

## High Efficiency Light Panel (HELP), a new wood-base panels system.



The aim of the project is to develop a construction system known as High Efficiency Light Panel (HELP). Consists of a set of innovative solutions based on a mixture of lightweight timber framing and cross laminated timber (CLT), for the manufacture of "Zero Emission" walls, slabs and roofs.

There is an improvement of the structural capacity of the construction system that allows more height (3-4 floors) than with the traditional lightweight building. The positioning of a three-layer or CLT board on the inside of the walls acts directly as a vapour barrier, saving the cost of installation.

The new building solutions are based on wooden or wood-base panels which will be subjected to tests, analytical calculations and numerical approximations for their structural, thermal, acoustic, watertight and fire resistance characterization. In addition, its environmental characterization (CO<sub>2</sub>, reutilization) will be carried out.

A solution with the new construction system has been defined for use in slabs, walls and roofs. Spreadsheets have been developed to obtain thermal transmissivity, surface and interstitial condensations, sound absorption and structural capacity.

## DETALII

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### SURSA DE LEMN

Pădure

### TIPUL DE LEMN

Lemn masiv

### TIPUL DE LEMN ÎN CAUZĂ

Sawn timber, KVH

### IMPACTUL ASUPRA MEDIULUI ȘI BIODIVERSITĂȚII

Positive

### EFACT ASUPRA VENITURILOR

Positive: decreased building time

### POTENȚIAL DE EXPLOATARE

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### HUB

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### IMPACT ECONOMIC

Increase of the load-bearing capacity of the building by 30% approximately

### CUNOȘTINȚE SPECIFICE NECESARE

High knowledge needed about similar construction systems

### POTENȚIALUL DE MOBILIZARE

10-20 m<sup>3</sup> / house

### POTENȚIAL DE SUSTENABILITATE - VALOARE

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### FACILITATEA DE IMPLEMENTARE

Medium

### FACILITATEA DE IMPLEMENTARE - EVALUARE

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### CONDIȚII CHEIE PRELABILE

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### TIPUL DE EVENIMENT LA CARE A FOST PREZENTAT ACEST IPB

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### EFACT ASUPRA LOCURILOR DE MUNCĂ

Positive: increased efficiency of materials

### COSTURI PENTRU IMPLEMENTARE (EURO - €)

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## MAI MULTE DETALII

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### PROVOCARE ABORDATĂ

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### CUVINTE CHEIE

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### ȚARA DE ORIGINE

Spania

### DOMAIN

Industria construcțiilor din lemn

### SOLUȚIE DIGITALĂ

Nu

### SCARA DE APLICARE

Național

### TIP DE SOLUȚIE

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### INOVAȚIE

Da

### ANUL DE ÎNCEPUT ȘI DE SFÂRȘIT

2017 - 2018

## REFERENCES AND RESOURCES

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### PAGINĂ WEB

<http://www.mabitat.es>

### WEBSITE PROJECT

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### REFERINȚĂ PROIECT

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### RESURSE

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PROIECTUL ÎN CADRUL CĂRUIA A FOST CREATĂ ACEASTĂ FIȘĂ INFORMATIVĂ

Rosewood

DATA POSTĂRII

13 Sep 2019

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A TOOL FROM ROSEWOOD 4.0, DESIGNED AND DEVELOPED BY

