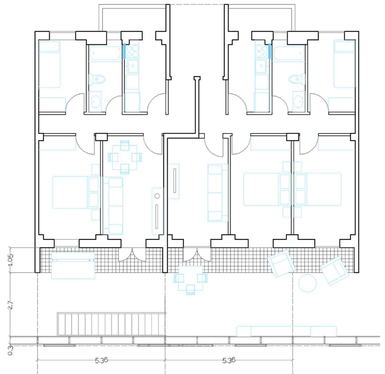
RE_HIVE

Project RE_HIVE seeks to offer a solution to collective housing models that have become obsolete in the social, economic and sustainable rhythms of today's cities.

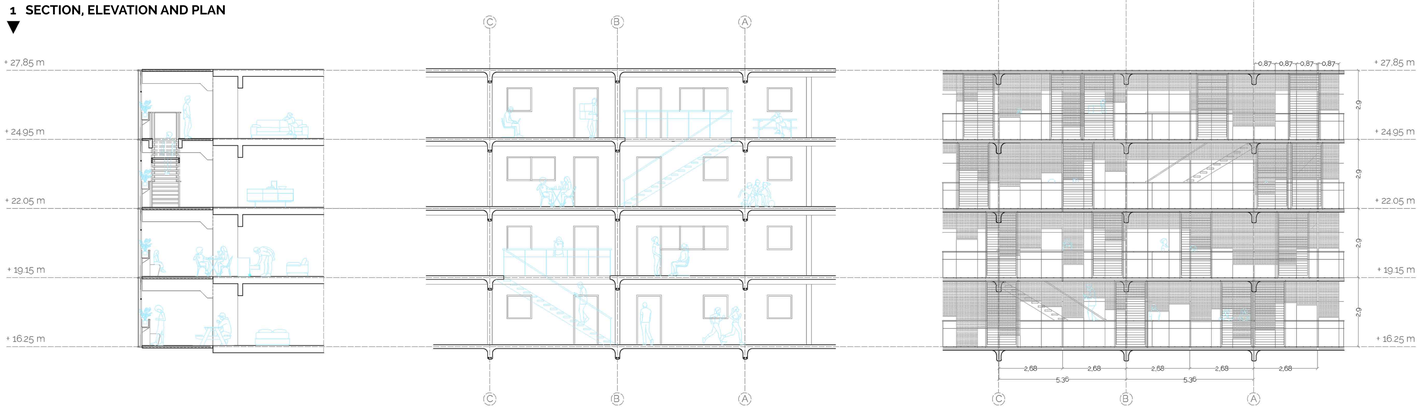
It takes as an example the housing colonies of the Barrio de la Concepción in Madrid. A neighbourhood conceived as a small city where more than 25,000 people live together at a short distance from the centre of Madrid and which was once the most densely populated area in Europe.

A system modulated according to the building's own existing facade is proposed to expand the facade space by 3 metres and to conceive it as the link first between the neighbours and then as a connection of the building to the outside. In this way, not only horizontal connections on the same floor are promoted, but also vertical ones, by this system of "elevated streets". This new skin also adapts itself in a sustainable way, providing both protection from the sun directly and integrated systems for the generation of renewable energy, improving the energy efficiency of the building's envelope.

In the current context where pandemics threaten our way of life, the space of the façade must become into a mitigating one in the case of quarantines, offering a contact with the outside world and with the neighbours, as well as a sanitary filter for the whole building

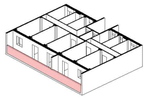


1 SECTION, ELEVATION AND PLAN

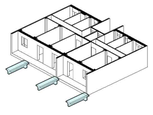


2 BUILDING PROCESS

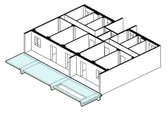
1_Demolition of the current living building terrace dungarees.



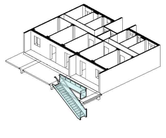
2_Placement of the pre-stressed concrete supports for the structure every 2,7m in the facade



3_Placement of the floor modules made of forged metal sheet every 2,7 m, suported in the prefabricated beams.



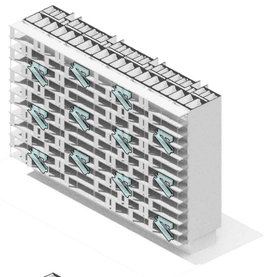
4_The modules containing stairs are previously planned when the structure is mounted.



5_The aluminium anchoring system of the facade elements is attached to the prefabricated structure.

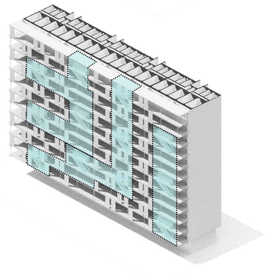
6_Placement of the mobile elements of solar protection and photovoltaic energy colectors

3 CIRCULATIONS SCHEMES

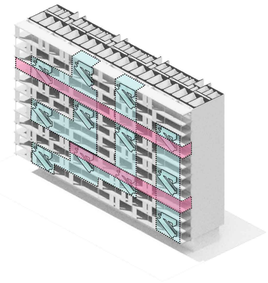


The condition of a prefabricated structure allows the stair modules to be placed freely and then to establish connections not only horizontally but also vertically throughout the building's façade, thus promoting the social connections of the block and allowing flexibility in the configuration of the houses

1_STAIRS CONFIGURATION

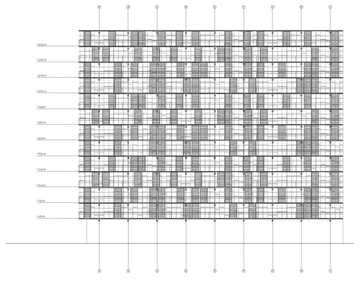


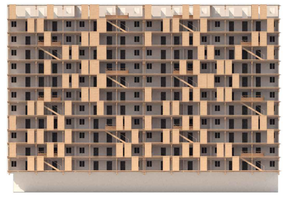
2_VERTICAL CONECTIONS



3_HORIZONTAL CONECTIONS

4 GENERAL ELEVATION AND 3D MODEL





5 CURRENT STATE AND RENEWAL STATE IMAGES

The Barrio de la Concepcion area was constructed in Madrid in the early 60s, and was planned with a poor acess to the center of the city.

It housing system was based in 50 to 70 sqm houses with two or three bedrooms, kitchen, bahtrom, lving room and a small terrace of no more than 1 meter.

That isolated situation encouraged the conections and relations beetween neighbours.

6 CONSTRUCTION DETAIL

The facade is composed of different layers that help first in the direct protection from the sun and second in the generation of renewable energy.

The entire construction process is based on quick dry joints to optimize construction times.

This composition and constructive process helps to obtain a better energy efficiency