iBRoad2EPC

Integrating Building Renovation Passports
into Energy Performance Certification schemes
for a decarbonised building stock

iBRoad2EPC outreach documentation

Overview report

sympraxis TEAM

Sympraxis

August 2024

www.ibroad2epc.eu

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Depositphotos.com / vlastas

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All of iBRoad2EPC's reports, analysis and evidence can be accessed from ibroad2epc.eu

EXECUTIVE SUMMARY

For iBRoad2EPC to penetrate the markets and achieve its decarbonisation ambitions, a key priority is to support awareness raising, recognition, interest and participation, and to promote the project results, both at local and EU level. This has been highlighted during discussions at project, EU or national level, as well as through interaction with stakeholders.

This report summarises the project's Outreach Documentation contributIng to this priority; it includes the following specific activities:

- News alerts
- Digital information hubs
- Professional media
- Infographics

Stakeholders' feedback confirms that the aim has been reached and iBRoad2EPD has established a strong presence, name and position in the market. What remains next is for public authorities to grab the opportunity and take up iBRoad2EPC as part of their EPBD recast transposition processes.

TABLE OF CONTENTS

INTRODUCTION

Background and context

The iBRoad2EPC project, funded by the EU's Horizon 2020 programme (2021-2024), aims to support the decarbonisation of the EU building stock by combining EPCs with certain elements of a building Renovation Passport or roadmap, particularly the renovation guidance. The project has developed and tested a simplified and modular version of the Renovation Passport to meet the diverse needs of EU Member States markets and EPC frameworks. By combining the strengths of EPCs and renovation passports into a single flexible tool, it enhances user perception and motivates building owners towards energy-efficient renovations. It consists of a basic module, which incorporates the staged renovation advice, and additional modules (covering energy demand, investment, indoor environmental quality, smart readiness indicator, measured energy performance indicator, and other areas) that can be added as needed. With these features incorporated, **iBRoad2EPC is a ready-to-use, flexible, adaptable, modular and affordable model Renovation Passport, designed to be optionally integrated into existing EPC schemes, that has proven to have significant potential to support the implementation of the 2024 EPBD recast and help meet the EU's building decarbonisation targets.**

Objectives and structure of this report

As highlighted during discussions at project or national level and through interaction with stakeholders, key priority for iBRoad2EPC to penetrate the markets and achieve its decarbonisation ambitions is to support awareness raising, recognition, interest and participation, and to promote the project results, both at local and EU level. This report summarises the project's Outreach Documentation to contribute to this. It brings together the outputs of the project's following specific activities, around which the report is structured:

- News alerts
- Digital information hubs
- Professional media
- Infographics.

SUMMARY OF ACTIVITIES

News Alerts

Brief email updates sent to the project contacts list when new material is posted on the website.

iBRoad2EPC sample News Alert

Digital information hubs

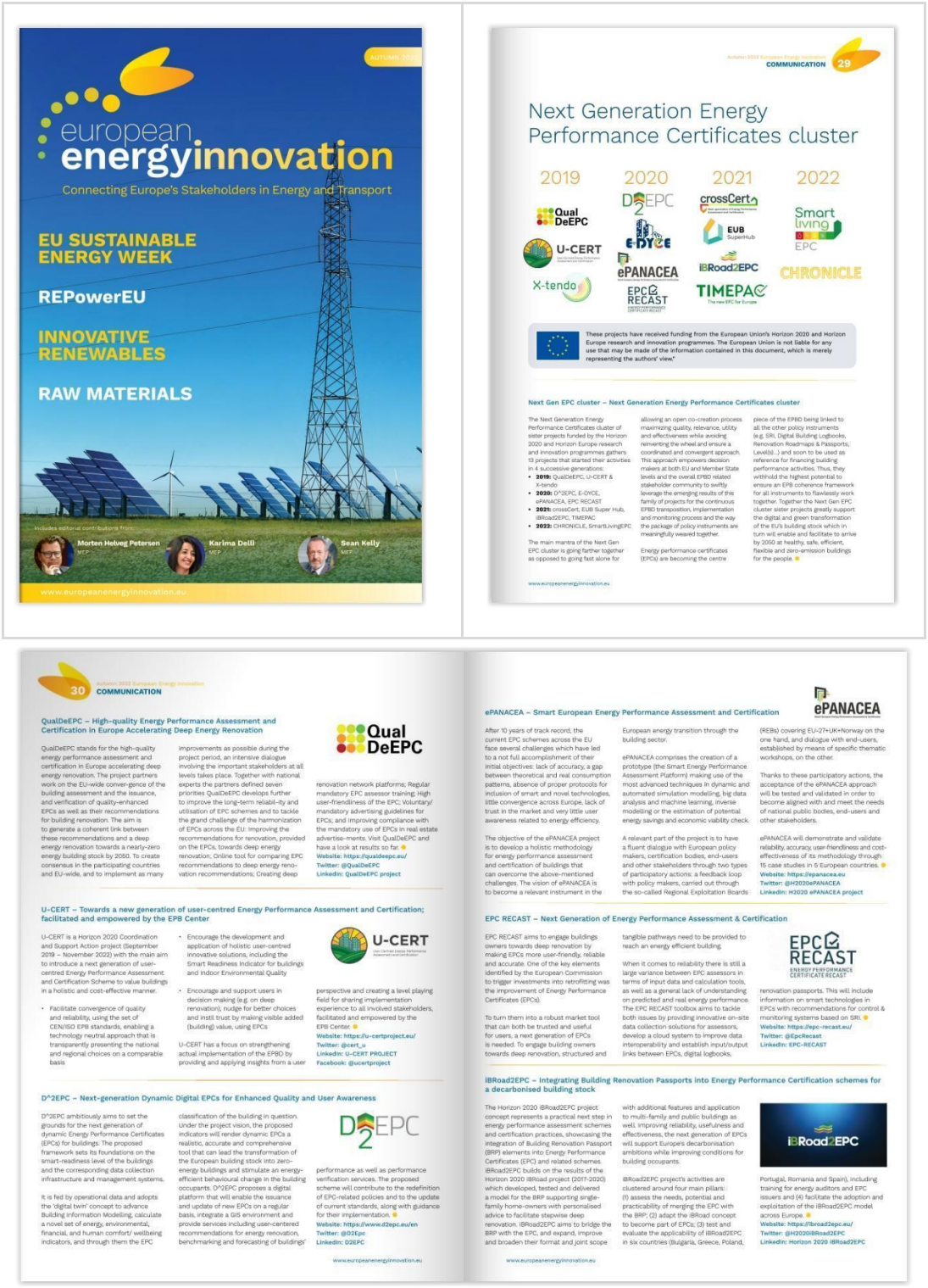
The EC has been supporting since many years the BUILD UP portal as a centralised database of resources on energy efficiency policies. It is thus considered incremental for iBRoad2EPC's outreach and recognition that public deliverables, important news, announcements and outcomes have been posted to the BUILD UP portal. More than 15 original posts have been submitted to BUILD UP in total, including public deliverables, press releases, and other. An overview of the related posts to BUILD UP, as shown through Search | BUILD UP is included in Annex I.

Another relevant and broadly known digital information hub is Construction 21. Two targeted posts were made to Construction 21 as included in Annex II.

Professional media

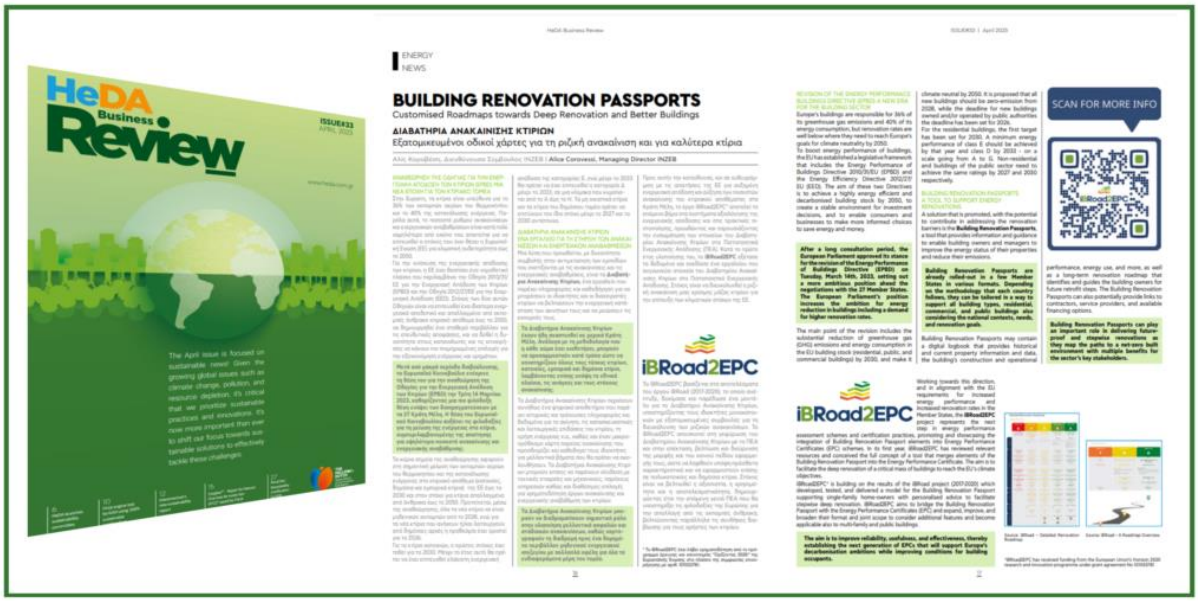
iBRoad2EPC's media work was initiated to further enhance widespread outreach of project related news. Ad hoc, specially drafted and press ready summaries of outcomes in the form of posts, website articles, journal/newspaper articles, interviews, press releases, blogs, etc. were shared by project partners through their networks. Key highlights are presented below.

A first presence in the European Energy Innovation autumn 2022 edition was arranged in collaboration with the Next Generation EPCs Cluster.



iBRoad2EPC featured in European Energy Innovation autumn 2022 edition

An article drafted by partner INZEB was included in HeDA's (Hellenic Dutch Association) Business Review which was disseminated in 1,500 printed copies available in key spots, such as the KLM business lounge at the Athens Airport, major central hotels in Athens and all member companies of the Association.



HeDA Business Review

ENERGY NEWS

BUILDING RENOVATION PASSPORTS

Customised Roadmaps towards Deep Renovation and Better Buildings

ΔΙΑΒΑΤΗΡΙΑ ΑΝΑΚΑΙΝΙΣΗΣ ΚΤΙΡΙΩΝ

Εξατομικευμένοι οδικοί χάρτες για τη ριζική ανακαίνιση και για καλύτερα κτίρια

Alice Corovessi, Managing Director INZEB

iBRoad2EPC

SCAN FOR MORE INFO

iBRoad2EPC featured in Hellenic Dutch Association Business Review

Partner ADENE prepared an article that was included in a large national distribution newspaper (61,533 daily paid digital and printed copies), in the dedicated buildings market section "*Público Imobiliário*".

Passaportes de renovação dos edifícios como ferramenta para a descarbonização

João Cleto
Gestor de Projetos na Direção de Estratégia, Políticas e Projetos da ADENE

Um dos grandes desafios das próximas décadas, à escala mundial, europeia e nacional, será a requalificação dos edifícios até 2050, para que se atinja um parque edificado mais eficiente e sustentável e que possa garantir um dos direitos mais fundamentais na nossa sociedade: uma habitação digna conforme consagrado no artigo 65.º da Constituição da República Portuguesa. A renovação adequada dos edifícios onde vivemos e trabalhamos tem impactos positivos na redução das emissões de gases com efeito de estufa (tanto as emissões diretas e indiretas na fase de operação como aquelas associadas ao ciclo de vida dos produtos incorporados nos edifícios), na saúde dos ocupantes, na resiliência às alterações climáticas, no combate à pobreza energética e na transição para uma economia mais sustentável alicerçada em novas competências e "empregos verdes", garantindo ao mesmo tempo condições de trabalho justas e dignas.

Se estes objetivos de longo prazo parecem uma inevitabilidade, a realidade é hoje bem mais complexa. O quinto relatório de monitorização da Estratégia de Longo Prazo para a Renovação dos Edifícios, na qual a ADENE – Agência para a Energia tem um papel fundamental como membro do Grupo de Coordenação, revela que, apesar da trajetória de redução de emissões e de consumo de energia primária, a taxa de renovação dos edifícios fica aquém da meta definida: um valor acumulado de 6,2% de edifícios renovados entre 2018 e 2020 face aos 69% definidos para 2030. Adicionalmente, o processo de renovação de um edifício ou fração pode ser complexo, dispendioso, difícil de organizar e demorado, envolvendo diversos profissionais e entidades. Muitas vezes, a única forma de fazer esta renovação é estendendo-a ao longo de vários anos e etapas.

É neste contexto que surge o passaporte de renovação dos edifícios como ferramenta de apoio à reabilitação, sendo uma das muitas disposições incluídas na reformulação da diretiva europeia relativa ao desempenho energético dos edifícios (publicada no Jornal oficial da União Europeia a 8 de maio de 2024). Para além dos passaportes, constam também da diretiva objetivos ambiciosos como padrões mínimos de desempenho energético e trajetórias para uma renovação progressiva do parque edificado, eliminação progressiva de sistemas com recurso a combustíveis fósseis e a ligação a infraestruturas para a mobilidade sustentável, entre muitos outros. O passaporte de renovação, cujo conceito havia já sido introduzido na anterior versão desta diretiva, sai agora reforçado sendo definido como um "roteiro adaptado para a renovação profunda de um determinado edifício num número máximo de etapas que melhorarão significativamente o desempenho energético deste".

Foi com o objetivo de estudar possíveis modelos de passaporte e formas de operacionalização

> O passaporte de renovação sai agora reforçado sendo definido como um "roteiro adaptado para a renovação profunda de um determinado edifício num número máximo de etapas que melhorarão significativamente o desempenho energético deste"

que foi desenvolvido o projeto iBRoad2EPC – Desenvolvimento e Integração de Passaportes de Renovação dos Edifícios no Sistema de Certificação Energética dos Edifícios, cofinanciado pelo programa Horizonte 2020 da União Europeia, O iBRoad2EPC contou com 11 parceiros e as ferramentas desenvolvidas foram testadas em seis países: Bulgária, Espanha, Grécia, Polónia, Portugal e Roménia. A ADENE, como parceira deste projeto, teve como responsabilidade acompanhar o desenvolvimento da plataforma e ferramenta de emissão de passaportes de renovação, a ligação ao Sistema de Certificação Energética dos Edifícios, a formação de Peritos Qualificados na metodologia e a coordenação da fase de testes em Portugal. Foram avaliados 10 edifícios de diferentes tipologias (escritórios, escolas, edifícios multi e unifamiliares), fruto da colaboração e apoio da Santa Casa Misericórdia de Lisboa, da empresa Construção Pública E.P.E. e da GEBALIS – Gestão do Arrendamento da Habitação Municipal de Lisboa, E.M., S.A.

Como exemplo, num dos edifícios multifamiliares estudados, foi possível estabelecer um plano que permite evoluir da classe energética F para a A+ em quatro etapas. Atualmente é um edifício em mau estado de conservação, com patologias que afetam a qualidade do ambiente interior e uma situação muito provável de pobreza energética dos residentes. A renovação proposta passa pela remodelação da envolvente, a instalação de solar térmico para a preparação de água quente sanitária, com apoio de uma bomba de calor, janelas eficientes (classe A+ pelo sistema de classificação CLASSE+ da ADENE) e sistema a biomassa para aquecimento ambiente. Estima-se, assim, atingir uma redução na emissão de gases com efeito de estufa da ordem dos 98%, de 58% no consumo de energia final e de 95% da fatura energética, melhorando significativamente a qualidade do ambiente interior e dotando o edifício de inteligência. Tudo isto se traduz numa oportunidade de planear e realizar investimentos coerentes e realistas que garantem um edifício preparado para o futuro, valorizam o ativo imobiliário detido e aumentam a qualidade de vida dos residentes atuais e futuros, respondendo também a necessidades prementes como as patologias do edifício e prováveis situações de pobreza energética.

Fica assim evidente que, com os devidos incentivos, e a integração dos passaportes em ferramentas como o portal casA+, uma plataforma desenvolvida pela ADENE, que centraliza num só local toda a informação relevante sobre a habitação e permite contactar diretamente com empresas e profissionais com vista à implementação de medidas de melhoria, é possível estabelecer e concretizar um plano coerente e realista para a renovação de cada um dos edifícios contribuindo para a progressiva renovação do parque edificado total.

> "Tudo isto se traduz numa oportunidade de planear e realizar investimentos coerentes e realistas que garantem um edifício preparado para o futuro, valorizam o ativo imobiliário detido e aumentam a qualidade de vida dos residentes atuais e futuros"

Este trabalho será essencial para a transposição da diretiva relativa ao desempenho energético dos edifícios, que deverá ser finalizada até 28 de maio de 2026, mas também para o grande desafio de atingirmos um parque edificado descarbonizado até 2050.

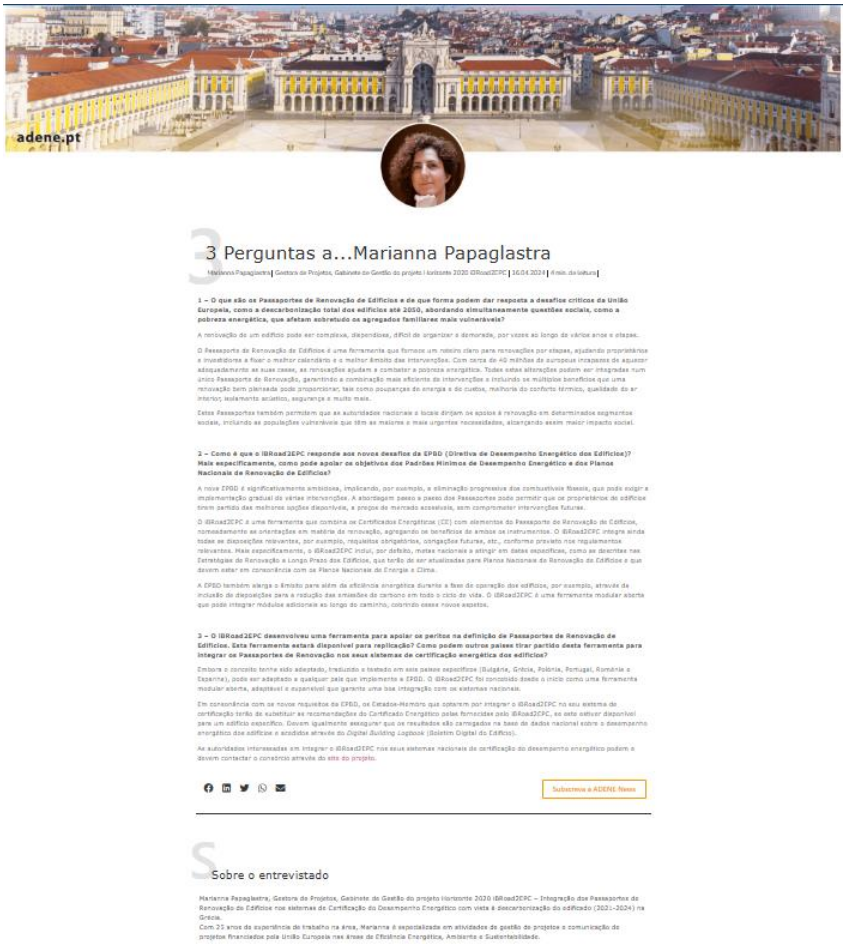
A ADENE estará sempre presente para continuar este trabalho e apoiar a prossecução destes ambiciosos objetivos.

iBRoad2EPC featured in Público Imobiliário

Three major articles were especially drafted to focus on specific topics and were shared through the projects' contacts Horizon magazine, BUILD UP portal, Balkan Green Energy News, ECEEE, CORDIS and the BPIE website:

- Press release "*Positive perspectives for the iBRoad2EPC model Renovation Passport following field testing in six EU countries*". Drafted by partner Sympraxis, this press release utilised a double momentum, that of the completion of the iBRoad2EPC field tests in six pilot countries with that of the publication of the EPBD recast, to announce the iBRoad2EPC evaluation results and highlight the value and potential of iBRoad2EPC as perceived by the energy auditors and building owners that took part in the testing.
- "*A blueprint for success: How a modular renovation passport can accelerate deep renovation*" is a think piece drafted by BPIE with support from Sympraxis, as a summary of the EU policy roadmap for accelerating deep renovation in the EU with the iBRoad2EPC Renovation Passport. It delves into how iBRoad2EPC aligns with the provisions of the EPBD recast, and in particular Art. 12 and Annex VIII for renovation passports, and proposes actions to support effective transposition of the EPBD recast as concerns the renovation passport.
- *The event summary "EU-funded projects focused on next generation Energy Performance Certificates (EPCs), present their results in support of the implementation of the recast Directive on Energy Performance of Buildings*" includes detailed proceedings of the joint final conference of the Next Generation EPC cluster projects crossCert, EPC RECAST, EUB SuperHub and iBRoad2EPC, titled "*Next Generation Energy Performance Certificates Conference – EPBD recast edition*". The conference was held on 23 May 2024 physically at Mundo Madou in Brussels, and was live streamed online. Aim of the conference was for the projects to bring forward valuable insights and applicable outcomes in the context of the 2024 recast Energy Performance of Buildings Directive and to discuss these with their peers. The event summary was drafted by Sympraxis on behalf of the four projects and was widely shared across the clusters' networks and means.

A series of articles were drafted by partners and shared through the partners' own websites, social media and newsletters. Among these, a short interview on iBRoad2EPC was published on the Portuguese Energy Agency's newsletter



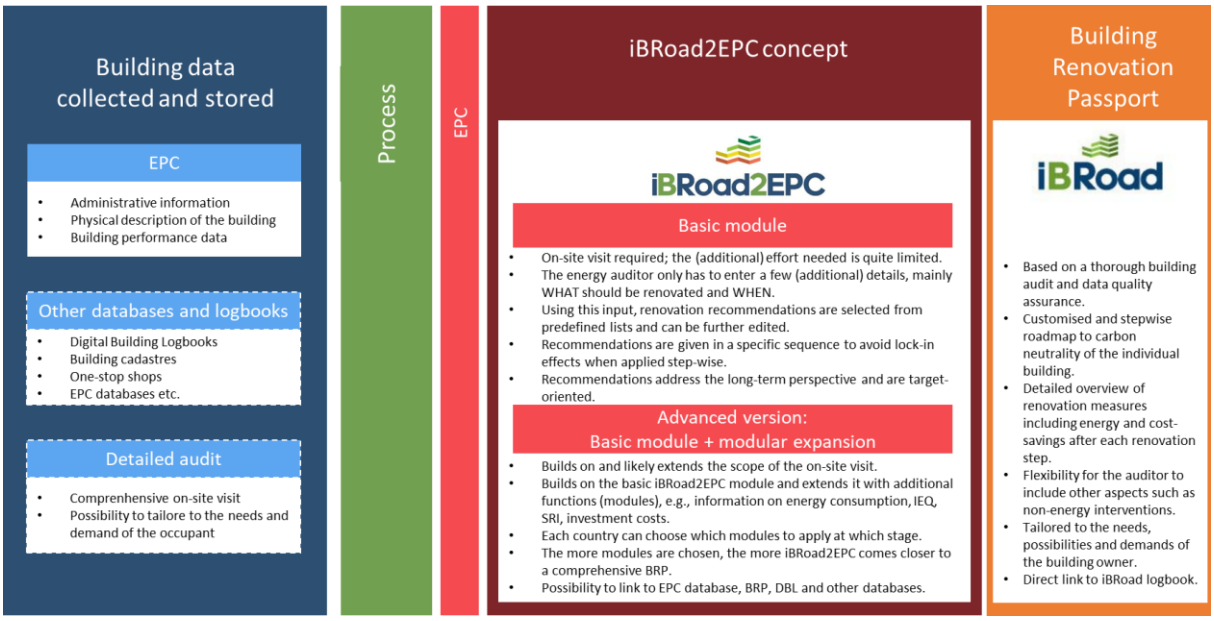
iBRoad2EPC featured in ADENE's newsletter

Last but not least among the main highlights, the BUILD UP portal has requested a written interview on the iBRoad2EPC concept from Sympraxis, to be included under the Topic of the Month "*Energy Certification and Energy Labelling of buildings*", soon to be released.

Infographics

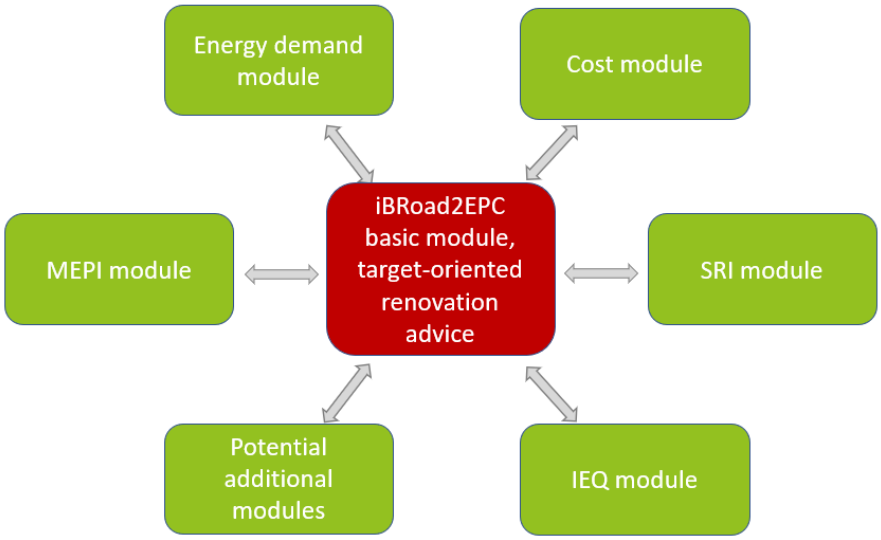
One picture stands for 1,000 words. iBRoad2EPC's outreach, promotion and dissemination activities would thus be so much poorer without its key infographics: simple visuals designed to present in a clear, comprehensive and attractive way key facts of the project. The infographics were included in various project deliverables, website and newsletter articles, social media posts, etc.

The first infographics were developed by ifeu, BPIE and Sympraxis early on to visualise a) the project concept, b) the strategic placement of iBRoad2EPC between existing EPCs and the Building Renovation Passport and the implications for pricing and market penetration and c) the modularity of iBRoad2EPC.



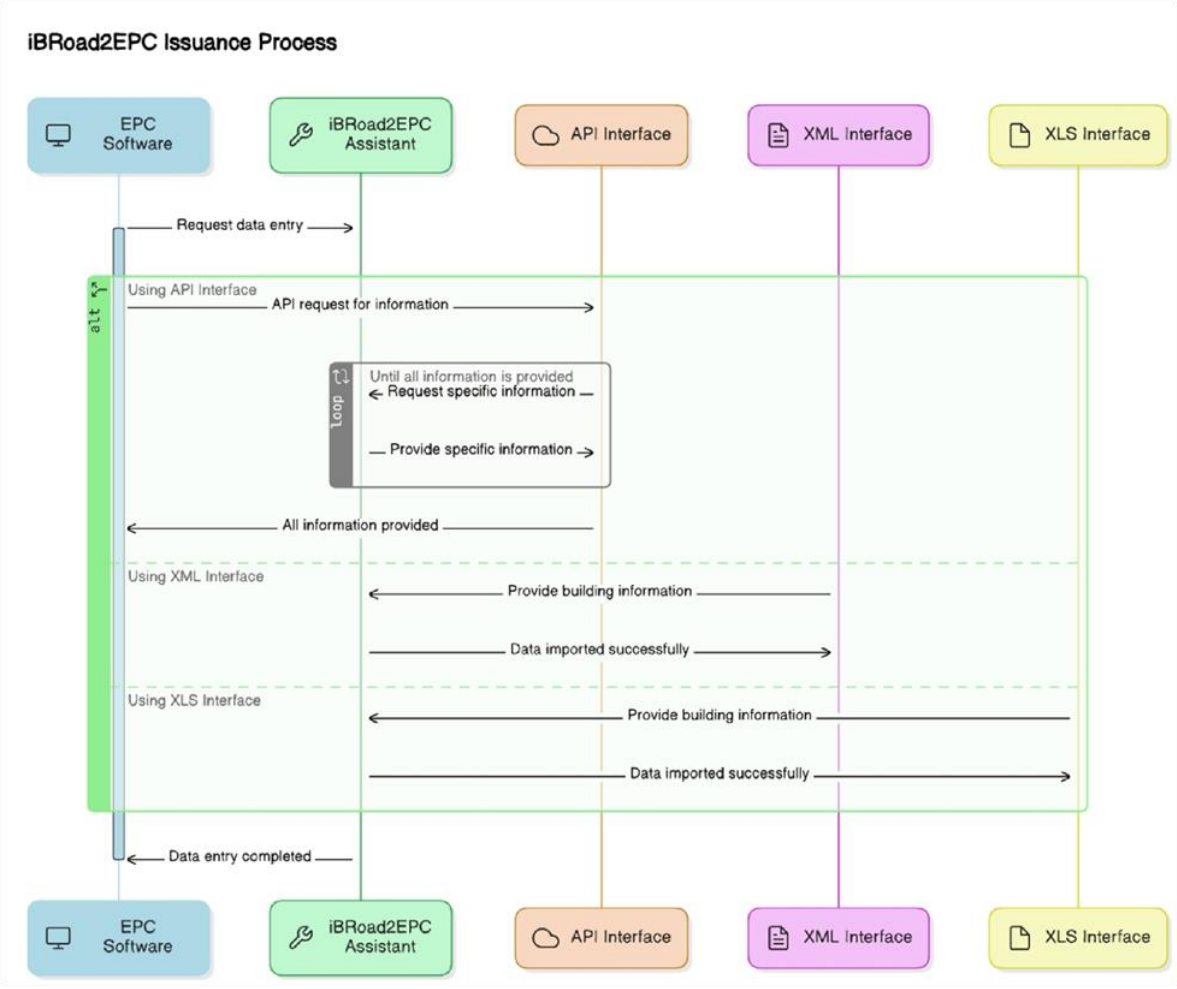
Infographic: The iBRoad2EPC concept

Infographic: The iBRoad2EPC strategic placement



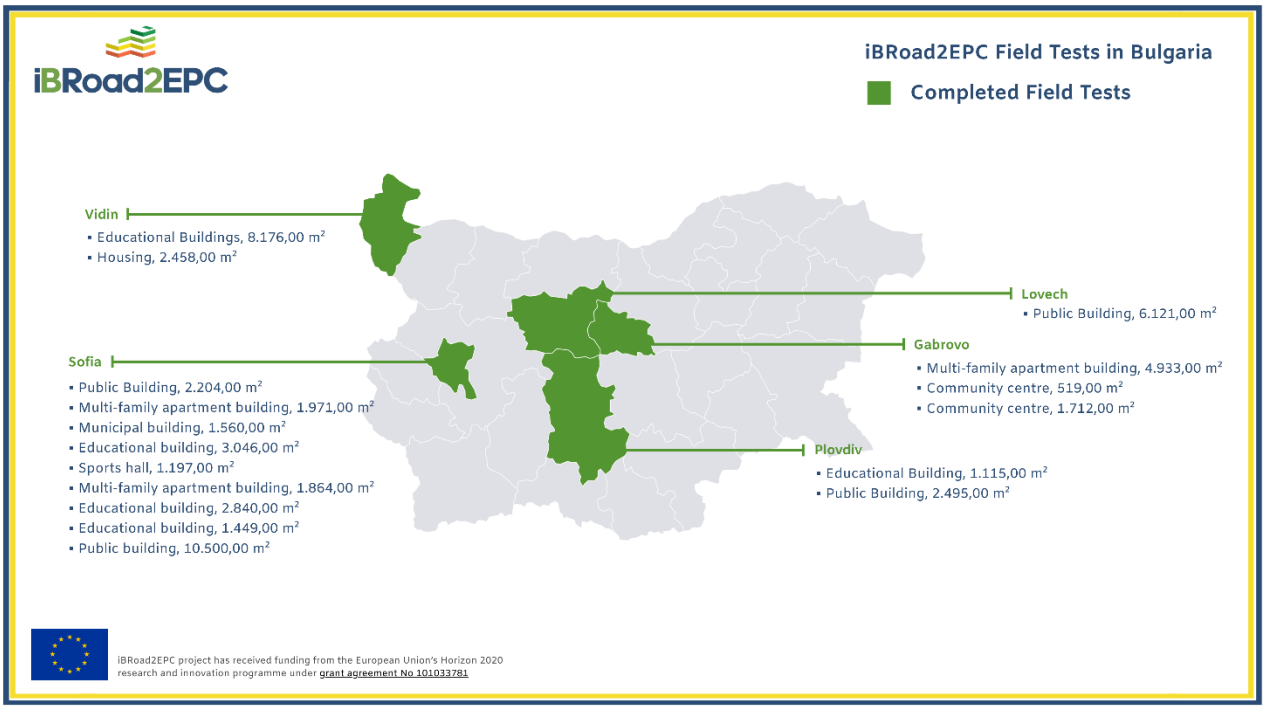
Infographic: The iBRoad2EPC modularity

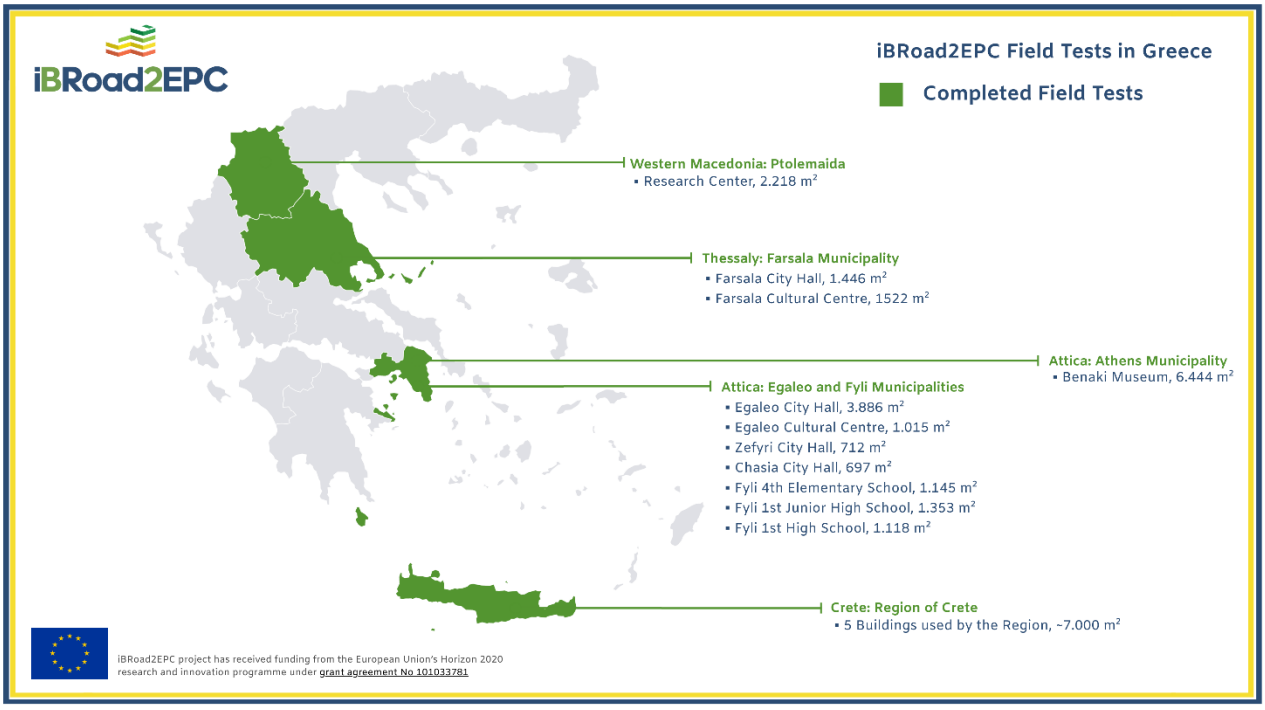
Various more technical infographics were developed by ifeu to showcase and explain the ways in which iBRoad2EPC integrates technically with the EPC software.

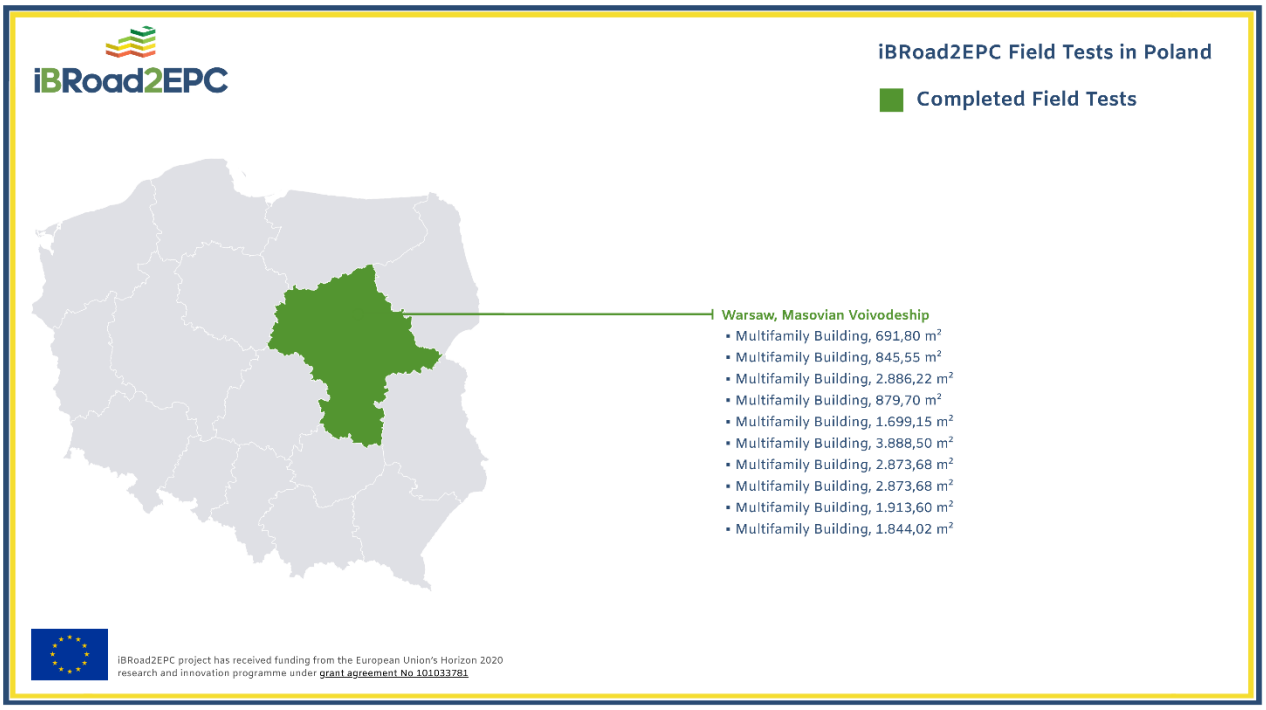


Infographic: Technical description of the iBRoad2EPC issuance process and how iBRoad2EPC integrates technically with the EPC software.

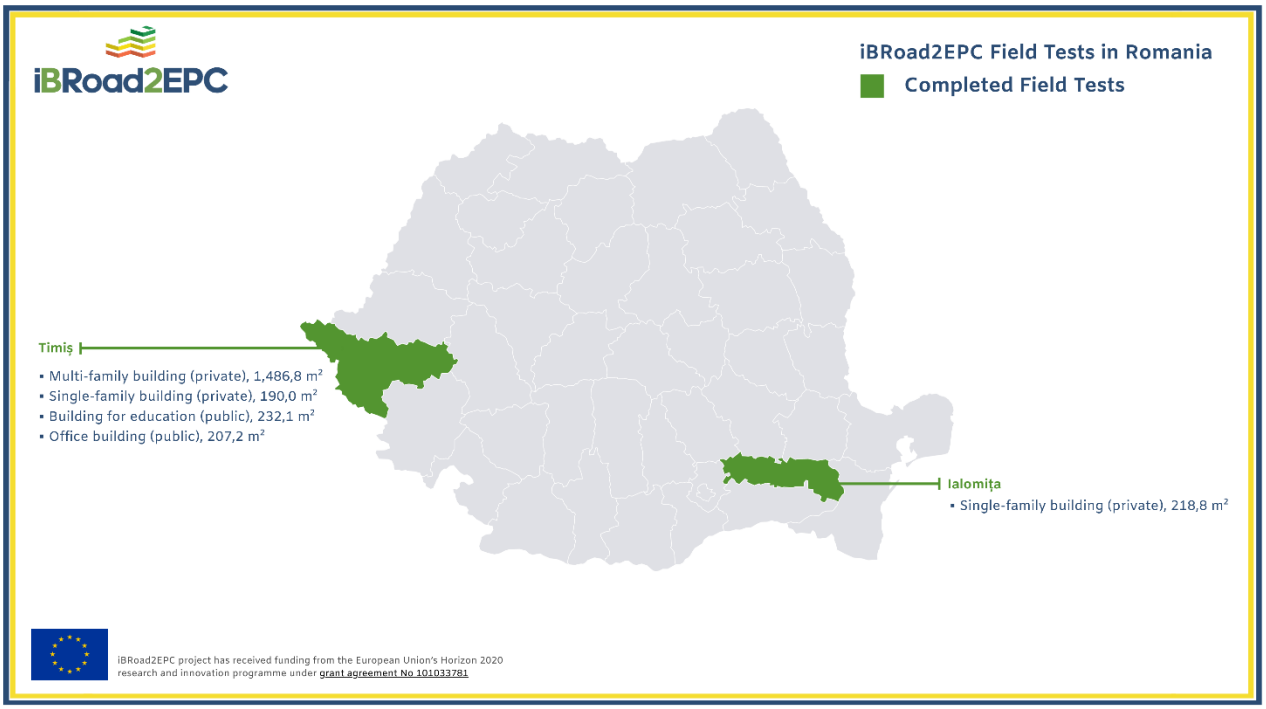
A series of factsheet/map infographics was produced by INZEB to visualise the field testing in the six pilot countries.

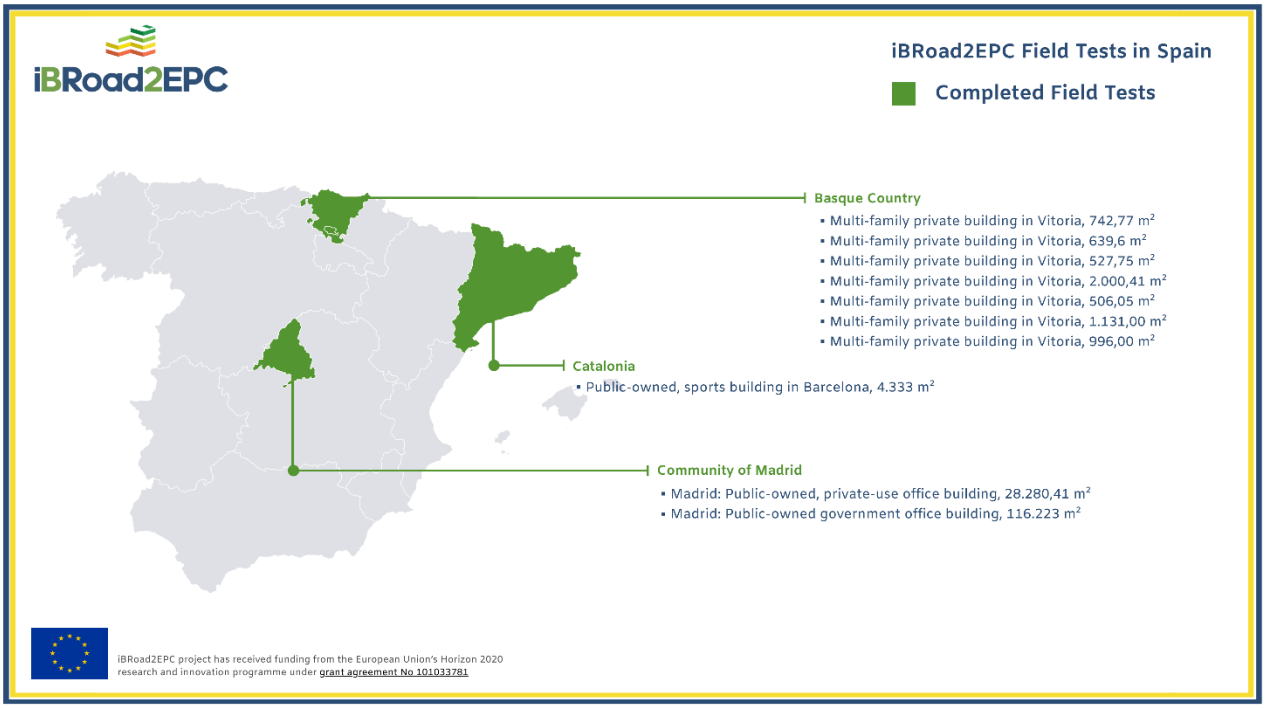





iBRoad2EPC
iBRoad2EPC Field Tests in Poland
Completed Field Tests
Warsaw, Masovian Voivodeship
▪ Multifamily Building, 691,80 m²
▪ Multifamily Building, 845,55 m²
▪ Multifamily Building, 2.886,22 m²
▪ Multifamily Building, 879,70 m²
▪ Multifamily Building, 1.699,15 m²
▪ Multifamily Building, 3.888,50 m²
▪ Multifamily Building, 2.873,68 m²
▪ Multifamily Building, 2.873,68 m²
▪ Multifamily Building, 1.913,60 m²
▪ Multifamily Building, 1.844,02 m²
iBRoad2EPC project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101033781


iBRoad2EPC
iBRoad2EPC Field Tests in Portugal
Completed Field Tests
North Region, Porto Metropolitan Area, Porto
▪ Single family house, 28,96 m²
Central Region, Leiria Region, Pombal
▪ Secondary school in Pombal (central Portugal) – managed by Construção Publica E.P.E. Public Company, 10.638,17 m²
Greater Lisbon, Lisbon
▪ Large non-residential building – Offices - headquarters' of Construção Publica E.P.E. Public Company, 31.578,40 m²
▪ Multifamily building owned by SCML – social services institution and privately rented to residents, 479,75 m²
▪ Multifamily building (social housing building managed by GEBALIS – Lisbon Social Housing company), 2.160,00 m²
▪ Multifamily building (social housing building managed by GEBALIS – Lisbon Social Housing company), 1.026,00 m²
▪ Single family house building (owned by SCML – social services institution and privately rented to residents), 291,91 m²
▪ Single family house (social housing building managed by GEBALIS – Lisbon Social Housing company), 17,31 m²
▪ Single family house (social housing building managed by GEBALIS – Lisbon Social Housing company), 51,67 m²
▪ Bi-family house (owned by SCML – social services institution and privately rented to residents), 66,60 m²
iBRoad2EPC project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101033781





Infographics: The iBRoad2EPCcountry maps on field tests

SUCCESS FACTORS AND OUTCOMES

In iBRoad2EPC, all communication materials are drafted and designed so as to be used, reused and utilised in parallel or across multiple and all available means & channels, in order to reinforce and recreate buzz around the project, its outcomes and the principles it stands for. In this respect, infographics are included in website articles, deliverables and social media both at national and at EU level, drafted press releases are also shared through social media or EU networks, event summaries serve for both networking and dissemination, etc.

Dedicated reports further summarise different Communication & Dissemination activities, e.g.

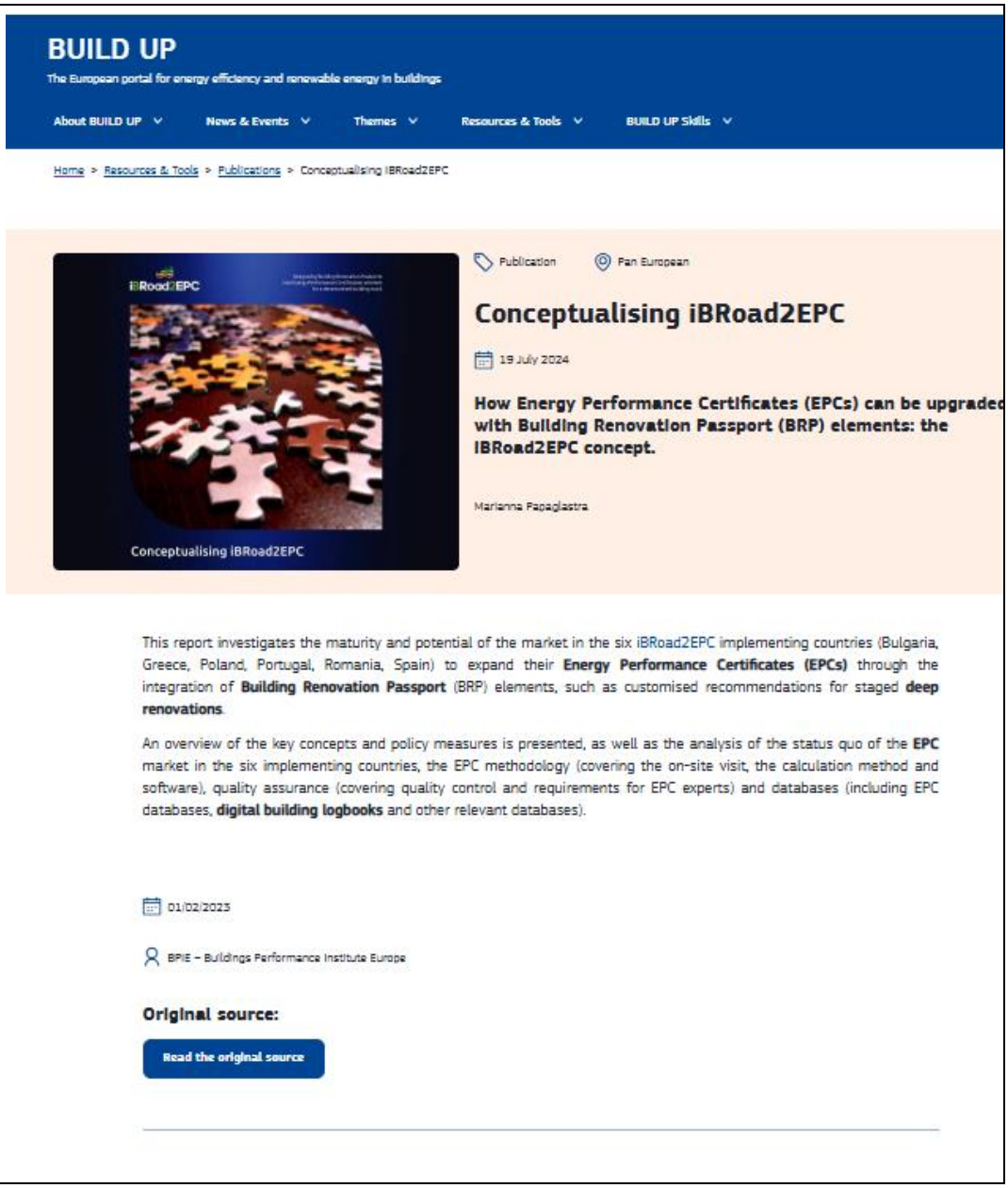
- Straightforward guidance for better buildings – iBRoad2EPC's Layman's report
- iBRoad2EPC outreach documentation — Overview report
- iBRoad2EPC national outreach: National events and networking briefings
- iBRoad2EPC: EU-Focused Stakeholder Engagement and Dissemination

In practice, it was almost not possible to mention one activity under only one context/report. So, even though each of these deliverables is prepared as a stand-alone report on its own, all of the above reports are interconnected.

Stakeholders' feedback confirms that the aim has been reached and iBRoad2EPD has established a strong presence, name and position in the market. What remains next is for public authorities to grab the opportunity and uptake iBRoad2EPC as part of their EPBD recast transposition processes. The iBRoad2EPC consortium will be ready to support them in this endeavour towards a decarbonised and sustainable future for EU's building stock.

ANNEX I. INDICATIVE IBROAD2EPC POSTS ON BUILD UP

iBRoad2EPC in depth | BUILD UP

Conceptualising iBRoad2EPC | BUILD UP	

The iBRoad2EPC project | BUILD UP	

BUILD UP

The European portal for energy efficiency and renewable energy in buildings

About BUILD UP | News & Events | Themes | Resources & Tools | BUILD UP Skills

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Links | Pan European

The IBRoad2EPC project

01 June 2021

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No.101033781.

Editorial Team

Integrating Building Renovation Passports into Energy Performance Certification schemes for a decarbonised building stock.

iBRoad2EPC represents the next step in energy performance assessment schemes and certification practices, promoting and showcasing the integration of Building Renovation Passport elements into EPC schemes.

Building on the results of the iBRoad project (2017-2020) which developed, tested and delivered a model for the Building Renovation Passport supporting single-family homeowners with personalised advice to facilitate stepwise deep renovation, iBRoad2EPC aims to bridge the Building Renovation Passport with the EPC, and expand, improve and broaden their format and joint scope to consider additional features and become applicable also to multi-family and public buildings.

The aim is to improve reliability, usefulness and effectiveness, thereby establishing the next generation of EPCs that will support Europe's decarbonisation ambitions while improving conditions for building occupants. This will be done by clustering the project's activities around four main pillars:

1. Assess the needs, potential and practicability of merging the EPC with the Building Renovation Passport;
2. Adapt the IBRoad concept to become part of EPCs;
3. Test and evaluate the applicability of IBRoad2EPC in six countries (Bulgaria, Greece, Poland, Portugal, Romania and Spain), including training for energy auditors and EPC issuers
4. Facilitate the adoption and exploitation of the IBRoad2EPC model across Europe.

Implementing authorities in the six countries will be directly involved in the process of conceptualisation, development and testing of IBRoad2EPC to become an integral part of existing relevant schemes. Targeted communication, dissemination and exploitation activities at national and European level will support further acceptance and uptake. The project will leverage existing knowledge from other projects to expand EPC features and contribute back policy proposals as well as training and capacity building modules.

Partners

- SYMPRAXIS TEAM P.C.
- BUILDINGS PERFORMANCE INSTITUTE EUROPE AISBL
- ITEU - INSTITUT FUR ENERGIE- UND UMWELTTECHNIK HEIDELBERG GMBH
- TECHNISCHE UNIVERSITEIT WIEN
- INZED ASTIKI MI KERDOSKOPIKI ETAIREIA
- BLUE PLANET ACADEMY & CONSULTING SVOL
- FUNDACIÓN CENTRO DE ESTUDIOS AMBIENTALES - CENEAM
- ADENE - AGENCIA PARA A ENERGIA
- KRAJOWA AGENCJA POSZANOWANIA ENERGII SPÓŁKA AKCYJNA
- INSTITUTUL NATIONAL DE CERCETARE-DEZVOLTARE IN CONSTRUCTII URBANISM SI DEZVOLTARE TERITORIALA DURABILA URBAN-INCERC
- GREEN BUILDING COUNCIL-ESPAÑA CONSEJO PARA LA EDIFICACIÓN SOSTENIBLE-ESPAÑA
- CIVICA ARQUITECTURA SCCL

Start date: 1 May 2021 - End date: 30 April 2024

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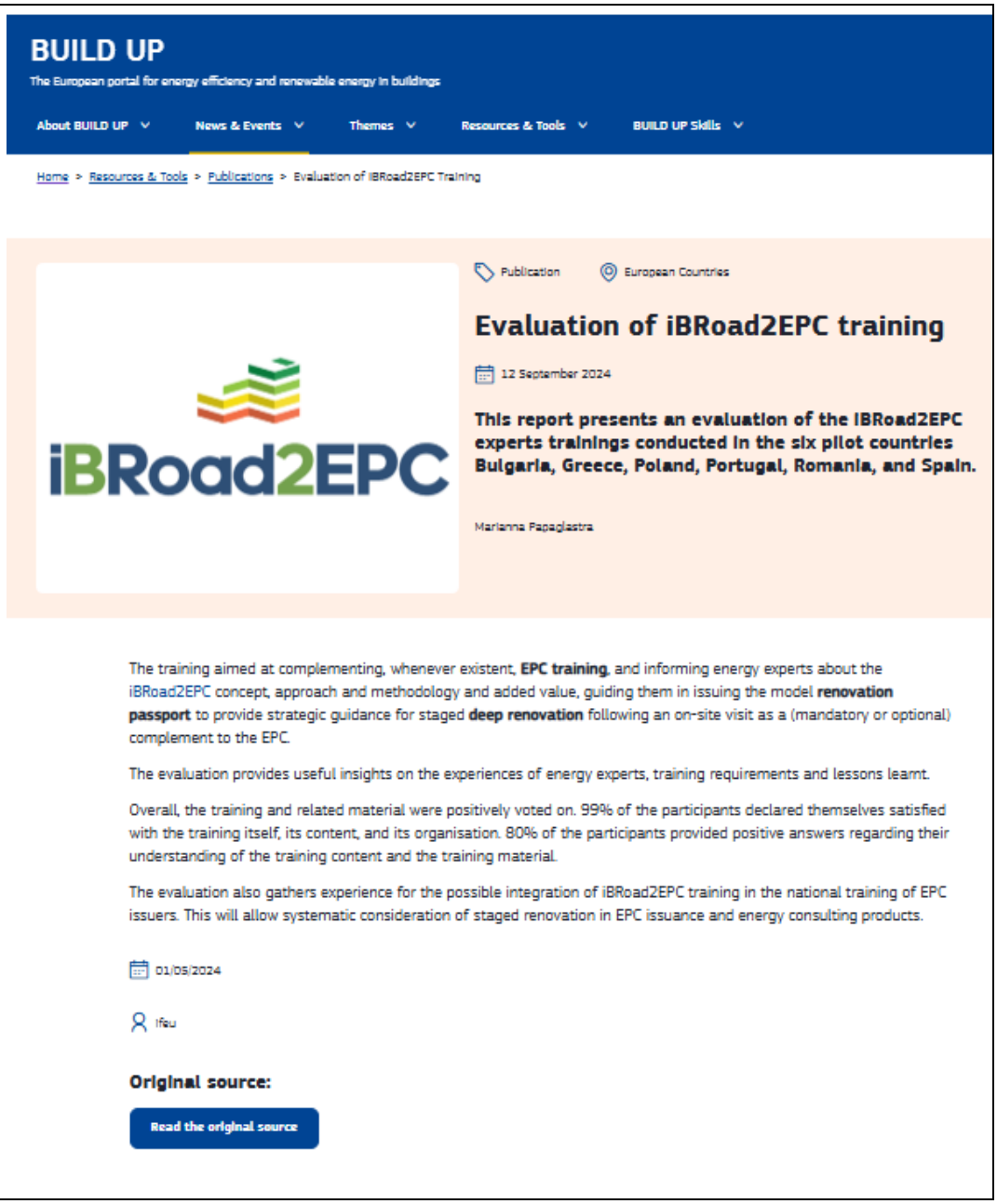
iBRoad2EPC Training toolkit | BUILD UP	

[Evaluation of iBRoad2EPC training | BUILD UP]	

[iBRoad2EPC Assistant software | BUILD UP]	

[Enhancing incentives through iBRoad2EPC | BUILD UP]

BUILD UP

The European portal for energy efficiency and renewable energy in buildings

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Home > Resources & Tools > Publications > Enhancing Incentives Through iBRoad2EPC

Publication

Enhancing incentives through iBRoad2EPC

19 July 2024

How to best use financial and non-financial incentives for renovation in implementing markets.

Marianna Papaglastra

The primary added value of the iBRoad2EPC concept is that it can significantly enhance the quality of **EPCs** and the effectiveness and acceleration of **deep renovation** interventions. Financial and non-financial incentives play a key role in facilitating these **deep renovations**, which are associated with high costs. The integration of iBRoad2EPC into financial and non-financial incentive programmes can improve their effectiveness by:

1. prescribing clearer guidelines for public administrations on what renovation interventions should be incentivised with priority;
2. tying the exact amount of funds to specific and measurable energy improvements, and
3. providing building owners with clear, reliable and actionable information, thus making renovations more accessible.

This report examines how the approach developed in the iBRoad2EPC project can be used in incentive schemes for renovation in the six iBRoad2EPC pilot countries – Bulgaria, Greece, Spain, Poland, Portugal and Romania. It starts by individually assessing the role of EPCs in various current **financial and non-financial incentive programmes for building renovation** and their alignment with the **Long Term Renovation Strategies (LTRSs)**. It then identifies opportunities and provides recommendations for integrating the iBRoad2EPC concept into incentive programmes to increase their effectiveness.

01/11/2023

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Publication

Specification for the iBRoad2EPC software tools

15 July 2024

Report on adaptation requirements for roll-out countries.

Marianna Papaglastra

iBRoad2EPC builds on the **Energy Performance Certificate (EPC)** and works on the integration of **building renovation passport** elements and new parameters into existing EPC schemes to improve the EPC recommendations and **guide renovation**, either in one or several steps. In this way, iBRoad2EPC can ensure consistent design, programming, and quality assurance with the national EPC schemes. Thus, when implementing iBRoad2EPC in individual Member States, various features need to be adapted to country-specific requirements. The process of **adaptation to the specific requirements of implementing countries** Bulgaria, Greece, Poland, Portugal, Romania and Spain is described in this report. This can serve as a model for other countries that intend to implement iBRoad2EPC at a later stage.

Adaptations concern, among others, specific target building types, customer groups and energy performance scales, and comprise for example prefabricated text blocks for renovation advise including milestones, targets and notes to avoid lock-in effects, etc., as well as indicators, images and the format of iBRoad2EPC. The adaptations are made in the **iBRoad2EPC database** where both the contents of the iBRoad2EPC output document and that of the iBRoad2EPC Assistant tool are stored.

The objective of this report is to explain the context, target groups and methodology for country specific adaptation, and thereby the approach for embedding, use and structure of the iBRoad2EPC. The report is accompanied by an excel spreadsheet containing the country specific templates and main content of the database as well as the translations of the content to the respective languages of the participating countries.

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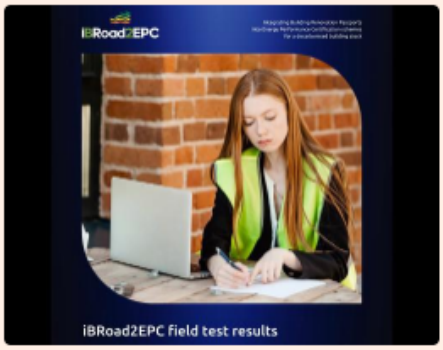

Publication

iBRoad2EPC field test results

20 September 2024

This report summarises the results of the iBRoad2EPC field test based on analysis of the evaluation surveys from energy experts and building owner that took part in the field test.

Marianna Papaglastra

End users in Bulgaria, Greece, Poland, Portugal, Romania and Spain have successfully tested and positively assessed the iBRoad2EPC model **building Renovation Passport**.

The comprehensive field test involved 48 energy experts and 37 building owners who evaluated the application of iBRoad2EPC in 57 **residential and non-residential buildings** between July 2023 and March 2024.

Energy experts found iBRoad2EPC easy to use, and **building owners** found the output extremely informative and useful in planning a step-wise **deep renovation** of their building.

Overall, the field test demonstrates that the iBRoad2EPC Renovation Passport, together with the **Energy Performance Certificate**, has significant potential to support the implementation of the 2024 EPBD recast and help meet the EU's building decarbonisation targets.

01/08/2024

iBRoad2EPC-D4.4-Field-test-results-2024-08-ifeu.pdf
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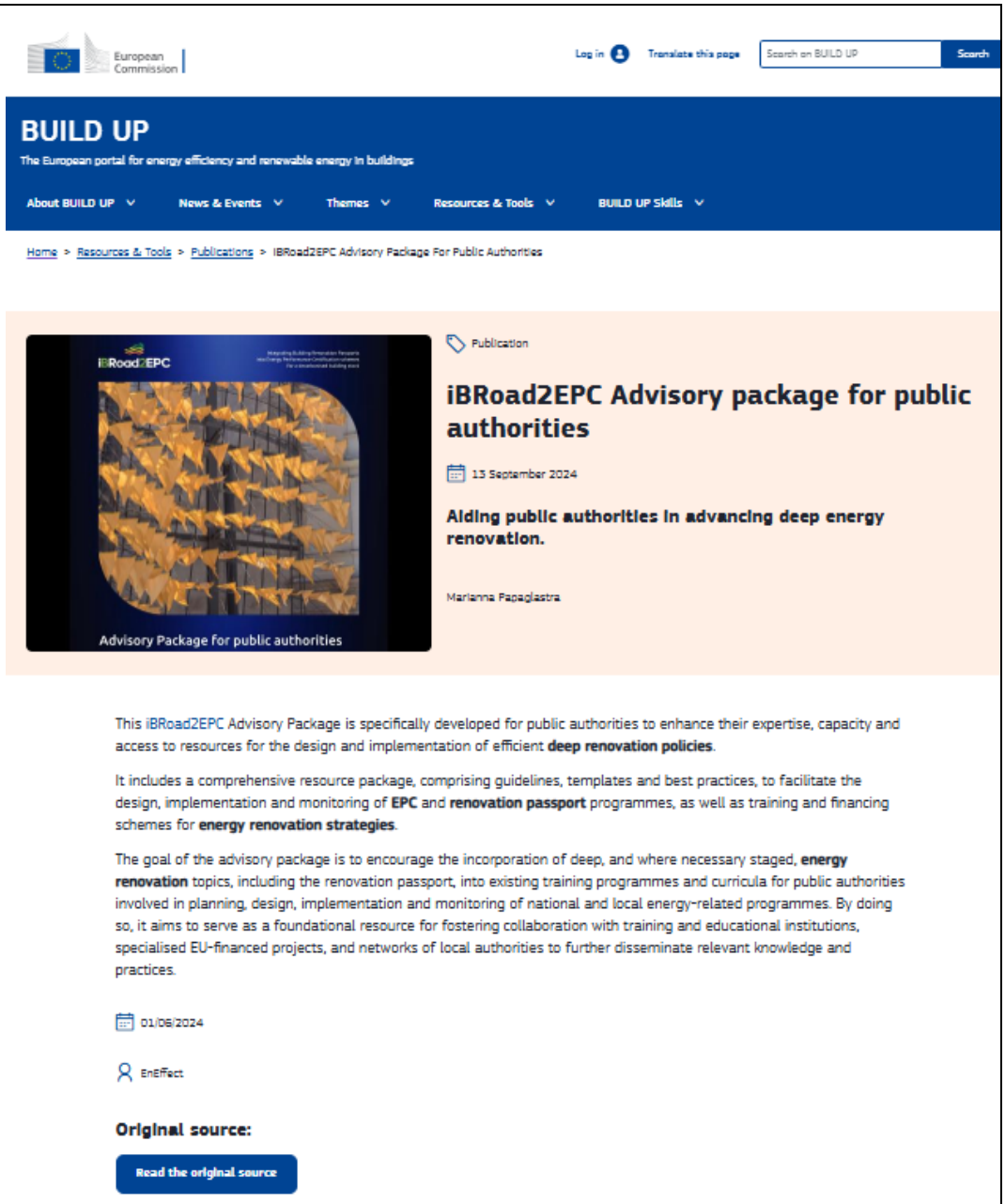
iBRoad2EPC Advisory package for public authorities | BUILD UP	

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Publication

iBRoad2EPC Advisory package for public authorities

13 September 2024

Aiding public authorities in advancing deep energy renovation.

Marianna Papaglastra

This iBRoad2EPC Advisory Package is specifically developed for public authorities to enhance their expertise, capacity and access to resources for the design and implementation of efficient **deep renovation policies**.

It includes a comprehensive resource package, comprising guidelines, templates and best practices, to facilitate the design, implementation and monitoring of **EPC** and **renovation passport** programmes, as well as training and financing schemes for **energy renovation strategies**.

The goal of the advisory package is to encourage the incorporation of deep, and where necessary staged, **energy renovation** topics, including the renovation passport, into existing training programmes and curricula for public authorities involved in planning, design, implementation and monitoring of national and local energy-related programmes. By doing so, it aims to serve as a foundational resource for fostering collaboration with training and educational institutions, specialised EU-financed projects, and networks of local authorities to further disseminate relevant knowledge and practices.

01/06/2024

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Publication Pan European

iBRoad2EPC training material for construction professionals

14 March 2024

iBRoad2EPC training material for staged renovation design and construction.

Marianna Papaglastra

Building Renovation Passports are gaining more and more visibility as a tool with excellent potential to stimulate **renovation** action across Europe. Bridging the **Building Renovation Passport** with the **EPC** will lead to improved reliability, usefulness and effectiveness, thereby establishing the next generation of EPCs.

To raise awareness of **building professionals** around EPC-integrated Building Renovation Passports and support their **upskilling**, according to their role in the investment process, for **on-site application** of the measures and specifications described in the EPC-integrated Building Renovation Passports, a set of training materials have been prepared by the **iBRoad2EPC project**.

The training materials are organised in 8 topics as follows:

- Identify opportunities for energy savings
- Interpret iBRoad2EPC and the underlying documentation
- Step-by-step recommendations
- Explain the project proposal to different specialist/stakeholders
- Manage and oversee the project implementation
- Components of the building envelope, ensuring optimal airtightness and elimination of thermal bridges
- Heating, cooling, ventilation, and DHW system
- Relationship between building systems and building envelop

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News

Positive perspectives for the iBRoad2EPC model Renovation Passport

Field studies confirm iBRoad2EPC as a useful tool supporting the deep renovation of the EU building stock under the provisions of the 2024 Energy Performance of Buildings Directive (EPBD) recast.

Energy experts in Bulgaria, Greece, Portugal, Romania and Spain have successfully tested and positively assessed the iBRoad2EPC model **building Renovation Passport**, developed as part of the iBRoad2EPC Horizon 2020 funded project. The comprehensive field test involved 48 energy experts and 37 building owners who evaluated the application of iBRoad2EPC in 57 **residential and non-residential buildings** between July 2023 and March 2024. Energy experts found iBRoad2EPC easy to use, and building owners found the output extremely informative and useful in planning a stepwise **deep renovation** of their building. Overall, the field test demonstrates that the iBRoad2EPC Renovation Passport, together with the Energy Performance Certificate, has significant potential to support the implementation of the 2024 EPBD recast and help meet the EU's building decarbonisation targets.

A flexible tool that complements EPCs

The ambition of the iBRoad2EPC project has been to develop a capable tool that is sufficiently flexible and affordable to trigger a major increase in the number of deep (nearly zero or zero emissions) building renovations, across varying country contexts. In this sense, it was conceived as a complement to existing national Energy Performance Certificate (EPC) schemes, to be jointly issued by a qualified or certified energy expert, following an onsite visit.

The developed **iBRoad2EPC** is a flexible model Renovation Passport that brings together the benefits of the EPC, as an established tool to assess the energy performance of a building, with those of a tailored roadmap for its deep renovation in a maximum number of steps, significantly improving the building's energy performance. Adding new components to this combined approach –covering, e.g., Energy Demand, Investment Cost, Smart Readiness, Indoor Environmental Quality, Measured Energy Performance and others– iBRoad2EPC aims to give renovation a significant push and contribute to the improvement of the energy performance of European buildings, while providing for health, comfort, cost-effectiveness and energy security.

Designed as a modular tool, the iBRoad2EPC Renovation Passport allows adaptation to various existing EPC schemes or country-specific ambitions and contexts. Such flexibility is now reflected in the provisions of the 2024 EPBD recast that allow Member States to determine the extent to which Renovation Passports and EPCs should be linked. As such, the results of the iBRoad2EPC project are highly relevant and provide Member States with a set of solutions that can be immediately applied to the transposition and/or implementation of this, as well as other, important EU policy instruments.

Testing

A field test in six pilot countries (Bulgaria, Greece, Poland, Portugal, Romania and Spain) examined how iBRoad2EPC is perceived by relevant end-users (energy experts and building owners/building managers).

Before field testing, a total of 202 energy experts in the six pilot countries were trained on how to issue the iBRoad2EPC. The overall evaluation following the training showed predominantly positive feedback:

- 80% of trained experts saw potential in merging iBRoad2EPC and EPCs
- 81% said they would offer an iBRoad2EPC to their clients

Of the energy experts trained, 48 participated in the field test and issued 57 iBRoad2EPCs, covering a built area of almost 280,000 m², of both residential and non-residential buildings, with a particular focus on public buildings. An overview and main highlights of the iBRoad2EPC field test are summarised below:

Main outcomes

The experience of the experts and the building owners/building managers who took part in the testing was collected through a survey. The key findings of the evaluation are the following:

- Both experts and owners favoured the voluntary integration of iBRoad2EPC alongside the EPC, reflecting the tool's potential to enhance energy efficiency and cost-effectiveness in building renovations.
- In terms of pricing, 30% of the experts and 31% of the building owners consider a surcharge of more than 100% on top of the price of the EPC to be reasonable. This demonstrates the perceived value and potential of iBRoad2EPC in contributing to energy-efficient renovations and climate protection.
- Building owners reported that their main motivation for renovating is to save on energy costs, followed by introducing qualitative improvements to their buildings and contributing to climate change mitigation. While energy and cost considerations were important across all pilot countries, climate protection was more important in some than in others; this suggests different national priorities. During the development of iBRoad2EPC, cost-effectiveness was not the priority focus, because cost-effective renovations do not always meet climate targets: there is a clear discrepancy between renovation costs and incentives on one hand, energy and CO_2 pricing on the other. However, to meet the market demand for information on cost savings through renovation, as evidenced in the field tests, a more detailed cost calculation for the first renovation step can be implemented in iBRoad2EPC as an additional improvement. The short time span until this first step allows for more reliable predictions and increases the confidence in the results of such a cost calculation.
- Building owners and property managers are largely supportive of the mandatory on-site visit component of iBRoad2EPC, despite the extra work involved for the experts.
- Overall, end users agree on the usefulness of iBRoad2EPC for multi-family and public/administrative buildings, recognising its ability to provide essential insights for long-term renovation planning and proactive mitigation of lock-in situations. Feedback from energy experts and building owners, alongside considerations for the iBRoad2EPC pricing structure, underscore the perceived value and potential of iBRoad2EPC in facilitating energy-efficient renovations and climate change mitigation efforts.

iBRoad2EPC Horizon 2020 project

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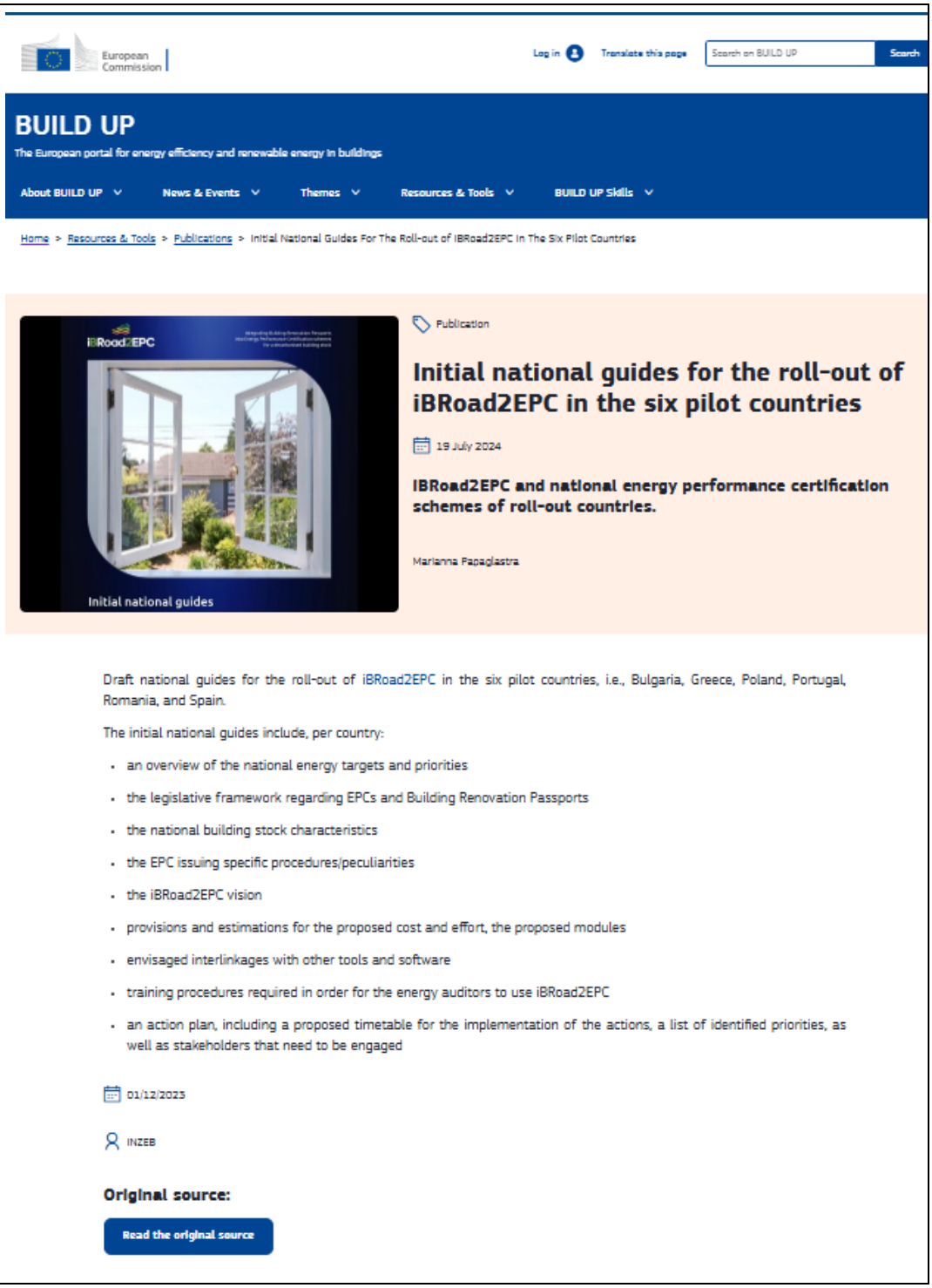
Initial national guides for the roll-out of iBRoad2EPC in the six pilot countries | BUILD UP	

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Publication

Initial national guides for the roll-out of iBRoad2EPC in the six pilot countries

19 July 2024

IBRoad2EPC and national energy performance certification schemes of roll-out countries.

Marianna Papaglastra

Draft national guides for the roll-out of iBRoad2EPC in the six pilot countries, i.e., Bulgaria, Greece, Poland, Portugal, Romania, and Spain.

The initial national guides include, per country:

- an overview of the national energy targets and priorities
- the legislative framework regarding EPCs and Building Renovation Passports
- the national building stock characteristics
- the EPC issuing specific procedures/peculiarities
- the iBRoad2EPC vision
- provisions and estimations for the proposed cost and effort, the proposed modules
- envisaged interlinkages with other tools and software
- training procedures required in order for the energy auditors to use iBRoad2EPC
- an action plan, including a proposed timetable for the implementation of the actions, a list of identified priorities, as well as stakeholders that need to be engaged

01/12/2023

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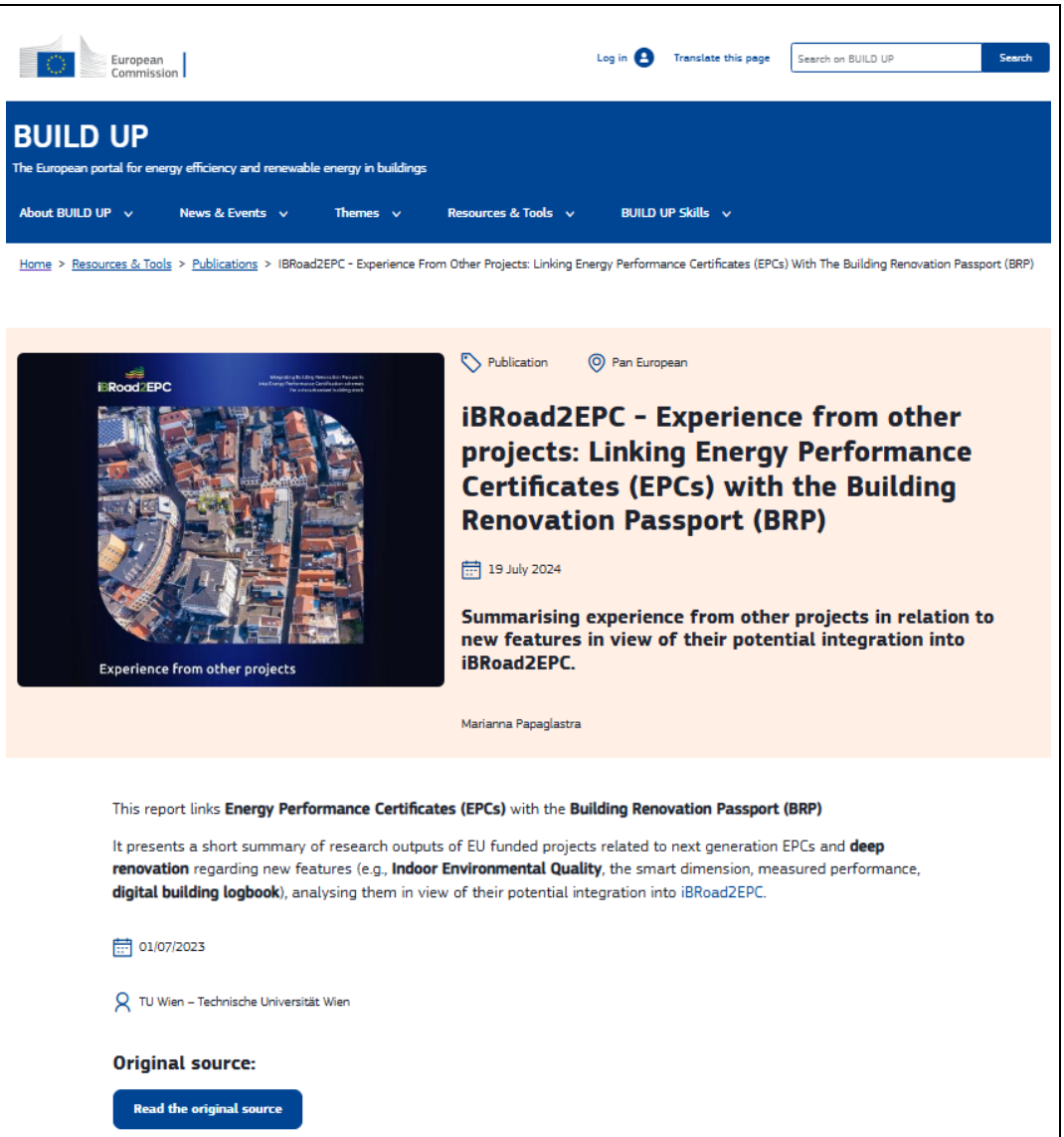
iBRoad2EPC - Experience from other projects: Linking Energy Performance Certificates (EPCs) with the Building Renovation Passport (BRP) | BUILD UP	

ANNEX II. INDICATIVE IBROAD2EPC POSTS ON CONSTRUCTION 21

[Positive results for iBRoad2EPC Renovation Passport after testing in 6 EU countries]

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Positive results for iBRoad2EPC Renovation Passport after testing in 6 EU countries

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386

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energy efficiency | labels and certifications | public policies | energy efficiency

Field studies confirm iBRoad2EPC as a useful tool supporting the deep renovation of the EU building stock under the provisions of the 2024 Energy Performance of Buildings Directive (EPBD) recast.

Energy experts in Bulgaria, Greece, Portugal, Romania and Spain have successfully tested and positively assessed the iBRoad2EPC model building Renovation Passport, developed as part of the iBRoad2EPC Horizon 2020 funded project. The comprehensive field test involved 48 energy experts and 37 building owners who evaluated the application of iBRoad2EPC in 57 residential and non-residential buildings between July 2023 and March 2024. Energy experts found iBRoad2EPC easy to use, and building owners found the output extremely informative and useful in planning a step-wise deep renovation of their building. Overall, the field test demonstrates that the iBRoad2EPC Renovation Passport, together with the Energy Performance Certificate, has significant potential to support the implementation of the 2024 EPBD recast and help meet the EU's building decarbonisation targets.

[A blueprint for success: How a renovation passport can accelerate deep renovation]

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A blueprint for success: How a renovation passport can accelerate deep renovation

Author of the page
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454
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public policies | renovation | labels and certifications | EPBD | renovation | retrofit

The building stock is far off track to achieve climate neutrality by 2050. Beyond decarbonisation, we also know that the negative consequences of unrenovated buildings on human health are significant, and rising energy prices are having a significant negative impact on citizens' purchasing power.

iBRoad2EPC

The 2024 recast of the Energy Performance of Buildings Directive (EPBD) has responded to this, laying the framework for an ecosystem of tools that should in principle upscale deep renovation, fast. Among other elements, for the first time ever, it introduces a framework for renovation passports in Article 12 as a voluntary tool, to facilitate and simplify the renovation process for building owners.

Renovation passports – a valuable tool for decision making in the renovation journey and asset valuation

The renovation passport is a valuable tool for building owners and investors to make informed decisions. It provides high-quality recommendations for staged deep renovations and actionable information to implement them.

Financial actors could use renovation passports as a fundamental tool for asset valuation and link them to green mortgage programmes, taking advantage of the ongoing programmes and in line with the EU taxonomy. The integration of EPC and renovation passports with incentive programmes could improve their effectiveness by (1) prescribing clearer guidelines for public administrations on what renovation interventions should be incentivised with priority; (2) tying the exact amount of funds to specific and measurable energy improvements; and (3) providing building owners with clear, reliable and actionable information, thus making renovations more accessible

iBRoad2EPC

www.ibroad2epc.eu

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