

HORIZON
2020

PLUG-AND-USE RENOVATION WITH ADAPTABLE LIGHTWEIGHT SYSTEMS

Fact Sheet

Project Information

PLURAL

Grant agreement ID: 958218

[Project website](#)

DOI

[10.3030/958218](https://doi.org/10.3030/958218)

Project closed

EC signature date

25 September 2020

Start date

1 October 2020

End date

30 September 2024

Funded under

INDUSTRIAL LEADERSHIP - Leadership in enabling and industrial technologies - Advanced manufacturing and processing

Total cost

€ 9 663 495,03

EU contribution

€ 7 973 817,70

Coordinated by

ETHNICON METSOVION

POLYTECHNION

 Greece

Project description

Innovative solutions for deep building renovation

The deep renovation of residential buildings has emerged as an essential step towards the reduction of buildings' total primary energy consumption. The EU-funded PLURAL project will design and validate a set of flexible, adaptable, scalable, off-site prefabricated plug and play façade components, the Plug-and-Use (PnU) kits. It will deliver optimal practice, deep renovation examples for post-war residential buildings in different European climates. Partners will evaluate three key systems that couple heating-cooling, ventilation, and heat-harvesting systems with smart windows, 3D printing, low carbon footprint and nano-empowered coating materials. PLURAL relies

on building information modelling, or BIM, Big Data management platform and a decision support tool to achieve optimal component selection and integration, perfect PnU kit design, and fast and low-cost manufacturing and installation.

Fields of science

[engineering and technology](#) > [electrical engineering](#), [electronic engineering](#), [information engineering](#) > [electronic engineering](#) > **[control systems](#)**

[engineering and technology](#) > [environmental engineering](#) > [energy and fuels](#) > **[renewable energy](#)**

[engineering and technology](#) > [materials engineering](#) > **[coating and films](#)**

[engineering and technology](#) > [mechanical engineering](#) > [manufacturing engineering](#) > **[additive manufacturing](#)**

[engineering and technology](#) > [civil engineering](#) > [architecture engineering](#) > [sustainable architecture](#) > **[sustainable building](#)**

Keywords

[Off-site prefabrication](#)

[NZEB](#)

[Renewable Energy Systems](#)

[adaptive control](#)

[IT based predictive monitoring](#)

[Decision Support Tool](#)

[low CO2 signature materials](#)

[Digital Manufacturing](#)

[3D printing](#)

Programme(s)

[H2020-EU.2.1.5. - INDUSTRIAL LEADERSHIP - Leadership in enabling and industrial technologies - Advanced manufacturing and processing](#) (MAIN PROGRAMME)

[H2020-EU.2.1.5.2. - Technologies enabling energy-efficient systems and energy-efficient buildings with a low environmental impact](#)

Topic(s)

[LC-EEB-04-2020 - Industrialisation of building envelope kits for the renovation market \(IA\)](#)

Call for proposal

[See other projects for this call](#)

Sub call

H2020-NMBP-ST-IND-2020-singlestage

Funding Scheme

[IA - Innovation action](#)

Coordinator



ETHNICON METSOVION POLYTECHNION

Net EU contribution

€ 1 026 812,50

Total cost

€ 1 026 812,50

Address

HEROON POLYTECHNIOU 9 ZOGRAPHOU CAMPUS
157 72 ATHINA

 Greece 

Region

Αττική > Αττική > Κεντρικός Τομέας Αθηνών

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Participants (18)



PROIGMENES EREVNITIKES & DIAHIRISTIKES EFARMOGES

 Greece

Net EU contribution

€ 680 006,25

Address

DIM. GLINOY 7

14122 Irakleio 

SME 

Yes

Region

Αττική > Αττική > Βόρειος Τομέας Αθηνών

Activity type

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

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 971 437,50



DIMOS VARIS - VOULAS - VOULIAGMENIS

 Greece

Net EU contribution

€ 89 500,00

Address

LEOFOROS KARAMANLI 18 - 18 K. KARAMANLIS AVENUE

166 73 VOULA 

Region

Αττική > Αττική > Ανατολική Αττική

Activity type

Public bodies (excluding Research Organisations and Secondary or Higher Education Establishments)

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 89 500,00



FENIX TNT SRO

 Czechia

Net EU contribution

€ 227 325,00

Address

DUSIKOVA 906/33

638 00 Brno 

SME 

Yes

Region

Česko > Jihovýchod > Jihomoravský kraj

Activity type

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

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 324 750,03



OBEC KASAVA

 Czechia

Net EU contribution

€ 168 437,50

Address

KASAVA 217

763 19 KASAVA 

Region

Česko > Střední Morava > Zlínský kraj

Activity type

Public bodies (excluding Research Organisations and Secondary or Higher Education Establishments)

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 168 437,50



CESKE VYSOKE UCENI TECHNICKE V PRAZE

 Czechia

Net EU contribution

€ 550 750,00

Address

JUGOSLAVSKYCH PARTYZANU 1580/3

160 00 Praha 

Region

Česko > Praha > Hlavní město Praha

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 550 750,00



BERGAMO TECNOLOGIE SPZOO

 Poland

Net EU contribution

€ 634 287,50

Address

ULICA SIENKIEWICZA 5

95050 Konstantynow Lodzki 

SME 

Yes

Region

Makroregion centralny > Łódzkie > Łódzki

Activity type

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

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 997 125,00

 **THIRD-PARTY** 

BERGAMO TECNOLOGIE SRL

 Italy

Net EU contribution

€ 63 700,00

Address

VIA AZZANO 16

24050 Grassobio 

SME 

Yes

Region

Nord-Ovest > Lombardia > Bergamo

Activity type

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

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

No data



DAIKIN AIRCONDITIONING HELLAS SA

 Greece

Net EU contribution

€ 327 433,75

Address

AGIOU KONSTANTINOU 50

15124 Marousi 

SME 

Yes

Region

Αττική > Αττική > Βόρειος Τομέας Αθηνών

Activity type

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

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 


[HORIZON collaboration network](#) 

Total cost

€ 467 762,50



NETCOMPANY-INTRASOFT SA

 Luxembourg

Net EU contribution

€ 388 412,50

Address

RUE NICOLAS BOVE 2B

1253 Luxembourg 

Region

Luxembourg > Luxembourg > Luxembourg

Activity type

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

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 554 875,00



OST - OSTSCHWEIZER FACHHOCHSCHULE

 Switzerland

Net EU contribution

€ 807 062,50

Address

OBERSEESTRASSE 10
8640 Rapperswil 

Region

Schweiz/Suisse/Svizzera > Ostschweiz > St. Gallen

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 807 062,50



INSTITUT DE TECNOLOGIA DE LA CONSTRUCCION DE CATALUNYA

 Spain

Net EU contribution

€ 450 750,00

Address

Calle Wellington 19
08018 Barcelona 

Region

Este > Cataluña > Barcelona

Activity type

Other

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

Total cost

€ 450 750,00



PICH-AGUILERA ARQUITECTOS SL

 Spain

Net EU contribution

€ 274 575,00

Address

CALLE AVILA 138 4 1
08018 Barcelona 

SME 

Yes

Region

Este > Cataluña > Barcelona

Activity type

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

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 392 250,00



FUNDACIO INSTITUT DE RECERCA DE L'ENERGIA DE CATALUNYA

 Spain

Net EU contribution

€ 527 375,00

Address

C/ JARDINS DE LES DONES DE NEGRE 1
08930 Sant Adria De Besos 

Region

Este > Cataluña > Barcelona

Activity type

Research Organisations

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 527 375,00



AGENCIA DE L'HABITATGE DE CATALUNYA

 Spain

Net EU contribution

€ 410 550,00

Address

CALLE DE LA DIPUTACIO 92

08015 Barcelona 

Region

Este > Cataluña > Barcelona

Activity type

Public bodies (excluding Research Organisations and Secondary or Higher Education Establishments)

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 410 550,00



ZRS ARCHITEKTEN GESELLSCHAFT VONARCHITEKTEN MBH

 Germany

Net EU contribution

€ 258 331,50

Address

SCHLESISCHE STRASSE 26 AUFANGANG A

10997 Berlin 

SME 

Yes

Region

Berlin > Berlin > Berlin

Activity type

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

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 369 045,00



RECUAIR S.R.O.

 Czechia

Net EU contribution

€ 169 793,70

Address

TROJANOVA 117

27801 Kralupy Nad Vitavou 

Region

Česko > Střední Čechy > Středočeský kraj

Activity type

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

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 242 562,50



DENVELOPS TEXTILES SL

 Spain

Net EU contribution

€ 489 790,00

Address

CALLE LUXEMBOURG 9
08700 Igualada 

Region

Este > Catalunya > Barcelona

Activity type

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

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 699 700,00




RD RYMAROV SRO

 Czechia

Net EU contribution

€ 428 925,00

Address

8 KVETNA 1191/45
795 01 Rymarov 

Region

Česko > Moravskoslezsko > Moravskoslezský kraj

Activity type

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

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 612 750,00

Last update: 6 September 2024

Permalink: <https://cordis.europa.eu/project/id/958218>

European Union, 2024

