

The fantastic forest phenomenon: testing a new narrative

Prologue – Waking up

WE487 Looking at its rich industrial heritage, it is clear Karlovac used to be a productive city. However, due to complex shifts in the city's social, economic and political climate, today it is facing a rather dull reality.

With most of the production coming to a halt and a significant amount of the younger population moving to set up their lives elsewhere, the city is losing its momentum and struggling to keep up with the flux of the new millenium. Bearing that in mind, it is essential that we define right at the start – what does “a productive city” mean in this context? How can we help Karlovac bridge the gap that has been increasing over the years, moving it farther away from the vibrant excitement of the contemporary city? What do we need to produce, and how should it be done?

Facing all these questions, our first notion was that the answers and solutions would have to come gradually – a city like that cannot wake up over night. It would be wrong to immediately start planning new urban areas and objects from scratch. What the city really needs first is a strategy – a plan to start re-adapting and getting back in sync with the present moment, simultaneously attracting people and businesses who can then make a change in the future. In short, what Karlovac needs first is a new narrative.

Chapter 1 – A better fit

In the past, production was usually linked to factories that mostly produced some kinds of objects or substances. Today the term has a much broader meaning, with a wide array of new industries joining the conversation. One of the most relevant production niches at the moment, with the tendency to become even more so, is the production of sustainable, or renewable, energy.

Scientific publications state that one of the places with the best geothermal potential in Croatia is a small settlement called Rečica, situated less than 10 km from the city centre of Karlovac. Measured water temperatures reach up to 141°C, which is enough to seriously start considering construction of a geothermal power plant, the first of its kind in Croatia.

Historically, Karlovac has always had a very important strategic position, playing a vital role in various administrative and political constellations, mostly in the context of transit and warfare. The first remains relevant, the latter hopefully not – so maybe it could give place to this new story of energy and production, a much-needed, better fit for the 21st century.

Chapter 2 – New flows

WE487 Planning the construction of a geothermal power plant is a matter of state importance and would surely affect Karlovac and its citizens in a considerable manner. That is why in the Prolouge we stressed the importance of gradual development. So instead of somewhat naively taking this energetic possibility for granted, our approach is to question and analyze it first – in other words, set up a research hub in the city and see where it takes us. The first kind of production Karlovac needs is intellectual production.

The project site on Luščić seems perfectly suited for this: a new arena for research and experiment, a live and vibrant city within the City. Situated directly across the old town of Zvijezda, in a way it aims to function as its polar opposite. Instead of trying to be ideal, it's real; instead of spending money, it makes it; instead of slowly fading away and falling apart, it's quickly growing and building itself up.

This juxtaposition of Luščić and Zvijezda simultaneously also amplifies the theme of the central urban axis, although we took to this with caution. We do acknowledge that to some extent this theme cannot be completely avoided in a historically planned city like Karlovac, but it is important to state that we believe that an axis-oriented approach to urban planning is rather out of place in the 21st century.

That is why rather than just focusing on the proposed central axis concept, a network of new flows through the city is introduced, connecting multiple important nodes and areas of the city, including areas such as the public bathing spots on the Korana River (Foginovo) or the market in Novi Centar. New paths and infrastructural corridors are planned, allowing a dynamic flow of people, energy and water through the city.

New pedestrian crossings (bridges) are planned on the intersection of frequent routes with heavy traffic. Next to the main intersection of this kind, where the central axis intersects with the "old road" through town (Prilaz Većeslava Holjevcica), a public garage is planned which works as a transfer point, a place where passengers in town park their cars and hop on other, cleaner means of transit through the city, such as bikes or electric scooters.

This new node is plugged onto a new pedestrian walkway between Zvijezda and Luščić, which doubles as a structure providing all the necessary infrastructure for programs and activities that can appear on the central urban axis (for instance, storage for various kinds of urban elements such as stage elements and seats that can temporarily be set up for concerts and similar events).

Chapter 3 – The fantastic forest phenomenon

WE487 Speaking strictly in an architect's manner, Luščić is planned as a new mixed-use area comprising research, public and housing facilities. But more importantly, Luščić is planned as a peculiar, forest-like environment, a hybrid urban-natural habitat that serves as an exciting arena for experiment and imagination. It functions as an independent ecosystem, with each part affecting its neighbouring parts as well as the whole.

Programatically speaking, the most important part of the system, so to speak its "brain", is the building of the energy-research hub, a long slab with numerous studios and laboratories focused on cutting-edge technology in renewable energy resources. However, it is important to state that the research conducted at Luščić isn't confined just to this building, but rather the whole project site, along with all its exterior and interior spaces, is considered an ongoing, large-scale research project. Each building or part of the landscape plays its own, specific role in the project, and serves as some sort of experiment or testing ground.

A pine tree and fir forest was found on parts of the site. The plan is to completely preserve it, with new trees being planted as well, so as to form a natural, woodland envelope around a central clearing. Tall housing units are then placed amongst the woods, while public building and spaces occupy the area of the central clearing, the "oasis".

The whole new neighbourhood is energetically independent and self-sustainable, with heat pumps and small cogeneration plants being installed at the most favorable locations, supplying the area with hot water and electricity.

3.1 The forest

The housing on Luščić is planned as a perimeter of residential towers incorporated into a forest-like landscape. The buildings are envisioned as 30 meter high towers (P+9) with either 4 studio-apartments or 2 flats on each floor. The height of the towers corresponds to the height of trees found on site; they become an equal part of the forest.

On the south side of each floor there is a communal open-air gallery that doubles as a fire-escape route and can be used as a sundeck / viewpoint of the surrounding landscape (the experience should be similar to spending time in a tree-house). The facades of towers are covered with fog harvesting catchers – an experiment monitored by the central research centre. The fog catchers consist of single layer mesh net supported by two posts that are positioned perpendicular to the prevailing wind in Karlovac and on foggy days when fogs sweeps through them, they capture and collect water. They give the buildings a blurry, mystical appearance when perceived close to numerous high pine trees. Now you see it, now you don't – a sort of soft skyscraper.

The ground floors of the towers create semi-public spaces oriented to the environment but experienced through a thin metal mesh. Garage buildings are placed on several spots in the neighbourhood to provide parking spaces for nearby towers. The buildings are 5 stories tall and consist of restaurants and shops on their ground floors.

3.2 The clearing

A large clearing in the surrounding forest, the central public space of Lušćić is an elongated square with adjacent new amenities: a public swimming pool, a movie-theater and the above-mentioned energy research hub. A public garage is located under the square and is accessed from the north-south oriented street crossing our site. The garage also serves as an underground secondary vehicular access to all utility / storage rooms of the new public buildings.

There is an excavation on the south side of the square, which creates an outdoor theater and a second, more secluded public space oriented to the backside of the movie theater, where open-air movie projections can be organised. The movie theater is a much-needed addition to Karlovac, since we have found residents expressing the need for it on numerous occasions. It is also used by the research center as a place of social experiment and testing public opinions on certain topics of importance.

A public swimming pool is another coveted public building in Karlovac. There is a long tradition of swimming in the Korana and Kupa Rivers, but the city lacks a publicly accessible pool for the winter season and professional training. The building also serves as a testing ground for all kinds of water-related infrastructural novelties.

Epilogue – Learning from Lušćić

Cities should be looked at as living organisms.
We are not here so much to design buildings, but systems.
A lot can be learned from nature and its cycles.
Our technologies and networks are also our natures.
Living in the treetops is beautiful.