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Honors theses

The tram-train and the industrial inheritance new opportunities of urban transformation in Aosta Valley

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Our thesis is focused on the study of Aosta Valley a region characterized by contrasts and dynamics that can give rise to opportunities for interesting design choices.

Through the analysis of the existing settlement principles, we tried to understand how the urban cloth might change by a new infrastructural system, which would result in the mending of the urban tissue. Particularly, in the city of Aosta, the Cogne steel complex is being used as the basis for redesigning the area.



The redesign of Cogne Steel Complex Yards side view

The railway line is considered to be the driving force in order to resolve the critical problems of the valley. The transformation of the railway into a tram-train proposes a new image of the line and leads to the redesign of the urban fabric associated with it.

It is no longer a foreign body to the city, associated to a pre-existing fabric, but it integrates with the city, the landscape and the infrastructures.

The goal of this project is to understand what changes are generated at an urban level by the use of the tram-train, which would make the line traversable, and how to control them. From this perspective, new opportunities are created for mending and integrating the two sides of the line, thus providing alternative design scenarios, in order to control the expansion of the various urban centers, characterized until nowadays by an urban sprawl.

These urban projects are embedded in an economic plan in order to verify and justify some of the design choices.

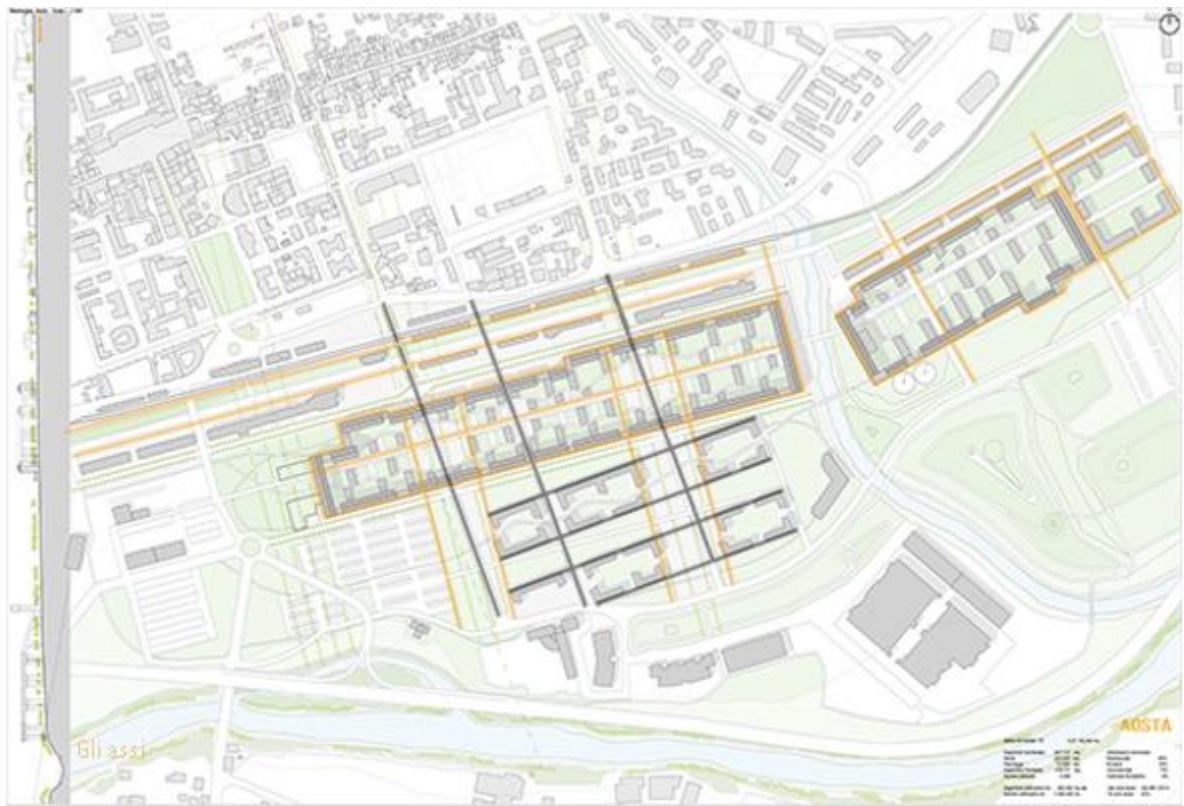
The project is focused on the Nus – Aosta stretch (14km), a limited portion of the plain, which can form the basis for developing the aforementioned possibilities. In this stretch, intermediate stops have been identified, in either newly established buildings or previously abandoned and reused ones, depending on the users' needs and the various points of interest offered along the way.



Masterplan project of Saint Christophe and Amerique area

For the transformation in Aosta the focus is on the former industrial area Cogne, adjacent to the station, which requires deeper and more complex intervention. The design principles in this case are based on the coexistence of the Roman axes, the industrial ones, and the perimeter of the industrial buildings on the site. The Roman roads are extended, mending the urban tissue in the north-south direction, while the Cogne axes suggest the shape of the buildings.

The main new features that can be identified in this project area include residential, commercial, manufacturing handcrafted in small part and services. A particularly interesting element is the design choice of the main complex's envelope, located at the north. An outer shell has been chosen combined with a different inner one, in order to recognize the industrial building even after his transformation. The outline of the old factory is marked using a steel material for the outer coating of the macro blocks. For the inner shell, in the yards side, a different material has been chosen in order to underline the change of the site from industrial to residential. The roof protrudes by five meters over the underlying volume forming a deep porch, that creates a diaphragm between the building and the courtyard, marked by terraces and outgoing volumes. The exterior elevation is maintained without overhangs and in some places is retracted to form lodges, while the lost volumes are recovered with cubes and projecting balconies in the interior elevation.



Design principles of the Cogne steel complex and masterplan

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