



# THERESA

# Open Market

# Consultation

On-site treatment of hospital wastewater



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*Welcome and introduction*

*Overview of the OMC structure and events*

*What THERESA PCP is aiming for?*

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# House rules

**This event will be recorded. Participants who do not wish to appear are kindly requested to switch off their camera and use the chat function.**



**Please, write your questions in the chat. We will answer as many as possible during the session, and a Q&A document will be published afterwards.**

**The recording and presentation will be made available on the project's website.**

**The list of participants in this webinar will not be disseminated.**





# Welcome and introduction

Welcome and thank you for joining this Open Market Consultation event for the THERESA Pre-Commercial Procurement.

We appreciate your interest and participation in this **early dialogue with the market!**



# The Health sector and its footprint



**4,4%**



**5th**

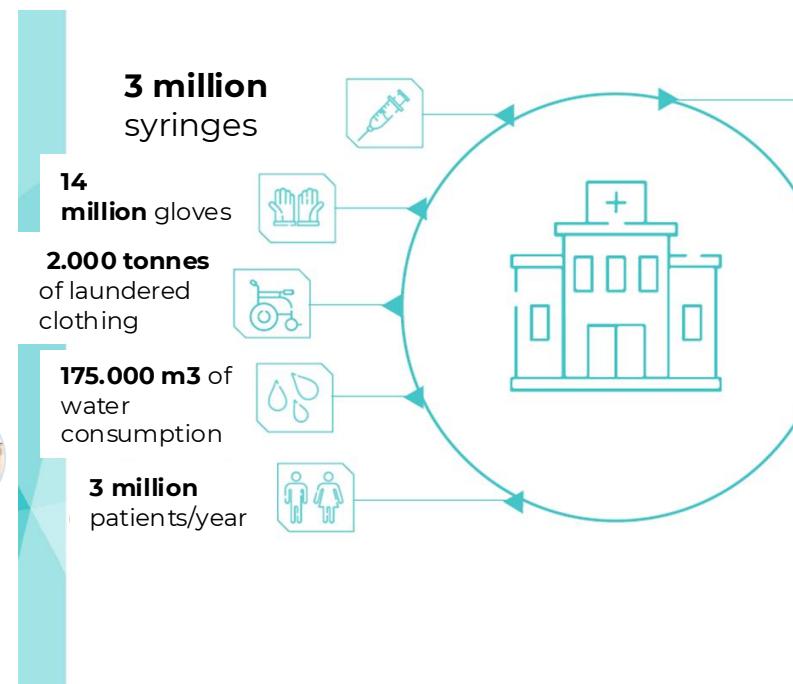


If it were a country, it  
would be the fifth  
largest GHG producer.

**514**



Emissions equivalent to  
514 POWER STATIONS



**50 million Kwh**

Avg. Consumption of thermal energy +  
electricity + gas

**2000 tonnes of waste  
generated**

**1.500 tonnes**

**Non-hazardous  
waste** (urban  
waste, paper  
and cardboard,  
plastics, toners,  
cooking oils,  
rubble, etc.)

**500 tonnes**

**Hazardous  
waste:** (Type II  
sanitary  
products,  
cytostatics, lab  
liquids,  
batteries, X-  
rays, packaging  
of hazardous  
products...)

# Alignment of the HUN's areas of action with the SDGs of the UN's 2030 Agenda



1. Organisation and Strategy aligned with the Circular Economy
2. Sustainable patient care
3. Eco-construction and installations
4. Energy and water consumption
5. Mobility and environmental impact
6. Responsible purchasing
7. Waste management
8. Food and restoration
9. Professionals



# WHAT THERESA PCP is aiming for?

*What is THERESA?*

*The challenge*

*The goal*

*The Public Buyers Group*

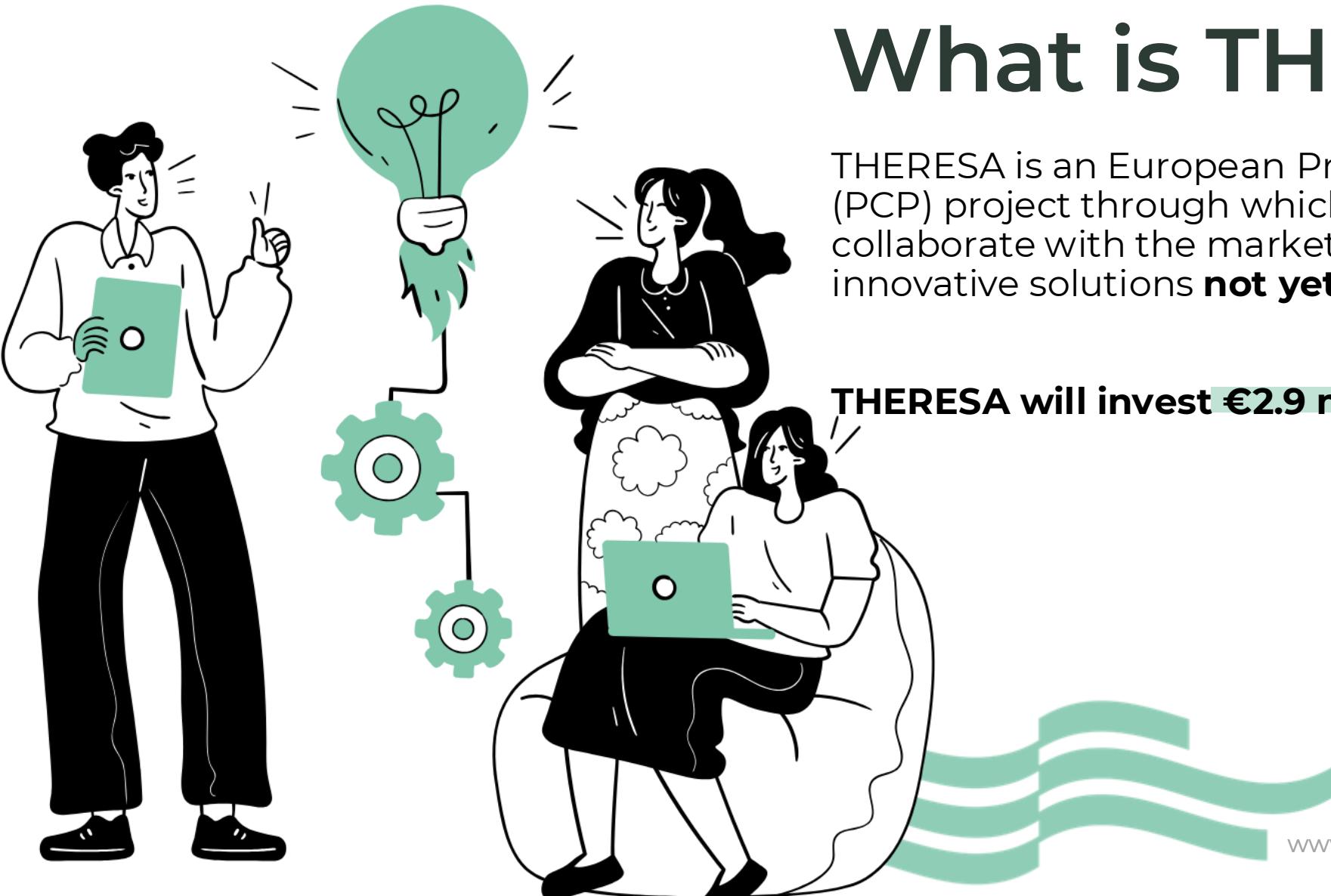
*THERESA PCP partners*



# What is THERESA?

THERESA is an European Pre-Commercial Procurement (PCP) project through which public organisations collaborate with the market to develop and test innovative solutions **not yet available commercially**.

**THERESA will invest €2.9 million through this process.**



# TERESA's precursor: Procure4Health (P4H)



Procure4Health is an EU project that aims to overcome the barriers to EU-wide adoption of innovation procurement by creating an open community of health&care procurement stakeholders.

Running from June 22 to May 25, one of the relevant activities carried out by partners and collaborators was the identification of common needs.

One of the **identified needs** was the **current insufficient capacity of onsite treatment** of Hospitals' wastewater.



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# TERESA's precursor: Procure4Health (P4H)

The Hospitals participating in P4H identified the need to develop an **on-site system** capable of effectively removing toxic substances, infectious compounds, pharmaceutical residues, and pathogens from hospital wastewater.

P4H engaged with the market to explore the feasibility of co-designing a solution to this unmet need during April 24 with promising results.

TERESA is the continuation of this process.



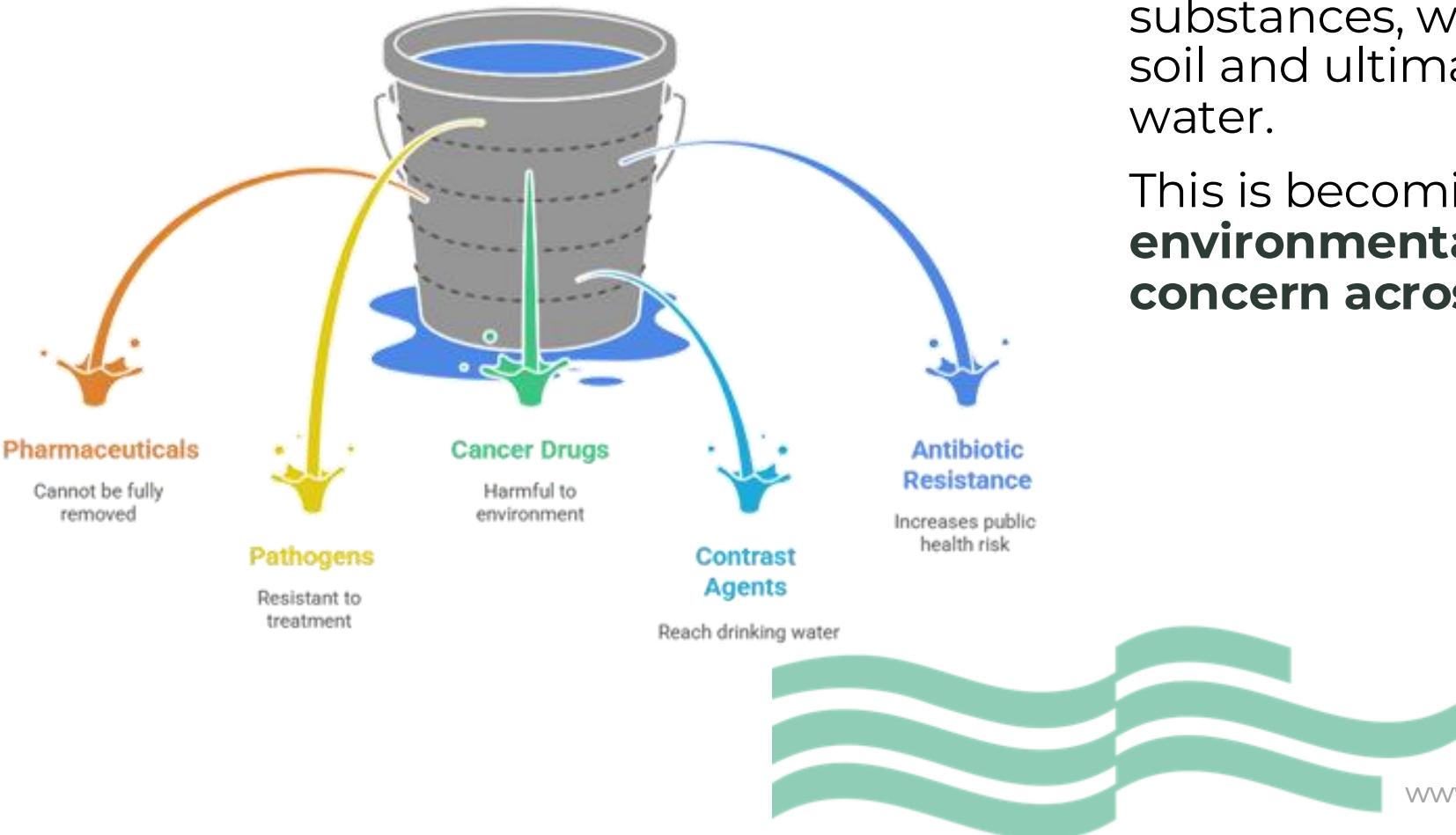
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# The challenge

Hospitals release:



Conventional treatment plants cannot remove many of these substances, which then reach rivers, soil and ultimately food and drinking water.

This is becoming an **increasing environmental and public-health concern across Europe.**



# Adressed Contaminants:

## Cytostatics

- e.g., Fluoroacil, Methotrexate, Ifosfamide, Cisplatin

## X-Ray contrasts agents (Diagnosis)

- Iodinated, Watersoluble, nephrotropic, low osmolar X-ray contrast media
- Paramagnetic contrast media

## Antibiotics

- **Third generation cephalosporins, Carbapenems, Penicillins, Macrolides, Fluoroquinolones (e.g.)**

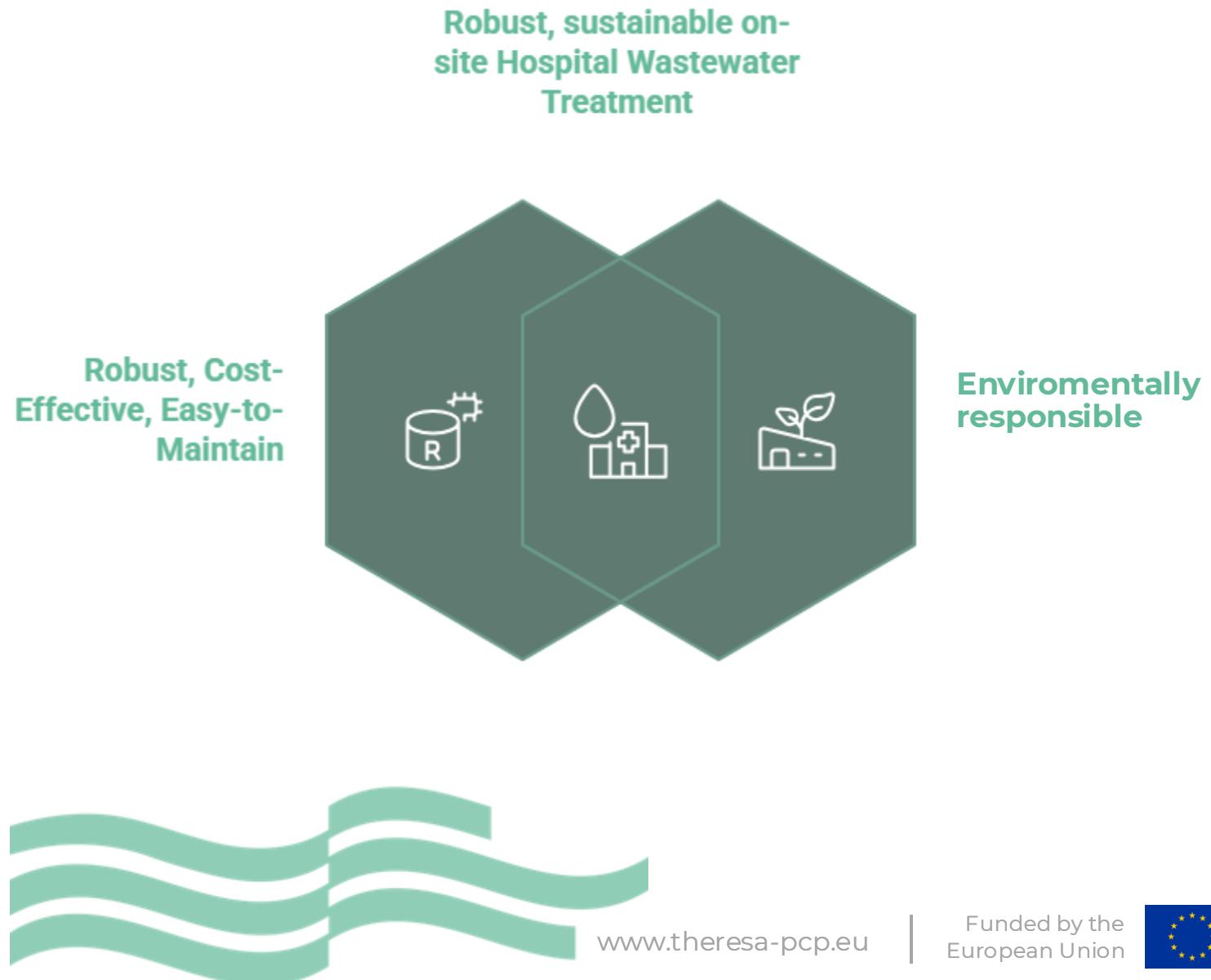
## Antibiotic Resistant Bacteria and Genes



# The goal

THERESA is seeking pre-treatment solutions that are:

- **Modular.**
- **Interoperable.**
- **Adaptable** to a variety of hospital settings.
- Should **target** at least one of the **priority contaminant groups**.
- Must demonstrate **technical feasibility, cost-effectiveness and readiness for integration into real-world infrastructures**



# The Public Buyers Group

## BUYERS GROUP



CONSORCI  
HOSPITALARI  
DE VIC



Maastricht UMC+  
Maastricht University



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# Theresa PCP partners

COORDINATOR



BUYERS GROUP



SUPPORTING PARTNERS



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# INTRODUCING PCP

*What is Public Procurement and why is it regulated?*

*Where is it regulated?*

*(TFEU) Principles*

*EU Legal Framework - Public Procurement Directives*

*Innovation Procurement and Technology Readiness Levels (TRL)*

*PCP and its legal framework*



# What is Public Procurement and why is it regulated?



*"Public procurement is the process by which public authorities (such as government departments or local authorities) purchase works, goods or services from companies which they have selected for this purpose".*

**European Union**

*"Public procurement is regulated...to ensure that public funds are spent honestly and efficiently, on the basis of a serious assessment and without any kind of favouritism or quid pro quo whether financial or political."*

*Public procurement is regulated at EU level where:*

*"The main purpose of Community harmonisation is to ensure a free market."*

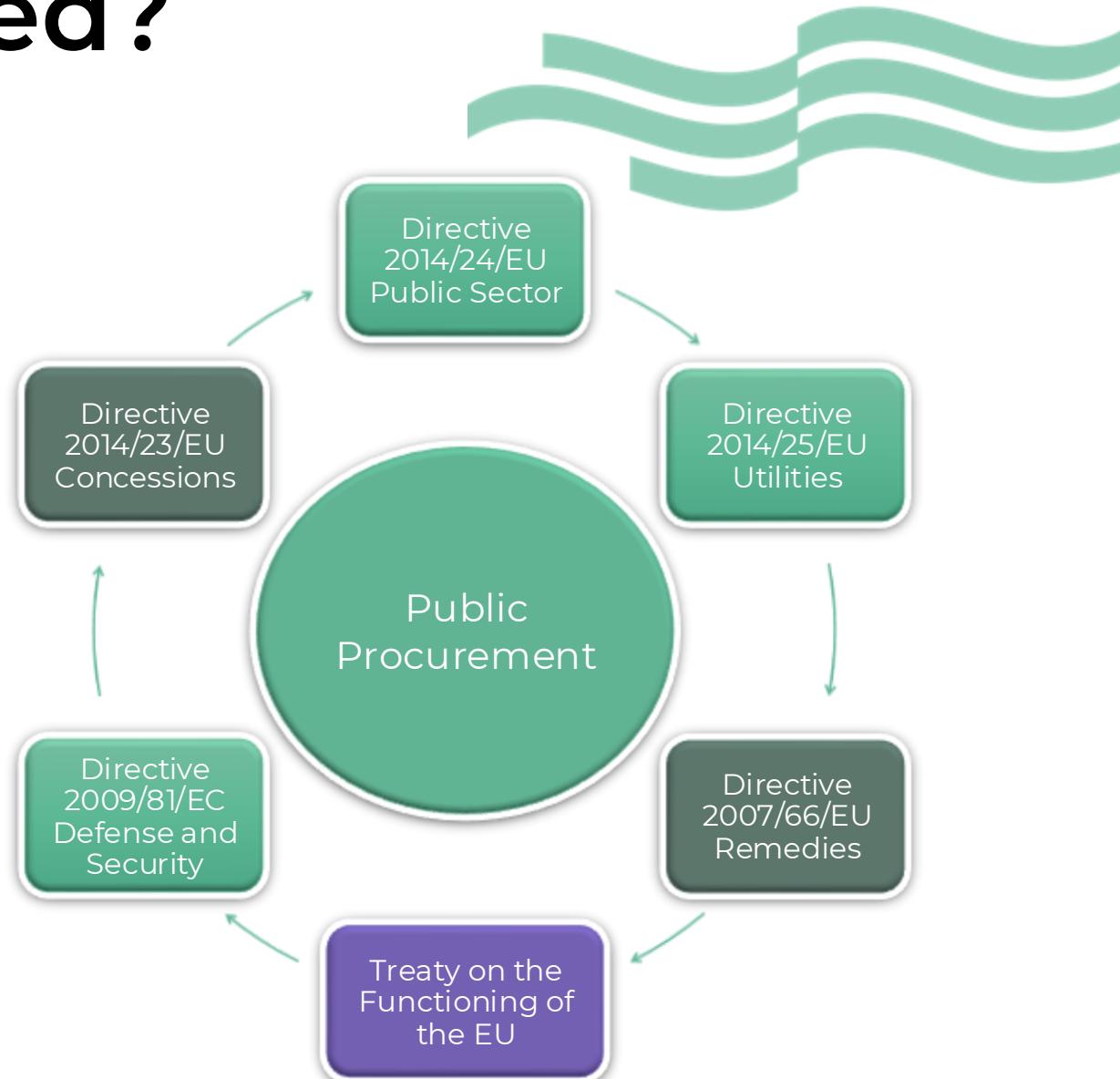
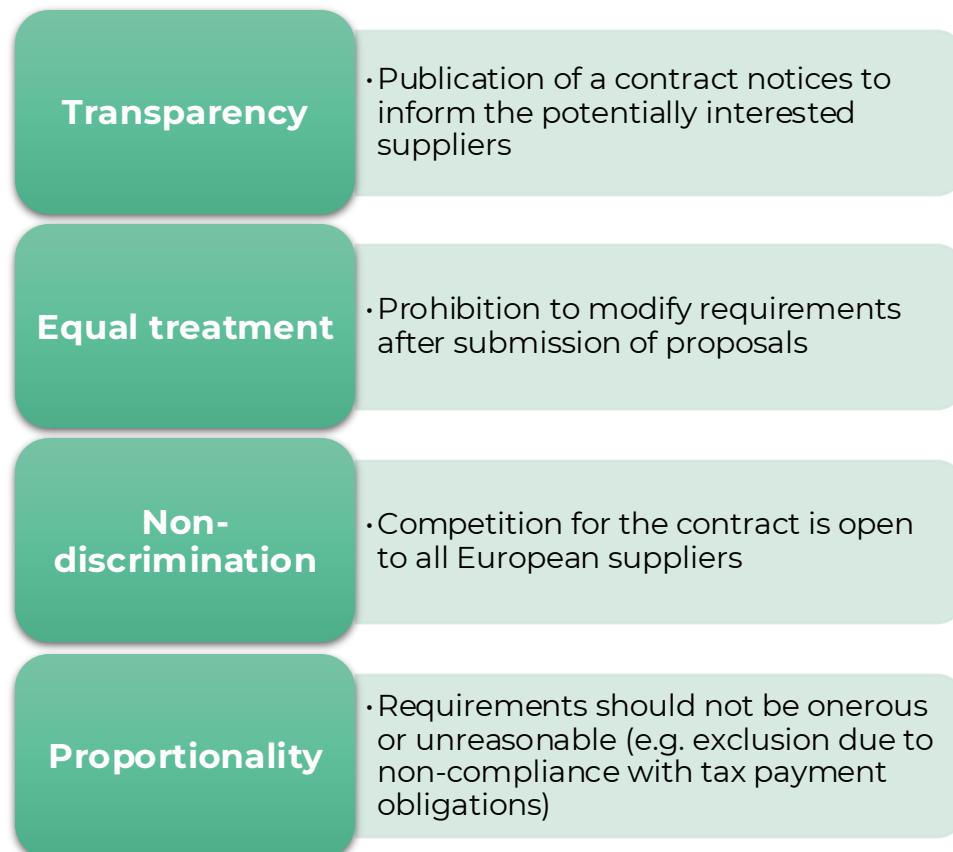
***Opinion of Advocate General Jacobs***

***Case C-19/00, SIAC Construction Ltd v County Council of the County of Mayo***

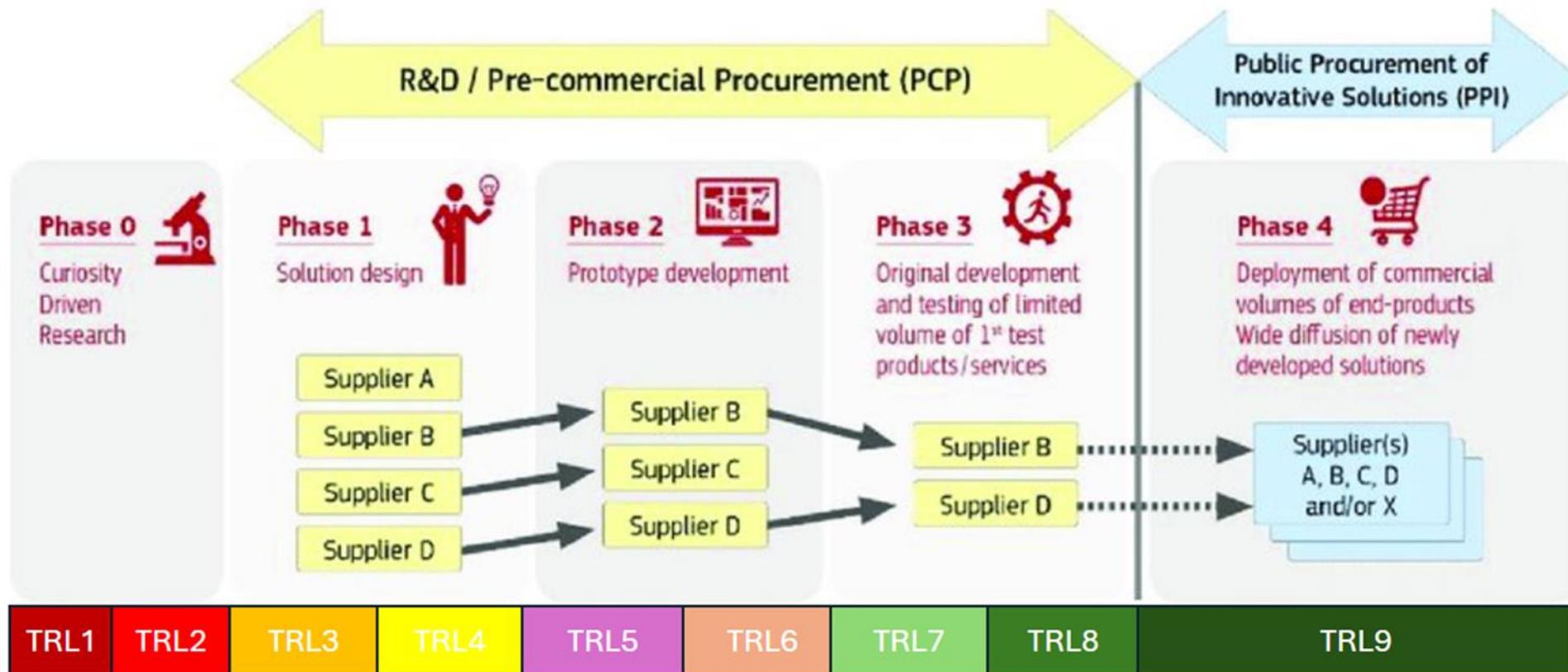


# Where is it regulated?

## TFEU principles EU Legal Framework

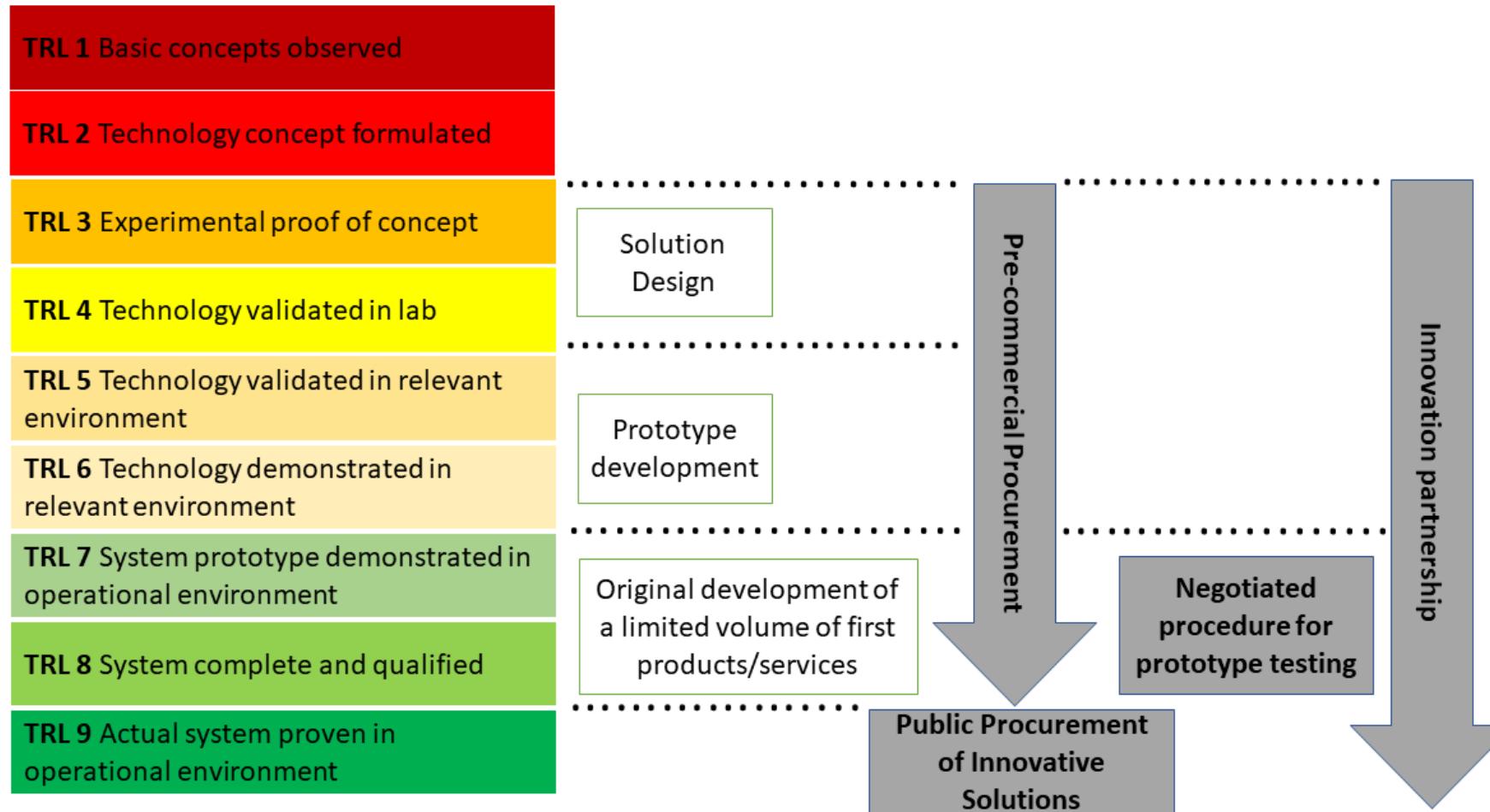


# Innovation Procurement and TRL (1)



Innovation Procurement happens when **public buyers** acquire the **development or deployment of pioneering innovative solutions** to **address specific mid-to-long-term public sector needs**.

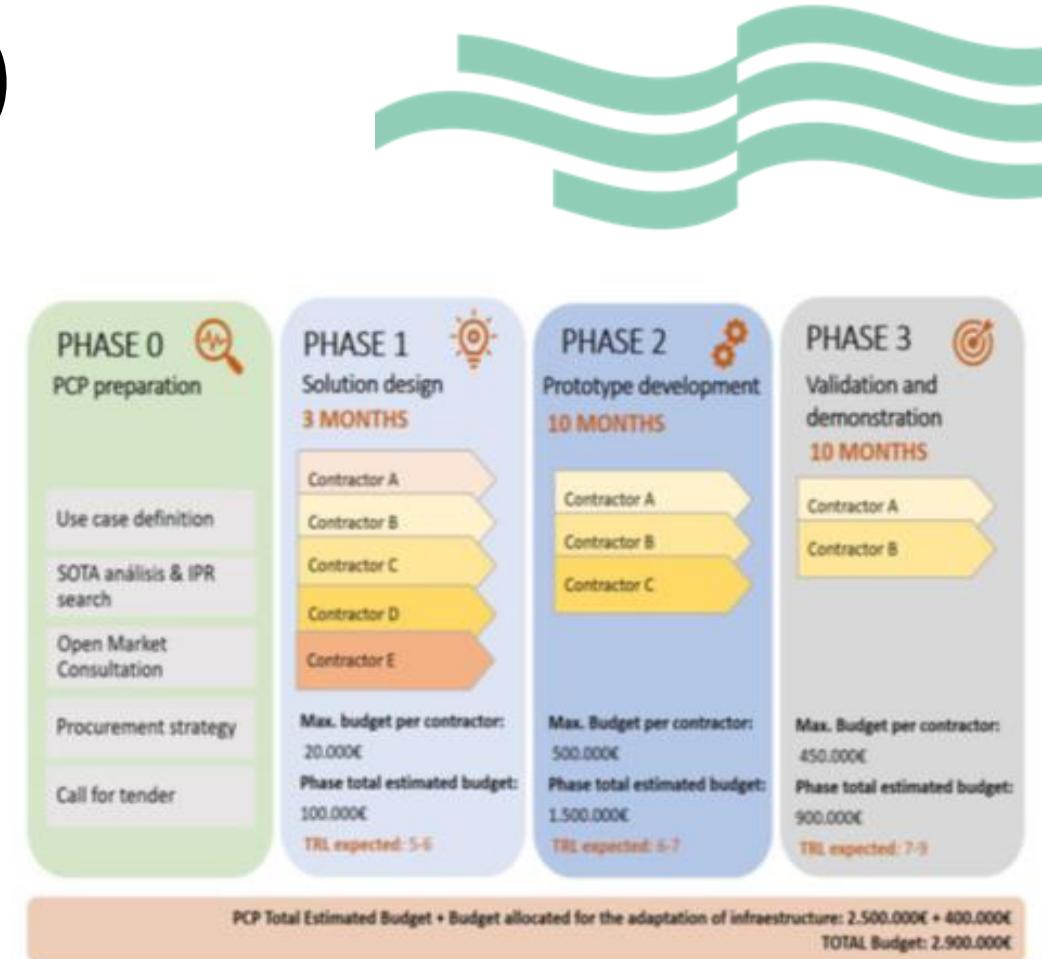
# Innovation Procurement and TRL (2)



# PCP and its legal framework (1)

PCP is a public **procurement of Research and Development** (R&D) services characterized by:

- **competitive development** in phases
- **risk-benefit sharing** under market conditions → Public procurer does not pay the full cost of the R&D performed under the contract
- a clear **separation between the procurement of the R&D from the deployment of commercial volumes** of end-products



# PCP and its legal framework (1)

- PCP falls **outside the scope of the European Public Procurement Directives**
  - Article 14 D. 2014/24/EU, Article 32 D. 2014/25/EU and Article 25 D. 2014/23/EU
  - “this Directive shall only apply to public service contracts for research and development services [...] provided that both of the following conditions are fulfilled: (i) the benefits accrue exclusively to the contracting authority for its use in the conduct of its own affairs, and (ii) the service provided is wholly remunerated by the contracting authority”.
- The **general principles of the TFEU are applicable**.
- Communication from the Commission, **“Pre-commercial procurement: driving innovation to ensure sustainable high quality public services in Europe”**, COM(2007) 799 final, 14.12.2007
- Commission Staff Working Document, Example of a possible approach for procuring R&D services SEC(2007) 1668
- 2022 **Framework for state aid for R&D&I**



# OVERVIEW OF THE OMC STRUCTURE AND EVENTS

*Why an OMC?*

*Who can participate?*

*Engaging mechanisms*

*What is it for?*



**JOIN  
THERESA**



# Why an OMC?

- To **open a dialogue** about scope, budget, functionalities, requirements, business model, DPI... of the future PCP.
- To **inform the market** about THERESA PCP opportunities and process
- To **encourage possible suppliers to participate** in the future PCP tender.
- To facilitate **matchmaking** among suppliers



# Who can join?

Participation is **open to all organisations** with an interest in the wastewater treatment, environmental technology, digital monitoring, automation, sensing, or hospital infrastructure sectors.

This includes, but is not limited to:

- Technology providers (SMEs, large industry, start-ups).
- Research institutions and universities.
- Environmental and water-sector organisations.
- Hospitals, utilities, and wastewater authorities.
- Intermediaries supporting innovation procurement.



# What does the OMC offer?

## For suppliers

- To know needs and priorities from Theresa's procurers.
- Obtain information about future PCP.
- Making your entity known to the procurers and potential collaborators.
- To influence the preparation of the coming tender



11

## For procurers

- To cross-check and clarify their assumptions for the Call for tenders.
- Obtain new information from the market.
- To make potentially interested bidders aware.



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# Events and Engaging mechanisms

Events	Dates
<a href="#"><u>Spain</u></a>	January 08
<a href="#"><u>Estonia</u></a>	January 13
<a href="#"><u>Poland</u></a>	January 19
<a href="#"><u>Belgium</u></a>	January 23
<a href="#"><u>The Netherlands</u></a>	January 26
Wrap-up event	February 26

**Matchmaking tool**

At THERESA PCP's web

**Pitch sessions**

At the end of the events

**Bilateral meetings**

Between 6-24 February

**Questionnaire**

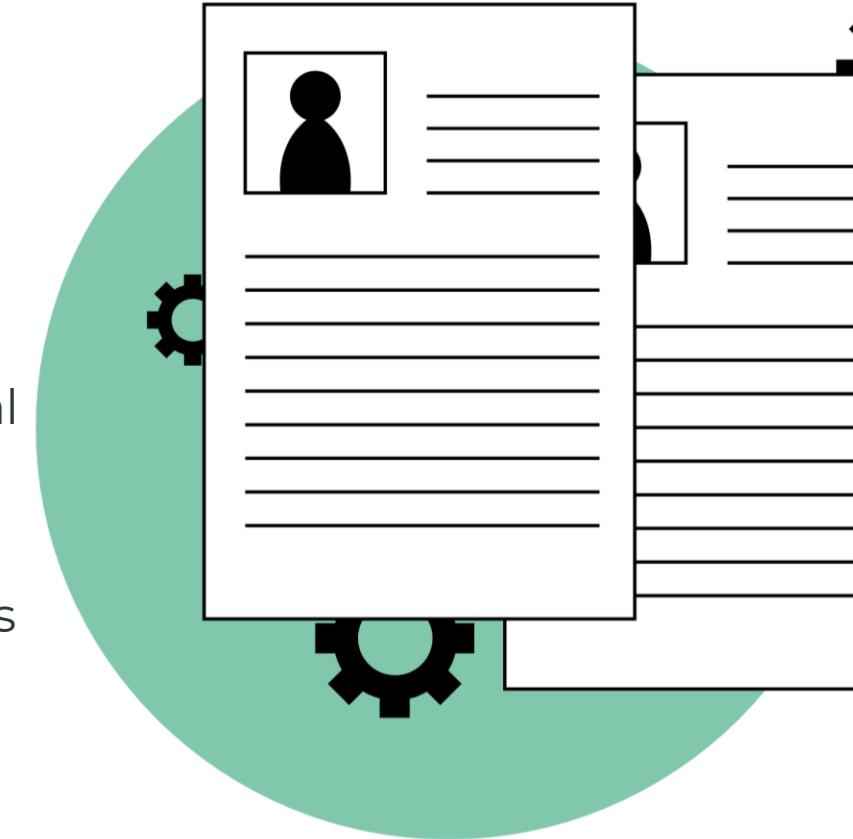
Submitted by: 24 February



# Confidentiality Clause

The contracting authority **may not disclose any technical or commercial information** that may have been provided by the participants, which they have designated and reasoned as confidential.

**The suppliers must identify the documentation** or the technical or commercial information that they consider to be confidential, and it is not permissible for them to make a generic declaration or declare that all documents or all information is confidential. Participants may designate some of the documents submitted as confidential.



# Non-binding consultation and equal treatment

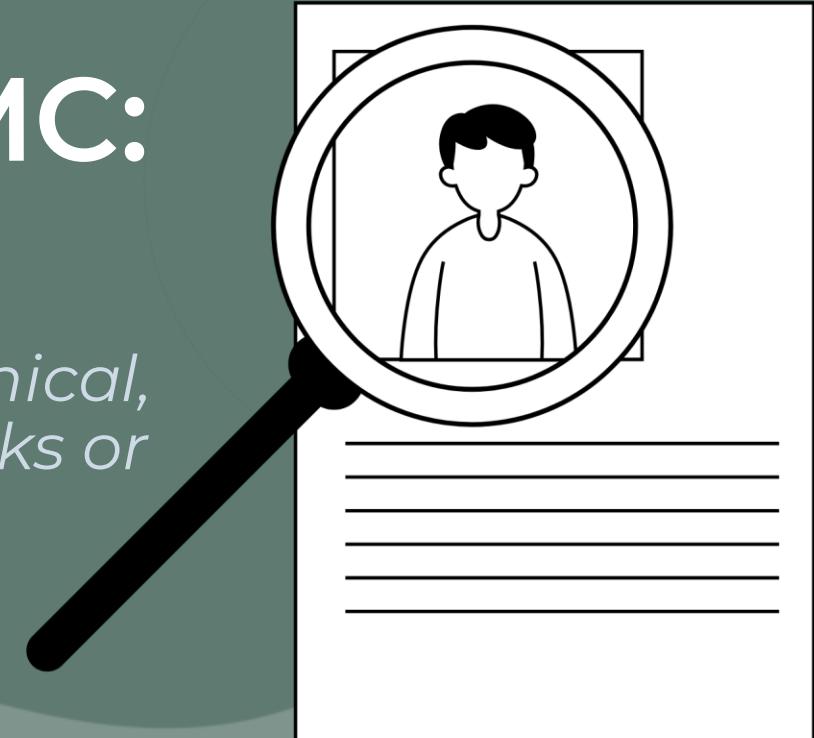
Participation in this Open Market Consultation **does not constitute a condition for participation in any subsequent procurement procedure** and shall not result in any advantage, preferential treatment, or prejudice in the context of any future tender or contract award



# EXPECTATIONS FOR SUPPLIERS DURING OMC:

*What type of feedback can you give? (Technical, innovation, timeline, budget distribution, risks or barriers...)*

*How to provide feedback?*



# What type of feedback can you give?

The Open Market Consultation is not just about us presenting requirements to you, it's about **listening to the market** before we finalize the tender.

## Your input directly shapes:

- **Technical specifications:** Are our targets realistic? Are we missing functionalities?
- **Performance criteria:** What removal rates, energy consumption levels, or operational parameters are achievable with current or emerging technologies?
- **Budget allocation:** Is the €2.9M total budget distributed appropriately across the three phases? Should we reallocate resources?
- **Timeline feasibility:** Can prototypes be developed in 10 months? Is field validation realistic in another 10 months?
- **Testing conditions:** What do you need from pilot sites? What infrastructure, utilities, or support should hospitals provide?
- **Contractual terms:** Are IPR arrangements fair and attractive? Are there administrative barriers we can reduce?



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# Why is this done openly and transparently?

- **Equal treatment:** All questions, answers, and insights are published anonymously on our website
- **Level playing field:** No supplier gets privileged information—everyone sees the same updates
- **Better procurement:** A well-informed tender attracts more competitors and better solutions
- **Market validation:** We want to ensure the PCP is ambitious yet achievable



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# How to provide feedback?

## 1. Company Pitches

### Benefits:

- Visibility among potential partners
- Presentation of capabilities

## 2. THERESA OMC *Questionnaire*

### Benefits:

- Structured way to share detailed feedback
- Informs tender design
- Required for pitching and bilateral meetings

## 3. Q&A Platform

### Benefits:

- Transparent, everyone sees the same answers
- Continuously updated throughout the OMC
- Permanent record for future reference

## 4. Matchmaking Platform

### Benefits:

- Find the right partners early
- Build balanced, competitive consortia
- Increase your chances of success



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# CONTEXT: SPANISH HOSPITALS

*Participating Hospitals context: Spain*

*What suppliers need to know about Spanish Hospitals*



# Participating Hospitals context Spain

Spain contributes **three healthcare institutions** to the THERESA Public Buyers Group, representing diverse hospital sizes, specializations, and wastewater management challenges. These facilities provide critical real-world testing environments for validating innovative pre-treatment technologies under varying operational conditions.

Participating Spanish Hospitals:

- Hospital Universitario de Navarra (HUN), Hospital Virgen del Camino, Clínica Ubarmin, Pamplona, Navarre
- Hospital Universitario Virgen Macarena (HUV), Sevilla, Andalusia
- Hospital Universitari de Vic (CHV), Vic, Catalonia

## Why Spain?

These three hospitals are proactive in seeking sustainable solutions to reduce pharmaceutical discharge, prevent AMR spread, and align with the **EU Green Deal** and **Zero Pollution Action Plan**. Spain's involvement ensures THERESA solutions are tested in Mediterranean climate conditions and adapt to Southern European regulatory frameworks.

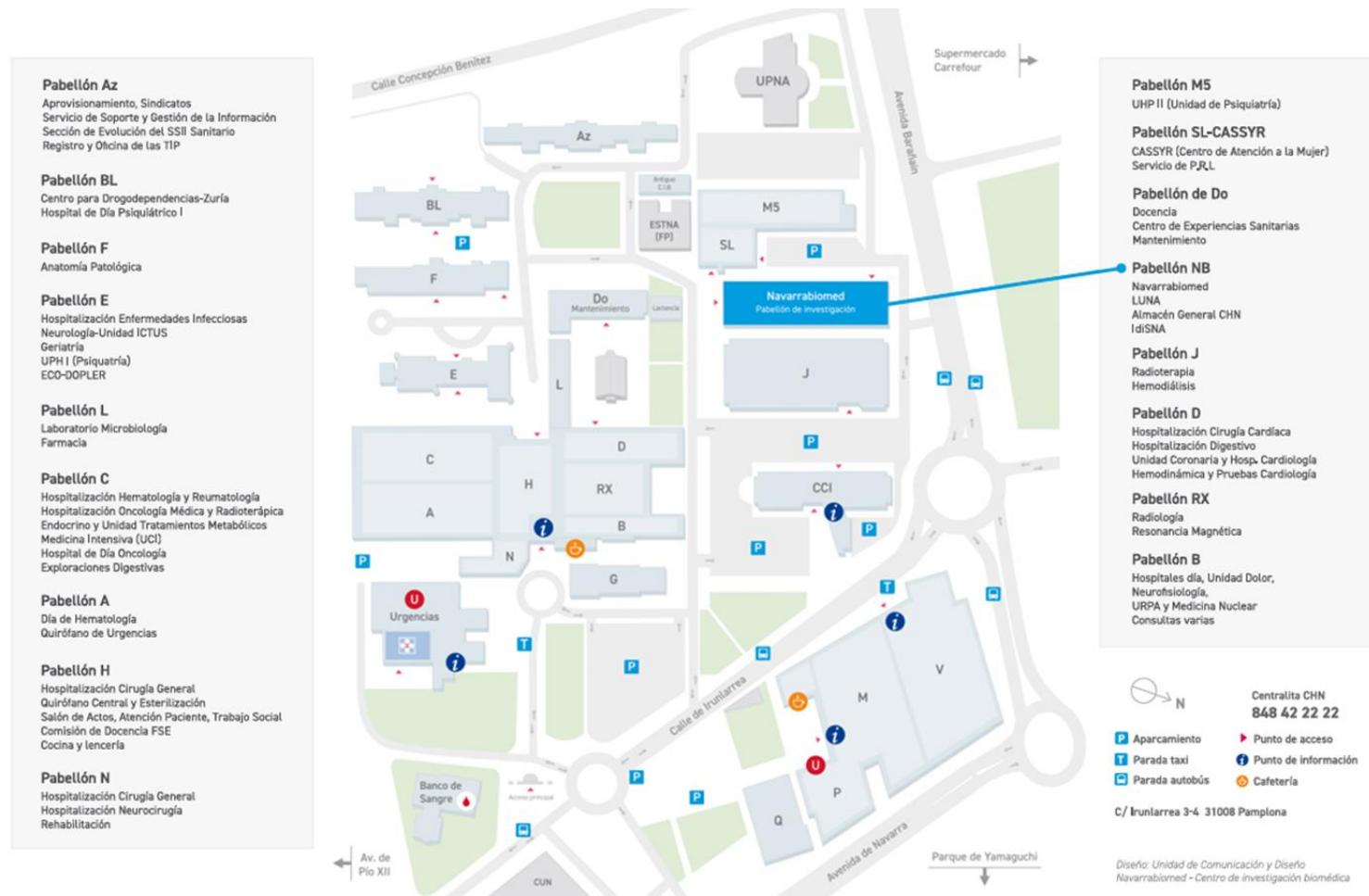


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# Hospital Universitario de Navarra



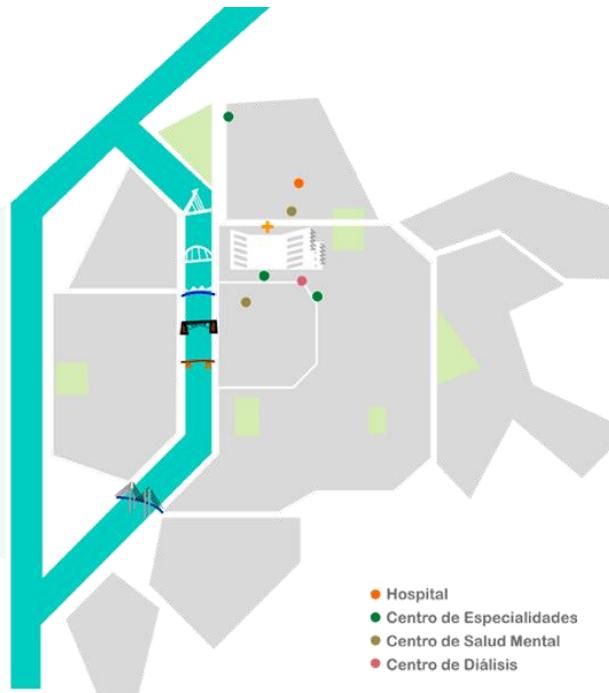
**Phase 3:** Validation in real operational environment

Number of beds	1.077
Number of admissions	~42.000
Outpatient visits	~780.000
Average length of stay	5,6 days
Type of centre	General Hospital
Catchment Area	686.180



# Hospital Virgen de la Macarena

**Phase 2:** Prototype Testing in Laboratory Conditions



Number of beds	777
Number of admissions	41.994
Outpatient visits	1.036.899
Average length of stay	11,36 days
Type of centre	General Hospital
Catchment Area	481.296



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# Hospital Universitari de Vic

## Phase 2: Prototype Testing in Laboratory Conditions



Number of beds	198
Number of admissions	12.911
Outpatient visits	182.586
Average length of stay	4,45 days
Type of centre	General Hospital
Catchment Area	171.000



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# What suppliers need to know about Spanish Hospitals

- **Wastewater Flow and Variability:**

Flow data not collected in some hospitals.

WORK IN PROGRESS

- Measurements in 2026
- Water consumption data instead (estimation)
  - Peak flows

- **Infrastructure and Monitoring:**

Description of Wastewater Pathways and Segregation

- Rainwater, Lab/Laundry/Radioactive Wastewater
- Different Discharge points depending on the building/area of the hospital: Single vs Multiple Discharge Points
- Wastewater and Rainwater segregation: Yes/No/Where do they merge

Interest of Building Management System (BMS) integration for control

Water quality monitoring

WORK IN PROGRESS

- Different current monitoring among hospitals



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# What suppliers need to know about Spanish Hospitals

- **Space limitations:**

HUN: Space available but main collector is 6 meters deep, posing installation challenges. Electrical capacity may require upgrades. Integrated into the city, noise and odour concerns.

HUVM: Multiple outdoor manholes available; urban hospital environment limits expansion.

CHV: Allocated area from former WWTP available.

**WORK IN PROGRESS**

- **Operational capacity:**

HUN: Large in-house maintenance team (mechanical, plumbing staff + additional technical personnel) capable of routine supervision.

HUVM: Likely reliance on external contractors for specialized tasks.

CHV: Technical staff; capable of basic checks; some outsourcing for complex interventions

Structural and organisational differences : e.g. Vertical vs horizontal hospitals

Currently working on defining common traits in order to develop a Pilot-Scale solution



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# Next steps

**IF YOU ARE A POTENTIAL SUPPLIER, PLEASE:**

- **SIGN UP FOR THE FOLLOWING ONLINE EVENTS: JANUARY 13/19/23/26 AND FEBRUARY 26**
- **PROVIDE FEEDBACK VIA:**
  - QUESTIONNAIRE
  - Q&A
- **SEARCH FOR POTENTIAL PARTNERS**
  - PITCH IN THE FOLLOWING EVENTS
  - USE OUR MATCHMAKING TOOL
- **SHARE THE PROJECT AND THE OMC WITH STAKEHOLDERS OF INTEREST**



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# Key dates

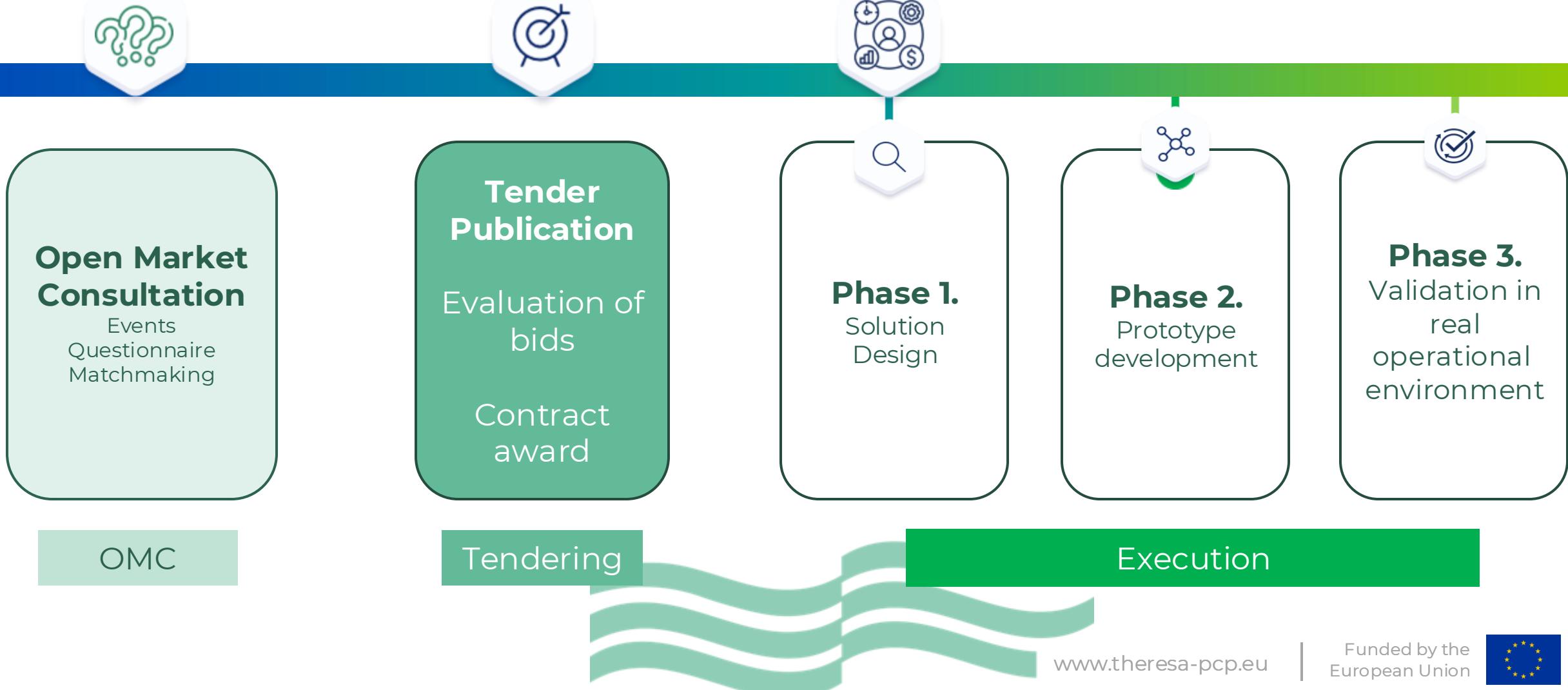
22 December 2025 –  
**28 February 2026**

May 2026

January 2027–  
March 2027

July 2027–April  
2028

August 2028–  
May 2029



# ...AND REMEMBER!

Events	Dates	Topic
<u>Spain</u>	January 08	General presentation
<u>Estonia</u>	January 13	Introducing to PCP and tendering
<u>Poland</u>	January 19	SOTA, Functional & Technical Requirements
<u>Belgium</u>	January 23	Legal, Ethical & Interoperability Aspects
<u>The Netherlands</u>	January 26	Verification, Validation and Exploitation
Wrap-up event	February 26	Wrap up of OMC findings, main messages



# Q&A

*Ask away!*



# THANK YOU!

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