

# Life outside the box

Barcelona (ES)

## New in the Hood

The arrival of a new public housing building in a neighbourhood that has been neglected for years is an opportunity to bring young people to La Verneda and to transform the neighbourhood's dynamics, both at the community level and in terms of how energy, water and resources are managed collectively.

This momentum will also be made easier by the new Sagrera station and its new linear park, which will open soon. This will connect the area to Barcelona and the wider metropolitan area, so Verneda, it's time to get going!

The new homes will be built on a triangular piece of land, flanked by 1960s apartment buildings on its south and east sides, which cast a significant shadow over the interior. This means we have to arrange the homes into two sections of different heights: a ground floor + 7-story block that gets the best sunlight and puts the most homes on the northern side perimeter, and a second ground floor + 3-story block that embraces a communal courtyard inside and will benefit from some energy-saving measures.

But this strange place is also home to a hidden gem, a neighbourhood community center that's still full of life and even a bit of rebellion. The project will support this activity with a facility that also helps to resolve the height difference between Santander and Cantabria streets. This creates a raised platform that provides a shared space for the buildings to relate, allowing them to be connected by stairwells and bring the community together in a meeting place, sheltered by the housing exterior walkways.



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## Connected yet Independent

Life for new generations has become liquid: we change partners, jobs, life plans, and even culinary tastes. That's why we need housing capable of adapting to our changing lives. A home that flows with us.

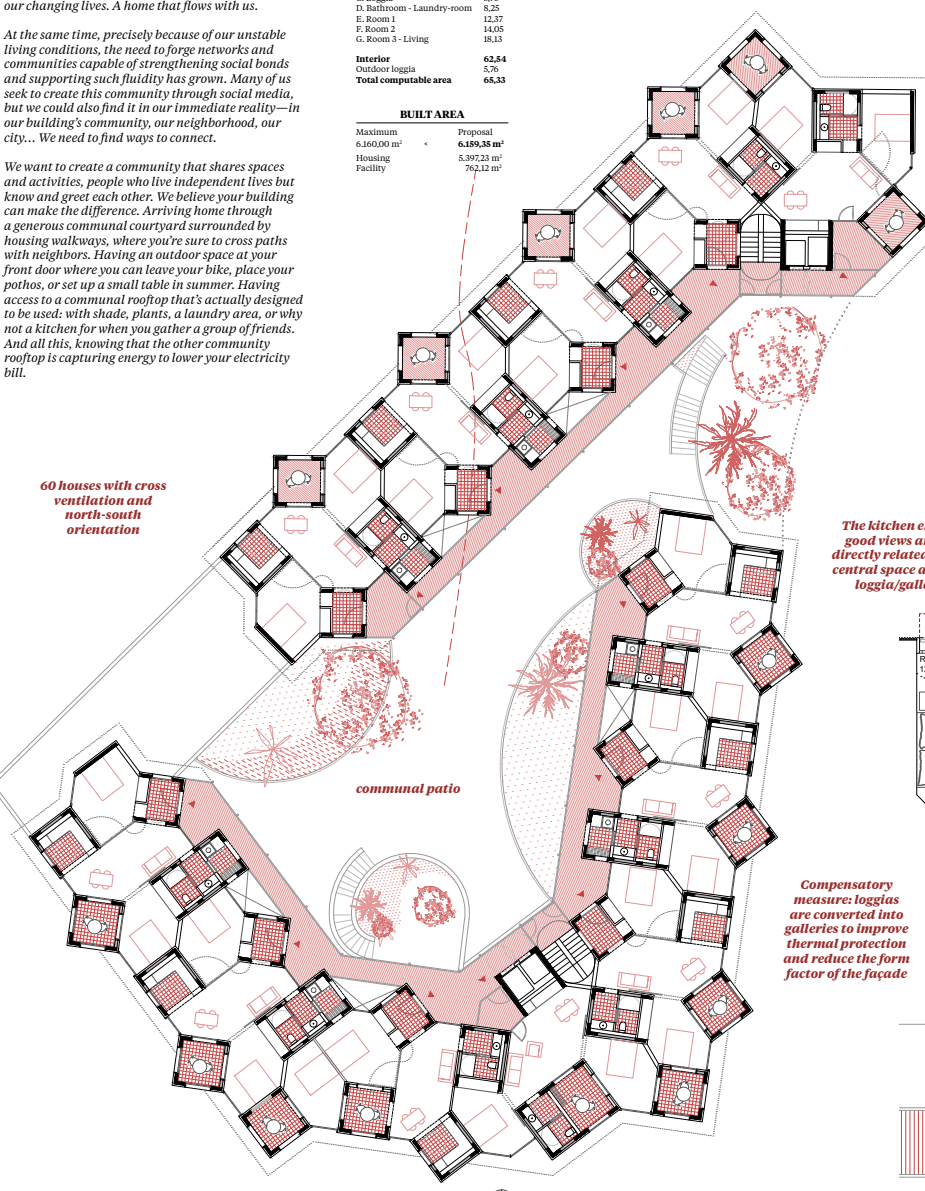
At the same time, precisely because of our unstable living conditions, the need to forge networks and communities capable of strengthening social bonds and supporting each fluidity has grown. Many of us seek to create this community through social media, but we could also find it in our immediate reality—in our building's community, our neighborhood, our city... We need to find ways to connect.

We want to create a community that shares spaces and activities, people who live independent lives but know and greet each other. We believe your building can make the difference. Arriving home through a generous communal courtyard surrounded by housing walkways, where you're sure to cross paths with neighbors. Having an outdoor space at your front door where you can leave your bike, place your potted plants, or set up a small table in summer. Having access to a communal rooftop that's actually designed to be used: with shade, plants, a laundry area, or why not a kitchen for when you gather a group of friends. And all this, knowing that the other community rooftop is capturing energy to lower your electricity bill.

60 houses with cross ventilation and north-south orientation

| LIVABLE AREA - 3 ROOMS     |       |
|----------------------------|-------|
| A. Entrance                | 2.74  |
| B. Kitchen                 | 5.94  |
| C. Loggia                  | 5.76  |
| D. Bathroom - Laundry room | 8.25  |
| E. Room 1                  | 12.87 |
| F. Room 2                  | 14.05 |
| G. Room 3 - Living         | 16.13 |
| Interior                   | 62.84 |
| Outdoor loggia             | 5.76  |
| Total comfortable area     | 68.60 |

| BUILT AREA  |             |
|-------------|-------------|
| Maximum     | Prepared    |
| 6,360.00 m² | 6,439.58 m² |
| Housing     | 5,392.25 m² |
| Publicity   | 792.12 m²   |



The kitchen enjoys good views and is directly related to the central space and the loggia/gallery

Compensatory measure: loggias are converted into galleries to improve thermal protection and reduce the form factor of the facade

A room with independent access allows for individuality and alternative uses

MY SPACE, MY RULES  
Mama is an only child who lives with his parents. "Dad, this room is his own territory. He says that it is spacious and separate from the rest of the house. This way, he can live his life. If he brings a date home, there is no need for explanation."

LIVING APART TOGETHER  
Dad and Mom have a great relationship, respect and love good friends. It wasn't easy to find flat with two small good bedrooms where they can watch whatever TV show they want. As they both work hard, assembled in a controlled environment space into a generous workspace which they turn into a gathering room when they invite friends over.

TINY HUMANS, BIG CHANGES  
It was a difficult time for parents, especially when new babies were born. They never imagined that such tiny beings could generate so much stuff, clothes, toys, magazines, art supplies... Luckily, they have room for it all since the whiteboard has passed, they'll use it for a second child.

green roof with low-maintenance succulent plants and solar panels

habitable roof for community living

## Pack it up and let it flow!

We want to offer you a home that has what you need, but where not everything is predetermined. This is what we architects would describe as a resolved functional program with a high degree of interior flexibility.

We propose a home with compact but sufficient spaces to store your things, cook, wash, hang that damn laundry, and... oh, and support the building! This allows us to free up the other partitions in the house so you can configure them as you wish. Do you share an apartment, live as a couple, work from home, have pets? It's up to you whether to have a conventionally compartmentalized house or an open-plan home without interior divisions. The partitions aren't structural and are prepared to move—not every day, but every time you change your lifestyle.

SUN EXPOSURE & VOLUMETRIC STRATEGY  
Due to the poor sun exposure conditions of the site, the strategy focuses on maximizing the full volume (total floor exposure), which is located on the north side of the plot as far away as possible from the neighbouring towers.

HIGHER MODULE c TO BALANCE CONDITIONS  
We compensate the low building (less sun) with a higher module (c/c+), featuring galleries, maximum insulation and completely heated apartments.

URBAN REGULATIONS  
A 10-meter housing bay is proposed around a central patio, with two strategic passages on the ground floor. Urban planning regulations are respected, including setbacks from adjacent buildings and the inner courtyard radius.

# 2

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## Design for Reassembly

Industrialization is once again knocking on the door of the construction world. This time, it is not only a matter of efficiency in terms of time and economy; it is also a crucial aspect of material circularity, extending life cycles and reducing waste. Additionally, we are committed to creating an industrializable design that generates beauty, uniqueness, and functionality for everyday life.

Our building is designed to be produced entirely in the workshop. It is made up of removable parts that are assembled on site and can be disassembled for repair, recycling, or reuse. Its compactness for transport has also been considered. While the building is being manufactured in the workshop, the foundation and first-floor structure can be constructed on site.

Each house consists of four box modules, each composed of four types of elements: structural, installation, finish, and programmatic. These four elements are independent of each other and arrive pre-assembled. This facilitates execution on site while allowing for future updates and radical changes to the program. The other partitions, including dividing walls, are free of structural or installation functions. The two interior dividers are movable, allowing you to change your layout with ease.

So, architecture, make way for everyday life!

Industrialized assembly of warm materials to highlight domesticity

TIMBER STRUCTURAL SLAB  
These horizontal elements create the remaining living spaces while connecting the box-units into a cohesive structural system.

The Box Units are joined together by the timber slabs that conform the other spaces in the typology. This horizontal structural element is attached to the Box Units by their peripheral laminated timber beams. The timber slabs are made with:

- a. OSB timber board, 30 mm thick
- b. Laminated timber frame and perimeter beams from galician forest.
- c. 20 mm tongue and groove boarding
- d. Laminated inner wooden beams 250x100 mm
- e. Laminated perimeter wooden beams 200x150 mm

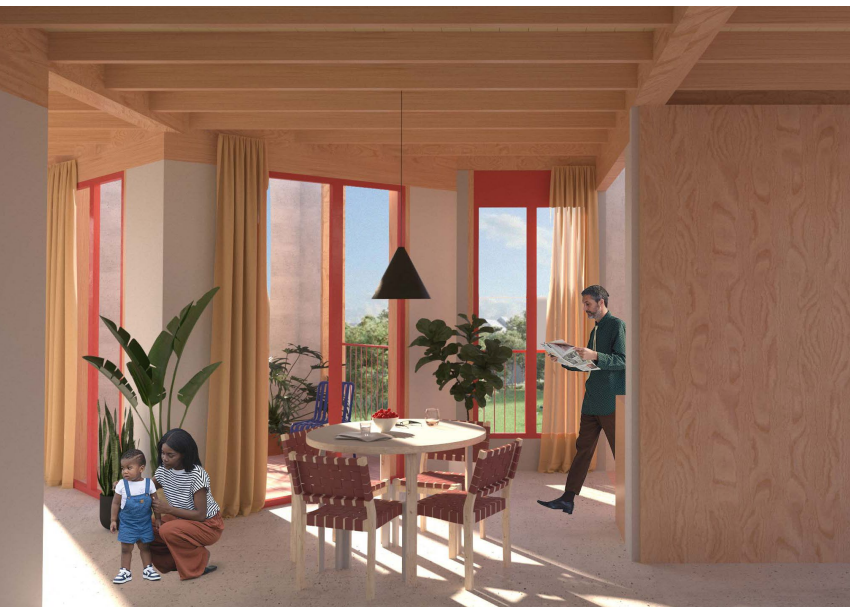
THERMAL ENVELOPE WITH MODULAR INDUSTRIALIZED ELEMENTS  
The building envelope system combines thermal performance with modular assembly, creating a continuous protective barrier around the structural core.

- a. Self-standing inner facade layer, assembled in situ between slabs, composed by dry wall system of boards, substructure, rock wool insulation and external waterproofing sealants.
- b. External layer with continuous thermal acoustic insulation with rock wool panel.
- c. Voids setting: aluminum windows framing and galvanized steel railings, joint together between wood studs. Assembled in a controlled environment and placed together in the construction.
- d. External facade finishing with corrugated metal sheets, modulated and placed mechanically to the inner facade layer.

- Inner dry-wall facade
- Sun protection covering box
- Recycled aluminum windows
- Thermally modified timber studs
- Galvanized steel railing
- Thermal acoustic insulation 100 mm
- Modular corrugated metal sheets

# Life outside the box

# 3



## TIME-LINE

### FOUNDATION AND GROUND FLOOR

While all building components are being manufactured in the factory, the dry foundations and concrete ground floor of the public facility are simultaneously executed on site. The concrete base will sit on a structural foundation to support the entire prefabricated building assembly once it arrives from the factory.

### VERTICAL STRUCTURE MODULES

The industrialized modules integrate the building's essential functions: dining, bathroom, and kitchen. While simultaneously forming its vertical load-bearing structure. Prefabricated in low-carbon reinforced concrete, these elements provide the thermal inertia necessary for building comfort while optimizing the construction process through factory construction.

### INDUSTRIALIZED WOODEN SLABS

The floor slabs are constructed in the factory, with one slab per room, and are transported to the construction site to rest on the structural modules. The slabs feature a timber frame structure made of laminated Galician pine beams.

### DRY-ASSEMBLED MODULAR FACADE

The facade is installed outside the modules to minimize thermal bridges. It is modularized for dry assembly on site. Composed of corrugated metal panels placed between frames that support the railings, solar protection and windows. The corrugated metal panels create a modular envelope, while the modular scale breaks with monotony, humanizing the industrialization process.

### FACTORY TYPOLOGY MOCK-UP

A complete housing unit is constructed in the factory as a full-scale prototype, which is then disassembled and reassembled on site. This allows for all necessary decisions and corrections to be made in advance, ensuring an efficient construction process with minimal waste generation.

### 3D AND 2D MODULES TRANSPORT

The dimensions of the 3D structural modules, 2D horizontal slabs, and facade components are specifically adapted to truck measurements. A logistical schedule is generated to ensure coordinated and efficient transport, delivery, and assembly processes.

### ON-SITE ASSEMBLY

With the planned arrival of all components, the building rises in height progressively. As the structure advances, the facade is subsequently mounted and the mobile interior partitions are installed. Welcome inhabitants! ... 100 years later, the building could be disassembled. ...