

UNFOLDING NEW MOBILITY

Giulia Setti

Assistant Professor in Architecture and Urban Design
Politecnico di Milano. Department of Architecture and Urban Studies (DASTU)

Infrastructure shapes the landscapes we inhabit: roads, highways, railways, and airports allow people to travel for work or pleasure by car, train, and plane. Not only large-scale infrastructure, but also slow-moving lines like cycle paths and pedestrian walkways enable safer travel for cyclists and pedestrians.

Infrastructures have a decisive impact on shaping cities, sometimes defining barriers and limits but, at the same time, they are an exceptional opportunity for the architecture. In recent decades, Italy has seen the partial completion of the new high-speed railway, making connections, such as Milan-Rome and Milan-Naples, extremely fast and convenient. The construction of this impressive infrastructure has sparked projects devoted to build new train stations. In Reggio Emilia, the architect and engineering Santiago Calatrava designed the station dedicated exclusively to high-speed trains, while in Naples, the Afragola one was built on the design proposal defined by an iconic architect like Zaha Hadid.

Between October and December 2020, for the first time in its history, the

MOSE (Experimental Electromechanical Module) was raised to protect Venice from high water. The system of mobile dams designed to protect the Venice lagoon from the rising Adriatic Sea is a massive and pioneering infrastructure project, built over more than twenty years, which has protected the historic center and the city from increasingly frequent and dangerous flooding. Its construction represents one of the longest and most controversial stories in Italy, at the center of numerous judicial investigations and many delays. The project saw the light after over 17 years of work and at a cost far higher than initially estimated. These are just a few examples, among many, that demonstrate the need to enrich design research around the relationship between mobility, architecture, and context. They also demonstrate how the advent of new forms of mobility represents a crucial opportunity to imagine spaces and architecture designed to accommodate passengers, and that regulations, tools, and imagination are needed to build new infrastructure within a reasonable timeframe, at least in Italy.

The *Unfolding New Mobility* section will explore the emergence and evolution of new forms of mobility and new infrastructure, pushing the boundaries of visions and scenarios that could transform our cities and, above all, the ways we travel. It is interesting to outline ongoing research on these topics because it allows us to understand the potential intersections with architecture. Specifically, how the project can contribute to the design of new devices imagined to make the movement of people and goods more agile, sustainable, and rapid. The selected contributions bring together a variety of approaches to the topic, particularly observing and studying pioneering forms of travel, such as the use of drones and electric vehicles, and how the advent of Urban Air Mobility will create a new layer in cities' air transportation systems. The collected contributions explore design strategies and regulations currently being developed for a transportation sector that is still partially unexplored. Some studies, however, reflect on the potential, which has yet to fully emerge, of self-driving vehicles and, therefore, the revolution this type of transportation could bring to urban

contexts. Others study processes of transformation and regeneration of obsolete infrastructures that become new accessible and useful spaces for cities, or that can redefine forms of soft mobility, especially cycling. Or, again, how logistics spaces can be integrated along highways and into the surrounding landscape in more harmonious and sustainable ways. Clearly, the studies illustrated in this section attempt to describe a near, and possible, future where new infrastructures will be designed and will, in part, shape new urban and peri-urban landscapes.

The revolution – and evolution – of contemporary forms of mobility is a current and urgent topic that underscores the urgency of defining the relationship between architecture and infrastructure considering new developing technologies. The current scenario is very interesting because it observes a phenomenon in transition, where mobility is at center of a sustainable and ecological revolution and where design could be a key to imagine new and innovative perspectives.

Bélanger Pierre, *Landscape infrastructure: a base primer*. New York, Routledge, 2017.

Dümpelmann Sonja, Waldheim Charles (edited by), *Airport Landscape: Urban Ecologies in the Aerial Age*. Cambridge, Harvard Design Studies, 2016.

Khosravi Hamed, Kuzniecowa Bacchin Taneha, Lafleur Filippo, *Aesthetics and Politics of Logistics*. Milano, Humboldt, 2019.