

AGROECOLOGICAL CONDENSER

SAN DONA DI PIAVE (IT)

Reinvent the city's center

The cities have always been the spiritual reflection of time. In ancient times, the city center was configured to carry political, cultural ideologies and foundational ideologies which are fundamental aspects defining the society. In modern times, the culture, civilization, and built environment are facing another challenge on a global scale which is climate change and the degradation of nature. Hence, beyond creating solely a space for commercial, communal activities, restoring the urban ecology system in the city's center is a defining feature that promotes nature-centric urbanization, and harmonious cohabitation between humans, nature, and other species. The relocation of the bus station presents an opportunity to reinvent the city center as a living and dynamic system that fosters and stimulates socio-cultural networks of all kinds. As a philosopher, Clement Fresco said "In nature, nature arts, a way of defining a thing by its natural opposite: the city posted as the opposite of nature. The city hence, would be anti-artificial. It must then recover and once again find its, culture, animals, greenery, purity, calmness".

San Dona is a middle-sized city defined by a mono-centric structure: the core city is dominated by a transport hub which is surrounded by a semi-ring peri-urban system including the residential and industrial fabric. On its edge is the ring of peri-urban agricultural areas. At the urban scale, the project aims to investigate an alternative way of configuring the city by integrating the agroecological system into the existing urban fabric. By reversing the conventional structure and introducing nature to the city center the notion of productivity and living features through an acupuncture network of small-scale agricultural gardens, and micro forests. Furthermore, the urban agroecological application is critical to limit climate impact on climate change, mitigate and reduce ecological degradation, increase the resilience and productivity of the city center. The station would be the starting point of the whole urban renewal process and the nexus of historical, cultural, industrial, civic, and natural conservation.

The Corso Urbano as a Living system

In the modern West, the image of continuous circulation within the organism has been used to describe the living since 1862, when William Harvey discovered the continuous circulation of blood within the human body. It is continually guarantees life. Inspired by this idea, the project at the urban scale essentially is conceived as a linear continuous ecological system organized around the Corso Urbano. The urban backbone is characterized by a green canopy connecting the Pieve river, the Victoria bridge up to new Porta Nuova, and a complete network of pocket gardens and micro forests. The agroecological system engenders a continuous flow of exchanges across the city. It eventually turns the city into a system of cohabitation between different living forms, promoting the interaction between plants, animals, humans, and the environment within agricultural systems. The urban agroecological application is critical to limit climate impact on climate change, mitigate and reduce ecological degradation. The Covid-19 has reminded us that we are not the only creatures on this planet. Sharing the living space and cohabiting with other species, making the built environment adapting to the wild is the best way to make the city more resilient and equal.



The Pieve river corridor as the starting point of an urban ecological journey

The Pieve river corridor is currently under-used and cut off from the rest of the city. The project proposes to open up this boundary, erase the urban fragmentation, and bridge the two disconnected parts of the city to the river. The project aims to establish a dialogue between the city center and its river. The actual large empty park will become a place for experimental permaculture and wildlife habitat.

A system of elevated wooden structure integrates subtly into the agricultural park. In between the existing vegetation will provide better accessibility to the river. Beyond the function as a recreational space, the restoration of the ecosystem will provide habitat for a diversity of species and bring back wildlife into the city. The agricultural park also participates in the food supply chain of the city. Recreational and educational activities will also be introduced in total harmony with nature. At the entrance of the city, the social parking will be restored, it not only increases the capacity of the parking lot for greater density and compactness but also provides a social gathering place by the riverside. The wooden structure helps the building to be blended and camouflaged into the wooded area.



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Pocket garden and micro forest network as the agroecosystem.

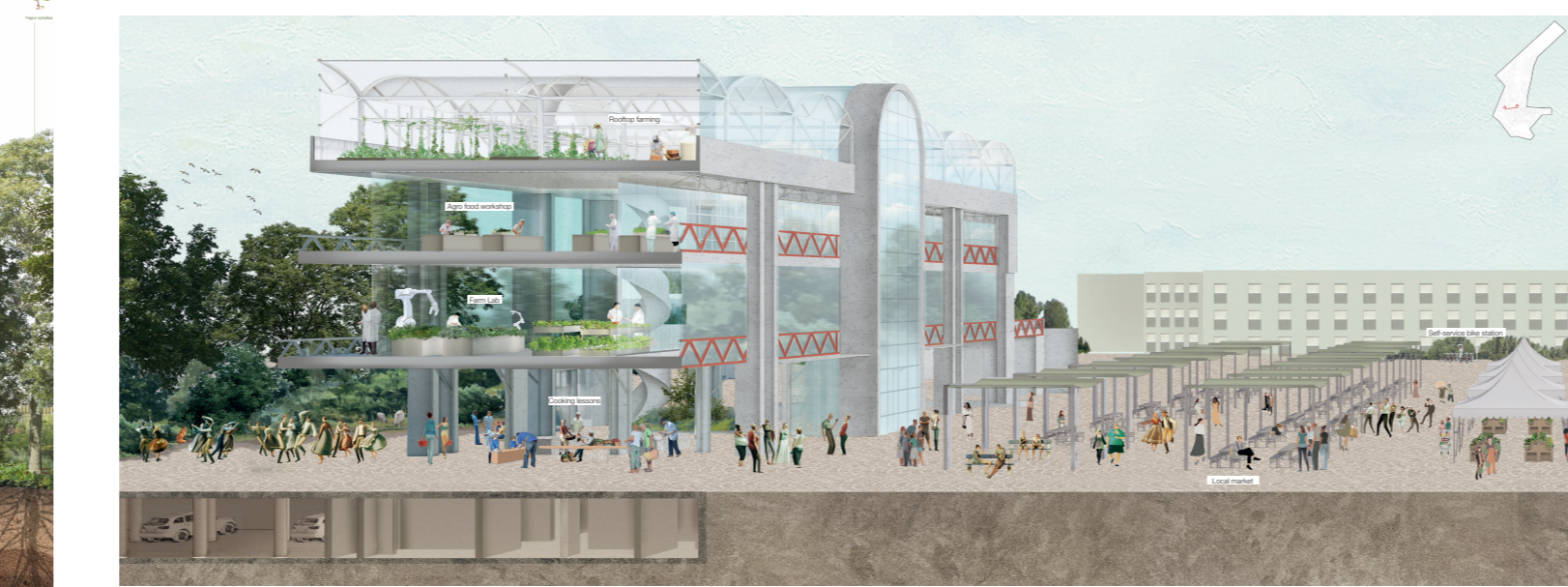
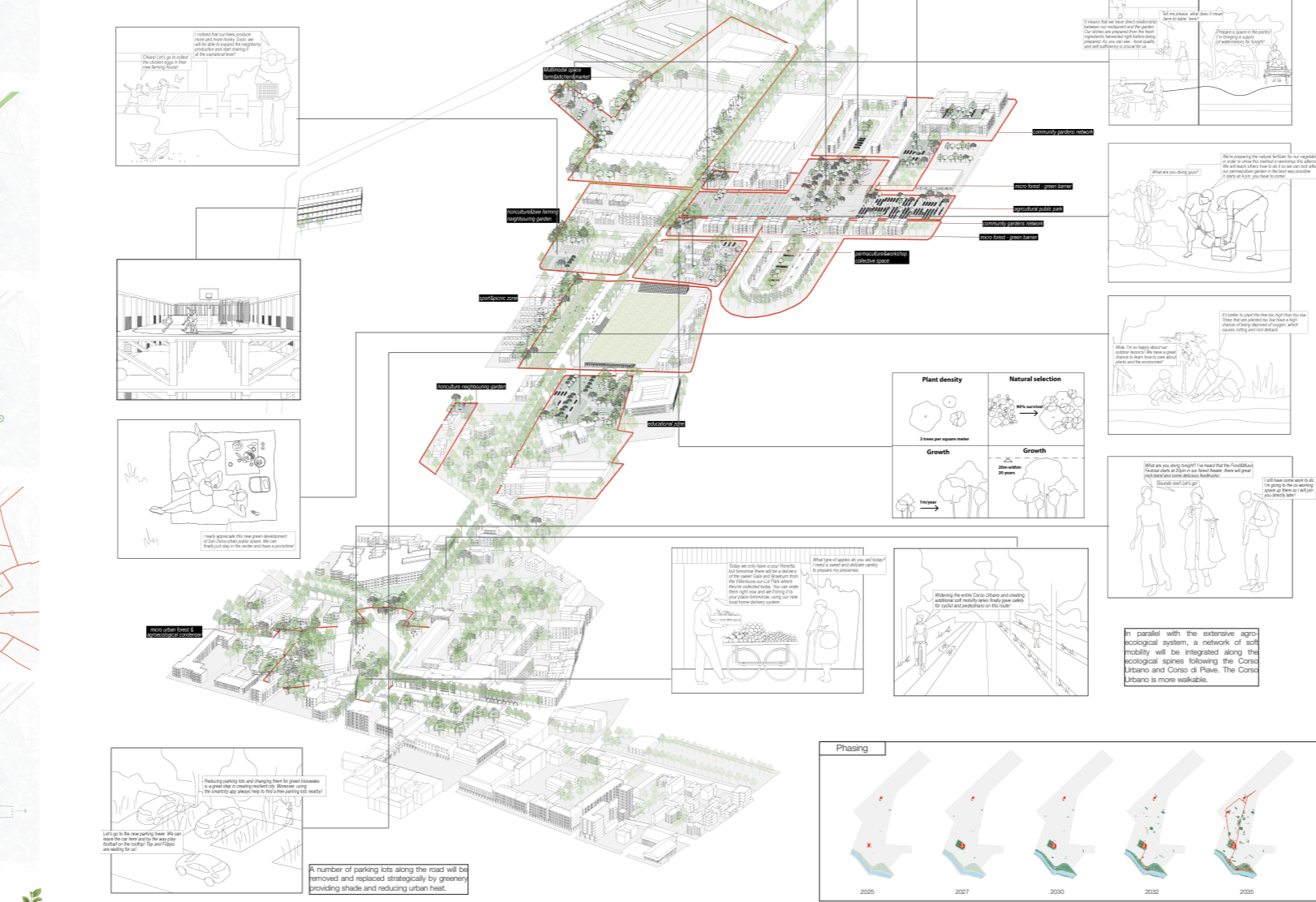
Pocket garden

At the regional scale, according to the study, products from Veneto can reach southern Italy in 10 hours, Frankfurt or Sicily in 15 hours, Berlin, Brussels, or Paris in 17 hours. Based on the relatively short transportation time, there is a great potential to make the Veneto "The Garden of Europe" (Baino 2004). Furthermore, San Dona was largely occupied by the marshes, residues of the late lake of Piave until the 19th century. The land is characterized by a large network of waterways which is beneficial for agricultural activities. And due to the abundance of water, it is the perfect habitat for animal species, insects, amphibians, and small mammals. The city eventually has to doubt the most favorable conditions to develop a factory agroecosystem.

A French landscape architect, Gilles Clément argued that all of the underused parcels of land where man does not use, having rich biodiversity compared to the monocultural fields, are sprayed with phytochemical products. We thus look at **wild underused lands**, by identifying them into **potential productive spaces**. An **acupuncture network of pocket gardens** and the **micro-urban forest** will be formed and interwoven into the existing urban fabric. In order to cope with the given architectural programs and urban conditions, the landscape will acquire various programs that support the growth of the neighborhood and form different functional clusters. The pocket garden network envisions a city that produces its own necessities. It also supports recreational, educational activities, and functions as a **social condenser** encouraging dynamic exchanges, social interaction, and coexistence through common unexpected realities.

Micro forest

A city can't be resilient and reclaim its status as a living system only with the simple plantation of trees and flowers. Forests in urban settings, which are non-traditional objects by definition, are gaining increasing significance in the urban context. Forests with their specific microclimate can contribute to developing ecosystems within the urban space. The visible feature of the forest is its structure, as it consists of several layers with slightly unique ecological conditions, corresponding to different organisms living there. The network of micro forests should initiate the return of the natural environment to the city, the wildest and the most precious one. At the same time, creating recreational spaces for urban residents as well as educational opportunities for future generations. A network of micro forests is thus defined strategically between the edges of different urban fabrics. A functional biodiversity system integrates the city in the regional ecological process.



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The Janus-faced station. The binary nature and culture, recent past and future.

Rafael Calvo writes about the city "is a place of exchange. These exchanges are not just trade in goods, they also involve beliefs, desires, and memories". San Dona's center has been defined by the AVTO station as a symbolic anchor of the city, a place of exchange. Being placed in the pre-recreational period. The question is how to carry forward the city's past and transform it to the future while taking into consideration the local and global challenges of our time.

Janus frequently symbolized change and transitions such as the progress of past to future as he could see into the past with one face and into the future with the other. The old AVTO station is situated on the hinge of not only the spatial transition from the historical to the present but also the transition of time. The repositioning of the AVTO station hence provides clear all beginnings, the passage, and transitions. The building's configuration and position allow it to interact with two different premises. We try to conceptualize the new programs of the station following the Janus-faced metaphor principle.

The front facade opens to the front piazza which represents the **extroverted dynamic space** with diverse flexible functions that transform in time dimensions. It could host diverse public events, commercial activities but also part of the main traffic circulation. The urban void in the heart of the city will provide extension spaces for public activities. In parallel, the backside of the station is embraced by a micro forest which functions not only as a productive space but also creates an inward-looking atmosphere forming a theatrical atmosphere. Passing through the station as a transitional space from one side to another, the urban sequences will be framed from an extroverted, dynamic space to an introverted space. One can experience walking through the piazza to a hidden campus which is an experimental space promoting the **binary cultural and natural**. This quality could be a local point, a magnet for the whole city and region.

The station itself is functioning as a process of production, transformation, storage, and distribution. By cutting the membranes, it establishes a short circuit of production and consumption of local agricultural products. The productive roof has the form of arcs to continue one of the features of the building and give it an iconic dimension. The stone pavement area throughout the building from the interior to the exterior without any spatial limitation. The ground floor of the station is no longer an obstacle but a means of connection. With flexible architectural building from the interior to the exterior without any spatial limitation. The ground floor of the station is no longer an obstacle but a means of connection. With flexible architectural building from the interior to the exterior without any spatial limitation. The ground floor of the station is no longer an obstacle but a means of connection. With flexible architectural building from the interior to the exterior without any spatial limitation.

