



Solar Decathlon Europe
2019, Szentendre

TO WHAT TO SUSTAIN?

This document aims to explain the basic concepts of our project. For updates on recent activity see our monthly newsletter, the link is at the end of this release.

TO IS A PHYSICAL AND SOCIAL SPACE THAT ALLOWS THE USER TO REFLECT ON THEIR HABITS AND ON SUSTAINABILITY. WE PROPOSE A REVISION OF OUR DAILY ACTIVITIES, OF THE WAYS OF LIVING AND OF THE INHABITED SPACES THAT WE HAVE INHERITED FROM THE PAST. WE UNDERSTAND INHABITING, IN ALL ITS DIMENSIONS, AS A KEY FEATURE IN THE INDIVIDUAL DYNAMICS AND, THEREFORE, THOSE OF THE SOCIETY.

WITH THE AIM OF TRIGGERING AN ECOSYSTEMIC CHANGE, WE PROPOSE A SPACE DWELLING THAT IS STRUCTURED AROUND NEW LOGICS OF USE AND CONSUMPTION, NEW DAY-TO-DAY PRACTICES AND NEW WAYS OF INTERACTION AND LIVING.

THEREFORE, THE BUILDING SEEKS THAT THE USER UNDERSTANDS ITS FUNCTIONING; IT ALLOWS YOU TO MAKE A GOOD MANAGEMENT OF WASTE, TURNING IT INTO A RESOURCE, AND TO MANAGE THE COMFORT OF THE SPACE.

Sant Cugat del Vallès, 24/10//2019

The Solar Decathlon Europe 2019 is an international competition that challenges university student teams to design and build houses promoting sustainable design and renewable energy.

We, the TO team are the participating students from UPC - Politecnico University of Catalunya - in this 2019 edition. The Vallés School of Architecture has sent a team in each of the previous three editions with innovative and engaging proposals. These aimed, not only to shorten the distance between architecture students and the building practice, but also to broaden the view introducing real, economical and social concerns.

In this context, the TO project aims to continue questioning the impact architecture can have in day to day activities and how it can contribute to a more sustainable lifestyle.

Our project starts by questioning what the term sustainability means and what implications it should have in everyday life. In consequence, we have given major importance to developing the philosophy behind the project and have synthesized our manifesto into the following five core ideas:

1. First, to broaden the scope of the project so that it not only presents a sustainable housing model, but fosters a change towards an ecosystemic future.
2. Second, this change starts with small actions at home, with a critical attitude towards our day-to-day habits.
3. Third, we acknowledge that we carry out these domestic actions everywhere in the city, which has, in turn, become our home.
4. Fourth, in consequence, the only agent that determines our habits is ourselves, and as such, change starts with self-criticism.
5. And five, our prototype is a communicative tool. It's the material interactive and educational expression of our manifesto.

On one hand; the prototype aims to be understood by the user; to learn how it works and how to manage it in a sustainable way. Within the prototype there is a comprehensive display of the natural resources course inside the housing unit, the disposal resulting from their use, and the way it is reused and reconverted into a resource again. This enables the users to choose when to use each resource and to close their metabolic cycles.

As well as this, the user is able to manage space comfort conditions aiming at minimal energy consumption. They can manipulate the filters between interior spaces and the exterior to reach the desired comfort. The variety of comfort options, what we have named dynamic comfort, translates into a series of mobile gadgets that allow all activities to happen in any of the spaces according to the user's preferences and needs. For example, it offers the possibility to move the shower, or to sleep or cook, on the warmer, south part of the building in winter and on the fresher, north part in summer.





That said, the prototype is materialised into three main items, those are:

- Two servant walls on the east and west facades that display the use of natural resources and allow the understanding of their management. One is for the water cycle and the other one for the organic matter. With these, the user has at hand different types of water or compost to choose from according to the need of each of their actions.

- The north and south sides are converted into a series of multi-purpose spaces, isolated from one another, that achieve different environmental conditions. This comfort is reached by means of a series of filters with different temperature, humidity, solar protection, and ventilation purposes.

- And finally, a central space, that, given the passive thermal cushion at north and south sides, achieves comfort all year round with little aid of active systems. This space can hold large groups of people and is the centre of all the activities that will happen inside the house to fulfill the purpose of the house being a collective and shared space.

Equally important, we are working with the Barcelona City Hall to build it in the UPCampus of Barcelona after the competition and use it as a public domestic facility open to the neighbours. It will be a home for research teams and will be used as an educational center for citizens interested in a more sustainable living.

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MORE INFORMATION

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For information about our recent activity see our monthly newsletter, together with more documents it can be downloaded here:



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<https://tinyurl.com/y5umdyhh>

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