DESIGN BRIEF:
FROM SITE TO FLIGHT

Idroscalo City Airport, Milan
Complex Projects

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TUDelft
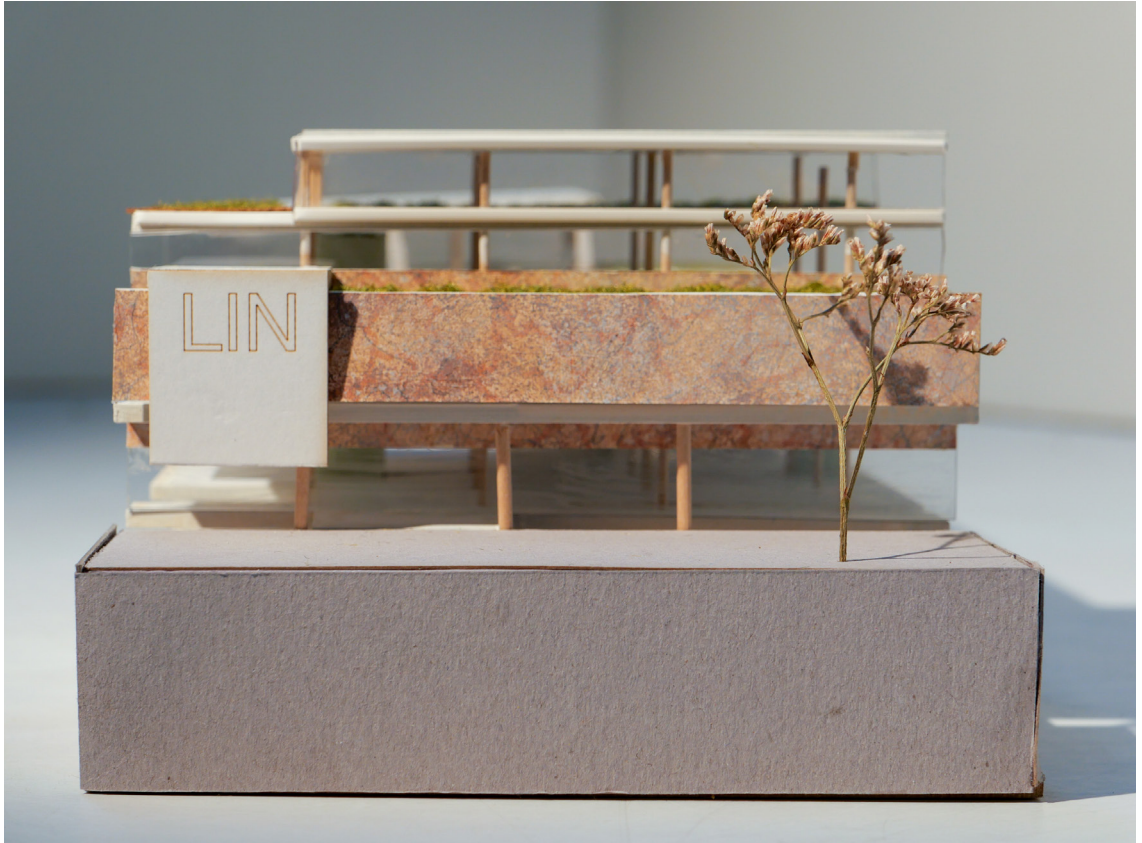
2024-25

COMPLEX PROJECTS
Bodies and Building Milan
AR3CP100

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Bodies and Building Milan
Materials group

INDEX

KICK-OFF

01

Project type:
    Airport
Seminar topic:
    Flows
Location:
    Viale Enrico Forlanini, 20054,
    Segrate, Milan,
    Italy

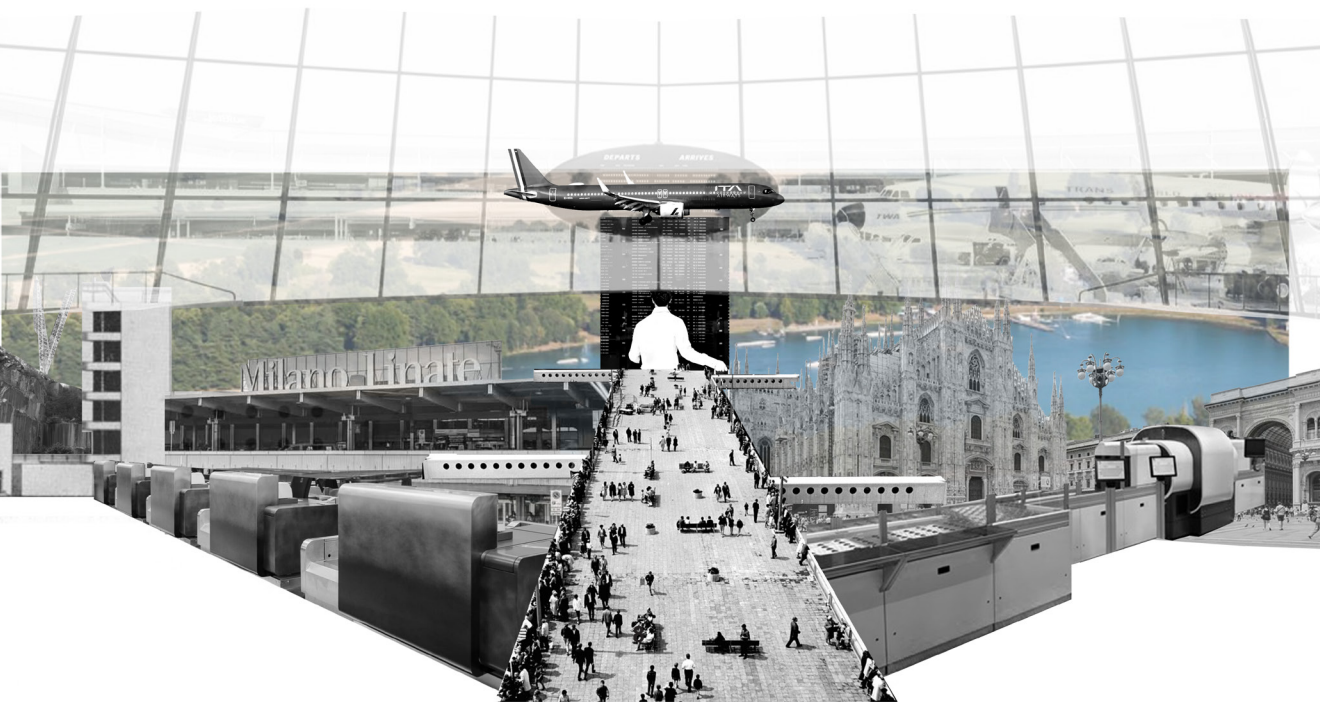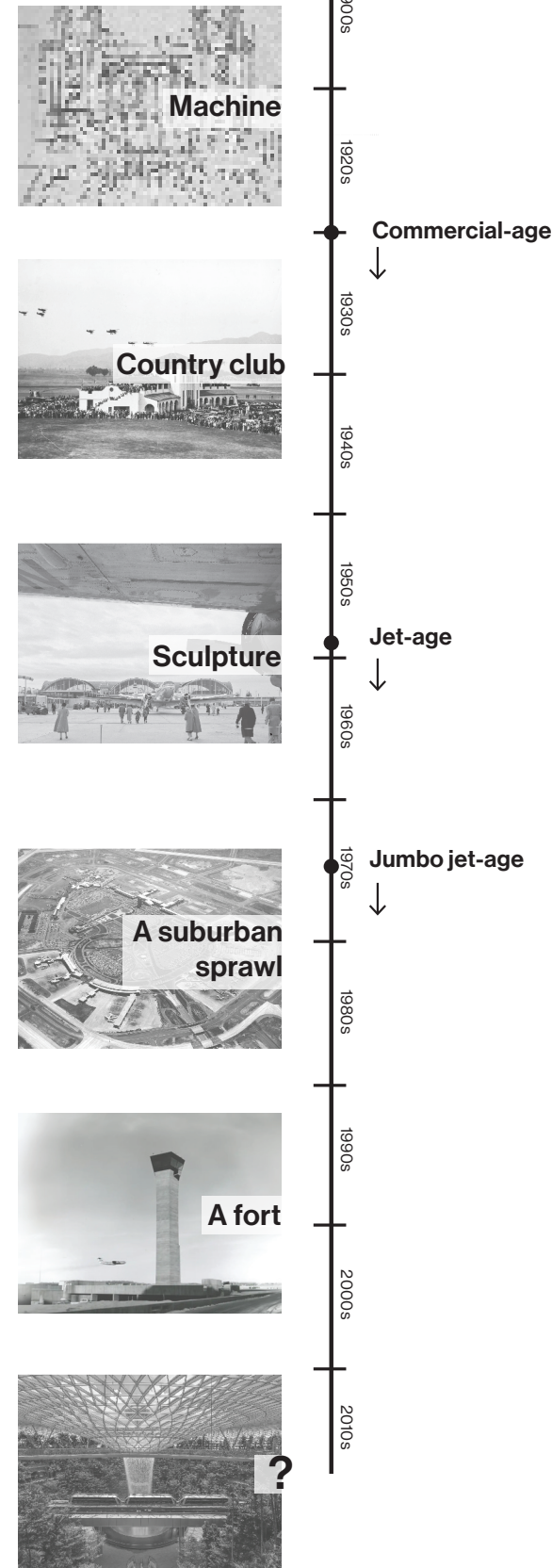"How can city airports balance **efficiency and security** with **social placemaking** to foster a **distinct sense of time and place**?"

Research-question:
How can city airports balance efficiency and security with social placemaking to foster a distinct sense of time and place?

Sub-questions:

1. How can transparency in the terminal to site and operations provide users a sense of time and place?

2. How can pre-security areas, like the meeters & greeters hall, become more accessible social places?

3. How can the airport fill functional requirements, while also serving non-flyers?

Machine

1900s

1920s

Commercial-age
↓

Country club

1930s

1940s

Sculpture

1950s

Jet-age
↓

1960s

Jumbo jet-age
↓

A suburban sprawl

1970s

1980s

A fort

1990s

2000s

?

2010s

Posed problem:

Contemporary airports have developed into machine-like spaces that prioritize speed, costs, and security at the expense of the user experience. This has led to a sterile and acontextual building type that induces stress on passengers and fails to engage with its surrounding context.

Airports also emit fumes, noise, and induce traffic in their respective neighborhoods. While they provide a significant economic boost to their catchment area, they generally fail to improve the spatial quality of their sites and serve local stakeholders.

The goal of this design assignment is to study how the airport could be re-imagined as a more open space that serves its locale, while respecting all necessary security and function requirements.

Connection to Complex Projects studio:

Airport design is directly linked to the Complex Project's overarching topic of "Bodies and Building," and its subtopic of "Places of Flows." Airports epitomize these categories in that they act like a processor that uploads and offloads passengers from planes as efficiently as possible.

It is a large-scale, infrastructure-oriented building through which multiple moving bodies (passengers, staff, baggage) circulate. In addition to physical people and goods that flow through this

larger building, so do more ephemeral memories, ideas, and social interactions. The airport must accommodate all these elements, making it a complex building type.

Project relevance:

In a social sense, it will seek to challenge the expectation of airports as generic utilitarian infrastructure, instead offering a vision for a user-centric and hyper site-specific experience. In a professional sense, it will offer an alternative airport model driven by local needs rather than strictly financial interests. In a scientific sense, it will explore how our building inventory can be leveraged to its full potential by accommodating multiple purposes, thus mitigating the impact of the construction industry on the land.

The above research question and sub-question provide the framework for a research and design project explored through various scales of design from detailing to site planning. Key aspects include "placemaking," i.e. how to foster rich social interactions through architecture, the flow of users and goods, site planning, and the meeting of aviation industry-specific function requirements.

The resulting design assignment seeks an academic reimagination of the airport typology that is yet to be realized due to real-world constraints, intending to push the conventions of what airports can do regarding integrating building, user, and site.

The goal of this research is to inform a design assignment for Linate airport that addresses the following issues:

- At the large city-wide scale the airport will seek to be accessible. This means a "democratized" airport that is open, reachable, and enjoyable for travelers, their families, and community members of all socioeconomic backgrounds.
- At the medium scale of Linate's site, it will seek to be contextual by integrating the site, like a reciprocal relationship with the waters of the Lambro River and Idroscalo Lake.
- At the smaller scale of the building, the new terminal seeks to be recognizable. A distinct, legible exterior as well as a haptic interior should guide passengers through the building in an intuitive way.

These three aspirations are expected as a prerequisite for placemaking-oriented airport architecture.
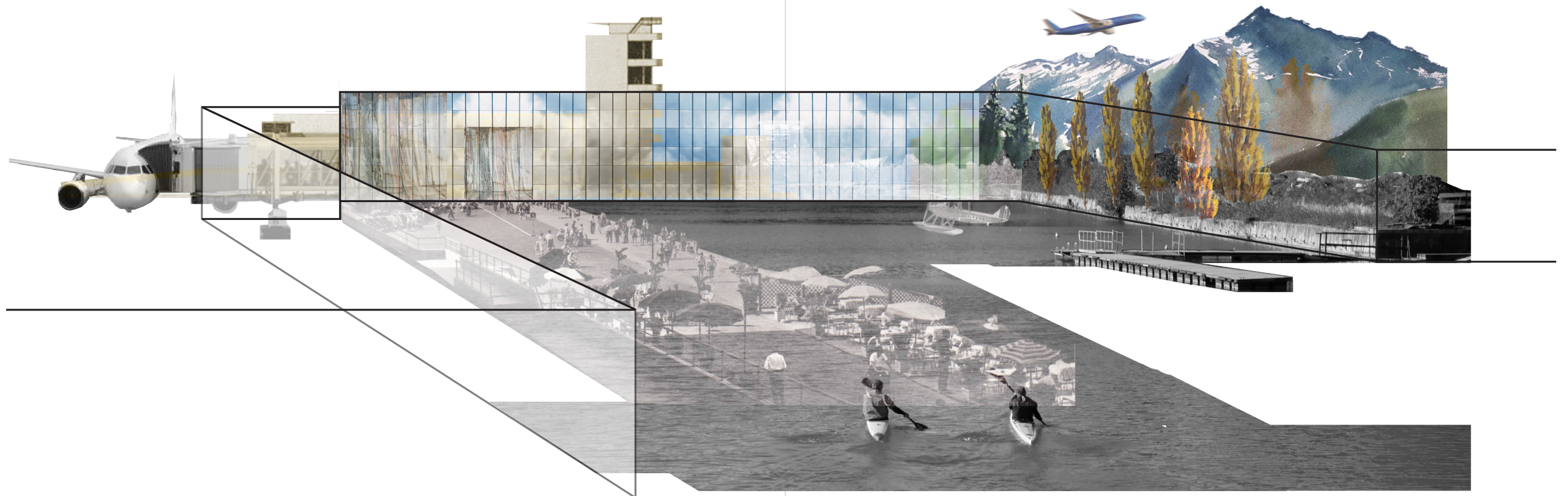
Design challenges:

1. Constrained - Infrastructural (L):
Linate faces increased passenger traffic but has limited room for expansions.

2. Disconnected - Site (M):
Linate is physically and emotionally disconnected from its surrounding environment.

3. Unclear - Building (S)
Linate lacks a consistent and legible architectural language across the main terminal and supporting facilities, potentially causing disorientation.

NON-PLACE

A PLACE

Design ambitions:

1. Contextual
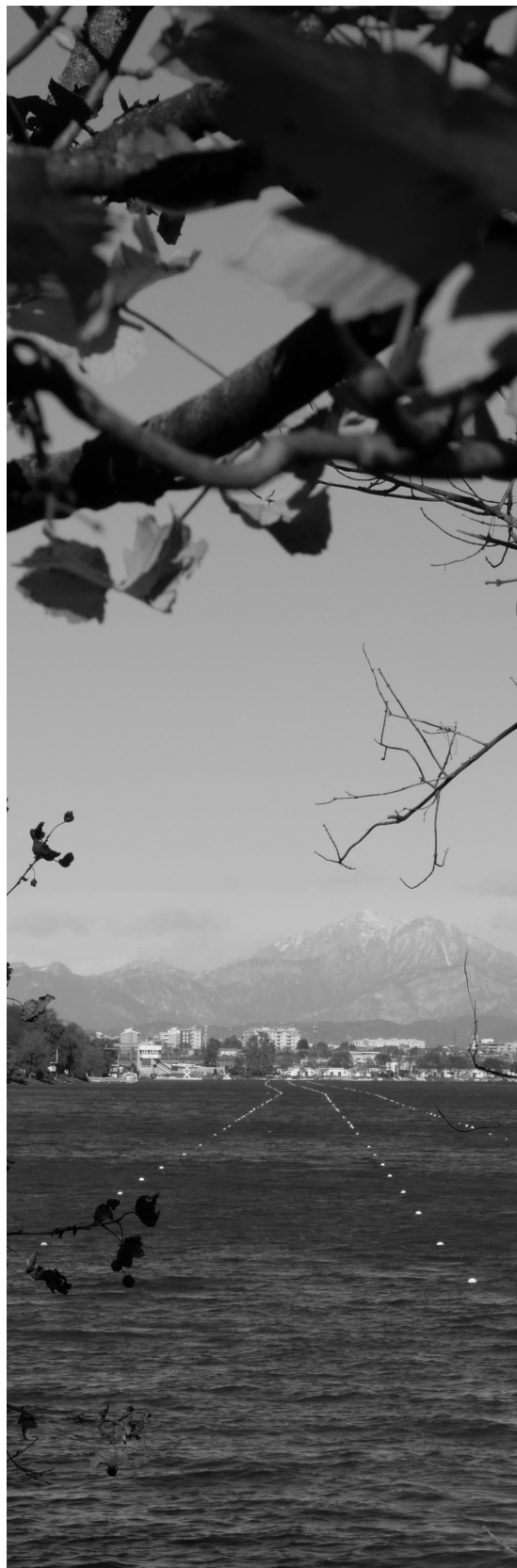Develop reciprocal relationship with the Lambro River & Idroscalo lake.

2. Accessible
A "democratized" airprot that serves the wider Milanese population.

3. Recognizable
Distinct exterior form & haptic interior spaces that ground passengers to their context.

RESEARCH

02

Method:

The methodology of this research is certainly not a linear step-by-step process. Gathering the necessary knowledge to inform the airport design in Linate requires revisiting earlier sources and research strategies as new paths of curiosity reveal themselves along the process. Regardless, the general methodology of this is founded on the following three phases.

1. Literature review & research question:

• The "status quo" of airport architecture is established through a literature review that addresses airports from the angles of theory, culture, and architectural history.
• Digital archives from the municipality of Milan and regional government of Lombardy uncover the critical history of Linate, relating to the terminal, site, and its users. This informs what the defining qualities of the site are that should be bolstered in the pursuit of placemaking.
• By gathering literature and archival information about airport architecture broadly and Linate specifically, a relevant research question on site-integrated airports is crafted.

2. Precedent study:

• The existing Linate airport serves as the foundation for this research project. By thoroughly understanding the intricacies of its positive qualities and its shortcomings, a more grounded design proposal will be possible. This precedent study is conducted through the lenses of site, program, and client.

• Site analysis: GIS data is used to form an understanding of Linate's site in terms of connectivity, nearby assets, and ecology. This informs what the defining qualities of the site are that should be bolstered in the pursuit of placemaking. This is backed by repeated in-person visits that are well documented through photography, video, and audio.

•Program analysis: Benchmarking Linate with other real-world airports of similar size, use, and siting is used. It will provide rules of thumb for the allocation of different programs, what adjacencies must be prioritized, and the implications these have on placemaking. The comparison will be conducted by comparing empirical data such as passenger capacity, terminal dimensions, proximity to the city center, a general breakdown of programs, as well as any notable qualities that act in favor or against passengers' sense toward their respective time and place.

•Client analysis: Publications of SEA, the corporation operating the existing Linate airport provide insight into the key pieces of information to design a realistic airport by providing information on demographics, finances, and operations. Airport planning manuals made available digitally by ICAO, one of the industry's governing bodies, will be referenced to establish key technical and legislative requirements across the airport. These include spatial requirements for security, apron dimensions, and gate layouts.

3. Conceptual design:

•Early design explorations will be conducted through analogue and digital mediums. A 1:1500 scale model of the site and existing airport will be used to test physical foam massings. Sketching of conceptual sections, plans, and diagrams will be the starting point for more rigorous relation schemes and program massings done to scale via CAD and 3D modeling software.

Placemaking:

A concept from the field of urbanism that seeks to create environments where people feel a strong sense of belonging and connection. "Places" are produced by the activities and interactions among people- which can be fostered through design. Strategies that could be translated to the building scale include providing hierarchy in circulation options, variety in building frontages, or pockets of greenery.

For the scope of this project, emphasis is placed on the "meeters and greeters" hall as the key space foster placemaking. This space is often an afterthought in airport design, acting merely as a small fenced off area in the lobby area around the exit of arriving passengers. This is true at Linate in its current form, as the hall is a congested area with limited seating and spaces for loved ones to reconnect.

As the theory of placemaking argues that a sense of place is created through the quality of interpersonal experiences occuring at a respective location, the meeters and greeters hall will be a great opportunity to inject positive experience and emotion into an otherwise utilitarian building for users.

What Makes a Great Place?

Project for Public Spaces
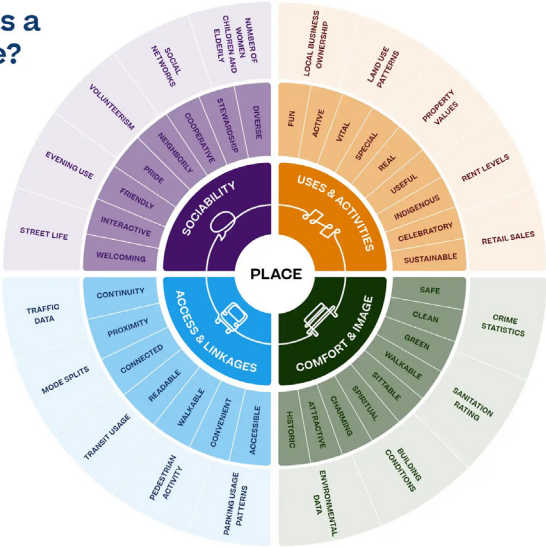
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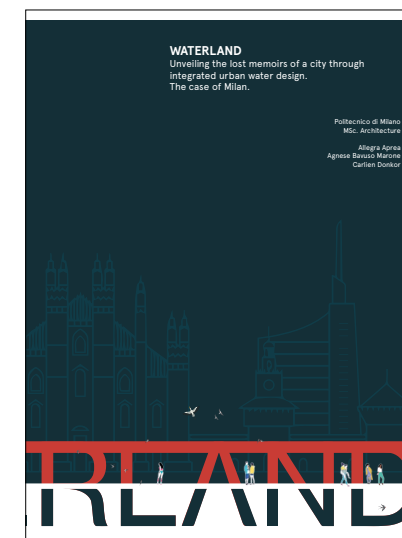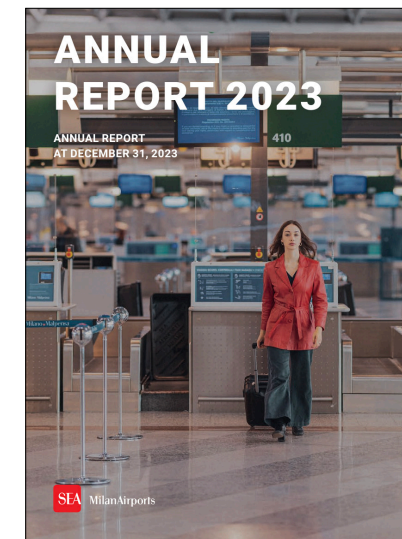
SITE

"HOW CAN TRANSPARENCY IN TERMINAL TO SITE AND OPERATIONS PROVIDE USERS A SENSE OF TIME AND PLACE?"

03

SITE AMBITION:

CONNECT THE INFRASTRUCTURE OF THE AIRPORT, WITH HERITAGE OF WATER

↓

REQUIREMENT #1:

SIGHTLINES TO WATERFRONT FOR ARRIVING PASSENGERS. WALKABLE LINK FOR ALL USERS.

Linate Airport is located of east of Milan's city center, just outside its administrative boundaries. As the smallest of the three airports serving the metropolitan region's catchment area, it primarily hosts domestic and European routes. With multiple routes to the United Kingdom, non-Schengen gates are also required at Linate.

Milan's first airport was Taliedo nearby Linate's current location. It was established to support both military and civil aviation, becoming a hub for research, manufacturing, and early air transport. The area was ideal for aviation due to its lack of human settlements, while its proximity to the city ensured easy access to materials and a readily available workforce. Firms like Aeroplani Caproni expanded the airport during wartime as production demands increased.

In the late 1920s, seaplanes became increasingly popular in the region. Milan would serve as a stopover point along the Torino-Trieste line, connecting north Italian cities and lakes.

In 1926, plans to improve Milan's Taliedo aerodrome included merging seaplane and airplane operations, leading to the construction of the Idroscalo basin in 1930. It was connected to the city via an extended Corso XXII Marzo and the Lambrate rail yard.

The water basin, 2,500 meters long and up to 450 meters wide also served as a site for rowing and sailing competition during summer months.

By the late 1930s, seaplanes became obsolete, shifting the basin's focus to recreational use. Greenery development began in 1938, and large-scale reforestation in the 1950s established the Idroscalo Park.

By the 1930s, the limitations of Taliedo's size and infrastructure became evident, especially as aviation technology and the scale of operations grew.

Milan Linate airport was constructed replace Taliedo as the city's main airport. Linate offered modern facilities and better connectivity, meeting the needs of larger aircraft and increased passenger and cargo volumes.

Work started in 1933, and architect Gianluigi Giordani designed a two-story terminal with passenger facilities, while a large hangar

by engineer Danusso was added in 1936. Named after Enrico Forlanini, the airport opened in 1937.

After WWII, the industry of Taliedo airport collapsed due to the loss of military contracts. With the bankruptcy of the main companies like 'Aeroplani Caproni', the airfield lost its purpose and, as the city expanded around it, was converted into a residential area.

Aeroporto
Taliedo

Smistamento
Interport

Linate Airport
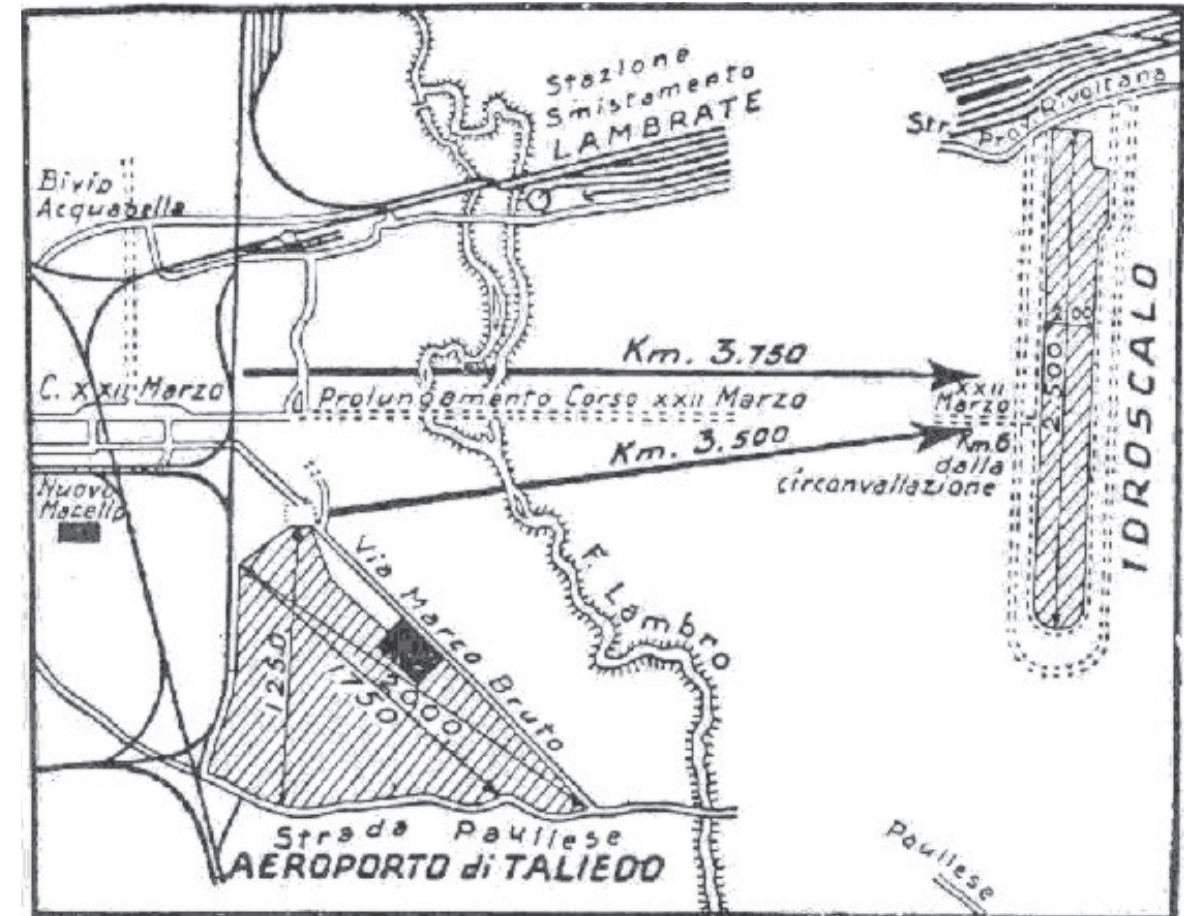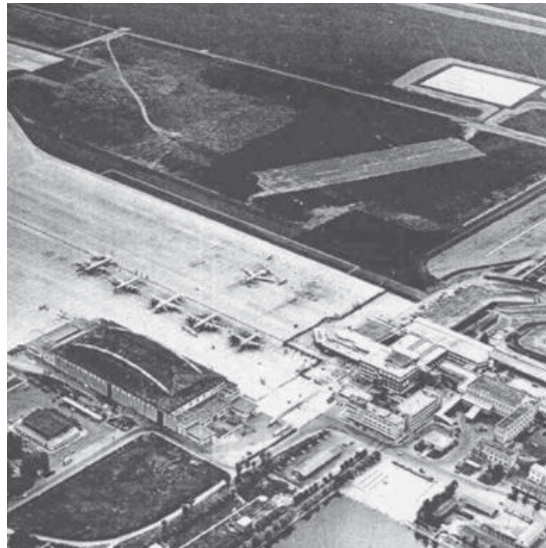
+ +

AIR
1910s

RAIL
1931

WATER
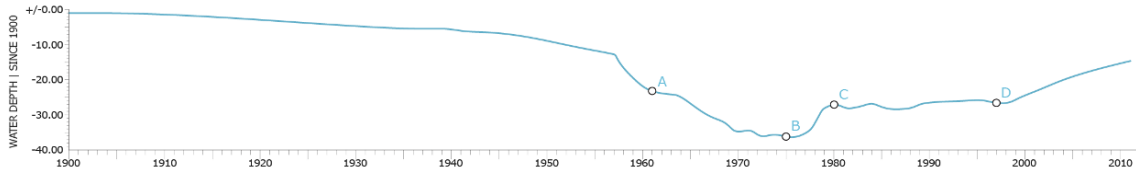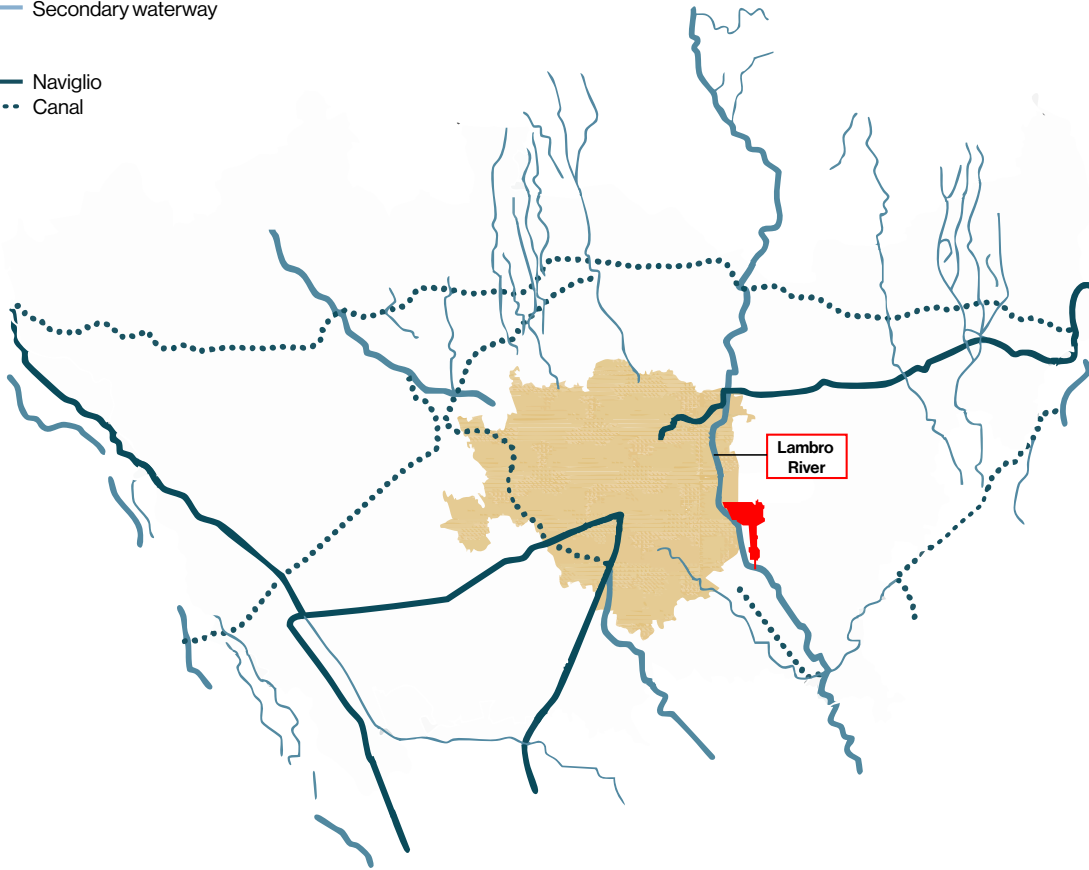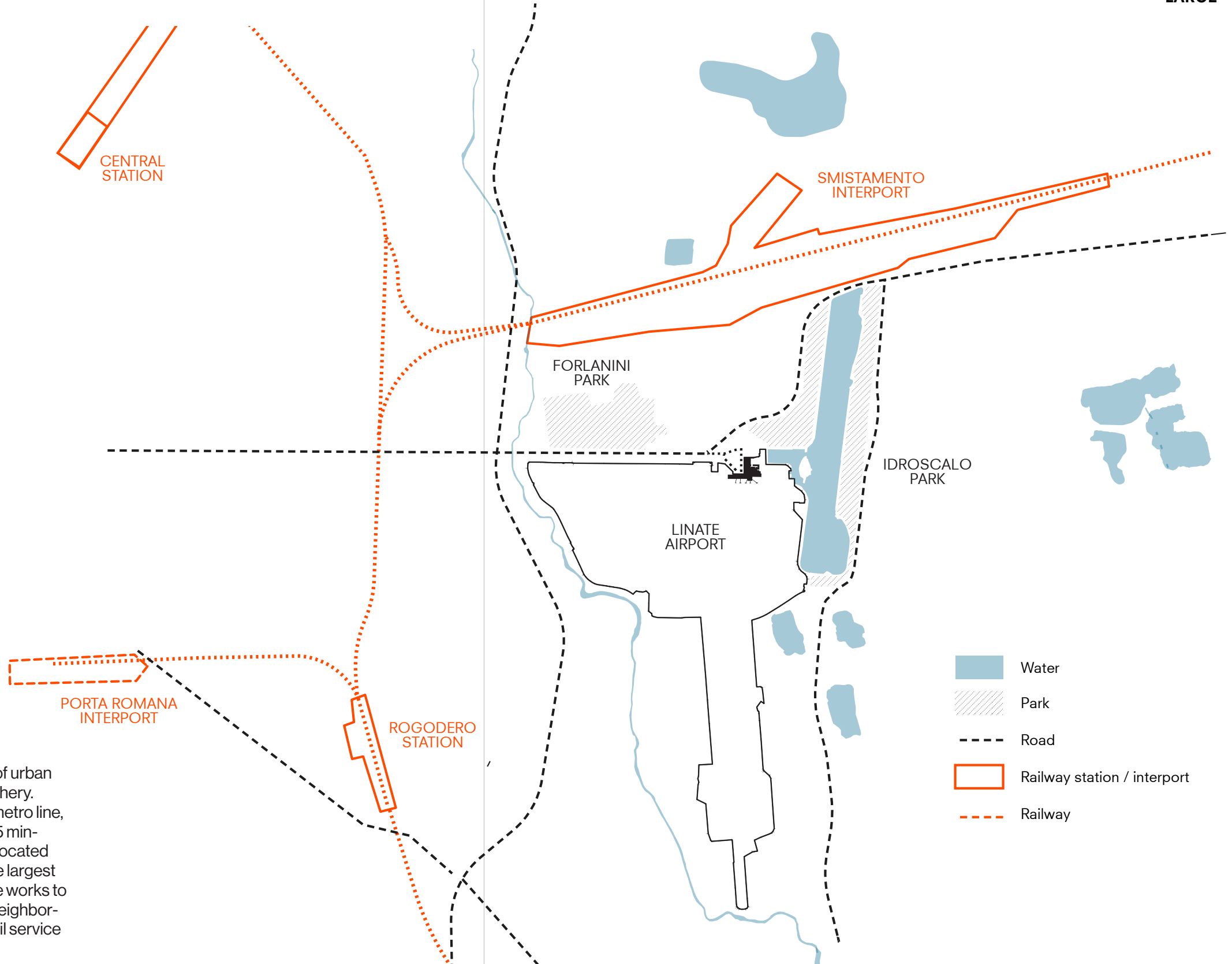**1937**

In addition to the Idroscalo, the site is in close proximity of the Lambro River on the western edge of its site. This is one of many major rivers running down the Alps toward the Po River Valley, making it a valuable means of transportation historically and source of irrigation water for agriculture today. The Milan region is prone to flooding, and the banks of the Lambro have breached over its banks in recent years. Additionally, it suffers from poor water quality due to solid waste and high sediment levels.

Primary waterway
Secondary waterway

Naviglio
Canal

Lambro
River

CENTRAL
STATION

SMISTAMENTO
INTERPORT

FORLANINI
PARK

IDROSCALO
PARK

LINATE
AIRPORT

PORTA ROMANA
INTERPORT

ROGODERO
STATION

Water

Park

- - - Road

Railway station / interport

- - - Railway

Linate is located at the crossroads of urban
Milan and the beginning of the periphery.
With the recent opening of the M4 metro line,
users can reach city center within 15 min-
utes. The Smistamento Interport is located
just north of the site and is one of the largest
railyards in all of Italy. Plans are in the works to
develop the area into a mixed-use neighbor-
hood with high-speed passenger rail service
to the east.
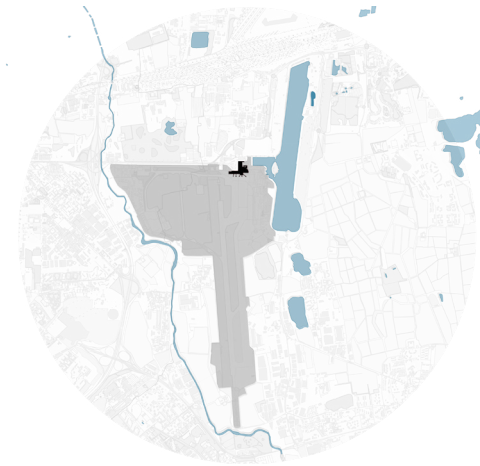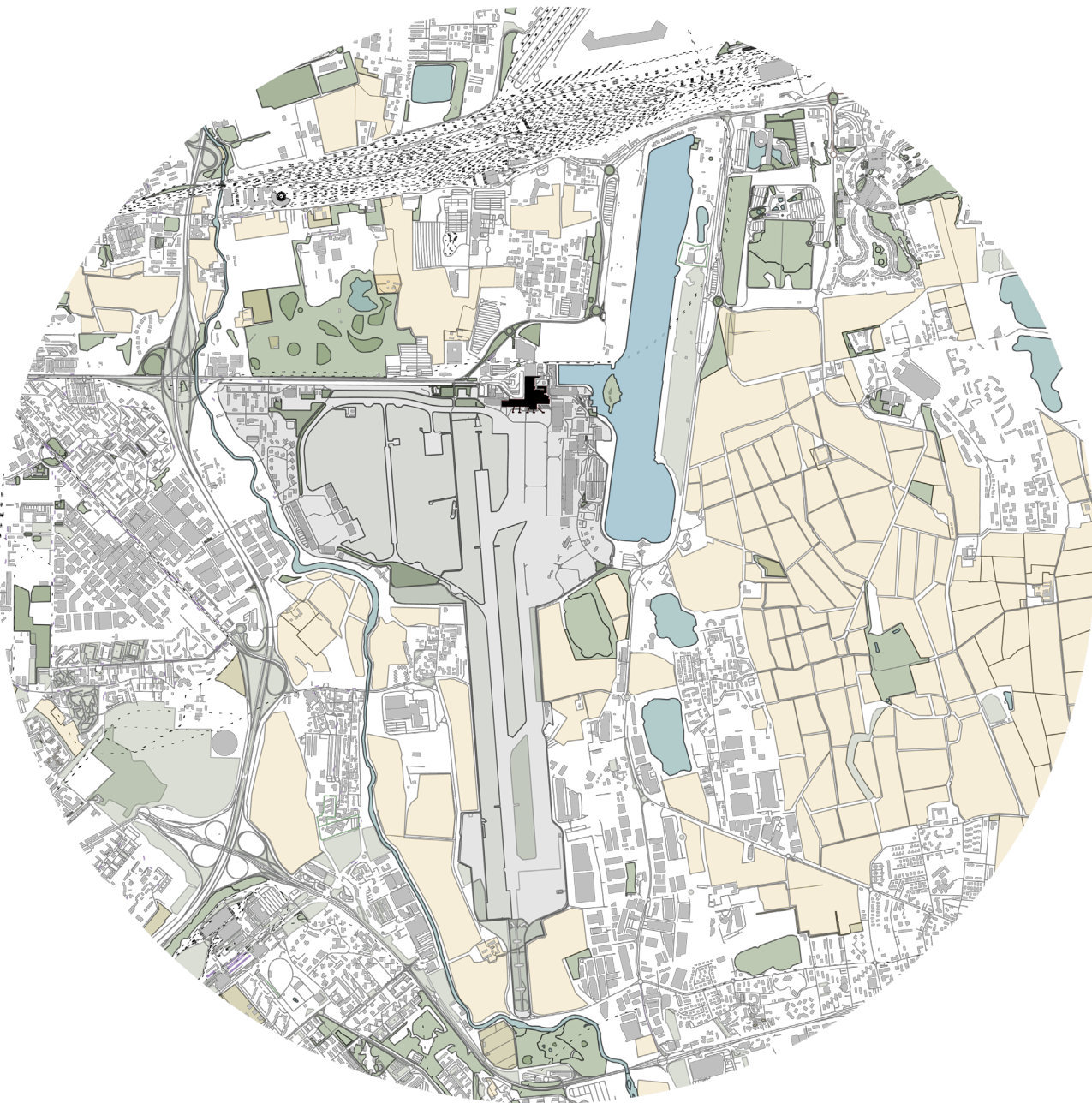
WATER
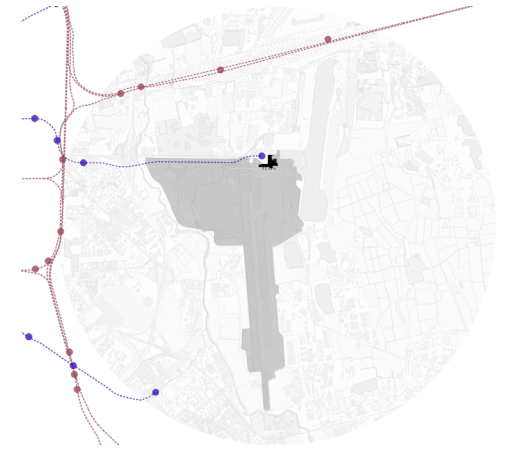
RAIL & METRO
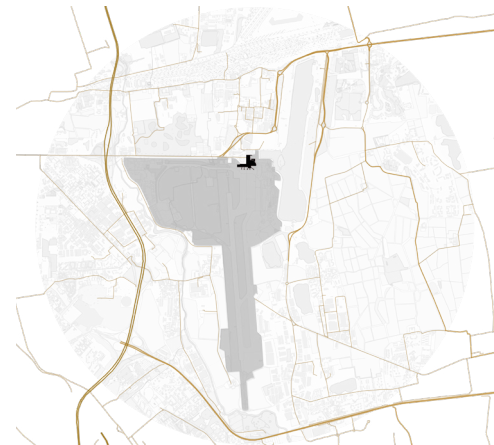
ROAD NETWORK
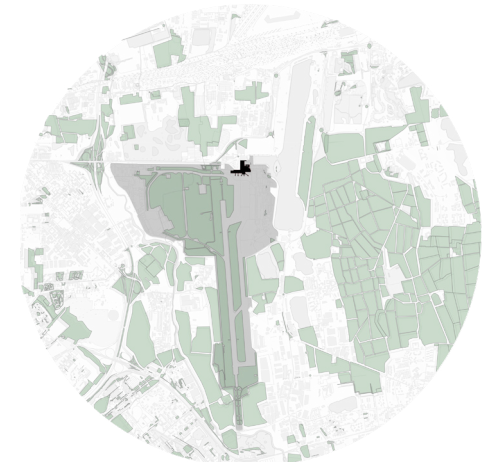
FARM & GREENERY

Linate is closely integrated with regional and local rail lines, as well as major roadways asuch as the Tangenziale Est. To the east of the site there are agricultural fields and farmsteads that characterize Lombardy more broadly.

Total surface area:
3,500,000 m²

Apron area:
398,000 m²

Terminal building GFA:
87,872 m²

1,554 m

3,947 m

2,442 m

Linate Airport spans approximately 350 hectares, occupying a compact site bordered by urban and industrial zones. Despite its proximity to Milan's waterways, including the Lambro River and various canals, the site remains largely disconnected from these features, with limited integration into the surrounding hydrological landscape.
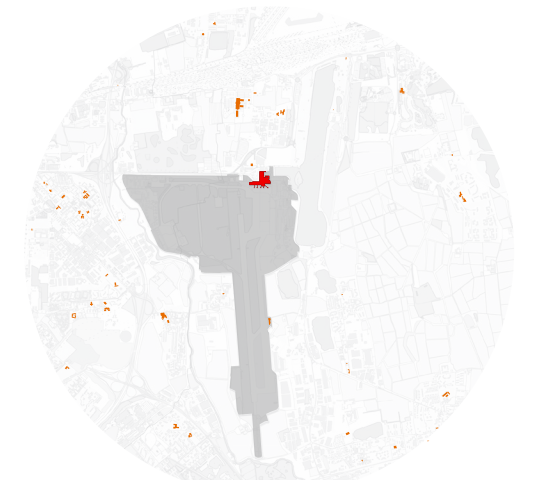
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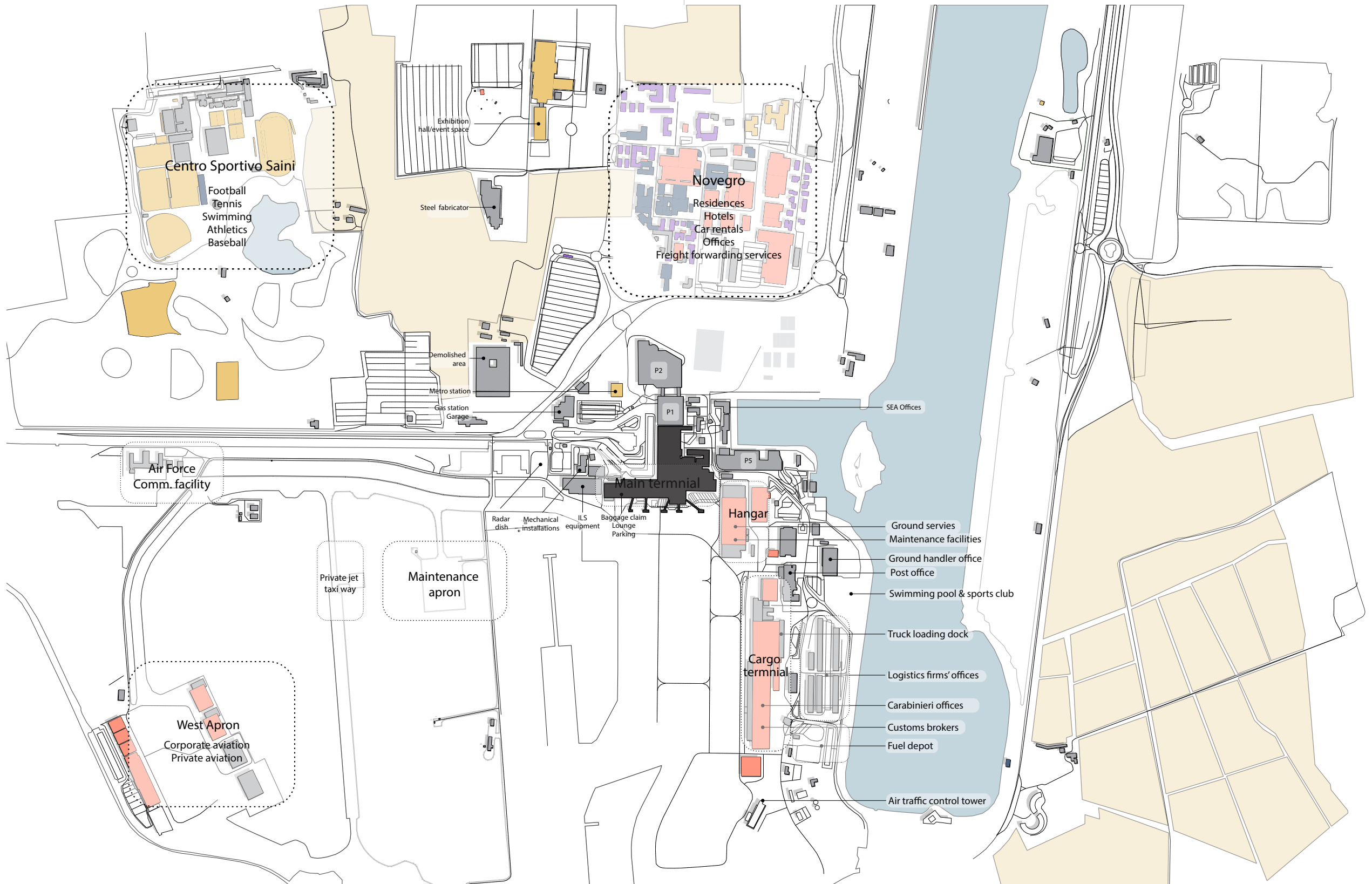
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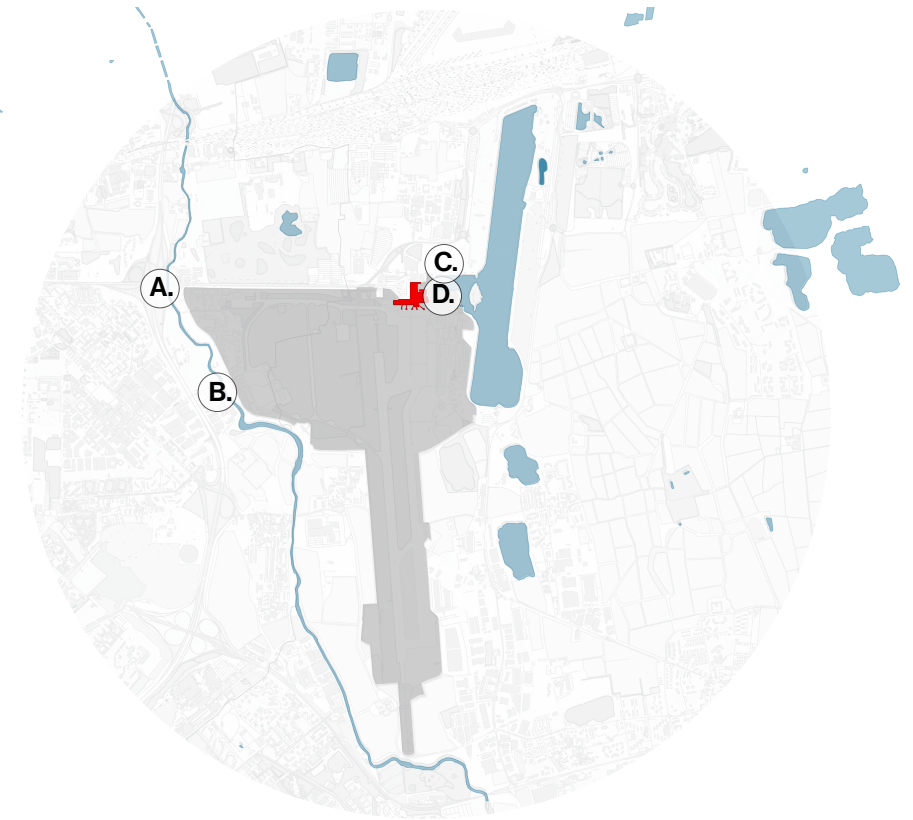
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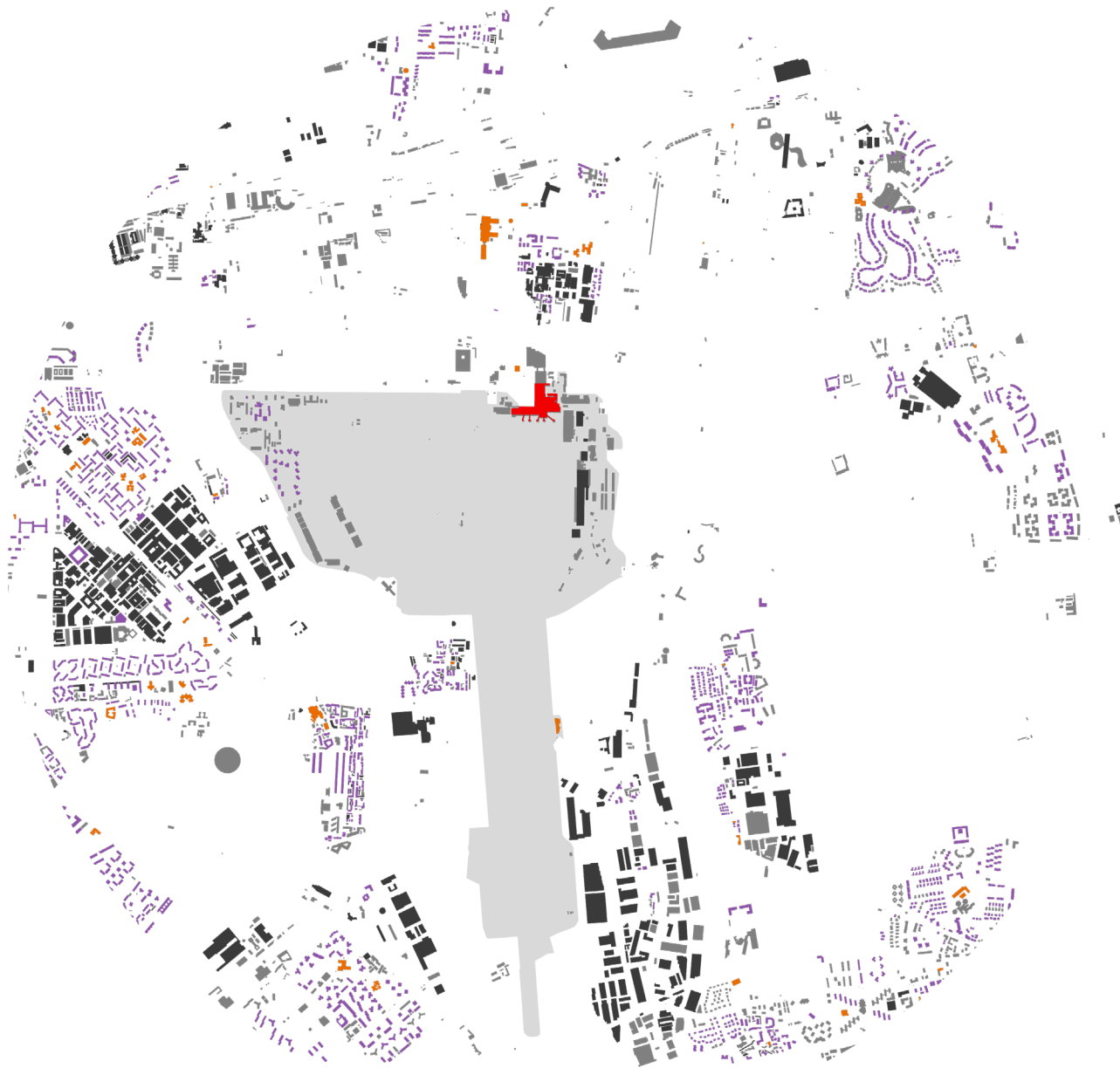
COMMERCIAL
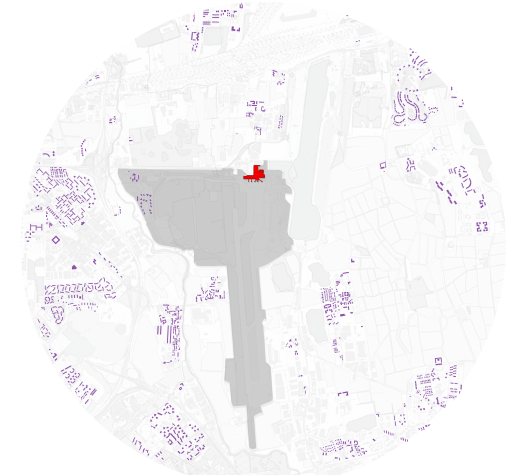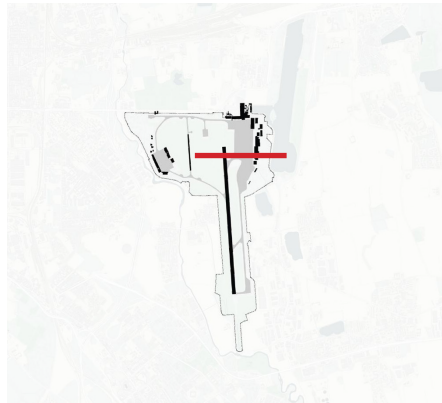
RESIDENTIAL

INDUSTRIAL

PUBLIC

The urban fabric around Linate Airport features a blend of industrial zones, suburban residential areas, and rural farmland. Nearby towns like Segrate, Peschiera Borromeo, and San Donato Milanese host a mix of corporate offices, logistics hubs, and local amenities, creating an interface between urban infrastructure and the surrounding agricultural landscape. One striking feature however are the lack of public and collective spaces, such as community centers and club houses as shown in orange.
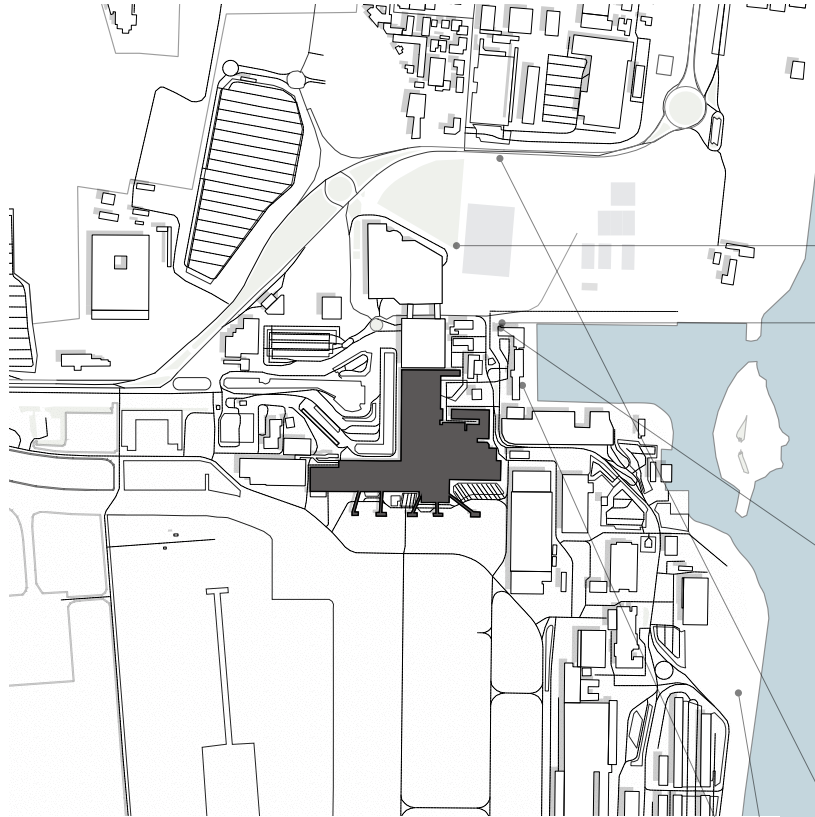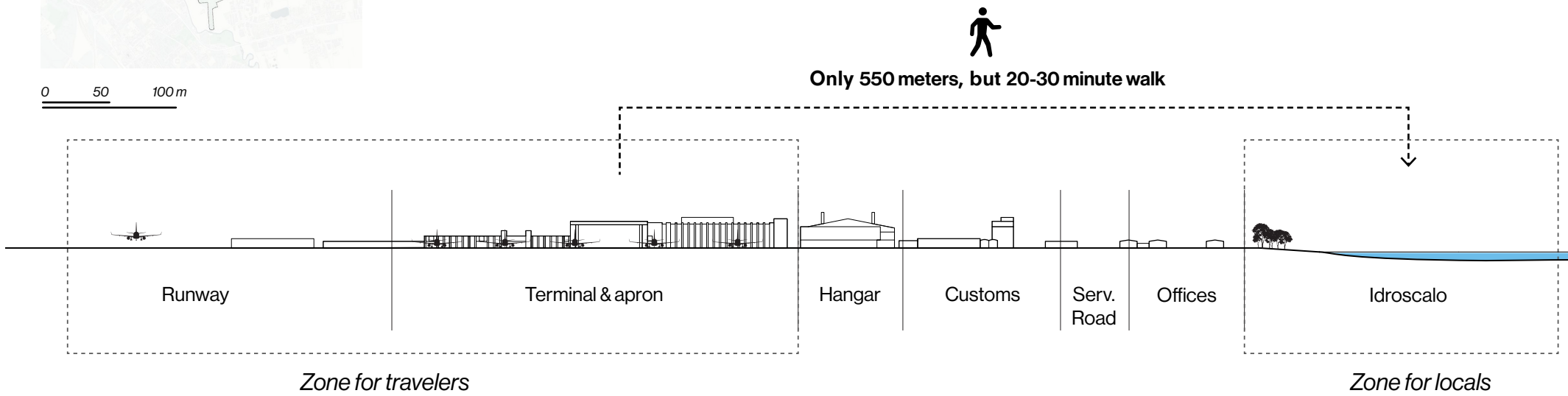
Centro Sportivo
Saini

Parco Esposizioni
Novegro

University
sports center

Mt.biking
Climbing center
Playground
Bar
Public pool
Rugby club
Restaurants
Live music

Parco
Forlanini

Walking routes
Golf
Baseball
Wedding venue

Idroscalo

Isola delle
rose

Running routes
Playground
Kiosk
Art gallery
Fields

Wakeboarding
area

Centro Sportivo Saini

Football
Tennis
Swimming
Athletics
Baseball

Exhibition
hall/event space

Steel fabricator

Novegro

Residences
Hotels
Car rentals
Offices
Freight forwarding services

Demolished
area

Metro station

Gas station
Garage

P2

P1

SEA Offices

P5

Air Force
Comm. facility

Main termnial

Hangar

Radar
dish

Mechanical
installations

ILS
equipment

Baggage claim
Lounge
Parking

Ground servies
Maintenance facilities

Ground handler office
Post office

Swimming pool & sports club

Private jet
taxi way

Maintenance
apron

Truck loading dock

Cargo
termnial

Logistics firms' offices

Carabinieri offices

West Apron

Corporate aviation
Private aviation

Customs brokers

Fuel depot

Air traffic control tower

The connection between Linate Airport and the Idroscalo is hindered by several architectural and infrastructural elements. These include barriers for construction purposes, vehicle traffic, and expansive lots.

Additionally, fencing and security barriers around the airport perimeter, combined with a lack of designated pedestrian pathways or crossings, further block direct access to the Idroscalo, creating a physical and experiential disconnect between the two sites.
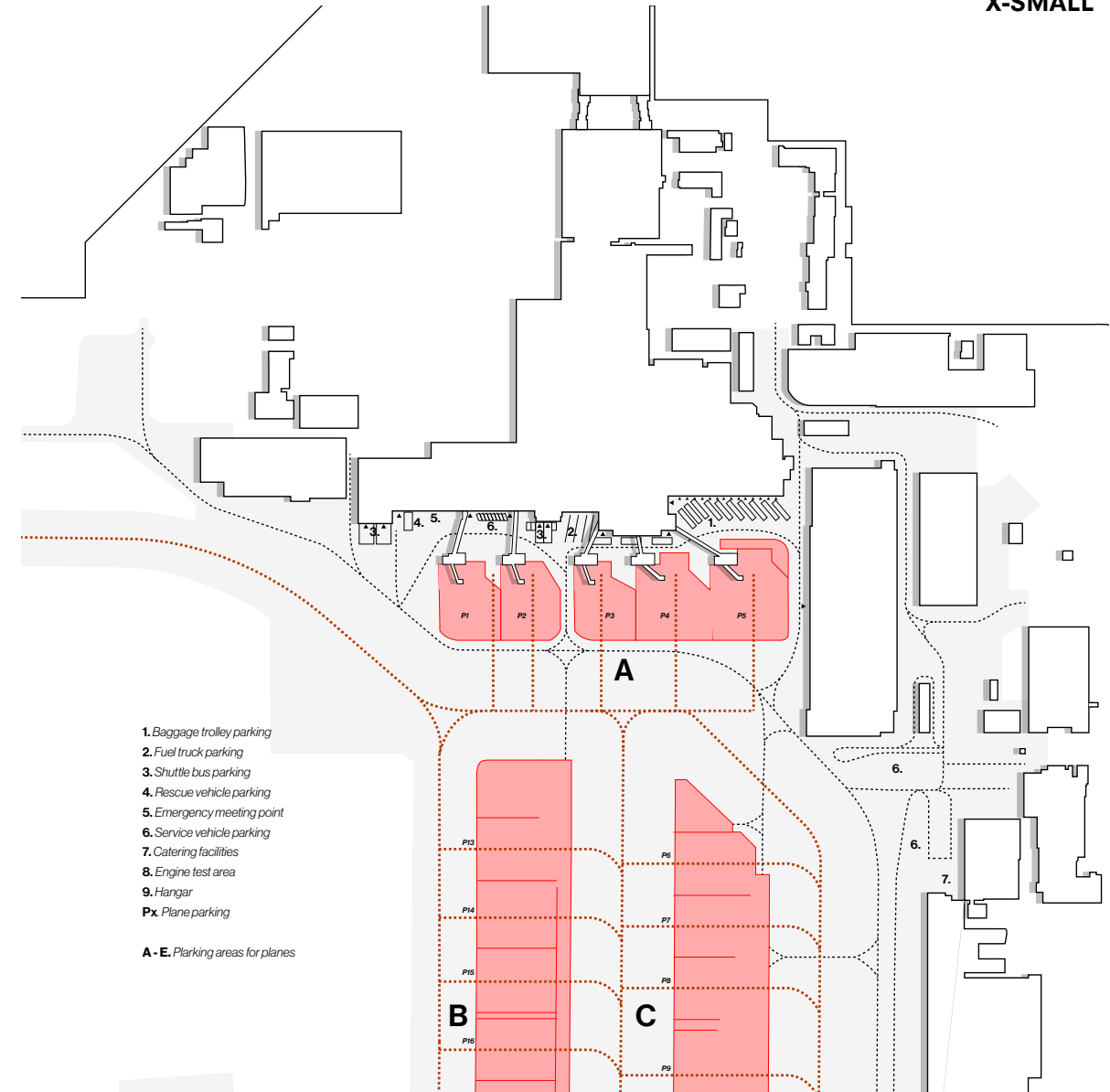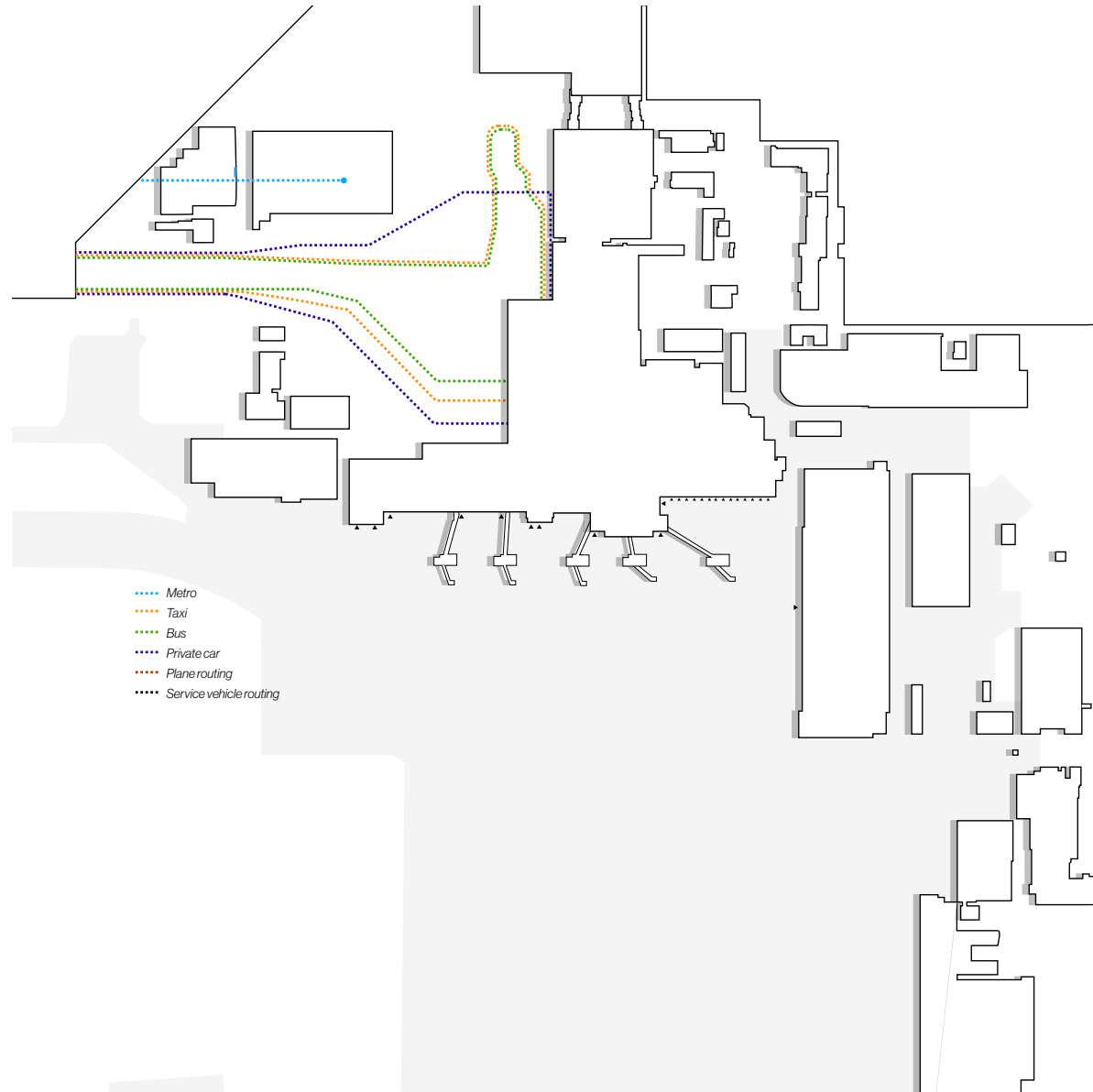

0   50   100 m

Only 550 meters, but 20-30 minute walk

| Runway | Terminal & apron | Hangar | Customs | Serv. Road | Offices | Idroscalo |

Zone for travelers

Zone for locals

Legend (left map):
- Metro
- Taxi
- Bus
- Private car
- Plane routing
- Service vehicle routing

1. Baggage trolley parking
2. Fuel truck parking
3. Shuttle bus parking
4. Rescue vehicle parking
5. Emergency meeting point
6. Service vehicle parking
7. Catering facilities
8. Engine test area
9. Hangar
Px. Plane parking

A - E. Parking areas for planes

PROGRAM

SUB QUESTION **#2:**

HOW CAN PRE-SECURITY AREAS, LIKE THE MEETERS & GREETERS HALL, BECOME MORE ACCESSIBLE SOCIAL PLACES?

04

PROGRAM AMBITION:

ENHANCE THE PUBLICLY ACCESSIBLE
PRE-SECURITY AREA

↓

REQUIREMENT #2:

**SPACIOUS, CENTRALLY LOCATED
MEETERS & GREETERS HALL THAT
REFLECTS MILAN.**
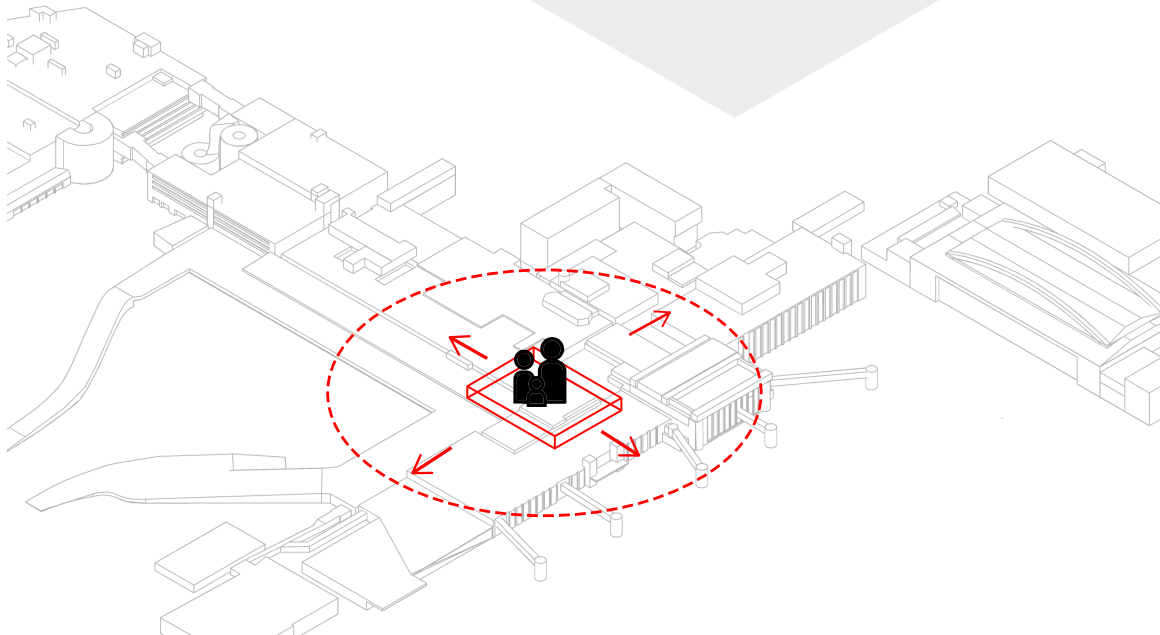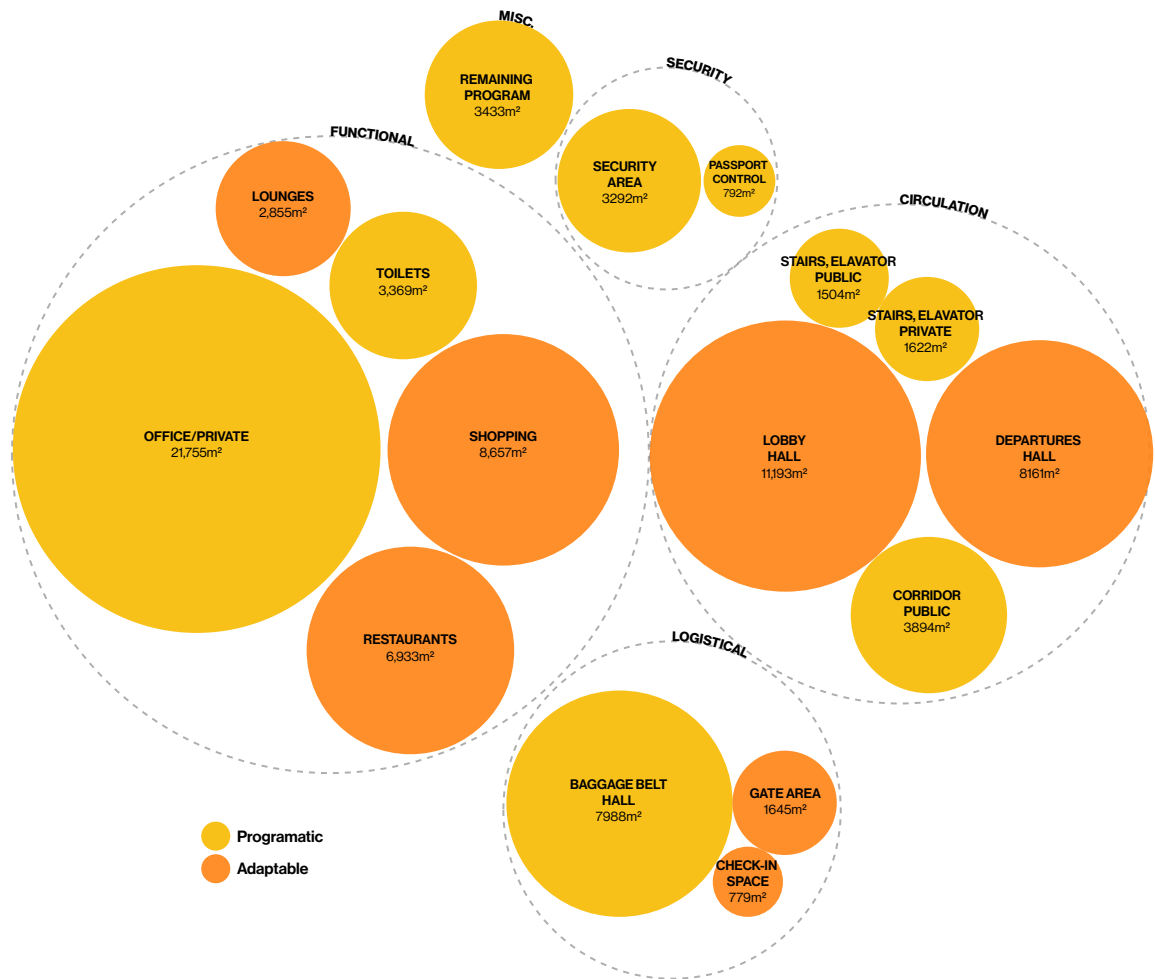
The terminal at Linate Airport is organized to prioritize efficiency and passenger flow, featuring a compact layout with clearly defined zones for departures, arrivals, and baggage handling. The ground floor houses check-in counters, security checkpoints, and baggage claim, while the upper levels include boarding gates, lounges, and a variety of retail and dining options. The design emphasizes functionality, catering to the airport's role as a hub for short-haul flights and business travelers.
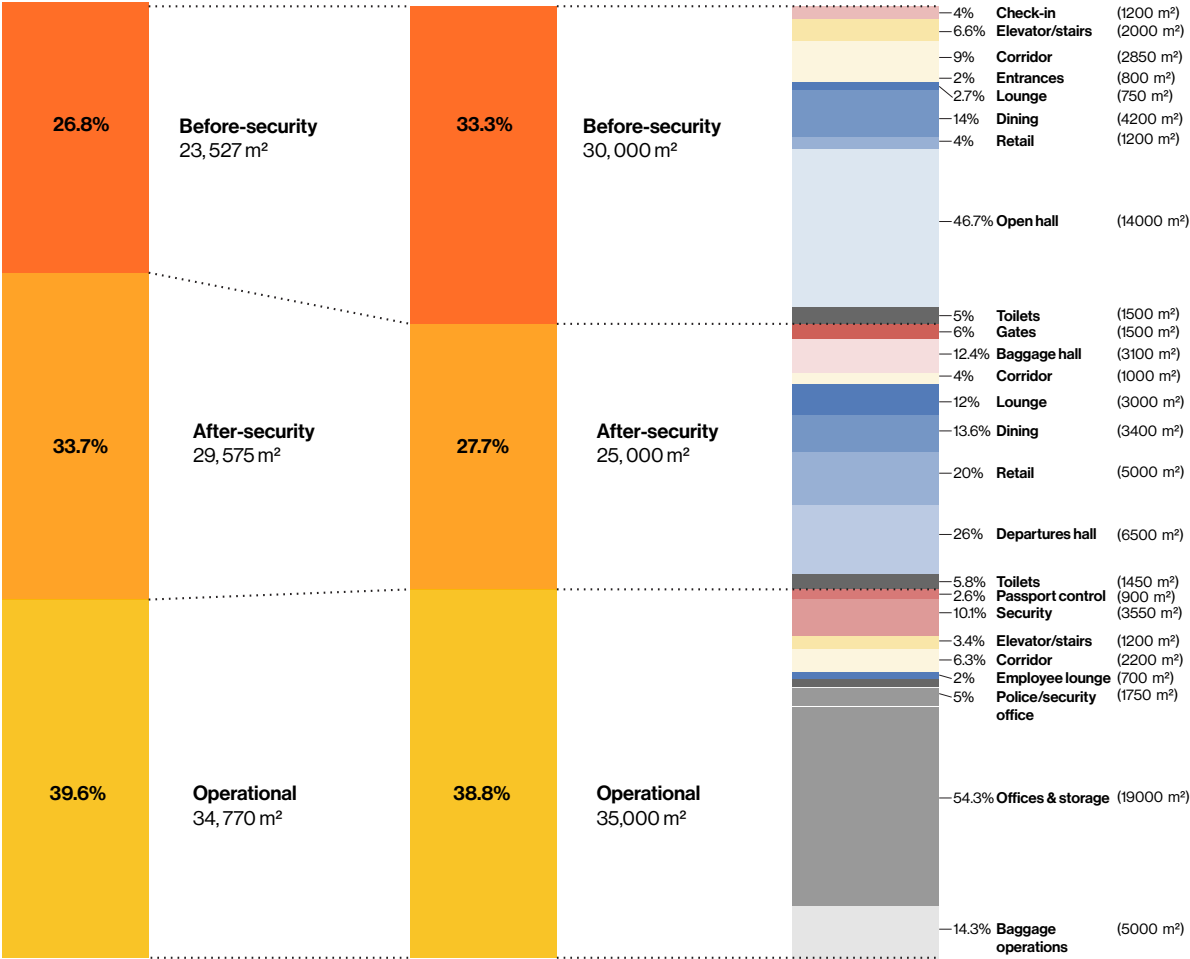
G

Lounge 327m²
Entrances 609m²
Retail 755m²
Check-in 898m²
Service/info desks 1060m²
Toilets 1300m²
Elevator & stairs 1868m²
Corridor 2546m²
Dining 3580m²
Lobby 10,584m²

L1

Service/info desks 54m²
Corridor 1023m²
Toilets 1447m²
Gate 1645m²
Lounge 2528m²
Dining 3353m²
Baggage hall 3462m²
Retail 7902m²
Departures 8161m²

L2

Lounge 327m²
Employee lounge 687m²
Toilets 709m²
Passport control 792m²
Elevator & stairs 1258m²
Police & security 1743m²
Corridor 2325m²
Security 3405m²
Baggage operations 4526m²
Office & storage 19,325m²

G

L2

L1

Legend

Entrances
Stairs
Offices
Private
Toilets
Check in
Security
Passport
Baggage
Gates
Restaurants and shops
Departure Lounge
Arrivals hall

TOTAL

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

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

26.8%	Before-security	
	23,527 m²	
33.3%	Before-security	
	30,000 m²	

- 4% Check-in (1200 m²)
- 6.6% Elevator/stairs (2000 m²)
- 9% Corridor (2850 m²)
- 2% Entrances (800 m²)
- 2.7% Lounge (750 m²)
- 14% Dining (4200 m²)
- 4% Retail (1200 m²)
- 46.7% Open hall (14000 m²)

33.7%	After-security	
	29,575 m²	
27.7%	After-security	
	25,000 m²	

- 5% Toilets (1500 m²)
- 6% Gates (1500 m²)
- 12.4% Baggage hall (3100 m²)
- 4% Corridor (1000 m²)
- 12% Lounge (3000 m²)
- 13.6% Dining (3400 m²)
- 20% Retail (5000 m²)
- 26% Departures hall (6500 m²)
- 5.8% Toilets (1450 m²)
- 2.6% Passport control (900 m²)
- 10.1% Security (3550 m²)
- 3.4% Elevator/stairs (1200 m²)
- 6.3% Corridor (2200 m²)
- 2% Employee lounge (700 m²)
- 5% Police/security office (1750 m²)

39.6%	Operational	
	34,770 m²	
38.8%	Operational	
	35,000 m²	

- 54.3% Offices & storage (19000 m²)
- 14.3% Baggage operations (5000 m²)

The proposed changes to the spatial programming at Linate emphasizes the publicly accessible, pre-security areas. The meeters and greeters hall will be the spiritual core of the building. The project will seek to foster the spirit of reconnection for both building and the bodies occupying it.
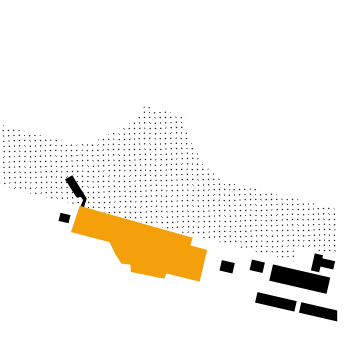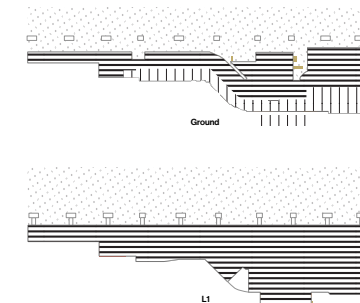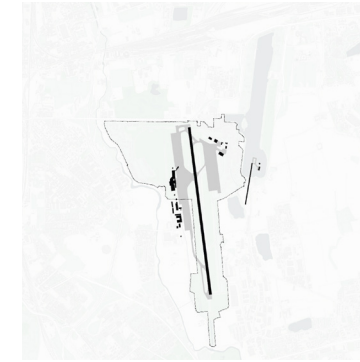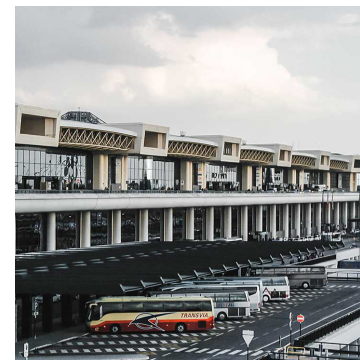
ATRIUM
restaurants - cafes - grocery - souvenir
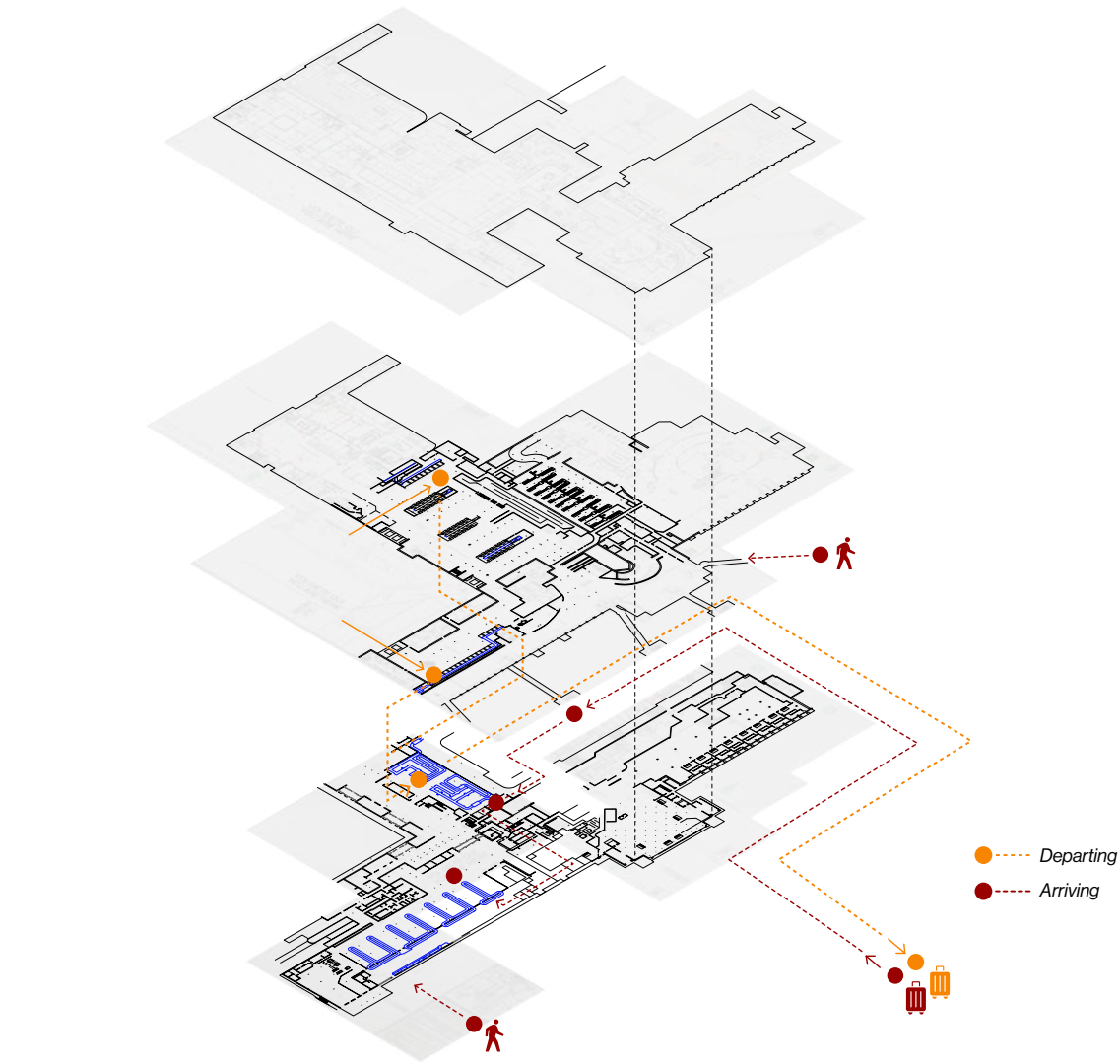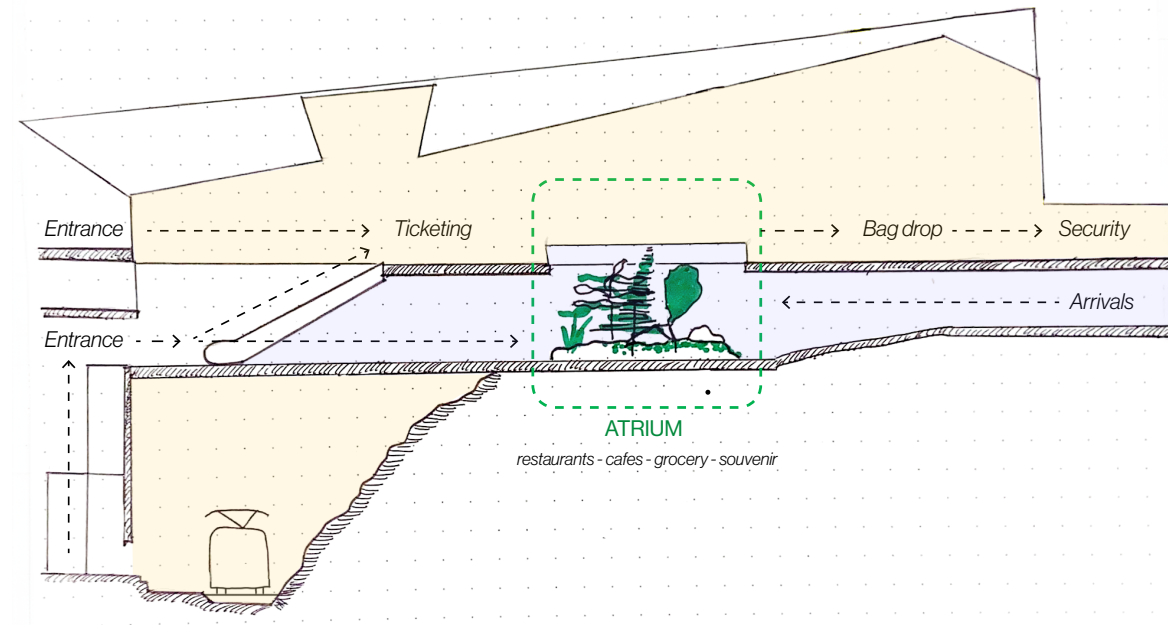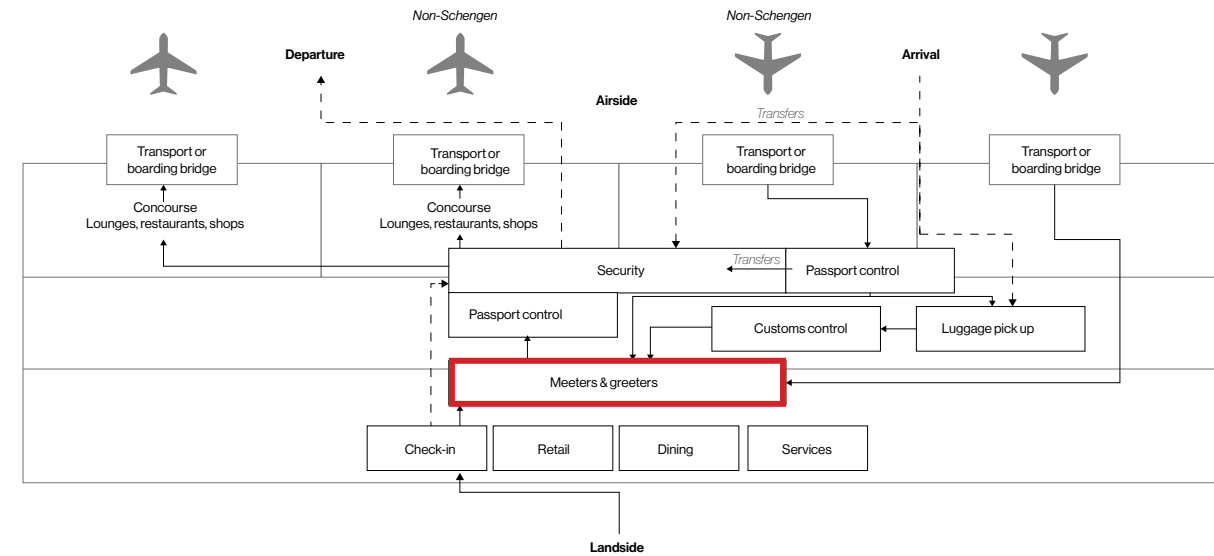
The meet and greet hall, centrally located within Linate Airport's terminal, will serve as a key gathering space that enhances the airport's welcoming atmosphere. This strategically placed area acts as a transition zone for arriving passengers, offering a clear point of connection for those meeting travelers. Its central position promotes ease of access and ensures it remains a focal point for both visitors and departing passengers, reinforcing the airport's role as a hub of connectivity.

In its current form, it feels confined with low ceilings and lacks comfortable seating. It lacks sunlight and views to the wider context of the airport. Also, arriving passengers must rely on signage to navigate out of the airport as the lobby area is monotonous with its lighting and organization.
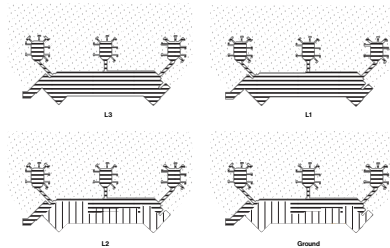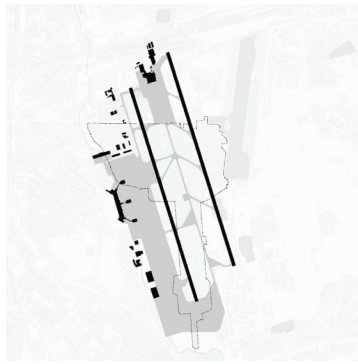
Private- offices & services
Public- before security
Public-after security

1748
2,932   3388
5007
16,140   2158
4,558   24255
710   1,600
518

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

LINATE (LIN)

Private- offices & services
Public- before security
Public-after security

7 %   1191
787   3193
7,853   6680
563   1097
1,601
1,188   5823

Ground

L1

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

BERGAMO (BGY)

BGY, the middle-sized airport near Milan, offers a stark contrast to Linate's design and role within the city's transport network. While Linate focuses on integrating with Milan's urban fabric, BGY prioritizes efficiency for low-cost carriers, with a more utilitarian and minimalistic design. This functional approach leads to a less immersive placemaking experience, where the emphasis is more on quick transitions and a longer travel to the center.
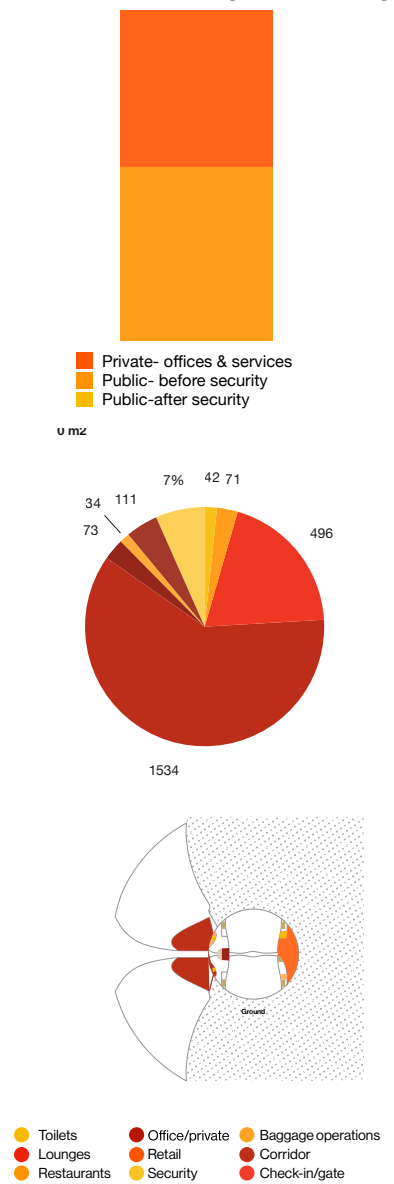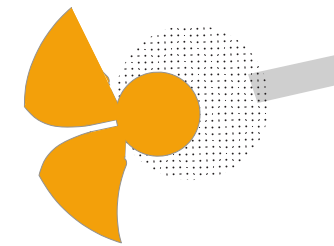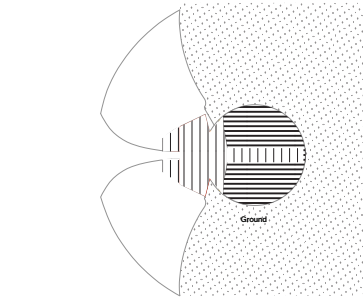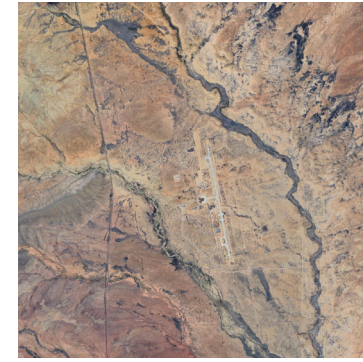
Private- offices & services
Public- before security
Public-after security

3,173 5% 2900 5770
9341
4873
20,372
21566
8,584
9,882 6,635

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

Private- offices & services
Public- before security
Public-after security

48 115 157
351
708
627
88
367 341

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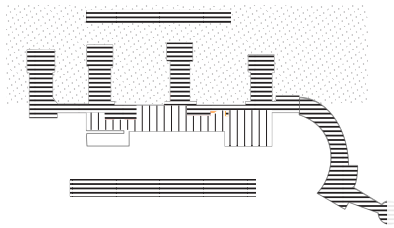Restaurants   Security   Check-in/gate

MALPENSA (MXP)

MXP, being Milan's primary international gateway, contrasts with Linate's more localized focus by handling a much broader range of international flights. While Linate is compact and geared toward regional connectivity, MXP's larger scale challenges placemaking by creating a more impersonal experience for travelers, with long walking distances and complex navigation.
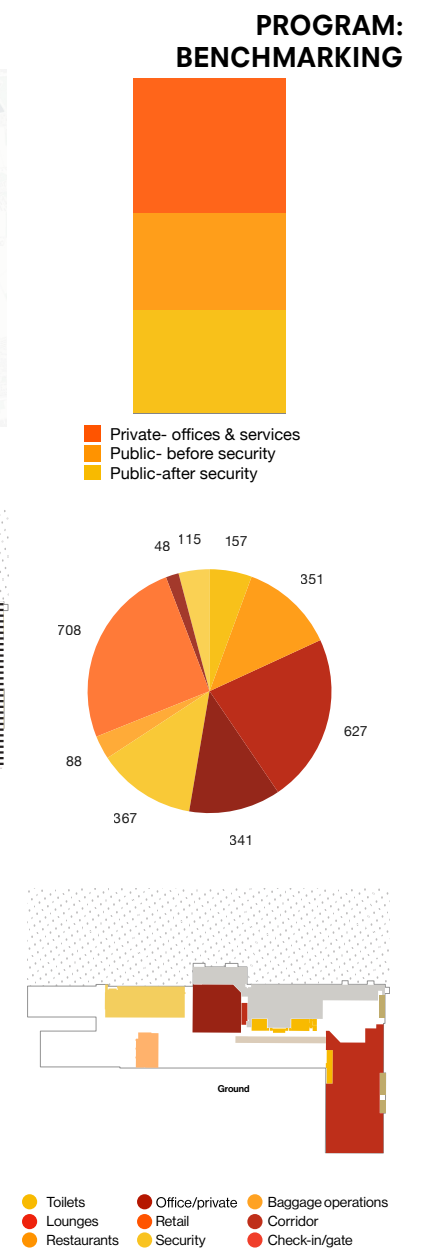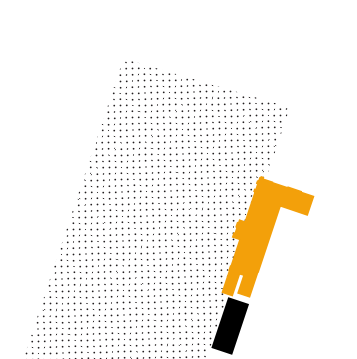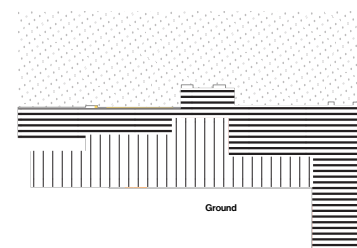
WYOMING (JAC)

JAC's design stands out by embracing the natural environment of the American West, with architecture that blends seamlessly into the surrounding landscape. The airport's rustic, mountain-inspired design creates a strong sense of place, reflecting the region's character. The passenger concourse has more the quality of a hunting lodge's living room than a shopping center.

Private- offices & services
Public- before security
Public-after security

2,500
2200
950
3500
5500
6000
18,000
10000
850
1,400
2,000

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

Private- offices & services
Public- before security
Public-after security

0 m2

7% 42 71
34 111
73
496
1534

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

WASH. D.C. (DCA)

DCA, much like Linate, is a smaller airport of 3 with a strong urban connection, located close to Washington, D.C.'s city center. Both airports prioritize ease of access for passengers.. It too is accessible by metro, but relies on personal vehicles even more. Located along the Potomac River, it is limited in how many flights it can serve per hour. A passenger concourse with distinct steel structure ais a standout placemaking feature.

SPACE PORT AMERICA

Though vastly different in its purpose, located in the desert of New Mexico, Spaceport America epitomizes placemaking through its form. With a low silhoutte, it blends into the flatness of the landscape. Its internal program is therefore also different, as it does not operate commercial flights but rather private journeys to the edge of space through Virgin Galactic.

CLIENT

HOW CAN THE AIRPORT FILL FUNCTIONAL REQUIREMENTS, WHILE ALSO SERVING NON-FLYERS?
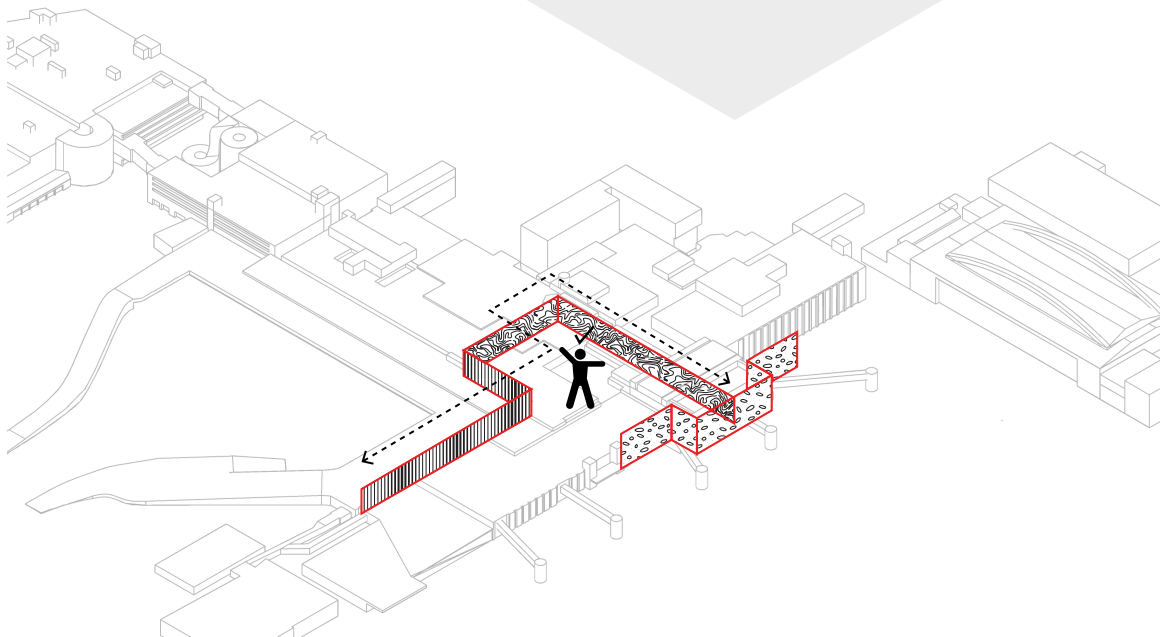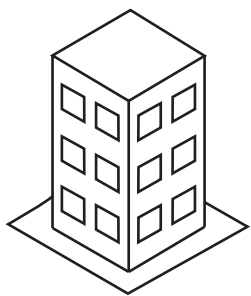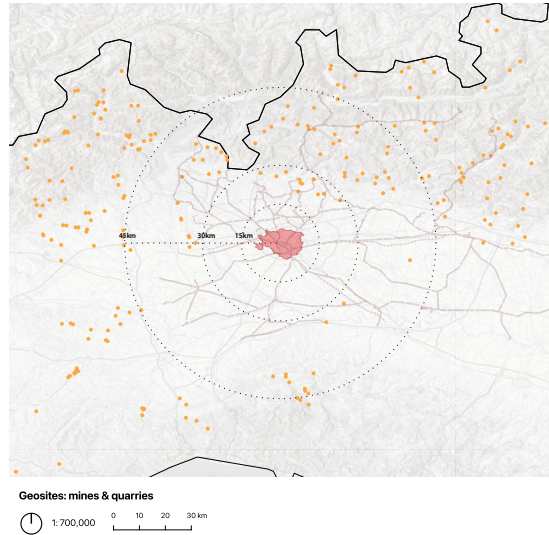
05
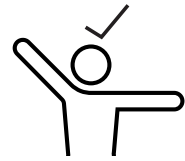
CLIENT AMBITION:

REFLECT MILANESE IDENTITY, AND ALSO
SERVE NON-FLYING STAKEHOLDERS

↓

REQUIREMENT #3:

**ILLUSTRATE THE "NARRATIVE OF
(MARBLE) EXTRACTION" IN BUILDING
CIRCULATION.**

Geosites: mines & quarries
1: 700,000   0   10   20   30 km

"EVERY PROJECT MUST FEATURE ONE **PROMINENTLY VISIBLE CRAFTED ELEMENT** (ENTRANCE HALL) MADE FROM **LOCALLY SOURCED MATERIALS**"

Marble, as a material, is deeply embedded in the identity of Milan, with its historical use in iconic structures like the Duomo and the Galleria Vittorio Emanuele II. This timeless material embodies both the city's architectural legacy and its commitment to craftsmanship, making it an ideal focal point for our group lens. By emphasizing marble, the project can connect its design to Milan's rich material tradition, providing a tangible link between the airport's architecture and the city's cultural heritage.

To exhibit the "Narrative of Extraction" as explored through the group lens, marble can be presented in various forms along the circulation. For example, in the exterior facade marble could be "reimagined" by laminating iwithin glass panes to create a translucent effect. Then in the lobby it could be presented more conventionally, such as polished floor panels to guide the circulation. Then, finally in the concrouse area it can be left relatively untreated to express its origins in the Candoglia Quarry.
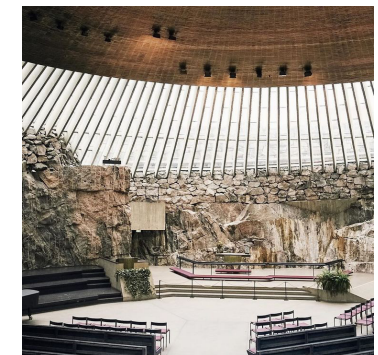
Reimagined
(facade)

ex. Apple Store, Macau

Arrival →

Refined
(pre-security area)
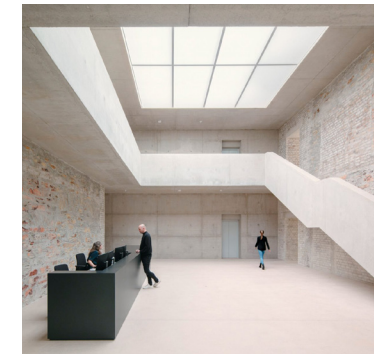
ex. Jacoby Studios, Paderborn

Raw
(post-security area)

ex. "Rock Church", Helsinki

Take-off →

The "Clients" in the design brief for Linate Airport encompass three key groups: the airport owner, businesses operating within the airport, and the passengers. The owner is responsible for the overall functionality and long-term sustainability of the airport, ensuring that it serves as a vital transportation hub for Milan while reflecting the city's identity.

The businesses, including airlines, retail operators, hospitality services, and logistics providers, play a crucial role in creating a seamless, efficient, and profitable environment.

The passengers, as the end users of the airport, are also the main revenue source for the entire airport ecosystem. However, they also have the least agency and have the least agency in altering the airport flying experience.

	OWNERS DECISION MAKERS	BUSINESSES SERVICE PROVIDERS	PASSENGERS CUSTOMERS
DEGREE OF AGENCY:	■	■	■
REVENUE	←	€	●
PRIORITIES:	PROFIT ENVIRONMENT	PROFIT EFFICIENCY	EXPERIENCE EFFICIENCY
ORGANIZATIONS:	SEA Milan Airports Milano Prime Comune di Milano	ITA AIRWAYS swissport	

Milano
Malpensa

MILAN
BERGAMO
AIRPORT | BGY

50+ min

40+ min

15 min
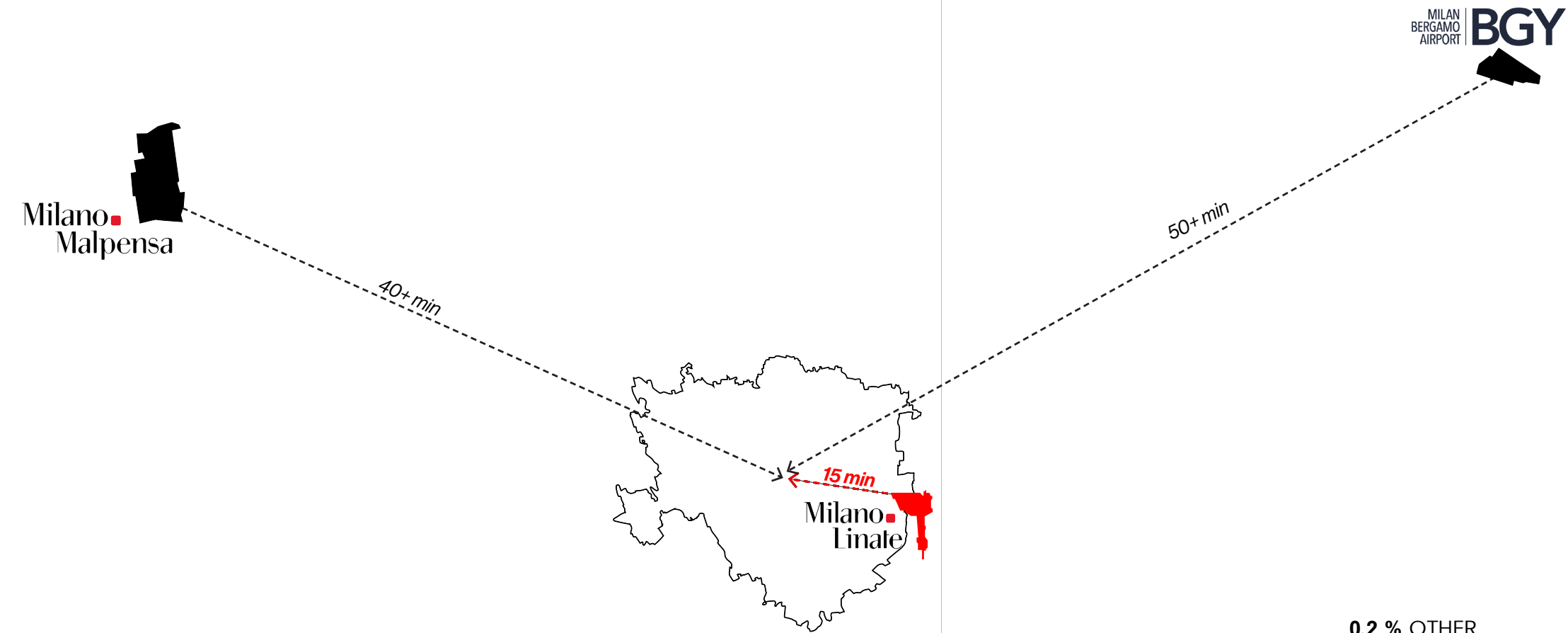
Milano
Linate

OWNERS:

Linate is operated by SEA Milano Airports, the same company responsible for Malpensa. SEA oversees all aspects of airport management, including infrastructure, services, and strategic development. However, the airport is owned by the City of Milan as the majority owner, with F2i with a minority stake. This infrastructure conglomerate finances many of Italy's airports, railyards, and ports. This means there is an incentive to balance financial stability with the more collective initiatives of the municipality.

0,2 % OTHER

PATROCINIO

F2i **45 %**

F2i

54,8 % MUNICIPALITY

Comune di
Milano

FLIGHTS PER MONTH
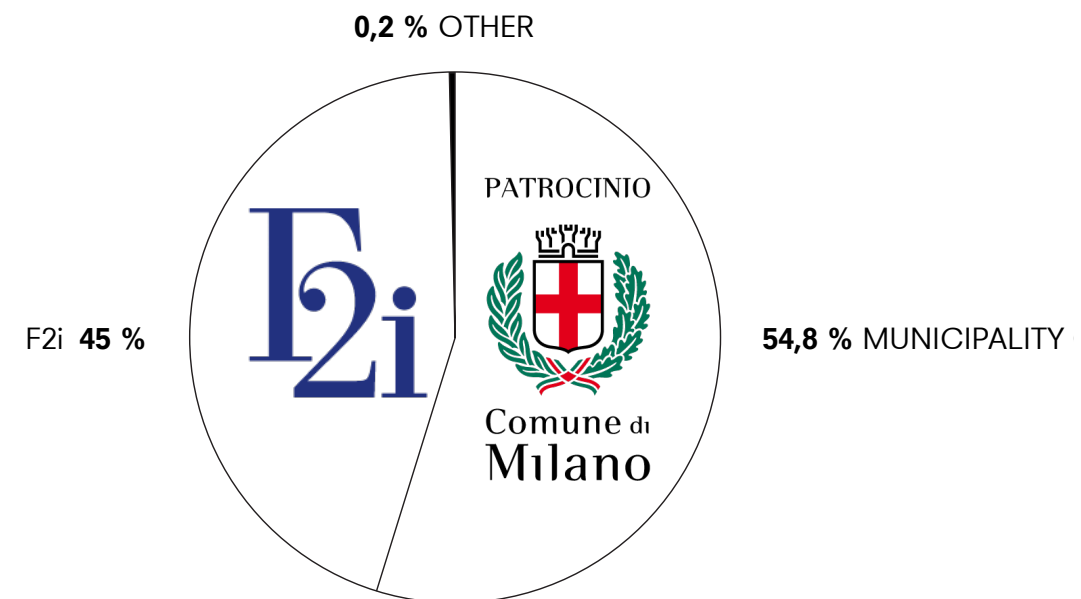
Linate Airport has seen a notable increase in passenger traffic post-COVID, with a steady recovery in both regional and business travel. However, there remains potential to further capitalize on revenue during off-peak seasons. By enhancing its offerings for non-peak periods such as diversifying retail options, expanding seasonal services, and promoting local cultural experiences around the Idroscalo—Linate could better capture passenger activity year-round, optimizing both profitability and airport vibrancy throughout the entire year.

PASSENGERS IN MILLIONS

PREDICTION

TOTAL MOVEMENTS

Holdings of SEA SpA 2023

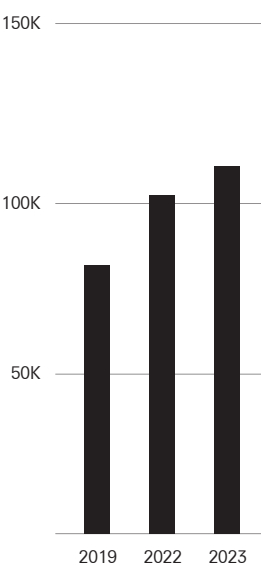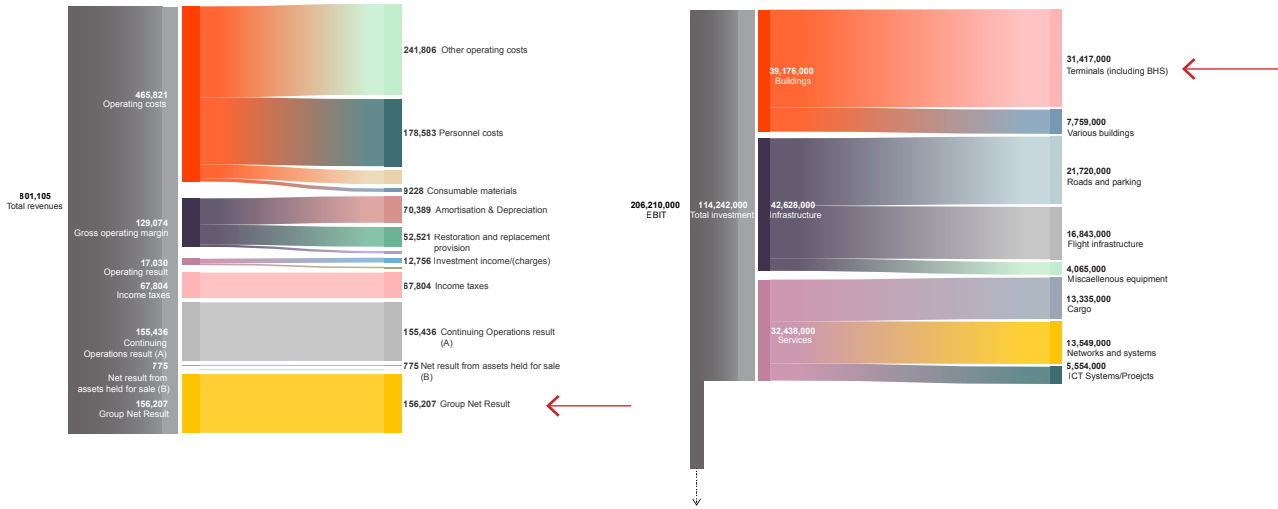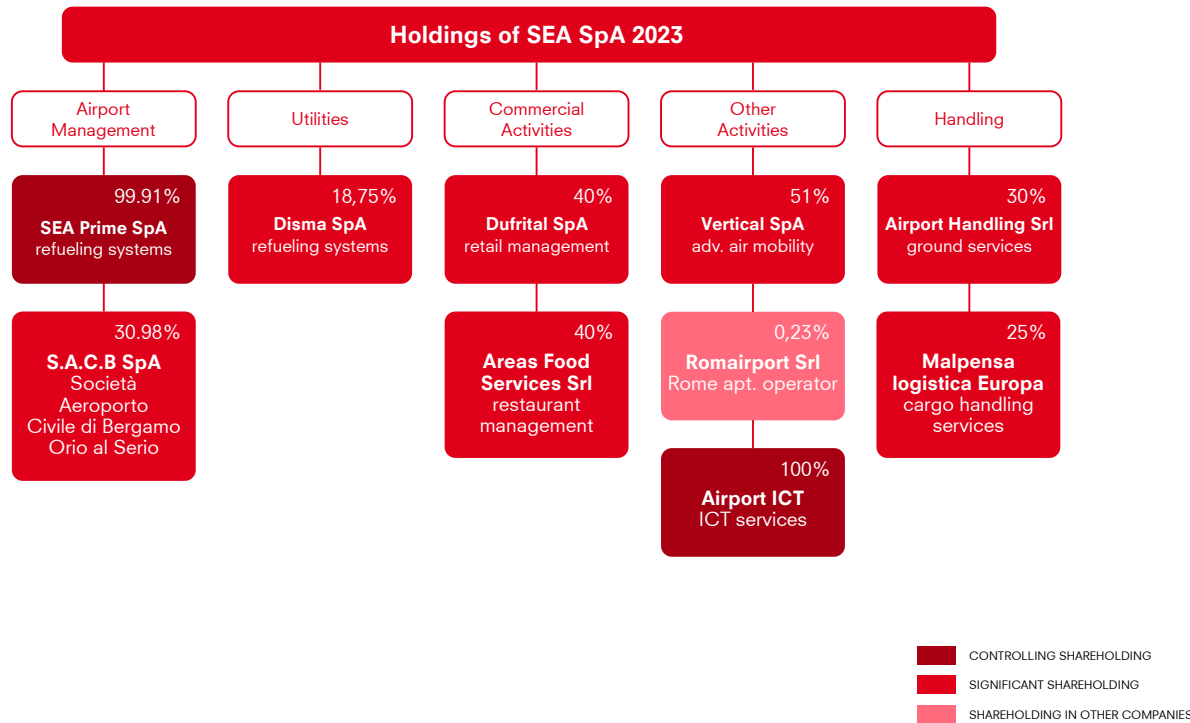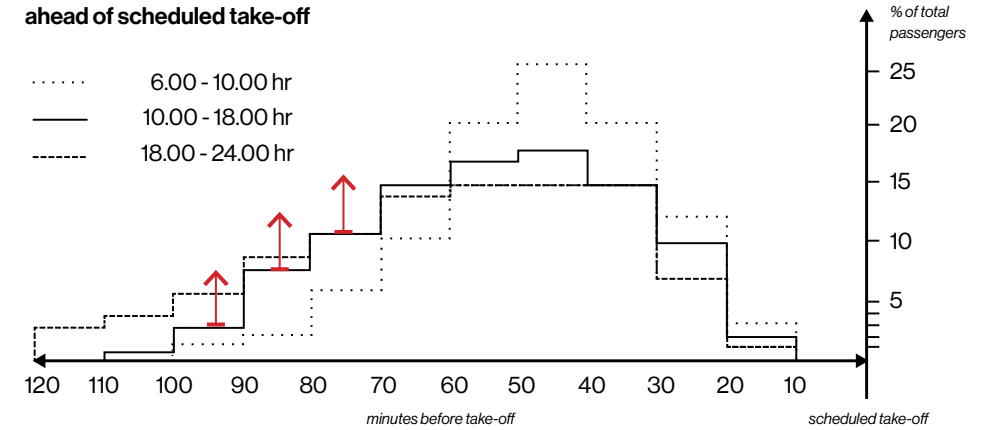|				
Airport Management	Utilities	Commercial Activities	Other Activities	Handling
99.91% **SEA Prime SpA** refueling systems	18,75% **Disma SpA** refueling systems	40% **Dufrital SpA** retail management	51% **Vertical SpA** adv. air mobility	30% **Airport Handling Srl** ground services
30.98% **S.A.C.B SpA** Società Aeroporto Civile di Bergamo Orio al Serio		40% **Areas Food Services Srl** restaurant management	0,23% **Romairport Srl** Rome apt. operator	25% **Malpensa logistica Europa** cargo handling services
			100% **Airport ICT** ICT services	

■ CONTROLLING SHAREHOLDING

■ SIGNIFICANT SHAREHOLDING

■ SHAREHOLDING IN OTHER COMPANIES

Distribution of passenger arrival times ahead of scheduled take-off

...... 6.00 - 10.00 hr

——— 10.00 - 18.00 hr

------- 18.00 - 24.00 hr

1. Sustainability and Environmental Goals
Reduce the airport's carbon footprint by increasing energy efficiency, incorporating renewable energy, and minimizing waste. Expand green spaces, implement measures to reduce noise pollution.

2. Modernization and Passenger Experience
Enhance the airport's facilities to provide a world-class passenger experience, including updated terminals and streamlined operations. Incorporate smart technologies for faster check-ins, security, and baggage handling.

3. Urban Development and Local Engagement
Integrate public spaces, reconnect the environment and park. Address community concerns, while ensuring the airport continues to deliver economic benefits to the local population

4. Smart City and Innovation
Promote sustainable mobility including electric vehicles, sharing facilities, and enhance seamless public transport.

5. Cultural and Economic Leadership
Strengthen Milan as a global hub for culture, to attract international events and tourism. Position Linate as a hub for business travelers and short-haul European routes to support Milan's role as a business and cultural destination.

Linate is unique from most government-subsidized airports that it consistently operates at a profit, and has historically been able to invest in terminal and infrastructure improvements to maintain its competetive edge.

SEA has an interest in passengers dwelling longer in the post-security concourse area as they are a captive audience, forced to spend more at dining and retail. In contrast, The City of Milan prioritises more collective goals related to the environment and culture.
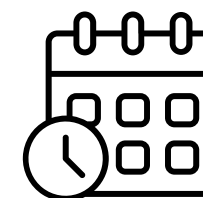
OWNERS
SUMMARY:

1. **Increase time spent**

Move DEPARTING passengers through security quickly to spend in retail. Encourage ARRIVING passengers to linger to spend in retail & dining.
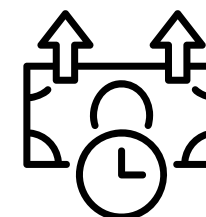
2. **Multi-seasonal revenue**

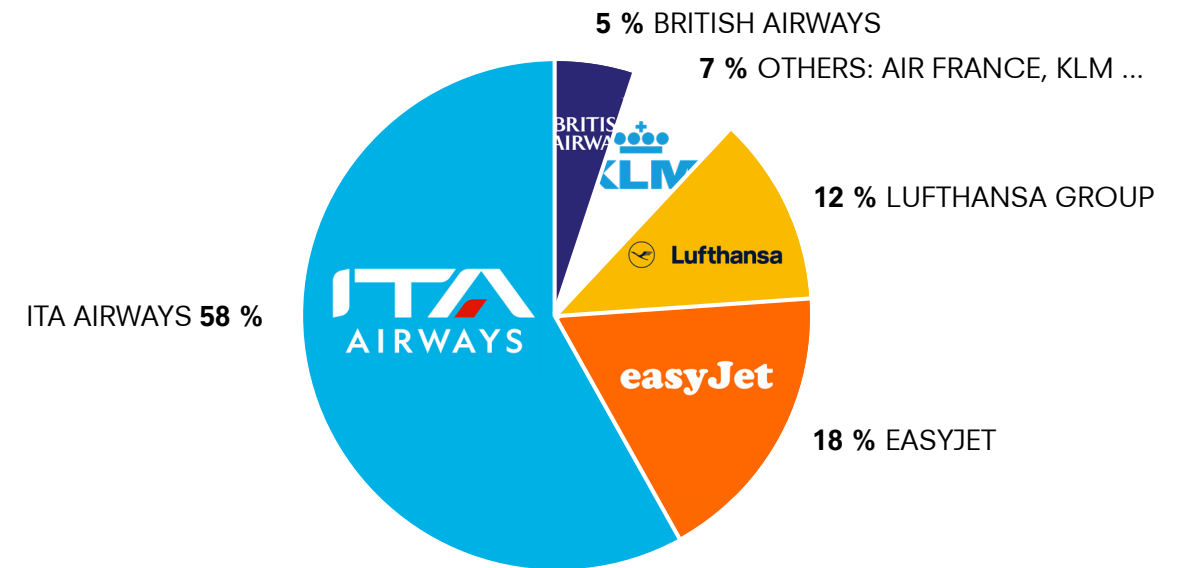Attract visitors to airport area during low-flight season to increase revenue.

3. **Environmental**

Meet the Municipality of Milan's goals for reduced noise pollution, expanded green space, & improving air quality.

5 % BRITISH AIRWAYS

7 % OTHERS: AIR FRANCE, KLM ...

12 % LUFTHANSA GROUP

ITA AIRWAYS **58 %**

18 % EASYJET

BUSINESSES:

The main businesses operating at Linate Airport include airlines, retailers, hospitality services, and logistics providers. For airlines, priorities lie in optimizing check-in processes, efficient boarding areas, and seamless passenger flow, all of which require functional and flexible architectural design.

Retailers focus on creating inviting spaces that attract and engage travelers, aiming for an experience that blends convenience with Milan's distinctive style.

Hospitality services, including restaurants and lounges, would be interested in creating comfortable, relaxing environments that reflect Milan's culture while offering

high-quality services.

Finally, logistics providers prioritize smooth, accessible areas for cargo handling and transport infrastructure, ensuring the airport operates efficiently behind the scenes. Each of these businesses looks for architecture that balances functionality, brand identity, and a strong connection to Milan's cultural and urban fabric.
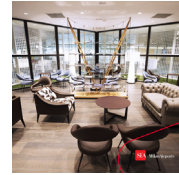
LOUNGES

BRITISH AIRWAYS LOUNGE

ITA AIRWAYS LOUNGE

PIRANESI CLASSIC LOUNGE

LEONARDO EXCLUSIVE LOUNGE

BRITISH AIRWAYS

ITA AIRWAYS

SEA GROUP

SEA GROUP

CARGO

MALPENSA LOGISTICA

WORLDWIDE FLIGHT SERVICES

LUFTHANSA CARGO

BETA-TRANS

FUEL

AIR BP

ENI

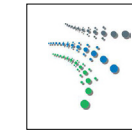LEVORATO MARCEVAGGI

CARBOIL AVIATION SERVICES

GROUND HANDLERS

SWISSPORT INTERNATIONAL

AVIA PARTNER HANDLING

GH ITALIA ALISUD GROUP
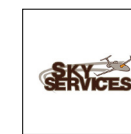

SIGNATURE AVIATION

UNIVERSAL AVIATION

AIRPORT HANDLING
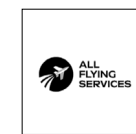

XPRESS HANDLING

SKY SERVICES

ARGOS HANDLING

ARE SRL

ALL FLYING SERVICES

AC95 SP
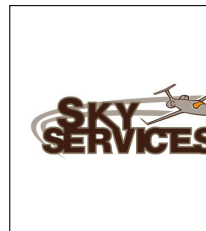
CATERING FIRMS

ALPHA FLIGHT SERVICES

DNATA SRL

HI FLY CATERING

LA SCALETTA

MARGO CATERING

SKYCATERING

SKYCUISINE

MEDITERRANEA CATERING

1. **Increase non-aeronautical revenue**

ITA Airways is capped on # of departures and size of planes. Can only increase revenue from auxillary services, such as retail and dining.
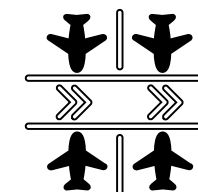
2. **Convey stability**

ITA Airways is a young firm born out of Alitalia's takeover. Linate serves as a hub for operations, and communicating "Italianness" through its branding.
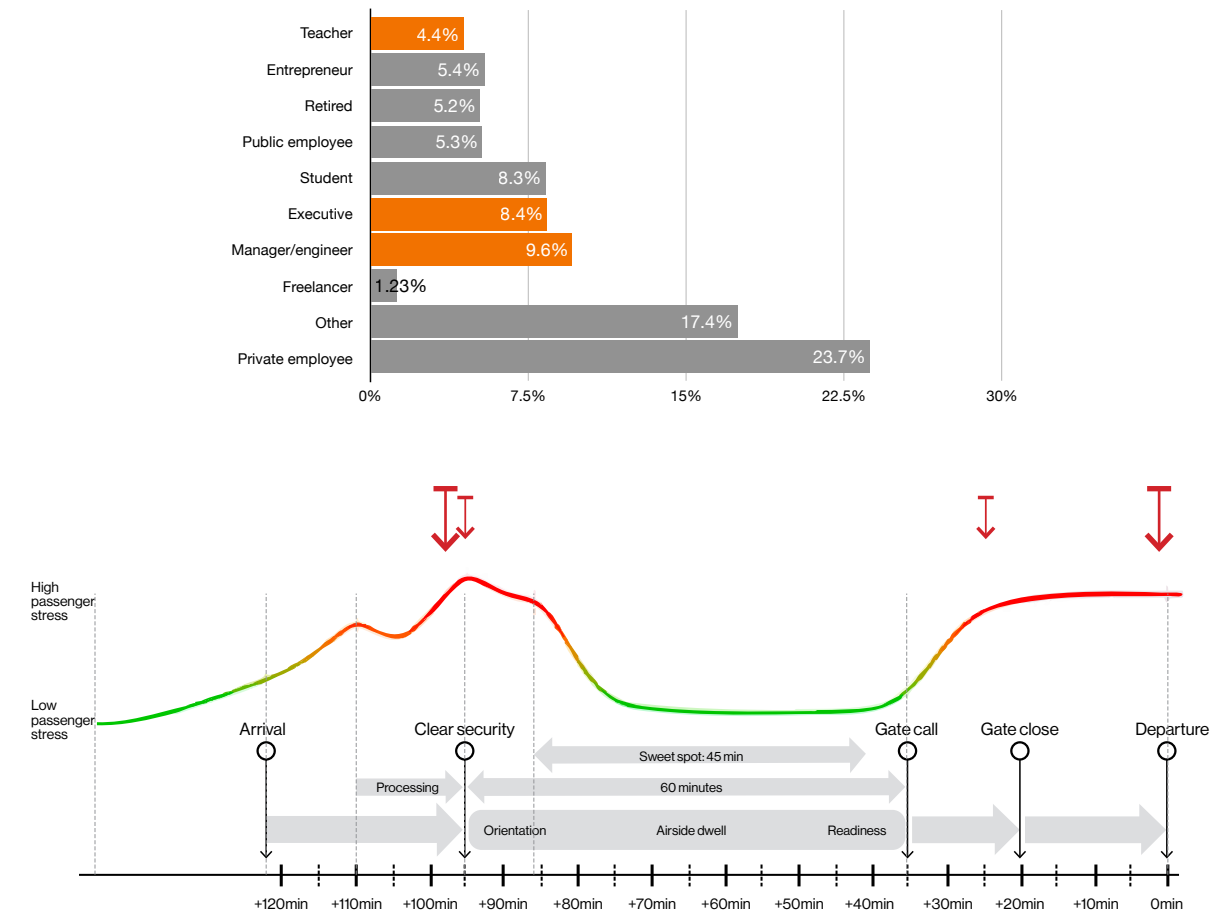
3. **Reduce apron congestion**

Increased # of jet bridges allows passengers to board & unboard quickly. Reduces apron traffic, easing logistics for ground handelers.

BUSINESSES SUMMARY:

Teacher — 4.4%
Entrepreneur — 5.4%
Retired — 5.2%
Public employee — 5.3%
Student — 8.3%
Executive — 8.4%
Manager/engineer — 9.6%
Freelancer — 1.23%
Other — 17.4%
Private employee — 23.7%

High passenger stress
Low passenger stress

Arrival — Clear security — Gate call — Gate close — Departure

Sweet spot: 45 min
Processing — 60 minutes
Orientation — Airside dwell — Readiness

+120min +110min +100min +90min +80min +70min +60min +50min +40min +30min +20min +10min 0min
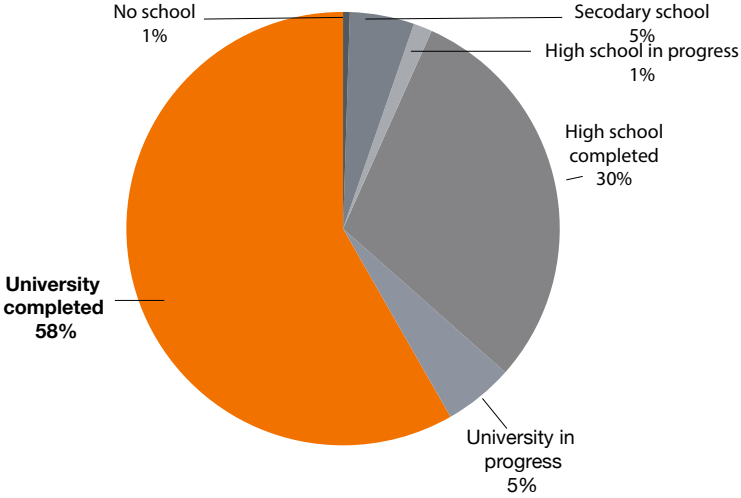
PASSENGERS:

Linate Airport primarily serves business travelers, short-haul passengers, and frequent flyers, with a significant number of passengers traveling to and from Milan for work-related purposes. These travelers prioritize efficiency, seamless navigation, and quick access to transportation options. For business travelers, the architecture needs to offer quiet, functional spaces for work, such as comfortable lounges and efficient meeting points. Frequent flyers look for convenience, with well-designed security areas, clear signage, and quick connections between trans-port modes. Leisure travelers, while a smaller segment, value a comfortable and enjoyable experience, with retail and dining spaces that reflect Milan's cultural identity.
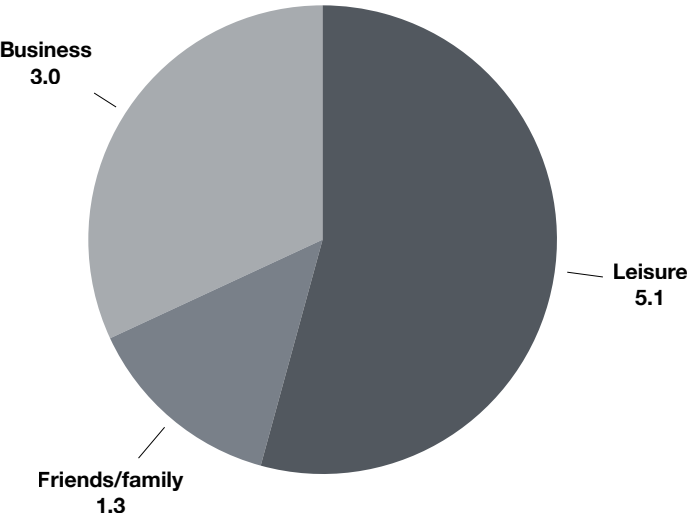
The average stay of passengers s 137 minutes, with stress peaks at the ecurity & gate. Reducing this stress will pose a design challenge that could be adressed with transparency in the flow.
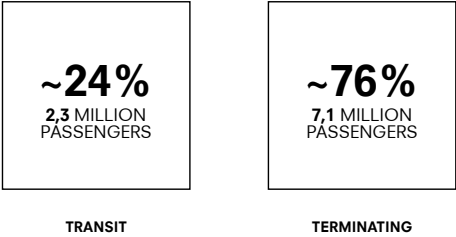
LEVEL OF
EDUCATION

No school
1%

Secodary school
5%

High school in progress
1%

High school
completed
30%

University
completed
58%

University in
progress
5%

PURPOSE
FOR TRAVEL

Business
3.0

Leisure
5.1

Friends/family
1.3

TRANSIT
VS.
TERMINATING

~24%
2,3 MILLION
PASSENGERS

TRANSIT

~76%
7,1 MILLION
PASSENGERS

TERMINATING

DOMESTIC
VS.
INTERNATIONAL

~60%
5,64 MILLION
PASSENGERS

DOMESTIC

~40%
3,76 MILLION
PASSENGERS

INTERNATIONAL

AVERAGE
AGE

39
YEARS
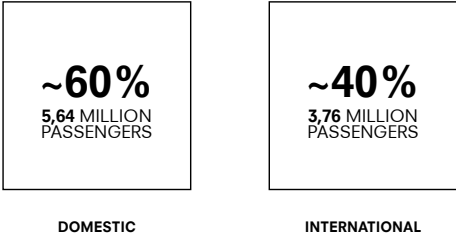
1. **Lounges & workspaces**

A large demographic of passengers are students and business travelers. Co-working spaces and open lounges would service their needs more than typical seating.
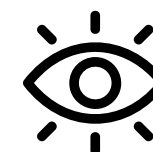
2. **Improve public, pre-security area**

The meeter's & greeter's hall currently is congested and anti-climactic. More space for friends & family can reduce stress.

3. **Speed & clarity**

Passenger stress can be reduced by maximizing sightlines to the apron area and next point in their circulation sequence.
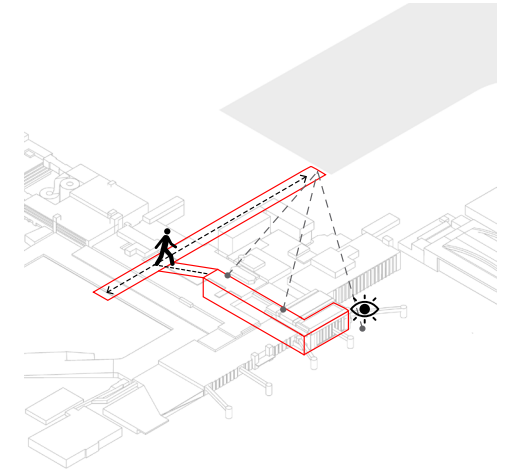
PASSENGERS SUMMARY:

SUMMARY

06

AMBITION & REQUIREMENTS:

SITE AMBITION:
CONNECT THE INFRASTRUCTURE OF THE AIRPORT,
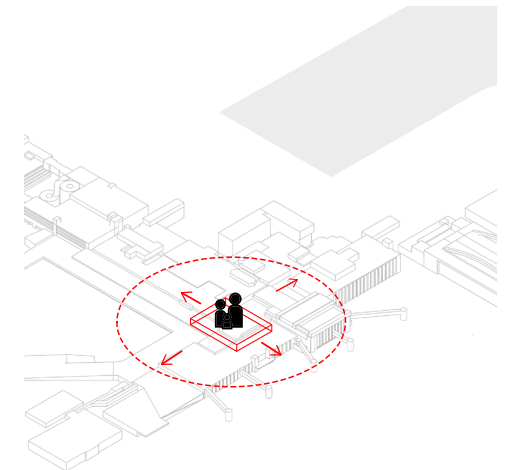WITH HERITAGE OF WATER

↓

REQUIREMENT #1:

**SIGHTLINES TO WATERFRONT FOR
ARRIVING PASSENGERS. WALKABLE
LINK FOR ALL USERS.**

PROGRAM AMBITION:
ENHANCE THE PUBLICLY ACCESSIBLE
PRE-SECURITY AREA
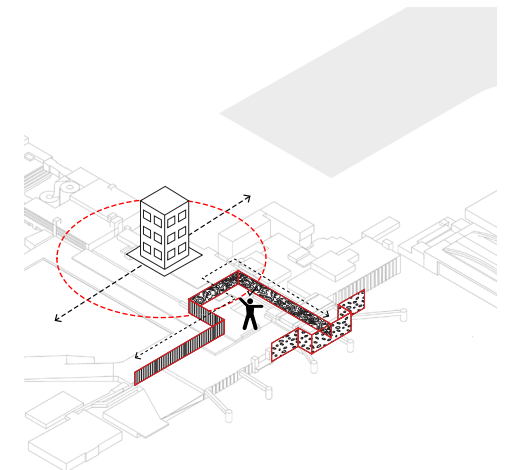
↓

REQUIREMENT #2:

**SPACIOUS, CENTRALLY LOCATED
MEETERS & GREETERS HALL**

CLIENT AMBITION:
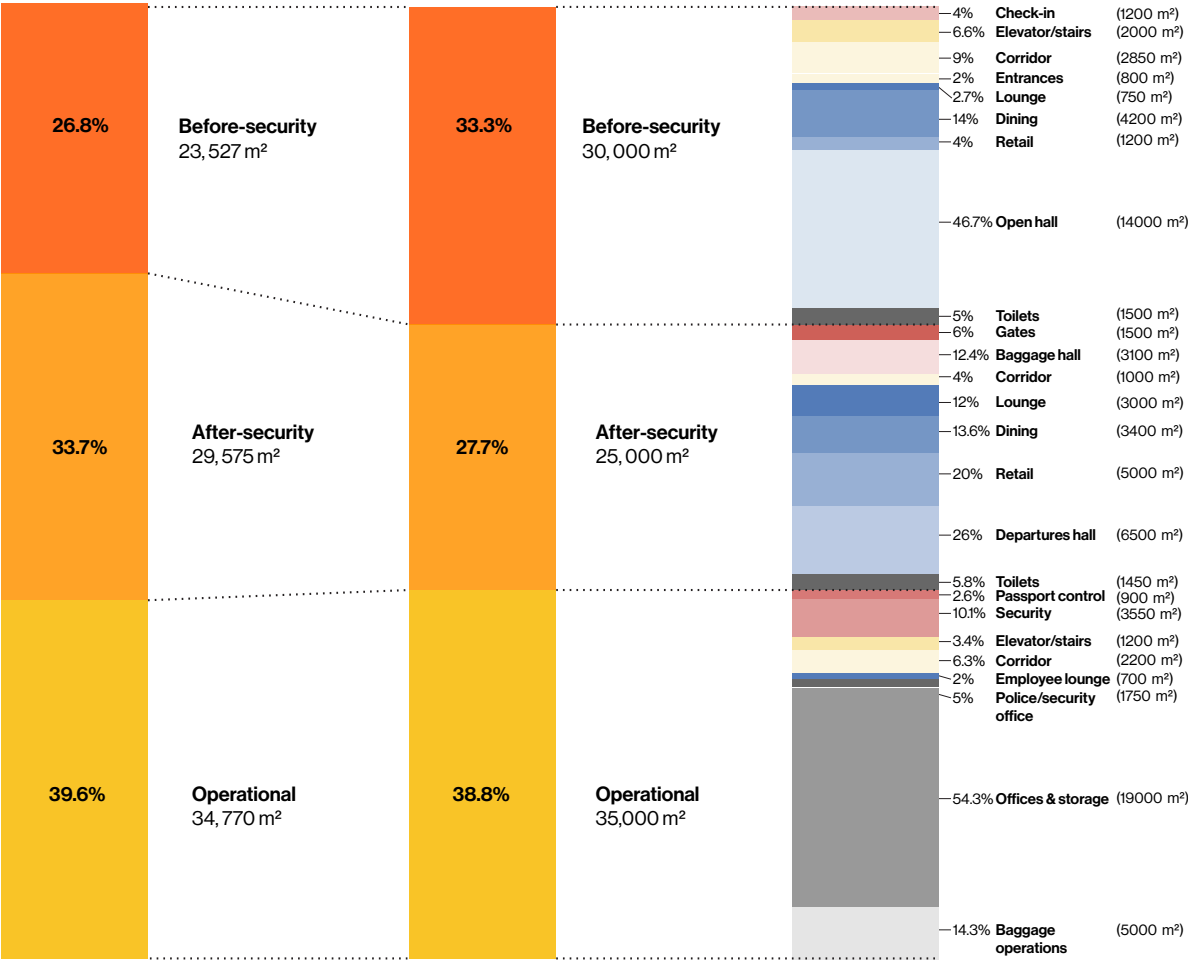REFLECT MILANESE IDENTITY, AND ALSO
SERVE NON-FLYING STAKEHOLDERS

↓

REQUIREMENT #3:

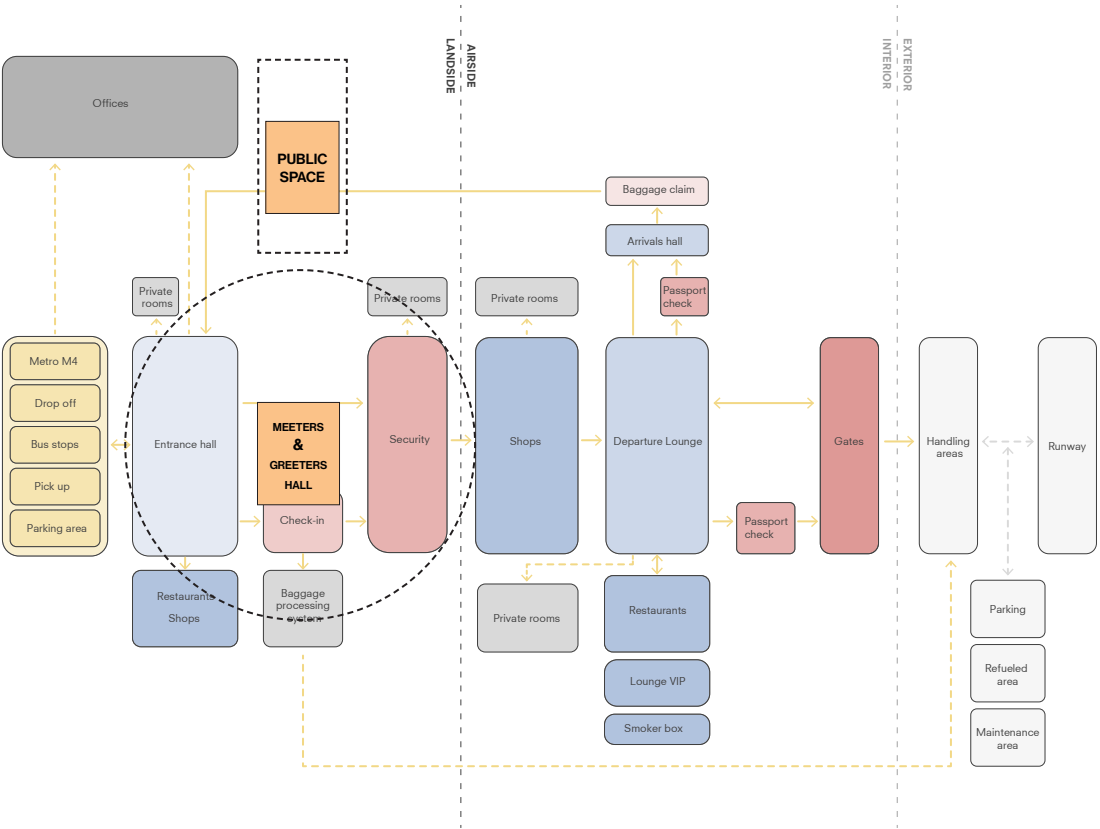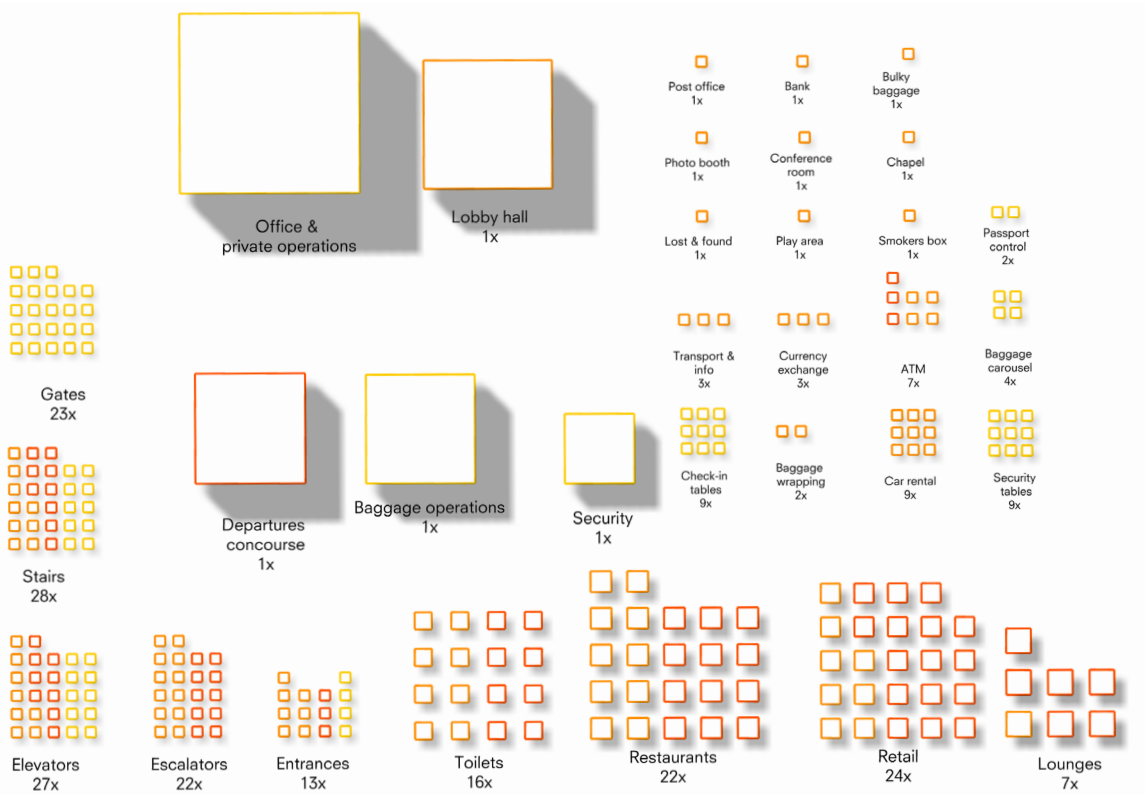**LANDMARK EXTENSION TO THE CITY
OF MILAN.**

TOTAL

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

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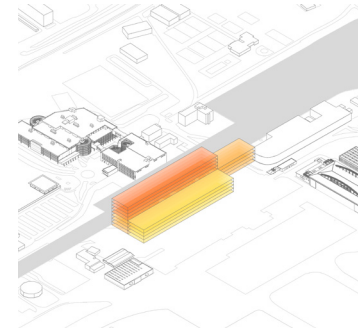Total terminal building GFA:
90, 000 m²

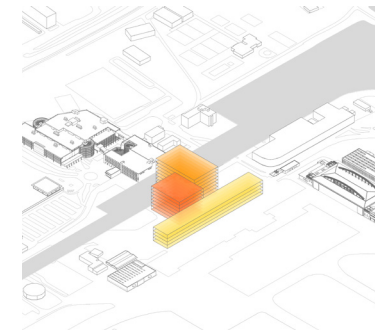|		
4%	Check-in	(1200 m²)
6.6%	Elevator/stairs	(2000 m²)
9%	Corridor	(2850 m²)
2%	Entrances	(800 m²)
2.7%	Lounge	(750 m²)
14%	Dining	(4200 m²)
4%	Retail	(1200 m²)
46.7%	Open hall	(14000 m²)

26.8% Before-security 23, 527 m²
33.3% Before-security 30, 000 m²

5%	Toilets	(1500 m²)
6%	Gates	(1500 m²)
12.4%	Baggage hall	(3100 m²)
4%	Corridor	(1000 m²)
12%	Lounge	(3000 m²)
13.6%	Dining	(3400 m²)
20%	Retail	(5000 m²)
26%	Departures hall	(6500 m²)

33.7% After-security 29, 575 m²
27.7% After-security 25, 000 m²

5.8%	Toilets	(1450 m²)
2.6%	Passport control	(900 m²)
10.1%	Security	(3550 m²)
3.4%	Elevator/stairs	(1200 m²)
6.3%	Corridor	(2200 m²)
2%	Employee lounge	(700 m²)
5%	Police/security office	(1750 m²)
54.3%	Offices & storage	(19000 m²)
14.3%	Baggage operations	(5000 m²)

39.6% Operational 34, 770 m²
38.8% Operational 35, 000 m²

PROGRAM:

Office & private operations

Lobby hall 1x

Post office 1x
Bank 1x
Bulky baggage 1x

Photo booth 1x
Conference room 1x
Chapel 1x

Lost & found 1x
Play area 1x
Smokers box 1x
Passport control 2x

Transport & info 3x
Currency exchange 3x
ATM 7x
Baggage carousel 4x

Gates 23x

Departures concourse 1x

Baggage operations 1x

Security 1x

Check-in tables 9x
Baggage wrapping 2x
Car rental 9x
Security tables 9x

Stairs 28x

Elevators 27x
Escalators 22x
Entrances 13x
Toilets 16x
Restaurants 22x
Retail 24x
Lounges 7x

Offices

PUBLIC SPACE

Metro M4
Drop off
Bus stops
Pick up
Parking area

Private rooms

Entrance hall

MEETERS & GREETERS HALL

Check-in

Baggage processing system

Security

Private rooms

Shops

Private rooms

Departure Lounge

Passport check

Baggage claim

Arrivals hall

Passport check

Gates

Handling areas

Runway

Parking

Refueled area

Maintenance area

Restaurants
Shops

Restaurants

Lounge VIP

Smoker box

AIRSIDE LANDSIDE

EXTERIOR INTERIOR

■ ■ ■ ■ ■ EXISTING SITE LIMTS   ■ ■ ■ ■ ■ PROPOSED SITE LIMTS

SITE LIMITS:

"Water to Building" scheme
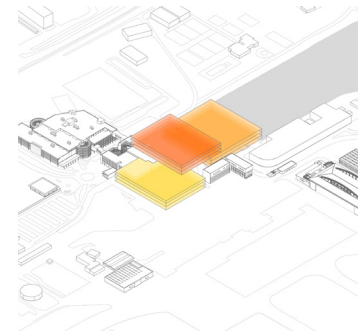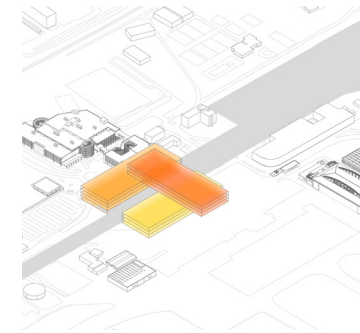
"Building to Water" scheme
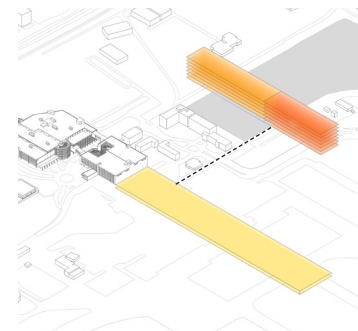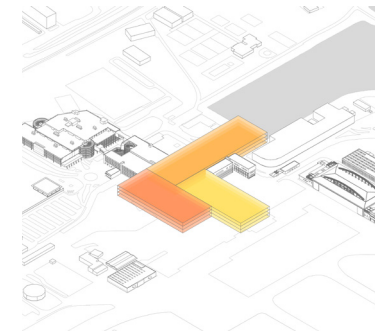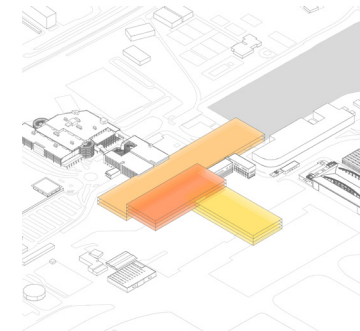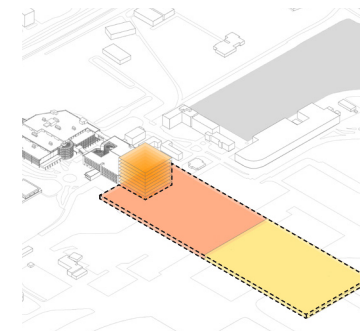

Floating terminal   *Underground terminal*   *Decentralized terminal*
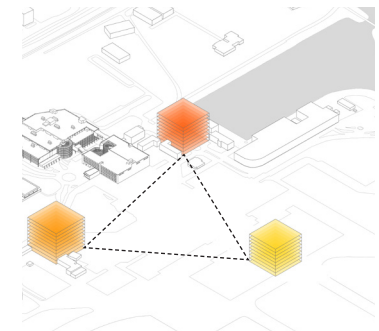
"Radical" schemes

MASSING
IDEATION:

⬤ **Operational:** 27,000 m²
🔴 **Pre-security:** 36,000 m²
🟠 **Post-security:** 27,000 m²

END