

Reflection Paper

Research Question: How can the design of train stations bridge the gap between human space and train-centered spaces?

Aspect 1: The Relationship Between Research and Design

The research explores the spatial and conceptual disconnect between human-centered spaces and train-centered infrastructure. It focuses on how architectural design can recalibrate the station environment so that trains are not isolated or hidden from the spatial experience but instead become visible and integrated elements of a broader urban and civic framework. Traditional station designs tend to compartmentalize functions, platforms for trains, halls for people, resulting in a fragmented spatial narrative. The design instead seeks to reconfigure the station hall as a shared domain, where the train enters into a human-scaled space rather than the reverse. In this way, the station transforms from a neutral transit shell into an inhabited and expressive civic environment.

Trains are brought visually and physically closer to users by treating the platform area not as a peripheral utility but as part of the main spatial continuum of the station. The design allows trains to enter the hall, not through concealed corridors but through an open and legible structure where their movement becomes part of the spatial experience. This strategy evokes the historical role of the station as a place of wonder and fascination with machines, restoring a degree of spectacle and engagement lost in the contemporary functionalist approach.

The design creates a space where trains are present but do not dominate, where movement does not erase the possibility of pause, and where the public realm reclaims its place within a transit environment.

Aspect 2: The Relationship Between the Graduation Topic and the Studio

This project directly aligns with the studio's focus on health and human experience in large-scale public architecture. The thesis centers on the scale and proportion of

buildings that must accommodate both large vehicles and the people who use them. It investigates whether current station typologies prioritize operational efficiency over human comfort and seeks alternatives that reconcile both scales without compromising either.

Drawing comparisons with other hybrid typologies, parking garages, airports, metro stations, and ports, the analysis highlights how some spatial systems accommodate vehicles while remaining intuitive and navigable for people, while others create alienating, oversized environments. In two-dimensional planning, infrastructure often conforms strictly to the logic of the vehicle. However, in three-dimensional form-making, there exists more freedom to reintroduce architectural qualities responsive to human perception and behavior.

The thesis focuses on re-scaling the station in favor of human experience without sacrificing the operational needs of high-speed rail. Through the introduction of layered public spaces, permeability, and visual continuity, the station becomes more than a node in the transport network, it evolves into a complex urban structure that hosts multiple rhythms of daily life, extending its utility beyond transit.

Aspect 3: Research Method and Approach Chosen by the Student in Relation to the Graduation Studio

The project is grounded in research-by-design, using spatial experimentation as the primary tool to test, evaluate, and refine architectural hypotheses. Iterative design was central to this process, involving continuous testing of how circulation, visibility, and thresholds influence user perception. The early stages involved mapping the disconnects between machine- and human-centered spaces in precedent projects.

Each design phase was informed by critical reflection on spatial diagrams, movement patterns, and scale relationships. Physical and digital models were used to examine how people interact with large infrastructure and how design interventions can create moments of intimacy within vast spaces. This iterative process allowed architectural choices to emerge from a continuous dialogue between research findings and design intuition, resulting in a proposal that evolves directly from the core research question.

Aspect 4: Relationship Between the Graduation Project and the Wider Social, Professional, and Scientific Relevance

This graduation project contributes to a wider architectural discourse on liminality, infrastructure, and the integration of civic life into transport environments. It focuses on the station as a transitional space, neither origin nor destination, but a threshold that

mediates between the personal and the mechanical. These spaces are typically designed to facilitate flow and efficiency, but rarely support lingering or other forms of spatial engagement. The thesis challenges this norm by proposing a model where the station can be experienced both as a place of passage and of presence.

From a professional perspective, the project raises questions about the role of architects in shaping future transport infrastructure. As high-speed rail gains prominence, particularly in countries like Italy, stations will no longer function merely as terminals but as strategic nodes within urban and regional networks. These hubs must accommodate growing flows of people while maintaining safety, legibility, and comfort. The project addresses this demand by prioritizing user experience and rethinking spatial hierarchies to enhance usability without diminishing the operational logic of rail systems.

The scientific relevance of the work lies in its contribution to the understanding of human-machine spatial interactions. It frames the problem not as a dichotomy between humans and machines, but as a design opportunity to create layered, legible, and inclusive environments. By investigating how infrastructure can support a wide range of social functions, not just transit, the thesis opens avenues for sustainable urban growth. The project imagines a future in which high-speed rail replaces short-haul air travel, especially in pollution-heavy regions such as Milan. The design anticipates the ecological and urban potential of rail-based mobility, proposing infrastructure that is environmentally responsible and socially generous.

Aspect 5: Ethical Issues and Dilemmas Encountered During Graduation

One of the most significant design decisions with ethical implications was the introduction of a subtle, continuous slope throughout the station. This gesture eliminates the need for elevators or escalators to access platforms, enhancing accessibility for all users, including those with reduced mobility, strollers, or luggage. While it may seem like a minor intervention, it reflects a broader ethical stance: that infrastructure should serve diverse bodies and needs without creating barriers. The slope becomes both a technical and symbolic tool, a way to physically and conceptually bridge the gap between levels, between people and trains, and between utilitarian movement and architectural experience.