

POLITECNICO DI TORINO
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Honors theses

Light as a building material: lighting design for Spina 4

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“La Metamorfosi” was an important competition that has affected the north part of Turin. The competition was developed in three strands: Sempione Gottardo, Scalo Vanchiglia e Spina 4. If the first two has been declared a winner, in the case of Spina 4 of the special mentions were awarded to five participants.

Thus was born the idea of play on the basis of the project of group CRCV’s Abitare Transitivo , led by Arch. Graziella Roccella, a lighting project, with the hope that the day will be taken up in the hands of the winning projects of special mention, Abitare Transitivo may have an edge to win the prize winner. During the searching for materials about the area of the intervention, I realized many of the constraints with respect to the massive changes that the city of Turin is facing. All of this heralds a new city with a new image and considerable changes, but its appearance at night is not mentioned anything.

While Turin is the Italian city with the oldest tradition of lighting plans, it is surprising that after a century since the first global design of electric lighting of the city, is still not well thought without lighting aspect. The light has become an important building material to be considered as cement, glass, steel and wood. An element that makes the city even as the design of everything that makes up a contemporary metropolis. A good urban lighting project does is reflect the image of the city during the night.

If the city administration, on the table today in Turin, studying the drawing and redrawing large parts of the city, it is necessary to intervene several professionals: planners, architects, sociologists, landscape architects, engineers and lighting designers.

All these professionals together to achieve a common end goal: a livable, modern city.

Studying the project Abitare Transitivo I tried to translate into light the main objectives of the various areas examined. However, under the aspect of lighting, we are in a period of great transition. LED technology today represents the future of public lighting. The research and development of this technology has led to the development of devices on the market more and more performance, which allow more spacing while maintaining high levels of illuminance, luminance, and uniformity required by the regulations, which provide significant energy savings as well as a good quality of light.

Leaving aside those who argue that the use of LED technology results in an ordinary conversation related to fashion or advertising, in specialize magazines and at industry conferences come into play several negative aspects overshadow the benefits of LED: from the high economic costs and the need to study major maintenance plans, to the new studies that address the photobiological risks and to human health and that lead to curb the use of this new technology that probably still needs development, research and field trials .

For these reasons, I developed two lighting projects in parallel: one entirely with traditional sources, and one entirely with LED technology. I searched for a practical example to try to give an answer about this debate that ignites the main exponents of the lighting industry.

At the end of the calculations and changes made in the four areas analyzed in this project it can be concluded that there can't be a clean break in the choice of the type of equipment. It can't still be a projects totally with LED, as it would be inappropriate to install a new lighting system without using this new technology.



The theme of Building Mobility



The theme of Square



The theme of Park

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