Buildings as Material Banks: Integrating Materials Passports with Reversible Building Design to Optimise Circular Industrial Value Chains

Fact Sheet

Project Information

BAMB
Grant agreement ID: 642384
Project website

Funded under H2020-EU.3.5.4.
Overall budget € 9,918,629.77
EU contribution € 8,858,763.02

Start date 1 September 2015 End date 28 February 2019

Coordinated by BRUXELLES ENVIRONNEMENT - LEEFMILIEU BRUSSEL Belgium

This project is featured in...

RESULTS PACK
Circular economy innovations for industrial and urban waste management

19 November 2019
Objective

The aims of BAMB (Buildings as Material Banks) are the prevention of construction and demolition waste, the reduction of virgin resource consumption and the development towards a circular economy through industrial symbiosis, addressing the challenges mentioned in the Work Programme on Climate action, environment, resource efficiency and raw materials. The focus of the project is on building construction and process industries (from architects to raw material suppliers). The BAMB-project implements the principles of the waste hierarchy: the prevention of waste, its reuse and recycling. Key is to improve the value of materials used in buildings for recovery. This is achieved by developing and integrating two complementary value adding frameworks, (1) materials passports and (2) reversible building design. These frameworks will be able to change conventional (cradle-to-grave) building design, so that buildings can be transformed to new functions (extending their life span) or disassembled to building components or material feedstock that can be upcycled in new constructions (using materials passports). This way, continuous loops of materials are created while large amounts of waste will be prevented.

Activities from research to market introduction are planned. Fundamental knowledge gaps should be bridged in order to introduce both frameworks on the market. Advanced ICT tools and management models will enable market uptake and the organization of circular value chains in building and process industries. New business models for (circular) value chains will be developed and tested on selected materials. The inclusion of strategic partners along the value chains in an industrial board will maximize market replicability potential, while several (mostly privately funded) building pilots will demonstrate the potential of the new techniques.

Awareness will be raised to facilitate the transition towards circularity by policy reform and changing consumer behavior.

Field of science

/social sciences/economics and business/business and management/commerce
/social sciences/economics and business/business and management/business model
/natural sciences/biological sciences/biological behavioural sciences/ethology/biological interaction
/social sciences/economics and business
/engineering and technology/environmental engineering/waste management/recycling

Programme(s)

Topic(s)

Call for proposal
Funding Scheme

IA - Innovation action

Coordinator

BRUXELLES ENVIRONNEMENT - LEEFMILIEU BRUSSEL

Address
Avenue Du Port 86C
1000 Bruxelles
Belgium

Activity type
Research Organisations

EU contribution
€ 1 065 768,66

Website
Contact the organisation

Participants (15)

EPEA NEDERLAND BV

Netherlands

EU contribution
€ 1 067 123,41

Address
Lichttoren 32
5611 BJ Eindhoven

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

Contact the organisation

VLAAMSE INSTELLING VOOR TECHNOLOGISCH ONDERZOEK N.V.

Belgium

EU contribution
€ 682 829,54

Address
Boeretang 200
2400 Mol

Activity type
Research Organisations

Website
Contact the organisation

BUILDING RESEARCH ESTABLISHMENT LTD
<table>
<thead>
<tr>
<th>Organisation</th>
<th>Country</th>
<th>EU contribution</th>
<th>Address</th>
<th>Activity type</th>
</tr>
</thead>
<tbody>
<tr>
<td>STICHTING ZUYD HOGESCHOOL</td>
<td>Netherlands</td>
<td>€ 348 449,30</td>
<td>Nieuw Eyckholt 300, 6419 DJ Heerlen</td>
<td>Higher or Secondary Education Establishments</td>
</tr>
<tr>
<td>IBM NEDERLAND BV</td>
<td>Netherlands</td>
<td>€ 654 605,88</td>
<td>Johan Huizingalaan 765, 1066VH Amsterdam</td>
<td>Private for-profit entities (excluding Higher or Secondary Education Establishments)</td>
</tr>
<tr>
<td>VRIJE UNIVERSITEIT BRUSSEL</td>
<td>Belgium</td>
<td>€ 1 033 177</td>
<td>Pleinlaan 2, 1050 Brussel</td>
<td>Higher or Secondary Education Establishments</td>
</tr>
<tr>
<td>RONNEBY KOMMUN</td>
<td>Sweden</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organisation</td>
<td>Country</td>
<td>EU Contribution</td>
<td>Address</td>
<td>Activity Type</td>
</tr>
<tr>
<td>--------------</td>
<td>---------</td>
<td>-----------------</td>
<td>---------</td>
<td>---------------</td>
</tr>
<tr>
<td>SUNDAHUS I LINKOEPING AB</td>
<td>Sweden</td>
<td>€ 425,315.63</td>
<td>Teknikringen 10, 58330 Linköping</td>
<td>Private for-profit entities (excluding Higher or Secondary Education Establishments)</td>
</tr>
<tr>
<td>TECHNISCHE UNIVERSITAET MUCHEMN</td>
<td>Germany</td>
<td>€ 114,991.25</td>
<td>Arcisstrasse 21, 80333 München</td>
<td>Higher or Secondary Education Establishments</td>
</tr>
<tr>
<td>UNIVERSITEIT TWENTE</td>
<td>Netherlands</td>
<td>€ 797,000.01</td>
<td>Drienerlolaan 5, 7522 NB Enschede</td>
<td>Higher or Secondary Education Establishments</td>
</tr>
<tr>
<td>UNIVERSIDADE DO MINHO</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Contact the organisation [link]
<table>
<thead>
<tr>
<th>Country</th>
<th>EU contribution</th>
<th>Address</th>
<th>Activity type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portugal</td>
<td>€ 338 592,31</td>
<td>Largo Do Paco, 4704 553 Braga</td>
<td>Higher or Secondary Education Establishments</td>
</tr>
<tr>
<td>Bosnia and Herzegovina</td>
<td>€ 500 882,79</td>
<td>Patriotske Lige 33, 71000 Sarajevo</td>
<td>Research Organisations</td>
</tr>
<tr>
<td>Germany</td>
<td>€ 289 056,25</td>
<td>Obere Waldplaetze 11, 70569 Stuttgart</td>
<td>Private for-profit entities (excluding Higher or Secondary Education Establishments)</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>€ 36 921,28</td>
<td>Breakspear Park, Breakspear Way, HP24FL Hemel Hempstead</td>
<td>Private for-profit entities (excluding Higher or Secondary Education Establishments)</td>
</tr>
</tbody>
</table>
AURUBIS BULGARIA AD

Bulgaria
EU contribution
€ 0

Address
Industrial Zone
2070 Pirdop

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

Contact the organisation

Last update: 23 September 2019
Record number: 196829

Permalink: https://cordis.europa.eu/project/id/642384/

© European Union, 2020