CHARGE!

from military fortress to new model city

Abstract
The project strategy for the transformation of the Luščić area is based on the historical identity of Karlovac. From the beginning its geographical position made the City a strategic military outpost; the shape, dimensions and spirit are still readable in the historic center: these elements inspire the new design. The military fortress is therefore conjugated in the new urban outpost, ready to be a new model of city. The project redefines the axes between Luščić area and the historic city center, enhances the facilities of the former barracks, and include a new infrastructural system based on public transportation. New buildings embrace well-preserved existing buildings, introducing courtyard complexes, which recover the settlement layout of Karlovac.

Strategic site
Our proposal considers the Luščić complex an urban fact that has the strength to present itself as part of the new city. The urban history of Karlovac took place through the succession and accumulation of distinct urban forms (such as the historic center with its star shape, the Novi Centar district, Gaza) which in itself represent the passions, conflicts and social transformations of the Croatian city. It is from this history that the project of regeneration of the Luščić area is believed to constitute a recognizable urban form within the geography of Karlovac. This is why our proposal consists in the development of a precise system, immediately readable and at the same time susceptible to transformation and adaptation.
The geographical position of the project area is located at such a point that if enhanced it has the strength to start a large-scale regeneration process immediately involving the areas along the new urban axis.
We propose to construct the new building along the axis in a punctual way, completing the existing one through a design that from time to time reflects, adjusts and transforms the current situation without it being completely distorted by new interventions.
This process will involve the new design of ground, the management of the new public transport system, and the application of new architectural rules on the buildings.
In this way the new city is organized on a well-defined axis described by the creation of a linear park.
The project site it's linked to the city center with a new green infrastructure.
The two ends of the new axes will constitute two independent centers, in the middle there are the productive activities that remain well connected to the main infrastructure system, becoming an attractive pole for the new Karlovac.

The model of historic city center
The historic city center so became the model from which derive effective design strategies that restore identity to the city of the future. In the city of the future success of its transformations it depends on the distinctiveness and secure quantity to the urban tradition. The design of the future city starts from the study of historic city centers because its preserves dimensions and measures "sustainable". The research begins with the quantitative investigation of the empty space of Zvitezda. Reading the city starting from the relationship between emptiness and built space becomes the stimulus to reflect on the identity and quality of the open spaces of the historic center.

Traditionally the neighborhood unit is characterized by a specific measure, based on the radius of the distance that the pedestrian travels. Normally this measure is set at a quarter of a mile, the path that an average man travels with a normal pace of 5km / h for 5 minutes.

Project site: process of transformation

The new design for the Luščić area requires three main steps.

1 (2025) – The first step consists in the demolition of the obsolete buildings and in the consolidation of the buildings to be recovered. At the same time the primary infrastructure will be built so as to define the spaces of the new planning and the minimum equipment to start the temporary uses of the recovered buildings. This first step is the most important because the temporary activities, mainly productive but also commercial and research, will trigger all the subsequent steps, giving credit to the large-scale development project.

2 (2025 - 2035) – The second step involves the construction of new buildings adjacent to the main axis, including the tower. In this way the transformation process will be strengthened by immediately defining Luščić's new image.

The new buildings will be equipped with sustainable energy production systems (geothermal energy) and other systems to reduce the environmental impact of buildings, like use of solar energy and collection and treatment of rainwater. A fundamental element for this phase will be the introduction of new spaces designed to accommodate the new forms of production and research, activities that will be in symbiosis with residential and commercial spaces.

3 (2035 - 2045) – The third phase sees the project now underway and ready to welcome new tourist-accommodation functions. New activities established within Luščić become attractions at national and European level. The last buildings are then built in the area following the guidelines of the initial project.

Parallel to what happens in the three steps in Luščić, Novi Centar will also undergo the influence of this change, growing itself with new buildings and new urban spaces linked to the Luščić - Karlovac axis.

A public transportation system will link all this area to the historic city center along the axis, connecting this system to the main infrastructure (railway and motorway existing).

Project site: Quality of urban spaces

The high density of the building minimizes the need for massive transport systems impacting the territory and the environment. Slow transport will be favored with public transportation system, cycle paths and pedestrian area. The distances to be covered on foot are such as to allow rapid and efficient movements through the regular urban grid designed.

Car traffic will be limited to a main ring, served by two multi-storey car parks. Secondary roads will give priority to slow transport (pedestrians and cyclists) and public transport systems.

The project area is surrounded by a new urban park defining its envelope limits in respect of a sustainable land use balance and safeguarding local biodiversity. This is what also happens in the historic city center, in which one the green area surrounded the buildings block.

The project proposes a system of public spaces with different scales that allow them to move smoothly from a domestic, more intimate place to the scale and metropolitan

attractiveness. What is important to recognize is the variable character of these spaces and their role.
The project takes into account its environmental impact starting from the management and treatment of rainwater. The roofs of the buildings become rainfall collection areas, the pedestrian paths will ensure water permeability as well as the public and private gardens discovered.

Architectural rules
The project defines the intervention rules for individual buildings.
Starting from the existing ones it is prescribed to preserve the original aspect, leaving their historical identity declared. The new buildings will have to respect some simple rules imposed in order to obtain a coherent urban design, easy to read, reassuring, sustainable and attractive. There are three main rules.

A - Terrace to protect buildings from sun rays and raining.
The new buildings will be predominantly glazed in their facades, so as to permit the greatest amount of light in the interior spaces. The presence of terraces to protect these facades will allow the regulation of the amount of light in the warmer seasons, decreasing the temperature on the windows. In the coldest and darkest seasons these will permit you to make the most of the large windows by bringing light and a suitable internal air recirculation.
B - Ground floor openings to allow space permeability.
On the ground floor the openings between the buildings are indispensable to create a sub-network of spaces that bring different productive, commercial and research realities into direct communication. This creates a system of public spaces articulated by pedestrian areas and public gardens.
These gardens can become shaded areas equipped with tables and chairs near the shops or playgrounds for children to play. This intermediate scale guarantees the quality of the open space and a varied and continuous use during all hours of the day. The public gardens are joined by private ones at the residences.
C - Open spaces in the upper floors. Private and common gardens.
The open spaces inside the building blocks permit to create different situations in favor of the quality of life. These spaces first of all allow a natural passage of air between the buildings and the internal courtyards.
They can become private or common gardens, and allow different situations for urban living by creating opportunities for social contacts.

Buildings must follow a regular facade design in order to guarantee the minimum criteria of energy, environmental sustainability and user comfort. The declination of the identified architectural unit allows the realization of a coherent design for the new city.

> *Each single element, simple, like a wall, a door, a rail, etc… it becomes part of an unspecified number of different organizations, whose diversity stands out due to the recurrence of the individual structural elements placed in ever new positions. This evolutionary process that goes by the single element to its location in an organism, in turn, leads to the development of the design of the entire city.*
>
> Leonardo Benevolo, La città e l'architetto, Laterza, Roma-Bari 1984