

Cookbook for an Urban living Room - Barcelona (ES)

This project promotes the urban regeneration of the neighborhood based on specific actions to link different contexts and activate different scales under an unitary and common strategy that takes into account social cohesion, the urban substrate, biodiversity and food sovereignty and that requires all involved actors for a balanced and healthy coexistence. To this end, two lines of action are outlined: On one hand shared eco-corridors generate a network that connects strategic points acting as climatic shelters. On the other hand the module added to existing buildings as a parasitic structure that improves their climatic and housing conditions while providing new spaces for social use. An itinerary divided into phases is projected that eases management over time while allowing actions to be consolidated without hindering daily life. The neighbors are encouraged into the management and use of the future neighborhood, offering generic tools for personalized use.

Needs Program (Pla de Barris)

Pla de Barris is an extraordinary program for the most disadvantaged neighborhoods of Barcelona, which aims to reverse inequalities through the application of new public policies, involving citizens in the development of revitalizing projects in their neighborhoods and with an extraordinary and intensive allocated budget for a limited time. In case of El Besòs i Maresme the mentioned needs are:

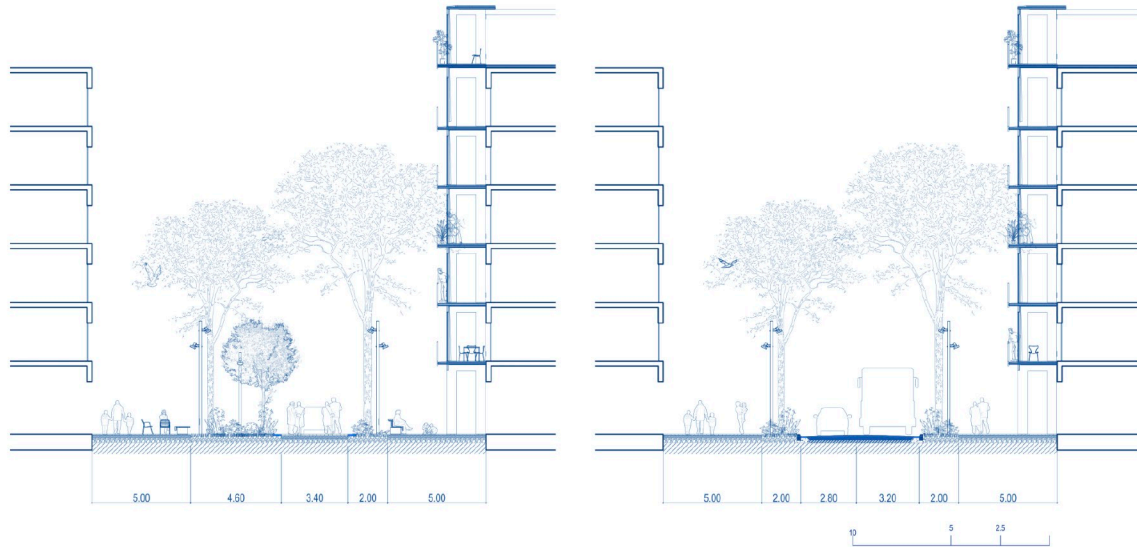
Education and Public Health. Social rights, gender equity and community action. Environmental sustainability and climate emergency. Employment, economic growth and social economy. Public space, accessibility and housing.

Repairing by Hybridizing Public Space

This project aims for a naturalization of the neighborhood working both horizontally (street point of view) and vertically (party walls). In addition to working in different strats, shrubby soil, wooded,... The public space is redesigned by eliminating the impermeable surface layer, and **using the soil as a filter element in the green infrastructure**, a runoff collector, that allows to avoid floods and use the rain water for keeping the green spaces as well as the watering of the productive gardens through a detention system. The existing plants in the infiltration zones will be specific for a **phytodepuration process** before being stored in the retention or detention tanks (as needed). Apart from the low maintenance of the vegetation, an efficient drip irrigation system is proposed, which can use the rainwater stored.

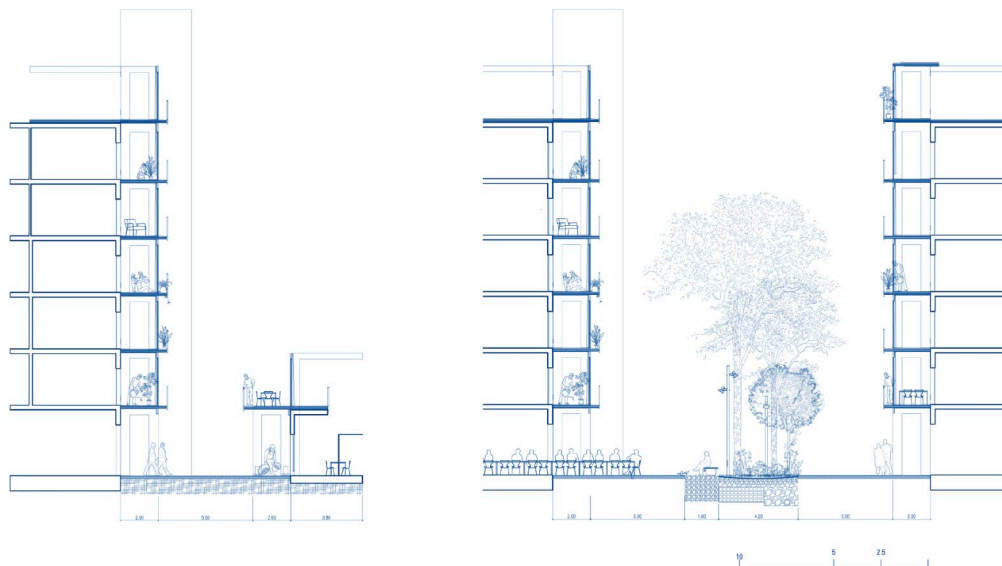
Streets

The public space is hierarchical, where vehicles are the main characters. They occupy most of the space, due to vehicle traffic and angle parking, segmenting the space and creating barriers to pedestrian mobility. Because main streets go in a vertical direction (N-S) they do not allow the free movement of pedestrians. The best proposal is to convert the entire street thinking that the main characters should be pedestrians instead of vehicles. Due to the ambitious size of the project, it is initially proposed to change certain areas of these streets adding **horizontal connectors** such as **squares at strategic points**. In these areas, **parking areas are eliminated, limits are blurred** and accessibility is achieved by creating a **single platform** that helps make motor vehicles come in second place.



Connecting Natural Spaces

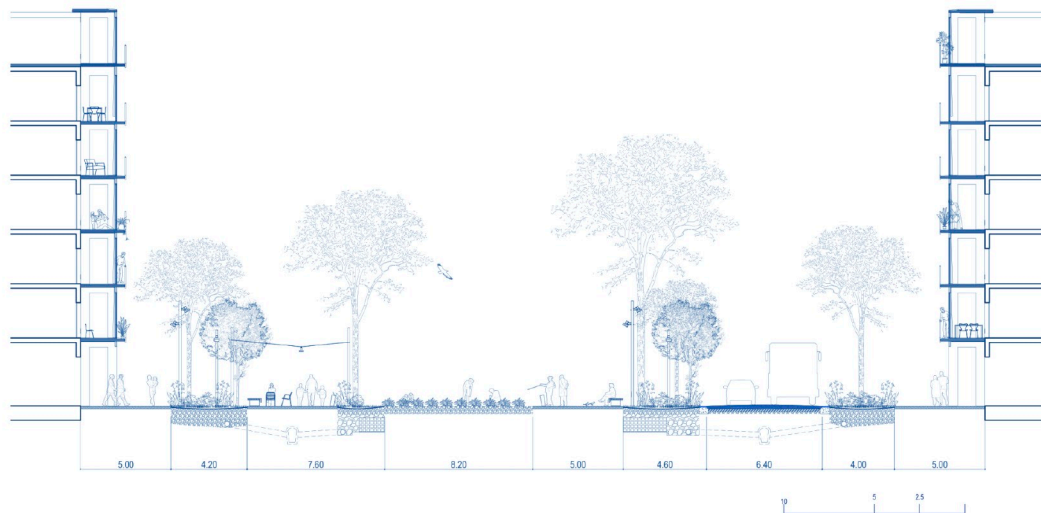
With the aim of taming the neighborhood, the "inner-streets" between buildings completely become **pedestrian spaces, borderless, where vegetation proliferates, hard pavement is eliminated** (50% becomes a filtration space through flower beds, for the paved space, the existing *panot* is reused and paving stones with an open joint are placed), **urban gardens appear, accesses to houses are organized**. They become a **community room**, a room between the adjacent buildings promoting cooperation and care for the common good. In addition, they become **nonlinear connectors in the neighborhood that ease pedestrian mobility by generating shortcuts**. Due to their morphology and the proposed biodiversity, they will also work as **ecological corridors** promoting the coexistence of human and non-human beings. Thanks to their location between the buildings and the amount of vegetation, the **microclimate** generated in these spaces provides **greater thermal comfort and acts as climatic shelters** and paths protected from high temperatures in hot seasons. **Agricultural production** and the **circular economy** develop in a network of existing green areas that connect the neighborhoods with each other and the city.



Productive Spaces agricultural activity as a social catalyst and circular microeconomy

The proposed urban **productive gardens are self-managed** land that help the objective of **food sovereignty**, while allowing **autonomy in the maintenance of these spaces**. In addition, they favor

the community, acting as a **solidarity practice and employment options in a healthy and collective activity**. They fulfill a valuable function in terms of **environmental education** and play a crucial social role by promoting **intergenerational exchange**. The educational activities carried out in the urban productive gardens provide opportunities for children to establish meaningful connections with the elderly, thus promoting mutual enrichment and the exchange of experiences. On the plots, which have dimensions ranging from 25 to 40m², a wide variety of vegetables, herbs, aromatic plants and seasonal flowers are grown. The most common crops include tomatoes, beans, potatoes, zucchini, chard, legumes, cabbage, eggplant, garlic, onions, artichokes and lettuce. In addition to food crops, there are other seasonal flower species that embellish the plots. Aromatic and medicinal plants play a crucial role in organic farming, as they help **control pests** by repelling or attracting insects and parasites.



Project keys

As an advantage of our proposal, the rehabilitation works of the houses are compatible with their use. Ground floor tenants who need to be moved are relocated to the roof floor in the same building. The dry and modular construction allows less expensive manufacturing and a fast assembly. Using less hard paving in public spaces in favor of draining soil saves material costs. The vegetation of the urban productive garden is kept by the community, reducing the maintenance cost of vegetated spaces by the local administration, at the same time the community gets naturally involved in the care for the rest of the neighborhood space. Using part of all the free space as productive space for self-consumption can help the economy of the neighborhood as well as its employment and relations. The reuse of rainwater as well as the use of solar energy help reduce lighting and irrigation costs for the local administration.

Zonal Development Phases and investments approach

- **16 months. Environmental and Housing Emergency. 32.870.000€.** It is the main strategic area and one of the most deteriorated and inaccessible.
- **8 months. Strategic Public Space. 12.300.000€.** It is approached at the public space level to make it more permeable, accessible and usable with large meeting areas for people and nature at the same time that the eco-corridors have just been connected with these points.
- **18 months. Implementation in the rest of the Neighborhood.** Once the action in the regenerated area has been completed, consolidated and reviewed, action is taken in the adjoining areas, extending the same criteria.
- **18 months. (month 12 to month 28). Densifying the Neighborhood.** In the neighborhood there is a detached house type of housing that is not consistent with an urban model with so much unbuilt space. A densification of the neighborhood is proposed that makes the use and maintenance of public space sustainable. At the points where this typology faces large open

areas or avenues, new buildings are built with prefabricated structures with the same modular concept.

Development phases in first action and investments approach

- **6 months. ACCESSIBILITY.** Multi-dwellings that have no accessibility are made accessible by an external and independent structure that contains a core of stairs and an elevator. The existing core of stairs inside the building is eliminated and a new open-plan space is created in its place, shared among its neighbors.
100.000€ / building 38 buildings = 3.800.000€
- **8 months. ECO-CORRIDORS.** With the aim of softening the neighborhood, the public spaces between buildings become completely walkable spaces, borderless, where vegetation grows, hard pavement is removed (50% of it becomes filtration space through plant beds, as for the paved space, the existing *panot* is reused and paving stones with an open joint are placed), urban productive gardens appear, doorways are organized.
1.500m² / building 38 buildings = 57.000m² 200€/m² = 11.400.000€
- **10 months. HABITABILITY.** A typical module in a self-supporting CLT wood structure with different variations is adjusted to colonize the building envelopes. This restored natural environment enables a permeable and energy efficient home.
5.000€ module 26 modules/floor 5 floors=130 modules 38 buildings = 24.700.000€
- **6 months. GROUND FLOORS.** The ground floors are emptied from housing and commercial premises and public spaces are opened instead. The ground floor apartments are transferred to the new attic floor built in the building using the same wooden modular system.
500€/m² 230m²/building 38 buildings = 4.370.000€
- **6 months. PRODUCTIVE SPACE AND CIRCULAR ECONOMY.** Reactivating exempt commercial buildings to locate community meeting, market and workshop spaces related to the new urban productive gardens.
500€/m² 300m²/building 6 buildings = 900.000€

Total cost per residential building = 865.000€ **Total cost per residential dwelling = 21.625€**

Selling part of the shop spaces on the ground floor makes it possible to pay part of the cost of the works. (%33 = 285.450€). The other part is reserved for common spaces. Grants (%33 = 285.450€)

Final cost per dwelling 7.136,25€

Total Cost Urbanization and Productive Spaces = 12.300.000€

