LEANDRO MADRAZO

TIMEPAC Coordinator, ARC Engineering and Architecture La Salle

TIMEPAC vision

Leandro Madrazo (Project Coordinator)

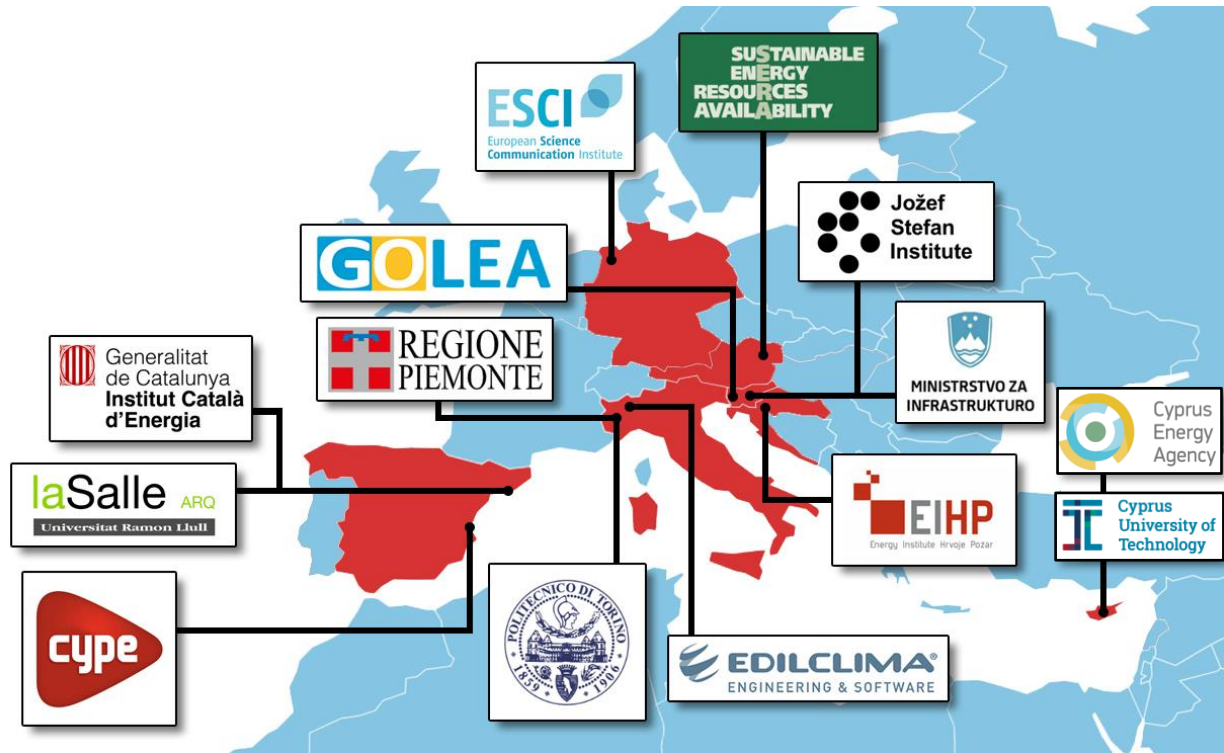La Salle – Universitat Ramon Llull (FUNITEC)

TIMEPAC International Workshops

- **Vienna**
  21 November 2023

- **Torino**
  30 November 2022

- **Ljubljana**
  14 December 2021 (online)

- **Barcelona**
 31 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
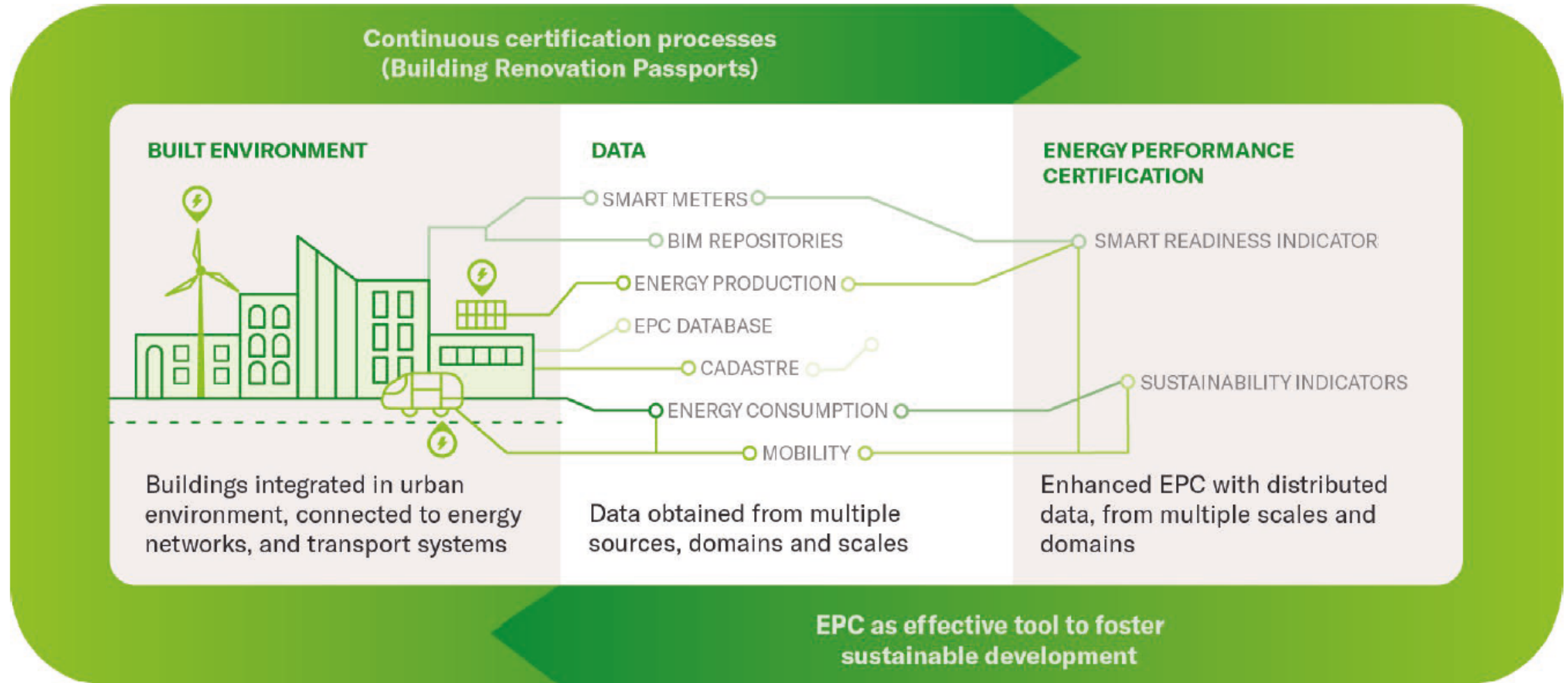
EPC seamless data flow

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

Automatic storage of the certificate in BIM and EPC databases

Analysis of EPC repositories to identify potential areas for building renovation

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

Procedures and tools for large scale statistical analysis of EPC databases

STORAGE

GENERATION

ANALYSIS

EXPLOITATION

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

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

New services for professional certifiers, ESCOs, consultants, building companies, to exploit EPC data in combination with other data sources
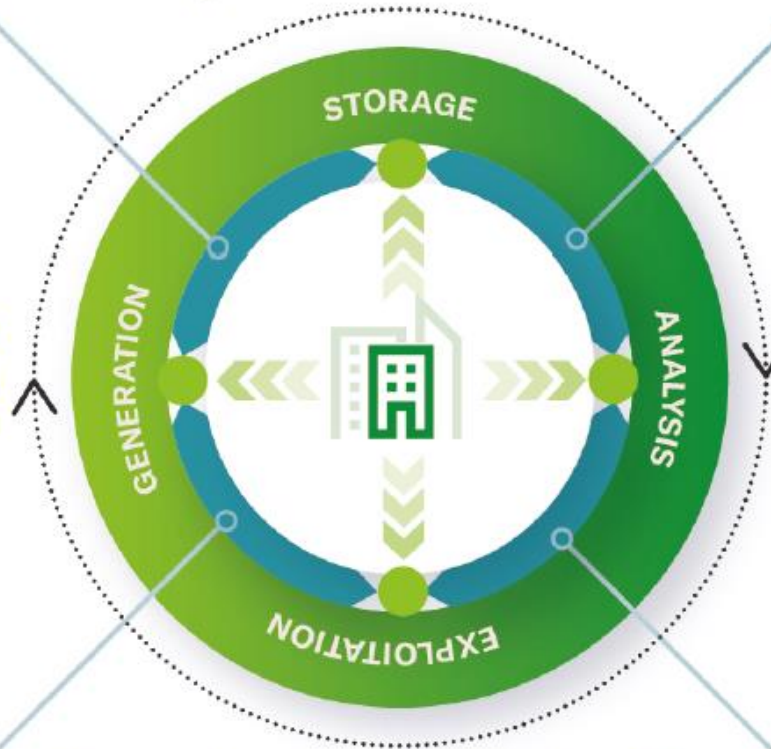
Specific objectives

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
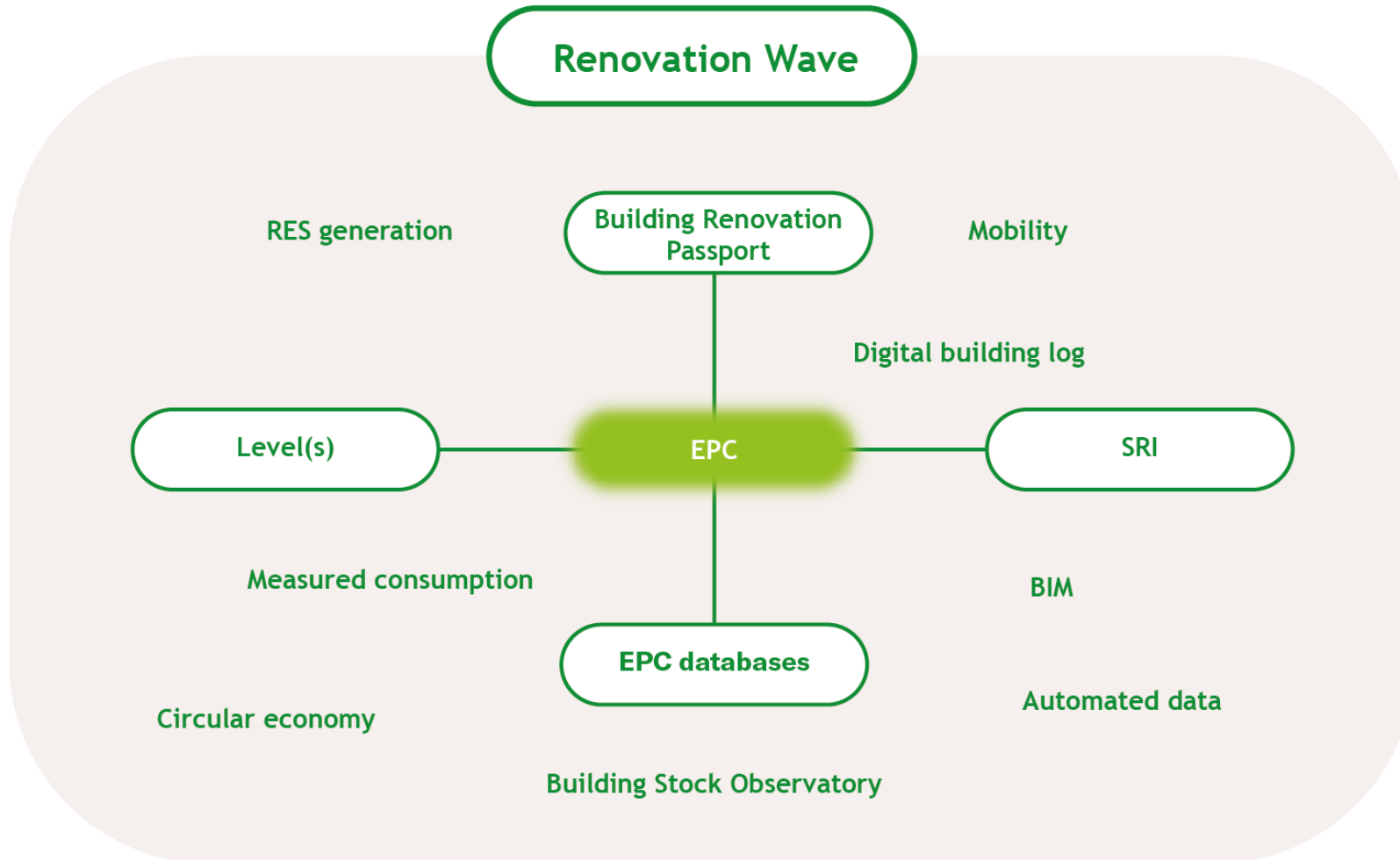
A new ecosytem for certification
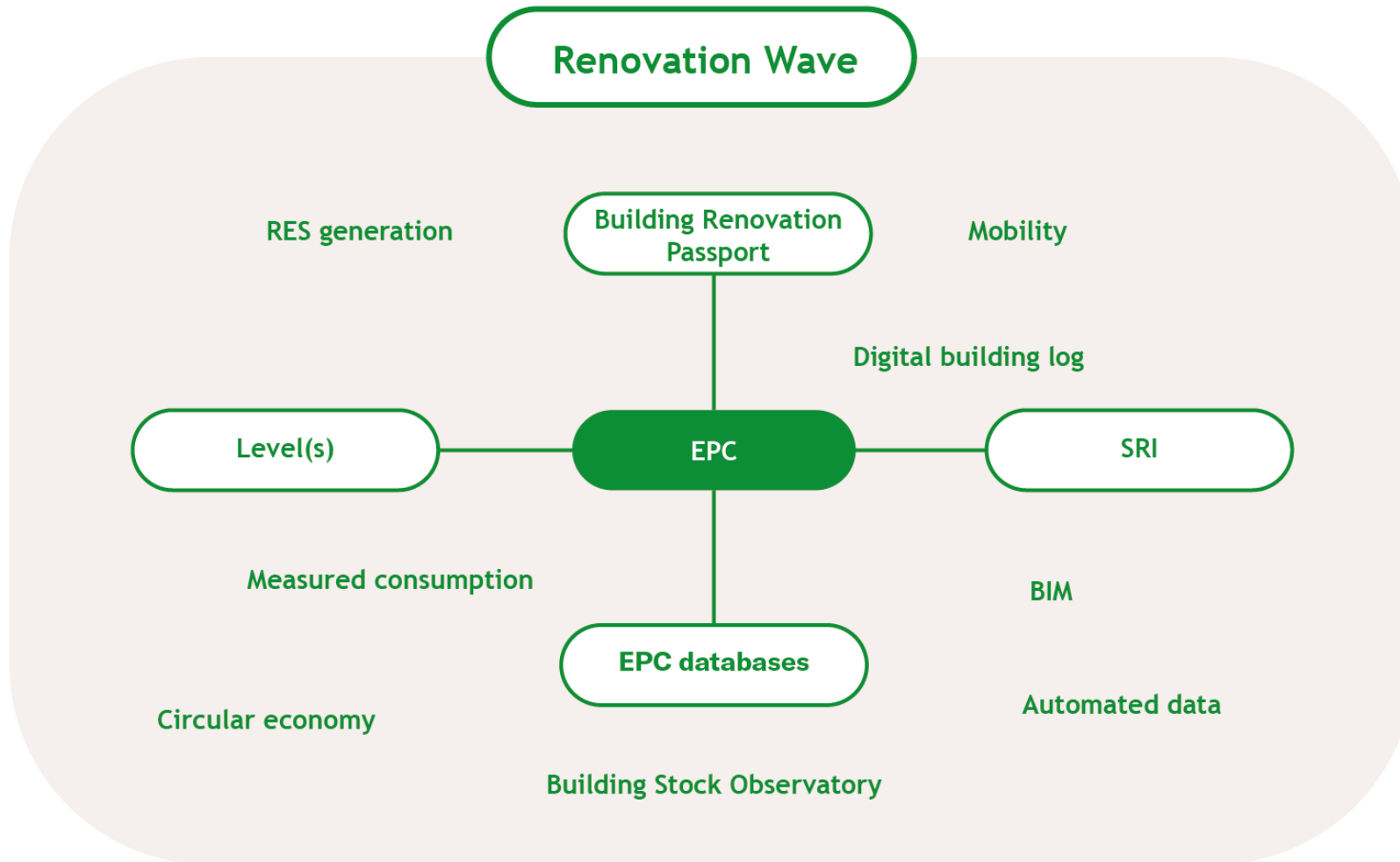
Challenges:

_ 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
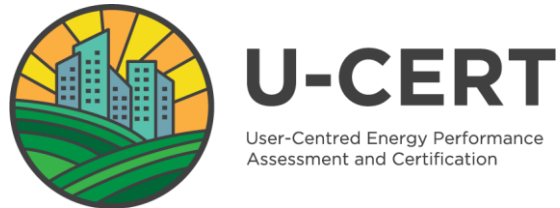
A new ecosytem for certification

Issues:

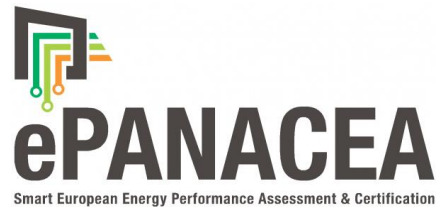_ what energy performance certificates will become in the new ecosystem?

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

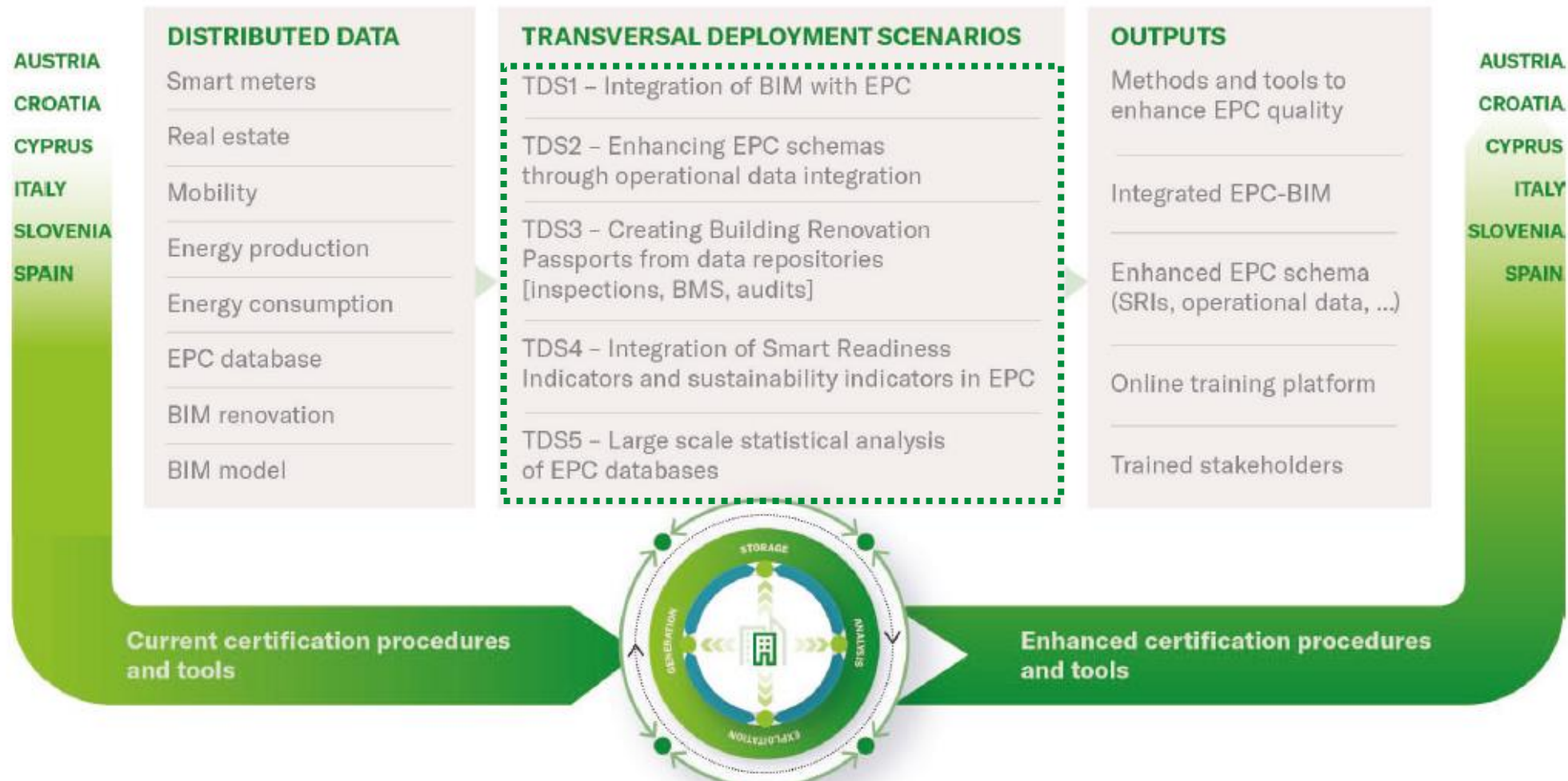# NextGenEPCerts cluster

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**.

AUSTRIA
CROATIA
CYPRUS
ITALY
SLOVENIA
SPAIN

DISTRIBUTED DATA

Smart meters

Real estate

Mobility

Energy production

Energy consumption

EPC database

BIM renovation

BIM model

TRANSVERSAL DEPLOYMENT SCENARIOS

TDS1 – Integration of BIM with EPC

TDS2 – Enhancing EPC schemas through operational data integration

TDS3 – Creating Building Renovation Passports from data repositories [inspections, BMS, audits]

TDS4 – Integration of Smart Readiness Indicators and sustainability indicators in EPC

TDS5 – Large scale statistical analysis of EPC databases

OUTPUTS

Methods and tools to enhance EPC quality

Integrated EPC-BIM

Enhanced EPC schema (SRIs, operational data, ...)

Online training platform

Trained stakeholders

AUSTRIA
CROATIA
CYPRUS
ITALY
SLOVENIA
SPAIN

Current certification procedures and tools

Enhanced certification procedures and tools

Transversal Deployment Scenarios (reports)

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
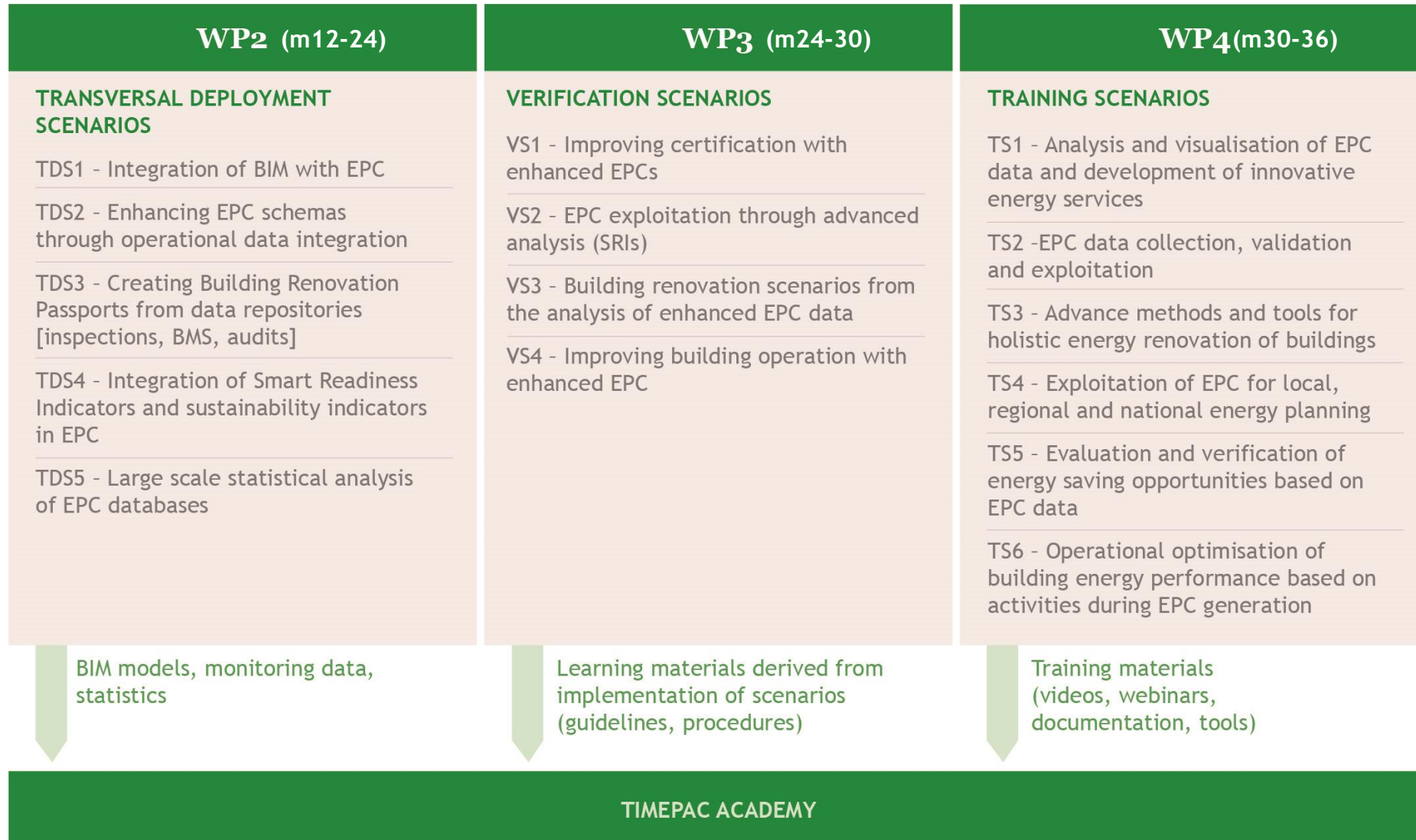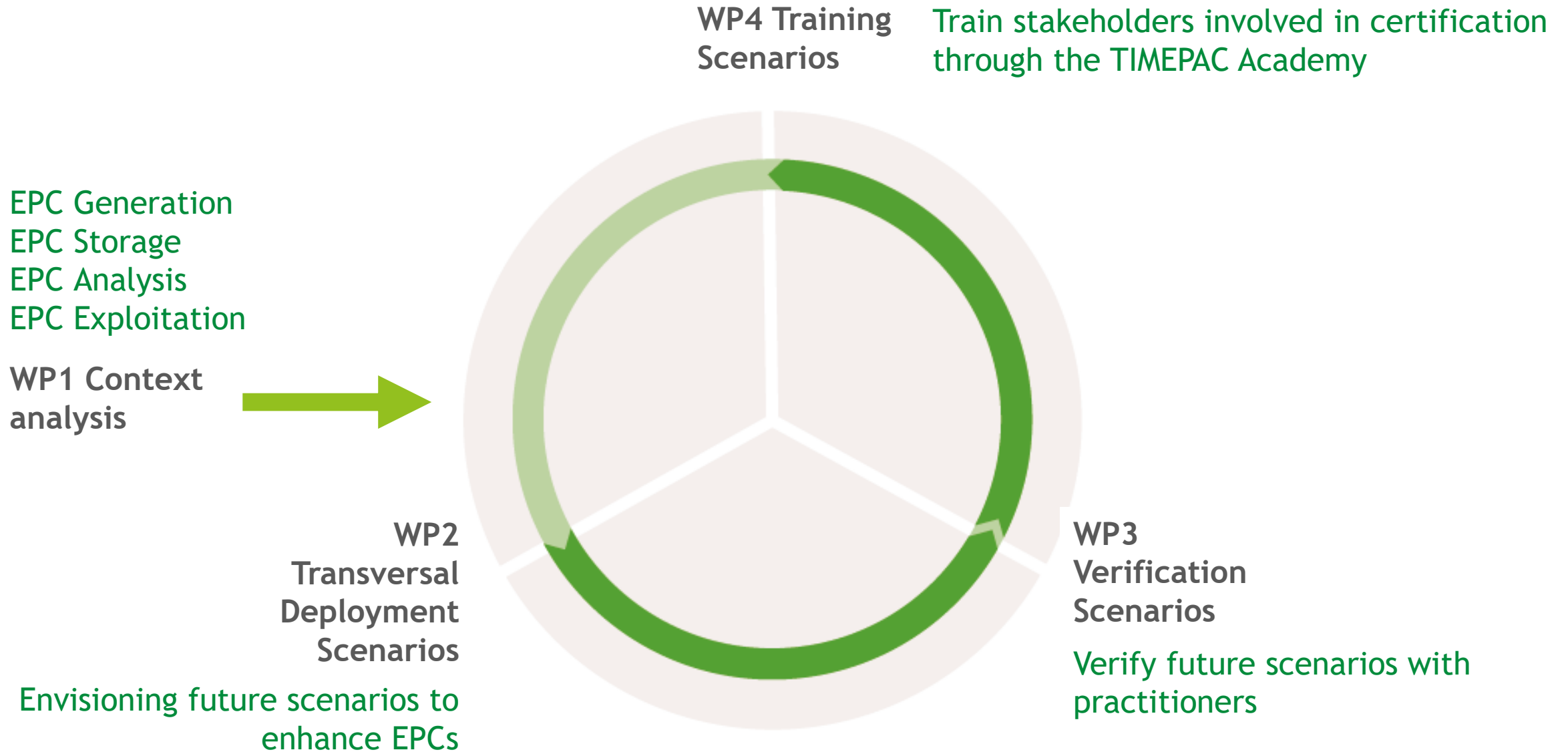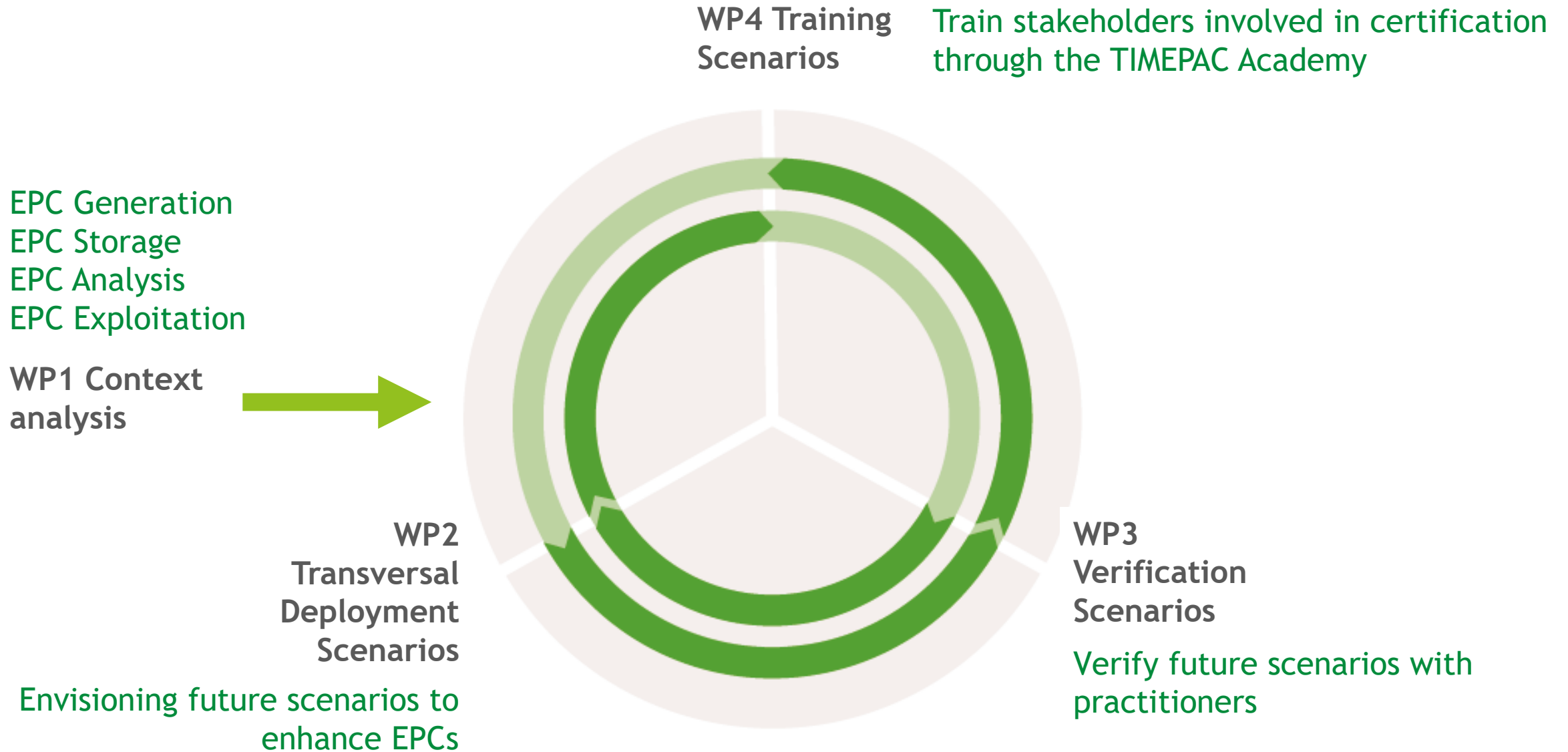
Deliverable 2.5

📅 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...

Read more >

https://timepac.eu/reports/

Three intertwined scenarios

WP2 (m12-24)	WP3 (m24-30)	WP4 (m30-36)
TRANSVERSAL DEPLOYMENT SCENARIOS	**VERIFICATION SCENARIOS**	**TRAINING SCENARIOS**
TDS1 – Integration of BIM with EPC	VS1 – Improving certification with enhanced EPCs	TS1 – Analysis and visualisation of EPC data and development of innovative energy services
TDS2 – Enhancing EPC schemas through operational data integration	VS2 – EPC exploitation through advanced analysis (SRIs)	TS2 –EPC data collection, validation and exploitation
TDS3 – Creating Building Renovation Passports from data repositories [inspections, BMS, audits]	VS3 – Building renovation scenarios from the analysis of enhanced EPC data	TS3 – Advance methods and tools for holistic energy renovation of buildings
TDS4 – Integration of Smart Readiness Indicators and sustainability indicators in EPC	VS4 – Improving building operation with enhanced EPC	TS4 – Exploitation of EPC for local, regional and national energy planning
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

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

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

TIMEPAC Academy

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

WP5 Exploitation
TIMEPAC Academy

WP2 Transversal Deployment Scenarios
Envisioning future scenarios to enhance EPCs

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

TIMEPAC
The new EPC for Europe

Thanks for your attention!

If you would like more information, please visit
www.timepac.eu
or contact us at leandro.madrazo@salle.url.edu