

THERESA Open Market Consultation

On-site treatment of hospital wastewater



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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%

This is equivalent to 4.4% of GLOBAL EMISSIONS of greenhouse gases (GHG).



5th

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



514

Emissions equivalent to 514 POWER STATIONS



3 million
syringes



14
million gloves



2.000 tonnes
of laundered
clothing



175.000 m³ of
water
consumption



3 million
patients/year



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?

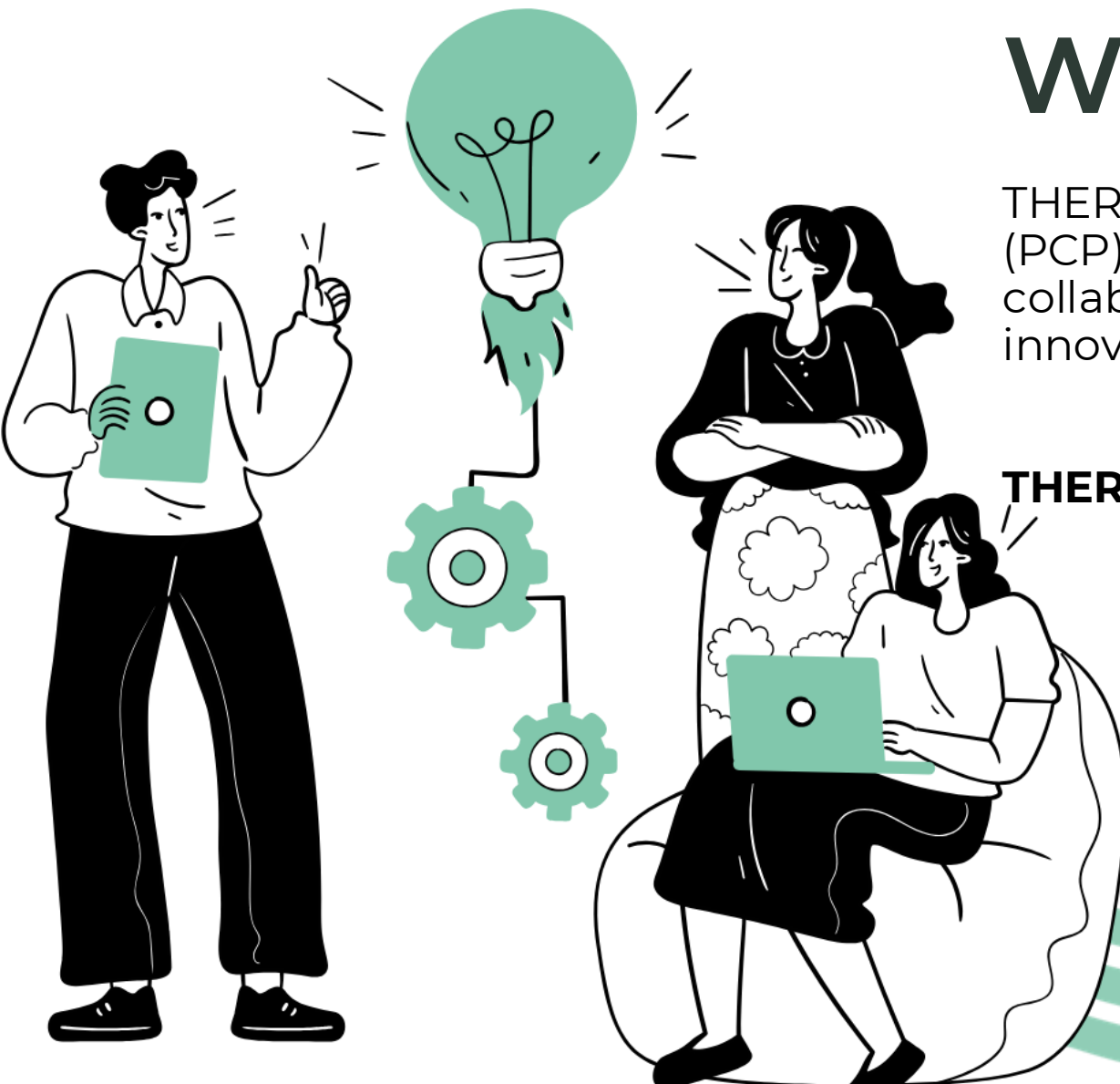
The challenge

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.



THERESA's precursor: Procure4Health (P4H)



Search...



ABOUT US ▾ ACTION PLAN POLICY PAPER TWINNINGS OMC ▾ COMMUNITY ▾



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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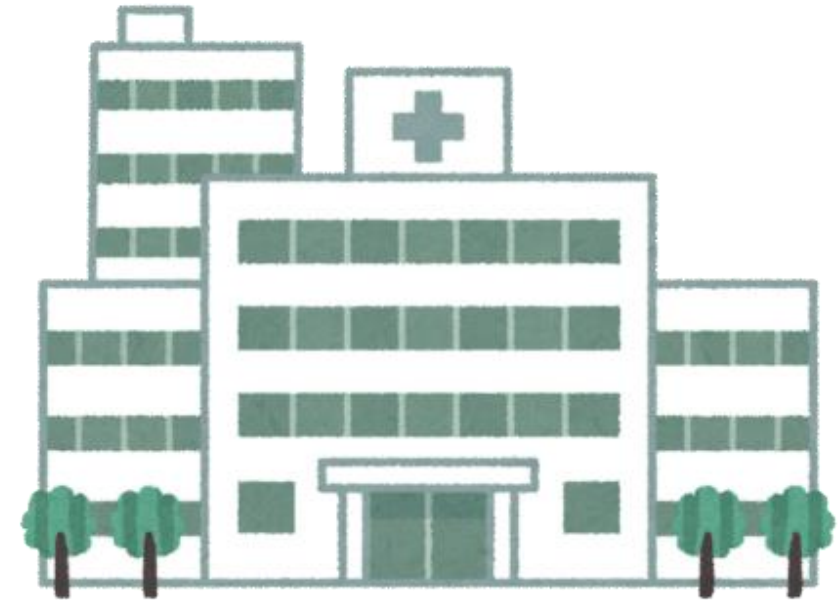
THERESA's precursor: Procure4Health (P4H)



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.

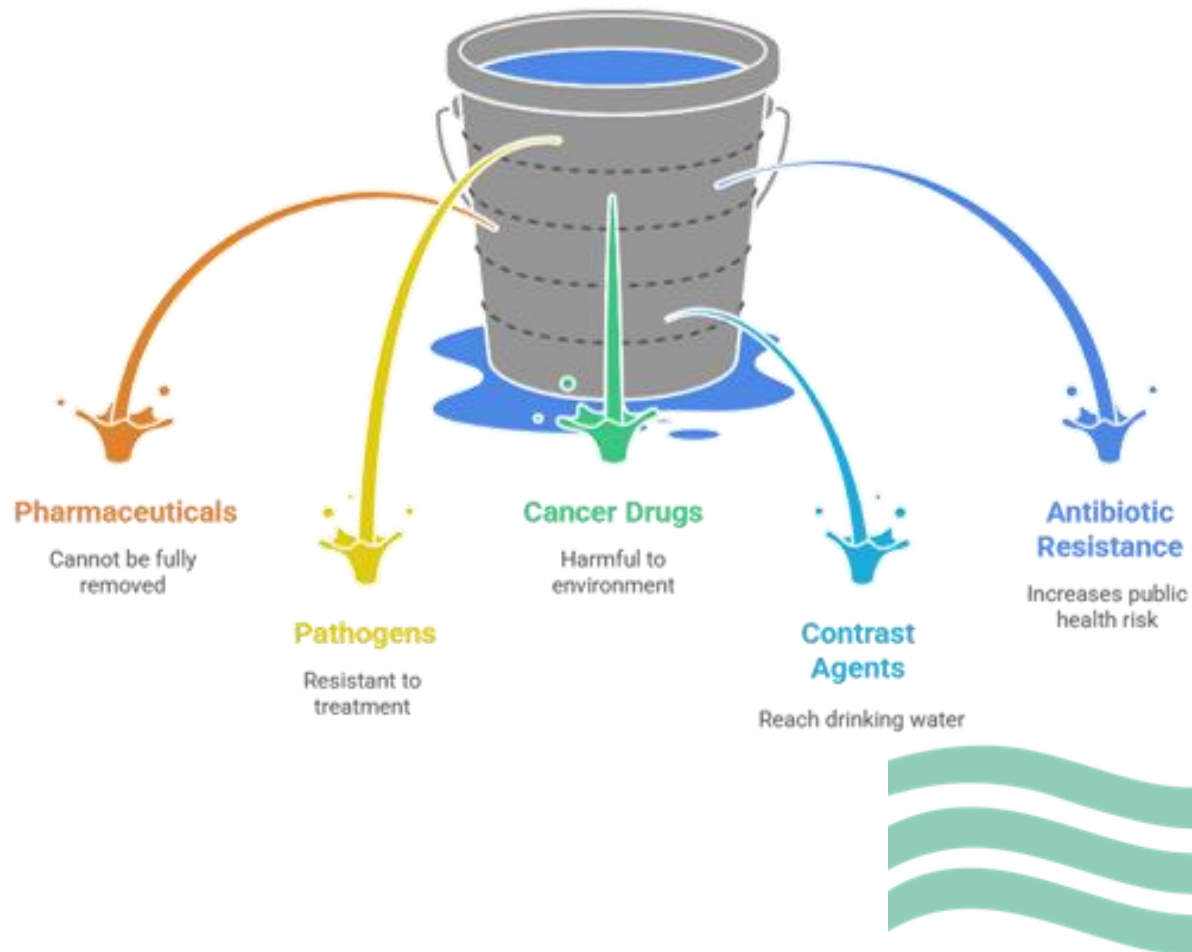
P4H engaged with the market to explore the feasibility of co-designing a solution to this unmet need during April 24 with promising results.

THERESA is the continuation of this process.



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



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Theresa PCP partners

COORDINATOR



BUYERS GROUP

Bringing together a strong European consortium to seek green innovative solutions for hospital wastewater treatment



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."

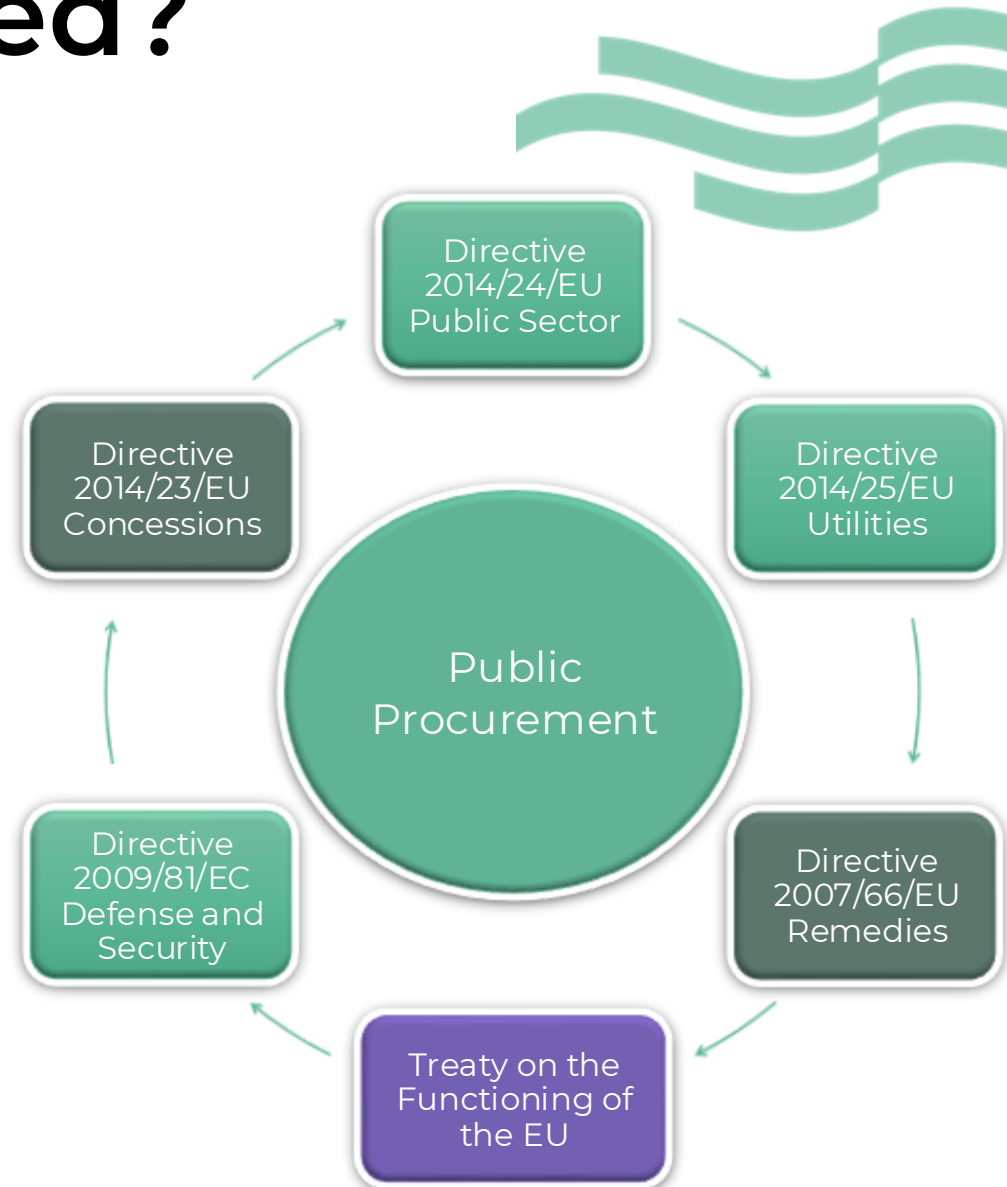
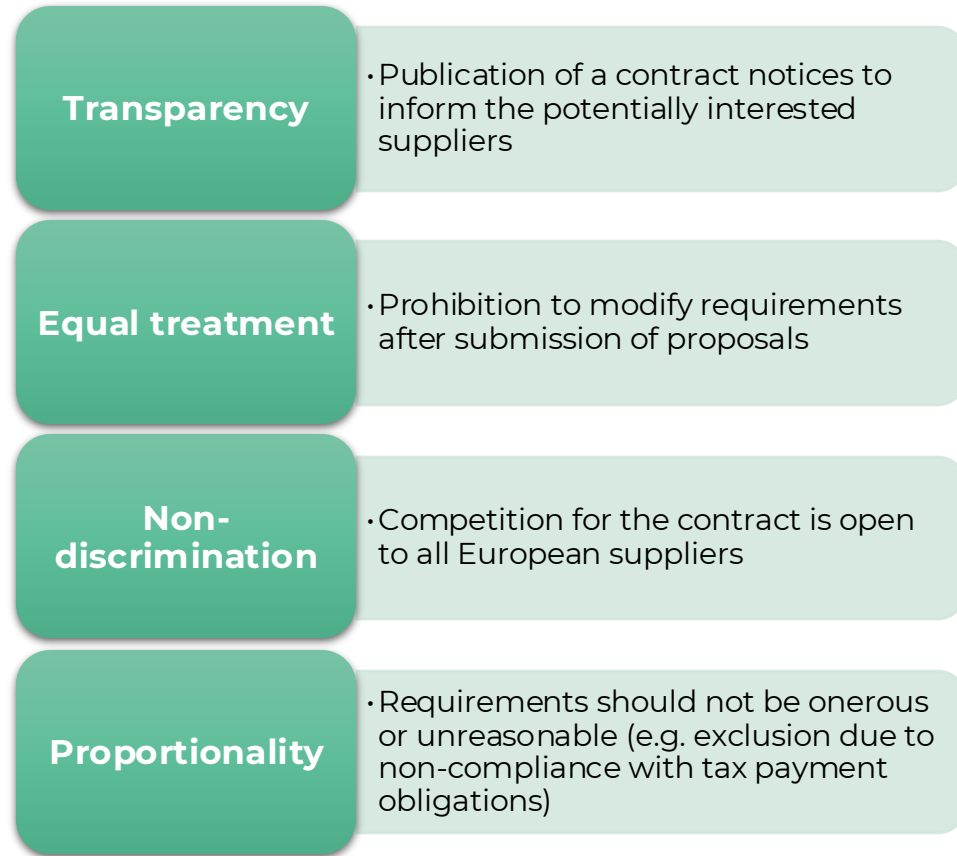
Opinion of Advocate General Jacobs

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

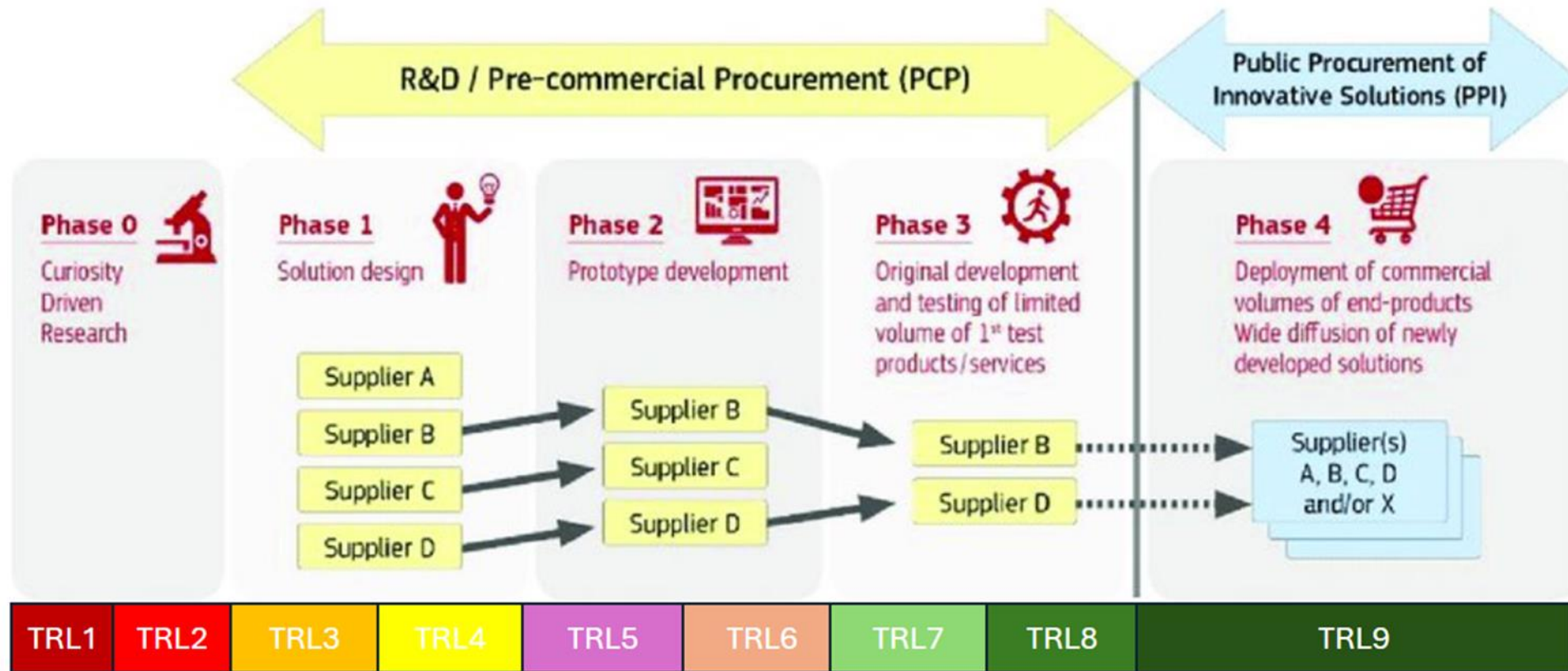


Where is it regulated?

TFEU principles EU Legal Framework

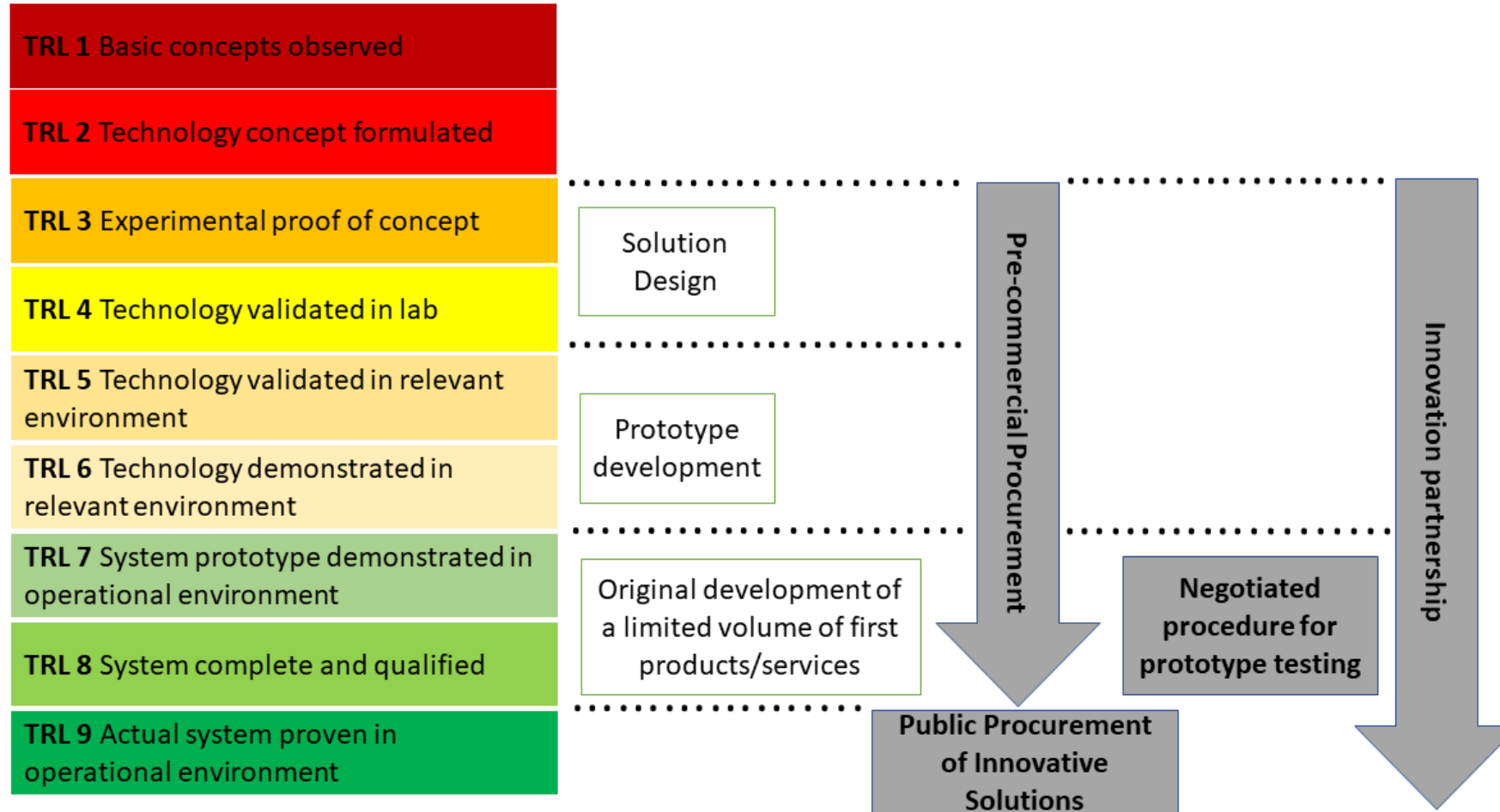


Innovation Procurement and TRL (1)



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



**JOIN
THERESA**

Why an OMC?

Who can participate?

Engaging mechanisms

What is it for?

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

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
Spain	January 08
Estonia	January 13
Poland	January 19
Belgium	January 23
The Netherlands	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



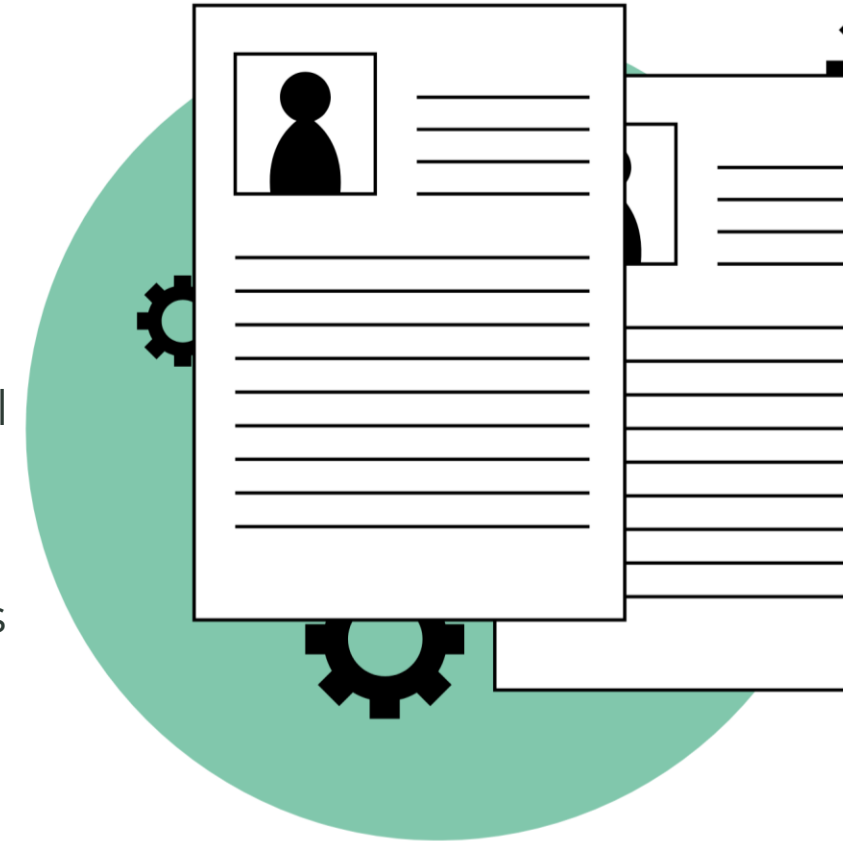
Submitted by: 24 February



Confidentiality Clause

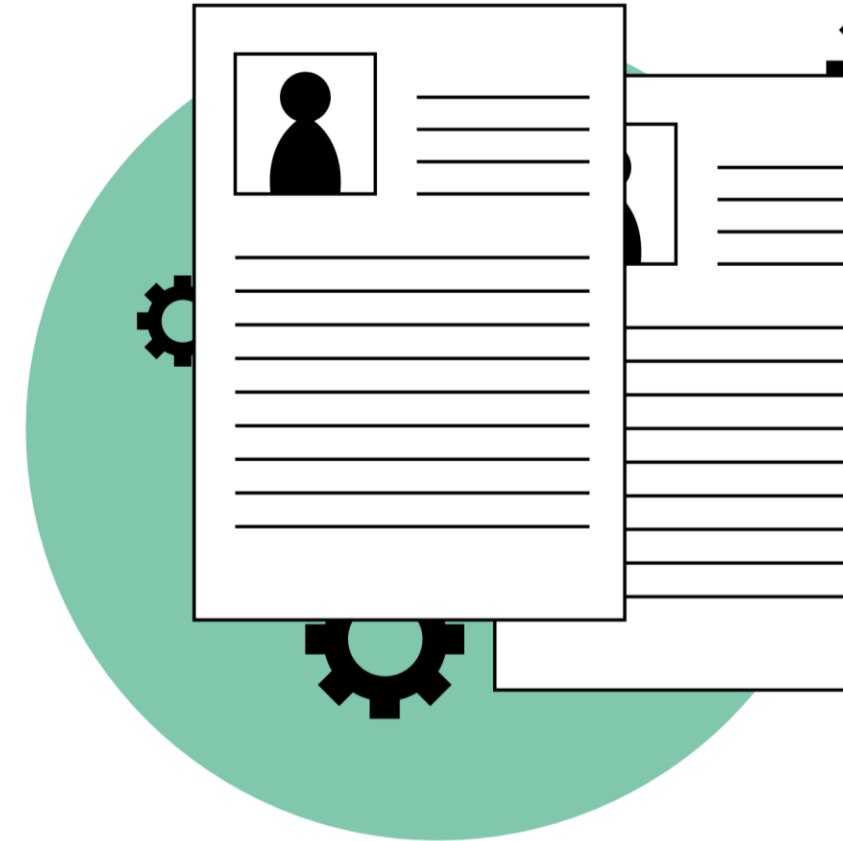
The contracting authority **may not disclose any technical or commercial information** that may have been provided by the participants, which they have designated and reasoned as confidential.

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

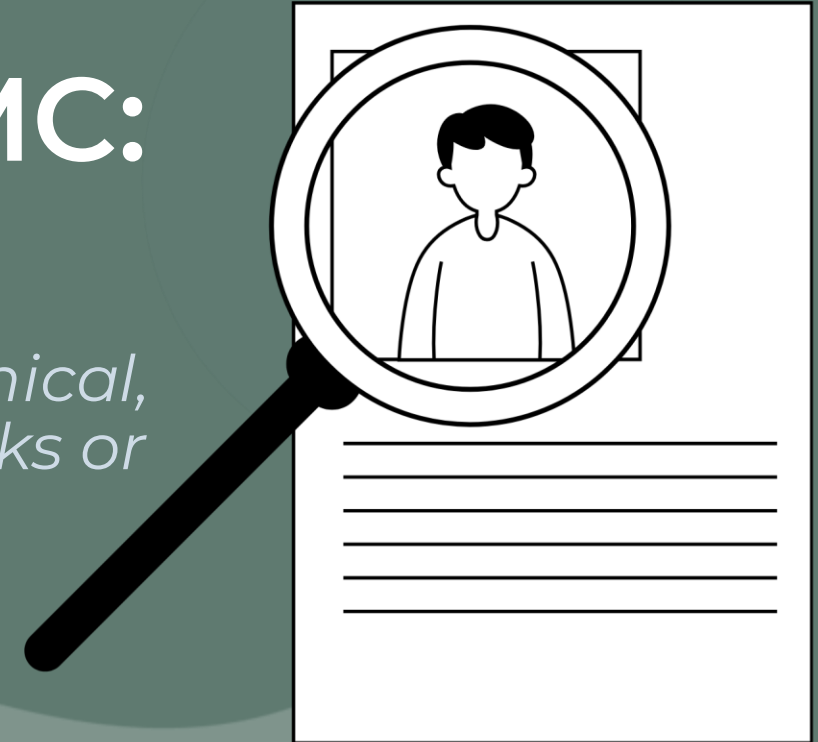
Participation in this Open Market Consultation **does not constitute a condition for participation in any subsequent procurement procedure** and shall not result in any advantage, preferential treatment, or prejudice in the context of any future tender or contract award



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?



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



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



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:

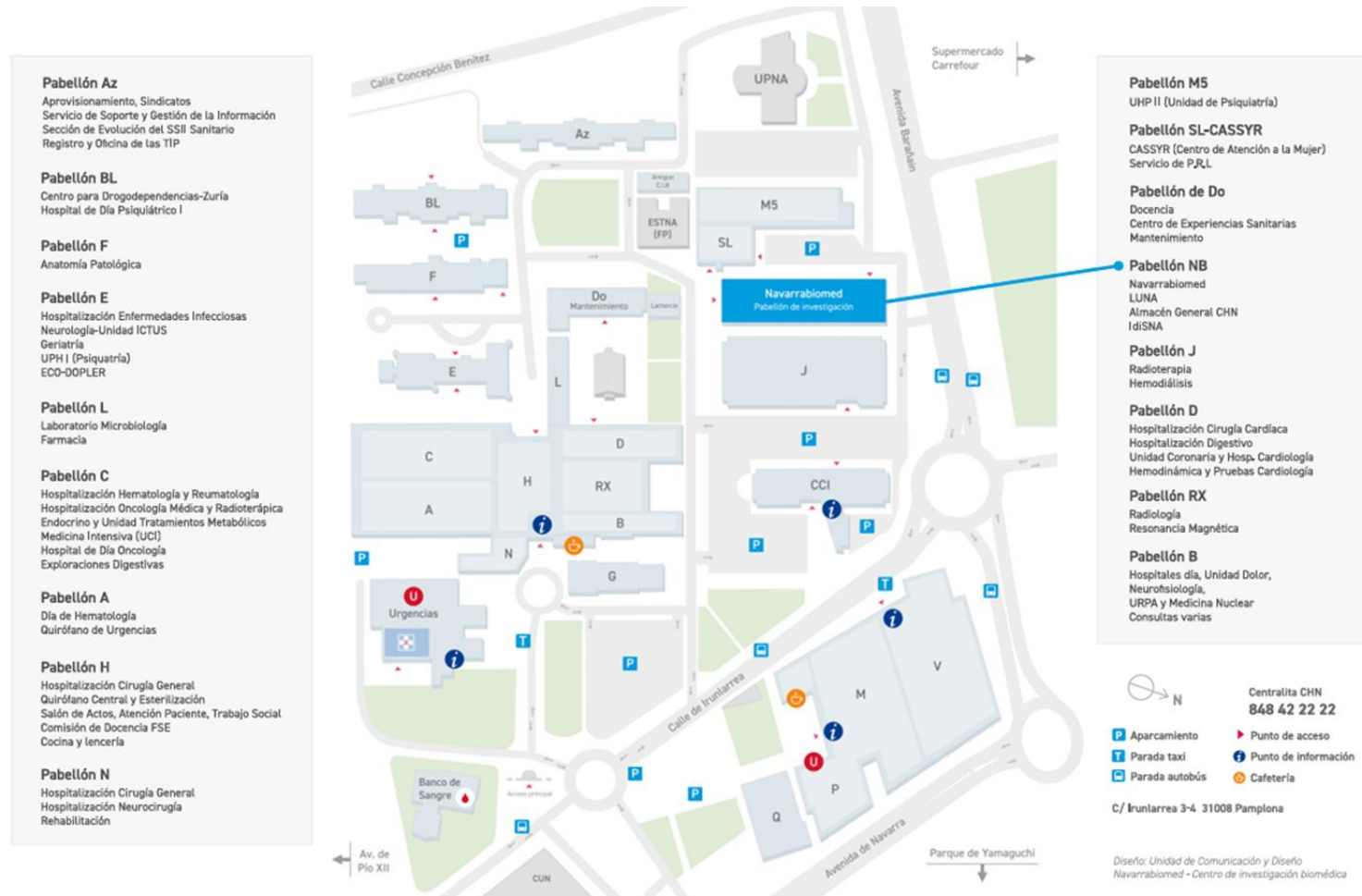
- Hospital Universitario de Navarra (HUN), Hospital Virgen del Camino, Clínica Ubarmin, Pamplona, Navarre
- Hospital Universitario Virgen Macarena (HUVVM), Sevilla, Andalusia
- Hospital Universitari de Vic (CHV), Vic, Catalonia

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.



Hospital Universitario de Navarra



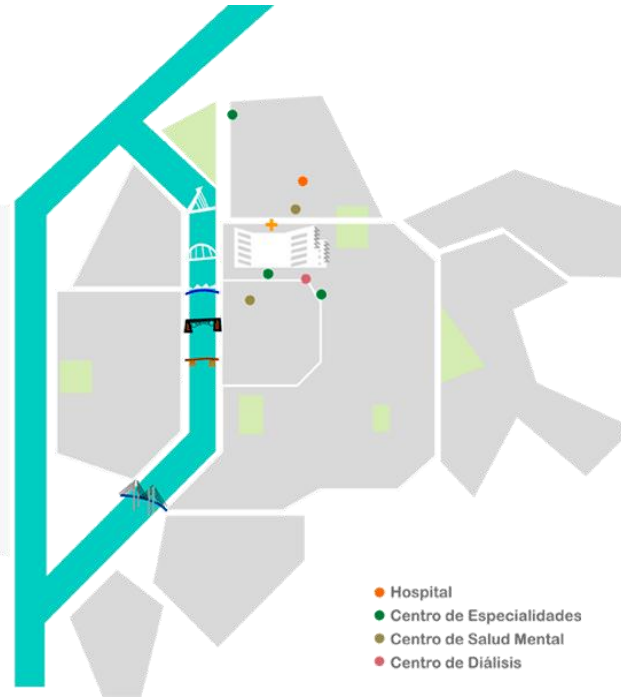
Phase 3: Validation in real operational environment

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



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



What suppliers need to know about Spanish Hospitals

- **Wastewater Flow and Variability:**

Flow data not collected in some hospitals.

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

WORK IN PROGRESS

- **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

- Different current monitoring among hospitals

WORK IN PROGRESS



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



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**



Key dates

22 December 2025 –
28 February 2026

May 2026

January 2027–
March 2027

July 2027–April
2028

August 2028–
May 2029



Open Market Consultation

Events
Questionnaire
Matchmaking

Tender Publication

Evaluation of
bids

Contract
award

Phase 1. Solution Design

Phase 2. Prototype development

Phase 3. Validation in real operational environment

OMC


Tendering

Execution






...AND REMEMBER!



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



Q&A

Ask away!



THANK YOU!

Subscribe to our newsletter to stay up to date:

<https://preview.mailerlite.io/forms/1801618/165775471966946380/share>

