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 (CO2, 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.

DéTAILS

ORIGINE DU BOIS
Forêt

TYPE DE BOIS
Grume

TYPE DE BOIS CONCERNé
Sawn timber, KVH

IMPACT SUR L'ENVIRONNEMENT ET LA BIODIVERSITé
Positive

EFFET SUR LE REVENU
Positive: decreased building time

POTENTIEL D'EXPLOITATION
--

HUB
--

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

CONNAISSANCES SPéCIFIQUES REQUISES
High knowledge needed about similar construction systems

POTENTIEL DE MOBILISATION
10-20 m3 / house

POTENTIEL DE DURABILITé - VALEUR
--

FACILITé D'IMPLéMENTATION
Medium

FACILITé D'IMPLéMENTATION - ÉVALUATION
--

PRéREQUIS CLéS
--

TYPE D'éVéNEMENT Où CETTE ICPE A éTé PRéSENTéE
--

EFFET SUR L'EMPLOI
Positive: increased efficiency of materials

COûTS D'IMPLéMENTATION (EURO - €)
--

PLUS DE DéTAILS

DéFI CONCERNé

--

DOMAINE

Industrie du bois de construction

TYPE DE SOLUTION

--

MOTS-CLéS

--

SOLUTION DIGITALE

Non

INNOVATION

Oui

PAYS D'ORIGINE

Espagne

ECHELLE D'APPLICATION

Nationale

DéBUT ET FIN D'ANNéE

2017 - 2018

REFERENCES AND RESOURCES

SITE WEB PRINCIPAL

http://www.mabitat.es

SITE WEB DU PROJET

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RéFéRENCE DU PROJET

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RESSOURCES

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PROJET SOUS LEQUEL CETTE FICHE D'INFORMATION A éTé CRééE

Rosewood

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Link to Rosewood 4.0

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