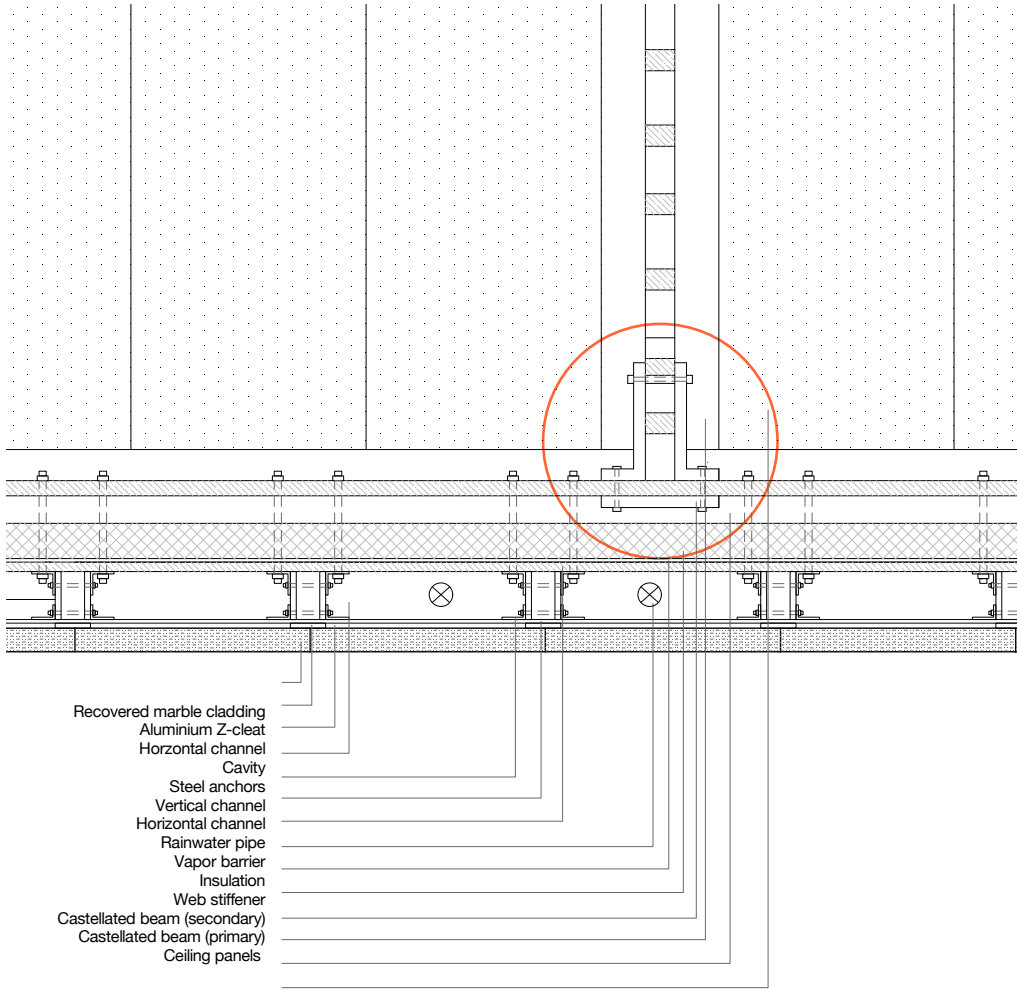


INDOOR-OUTDOOR



FRAGMENT DETAILS





LAYERED LANGUAGE

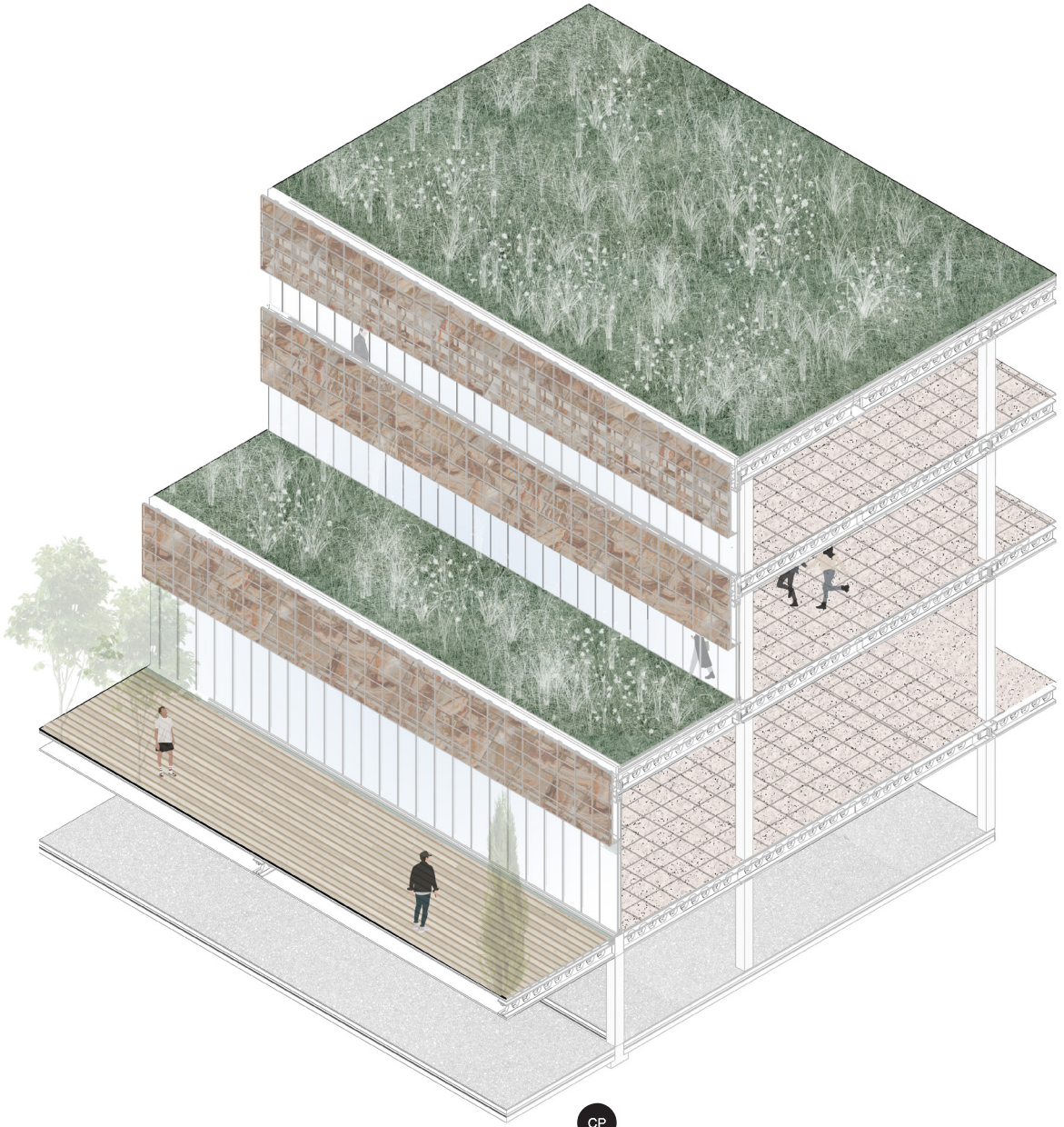
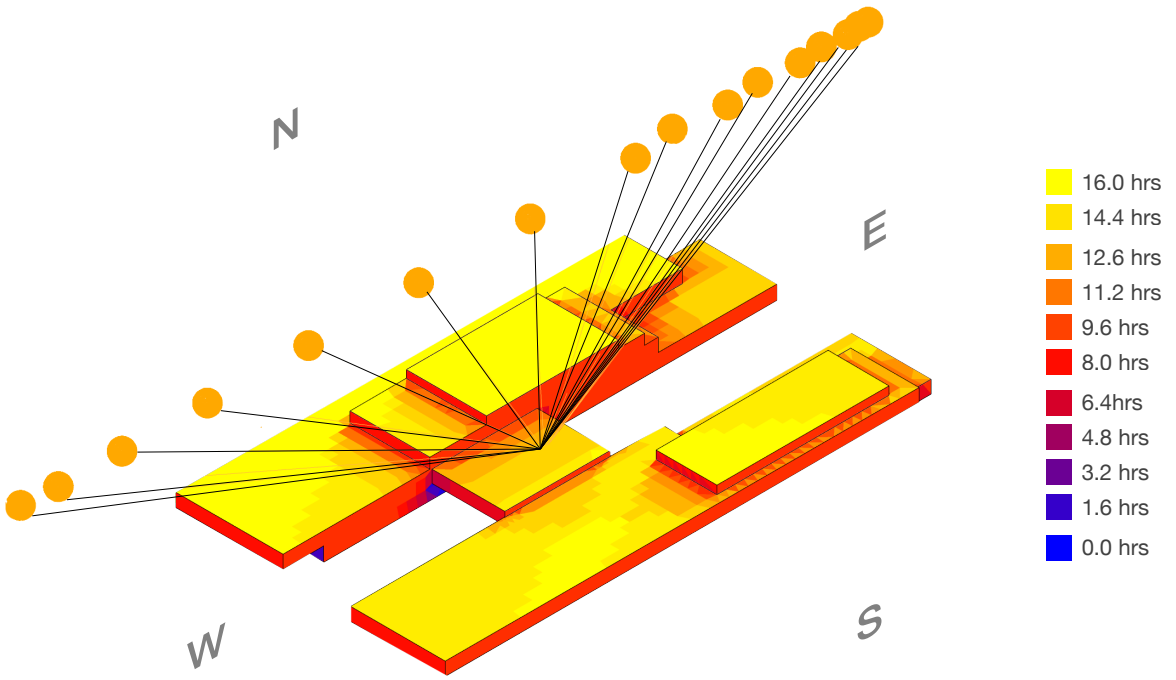


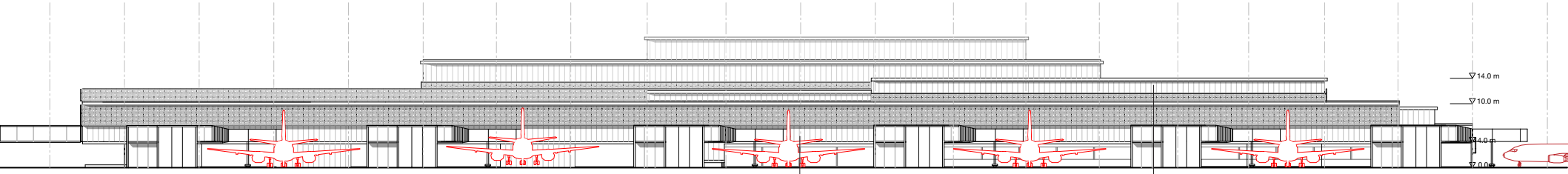
IMAGE... + ENVIRONMENT?

HOT CLIMATE

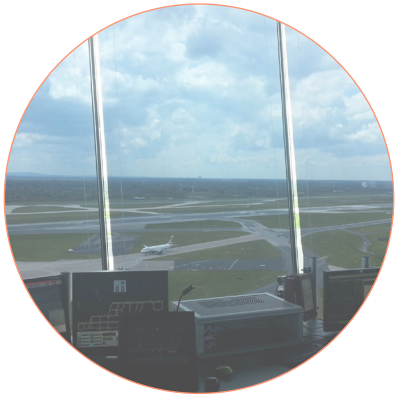
SOUTHERN EXPOSURE



FRAMING VIEWS, FILTERING LIGHT

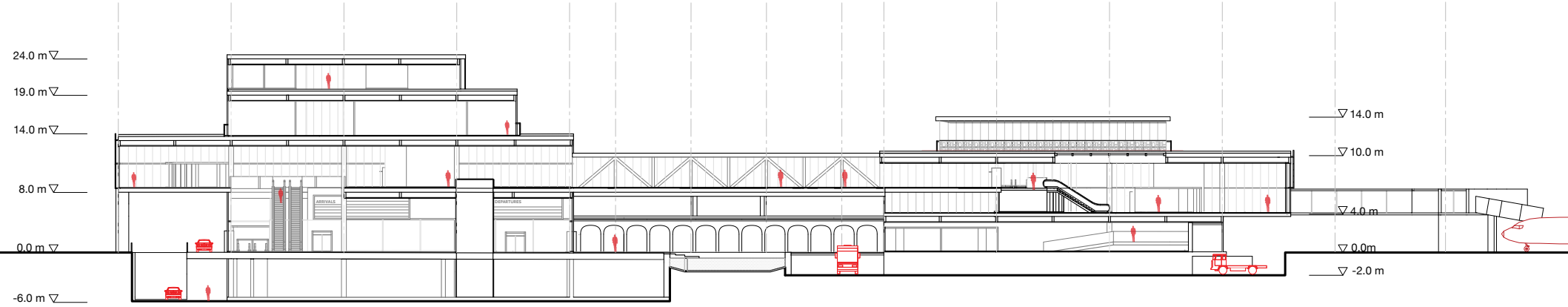


Automated curtain system

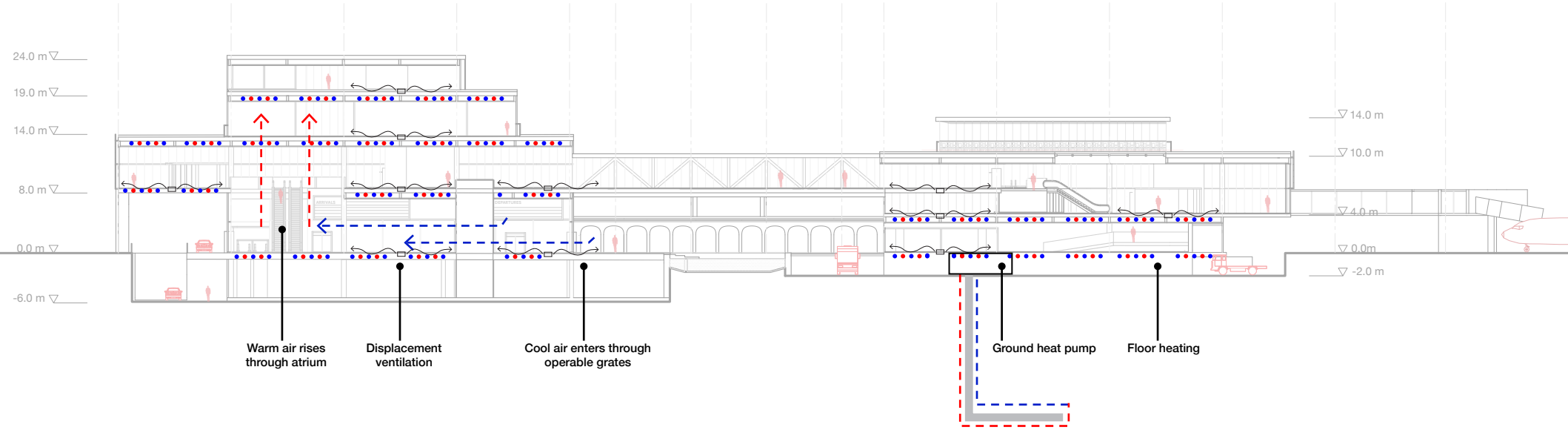


Anti-reflective (AR) coating

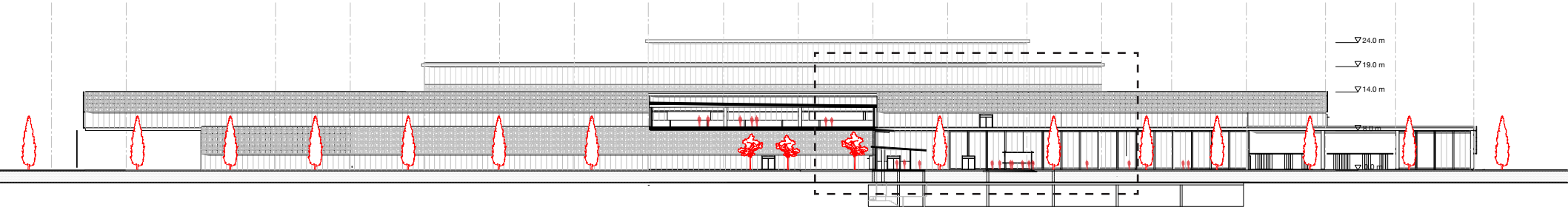
STACKED SHAPE

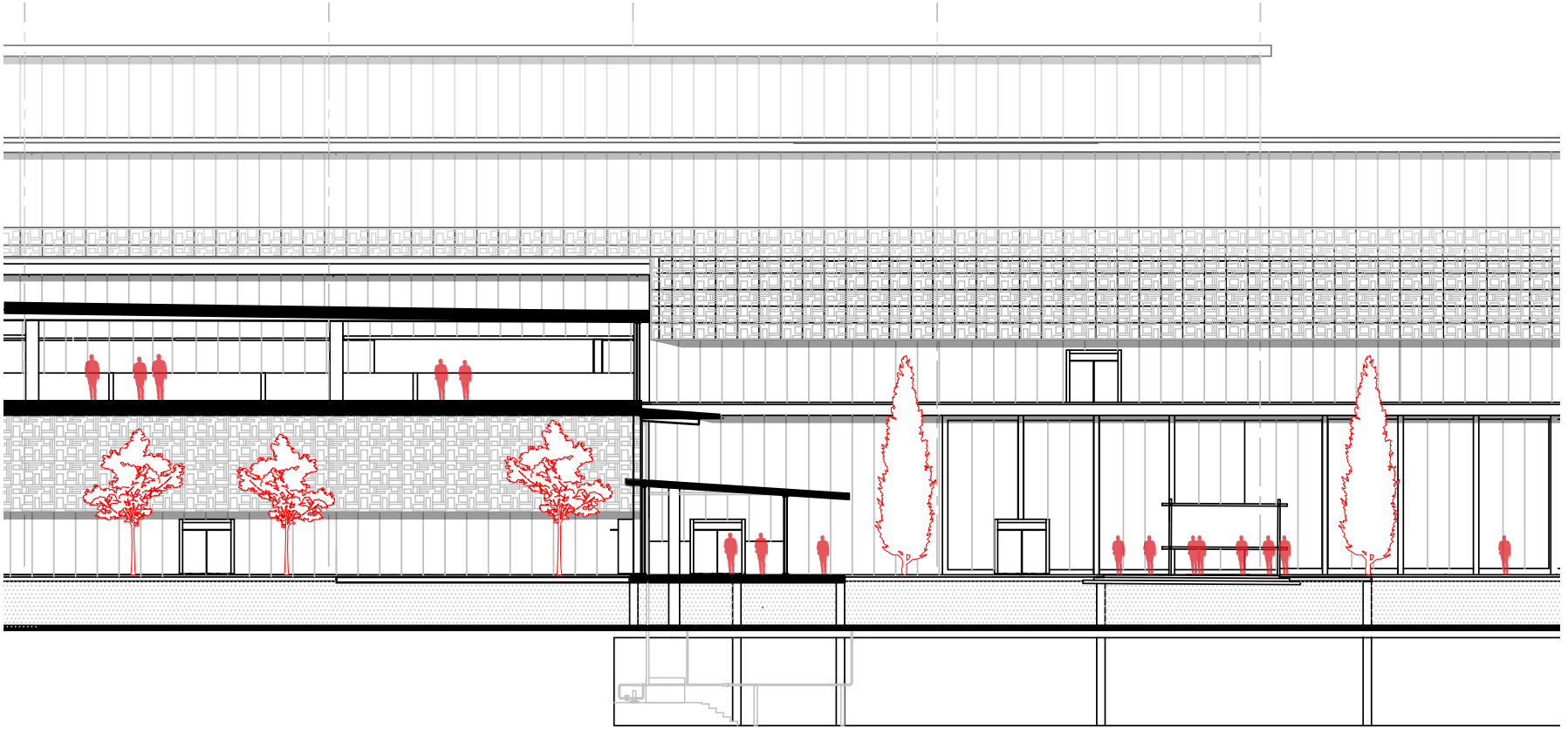


STACKED SHAPE

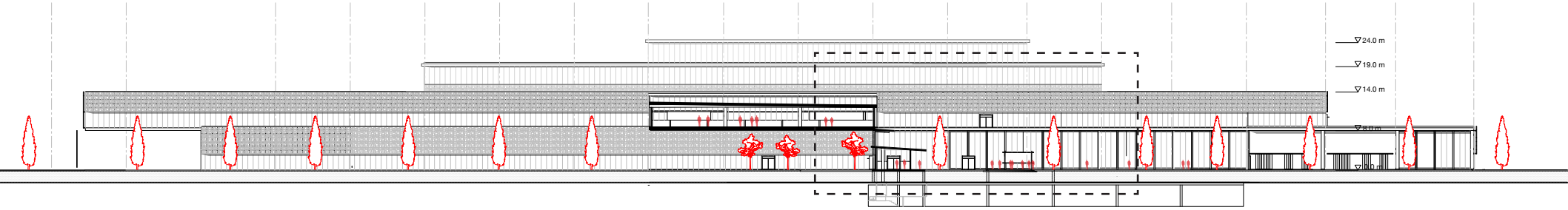


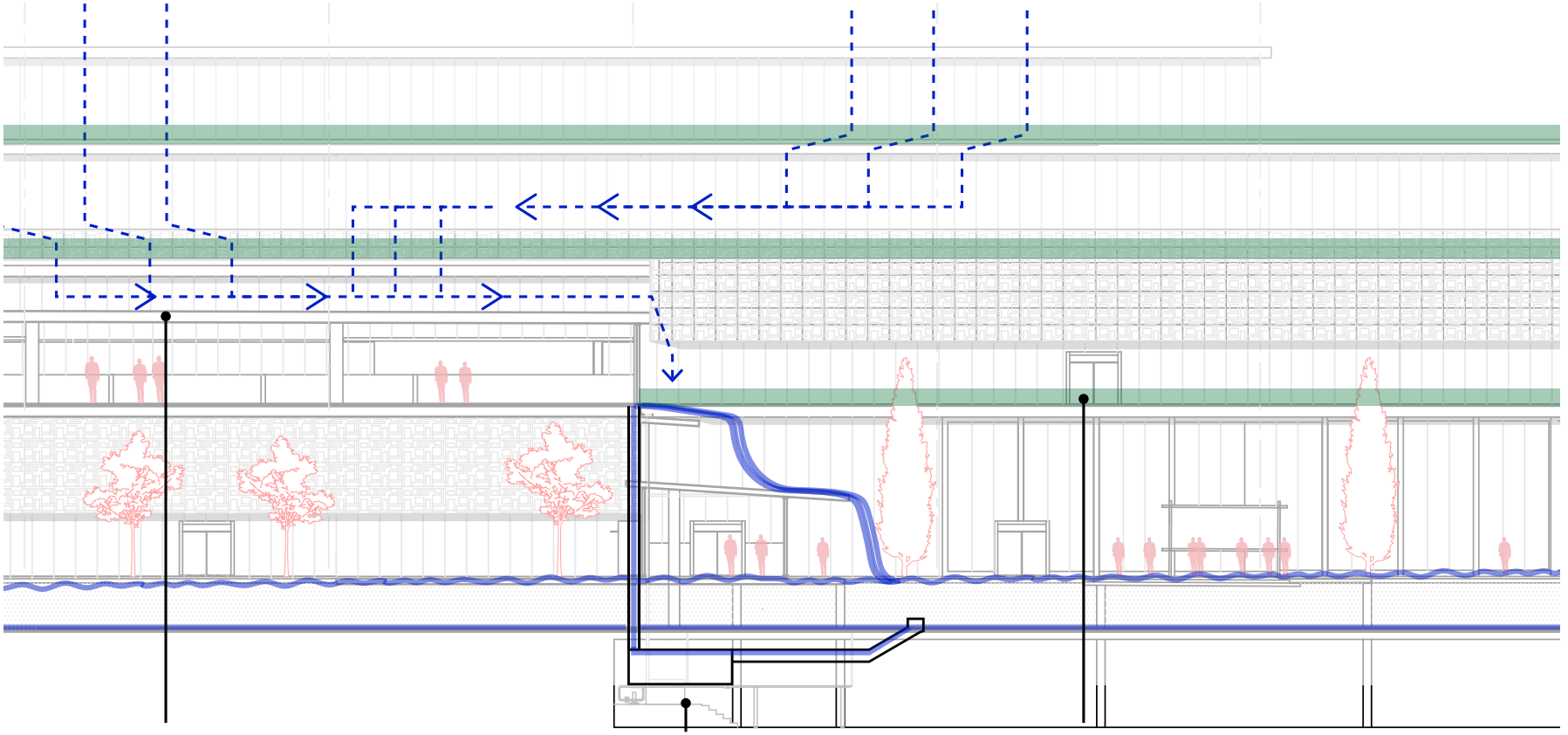
ELEVATING THE IDROSCALO





ELEVATING THE IDROSCALO





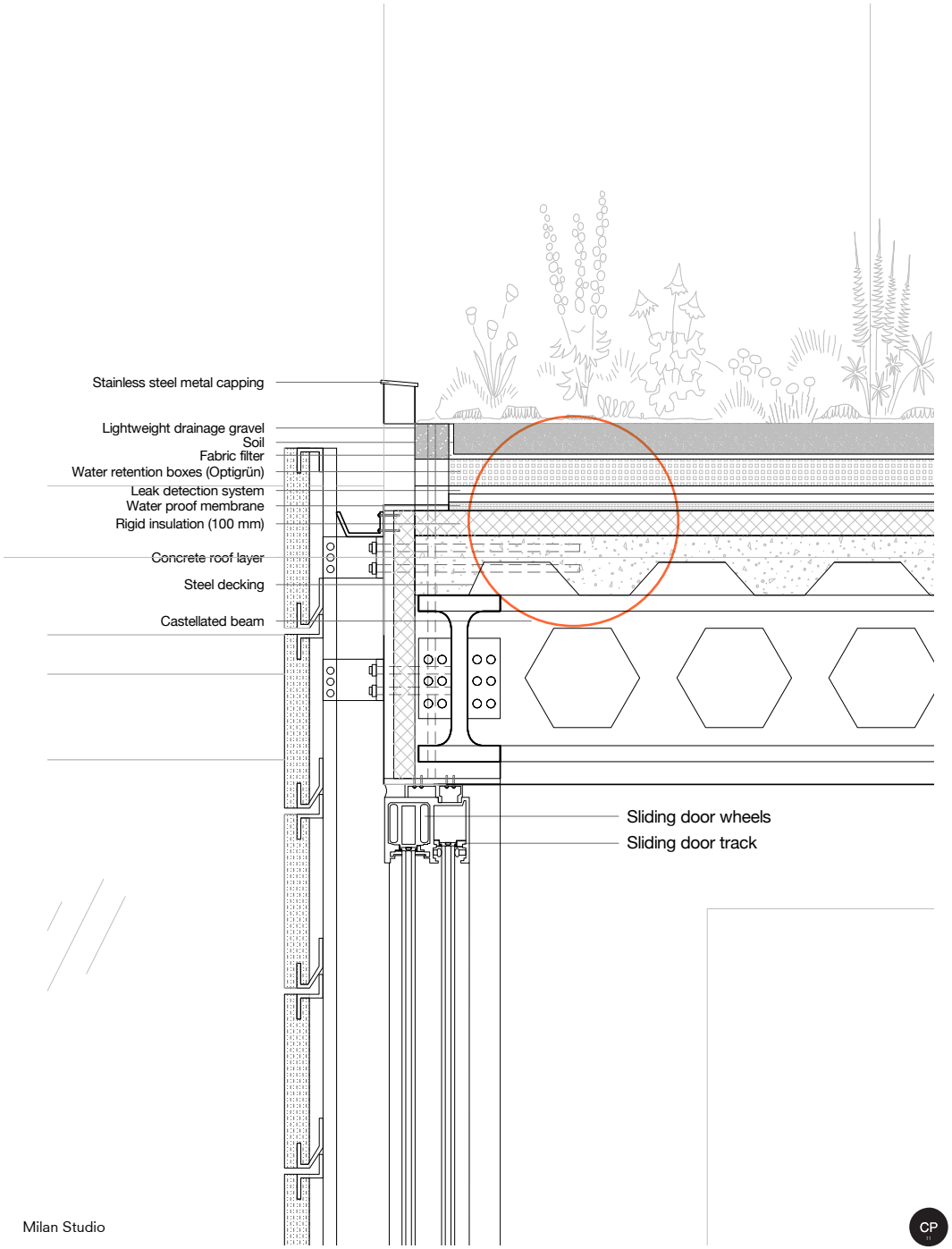
Sloped roof directs rain to Idroscalo

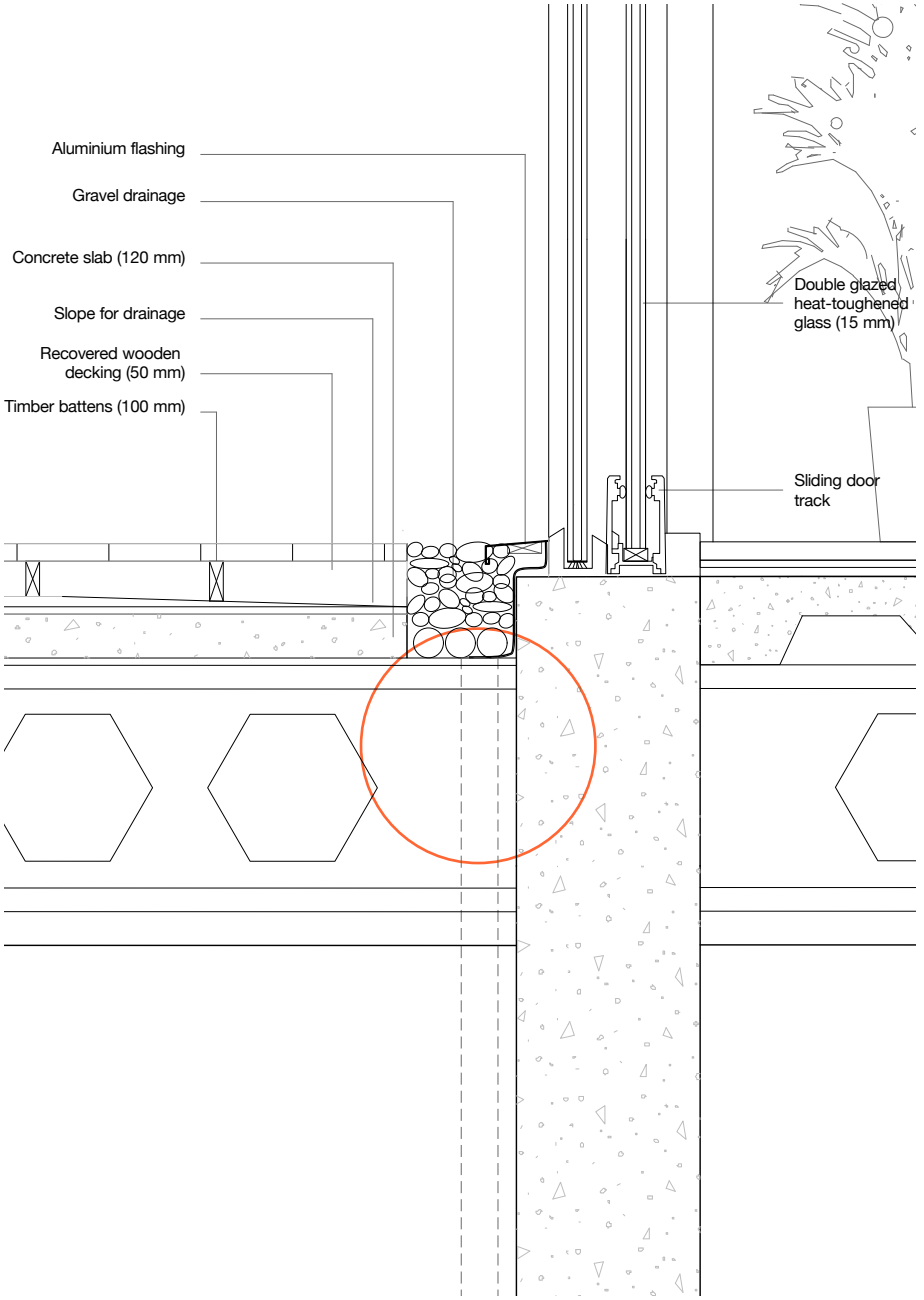
Electric pump operates waterfall in summer

Green roofs absorb excess rainwater

REFRESHING FROM JET LAG

WATER COLLECTION



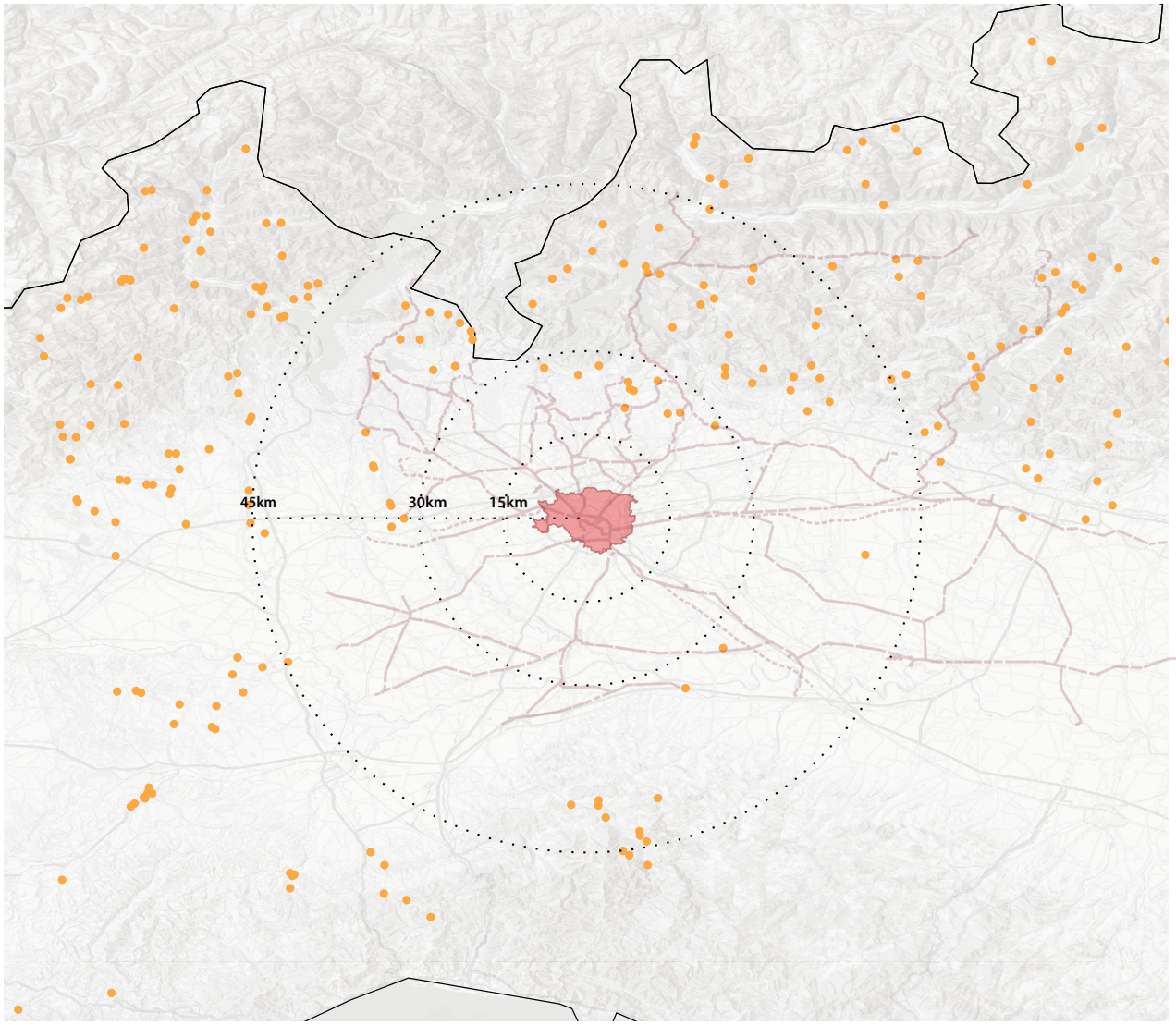


WHY STONE & MARBLE?

URBAN SCALE:

"All primary materials must be sourced within **30 km** of the project site, with at least **30% recycled or reclaimed content"**

LOCAL EXPERTISE



Geosites: mines & quarries

1: 700,000

0 10 20 30 km

MATERIAL RECLAMATION

HARVEST STONE & MARBLE

↓

CRUSH

↓

CAST

↙ ↘

POLISH

↓

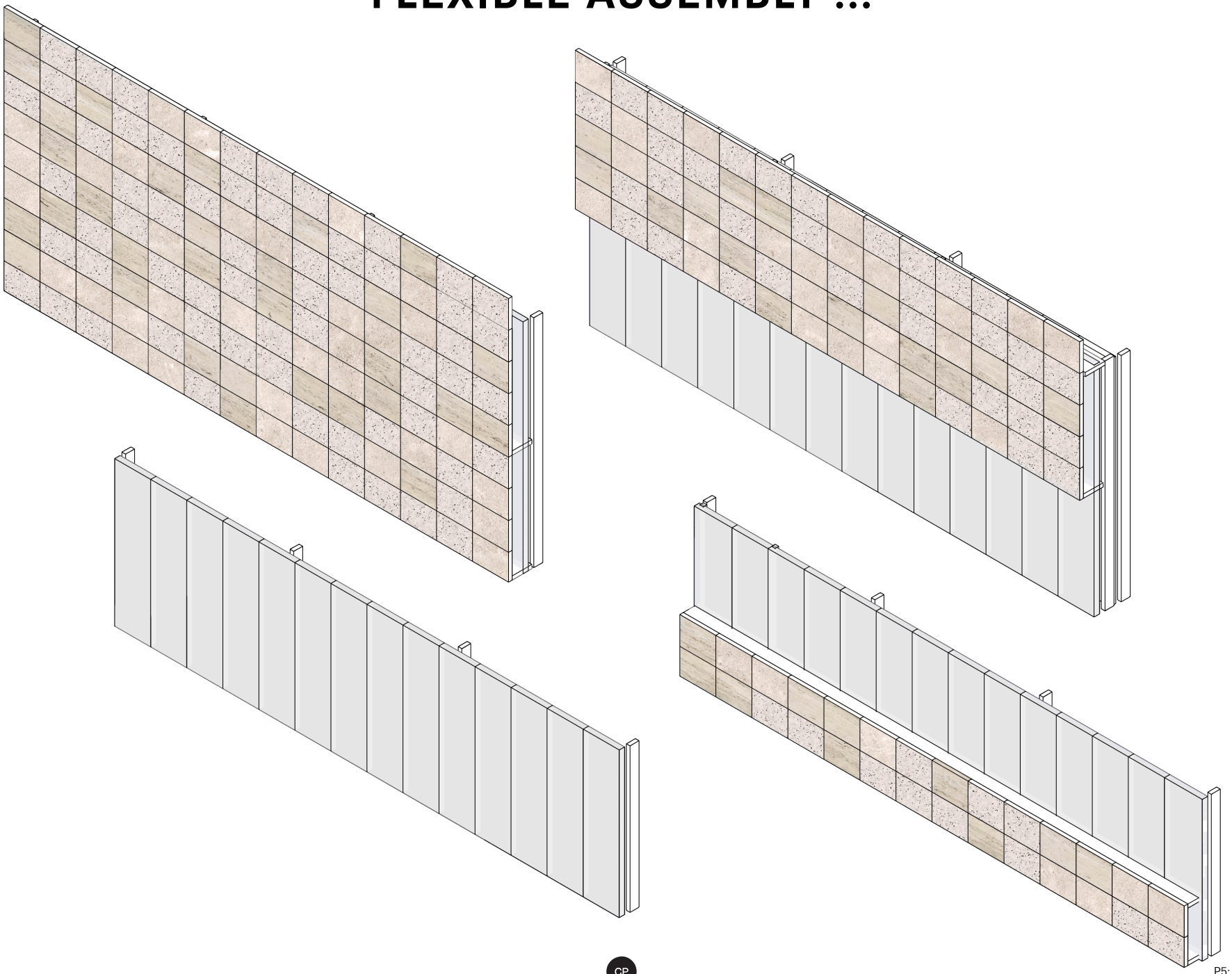
FLOORING

CUT

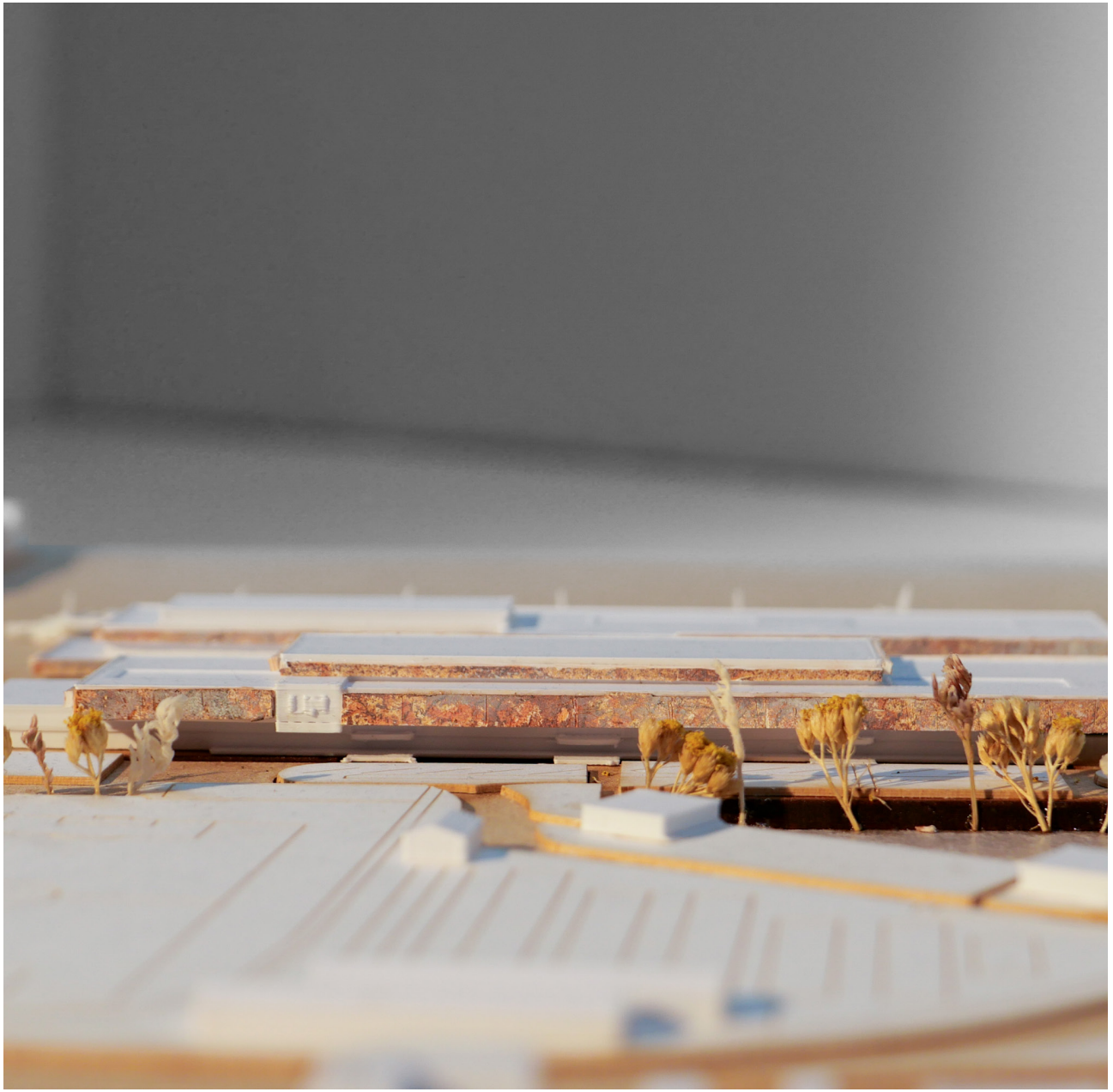
↓

CLADDING

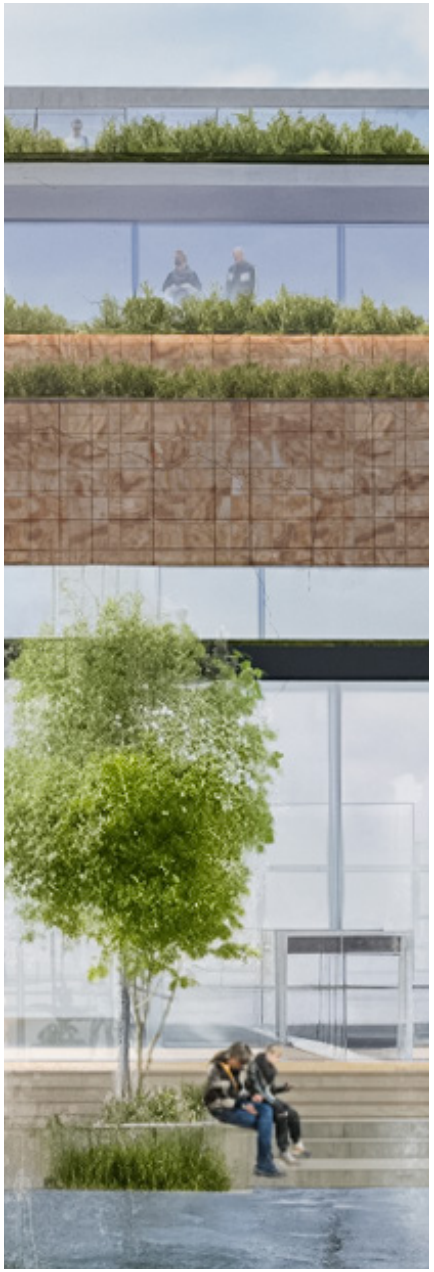
FLEXIBLE ASSEMBLY ...

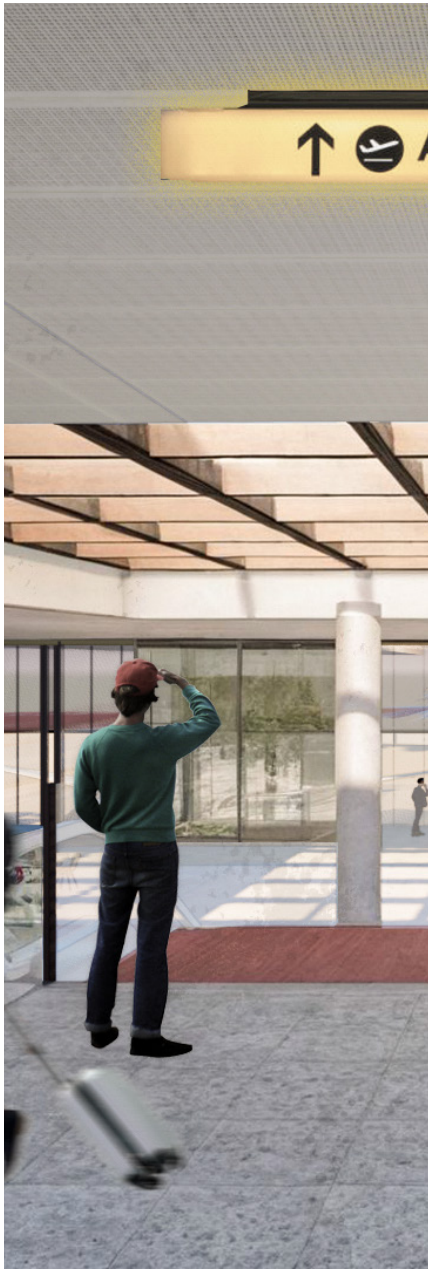


... UNIFIED IMAGE

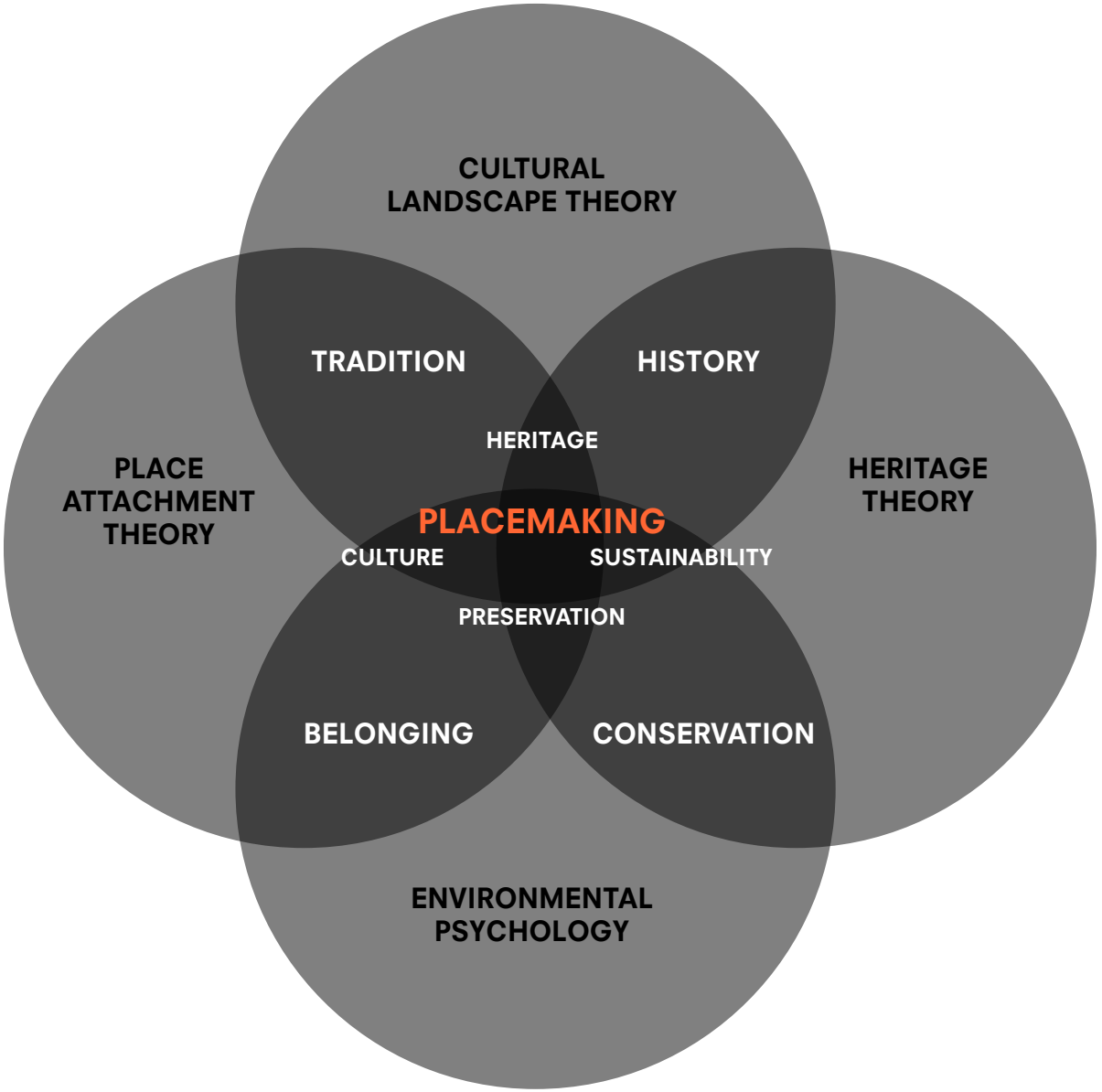


PLACEMAKING & MATERIAL





PLACEMAKING & MATERIAL



COLLECTIVE MEMORY

STERILE & GENERIC

LIN
TACTILE & SPECIFIC

1

THANK YOU
1