

RESEARCH PLAN: FROM SITE TO FLIGHT

Site-Integrated Placemaking in Linde Airport's Design
Complex Projects

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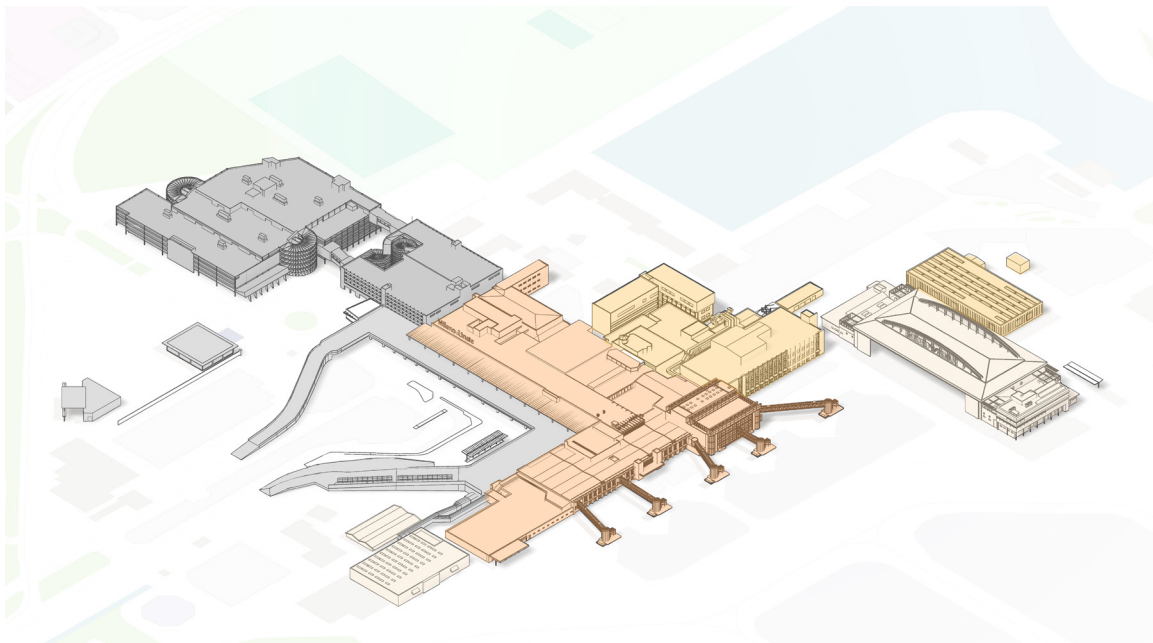


INTRODUCTION

01

Research question:

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



Keywords:

Linate Airport, Milan, placemaking, site, meeters & greeters hall

Problem statement:

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.

Research question:

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

Statement of significance:

As a key hub for business and tourism, the Milan metropolitan region is projected to continue dealing with increasing passenger numbers over the coming decades. While the larger Malpensa Airport will be able to expand and accommodate a greater number of passengers, Linate can differentiate from the machine-like model and serve as an example of people-centric, and site-integrated airport architecture. This aspiration of connecting with its site is especially relevant for Linate since it is truly a city airport close to Milan's center. The findings of this research may also be applied to other building types, such as train and bus terminals that share the dual mandate of acting as both transport infrastructure and spaces for people.

Sub-questions:

1. How can core airport operations and security function efficiently, while **minimizing disruption** to users' experience?
2. How can pre-security areas, like the meeter and greeters hall, in an airport become a more **accessible social place**?
3. How can **transparency** in the terminal to its site and operations provide users a sense of contextual awareness, i.e. time and place?

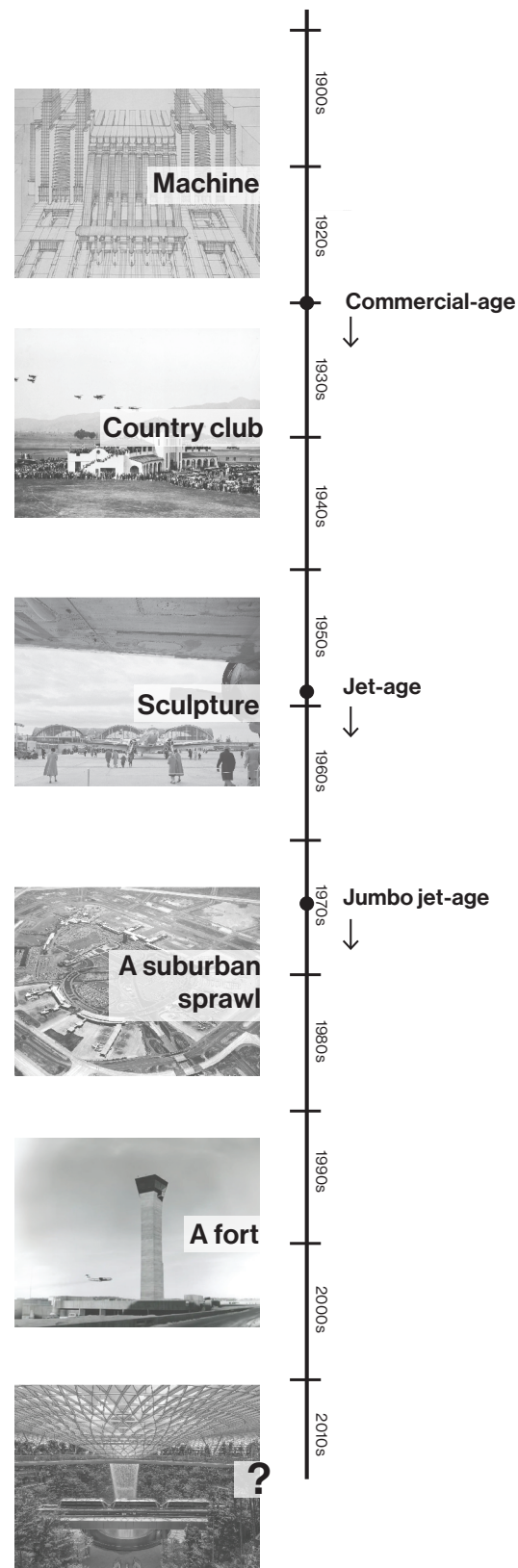
Research question:

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



CONTEXT

02



Today's status quo of airports as sterile, liminal spaces, is the product of over a century-long evolution shaped by cultural, economic, and technological factors. For the sake of this research, unraveling how aviation architecture degraded from the expressive to the expected is useful to find opportunities for differentiation. In *The Naked Airport*, architecture critic Alastair Gordon comprehensively tracks this development.¹ With relevance to the topics of place and time, it can be simplified into the following three periods:

1. Commercial aviation (1900s-mid 1950s):

Initial airports were little more than sheds and hangars along unpaved landing strips. Still, flying was largely reserved for wealthier classes with a high tolerance for risk given the loud, jarring, and smelly nature of air travel. As the industry began to formalize and open to the public, calls for the language of airport architecture were made but often called back to classical forms. Referencing temples or other stereotomic vernacular, they sought to convey a sense of weight and permanence, marking departure and arrival more ceremoniously. Fascination with time can also be observed, like with the "time-kiosk" located in the center of the hall of Croydon, England's 1920 neoclassical airport. A small tower exhibited analog wall clocks with the current times of cities around the world, speaking to a new, fluid understanding of time and place enabled by air travel.

These somewhat romantic qualities of airports were also contrasted by moves toward efficiency. For example, through his airport in Dearborn, Michigan, Henry Ford laid out a new vision calling out how "flying is now 90% man and 10% machine... our undertaking is to make it 90% machine and 90% man."² Move-

1. Alastair Gordon. *Naked Airport: A Cultural History of the World's Most Revolutionary Structure*. 1st ed. New York: H. Holt, 2004.

2. As quoted in Donald Duke, *Airports and Airways: Cost, Operation, and Maintenance* (New York: Ron-

ment and efficiency began to define this era where architect Richard Neutra claimed the true nature of the airport was of transition, not style, stating: "speed and fluidity in the transition from air to ground is what is needed more than a grand cour d'honneur in front of an airport."³ This foreshadowed a turn away from weighty, singular terminal buildings in favor of horizontally sprawling airports to more effectively process passengers off and onboard.

2. The Jet Age (mid-1950s-1970s)

The maiden public flight of the Boeing 707 in 1958 marked a paradigm shift in air travel. As the first commercial jetliner, it could traverse between New York and Paris almost three hours faster than the piston-powered airplanes it was replacing, with added benefits in capacity, reliability, and general smoothness. With less noise and vibration, the flight experience was more sanitized than ever before.⁴ More frequent and affordable cross-Atlantic flights created an elastic sense of time for passengers as one could cross multiple time zones without mentally registering. To accommodate the greater number of jets, airports needed to expand their aprons, and maintenance facilities, and insulate the terminal building from noise and fumes. These expansions led to what critic Reyner Banham called a "slummy sprawl" in airport facilities that "offered no legible or human order."⁵

The overt focus on functionality was met with an architectural response that Gordon calls the "jet-baroque" - terminals featuring concrete and steel to create highly expressive, sculptural forms to ignite a sense of

ald Press Company, 1927), 86.

3. Richard Neutra, "Terminals? — Transfer!", *Architectural Record* 68 no. 2 (August 1930), 99-104.

4. Thomas Leslie. "The Pan Am Terminal at Idlewild/Kennedy Airport and the Transition from Jet Age to Space Age." *Design Issues* 21 (December 1, 2005): 67.

5. Reyner Banham, "The Obsolescent Airport," *Architectural Review* (October, 1962): 252.

anticipation and excitement for flight.⁶ Eero Saarinen's swooping terminal for TWA at modern-day JFK's sprawling "airport suburb" is emblematic of this trend. For both departing and arriving passengers, it celebrates each stage of the sequence from approaching the building, walking through the passenger bridges, and offering grand views of the apron from the main lobby. In response to Neutra, spirited architecture like Minoru Yamasaki's St. Louis Lambert terminal and modern-day JFK's TWA and Pan Am Worldport sought to capture style in the experience of transience.

3. The jumbo jet age (1970s-present):

Boeing's introduction of the 747, the world's first jumbo jet, reflects the start of a period that further exasperated ongoing trends. Airports struggled to keep pace with the requirements brought by ever-larger jets in the sizes of aprons, lounges, and maintenance infrastructure. This meant many some were deemed obsolete already at their inception. Greater passenger numbers given the Airline Deregulation Act of 1978 coinciding with increased security measures following planejackings during the 70s combined to create stressful terminals with "alienating indignities."⁷ Spacious cocktail lounges were replaced by quick service restaurants, and security checkpoints separated passengers from companions far from the gate, reducing the sense of poignancy in flight.

Since the 90s many of these trends remain, but new constructions in growing economies across the Middle East and Asia have sought to give an alternative to the impersonal nature of deregulated airports by introducing new programming like theaters and gymnasiums. While principles of mall design from the likes of Victor Gruen have inspired the modern terminal to be a more pleasurable space for lingering, the building very much remains

predicated on the passenger as "customer."

This evolution reveals how pursuing efficiency and growth across airports has eroded the quest for spirited, place-specific architecture. From expressive terminals in early aviation to the neutral, sprawling structures due to deregulation and security requirements, the passenger experience has been suppressed. This context sets the stage for the key challenge of this research: how city airports can find a balance between efficiency and fostering a distinct sense of time and place through placemaking.

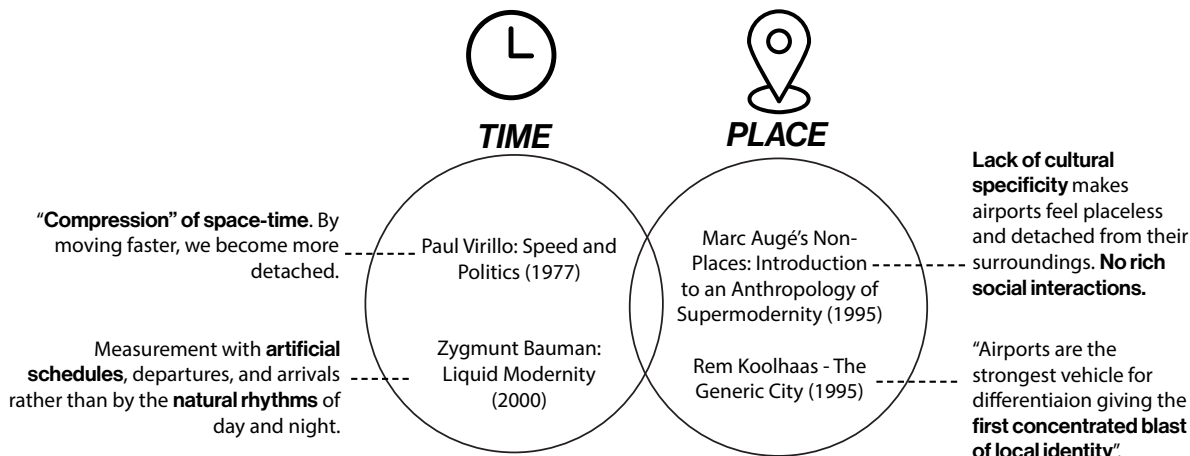


6. Alastair Gordon, *The Naked Airport*, 203.

7. Alastair Gordon, *The Naked Airport*, 205.

THEORETICAL FRAMEWORK

03



Archive photo Lake Idroscalo: an artificial pond for landing sea planes and the start of modern day Linate.

For a long time, it has been used water sports and recreation. (Source: Andrea Valentini, *Scoprendo Milano: il Forlanini, l'aeroporto anfibio*, 2017).

Theoretical framework:

This research refers to conventional theorists to provide some vocabulary to discuss the themes of time and place in airport architecture. It will then attempt to connect these somewhat abstract variables with the work of architects through time to inform new best practices for placemaking.

As the earlier synopsis of airport architecture's evolution revealed, the increased accessibility of air travel reformed society's conception of distance and its notion of transnational borders. Unsurprisingly, this major transformation triggered voices of disillusionment. As a dynamic building type that encapsulates issues of globalization, capitalism, and technology, airports have been a popular medium to both critique and celebrate modern life. Though certain theorists are referenced in airport design to the point of cliché, their conceptions are nevertheless relevant in discussing alternatives to the machine-like understanding of airports. The following writers provide a useful lens for one to begin thinking of "time," and how this comes at the expense of "place" in airports.

Time:

On the topic of speed as an influence in airports, French philosopher Paul Virilio's concept of dromology, or the "science of speed" as a dominant logic in society is useful in framing how jet travel has compressed the conception of spacetime.⁸ The jet age has been paradoxical in that the faster passengers move in the air, the less they sense it. This means that human biology's perception of time with the day and night cycle has been replaced by artificial schedules of departure and arrival. The framework of hyper-speed in modern life that Virilio describes raises a productive challenge for this research of architecture's potential to counter the sense

8. Paul Virilio. *Speed and Politics*. Semiotext(e), 2006.

of disorientation and detachment in air travel. This could mean designing for improved temporal perception with transparency to the next point in the sequence, or layouts that promote a sense of calm and "slowing down" in the concourse area.

Place:

On the topic of place, the first voice informing this research comes expectedly from French anthropologist Marc Augé's 1992 notion of "non-places."⁹ This seminal text characterizes spaces such as airports, shopping malls, and highways as devoid of cultural specificity, detachment from their surroundings, and lacking in rich social interactions. He is critical of airports in their current form for following a logic of "super modernity" in which we live with excessive information and immediacy. This creates spaces of transience and anonymity, which are governed by their functionality. This is in contrast to "anthropological places" which are imbued with a shared sense of history and interpersonal interactions shaping individual and collective identities. While abstract, the framework helps define a tenet of placemaking: to be considered "a place," the airport's design should reflect the history of its surroundings and enable authentic, non-prescribed social experiences.

A second often-referenced author on the sense of place and airports has been Rem Koolhaas in *The Generic City*.¹⁰ From the perspective of an architect, he frames the contemporary airport in a more optimistic lens compared to the aforementioned theorists writing about disillusionment in modern life.

9. Augé, Marc. *Non-Places: An Introduction to Supermodernity*. Translated by John Howe. Paperback edition. English-Language edition. Second edition. London: Verso, 2023.

10. Koolhaas, Rem, Jennifer Sigler, Hans Werle-mann, and Bruce Mau. "The Generic City." In *S M L XL: Second Edition, Subsequent edition*, 1248–64. Monacelli Press, 1997.

For Koolhaas, many of today's metropolises can be described by the model of a "Generic City." He laments the loss of identity in cities under the homogenizing force of capital, but offers a perhaps more optimistic view on the power of airports to serve as a medium of differentiation between these generic cities as they can offer "the first concentrated blast of local identity." This is relevant to the research by triggering the question of what architectural strategies could be employed to differentiate Linate from other similarly scaled airports in service of placemaking.

Practice:

The above theorists provide an approachable way to conceptualize the shortcomings of a typical airport. However, to find solutions to these shortcomings, other contemporary theoretical frameworks may be useful such as the following:

*Placemaking*¹¹:

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.

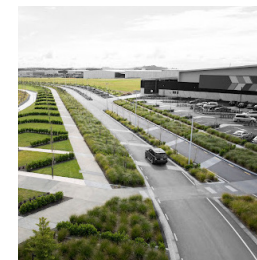
*Wayfinding*¹²:

A design concept that focuses on how people navigate through the built environment. It can be achieved through spatial organization,

visual cues, or simply signage. This practice is relevant to the research in developing an airport with intuitive, meaningful transitions that can help users progress with less stress, and connect smoothly with the site.

Applications of placemaking:

*Large
(infrastructural)*



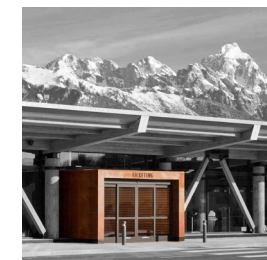
Contextual
reflects region

*Medium
(site)*



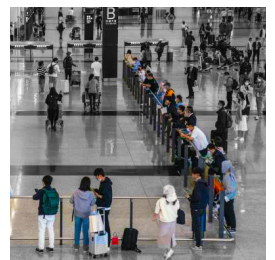
Accessible
open & legible approach

*Small
(building)*

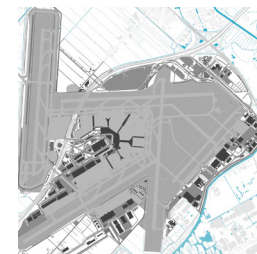


Human-scale
sheltered & identifiable

*X-Small
(interior)*



Social spaces
enable interactions



Environmental
water management



Transparent
views to surroundings



Vernacular
reflects region



Culture & art
opportunity for activities

METHODOLOGY

04

Methodology:

The notion of placemaking by definition is an abstraction of real-world conditions, which poses subjectivity that is difficult to quantify with empirical methods. Nevertheless, architectural research requires designers to distill and translate intangible topics graphically and spatially. To inform these future graphic and spatial expressions, research on the topics will be conducted through the following methods:

Literature review:

Gathering text-based sources, such as the authors of the theoretical frameworks above, is useful in establishing the “status quo” of the architectural analysis of airports. In the initial stage, the focus will be on literature that addresses airports from the angles of theory, culture, and architectural history. Though certainly relevant in the brief creation phase, manuals and databases defining real-world specifications have been deprioritized to keep opportunities for novel understandings of the airport open. Also, publications of SEA, the corporate operators of Malpensa and Linate airports, may provide insight into the demographics of the airport’s main users, as well as the strengths and deficiencies of the airport in its current form. In order to design spaces that cultivate a sense of place through interpersonal connections and activities, it is important to understand what type of users are expected.

Digital archives:

Resources from the municipal government of Milan and the regional government of Lombardy are key in uncovering what historical aspects of Linate’s construction and siting could be referenced in placemaking. This may include photographs of the terminal and site, as well as the people and activities taking place there. These digital archives may also

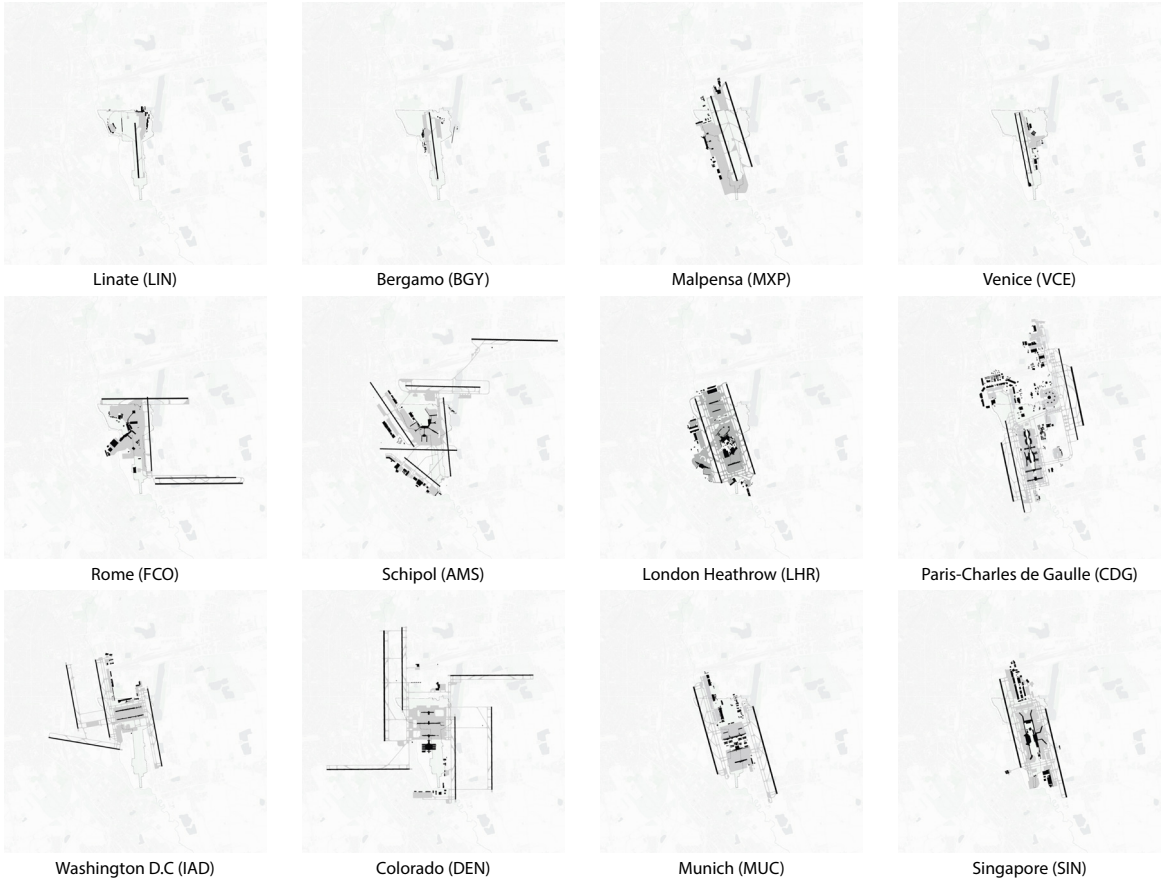
include GIS data that can be used to form an understanding of Linate’s site in terms of connectivity, nearby assets, and ecology. This can inform what the defining qualities of the site are that should be bolstered in the pursuit of placemaking.

Precedent study:

The most critical method for this research is analyzing existing airport architecture. Benchmarking Linate with other real-world airports of similar size, use, and siting is useful in establishing how placemaking is achieved (or not). It will also provide a sense of the 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. Lessons learned from real-world examples can provide inspiration for design solutions, validate (or disprove) the above theoretical frameworks, and signal potential pitfalls for the ultimate design.

Group lens:

Another component of conducting this research will be a collective effort with six other students to analyze the city of Milan through the lens of material. The initial conclusions of this research frame Milan through a narrative of extraction. It suggests that the harvesting of materials such as marble, wood, and aggregates around the Lombardy region has played a key role in forming the identity of Milan from an architectural, cultural, and industrial perspective. How exactly this narrative will inform the design of Linate is yet to be determined, but opportunities to link the material narrative and placemaking may include the following:



- Most literally, different spaces of the airport could employ locally sourced construction materials, such as marble for flooring, timber for furniture and mobile kiosks, or concrete for structure. Selective use of materiality along the passenger sequence may create a sensory map of Milan's architectural vocabulary.
- The concept of extraction could be expressed in the layout itself, represented by "mining" or carving a series of nested spaces. Passengers could proceed through progressively more intimate, personalized spaces leading to the boarding gate achieved through spatial transitions from bustling, expansive areas to quieter, introspective nooks.
- To propose a vision for the next phase of Milan's extraction narrative, the airport could exhibit how to reverse the cycle of extraction. This could mean instead of extracting material from nature, extracting material from nearby decaying or demolished building inventory for construction.

Aspiration:

The ultimate goal of this research is to inform a design for Linate airport that addresses issues further elaborated in the P1 presentation. At the large city-wide or regional 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. On a small scale, the new terminal building 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.

