Driving decarbonization of the EU building stock by enhancing a consumer centred and locally based circular renovation process

Risultati

Informazioni relative al progetto

DRIVE 0

ID dell'accordo di sovvenzione: 841850

Sito web del progetto

DOI
10.3030/841850

Progetto chiuso

Data della firma CE
13 Maggio 2019

Data di avvio
1 Ottobre 2019

Data di completamento
31 Dicembre 2023

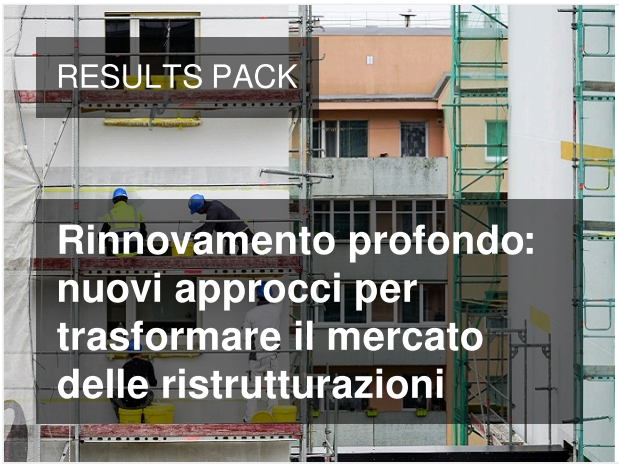
Finanziato da
SOCIETAL CHALLENGES - Secure, clean and efficient energy

Costo totale
€ 4 797 065,74

Contributo UE
€ 3 999 505,63

Coordinato da
Huygen Installatie Adviseurs
Netherlands

Questo progetto è apparso in...



23 Aprile 2024

CORDIS fornisce collegamenti ai risultati finali pubblici e alle pubblicazioni dei progetti ORIZZONTE.

I link ai risultati e alle pubblicazioni dei progetti del 7° PQ, così come i link ad alcuni tipi di risultati specifici come dataset e software, sono recuperati dinamicamente da .OpenAIRE.

Risultati finali

Documents, reports (23)

A set of smart building and installation details for mounting and de-mounting

The building and installation details in Task 26 will be made available digital BIM for the 2D and 3D prefab building elements developed in in Task 23 and 24 so that they can directly be applied in new designs

Numerical code for the construction of the Circular Readiness Indicator

In Task 5.3 will be estimated the Economic performance indicators and the environmental indicators for existing closed or semi-closed circular systems in the selected case studies. This will lead to the construction of a Circular Readiness Indicator that will be reported in this deliverable D5.3.

Report on the assessment available product and technology developments, benchmarking and selection of most favourable and most potential solutions for further development to circular renovation products and a list of criteria/KPI's

This report will present an inventory and assessment of available products and solutions from several recent H2020 projects on deep renovation (Task 2.1). These products/circularity will be benchmarked on: - circularity and potential for circularity, embedded energy - total performances - cost effectiveness and cost reduction - time reduction in the total renovation process A list of criteria and key performance indicators (KPIs) will be made (part of Tasks 2.2) for the further product development in tasks 2.3 – 2.6.

A set of circular prefab 2D building envelope elements with case specific solutions

A set of circular prefab 2D building envelope elements with case specific solutions will be developed in Task 23

Guidelines for a morphological design approach for circular renovation

Guidelines for a morphological design approach for circular renovation as developed in Task 31

Report on the effectiveness of the business models

This deliverable will report the validation of the business models as developed in WP 5, e.g., for the process of decision making, the effectiveness and use of the local platforms for information services to occupants as defined in Task 6.6.

Report on attractive and understandable user information including indicators that are really appealing to end users and occupants to behaviour change

This deliverable will report on the chosen indicators that are appealing and understandable to endusers and can lead to a behavior change and better occupants awareness

Detailed Monitoring Action Plans for each demonstration case

For each casedemonstrator an action plan with a detailed monitoring campaign including measurements awareness information and feedback campaigns will be elaborated describing the type of activities to be carried out as part of Task 62 including the schedule of implementation and the associated costs This will be reported in D62

Report and feedback loops of the tests in deep testing in living labs (step 1)

This deliverable will report the work done as part of the Step 1 testing in living lab conditions as defined in Task 63

Project Dissemination and Communication Plan with annual up-dates

A detailed Dissemination and Communication Plan will be delivered within M6 as part of Task 72 The Plan will constitute the core document outlining the activities on the basis of the projects dissemination and communication activities The Plan will be subject to revision on a yearly basis and thus also report on undertaken dissemination activities by all partners

Final report and executive summary of total project results

A full publishable report on the project's results will be elaborated by the end of the project duration.

Booklet with policy recommendations

Booklet with policy recommendations will be produced based on the outcomes of lessons learnt in WP5, especially in Task 5.4.

The EU circular renovation atlas

The EU circular renovation atlas will present the catalogue with circular concepts based on the work done in Task 3.5.

Evaluation of the impact of local drivers to trigger deep renovation

Overall evaluation and analysis of the demonstrators will be done in D6.7 reporting also on the impact of local drivers to trigger deep renovation.

Evaluation of the performances of the deployed renovation solutions, tools and information services

Evaluation (done as part of Task 6.5) of the performances of deployed renovation solutions, tools and information services will be reported in D6.5.

Designs for prefab building services HVAC platforms 2.0

A further development of prefab installation platforms so called house engines developed in H2020 MORECONNECT H2020 RENNOVATES and in the Dutch Energiesprong program version 10 will be done in Task 25 with emphasis on modularity miniaturization and circularity version 20

Monitoring Protocol

This deliverable reports the work done in Task 4.2 concerning the development of monitoring protocols that will be used in the Drive 0 demonstrators.

Report on the experimental/lab results on consumers/users behaviour and social responsibility

In this deliverable outcomes of Task 52 will be gathered

Report with a description of the boundary conditions of an enhanced circular renovation process

Report with a description of the boundary conditions of an enhanced circular renovation process based on the Task 3.2.

Collection of monitoring technologies, methodologies and information services

Mapping of existing methodologies for monitoring, data processing (from big data to smart data) and the supporting environments to display and present this information to end-users will be done and reported in D4.1 as result of Task 4.1.

Final report on Dissemination and Communication activities

Final report on Drive 0 Dissemination and Communication activities will be produced by the end of the project duration.

Report on benchmarking on circularity and its potentials on the demonstration sites

This deliverable D6.1 will report benchmarking on the circularity of the demonstration sites (Task 6.1).

Report on the business models employed in each case study

Deliverable D51 will report on the results of Task 51 related to identification of suitable circular business models for the DRIVE 0 case studies

Websites, patent fillings, videos etc. (2)

Drive 0 website

The website will be set-up between M1 and M3 in order to incorporate the visual design developed in T7.1. It will be constantly updated and used as main information, communication and dissemination channel.

Dissemination Material: Newsletters, Brochures, Posters, Video

Periodic e-Newsletter will be issued every six months by HIA where brochures, videos, posters will be done in collaboration with ACE.

Other (4)

Three webinars for ACE, HE and UIPI for a further market uptake of the business model and one collateral capacity event on application of the business model

Three webinars for ACE, HE and UIPI for a further market uptake of the business model and one collateral capacity event on application of the business model will be organized (Task 5.4).

Drive 0 corporate identity

DRIVE 0 corporate visual identity package will be developed within the first 3 months of the project

Seven national training courses

To disseminate the DRIVE 0 results and to create awareness about circular deep renovation, well-trained professionals are needed. Trainings will take place in two levels: National: The demonstration sites in WP 6 will offer realistic training cases. International: Two European training courses will be organized, e.g. in conjunction with ACE, HE, UIPI annual meetings and/or a session during an international conference.

User centred information service

Task 44 will aim to create a usercentred information service digital platform as an effective way to show the understandable and personalized information

developed in task 43 to end users It will be based on the existing openend users platforms architectures used in other H2020 projects

Demonstrators, pilots, prototypes (4)

Development of new generation of automated BIM controlled production lines for circular prefab renovation products

Blueprints for BIM controlled automated production lines for circular renovation products based on the task 3.4.

A set of circular prefab 3D case specific solutions

A set of circular prefab 3D case specific solutions will be developed based on the addons developed in ABRACADABRA project

Tailor made holistic and circular renovation packages for the 7 demonstration cases

Tailormade holistic and circular renovation packages for the 7 demonstration cases based on Task 33

Seven small scale demonstration sites renovated (step 2)

Step 2 will cover testing of the proven renovation solutions in small scale pilots (5 to 20 dwellings, or small building) under inhabited conditions.

Pubblicazioni

Peer reviewed articles (9)

The energy retrofit of building façades in 22@ innovation district of Barcelona: energy performance and cost-benefit analysis.

Autori: Manca Mauro, Prochazkova Zuzana, Berardi Umberto, Flores Larsen Silvana, Pich-Aguilera Felipe, and Batlle Teresa
Pubblicato in: IOP Conference Series: Materials Science and Engineering, 2019, ISSN 1757-899X
Editore: IOP Publishing
DOI: 10.1088/1757-899x/609/7/072067

Closing the loop in a duopolistic circular economy model

Autori: Elettra Agliardi a, Myrto Kasioumi b a Department of Economics, University of Bologna, Italy b Department of Economics, University of Guelph,

Canada
Pubblicato in: International Journal of Production Economics, 2023, ISSN 0925-5273
Editore: Elsevier BV
DOI: 10.1016/j.ijpe.2023.108927

Circular Environmental Impact of Recycled Building Materials and Residential Renewable Energy
Autori: Dimitra Papadaki; Dimitrios A. Nikolaou; Margarita N. Assimakopoulos
Pubblicato in: Sustainability; Volume 14; Numero 7; Pages: 4039, Numero 1, 2022, ISSN 2071-1050
Editore: MDPI Open Access Publishing
DOI: 10.3390/su14074039

Assessing the circular redesign of prefabricated building envelope elements for carbon neutral renovation
Autori: Ivar J.B. Bergmans1, Silu Bhochhibhoya1, Johannes A.W.H. Van Oorschot1* * Corresponding author, john.vanoorschot@zuyd.nl 1 Zuyd University of Applied Sciences, Heerlen, The Netherlands
Pubblicato in: Journal of Facade Design and Engineering, Numero Volume 11, n. 2 special issue, 2023, ISSN 2213-3038
Editore: Stichting OpenAccess
DOI: 10.47982/jfde.2023.2.a4

Circularity indicator for residential buildings: Addressing the gap between embodied impacts and design aspects
Autori: Dario Cottafava; MJ Michiel Ritzen
Pubblicato in: Resources, Conservation & Recycling, Numero 1, 2021, ISSN 1879-0658
Editore: Elsevier
DOI: 10.1016/j.resconrec.2020.105120

Justice in social housing: Towards a people-centred energy renovation process
Autori: Broers, Wendy
Pubblicato in: Energy research & social science, Numero 1, 2022, ISSN 2214-6326
Editore: Elsevier
DOI: 10.5281/zenodo.7419287

Assessing and Developing Circular Deep Renovation Interventions towards Decarbonisation: The Italian Pilot Case of “Corte Palazzo” in Argelato
Autori: Cecilia Mazzoli; Rachele Corticelli; Lorna Dragonetti; Annarita Ferrante; Johannes Van Oorschot; Michiel Ritzen
Pubblicato in: Sustainability; Volume 14; Numero 20; Pages: 13150, Numero 1, 2022, ISSN 2071-1050

Editore: MDPI Open Access Publishing
DOI: 10.3390/su142013150

A critical review of circularity - 'design for disassembly' assessment methods applied in the development of modular construction panels - an Irish case study
Autori: Patrick Daly a,b a Principal Investigator Drive 0 Project, Ireland b School of Architecture Buildings & Environment, Technological University Dublin, Ireland
Pubblicato in: e-Prime - Advances in Electrical Engineering, Electronics and Energy, 2023, ISSN 2772-6711
Editore: Elsevier Ltd.
DOI: 10.1016/j.prime.2023.100252

Driving decarbonisation of the EU building stock by enhancing a consumer centred and locally based circular renovation process
Autori: Ana Tisov, Kalle Kuusk, Miriam Navarro Escudero, Margarita Niki Assimakopoulos, Dimitra Papadaki, Peep Pihelo, Peter op 't Veld, Targo Kalamees
Pubblicato in: E3S Web of Conferences, Numero 172, 2020, Pagina/e 18006, ISSN 2267-1242
Editore: EDP Sciences
DOI: 10.1051/e3sconf/202017218006

Thesis and dissertations (1)

Estabilización de revestimientos de tierra usando Ceratonia Siliqua L
Autori: Joan Romero Clausell
Pubblicato in: reponame:RiuNet. Repositorio Institucional de la Universitat Politécnica de Valéncia, Numero 1, 2022
Editore: -
DOI: 10.4995/thesis/10251/169468

Conference proceedings (4)

Development of prefabricated insulation elements for buildings with aerated autoclaved concrete walls
Autori: Pihelo, Peep; Kalamees, Targo
Pubblicato in: 12th Nordic Symposium on Building Physics (NSB 2020), Numero 12, 2020
Editore: E3S Web of Conferences
DOI: 10.1051/e3sconf/202017218001

Circular approach for deep renovation of historic building heritage. The case of a manor villa in Argelato, Bologna

Autori: Mazzoli, Cecilia; Dragonetti, Lorna; Corticelli, Rachele; Ferrante, Annarita
Pubblicato in: Numero 1, 2021
Editore: 'Documentation, Restoration and Reuse of Heritage' conference - University of Porto
DOI: 10.5281/zenodo.7895275

Metodo di valutazione speditiva della circolarità negli interventi di riqualificazione del patrimonio edilizio esistente. Applicazione a quattro casi di studio in Europa - Simplified method for assessing the circularity in the requalification of the existing building heritage. Application to four European case studies

Autori: Corticelli, R.; Dragonetti, L.; Mazzoli, C.; Ferrante, A.
Pubblicato in: Numero 1, 2022
Editore: EdicomEdizioni
DOI: 10.5281/zenodo.7919310

The circularity of renovation solutions for residential buildings

Autori: Kuusk, Kalle; Ritzen, Michiel; Daly, Patrick; Papadaki, Dimitra; Mazzoli, Cecilia; Aslankaya, Guzide; Vetršek, Jure; Kalamees, Targo
Pubblicato in: 2022: CLIMA 2022 The 14th REHVA HVAC World Congress, Numero 1, 2022
Editore: TU Delft OPEN
DOI: 10.34641/clima.2022.333

Altri prodotti di ricerca

Altri prodotti di ricerca tramite OpenAire (2)

Metodo di valutazione speditiva della circolarità negli interventi di riqualificazione del patrimonio edilizio esistente. Applicazione a quattro casi di studio in Europa - Simplified method for assessing the circularity in the requalification of the existing building heritage. Application to four European case studies

Autori: Corticelli, R.; Dragonetti, L.; Mazzoli, C.; Ferrante, A.
Pubblicato in: Zenodo

Circular approach for deep renovation of historic building heritage. The case of a manor villa in Argelato, Bologna

Autori: Mazzoli, Cecilia; Dragonetti, Lorna; Corticelli, Rachele; Ferrante, Annarita
Pubblicato in: Zenodo

Ultimo aggiornamento: 17 Febbraio 2025

Permalink: https://cordis.europa.eu/project/id/841850/results/it