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TIMEPAC vision

Leandro Madrazo (Project Coordinator)

La Salle - Universitat Ramon Llull (FUNITEC)

TIMEPAC International Workshop Vienna, 21 November 2023



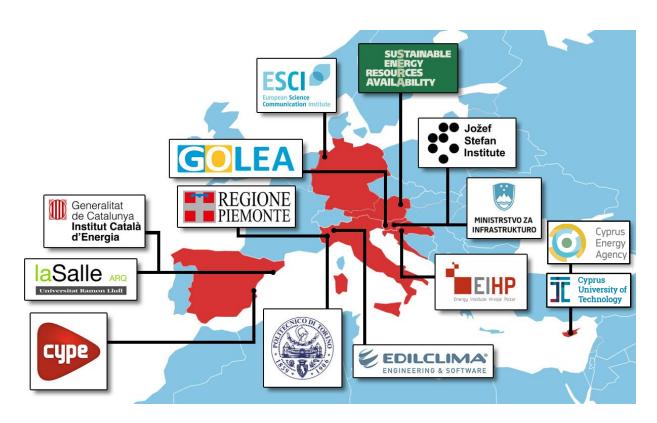
TIMEPAC International Workshops



- Vienna21 November 2023
- Torino30 November 2022
- Ljubljana14 December 2021 (online)
- Barcelona31 January-1 February 2019

Consortium

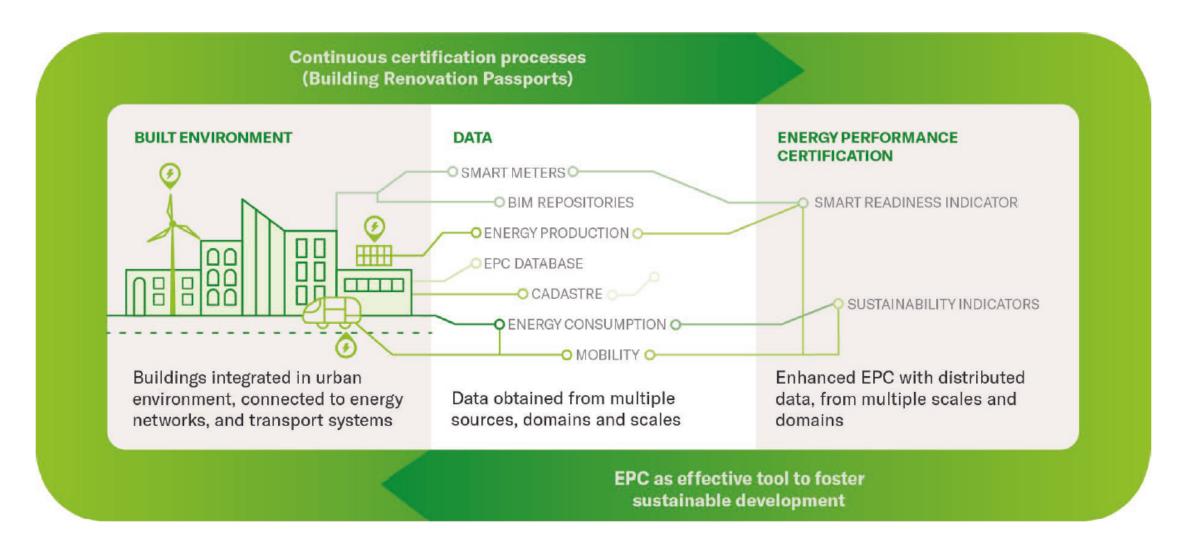
14 partners from 7 EU countries (Austria, Croatia, Cyprus, Germany, Italy, Slovenia, and Spain)



certification public bodies - local energy agencies and consultancies - software developers - research groups - communication agency

- La Salle URL (FUNITEC) (Coordinator), Spain
- Jožef Stefan Institute, Slovenia
- Politecnico di Torino, *Italy*
- Institut Català d'Energia, Spain
- CYPE Soft S.L., Spain
- Ministrstvo za infrastrukturo, Slovenia
- Goriška Lokalna Energetska Agencija, Slovenia
- European Science Communication Institute, Germany
- Edilclima, S.r.l., *Italy*
- Regione Piemonte, Italy
- Institute for Sustainable Energy and Resources Availability, Austria
- Energy Institute Hrvoje Požar, Croatia
- Cyprus Energy Agency, Cyprus
- Cyprus University of Technology, Cyprus

A holistic approach to EPC



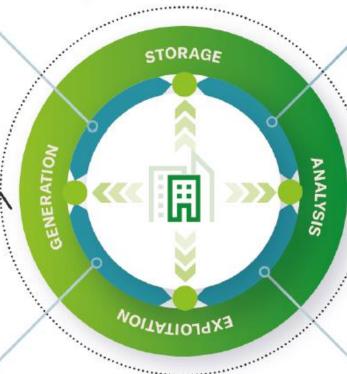
EPC seamless data flow

Automatic storage of the certificate in BIM and EPC databases

Enhanced EPC schemes with SRI and sustainability indicators, generated from BIM models

BIM models used to generate EPC to be used in future renovation projects

User-friendly environments to access EPC databases, interlinked to other data repositories (BIM, cadastre)



New services for professional certifiers, ESCOs, consultants, building companies, to exploit EPC data in combination with other data sources Analysis of EPC repositories to identify potential areas for building renovation

Procedures and tools for large scale statistical analysis of EPC databases

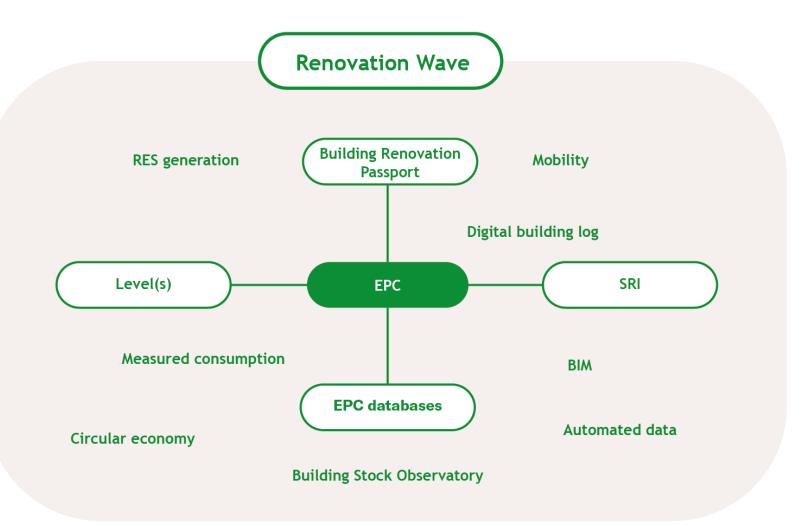
Identifying customers for building components and equipment in areas with a potential for renovation

Specific objectives

TIMEPAC is a cooperation and support action (CSA) which will contribute:

- To improve the quality and reliability of EPCs
- To enhance EPC with sustainability and smart readiness indicators
- To integrate EPC databases with other data sources to improve the efficiency and reliability of EPCs
- To increase awareness of the need to have EPC enhanced with other data sources to contribute to the decarbonisation of the building stock
- To train the next generation of certifiers based on the vision established in TIMEPAC

A new ecosytem for certification



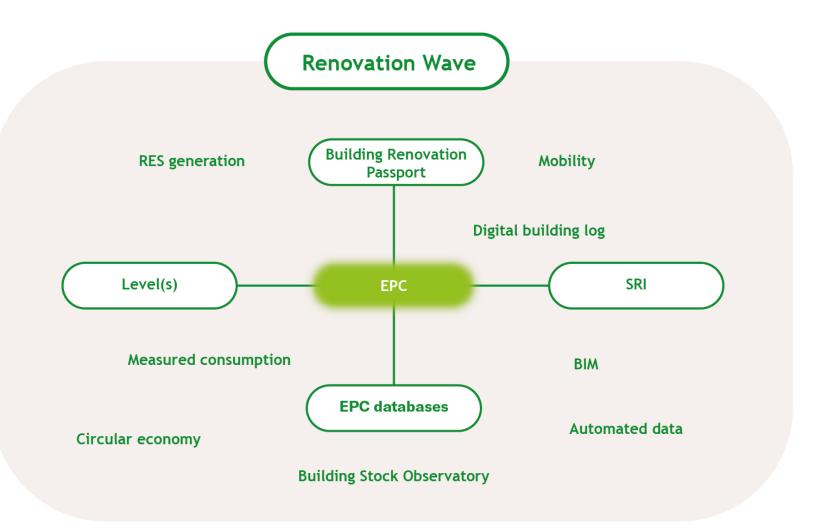
Challenges:

_ innovative approaches to building energy performance assessment -> integrating the different methods tools

_shared language of common standards to access information -> policies adapted to national contexts

_ involvement of all
stakeholders -> training

A new ecosytem for certification



Issues:

_ what energy performance certificates will become in the new ecosystem?

_ will EPCs dissolve in a network of interrelated data and data processing?

NextGenEPCerts cluster

2019 2020 2021 2022























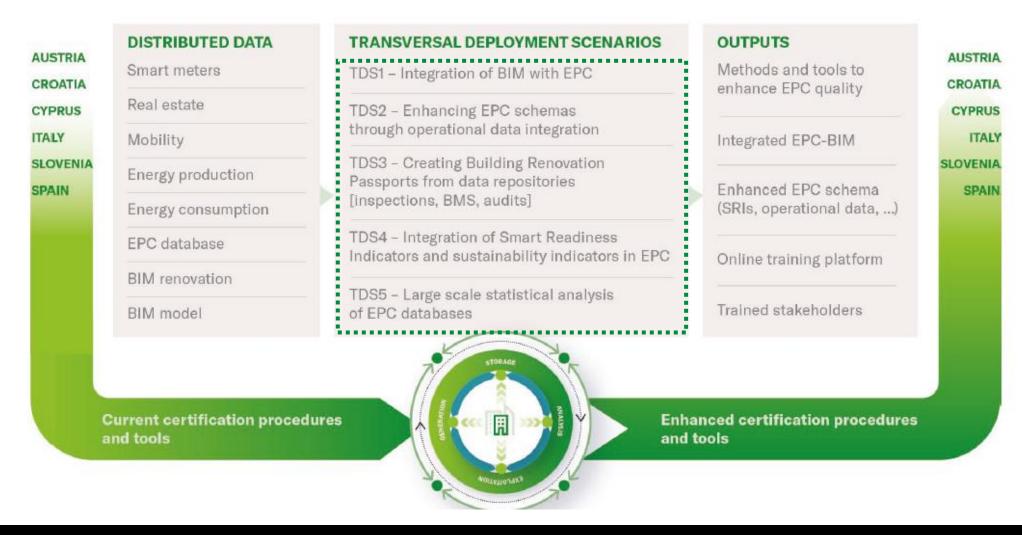




Participation of sister projects in TIMEPAC events - inputs from other projects used in TIMEPAC

Project concept

A comprehensive approach to the use of enhanced EPCs in the future developed in **five Transversal Deployment Scenarios (TDSs)** with the participation of the partner organizations, at a **European scale**.



Transversal Deployment Scenarios (reports)

TIMEPA@

Generating enhanced EPCs with BIM data

Deliverable 2.1

This report summarizes the work of Task 2.1 "TDS 1-Generating enhanced EPCs with BIM data", one of the five scenarios carried out in Work package 2 "Transversal Deployment Scenarios"...

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Enhancing EPC schemas through operational data integration

Deliverable 2.2

This report summarizes to the work performed in Task 2.2 *TDS 2* Enhancing EPC schemas through operational data integration" of Work Package 2 *Transversal Deployment Scenarios*. This work package is...

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Creating building renovation passports from data repositories

Deliverable 2.3

This report summarizes the work done in Task 2.3
"TDS 3- Creating Building Renovation Passports from data repositories". In a nutshell, TIMEPAC supports the implementation of the Renovation Passport by...

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Procedures and services for the integration of the SRI and environmental sustainability indicators in existing EPC tools

Deliverable 2.4

Deliverable 2.4 "Procedures and services for the integration of Smart Readiness Indicator (SRI) and environmental sustainability indicators in existing EPC tools" relates to the work performed in Task 2.4 of...

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Procedures and services to undertake large-scale statistical analysis of EPCs databases

Deliverable 2.5

This report summarizes to the work performed in Task 2.5 "TDS 5 - Large scale statistical analysis of EPC databases" of Work Package 2 "Transversal Deployment Scenarios". This work package...

Generating enhanced EPCs with BIM data

Deliverable 2.1

Published November 16, 2023

This report summarizes the work of Task 2.1 "TDS 1- Generating enhanced EPCs with BIM data", one of the five scenarios carried out in Work package 2 "Transversal Deployment Scenarios" (TDS). This work package is concerned with the creation of future scenarios with the aim...

Read more >

Enhancing EPC schemas through operational data integration

Deliverable 2.2

Published November 16, 2023

This report summarizes to the work performed in Task 2.2 "TDS 2- Enhancing EPC schemas through operational data integration" of Work Package 2 "Transversal Deployment Scenarios". This work package is concerned with the creation of future scenarios with the aim of deploying and delivering new...

Read more >

Creating building renovation passports from data repositories

Deliverable 2.3

Published November 13, 2023

This report summarizes the work done in Task 2.3 "TDS 3- Creating Building Renovation Passports from data repositories". In a nutshell, TIMEPAC supports the implementation of the Renovation Passport by assessing renovation projects in the partner countries regarding procedures how to make use of data...

Read more >

Procedures and services for the integration of the SRI and environmental sustainability indicators in existing EPC tools

Deliverable 2.4

Published November 16, 2023

Deliverable 2.4 "Procedures and services for the integration of Smart Readiness Indicator (SRI) and environmental sustainability indicators in existing EPC tools" relates to the work performed in Task 2.4 of the TIMEPAC project "Towards Innovative Methods for Energy Performance Assessment and Certification". Task 2.4 is...

Read more >

Procedures and services to undertake large-scale statistical analysis of EPCs databases

Deliverable 2.5

Published November 16, 2023

This report summarizes to the work performed in Task 2.5 "TDS 5 - Large scale statistical analysis of EPC databases" of Work Package 2 "Transversal Deployment Scenarios". This work package is concerned with the creation of future scenarios with the aim of deploying and delivering...

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https://timepac.eu/reports/



Three intertwined scenarios

WP2 (m12-24)	$\mathbf{WP3}$ (m24-30)	WP4 (m30-36)
TRANSVERSAL DEPLOYMENT	VERIFICATION SCENARIOS	TRAINING SCENARIOS
SCENARIOS TDS1 - Integration of BIM with EPC	VS1 - Improving certification with enhanced EPCs VS2 - EPC exploitation through advanced analysis (SRIs)	TS1 - Analysis and visualisation of EPC data and development of innovative
TDS2 - Enhancing EPC schemas through operational data integration		energy services TS2 -EPC data collection, validation
TDS3 - Creating Building Renovation Passports from data repositories [inspections, BMS, audits]	VS3 - Building renovation scenarios from the analysis of enhanced EPC data VS4 - Improving building operation with enhanced EPC	and exploitation
		TS3 - Advance methods and tools for holistic energy renovation of buildings
TDS4 - Integration of Smart Readiness Indicators and sustainability indicators		TS4 - Exploitation of EPC for local, regional and national energy planning
in EPC TDS5 - Large scale statistical analysis of EPC databases		TS5 - Evaluation and verification of energy saving opportunities based on EPC data
		TS6 - Operational optimisation of building energy performance based on activities during EPC generation
BIM models, monitoring data, statistics	Learning materials derived from implementation of scenarios (guidelines, procedures)	Training materials (videos, webinars, documentation, tools)
TIMEPAC ACADEMY		

Target users: certifiers, energy consultants, building managers, residents, real estate

Envisioning – verifying – training

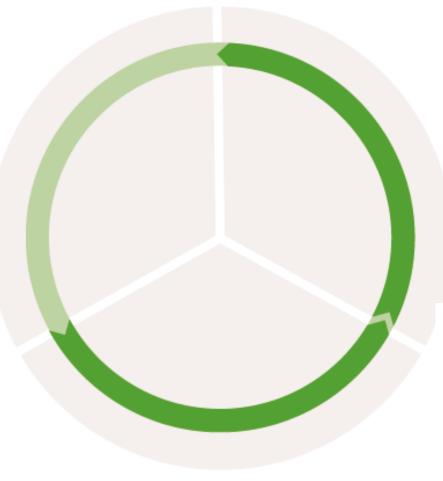
WP4 Training Scenarios

Train stakeholders involved in certification through the TIMEPAC Academy



WP2
Transversal
Deployment
Scenarios

Envisioning future scenarios to enhance EPCs



WP3 Verification Scenarios

Verify future scenarios with practitioners

Envisioning – verifying – training

WP4 Training Scenarios

Train stakeholders involved in certification through the TIMEPAC Academy

EPC Generation

EPC Storage

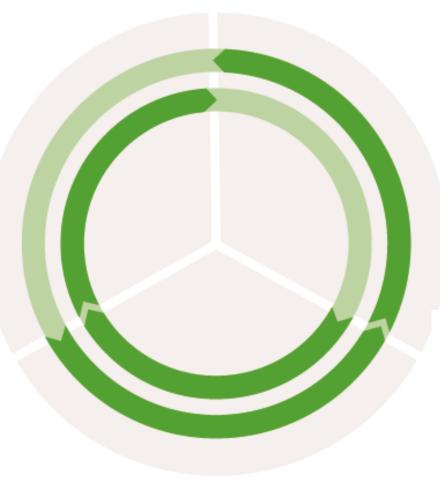
EPC Analysis

EPC Exploitation

WP1 Context analysis

WP2
Transversal
Deployment
Scenarios

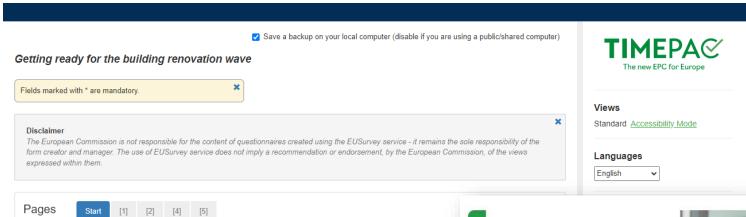
Envisioning future scenarios to enhance EPCs



WP3 Verification Scenarios

Verify future scenarios with practitioners

TIMEPAC Survey



GETTING READY FOR THE BUILDING RENOVATION WAVE

TIMEPAC - The new EPC for Europe

Help us define the next generation of building certification tools, methods and training needed to support the reno stock!

The **European Green Deal**, aims to achieve carbon neutrality by 2050 and building renovation is a top priority. The revis **Buildings Directive (EPBD)**, aims to establish minimum energy performance standards and includes tools such as I incentivise the private sector to upgrade the building stock.

Energy Performance Certificates (EPCs) can be an effective tool for identifying which buildings need to be renovated a taken. However, to make EPCs more effective, it is necessary to improve them through the use of more reliable data, such a and performance, and better calculation and simulation tools, such as Building Information Modelling (BIM). Current cert incorporating a Smart Readiness Indicator (SRI) and sustainability indicators such as Level(s).

TIMEPAC is an EU funded project focused on enhancing the energy certification process and developing a new set of stands proposed revisions of the EPBD.

Through this 10-minute questionnaire you can help us identify any obstacles or barriers in the implementation of new E revised directive.

HAVE YOUR SAY

on the future of building certification and renovation!

Take our 10-minute survey!



Calling all building experts:

Have your say on the future of building certification and renovation with the TIMEPAC Survey

Take the survey

Follow the results

Results of TIMEPAC survey

Discover detailed results

1500+ Respondents

from 6
Countries

23 % know what 84 % building professionnals

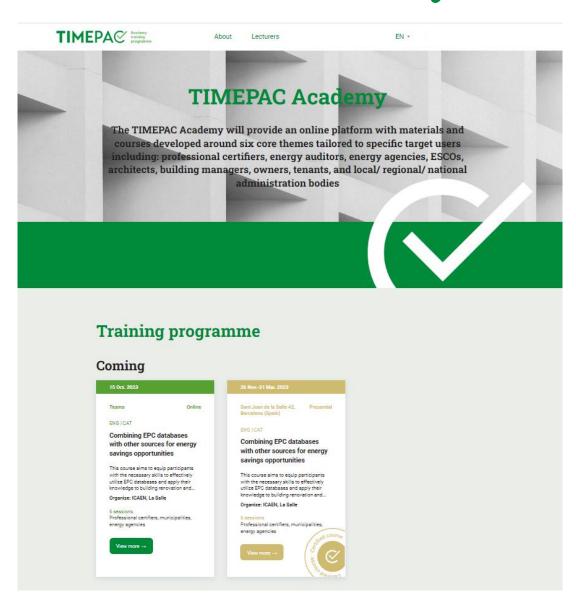
26 % know what

10 % public authorities

> 84 % know what a BIM is

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TIMEPAC Academy





Lectures

Challenges of the new energy performance of buildings directive

CA infective (EPBU), a crucial part of the EU "Fit for 55" package, which aims to achieve a zero-emission building stock by 2050. The Climate Action Plan has identified the EPBD as a key legislative instrument to deliver on the 2030 and 2050 decarbonization objectives.

Starting in 2030, all new buildings will be required to be zero-emission. To achieve this, the Global Warming Potential (GWP) of buildings must be evaluated by calculating their total emissions throughout their lifecycle, following the Lecturer: Ainoha Mata

Lecture materials



Envisioning – verifying – training

WP4 Training Scenarios

Train stakeholders involved in certification through the TIMEPAC Academy



EPC Storage

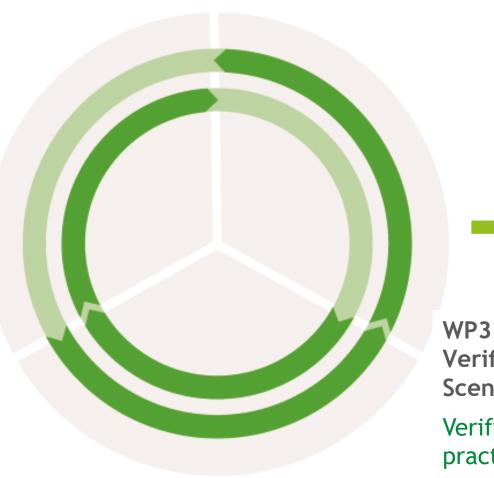
EPC Analysis

EPC Exploitation

WP1 Context analysis

WP2
Transversal
Deployment
Scenarios

Envisioning future scenarios to enhance EPCs



WP5 Exploitation

TIMEPAC Academy

WP3
Verification
Scenarios

Verify future scenarios with practitioners

Next steps

- Finalizing implementation of verification scenarios, and further dissemination of results among stakeholders involved in certification
- Implementation of training scenarios, by the partner organisations online and onsite
- Final exploitation plan, to assure the consolidation and maintenance of the TIMEPAC Academy
- Final TIMEPAC conference, Barcelona



Thanks for your attention!

If you would like more information, please visit www.timepac.eu

or contact us at leandro.madrazo@salle.url.edu

