



LUGO + BIODINÁMICO







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**PROJECT LUGO+BIODINÁMICO**  
**PLANIFICACIÓN DE UN BARRIO MULTI-ECOLÓGICO COMO MODELO DE RESILIENCIA URBANA - LIFE14 CCA/ES/000489**

**PROJECT LOCATION:**  
**LUGO**

**BUDGET INFO:**

**Total amount: 3,588,552 €**

**EC Co-funding: 1,793,130 €**

**USC Co-funding : 1.667.268 €**

**UPM Co-funding : 152.384 €**

**DIPUTACION Co-funding : 526.220 €**

**CITY COUNCIL Co-funding : 541.340 €**

**DURATION:**

**Start:01/18/16-End:06/30/20**

**PROJECT'S IMPLEMENTORS:**

Coordinating Beneficiary:

City Council of Lugo

Cofinancer: Diputación de Lugo

Associated Beneficiaries: University of Santiago de Compostela USC-Lugo,  
University Polytechnic of Madrid (UPM)



**Concello de Lugo**



**POLITÉCNICA**



**DEPUTACIÓN DE LUGO**



## -LUGO MÁS BIODINÁMICO. URBAN PLANNING STRATEGY FOR NEIGHBOURHOODS AND RESIDENTIAL AREAS RESILIENT

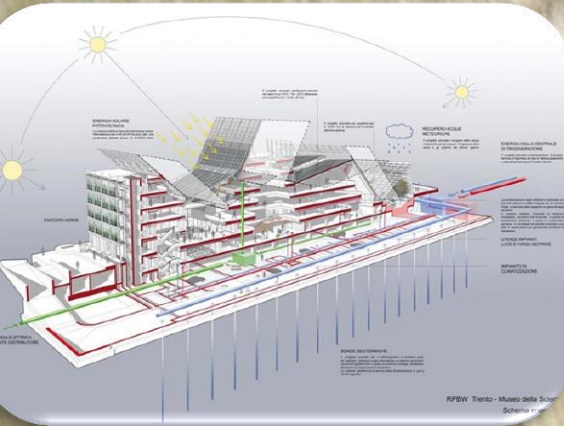
"INNOVATIVE URBAN PLANNING STRATEGY FOR NEIGHBOURHOODS AND RESIDENTIAL URBAN AREAS RESILIENT TO CLIMATE CHANGE EFFECTS". MULTI-SCALE ACTIONS, CONCEIVED AS A "DYNAMIC ADAPTATION" OF THE URBAN SURROUNDINGS"

The project framed within European LIFE program, one of the two achieved for Spain in the 2014 call for Adaptation to Climate Change in its section on Urban Adaptation and Mitigation.

The project is a sum of MULTIPLE ACTIONS aimed at the achievement of a SUSTAINABLE URBAN DEVELOPMENT model that will become a new growth motor for Lugo in the BIO-ECONOMY SECTOR and at the same time be TRANSFERABLE AS AN URBAN STRATEGY to other places And thus to REDUCE THE EFFECTS OF CLIMATE CHANGE, from the local area to obtain the best global effects.

To do this, let's sow a SEED! The seed of environmental awareness and we have selected:

- the best SEED,
- the best PLACE to sow it,
- the right MOMENT of sowing
- and therefore produce THE BEST GROWTH of the fruit, the most positive climatic effect possible in the FUTURE.



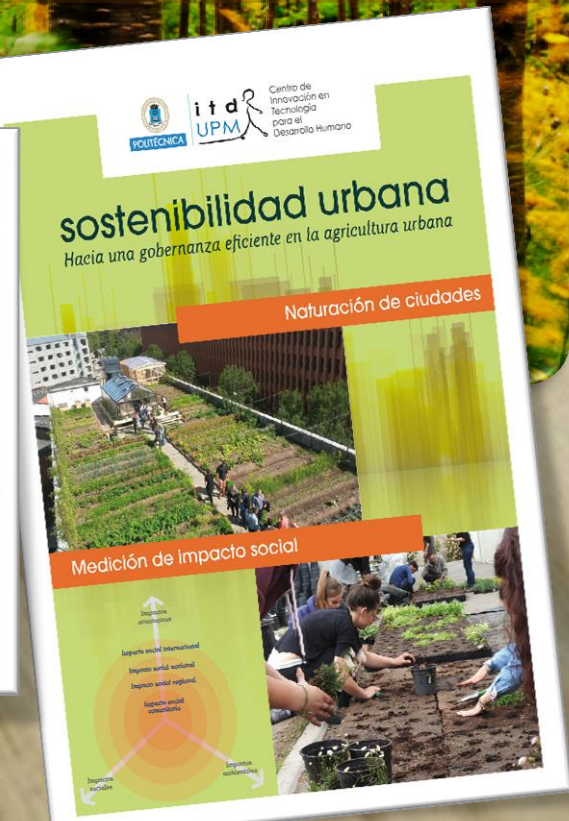
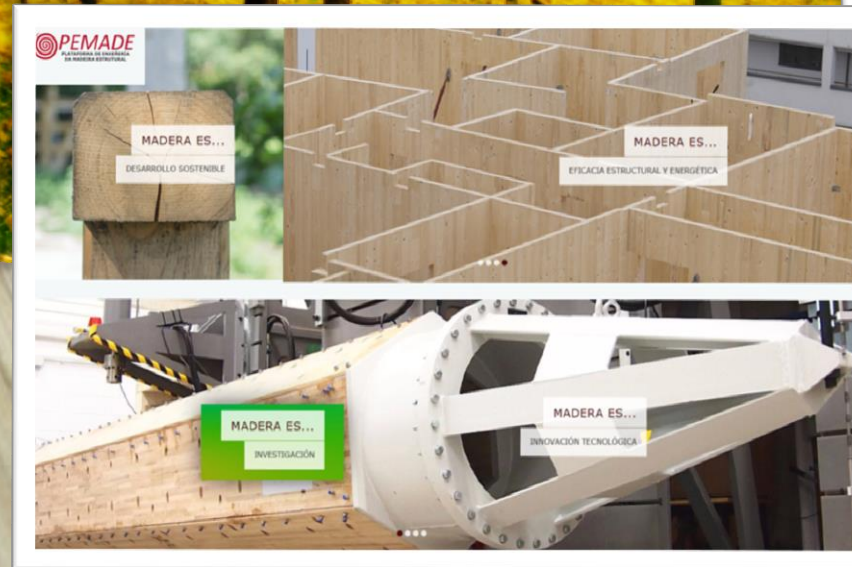




## -THE SEED:

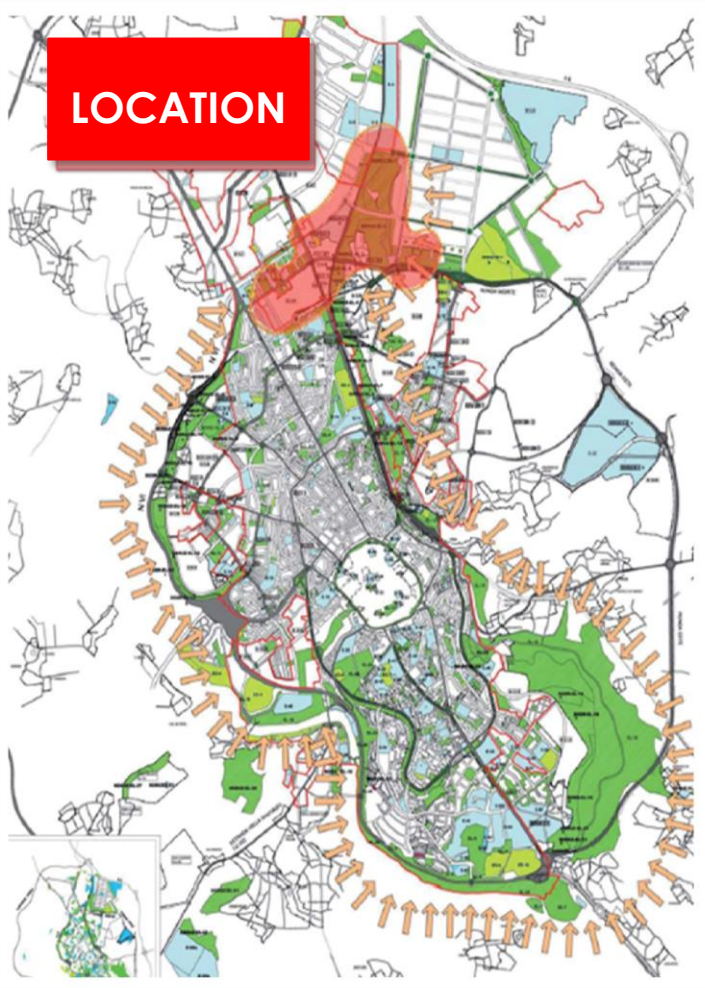
The seed has the essential elements of our local area. Inside have the main lines of investigation of the "earth campus" from Lugo specialized in environmental, social and economic sustainability of land use and from university polytechnic of Madrid, directly applicable to our proposed:

- ADAPTATION OF BUILDING SYSTEMS USING LOCAL MATERIALS with low energy incorporated and analysis other adaptive technologies.
- ENERGETIC CULTIVATION IN URBAN SURROUNDINGS which will produce biofuels in form of wood chips.
- NATIVE DENSE SELVICULTURE IN AN URBAN ENVIRONMENT (cherry, maple, ash and oak trees).
- INTEGRAL URBAN AGRICULTURE





## LOCATION



## -THE PLACE:

As well, it was carefully chosen the best place to sow it, by the confluence of many positive factors for the best growth of the seed.

-First, it is a vast green area, owned in exclusivity by the municipality, where we can develop the latent properties of the seeds, mentioned above, and demonstration actions, because also has unique properties, is located at the headwaters of the river greenbelt of the city, and we started classify as ENIL (natural environment of local interest).

-Secondly is located between two industrial parks, one of them recently implemented. With this we have a double effect:

- minimize negative climatic effects that usually cause these types of areas.
- And this will permit to put in contact these actions with industry, intending to create the germ of a progressive synergism, like a small scale "Biodynamic Silicon Valley" (Wood-Valley) leading to a higher sustainability of industrial activities, promoting the creation of new companies for the bioeconomy sector and developing new technologies focused on adaptation to climate change.

With the choice of location, two of the main purposes of the project in relation to climate change will be achieved in parallel:

1.-PROTECT AND IMPROVE THE PLACE OF INTERVENTION and, by extension, the city itself, the municipality and the province.

-To improve and value a RIPARIAN FOREST-ENIL

2.- Awareness of the population of the individual actions on the climate has global consequences.

-Establish a CHESTNUT GROVE (Souto) on a demonstration plot

-Create an ARBORETUM on a demonstration plot

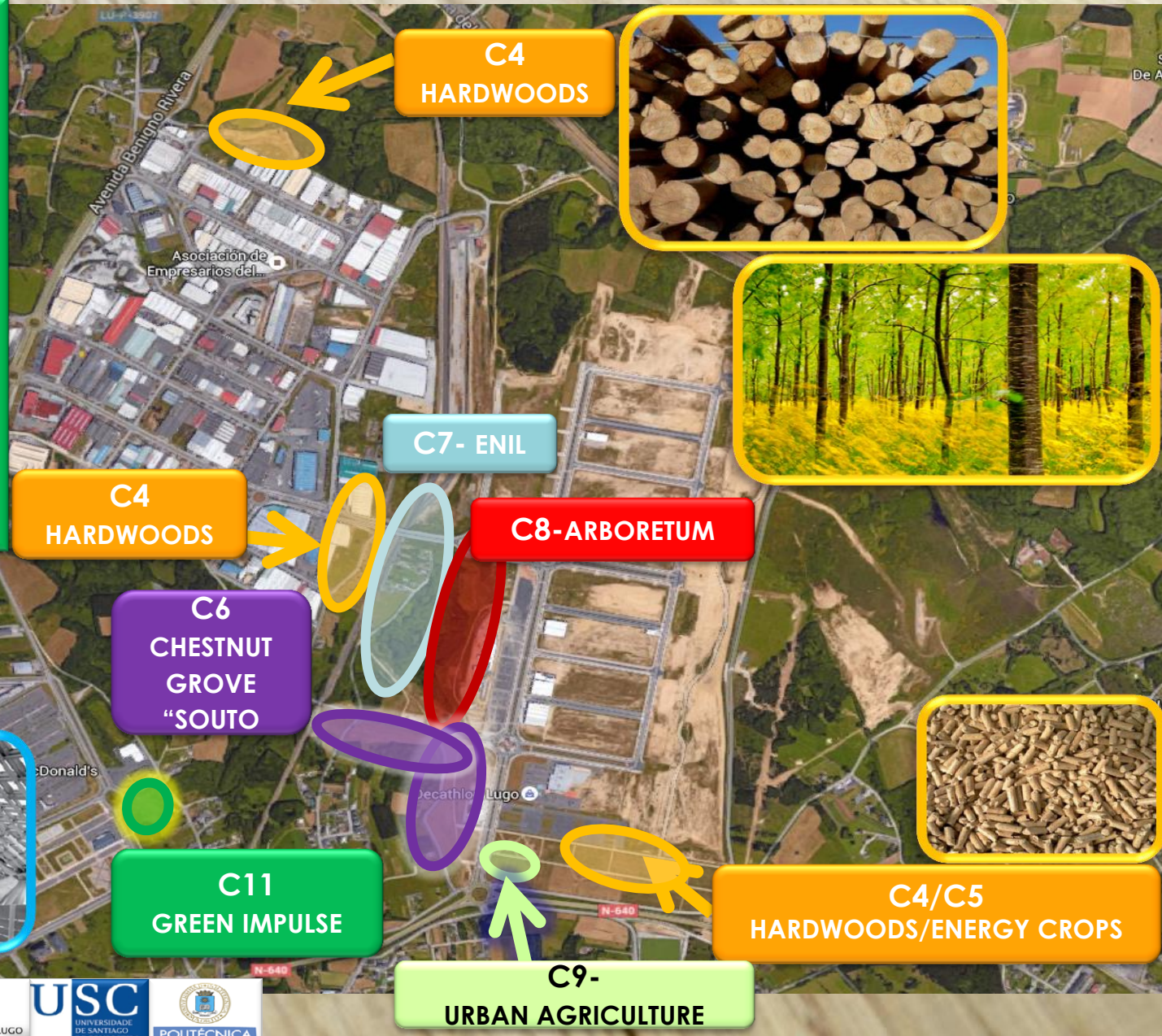






## DEMONSTRATIVE ACTIONS

- Actions of conservation and restoration of the archetype ecosystems in the area.
- C 4 Forestry of native hardwoods in urban areas for the production of quality wood
- C 5 Energy Crops in the urban environment: biofuels energy-efficient
- C 6 Establishment of a Chestnut grove "Souto" with traditional varieties
- C 7 Recovery and enhancement of Riparian Forest
- C 8 Establishing an Arboretum
- C 9 Urban Agriculture of Land and Elevation
- C11 Launching wood pavilion "Impulso Verde" (green impulse) for future urban developments.













## -THE MOMENT.

Concurrently, we consider this moment as the optimal moment to put into practice our actions.

The moment to encourage new economical initiatives in the context of environment protection and adaptation to climatic change, in our emerging industrial framework, the moment to take advantage of the valuable knowledge provided by our University, promoting at the same time its development, the moment to raise and stimulate the environmental awareness of our citizens...

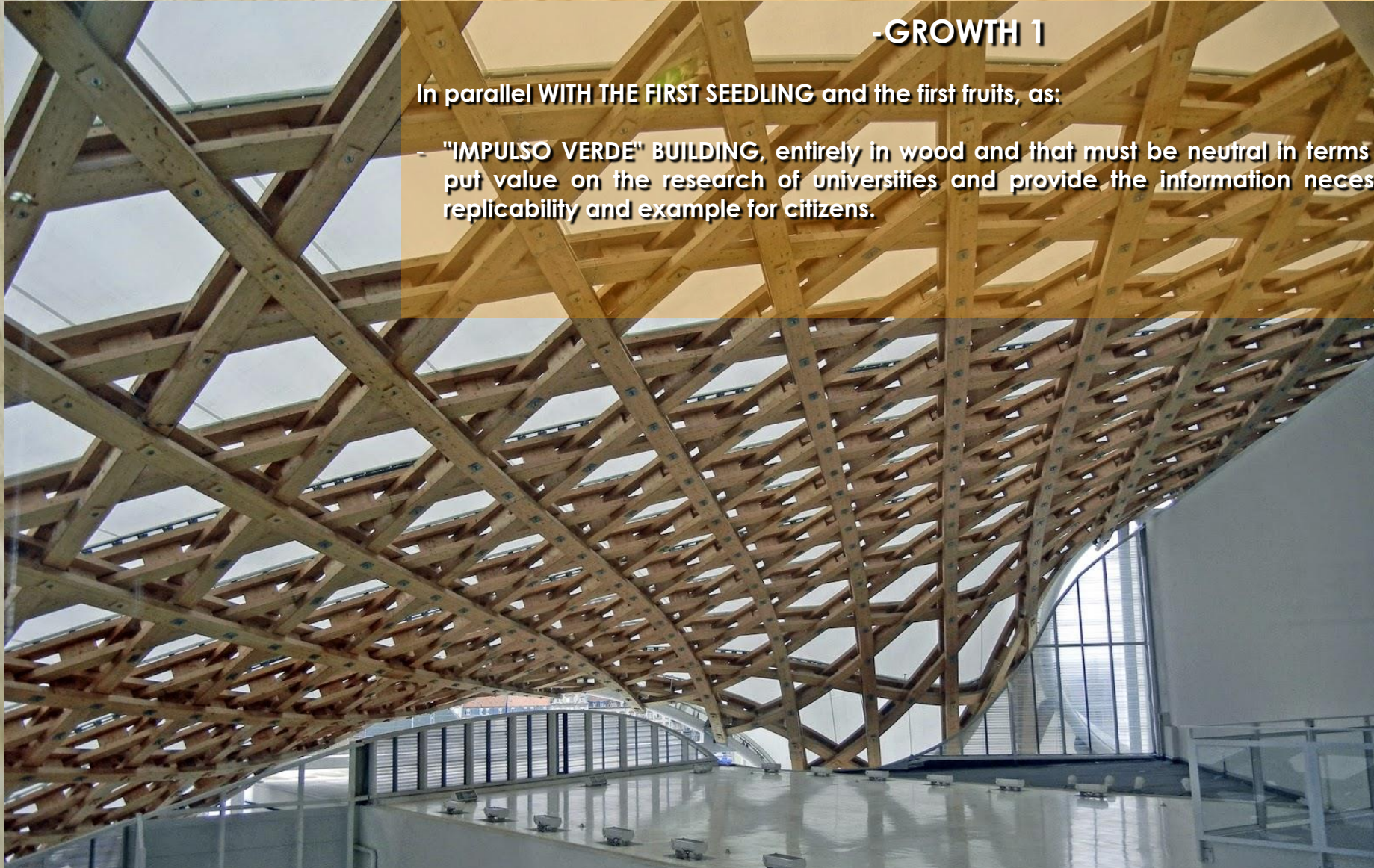




## -GROWTH 1

In parallel WITH THE FIRST SEEDLING and the first fruits, as:

- "IMPULSO VERDE" BUILDING, entirely in wood and that must be neutral in terms of carbon, put value on the research of universities and provide the information necessary for its replicability and example for citizens.





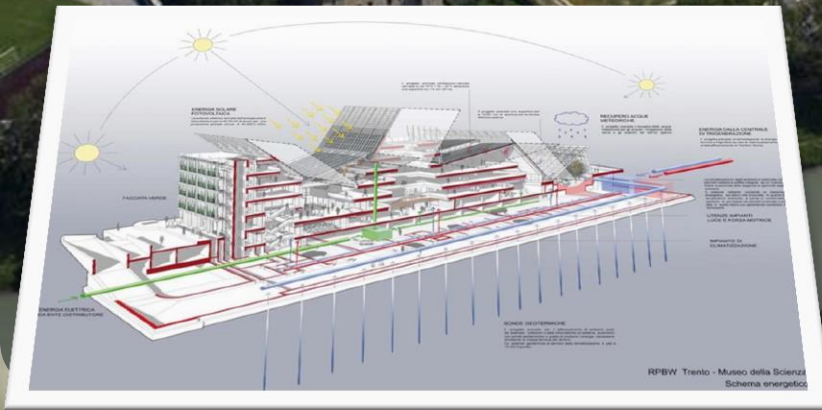
## -GROWTH 2

With these experiences and monitoring data will be passed to the actions of planning, our plant, under a new concept: "Dynamic Adaption", planned for a close urban residential area.

- INTEGRATED PLANNING OF A RESILIENT BIOCLIMATIC HOUSING "MULTI-ECOLOGICAL" NEIGHBOURHOOD.

- CATALOGUE OF URBAN DESIGN SOLUTIONS "ADAPT +" generic interventions of climatic adaption in the urban environment.

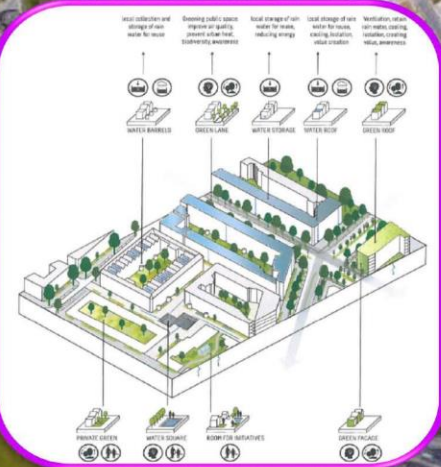
- Design and detailed planning of the new proposed residential areas classified as MICRO-CLIMATIC COMFORT ZONES.





## ACTIONS PLANNED AT MULTI-SCALE

- C1 Catalog of solutions of the Urban Design "ADAPT+.
- C2 Strategic infrastructure plan. Biodynamic Special Plan
- C3 Detailed Planning of Residential Comfort Climatic Areas (RCCA)



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## -THE FUTURE

These new seeds, descending our rivers, and transported by the winds of change will hopefully spread to other regions along our continent, colonizing cities with a similar structure as ours.  
**REPLICABILITY AND TRANSFERIBILITY.**

Michael Green

[https://www.ted.com/talks/michael\\_green\\_why\\_we\\_should\\_build\\_wooden\\_skyscrapers?language=es](https://www.ted.com/talks/michael_green_why_we_should_build_wooden_skyscrapers?language=es)

Ostry architects

[https://m.youtube.com/watch?v=GHIdnY\\_gnmE](https://m.youtube.com/watch?v=GHIdnY_gnmE)

Follow the LIFE programme on [ec.europa.eu/life](http://ec.europa.eu/life),  
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<http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=home.getProject&themeID=113&projectlist>