

**URBAN LANDSCAPE DESIGN - A COMMUNITY-ORIENTED  
PROPOSAL FOR CRAIOVA OLD TOWN**

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**ABSTRACT**

*This study focuses on designing a green space in Craiova's Old Town, aiming to improve residents' well-being through nature integration. Using 3D landscaping software, a 270 m<sup>2</sup> area was designed with features like terraces covered in *Wisteria sinensis*, green walls, aromatic plants and fruit trees, promoting the concept of Edible City Solutions. The design also includes community-oriented elements such as a stage for events. This project serves as a model for sustainable urban green spaces, enhancing social interaction and environmental quality while fostering a deeper connection between people and nature.*

**INTRODUCTION**

Given the rapid pace of global urbanization the quality of life in cities is continuously declining, thus, green space planning in urban areas is crucial for the future. The community members physical and mental well-being should be in the center of any landscape design project.

The aim of any designed greenspace is to create a unique experience for the people, guiding their movement and focusing their attention (Ignatieva, 2021), so plants serve as dynamic, living elements that fulfill various functions such as aesthetic functions, ecology function or recreational and utility functions (Melinescu & Cosmulescu, 2022, Yang et al., 2014).

From the dawn of human history, gardens have been envisioned as a means to create an ideal world where people can coexist harmoniously with nature, a concept that we need to get back in today society and outdoor design.

Urban green infrastructure is being reimagined to connect recreational spaces with traditional nature-based solutions, however, these initiatives have not significantly enhanced social cohesion, as they tend to encourage passive usage rather than active participation on-site (Säumel et al., 2019).

Edible City Solutions are classified as a unique form of nature-based solutions, includes concepts such as include the growing of edible plants and flowers, green facades, and high-tech indoor farming (Plassnig et al., 2022). Additionally, they include urban cooking and dining events, local city-grown products sold at markets, and initiatives for advocacy, networking, and raising awareness about transitioning to sustainable urban food systems (Plassnig et al., 2022). Edible City Solutions offer numerous benefits across all dimensions of sustainability,

including enhancing social well-being in cities through increased social cohesion, improving environmental conditions, supporting the local green economy, and sustaining local material and energy cycles (Säumel et al., 2019, Castellar, et al., 2021). Cities such as Rotterdam, Oslo, Andernach and Havana had implemented the concept of Edible City Solution.

Studies on the relationship between people and nature have shown that green spaces promote well-being and productivity (Jennings & Bamkole, 2019). Sensory and therapeutic gardens are being integrate in the cityscape. Garden therapy, also known as hortitherapy is a concept that must be promoted in the urban areas. There are two main ways to practice hortitherapy: the first one is passive - involves being present in a specific space and experiencing sensory stimulation, such as listening to birds, and feeling the scents, breeze, and sunlight and the second one is active - involves engaging in physical activities related to garden upkeep, such as harvesting fruits and flowers (Wajchman-Świtalska et al., 2021). For residents living in apartment buildings, it is impossible to do such activities, so the design of public green spaces should focus on creating spaces for the people.

The purpose of the study is to showcase a design proposal for an area of the Old Town in Craiova, focusing on plants for people, vegetation that can contribute to a better quality of life and can bring a contribution to the psychological well-being of the residents. Craiova Old Town has become an effervescent area and creating green spaces in the area it must become a concern for the city planning and urbanization.

## **MATERIAL AND METHODS**

An empty area of 270 m<sup>2</sup> from the Old Town in Craiova (Figure 1) was chosen to be design in Realtime Landscaping Architect, a 3D design program specialized in landscaping and green space design. The design followed a series of steps: an initial site analysis, the creation of a design concept that considered both the aesthetic effect and the benefits of vegetation for the community, followed by 3D modelling. The detailed and realistic design of the green space provides a clear picture of how the design can be implemented and perceived by the residents, so at the end of it we generated a series of digital materials.



Figure 1. The current situation of the selected area to be design

## RESULTS AND DISCUSSIONS

The Old Town of Craiova is a busy part of the city, especially during the cultural events in summer and in winter. The first element added to the design of the space was a terraces structure, covered in *Wisteria sinensis* (Figure 2), meant to provide residents with the opportunity to have a panoramic view of the Old Town, as well as to hide the wall of the building behind it. *Wisteria sinensis* contributes to the aesthetic effect of the space due to the purple flowers, but also because it enhances vitality, stimulates creativity, and fosters a sense of connection (Akdeniz, 2020). It is an invasive species, so it will need more attention and care, but it very popular among Craiova, it is found in different park and gardens, both public and private and residents tend to enjoy it. Small green walls were created on the building behind the terraces structure that contained *Sedum reflexum* and *Cineraria maritima*. Studies made in the North of Romania show that *Cineraria maritima* can adapt to vertical planting on systems for green walls (Cojocariu et. al., 2023), also, the plant can attract particle matter with their leaves, thus reducing the pollution (Hangan et. al., 2020). *Sedum reflexum* it is a common plant used in green roofs and for covering the ground, so due to its ability to adapt it can also be used on green walls.



Figure 2. 3D view of the terraces structure, covered in *Wisteria sinensis*, vertical wall and stage

On each floor of the terrace structure, containers with *Mentha piperita*, an aromatic plant, were placed (Figure 3). This plant has a sensory impact on people due to its cooling, sweet, and herbaceous aroma (Lin et al., 2022). The sensory experience can be enhanced by the gentle fragrance released when the leaves are crushed (Dinu Roman Szabo et al., 2023).



Figure 3. 3D view of the terraces

One of the main focuses of the space is to integrate the concept of edible city, thus a few fruit trees were placed in the design, such as *Prunus avium* (Figure 4), the second most recognize fruit tree in the landscape by the residents of Craiova (Melinescu & Cosmulescu, 2022). This could be a first step in educating the residents about the concept of the edible garden. The fruit harvesting can be done by the students together with the teachers, but also by the residents. Panels explaining this concept must be placed within the space. Three containers with vegetable and aromatic plants were also placed on the landscape, such as basil, hot pepper and cherry tomato.



Figure 4. 3D view of the fruit trees and vegetables and aromatic plant containers

Benches were added as urban furniture, alongside with bird fountains (Figure 5). Because the space is known for concerts, theater performances we added a permanent podium of 5 x 5 meters, that can be used as a stage when needed, decorated with 2 columns in the back and with plant containers that can be moved (Figure 5 & 6). The stage was left as empty as possible because, during cultural events, it would be covered with stage equipment that could harm the vegetation. *Lavandula angustifolia* known for its specific fragrance with calming effects (Szekely-Varga et. al., 2017) was placed in the containers on the stage.



Figure 5. 3D view of the urban furniture and stage

White is the predominant color of most of the surfaces, because it has the capacity to reduce absorption of solar radiation through surface reflectance (Cheela et. al., 2021). In front of the stage it is placed a fountain, a blue space that contributes to the aesthetic effect of the landscape, but also to the well-being of the residents. Blue spaces tend to improve the urban microclimate generating a cooling effect (Ampatzidis & Kershaw, 2020).

Species with taproots, which are the most suitable type of root for urban areas, as well as specific species that help filter dust particles, have been selected to be part of the design: *Albizia julibrissin* and *Liriodendron tulipifera* (Figure 6 & 7). Taproots can provide better stability in areas with limited soil space, such as near sidewalks or buildings, and are less likely to interfere with shallow infrastructure like pipes (Day et. al., 2010).

The entire surface of the space is covered with grass, being a practical choice for sustainable urban landscaping, it can mitigate urban heat through evaporative cooling and contributes to better air quality by capturing dust and particulate matter from the air (He, et. al., 2022). Additionally, grass also enhances water infiltration, reducing surface runoff and improving groundwater recharge.



Figure 6. 3D view of the design from the terrace



Figure 7. 3D view of the design from the pedestrian area

## CONCLUSIONS

The proposed design for the green space in the Old Town of Craiova exemplifies how urban areas can integrate greenery to improve the quality of life for residents. The design not only enhances the aesthetic appeal of the area but also promotes well-being through sensory experiences, interaction with nature, and opportunities for community engagement. By incorporating Edible City Solutions such as fruit trees and aromatic plants, the project educates residents on the potential of urban horticulture. The use of plants like *Wisteria sinensis*, *Albizia julibrissin*, *Liriodendron tulipifera* supports ecological functions such as air filtration



and heat reduction, making the design environmentally sustainable. Moreover, the addition of versatile spaces like a performance stage ensures that the space remains dynamic and adaptable to community needs. This approach not only revitalizes an urban area but also serves as a model for future projects that aim to balance urban development with the need for natural, engaging, and inclusive spaces.

Small design like these should be the first step in educating the residents regarding such concepts as edible gardens, hortitherapy. The digital visualization of a green space should be a first step in realizing the beauty that vegetation can bring us and the simple fact that the whole mood changes when we see a green design, even if it is only an imaginary and a 3D proposal. A future study could involve conducting questionnaires to measure the scenic beauty of the landscape, as well as to gather residents' opinions on these concepts and whether they would like to see them implemented in their community.

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