Welcome

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R2M Solution
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SUSTAINABLE PLACES 2024

LUXEMBOURG INSTITUTE OF SCIENCE AND TECHNOLOGY | LIST

R2M RESEARCH TO MARKET SOLUTION

Open Innovation Test Beds

WORKSHOP

1600h on 24 September 2024 – In Presence

Boosting the competitiveness of construction sector, RTOs, innovative companies and universities via OITBs

23-25 September 2024 - Luxembourg

STAR*track
A Built4People Project

metabuilding labs

MEZeroE
Measuring Envelope systems for Zero Energy buildings

iCLIMA BUILT

www.sustainableplaces.eu

SUSTAINABLE PLACES 2024

Open Innovation Test Beds

WORKSHOP

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R2M RESEARCH TO MARKET SOLUTION

INTENT

Participants to this workshop can expect to learn about how innovation clusters, open innovation test beds, and single entry points can accelerate product development in the construction sector increasing the competitiveness of universities, RTOs and companies and how the OITBs are positioning for post-project longevity, their best practices and how stakeholders can get involved.

OBJECTIVES

- Learn about 3 exciting OITB Projects
- Be Inspired
- Debate
- Engage / get involved

metabuilding labs

MEZeroE

iCLIMABUILT

SUPPORTING CALL TEXT

INDUSTRIAL LEADERSHIP

DT-NMBP-05-20 - Open Innovation Test Beds for materials for building envelopes (IA)

- OPEN INNOVATION
- CLUSTERING OF TESTING & INNOVATION FACILITIES
- SINGLE ENTRY POINT
- €65 MILLION ECONOMIC ACTIVITY 5 YEARS POST PROJECT
- BUILDING ENVELOPES (INCLUDING ROOFS & FACADES)

Combine expertise and make more accessible cross-sectorial innovation services and testing excellence for European SMEs

FUNDED PROJECTS

metabuilding labs

Landing page of European Construction & Champion of Innovation Clusters. Booking.com for testing and innovation

MEZeroE

Measuring Envelope systems for Zero Energy buildings

Excellence in pilot lines & open innovation services Marketplace

iCLIMA BUILT

Targeted technical systems. Advanced insulation systems & energy harvesting Open calls

These projects will need your help!

Delivering the vision of this call topic will be extremely challenging after these projects close (end of 2025)

AGENDA

1600-1610	**Welcome & Opening Remarks**	**Thomas Messervey** **R2M Solution**
1610-1620	STAR*track	Claudia Hunziker NOBATEK/INEF4
1620-1630	METABUILDING LABS	Antoine Dugue NOBATEK/INEF4 Germain Adell Metabuilding Association
1630-1640	iCLIMABUILT	Vasiliki Tsotoulidi National Technical University of Athens
1640-1650	MEZEROE	Roberto Lollini Eurac Research
1650-1725	Roundtable Discussion OITBs as Innovation Accelerators and long term viability	Thomas Messervey R2M Solution
1725-1730	Closing Remarks & Next Steps	Thomas Messervey R2M Solution

Open Innovation Test Beds – Let's Start!

STAR*track

A Built**4People** Project

Using Built4People Innovation Clusters to channel innovation support to companies

Funded by
the European Union

Nobatek INEF4
INSTITUT POUR LA TRANSITION ENERGETIQUE

What is a Built4People Innovation Cluster

STAR*track
A Built4People Project

It is a group of innovation-driven stakeholders,

such as local/regional cluster(s) or network(s),

that ambition to **increase their coverage (geographical, cross-sectoral, multidisciplinary), and the sustainability of their innovations**

in the Built Environment sector

Funded by the European Union

The STAR*track project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No 101147509.

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INSTITUT POUR LA TRANSITION ENERGETIQUE

Why becoming a Built4People Cluster

STAR*track
A Built4People Project

INCREASE VISIBILITY IN HIGH-LEVEL EUROPEAN NETWORKS

MEET WITH OTHER NATIONAL/ REGIONAL CLUSTERS

BENEFIT FROM NEW SERVICES FOR MEMBERS OF NETWORK

TAKE A BROADER APPROACH TO RESEARCH AND INNOVATION

ACCESS NEW RESOURCES AND FUNDINGS

COMMUNICATE KEY MESSAGES TO THE EUROPEAN COMMISSION

Funded by the European Union

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Initial plan for front-runner B4PIC Nouvelle Aquitaine – Euskadi - Navarra

STAR*track
A Built4People Project

Funded by the European Union

The STAR*track project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No 101147509.

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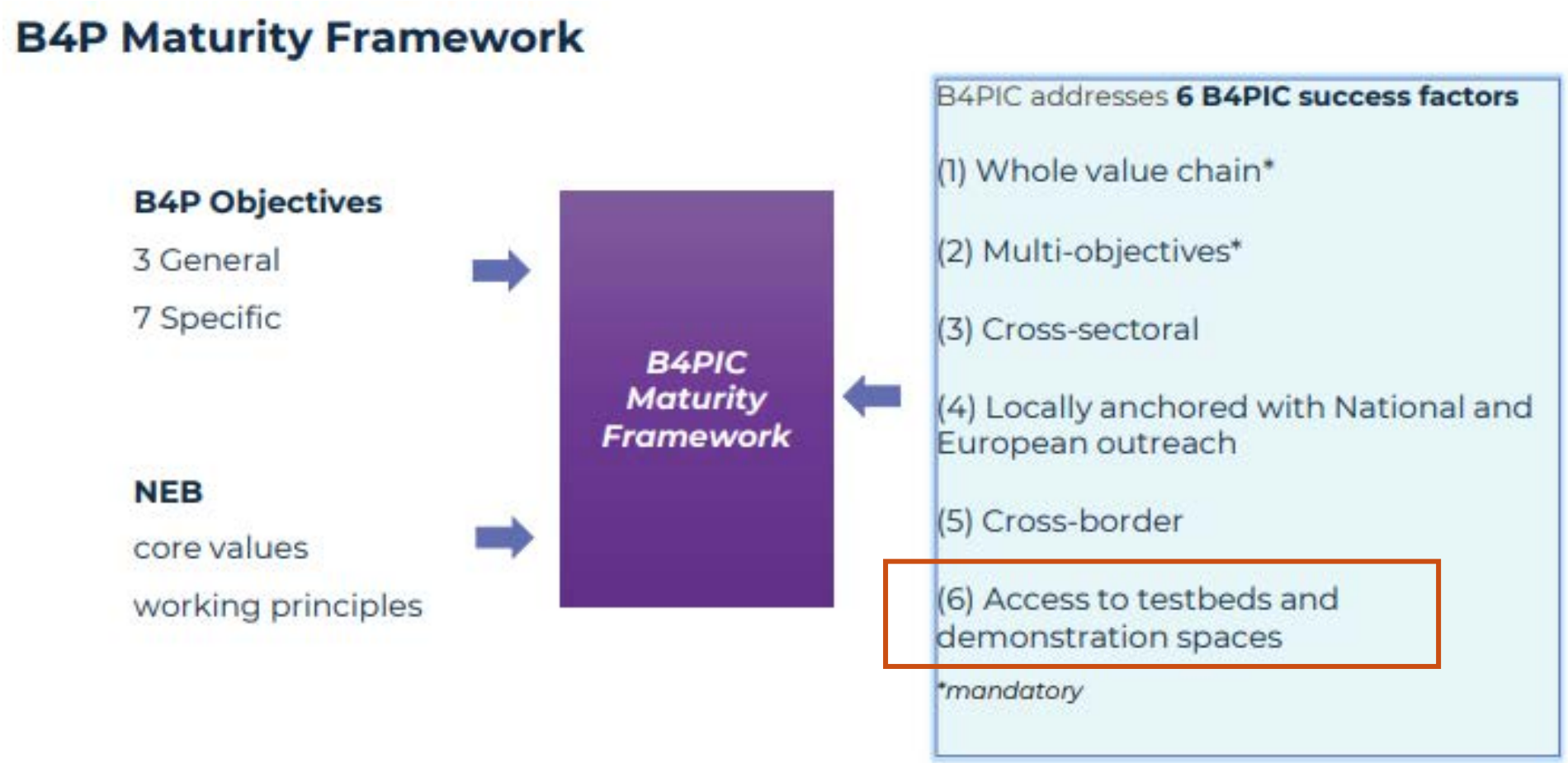
Success factors of maturation of a B4PIC



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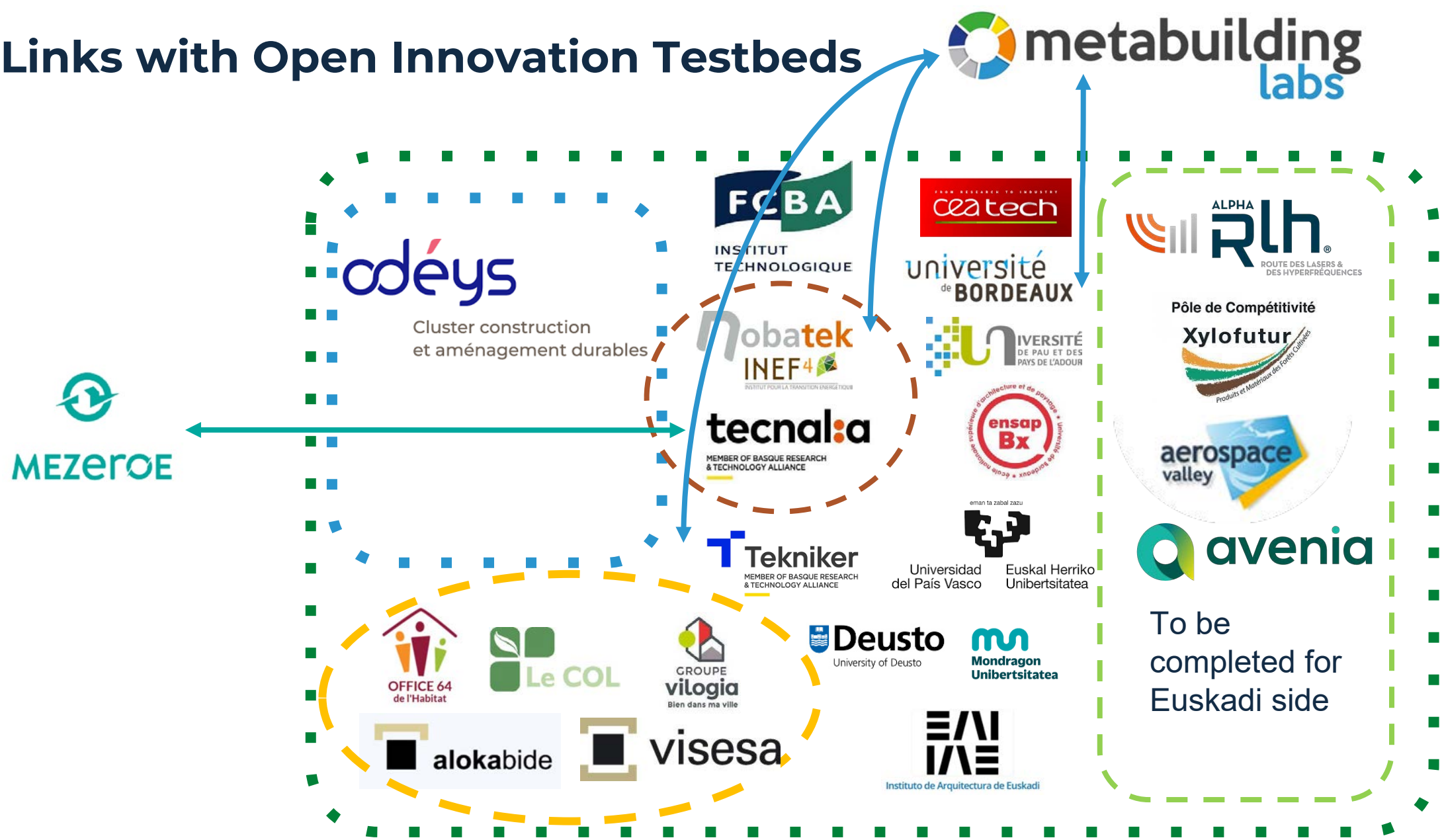
Links with Open Innovation Testbeds



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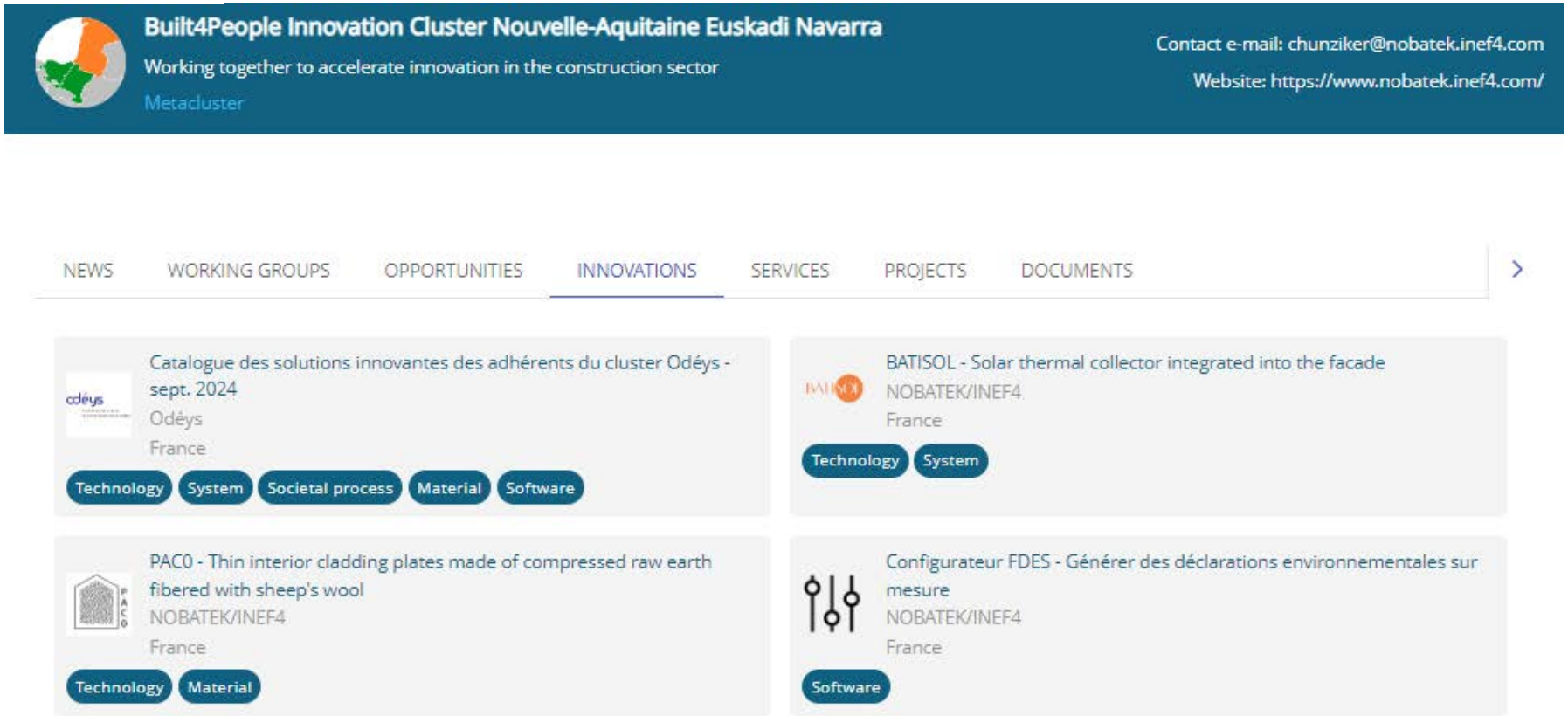
Front-runner Built4People Innovation Cluster Nouvelle Aquitaine – Euskadi - Navarra

STAR*track
A Built4People Project

metabuilding



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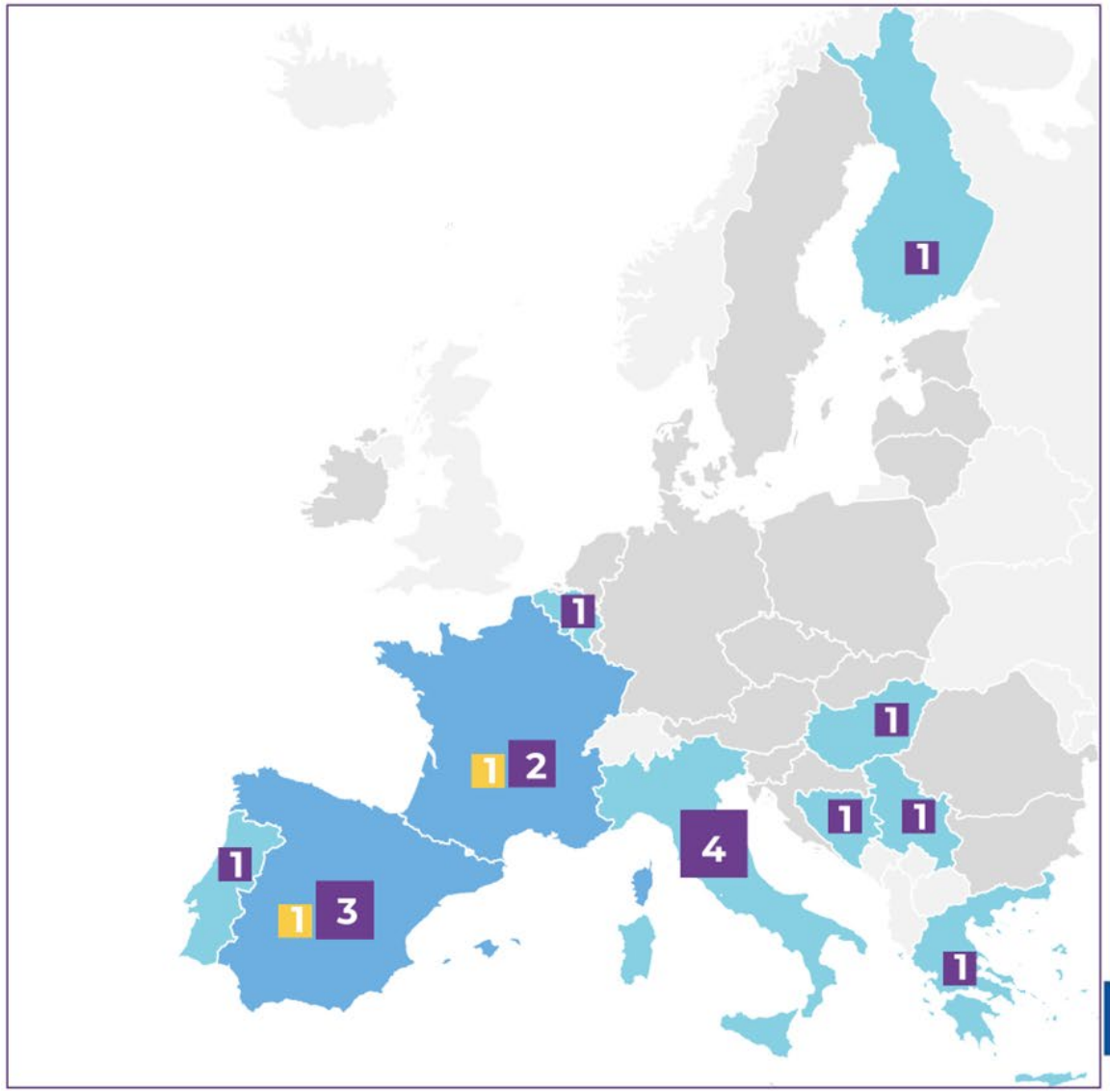
Built4People Innovation Cluster network

STAR*track
A Built4People Project



Built4People Innovation Cluster

The network of B4P Innovation Clusters is growing!

2 clusters have already signed the B4P Charter

16 clusters are in the process of joining the network

Co-funded by the European Union

ECTP

WORLD GREEN BUILDING COUNCIL

Funded by the European Union

The STAR*track project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No 101147509.

Nobatek INEF4
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Guidance on innovation expertise and access to testing and demonstration for B4PICs and their members

STAR*track
A Built4People Project

EMPOWERING
Be informed & competitive

Knowledge about innovation processes and testing and demonstration needed to bring innovative products to the market.

Innovation support, access to testing facilities and services via digital tools and promotion of digital product passports.

Identification of and access to demonstration sites with stakeholder participation (demonstration site match-making module).

Funded by the European Union

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INSTITUT POUR LA TRANSITION ENERGETIQUE

metabuilding labs

EU wide network of Testing facilities & Innovation services for new building envelope technologies & products

Sustainable Places 2024 OITB workshop
Luxembourg, 24/09/2024

Germain ADELL – Metabuilding ASBL General Director

14/10/2024

METABUILDING LABS Project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement No. 953193. The sole responsibility for the content of this document lies entirely with the author's view. The European Commission is not responsible for any use that may be made of the information it contains.

Metabulding Labs 5 highlights in Autumn 2024

- **Our ecosystem:** *40+ project partners + others from related projects like Metabuilding, Nebula, STAR*track…*
- **Our Digital Open Innovation Platform:** *metabuilding.com*
- **Our Single-Entry Point is active & operational:** *Metabuilding ASBL in Brussels*
- **Our O3BET innovative testbench network is being set up and is growing**
- **Our Pilot buildings matchmaking module in Metabuilding Platform**

Our project ecosystem

metabuilding labs

metabuilding asbl

R2M SOLUTION

ekodenge

ecowise

be commons

IMPULSE PARTNERS
Strategy | Innovation | Performance

université de BORDEAUX

BAŞAKŞEHİR LIVING LAB

minsait
An Indra company

vipasa

CONSTRUCTION21 FRANCE

ECTP
INNOVATIVE BUILT ENVIRONMENT

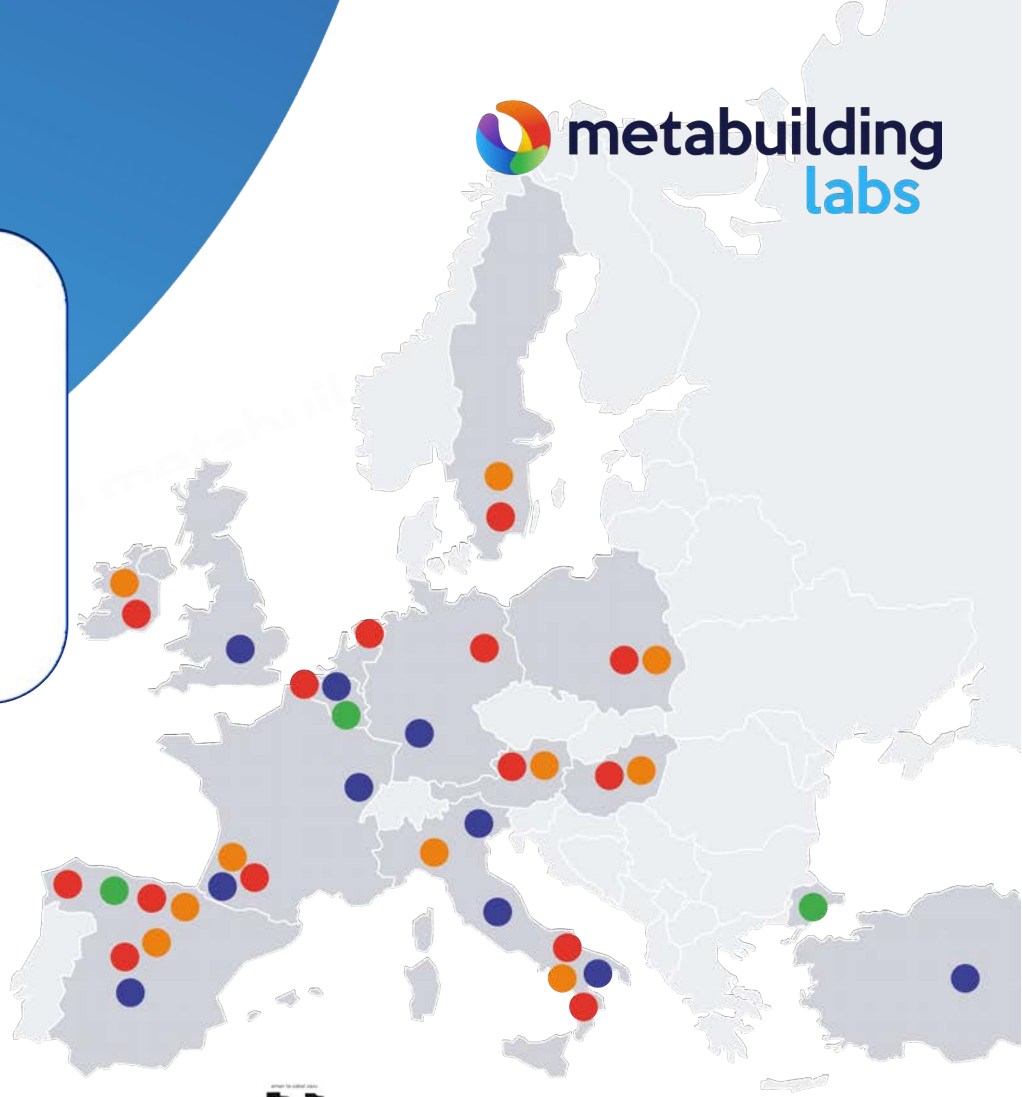
PTEC
Plataforma Tecnológica Española de Construcción

European Network of Living Labs

HOUSING EUROPE

European Aluminium

FEDERCOSTRUZIONI



RISE
Borás
SWEDEN

BAM
Berlin
GERMANY

ITB
Warsaw
POLAND

EMI
Szentendre
HUNGARY

BUILDWISE
Limette
BELGIUM

LIST / NEOBUILD
Bettembourg
LUXEMBOURG

U. of GALWAY
Galway
IRELAND

NOBATEK / INEF4
Anglet
FRANCE

IDONIAL
Gijón
SPAIN

CARTIF
Boecillo
SPAIN

AIT
Vienna
AUSTRIA

TEKNIKER
Eibar
SPAIN

UNIRC
Reggio Calabria
ITALY

STRESS
Benevento
ITALY

UPV / EHU
Vitoria
SPAIN

- O3BET replication
- Living Labs
- Clusters & dissemination point
- Testing Infrastructure

Our extended ecosystem

metabuilding labs

From Metabuilding project

Plataforma Tecnológica Portuguesa da Construção

EuRIC

EFB European Federation Green Roofs & Walls — Greener Cities in Europe

Fonds de Dotation Cercle Promodul INEF4

GRÜN STATT GRAU

+ Clusters in:

Nebula — A Built4People Project

STAR*track — A Built4People Project

BUILD:INN Basque Construction Cluster

odéys

ICONS

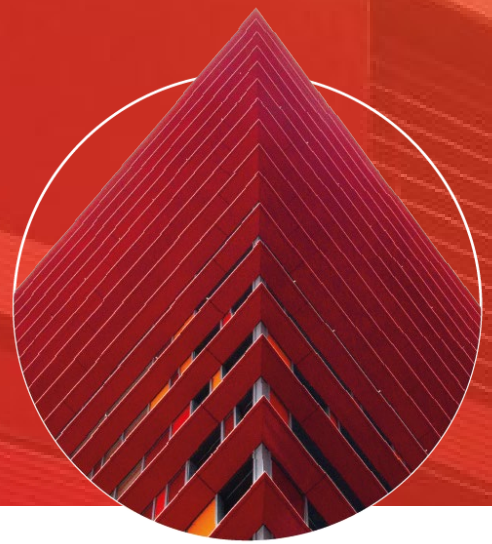
WE BUILD DENMARK

GATE 21

BUILD& CONNECT — Innovation for Buildings & Territories

e-CODOMH

Also, already
+ 340 registered organisations &
+ 1100 users in metabuilding.com
+ 190 SMEs!



Our digital Open innovation platform:
metabuilding.com

metabuilding

The platform brings free ecosystem services

metabuilding labs

The platform serves as a virtual selling point for Metabuilding Labs services

Our Single-Entry Point is active & operational:

Metabuilding Association in Brussels

meta building asbl

*The Single Entry Point for **easy access** to all our services is now a permanent organization in Europe!*

→ **Onboarding members gradually from the project**

ECTP INNOVATIVE BUILT ENVIRONMENT

Nobatek INEF4 INSTITUT POUR LA TRANSITION ENERGETIQUE

R2M RESEARCH TO MARKET SOLUTION

ecowise

IDONIAL TECHNOLOGY CENTRE

be commons

stress

CARTIF

→ **A new partner in EU funded projects**

metabuilding labs

STAR*track A Built4People Project

New project under GA signature

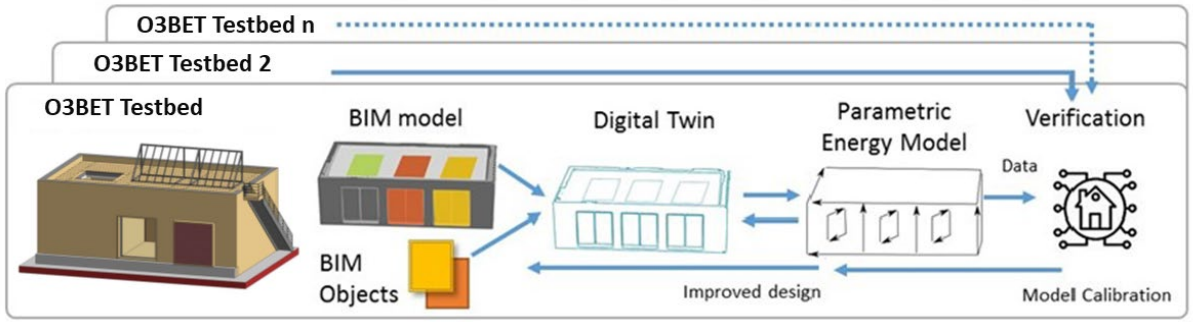
Open also to external new memberships

Our O3BET innovative testbench network is being set up

What is an O3BET?

A 1:1 scale, standardised and fully replicable, cost-effective, industrialised timber-based testing facility including all necessary sensors and hardware for testing.

O3BET | Open Source
Open Data
Open Access | **Building Envelope Testbench**



CARTIF O3BET: Boecillo, **SPAIN**
[*Warm mediterranean climate Csa*]*

STRESS O3BET: Térmoli, **ITALY**
[*Warm oceanic climate Cfa*]*

Our O3BET innovative testbench network is being set up

→ How many are being built and where

A starting network of **9 digitally connected O3BETs** in different EU locations/climates, to drive-test new building envelope products in real working conditions, backed by Digital Twins & Digital Product Passports.

- **CARTIF O3BET**: Boecillo, **SPAIN** [Warm mediterranean climate Csa]*
- **STRESS O3BET**: Térmoli, **ITALY** [Warm oceanic climate Cfa]*
- **ITB O3BET**: Katowice, **POLAND** [Temperate humid continental climate Dfb]*
- **NOBATEK/INEF4 O3BET**: Bordeaux, **FRANCE** [Temperate oceanic climate Cfb]*
- **RISE O3BET**: Borås, **SWEDEN** [Temperate humid continental climate Dfb]*
- **UoG O3BET**: Galway, **IRELAND** [Temperate oceanic climate Cfb]*
- **EMI O3BET**: Budapest, **HUNGARY** [Temperate humid continental climate Dfb]*
- **R2M Solution O3BET**: Pavia, **ITALY** [Warm humid oceanic climate Cfa]*
- **UPV/EHU PASSYS CELLS**: Vitoria-Gasteiz, **SPAIN** [Temperate oceanic climate Cfb]*

*Köppen climate classification.

→ Network to be expanded

Our Pilot buildings matchmaking module
in Metabuilding platform

metabuilding labs


ROOM2030

→ Solving the problem of testing in real environments in TRL 7-8

→ With the support of:

HOUSING EUROPE

Groupe Polylogis | LogiStic

vipasa

European Network of Living Labs

→ Metabuilding Labs will offer pilot operations design, implementation support services and co-creation feedback loops with end-users


BLL BAŞAKŞEHİR LIVING LAB


vipasa


HORMIPRESA


université de BORDEAUX


COVERIS

Thank you for your kind attention

Contact: g.adell@metabuilding.com

metabuilding labs

The Project
www.metabuilding-labs.eu

The Platform
www.metabuilding.com

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SUSTAINABLE PLACES 2024

ICLIMABUILT

FUNCTIONAL AND ADVANCED INSULATING AND ENERGY HARVESTING/STORAGE MATERIALS ACROSS CLIMATE ADAPTIVE BUILDING ENVELOPES

PROJECT PRESENTATION

Vasiliki Tsotoulidi– NTUA Coordination team

iCLIMABUILT

Project Details

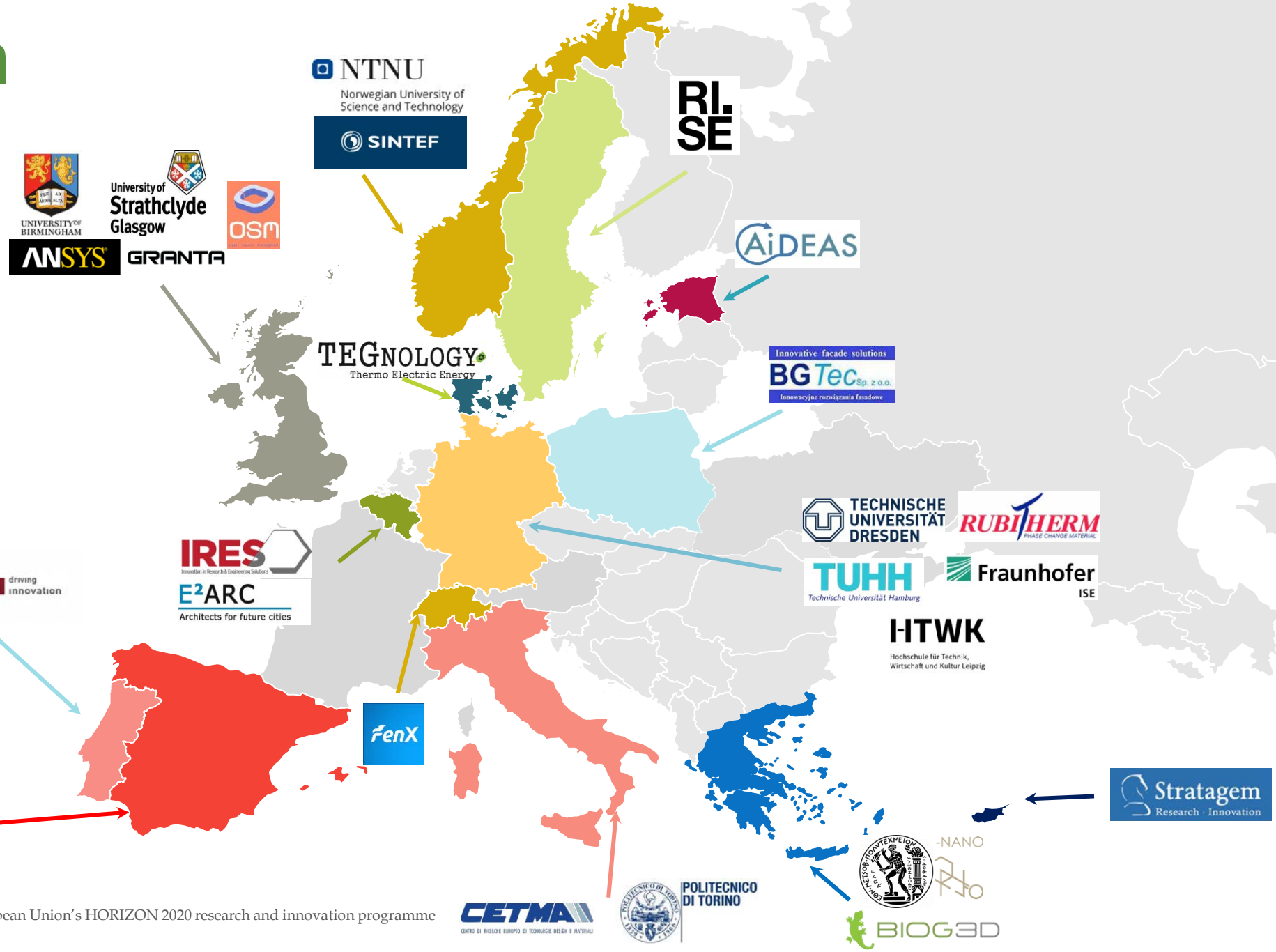
- **Full title:** Functional and advanced insulating and energy harvesting/storage materials across climate adaptive building envelopes
- **Acronym: iclimabuilt**
- **Call identifier:** H2020-NMBP-TO-IND-2018-2020 (**FOUNDATIONS FOR TOMORROW'S INDUSTRY**)
- **Topic ID:** DT-NMBP-05-2020 **Open Innovation Test Beds for materials for building envelopes** (IA)
- **Number of partners:** 27
- **Duration:** 54 months (01.03.2021 – 31.08.2025)
- **Funding:** ~ 15M €
- **Coordinator:** NTUA, R-NanoLab, Prof. C. A. Charitidis

iclimabuilt has received funding from European Union's HORIZON 2020 research and innovation programme under Grant Agreement No. 952886

Consortium

27 Partners
- 16 RTOs
- 11 SMEs

14 EU countries



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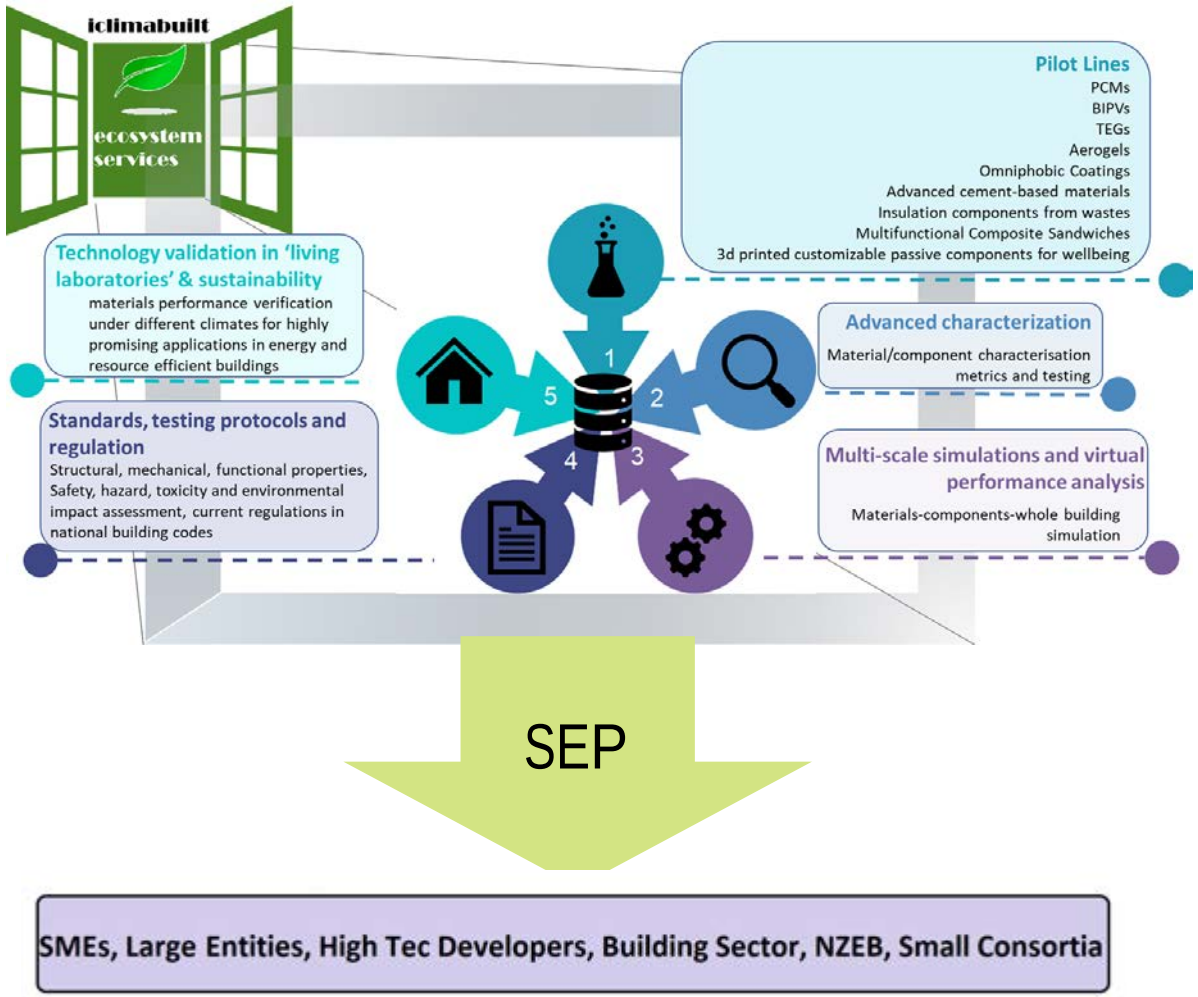
Concept

- iclimabuilt's **goal** is to create an **open access ecosystem** for developing, upscaling and testing innovations in building envelope materials and technical systems via its **9 Pilot Lines (PLs)** to reach **Nearly Zero Energy Buildings (nZEB)** balance

- **Open Innovation Test Bed (OITB):** Entities offering access to physical facilities, pilot lines, capabilities and services required for the development, testing and upscaling of nanotechnology and advanced materials for new innovative products and services in industrial environments. These facilities can be both existing and new, public and private test beds

- **The main goal of OITBs** is to assist companies and users advance from validation in a laboratory to prototypes in industrial environments by giving them access to technology. Potential users of the OITBs can be industrial, including SMEs, as well as innovators and start-ups



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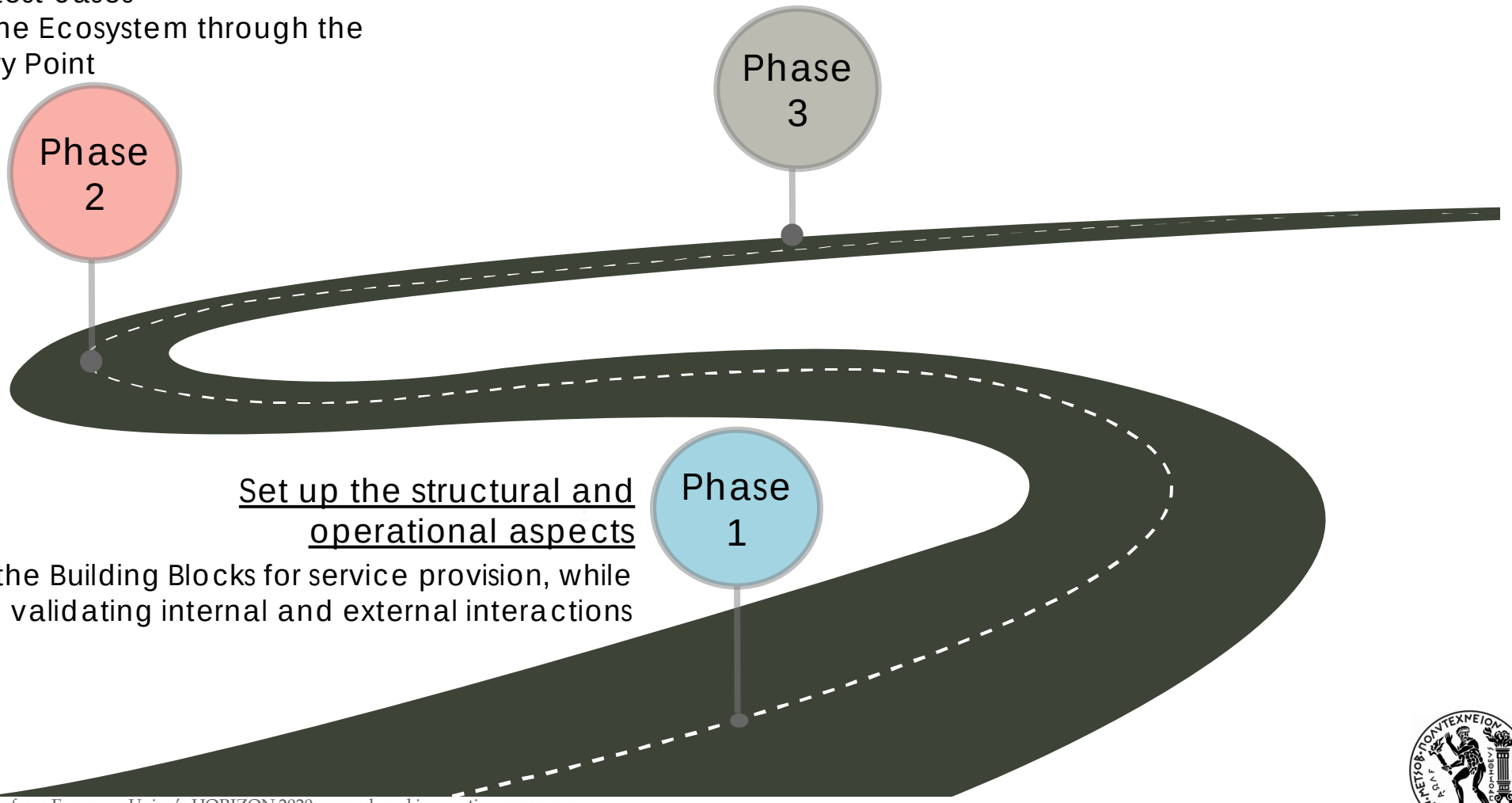
Project Phases

Validation of the ecosystem

Part 1: Analysis, evaluation & validation of the materials/Pilot Lines – test cases
Part 2 : Open Call to the Ecosystem through the established Single-Entry Point

Ecosystem extroversion and sustainability

Dissemination & Exploitation activities



Set up the structural and operational aspects

Creation of the Building Blocks for service provision, while developing and validating internal and external interactions

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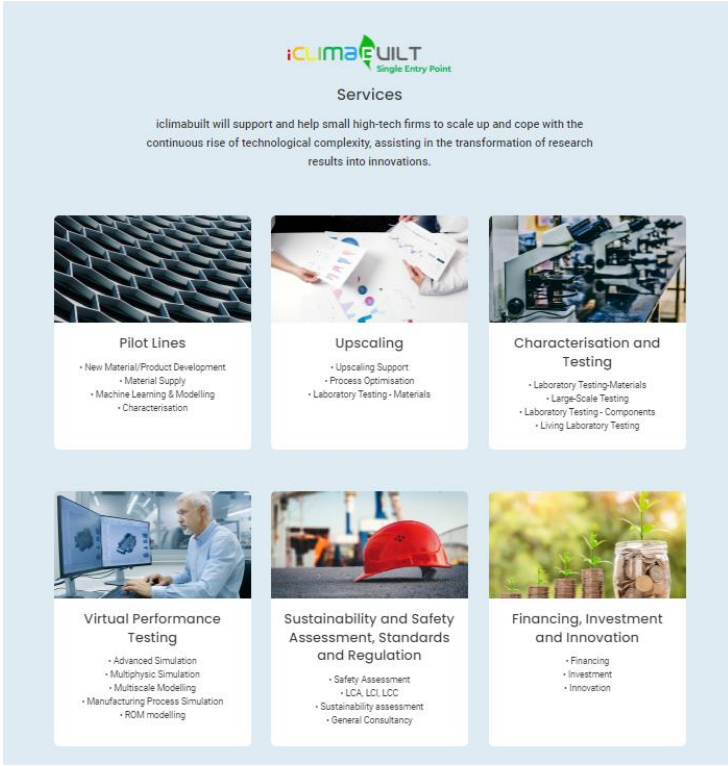
Ecosystem

Single-Entry-Point (SEP) developed to **link customers** with the project **ecosystem**, in order to **test**, **validate** and **upscale** new technological solutions: https://sepiclimabuilt.com/ **by utilizing our testbed's service portfolio**

The testbed service portfolio

Six Building Blocks:

BB No.	BB Name	# services
1	Materials by Design (WP3,WP4,WP5)	**9**
2	Testing (WP5, WP6)	15
3	Virtual performance testing (WP4, WP5, WP6)	13
4	Sustainability and safety assessment standards and regulation (WP5, WP6, WP8, WP9)	**10**
5	Upscaling (WP3, WP4)	**6**
6	Financing and innovation (WP1, WP2, WP9)	**8**
	TOTAL	**61**



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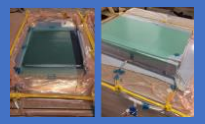
OITB

Pilot Lines

- PCMs
- TEGs
- Multifunctional Composite Sandwiches
- SAE materials
- Customizable 3d- printed components for well-being
- Cement/con materials for wall facades
- Insulation co from wastes
- Aerogels
- Omniphobic coatings



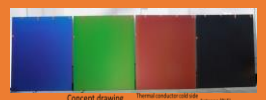


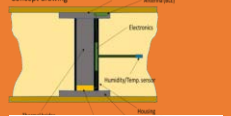


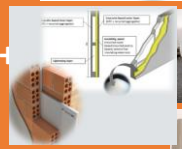


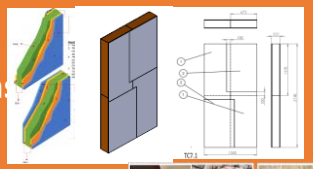
Test Cases

- Smart ventilated heat harvesting window
- BIPV & BIST collectors
- TEG modules
- TRC/CLCi composite panels
- Eco-sustainable insulating components (+ waste material)
- MCS solution
- 3D printed customizable components for indoor environmental quality improvement






Demos

- Amposta, Spain
- Manresa, Spain
- Torino, Italy
- Dresden, Germany
- Trondheim, Norway





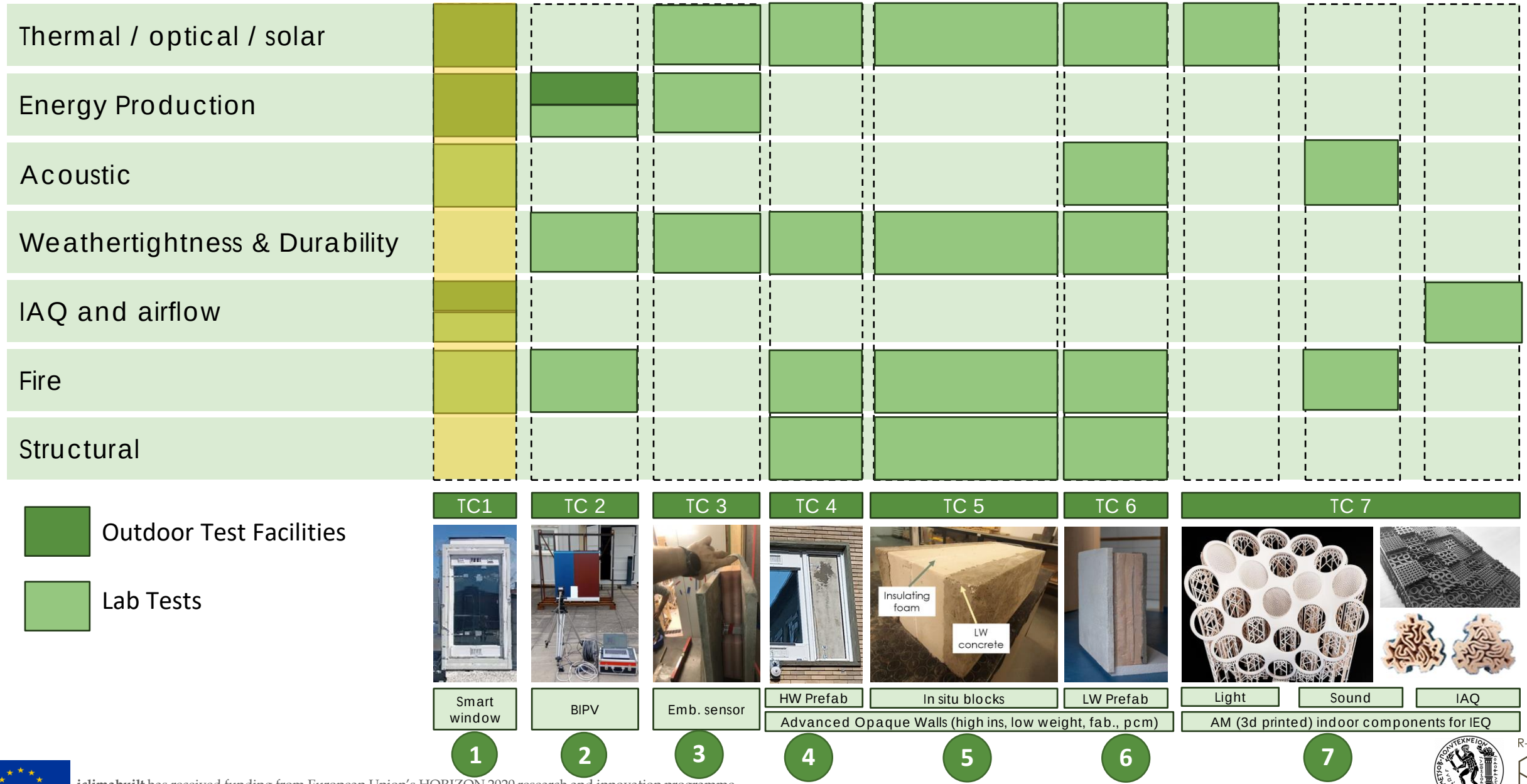
Open Call

- Validation of Testbed services towards external technological solutions (70% of funding to 8 external consortia of SMEs)
- Funding up to €150.000, free access to testbed services
- Upscaling of new TCs (up to TRL 6-7)
- SMEs support

MTaaS Platform

Customer-oriented configuration capability to translate user needs to adaptive workflows

iclimabuilt has received funding from European Union's HORIZON 2020 research and innovation programme under Grant Agreement No. 952886



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Project's Living Labs

Z1-Z2, AMPOSTA (SP)	Z3, CUBE (GR)	Z4, TEBE² & MANRESA (IT&SP)	Z5, ZEB (NR)
Mediterranean, warm summer	Temperate continental, dry season, warm summer	Temperate continental, thermal oscillations	Northern temperate, cold, no dry season

1 5 6 7

eurecat Centre Tecnològic de Catalunya

3 4 5 6

TECHNISCHE UNIVERSITÄT DRESDEN

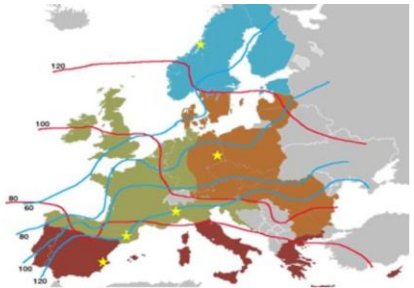
TEBE L²AB façade (TCs installation) | Reference façade (for comparison)

1 2 4 7

eurecat Centre Tecnològic de Catalunya

1 2 7

NTNU



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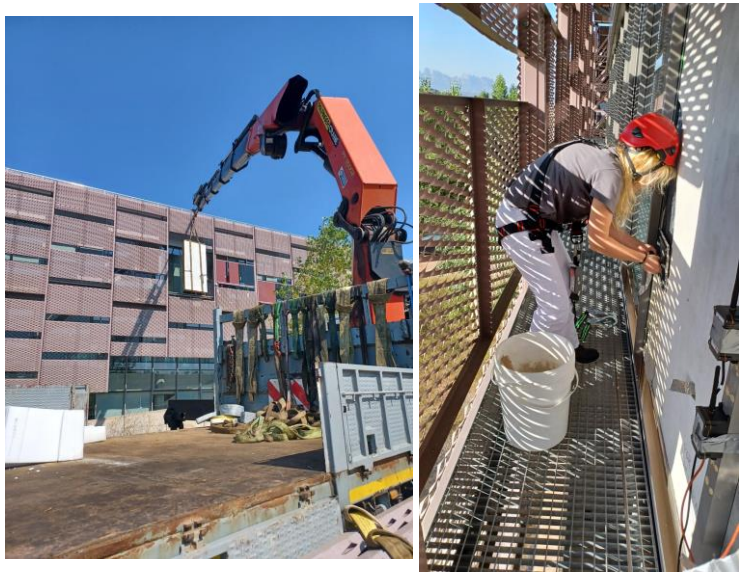
TCs integration in LLs

CUBE LL
TC5



Manresa LL
TC6

TC7.2

ZEB LL
TC7

TC7.1

TEBE L²AB LL
TC1 and TC4

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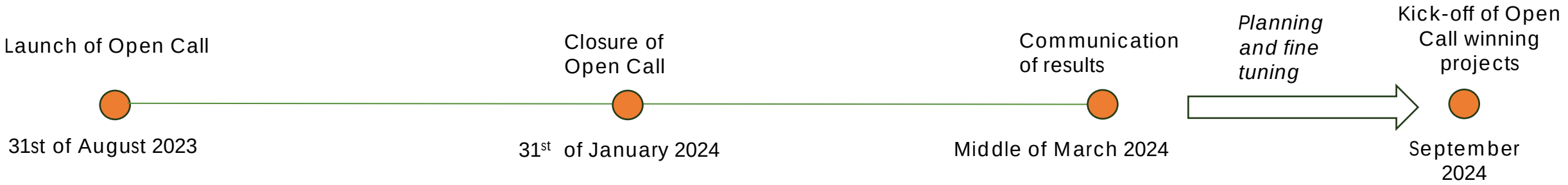
Open Call

- **Companies** (or **small** consortia-up to three partners) will **develop and/or test** their **technologies** referring to **materials** for **building envelopes** by utilizing the **services of the** iclimabuilt **testbed**.
- The **Open Call** will be utilised to **test** and **validate** the **project ecosystem** and **fine-tune** the **services**.
- **Total Open Call budget** : Approximately **1.1 Milion €**. **10 companies** or **small consortia** could be **funded. 50.000-150.000 € per winning proposal. Funding scheme: 70% by iclimabuilt OC, 30% by the winning applicants.**
- iclimabuilt partners are **providing** to the open-call winners **services consisting of person-months dedicated to subsidies activities, while through the funding consumables, travel costs, logistics etc. will be covered.**
- The Open Call **launched (https://sepiclimabuilt.com/open-call) through the SEP** in **August 2023** (M30) and **closed in January 2024** (M35).
- **''Open Call'' section** in the SEP was created, containing the **most relevant information to the Open Call, Guidelines for applicants, applicant forms, and a complete and updated list of services offered by** the iclimabuilt partners.
- The **SEP was configured to serve as the platform** for the applicants to submit the proposals.

iclimabuilt has received funding from European Union's HORIZON 2020 research and innovation programme under Grant Agreement No. 952886

Open Call

- **17 proposals** were **received, 13 were eligible,** and **underwent evaluation.**
- Each Open Call application**, brought in its technology,** described its **lack** in **knowledge** and how it is **expected** to **close** these **knowledge gaps by exploiting the testbed's services** resulting in **a new TC of an initial TRL 4-5 that will reach a final TRL 6-7.**
- **Evaluation process results: 8** proposals were considered **winning;** they had a **final score higher than 10/15.**
- The evaluation phase was followed by the **fine-tuning and negotiation phase** between the winning applicants and the service providers.
- After the successful implementation of the **fine-tuning and negotiation phase ,** all parties signed the relevant **contractual agreements**



✓ June 2024 – July 2025: **Feedback** gathering by the Open Call winners who will review the services provided via the Open Call. **The ecosystem fine tuning will be achieved based on their input.**

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The iclimabuilt JVC

- **Aim of the Joint Venture**: leverage our combined expertise, resources, and market knowledge to create a dynamic entity that can capitalize on emerging opportunities and address the needs of our target market more effectively, related to the **construction sector,** specifically focusing on the study and development of **innovative materials and building components for Nearly Zero-Energy Buildings (NZEB)**. JVC of iclimabuilt will **preserve and handle the iclimabuilt testbed after the completion of the project**.
- Following the company's establishment, it will join as the **28th partner** in iclimabuilt via an amendment, as foreseen in the Grant Agreement.
- **JVC funding**: being an SME, the JVC receives an **EU Contribution of 70% of the total budget** declared in its participation in the project, contributing the remaining 30%. **A budget of 200,000 Euros** plus 25% overheads is foreseen as funding for the JVC.
- **Three partners of the iclimabuilt** consortium, namely **NTUA, BGTec and TEGnology,** will establish the JVC and become its shareholders. The partners not joining the JVC, **will be bonded to the JVC via individual Joint Venture Agreements.**

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The iclimabuilt JVC

Our JVC will be a commercial limited liability company in the legal form of "Private Capital Company (PC) based in Greece"

- The **JVC business** will be focused on the **provision of the iclimabuilt ecosystem's services**. We should take advantage of the ecosystem with its offer of high-level services/ high level consultancy. We should promote the products and services of the JVC partners without disregarding the services of the iclimabuilt ecosystem as foreseen in the iclimabuilt GA.
- The **focus** should be the **commercialization of products/services with higher TRLs** and from the partners that are willing to be more commercial.
- **NTUA** *products/services* : LCA, fire testing, and possibly other services from RNanoLab service portfolio.
- **Bergamo Tecnologie** *products/services*: Prefabricated, multifunctional technologies (windows, facades with additional functionalities) // Prototyping capabilities (support in product development) // Support in new product design.
- **TEGNOLOGY** *products/services*: Expertise on thermal energy harvesting from building envelopes // Consultancy on retrofitting energy efficiency improvement solutions // Project management // LCA Supply-chain of insulation

iclimabuilt has received funding from European Union's HORIZON 2020 research and innovation programme under Grant Agreement No. 101033683

https://www.linkedin.com/in/iclimabuilt-project-4216a321b/

https://twitter.com/iclimabuilt

https://www.facebook.com/Iclimabuilt-project-114989307350735

https://www.youtube.com/channel/UCTCH6jQAmkwu31m3GKF1jMA/featured

info@iclimabuilt.eu

iclimabuilt.eu

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MEZeroE

Measuring Envelope products and systems contributing to next generation of healthy nearly Zero Energy buildings

MEZeroE network: the single-entry-point to the distributed open innovation test bed for performance characterisation and development of envelope solutions

Roberto Lollini, Eurac research

SP2024, 24th September 2024

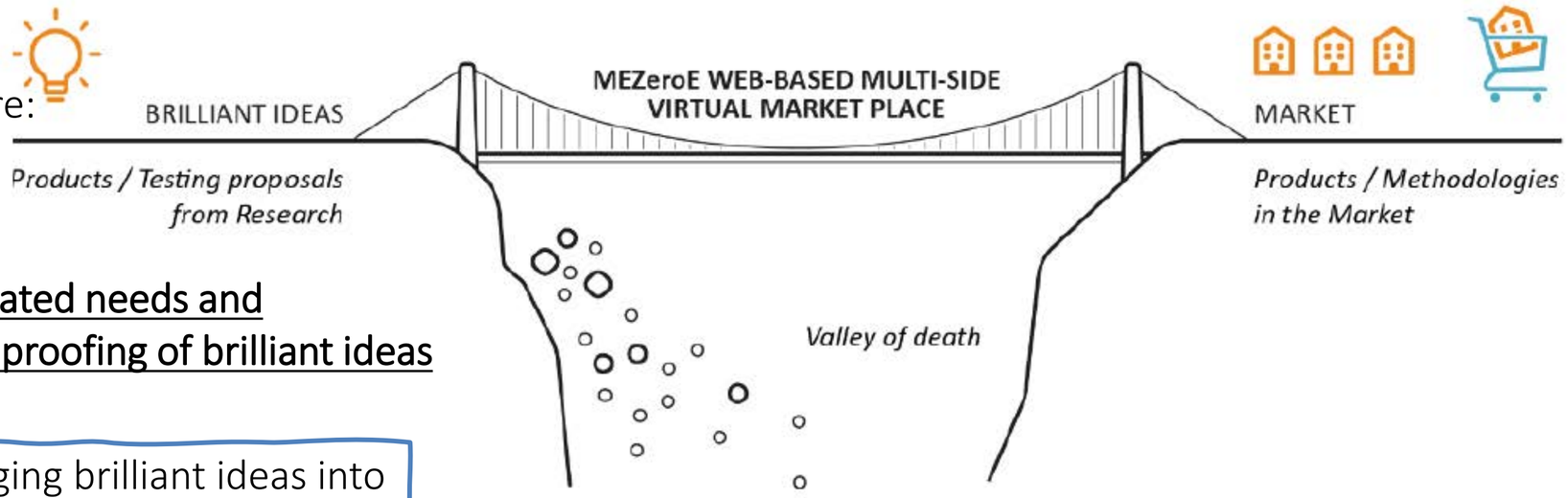
This project has received funding from the European Union's Horizon 2020 research and innovation programme under **grant agreement No 953157**

IDEAS → PERFORMANCE MAP AND VALUE PROPOSITON → PRODUCT/MARKET

MEZeroE network aims at providing a knowledge framework to enable the transition to an innovative and sustainable built environment.

The MeZeroE network key drivers are:

- Knowledge sharing for peers' exchanges facilitation
- Matching between innovation related needs and assessment capacity, for concept proofing of brilliant ideas



The available capacities enable bringing brilliant ideas into the market with a robust evidence-based performance characterisation, becoming the reliable base of the products value propositions

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MEZeroE

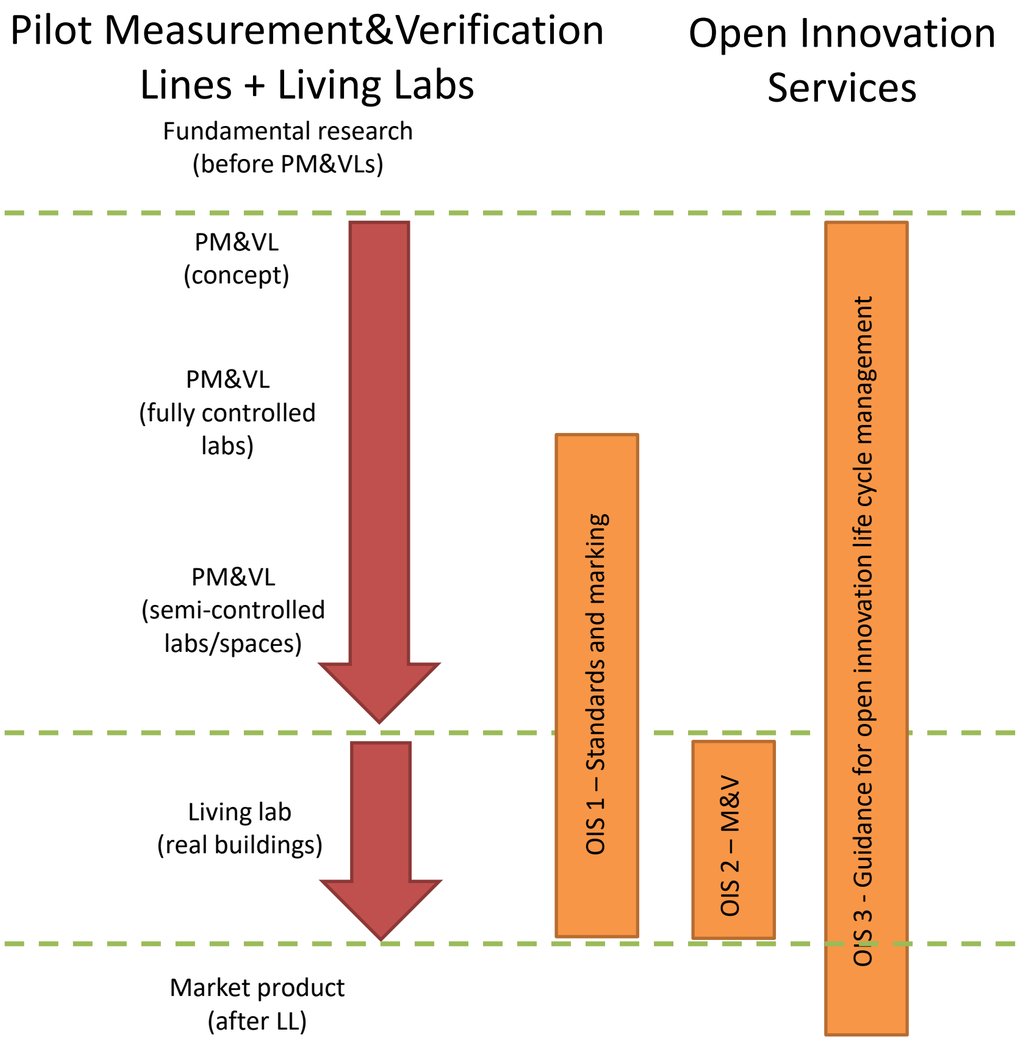
FROM IDEA TO MARKET

3 The innovation path

Façade System Interactions Lab in the PM&VL2 - Eurac research

Technology Readiness Level (TRL)

- TRL 1 • Basic principles observed and reported.
- TRL 2 • Technology concept and/or application formulated
- TRL 3 • Analytical and experimental critical function and/or characteristic proof of concept.
- TRL 4 • Component and/or breadboard validation in laboratory environment.
- TRL 5 • Component and/or breadboard validation in relevant environment.
- TRL 6 • System/subsystem model or prototype demonstration in a relevant environment.
- TRL 7 • System prototype demonstration in an operational environment.
- TRL 8 • Actual system completed and qualified through test and demonstration.
- TRL 9 • Actual system has proven through successful mission operations.



Measuring Envelope products and systems contributing to next generation of healthy nearly Zero Energy buildings

This project has received funding from the European Union's Horizon 2020 research and innovation programme under **grant agreement No 953157**

Building as living lab in Poggio Torriana, Italy, where we are measuring effect of an advanced façade (by FOCCHI in terms of IEQ measuring and POE

Control, simplification and human participants

Fully-controlled test bed facility:
A fully controlled facility to evaluate specific features of a system or component
No human participants

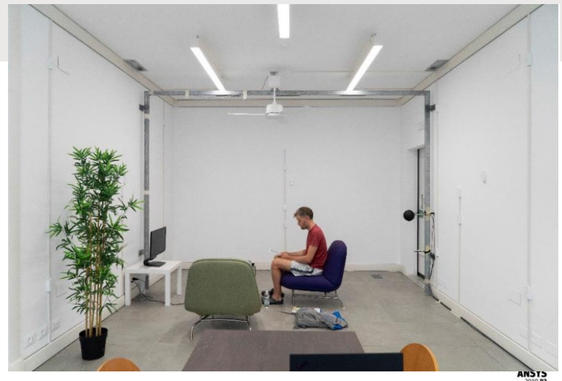
Test bed facility with human factor:
A facility to evaluate specific features of a system or component in more realistic conditions
Human participants might be involved (passive or active role, to be defined in the design of experiment)

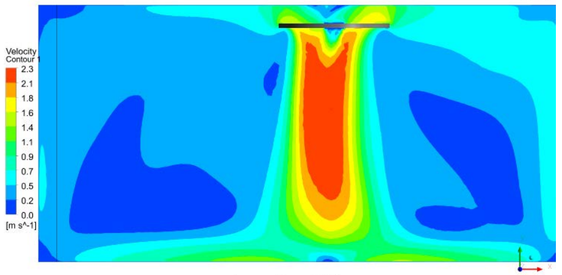
Living lab:
A test facility that is occupied by real people using the building as their home, office or other relevant type of building
Human participants must be involved

Real building as a living lab:
A real building that is occupied by real people, but has sufficient embedded sensors to measure the relevant parameters
Human participants are the usual occupants of the building

+ control -

- close-to-reality +





Portable, plug and play monitoring devices with real time data transfer

This project has received funding from the European Union's Horizon 2020 research and innovation programme under **grant agreement No 953157**

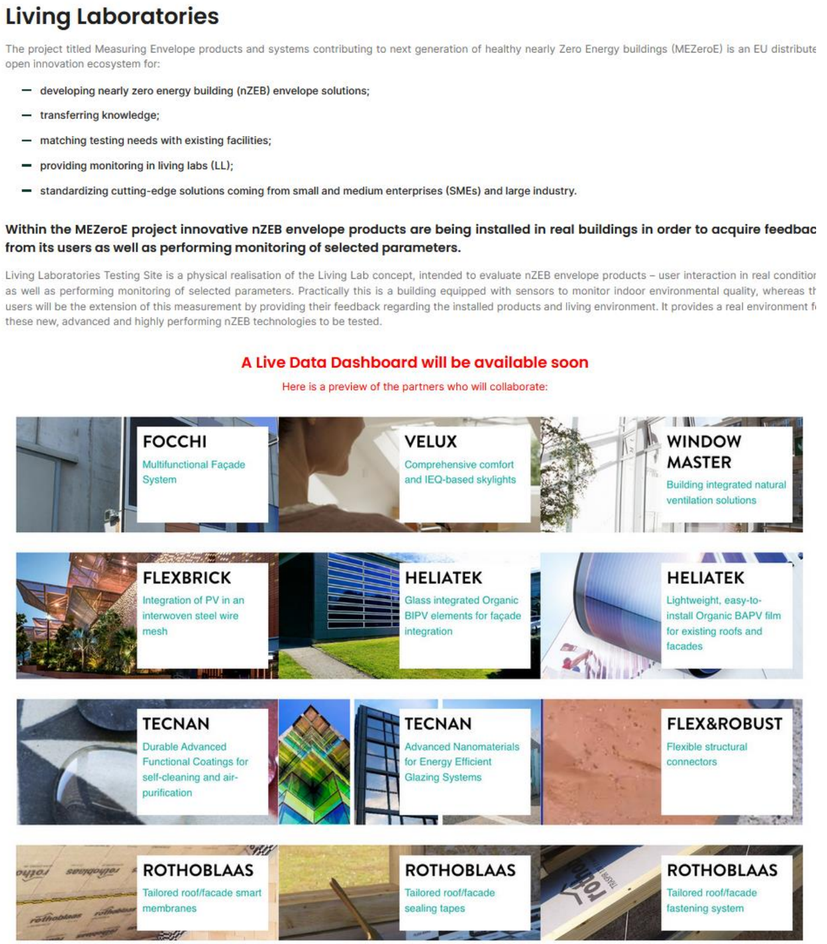
CHALLENGES

5 Towards open innovation

MEZeroE network is running as EU distributed knowledge-based open innovation ecosystem

accessible via a single-entry-point for

- sharing and transferring knowledge
- matching testing needs with test facilities
- real buildings used as living labs, where measuring and surveying users' perception involved players/stakeholders' feedback
- making marketable cutting-edge solutions coming from SMEs and larger industries
- developing robust technology solutions with reliable performance characterisation



https://mezeroe-platform.eu/

This project has received funding from the European Union's Horizon 2020 research and innovation programme under **grant agreement No 953157**

NETWORK KEY FUNCTIONS

- Define, implement, and periodically update the **strategy** of the open innovation ecosystem
- Promote **open innovation** in construction industry with a particular attention to high-performance envelope solutions, impacting building energy balance and IEQ
- Run the **web-based platform** as landing page for starting an interaction aimed to match industrial needs with testing capacities and/or open innovation services
- Organize an **annual symposium** for companies, practitioners and researchers focused on the latest advancements in high-performance envelopes
- Organize **periodical dissemination short events** (pills) for technical communication in the form of webinars or similar, focused on assessment and support methods
- **Seek feedback** from manufacturers, developers, designers, and other players and stakeholders in and around the building envelope industry
- **Promote synergies** and connections with other associations, OITBs, platforms, and entities in general that are active in the same field or in connected fields (also for circularity)

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MEZeroE Network

AFFILIATES

are legal entities

must provide OI services: performance characterisation or support to (open) innovation

ensure high quality of the services and compliance with the network procedure

propose and address decisions

have the opportunity for industry collaborations

MANAGEMENT BOARD

Expression of the affiliates: each with a representative in the board

Chaired by one of its members on rotational basis; the secretary support and act as deputy chair

Overall responsible for running MEZeroE network and entitled to approve decisions

TECHNICAL COMMITTEES

- Membership
- Communication & Dissemination
- Platform&IT
- SME&Industry
- Symposium
- Finance and administration → support and procedures

SERVICES ARE MANAGED AND PROVIDED BY THE AFFILIATE(S)
except if the request is not exactly addressed (generic request/question) → then in charge of the management board

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THE PLATFORM

8 **Towards open innovation**

https://mezeroe-platform.eu/

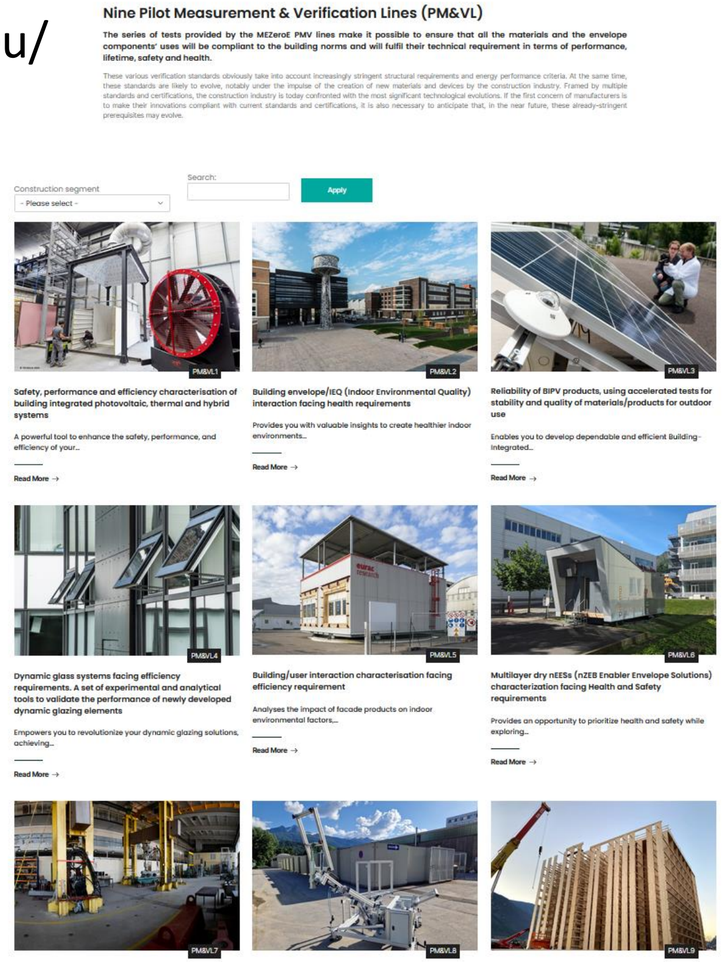
A VIRTUAL PLACE TO OFFER MEZEROE RESULTS

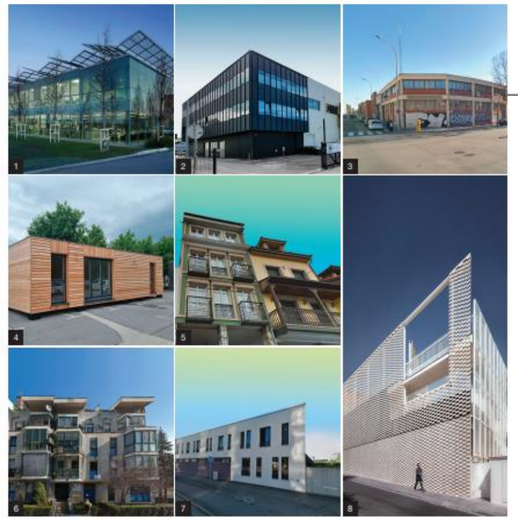
PILOT MEASUREMENT AND VERIFICATION LINES

OPEN INNOVATION SERVICES

LIVING LABS IN REAL BUILDINGS

FOLLOWING AND SUPPORTING THE INNOVATION PATH
TRL1 → … → TRL9





13

Commercial

1- ITALY - Poggio Torriana

Multi-domain indoor environmental quality
Measurement of indoor physical parameters before and after renovations, and collecting occupant feedback for evaluating multi-domain indoor environmental quality (IEQ) : thermal comfort, acoustic comfort, visual comfort, and indoor air quality.

The building utilizes the façade as an interface and environmental management element, working with the heating/cooling and lighting systems as well as other automation to control and measure the environment. This saves energy and enhances user comfort.

2- SLOVENIA - Logatec

Indoor thermal and daylighting comfort, energy performance.
Carrying out a thermal comfort study and calculating energy saving pre and post retrofitting.

Office building with connected state of the art fire laboratory. Building is undergoing a renovation toward improving its energy consumption and indoor comfort by applying energy efficient glazing system to its windows.

3- SPAIN - Barcelona

Indoor environmental quality (IEQ) monitoring
Thermal and acoustic comfort will be the main focus of the indoor environment monitoring and post-occupancy evaluation.

Window system will be replaced to enhance safety and reduce energy consumption as part of a rehabilitation project.

4- SLOVENIA - Ribnica

Envelope performance
Real condition timber envelope solutions on modular house. Calculating heat transfer through the building envelope, by measuring the heat flux (U-value), ambient and surface temperature.

Residential

5- SPAIN - Avilés

Renovation of cultural and historical building
Integral rehabilitation of a comprehensive protected building in the historic centre of Avilés.

Tailored roof/facade smart membranes and sealing tapes will be used. Advanced functional coatings and nanomaterials for energy efficient glazing system will be applied on the facade and windows, respectively.

6- CROATIA - Zagreb

Envelope performance
Residential house with reinforced concrete load-bearing structure. Restoration of the roof slab and thermal insulation of a loggia wall.

Calculating heat transfer through the building envelope, by measuring the heat flux (U-value), ambient and surface temperature before and after insulation foam implementation.

Public

7- GERMANY - Dresden

Organic photovoltaics integration
Renovation of the shell and roof. Complete interior restoration will be carried out, bearing in mind the new use of the area as a workshop hall with offices and a social area.

Educational

8- SPAIN - Barcelona

Façade photovoltaics integration
Newly constructed kindergarten and primary school upgraded with a Flexbrick pergola featuring photovoltaic cells that provide electricity and shading.

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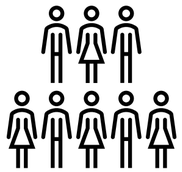
MEZeroE network is running …

- TESTING
- IMPLEMENTING LIVING LAB APPROACH
- PREPARING CALL FOR INNOVATIVE SOLUTIONS PERFORMANCE CHARACTERISATION
- PREPARING THE FIRST SYMPOSIUM
- ESTABLISHING FORMAL ENTITY AND CONSOLIDATING THE NETWORK



MEZeroE network is open to further affiliates and to face building-industry requests (innovation needs) in collaboration with other OITBs SEP (synergies and opportunities for collaboration)

The MEZeorE network doesn't want to do commercial activities per se, but through the affiliates

The MEZeorE network expenses can be covered through key functions, further initiatives, and possible affiliate fees (under definition)

Stay tuned!

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MEZeroE

Measuring Envelope products and systems contributing to next generation of healthy nearly Zero Energy buildings

THANK YOU!

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www.eurac.edu

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SUSTAINABLE PLACES 2024

Open Innovation Test Beds

WORKSHOP

Boosting the competitiveness of construction sector, RTOs, innovative companies and universities via OITBs

LUXEMBOURG INSTITUTE OF SCIENCE AND TECHNOLOGY | LIST

R2M SOLUTION RESEARCH TO MARKET

ROUNDTABLE DISCUSSION

- Let's Learn, Discuss & Debate
- Questions from the chat online chat are welcome
- Part of the discussions is between the OITB Projects
- Part of the discussions is between the audience and the OITB projects

metabuilding labs

iCLIMA BUILT

MEZeroE

QUESTION #1

OITB projects are notoriously hard across all sectors. Construction is difficult to begin with.

What is the secret sauce of your OITB project that has the potential to make it a winner / be long lasting?

metabuilding labs

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QUESTION #2

How does your Single Entry Point (SEP) work?

- Who will be engaged as OITB member from the project partnership and under which legal binding?
- Who do people contact to get in touch with your OITB services?

QUESTION #3

Are OITBs synergistic or competitive in nature?

How will it work this activity in STAR*track where there are the multiple innovation clusters and multiple OITBs?

metabuilding labs

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QUESTION #X..Y

The Floor is Open!

metabuilding labs

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MEZeroE

In Closing - AGENDA

1600-1610	**Welcome & Opening Remarks**	**Thomas Messervey** **R2M Solution**
1610-1620	STAR*track	Claudia Hunziker NOBATEK/INEF4
1620-1630	METABUILDING LABS	Antoine Dugue NOBATEK/INEF4 Germain Adell Metabuilding Association
1630-1640	iCLIMABUILT	Vasiliki Tsotoulidi National Technical University of Athens
1640-1650	MEZEROE	Roberto Lollini Eurac Research
1650-1725	Roundtable Discussion OITBs as Innovation Accelerators and long term viability	Thomas Messervey R2M Solution
1725-1730	Closing Remarks & Next Steps	Thomas Messervey R2M Solution

Open Innovation Test Beds – Let's Start!

Closing

Thomas Messervey
R2M Solution
thomas.messervey@r2msolution.com

SUSTAINABLE PLACES 2024

LUXEMBOURG INSTITUTE OF SCIENCE AND TECHNOLOGY | LIST

R2M RESEARCH TO MARKET SOLUTION

Open Innovation Test Beds

WORKSHOP

1600h on 24 September 2024 – In Presence

Boosting the competitiveness of construction sector, RTOs, innovative companies and universities via OITBs

23-25 September 2024 - Luxembourg

STAR*track
A Built4People Project

metabuilding labs

MEZeroE
Measuring Envelope systems for Zero Energy buildings

iCLIMA BUILT