

# OMC – Global Webinar

9 July 2021

10:00 – 12:00 (CET)



## Objectives

**To understand the scope of the project**

**To achieve a common understanding of the PCP process**

**To consult with potential suppliers of R&D solutions for building renovation**

**To facilitate the establishment of partnerships**

## The Presenters (other procurers also present)



**Roberto Fedrizzi**

**Eurac Research**  
Research Group Leader



**Georg Vogt**

**empirica GmbH**  
Head of ICT Innovation Energy

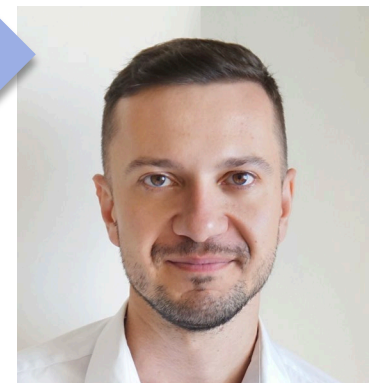
**Niko Natek**

**KSSENA**  
Lead Procurer,  
Coordinator



**Mehmet Bulut**

**empirica GmbH**  
Senior Researcher



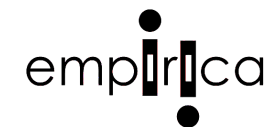
# Agenda

## 1 Welcome & Introduction

- 2 procuRE Aim & Scope
- 3 Procurement of Innovation and Tender Process
- 4 *Q&A on project and process*
- 5 Information on Local Building
- 6 *Q&A on local site*
- 7 Next Steps



**Georg Vogt**  
Head Innovation Energy



## Mentimeter for background (1-3)

— Use second screen or mobile

Go to **menti.com** and enter: **9479 6760**

or

**Follow link in chat:** [menti.com/d7cp33yn5h](https://menti.com/d7cp33yn5h)

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# Around 90% of existing non-residential buildings<sup>1</sup> will be in operation in 2050 with no clear path on how to achieve nearly zero standard in these buildings

## — The problem

### MACRO-LEVEL

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Buildings account for 40% of energy consumption and 36% of energy-related GHG emissions

Renovation rate are at 0.4-1.2% per year and upgrades usually limited to some improvements

Workforce is constrained and probably insufficient

### PROCURER-LEVEL – EVEN IF WE AIM FOR HIGH-STANDARDS, WE FACE

---

Highly fragmented sector often siloed in national markets

Very large number of technologies, for which expertise cannot be expected from procurers

Investors perceive high complexity of systems as higher risk and therefore prefer less ambitious solutions

<sup>1</sup> The figure for residential buildings is estimated at 80% by JRC (2021)

**procuRE tackles one of the major challenges of buildings and contributes to the target of decarbonising the EU building stock by 2050**

— [procuRE link to EU-policy](#)

## **Renovation Wave - the European Green Deal**

**Solve the challenge of existing public buildings**

**Public sector  
with large  
buildings stocks  
as viable option  
to create  
demand**

1. Renovate 35 million inefficient buildings by 2030
2. Reduce emissions by at least 55% in 2030
3. Build the foundations for a climate neutral Europe by 2050
4. Promote sustainable design [...]

**Joint procurement in form of a pre-commercial procurement (PCP) to drive innovation**



**Barcelona, Spain**



**Eilat, Israel**



**Istanbul, Turkey**



**Nuremberg, Germany**



**Velenje, Slovenia**



**Vila Nova de Gaia  
(Porto), Portugal**



**6 Procurers - 6 Countries**  
responsible for 21,000 Buildings

**1 Challenge: eliminating off-side supply  
in existing buildings**

**€7.68 mio. for external R&D services**

**Budget spent in 3 phase competition**

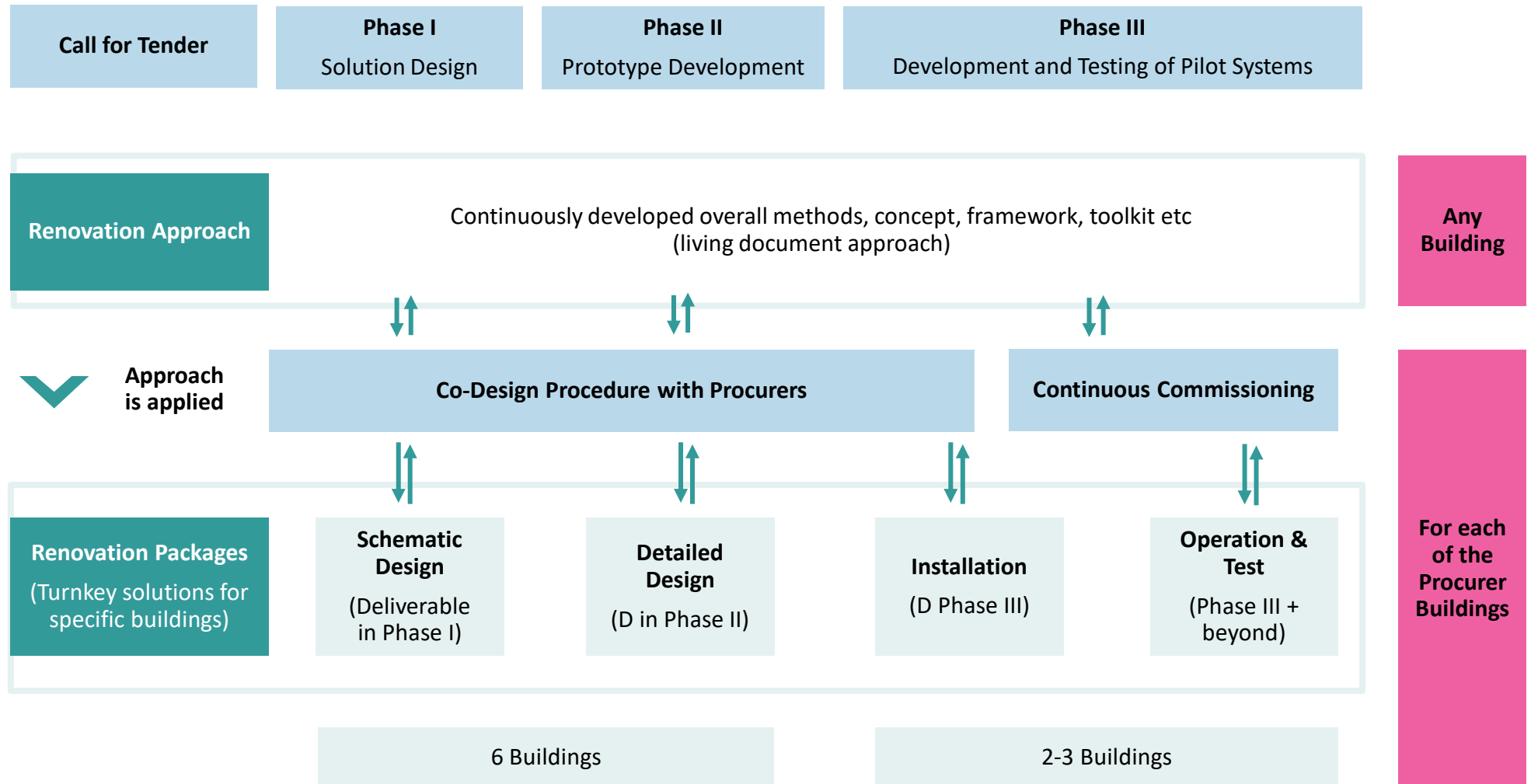
**3 Schools - 3 Offices**



# Our challenge to suppliers is to present a new Approach to renovations and develop & test it whilst applying it to demonstration sites during the project

Common challenge and expected output

Preliminary as of 25.06.2021



# PCPs create incentives in domains where mature solutions are missing and reduce risks for both procurers and suppliers to innovate

## Core features of Pre-Commercial Procurement (PCPs)

### WHAT IS A PRE-COMMERCIAL PROCUREMENT (PCP)?

**Instrument for public procurement of R&D services**



**Public procurers act as demanding customers**



**Tool for innovation**  
(EC sees the need but no offer on market)



**Risk-benefit sharing under market conditions**



**Interact closely with six procurers**  
operating 21,000 buildings



### WHAT ARE THE BENEFITS FOR SUPPLIERS?

**Create opportunities for companies**  
to gain leadership in new markets

**Provides a large enough demand** to incentivise  
industry to invest in wide commercialisation

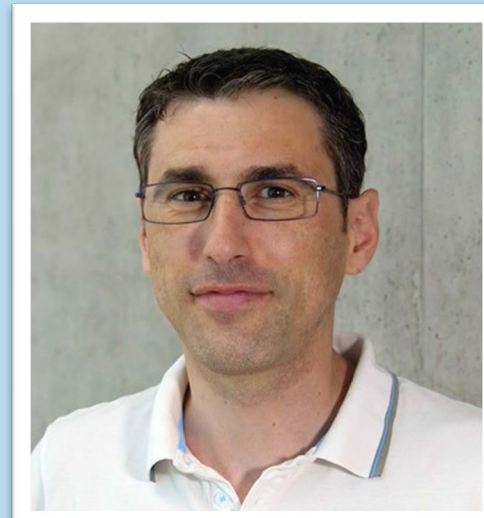
**Development in stages** and testing of innovative  
ideas under **real world conditions**

Suppliers retain **IPR ownership**,  
procurers gains access under limited conditions

**Visibility on EU-Level**

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**Roberto Fedrizzi**  
Research Group  
Leader

**eurac**  
research

# procuRE aims for more than one-off solutions; the core challenge is a new Approach to advanced retrofits followed by application in the real-world

## Common challenge and core boundaries

As of 09.07.2021

### RENOVATION APPROACH DEMONSTRATED BY...

Developing methods and tools for public buildings retrofit to 100% RES supply

Modelling the integration of components at sustainable investment costs

Designing renovation packages with Building Information Modelling (BIM) including monitoring and control

Including an assessment framework to deliver procurers and investors with transparent choices of their options

Deploying an efficient co-design procedure with procurers not requiring complete or deeply specialised expertise

Offering financing or contracting models increasing the procurers' ability to start a renovation wave



### ... RENOVATION PACKAGES FOR OFFICES AND SCHOOLS

100% Renewable Supply has to be on-site and close property for all demand (heat, cold, electricity)

Ensure easy configuration to adopt to different regulation and needs in energy usage

100% RES follows demand to largest extent possible (24/7 and over the year). Tools to operate and maintain building at a distance

Occupant behaviour and comfort level is fully considered

Provide innovative and cost-efficient training to building operators to ensure optimal operation

Remove entry barriers

## procuRE is technology neutral

### — Solution design

**Buyers Group  
defines the  
problem and  
award criteria**

**Suppliers  
define the  
solution**

**...any constellation of technologies is thinkable if it is  
applicable to other buildings, sustainable, etc. ...**

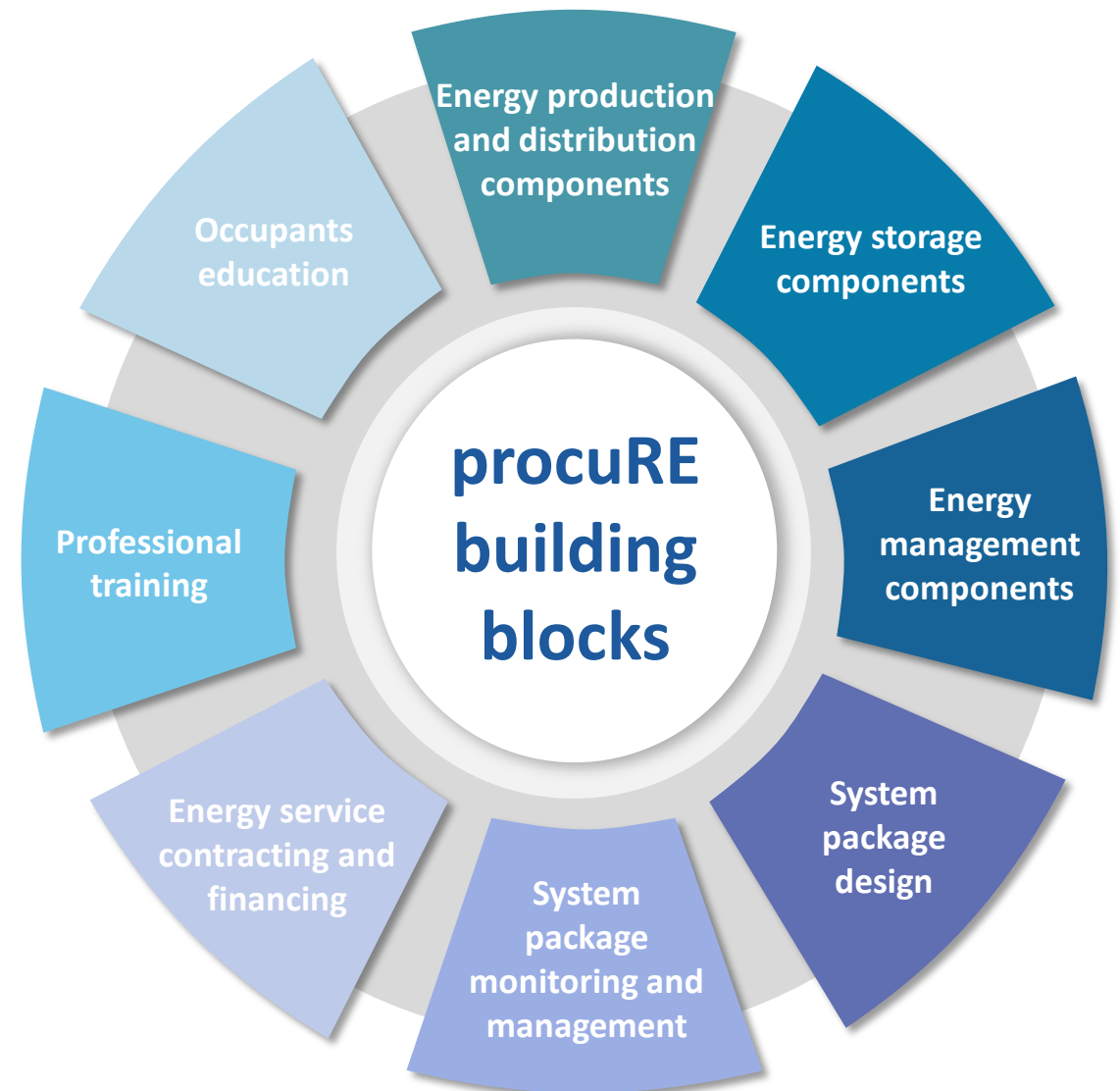
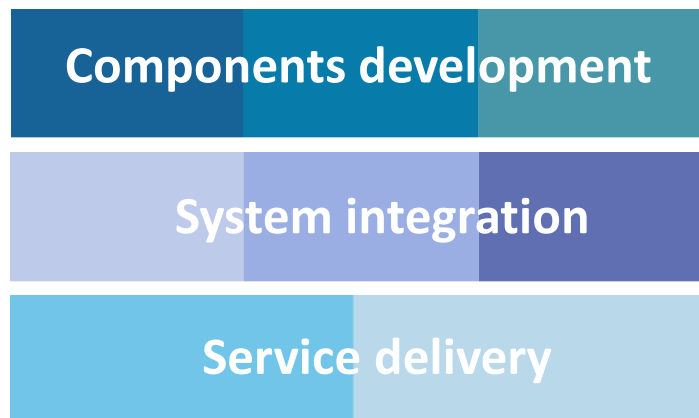
## procuRE structures the common challenge for R&D services along eight building blocks

### Building blocks

Our analysis identified eight blocks showing **major shortcomings** which require **progress beyond the state-of-the-art**.

Suppliers will be requested to describe their solutions focusing on these Blocks.

An Expert Group will rate the proposals based on the Blocks' requirements.



## Each block is described in more detail in the pitch deck

### Building block: System package design

Example



#### RATIONALE

- ▶ Synergistic utilisation of individually effective components
- ▶ Feedback loops in the process during the various design phases
- ▶ System specifications need to be in focus from the planning phase
- ▶ Becoming more advanced every year, BIM/BMS bring the

You can find detail for building blocks in pitch deck



#### SHORTCOMINGS

- ▶ Disjointed nature of single-building energy projects results in building
- ▶ In virtually all cases, both verification and continuous commissioning phases, are missing
- ▶ Long run performance of HVAC systems in public buildings is significantly poorer than rated
- ▶ Building owners wish to address new challenges themselves

Details of overall challenge and definition of blocks are under development

Please give your input via OMC questionnaire!



#### PLANNED PROGRESS ALONG WITH PROCURE

- ▶ Promote the elaboration and validation of comprehensive processes
- ▶ Design, deliver and maintain coherent and effective overall HVAC packages
- ▶ Simplify the interactions among stakeholders and deliver innovative Near-Zero energy planning design procedures
- ▶ Elaborate clear specifications to be understood and evaluated by “non-technical” procurer personnel

Link to pitch deck: [bit.ly/procure-pitch](https://bit.ly/procure-pitch)

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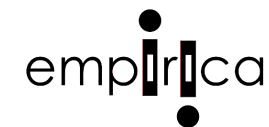


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**Georg Vogt**  
Head Innovation Energy



## Pre-Commercial-Procurements (PCP) create a new, competitive market for Research and Development (R&D) services and development

### Pre-Commercial Procurement vs. Traditional Public Procurement

#### PRE-COMMERCIAL PROCUREMENT

**Joint Procurement** (Buyers Group)

**High degree** of innovation / R&D effort required

**Prototype development:** medium-/long-term

**Competitive development:** several suppliers

**New IPR** – Risk/Benefit-sharing

**Special legal framework** in H2020/WTO

**Development in multiple phases**

#### TRADITIONAL PROCUREMENT

**Individual Procurement** (single department)

**Low degree** of solutions' innovation

**Mature product/service:** immediate/short-term

**Single contract:** one supplier

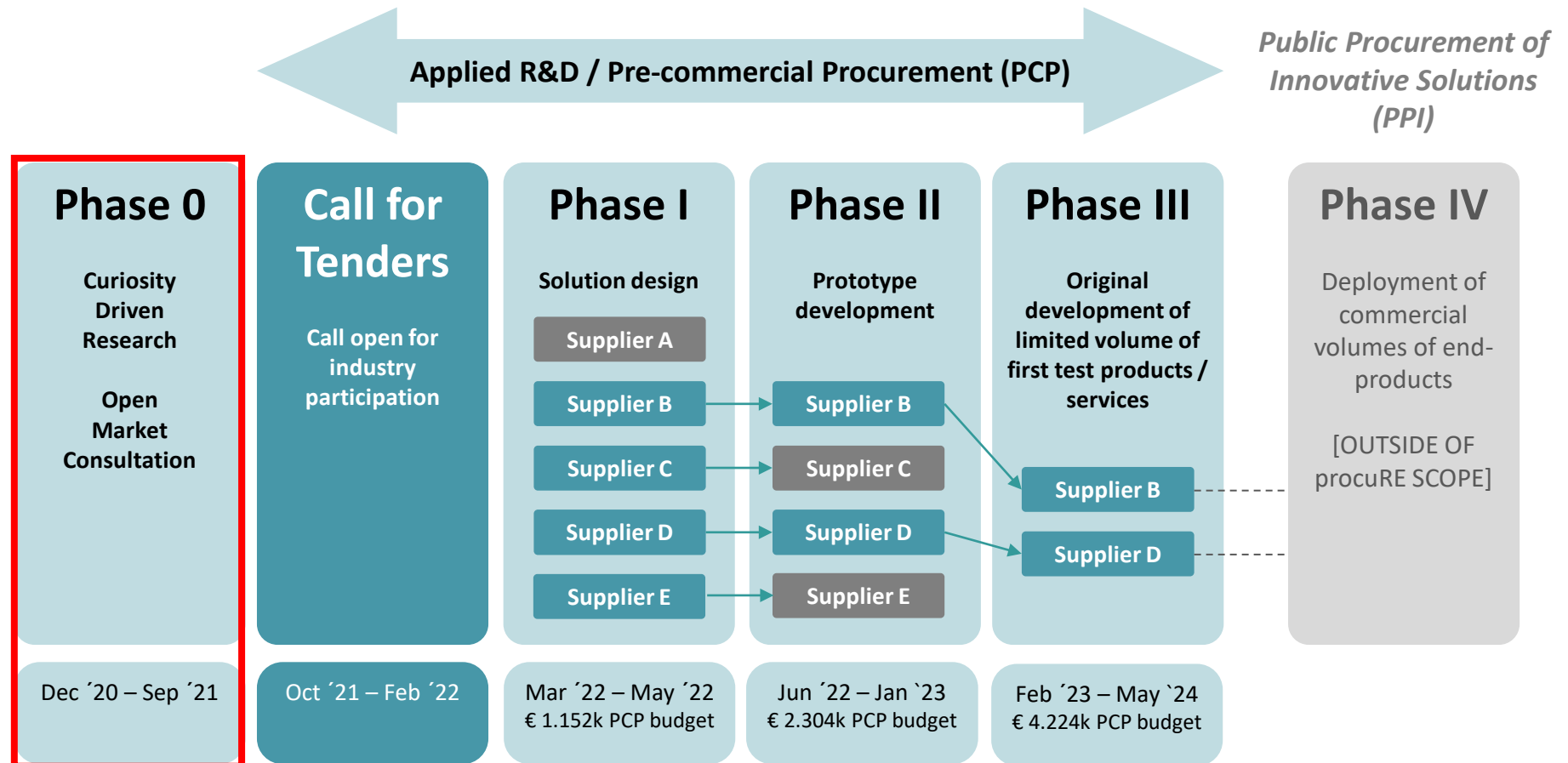
Often based on existing **IPR**

**National public procurement** rules apply

**Development in one phase**

# PCPs follow a multi-staged process to select the most suitable and promising innovation; R&D services are funded at all stages

## Procurement of Innovation and Tender Process



- ▶ Lead Procurer: KSSENA, overall co-ordination of the procurers, acting on their behalf vis-à-vis the suppliers
- ▶ Procurers (also Buyers Group: Barcelona, Eilat, Istanbul, Nuremburg, Energia)
- ▶ Suppliers (later Contractors) = organisations or consortia competing in the PCP process

# Concept design, solution architecture and technical specifications

procuRE PCP Process | Phase I

Preliminary as of 06.07.21

Ongoing Discussion whether it might be changed from 8 to 6 suppliers for Phase I

## Phase I

### Solution design

Supplier A

Supplier B

Supplier C

Supplier D

Supplier E

At least **8 suppliers** expected to be funded (TBD)

Duration: **3 months (Mar '22 – May '22)**

Maximum total budget of the phase: **€1,152,000**

Selected suppliers will **develop a detailed specification of the proposed solution** which addresses technical, economic and organisational requirements of the suppliers

**Expected output:** improved Renovation Approach and preliminary Renovation Packages for all six sites; detailed plan for the prototyping and testing activities in Phases II & III

# Development of Prototype

procuRE PCP Process | Phase II

Preliminary as of 06.06.21

## Phase II

Prototype  
development

Supplier B

Supplier C

Supplier D

Supplier E

At least **4 suppliers** expected to be funded (TBD)

Duration: **8 months (Jun '22 – Jan '23)**

Maximum total budget of the phase: **€2,304,000**

Selected suppliers will **develop the most promising ideas into well-defined prototypes**

**Expected output:** improved Renovation Approach and detailed Renovation Packages for all six sites; if applicable prototype specification & demonstration; plan for deploying Renovation Packages for field-testing

# Development and testing of pilot products or services

procuRE PCP Process | Phase III

Preliminary as of 06.06.21

## Phase III

Original  
development of  
limited volume of  
first test pro-ducts /  
services

Supplier B

Supplier D

**2 or 3 suppliers** are expected to be funded (TBD)

Duration: **16 months (Feb '23 – May '24)**

Maximum total budget of the phase: **€4,224,000**

Selected suppliers will **implement and assess the prototypes in real world conditions – one supplier per testing site**

**Expected output:** solution implementation in 6 testing sites; overall assessment and success verification; updated cost/benefits forecast, including a preliminary business plan

# The Request for Tender is expected for October 2021

## procuRE Tender Timing



The **Call for Tender** is expected to begin in October 2021 and will last till December 2021  
Evaluation January-February 2022.

Please check [procure-pcp.eu/tender](https://procure-pcp.eu/tender)  
(or register for newsletter or follow PIN etc.)

## **A PCP is a contract, not a grant**

### — Funding principles

**Financial offers are requested for each phase (up to the ceiling)**

**The offer has to include all costs (including tax if applicable)**

**The payment is made based on offered price ...**

**... after receipt of invoice and approval of work**



## All core requirements are derived from the EU directive on competition

### — PCP Tendering | Core requirements

Preliminary as of 06.06.21

#### ELIGIBILITY CRITERIA

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- ▶ Tender is open to **all types of operators** (companies or other type of legal entities) regardless of their size or governance structure
- ▶ Both **single entity** or **joint tender** offers (consortia) are possible
- ▶ The call will be open to all participants, as long as **a minimum of 50% of the project R&D activities/budget takes place in the EU or Associated countries**
- ▶ Participation in the open market consultation is not a condition for submitting a tender

#### GENERAL REQUIREMENTS

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**Electronic Submission via e-mail**

**3-5 months for submission starting Oct 21  
(To be confirmed)**

**Official language is English**

**IPR sharing, if suppliers do not exploit results**

# Bidders will be provided with templates and extensive guidance

## PCP Tendering | Summary of a tenderer bid

Preliminary as of 06.07.21

### SECTIONS TO BE COMPLETED

- ▶ **ADMINISTRATIVE** – 1 merged PDF file
- ▶ **FINANCIAL** – 1 PDF file and 1 xlsx file
- ▶ **TECHNICAL** – 1 searchable PDF file, max. 80 pages

### ADMINISTRATIVE SECTION

- ▶ Information and evidence on:
  - the legal capacity
  - non-disqualification from exclusion criteria,
  - economic and financial standing of the bidder, technical and professional solvency
  - fulfilment of the on/off award criteria

### FINANCIAL SECTION

- ▶ The tender must include a detailed financial offer specifying:
  - binding unit price for all items needed for carrying out phase I (to be evaluated)
  - estimates for phases II and III

### TECHNICAL SECTION

#### Tender documents will include:

- ▶ Request for Tender with Award Criteria
- ▶ Technical Challenge Brief structured by Award Criteria including an Annex with building information
- ▶ Template for technical application structured by Award Criteria with guidance on expected inputs

(Weighted) Award Criteria	Request for Tender T01	Challenge Brief T02	Technical Template T03
Technical Criteria		1 Technical	1 Technical
T1 System Integration		1.1 T1 - System Integration	1.1 T1 - System Integration
T2 Degree of achievement of objectives ...		1.2 T2 - Degree of achievement of ...	1.2 T2 - Degree of achievement of ...
...		...	...

#### Suppliers will be requested to:

- ▶ Describe the overall methodology and how the solution is designed to accommodate any given building
- ▶ Calculate core indicators for selected buildings
- ▶ Describe total cost of ownership, any financing models and commercialisation plans
- ▶ Project management approach including a concept for co-design procedures with procurers from design to implementation in buildings including training

## For each of the three phases the same rules on contract, monitoring, payments and IPR apply

### — PCP Tendering | Contract award and project work

#### Contracting

framework agreement with **specific contracts in each phase**

#### Monitoring

During each phase, contract implementation is **monitored periodically** and reviewed **against the expected outcomes**

#### Completion criteria

**Satisfactory completion** of milestones and deliverables: requirement for payment

#### Intellectual property rights

Suppliers **keep ownership of the IPRs** attached to the results generated during the PCP implementation, but must exploit

The project will do as much as we can (and suppliers want) to make chosen solutions publicly known during each phase; a focus will be procurers across Europe

— Exposure for successful suppliers (depending on preference)

### Mandatory: Abstract for EC and project website



### Additional: Open Pilot Days

Public and media viewing of solutions (Phase III suppliers only) at Open Pilot Days

### Optional: Presentations and Publications

The project is being continuously presented at meetings

- ▶ **Preferred Partners Forum** - next July 13<sup>th</sup>
- ▶ **Smart City Marketplace** - (procuRE is an Action Cluster)



Publication of summaries and info, **already running and more to come** – we will offer suppliers to include content across all phases:



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**Niko Natek**  
Energy Consultant and  
Project Manager



# Solutions are to be deployed in six demonstration sites – how allocation is to take place is under development (your input in OMC questionnaire is welcome)

## procuRE demonstration sites

### VELENJE, SLOVENIA

- ▶ Primary school + linked Sports hall
- ▶ Envelope 20 years old
- ▶ Space heating: oil + electric



### BARCELONA, SPAIN

- ▶ Offices + data centre
- ▶ 2010 upgrade to envelope (1850)
- ▶ Central heat pump with several splitters
- ▶ AC for data needs upgrade, monitoring installed since 2015



### NUREMBERG, GERMANY

- ▶ Primary school + nursery
- ▶ Built 2015 to passive-house standards
- ▶ Natural gas condensing boiler (radiators)
- ▶ No RES; basic HVAC control system



### ISTANBUL, TURKEY

- ▶ Office + bakery school
- ▶ Built 2015
- ▶ Variable Refrigerant Flow system
- ▶ No RES or monitoring



### VILA NOVA DE GAIA (PORTO), PORTUGAL

- ▶ Primary school + nursery
- ▶ Built 2014 to national standards
- ▶ Natural gas boiler, heat pump for cooling
- ▶ Small solar thermal; advanced control system for building



### EILAT, ISRAEL

- ▶ Future: Office + Maker + Exhibition
- ▶ Old terminal and tower - Built 1960
- ▶ Upgrades expected before phase III <sup>1</sup>
- ▶ Central HVAC, local AC systems, chillers



<sup>1</sup> Details of changes will be provided in tender specifications (Challenge Brief)

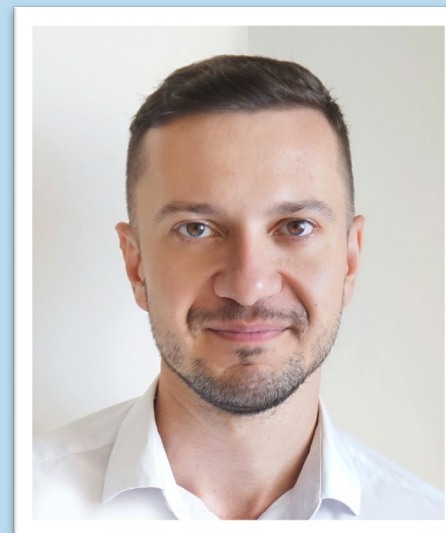


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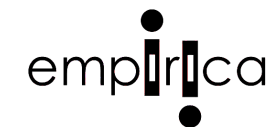
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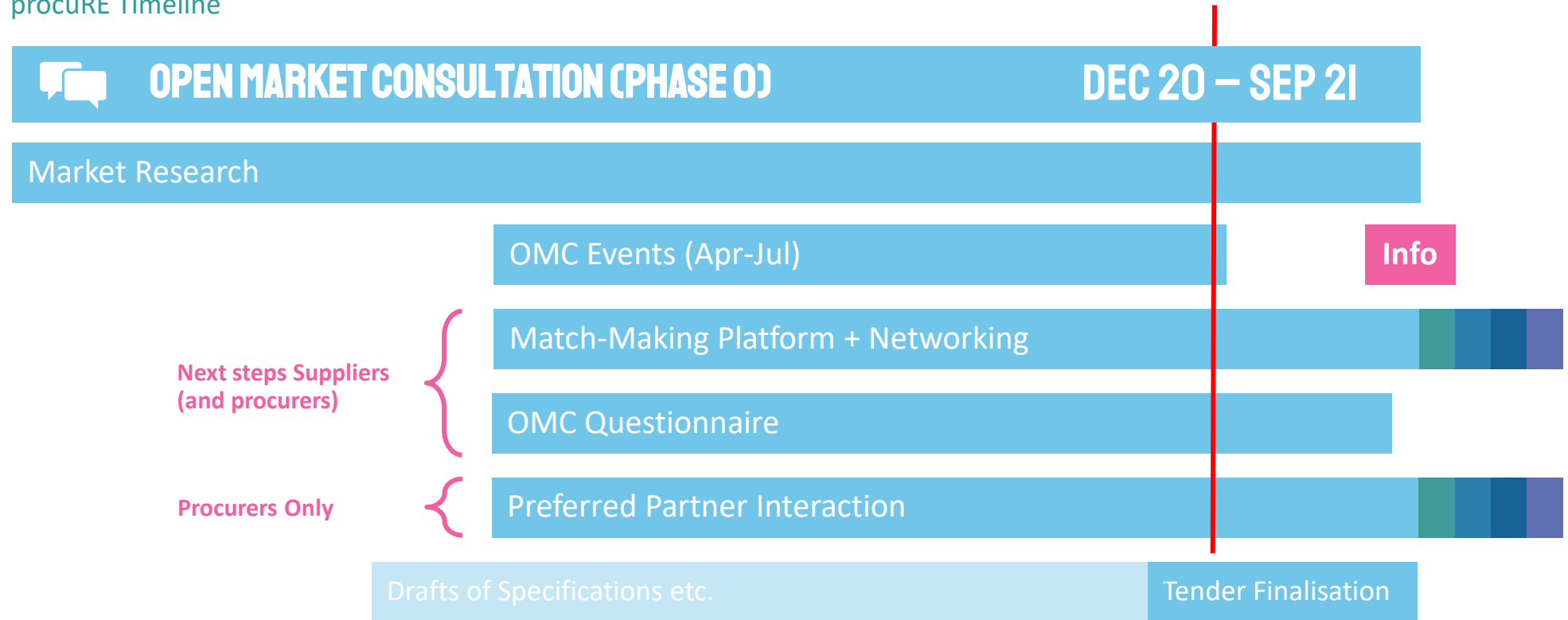


**Mehmet Bulut**  
Senior Research  
Consultant



## The Request for Tender is expected for October 2021

### procuRE Timeline



### Later:



# Open Networking: After this event and at fixed times to be announced across all sites

Next steps suppliers and procurers | Networking

SUPPLIER & PROCURER

## NETWORKING

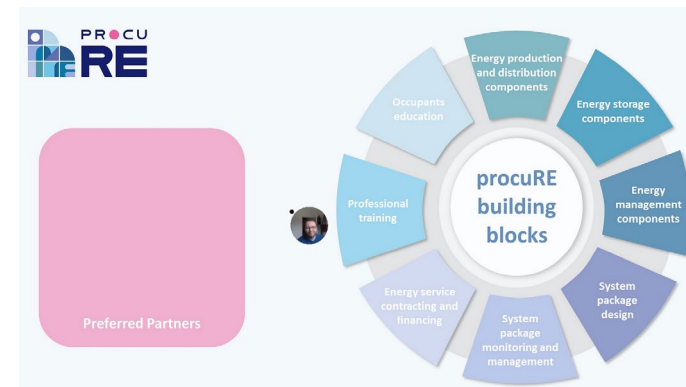
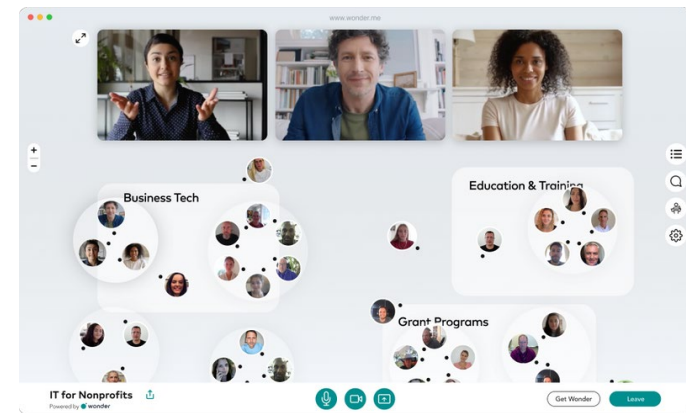
- ▶ Steps
  - Just open below link
  - No installation or registration necessary
- ▶ We will announce additional set times for
  - Suppliers to meet and built international consortia
  - To meet the project
  - Open networking with suppliers and procurers

Open networking outside of our control  
for suppliers and procurers.

## LOGIN

[bit.ly/procure-wonder](https://bit.ly/procure-wonder)

## WONDER ROOM



# Suppliers are invited to start creating a competitive consortium – Search of partners is supported with the Matchmaking Platform

Next step suppliers | Matchmaking

SUPPLIER

## MATCHMAKING

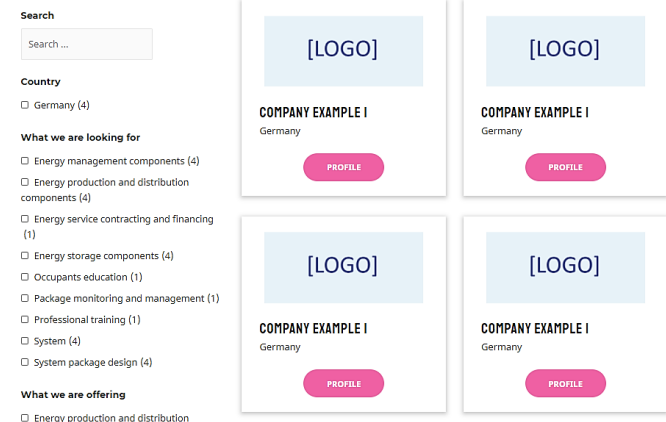
- ▶ Become visible among other suppliers looking for partners
- ▶ Steps, describe:
  - What you are looking for
  - What you are offering
  - Some basics + contact information
- ▶ Completing the form takes only **~5 minutes**

We encourage companies that cannot cover the whole procuRE solution to team up with other companies and apply together with international partners in a joint tender (consortium).

## LOCATION ON PROCURE-PCP.EU



## FORM AND LISTING IN PLATFORM



# All parties are invited to provide us input on content and conditions

Next steps suppliers and procurers | Respond to OMC Questionnaire

SUPPLIER & PROCURER

## OMC QUESTIONNAIRE

- ▶ Provide us with reflected input on content and conditions of procuRE
  - Suppliers: What is possible / best?
  - Procurers: What do you need?
- ▶ Steps
  - Please download and read pitch deck
  - Fill in form
- ▶ Completing the form takes **~5-15 minutes** (depending in level of detail)

All input – suppliers and procurers – is valuable to refine and structure the challenge brief.

## LOCATION ON PROCURE-PCP.EU



## ONLINE QUESTIONNAIRE

The screenshot shows the 'procuRE - OMC Questionnaire' form. It has a dark blue header with the PROCURE logo. The main content area is white with blue text. It includes an introduction, a list of questions, and a 'Next' button at the bottom. The questions are numbered 1 through 5. Question 1 asks for respondent information (supplier or procurer). Question 2 asks for organization size. Question 3 asks for areas of expertise. Question 4 asks for email address. Question 5 asks for website link. The form is currently on page 1 of 4.

# Any organisation on the demand side is invited to become a preferred partner

## Next step procurers | Preferred Partner

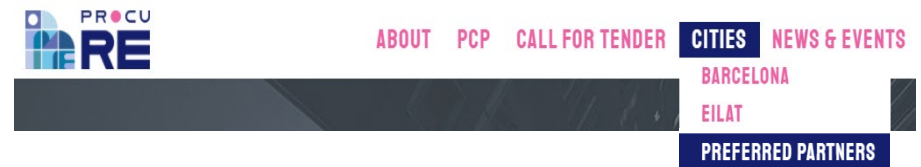
PROCURER

### HOW TO BECOME A PREFERRED PARTNER?

- ▶ If you are interested in procuRE approach, become a preferred partner to:
  - Collaborate with the Buyers Group
  - Engage closely with the PCP process
  - Get access to all info about PCP results
  - Receive reimbursement of travel cost to Open Pilot Days (subject to availability)
  - Suppliers who want, can speak at events
- ▶ Steps
  - **Register for the event on July 13 to learn more at [bit.ly/procure-preferred-partner](https://bit.ly/procure-preferred-partner)**
  - Simply state your interest via mail to [procure@empirica.com](mailto:procure@empirica.com)
  - Please include:
    - Brief motivation (climate goals and this topic)
    - Logo

Make public that you are interested in the solution demonstrates that there is demand and increases the likelihood that strong consortia apply.

### PREFERRED PARTNERS ON OUR WEBSITE



#### WHAT DOES IT MEAN?

To contribute wherever possible to shape and validate the PCP goal by providing background information regarding the specific needs of (public) procurers.



To collaborate with the consortium's Buyers Group and to meaningfully support the project's objectives.



To be kept informed about all aspects of the PCP and afforded access to all information concerning the PCP results.



To engage closely with the PCP Process, with a view to ultimately expanding the market uptake of the developed solutions through your own Public Procurement of Innovative solutions (PPI).



To join us, **CONTACT US.**

#### PREFERRED PARTNERS





**Pre-commercial Procurement of  
Breakthrough Solutions for  
100% Renewable Energy Supply in Buildings**

**All information about the call for tenders will be released at  
the website**

**[procure-pcp.eu](https://procure-pcp.eu)**

**All questions should be addressed to  
[suppliers@procure-pcp.eu](mailto:suppliers@procure-pcp.eu)**

