Building energy renovation through timber prefabricated modules

Fact Sheet

Project Information

BERTIM

Grant agreement ID: 636984

Funded under H2020-EU.3.3.1.

Project website

Status
Closed project

EU contribution € 4 148 435,25

Start date 1 June 2015
End date 31 May 2019

Overall budget € 4 914 210,20

Coordinated by
FUNDACION TECNALIA
RESEARCH & INNOVATION
Spain

Objective

About 40% of the overall energy consumption in Europe is related to the building sector and represents about 1/3 of Europe’s CO2 emissions. The successful accomplishment of the emission reduction target by 2050, involves the need to increase the rate of retrofitting of the inefficient building stock up to 2.9%. In order to increase the renovation rate, more efficient renovation processes from design to manufacturing phase are needed. The use of prefabricated modules for renovation reduces on-site works, installation time, works intrusiveness, minimising the consumption of raw material; however there is a need to define holistic methodologies to adapt prefabrication processes to individual renovation solutions as well as to mass production, linked to computer design tools.

Giving answer to the mentioned needs BERTIM will provide: (1) High energy performance prefabricated modules for deep renovation, integrating windows, insulation materials, collective HVAC systems, renewable energy systems and...
energy supply systems. The modules will be based in timber and recyclable materials for a low carbon footprint. The assembly system will guarantee a very little time in the installation and low disturbance to tenants. (2) An innovative holistic renovation process methodology based on a digital workflow from design to installation phase. In order to support the renovation process, a renovation project design tool oriented to SME integrating BIM with CAD/CAM tools and assuring the interoperability with CNC machines for mass manufacturing processes will be developed and implemented in three industrial settings. (3) Affordable business opportunities for different stakeholders as potential leaders in the launching of the renovation process. The whole renovation process and the developed timber modules will be validated in a full-scale research infrastructure, and then, they will be demonstrated in two real buildings in two different climatic zones (South and North Europe).

Field of science

/ engineering and technology/mechanical engineering/thermodynamic engineering
/ social sciences/economics and business
/ natural sciences/earth and related environmental sciences/atmospheric sciences/climatology/climatic zones
/ engineering and technology/environmental engineering/energy and fuels/renewable energy

Programme(s)

Topic(s)

Call for proposal

H2020-EE-2014-1-PPP

Funding Scheme

IA - Innovation action

Coordinator

FUNDACION TECNALIA RESEARCH & INNOVATION

Activity type: Research Organisations

EU contribution: € 946 469,79

Address

Parque Científico Y Tecnológico De Gipuzkoa
Paseo Mikeletegi 2
20009 Donostia/san Sebastian
## Participants (14)

<table>
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<tr>
<th>Organisation</th>
<th>EU contribution</th>
<th>Address</th>
<th>Activity type</th>
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<td><strong>EGOIN SA</strong></td>
<td>€ 310 555</td>
<td>Caserio Astei S/n 48287 Vizcaya</td>
<td>Private for-profit entities (excluding Higher or Secondary Education Establishments)</td>
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<tr>
<td><strong>EMPRESA MUNICIPAL DE LA VIVIENDA Y SUELO DE MADRID SA</strong></td>
<td>€ 105 665</td>
<td>Calle Palos De La Frontera 13 28012 Madrid</td>
<td>Private for-profit entities (excluding Higher or Secondary Education Establishments)</td>
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<tr>
<td><strong>INSTITUT TECHNOLOGIQUE FCBA (FORETCELLULOSE BOIS-CONSTRUCTION AMEUBLEMENT)</strong></td>
<td>€ 267 243,75</td>
<td>10 Rue De Galilee 77420 Champs Sur Marne</td>
<td>Research Organisations</td>
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<td><strong>POBI STRUCTURES</strong></td>
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France
EU contribution
€ 278,910,25

Address
78 Rue Elisee Reclus
58400 Decines-charpieu

Activity type
Private for-profit entities
(excluding Higher or Secondary Education Establishments)

Contact the organisation

COLLAGE ARKITEKTER AB
Sweden
EU contribution
€ 15,458,96

Address
Po Box 709
93127 Skelleftea

Activity type
Private for-profit entities
(excluding Higher or Secondary Education Establishments)

Contact the organisation

RISE RESEARCH INSTITUTES OF SWEDEN AB
Sweden
EU contribution
€ 385,000

Address
Brinellgatan 4
501 15 Boras

Activity type
Research Organisations

Website
Contact the organisation

MARTINSONS BYGGSYSTEM KB
Sweden
EU contribution
€ 9,128

Address
Burtraskvagen 53
93780 Bygdsiljum

Activity type
Private for-profit entities
(excluding Higher or Secondary Education Establishments)

Contact the organisation
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<td>BRABRAND BOLIGFORENING</td>
<td>Denmark</td>
<td>€ 3 940</td>
<td>Rymarken 2 Hasle, 8210 Aarhus V</td>
<td>Other</td>
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<td>DIETRICH'S FRANCE</td>
<td>France</td>
<td>€ 618 380</td>
<td>2 Rue Henri Bergson, 67200 Strasbourg</td>
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<tr>
<td>TECHNISCHE UNIVERSITAET MUNCHEN</td>
<td>Germany</td>
<td>€ 299 966,25</td>
<td>Arcisstrasse 21, 80333 Muenchen</td>
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<td>ASM - CENTRUM BADAN I ANALIZ RYNKUSPOLKA Z OGRANICZONA ODPOWIEDZIALNOSCIA</td>
<td>Poland</td>
<td>€ 261 250</td>
<td>Ul. Grunwaldzka 5, 99 301 Kutno</td>
<td>Research Organisations</td>
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OSLO KOMMUNE
Norway
EU contribution
€ 2 333,49
Address
Radhuset
0037 Oslo
Activity type
Public bodies (excluding Research Organisations and Secondary or Higher Education Establishments)

LULEA TEKNISKA UNIVERSITET
Sweden
EU contribution
€ 195 423,75
Address
Universitetsomradet Porson
971 87 Lulea
Activity type
Higher or Secondary Education Establishments

SETRA TRAVAROR AB
Sweden
EU contribution
€ 448 711,01
Address
Box 3027
169 03 Solna
Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)