

THERESA Open Market Consultation

On-site treatment of hospital wastewater



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House rules

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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!





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@ZAS

ZIEKENHUIS *aan* de STROOM



‘Stroom’ (current) refers to the Scheldt

- Connection
- Lifeline for our city and region
- Constantly in motion



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Strategic focus@Board level

“James Bond of hospitals”

*Els van Doesburg – Chair Board of
Directors ZAS
and act. Mayor City of Antwerp*



“Innovation meets Sustainability”

Jan Witters – Director of Quality, Innovation, Sustainability & Lean



Projectmembers of ZAS



Jan Witters

Director of Quality, Lean,
Innovation and Sustainability



Gwen Staes

Lean Coach and
Sustainability support



Annelies Casteleyn

Sustainability manager



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ZAS in numbers

Largest general hospital in Belgium
In Europe's top 5

3,200
Licensed beds



1.5 € billion
Turnover



8,900
Employees
1,000
Doctors



In Top 10 largest employers in Belgium

79,000
Classic admissions



79,000
Surgeries

127,000
Day admissions



> 1 million
Consultations

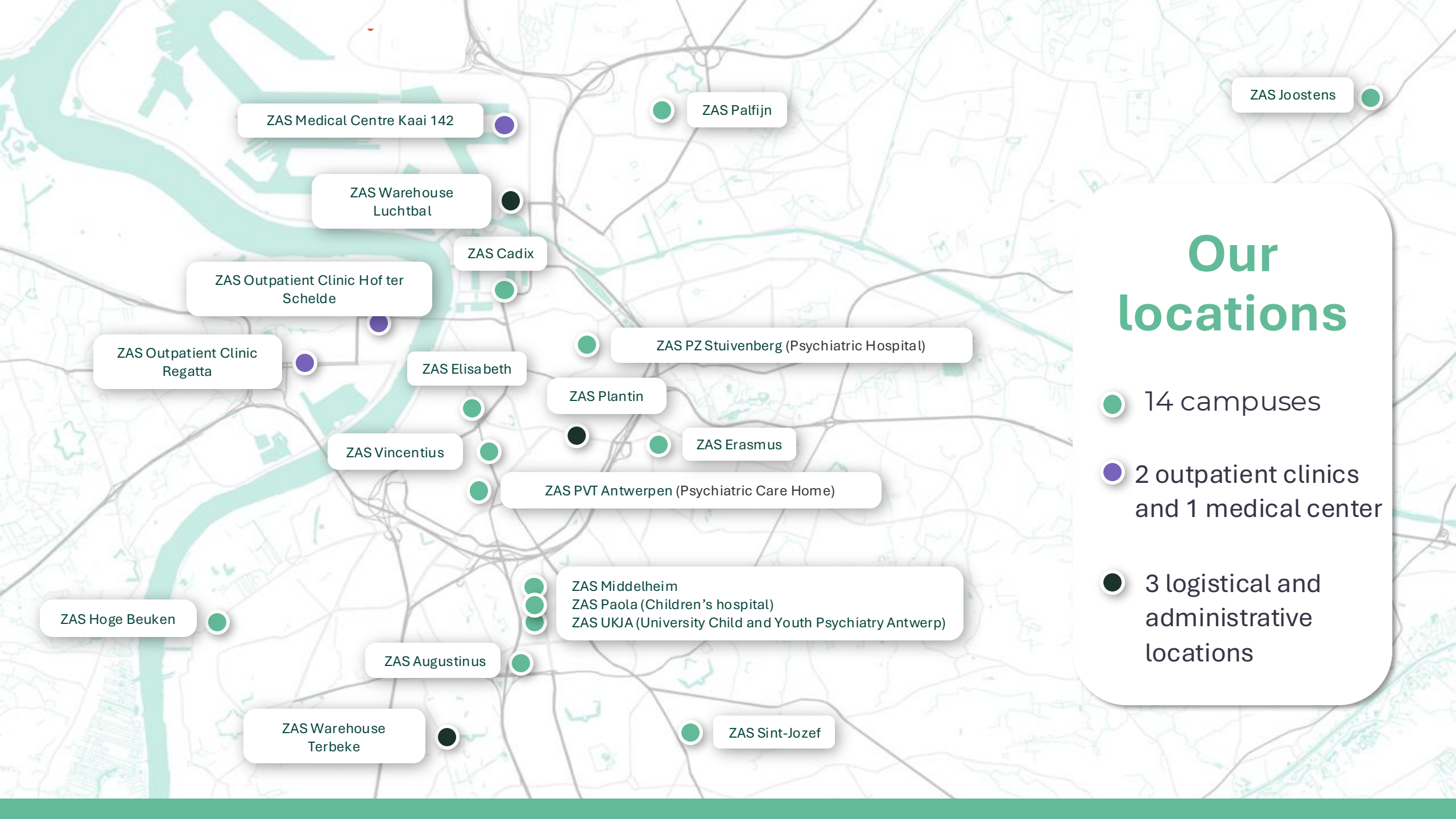


8,000
Births



188,000
Emergency cases





Our locations

- 14 campuses
- 2 outpatient clinics and 1 medical center
- 3 logistical and administrative locations



Algemeen ziekenhuis
ZAS Augustinus

Oosterveldlaan 24 . 2610 Wilrijk



Algemeen ziekenhuis
ZAS Cadix

Kempensstraat 100 . 2030 Antwerpen



Gespecialiseerd ziekenhuis
ZAS Elisabeth

Leopoldstraat 26 . 2000 Antwerpen



Gespecialiseerd ziekenhuis
ZAS Hoge Beuken

Commandant Weynsstraat 165 . 2660 Hoboken



Gespecialiseerd ziekenhuis
ZAS Joostens

Kapellei 133 . 2980 Zoersel



Algemeen ziekenhuis
ZAS Palfijn

Lange Bremstraat 70 . 2170 Merksem



Medisch centrum
ZAS Medisch Centrum Kaai 142

Mulhouseelaan Noord 3 . 2030 Antwerpen (Haven)



Algemeen ziekenhuis
ZAS Middelheim

Lindendreef 1 . 2020 Antwerpen



Kinderziekenhuis
ZAS Paola

Lindendreef 1 . 2020 Antwerpen



Algemeen ziekenhuis
ZAS Palfijn

Lange Bremstraat 70 . 2170 Merksem



Polikliniek
ZAS Polikliniek Hof ter Schelde

August Vermeylenlaan 6 . 2050 Antwerpen (Linkeroever)



Psychiatrisch verzorgingsstehuis
ZAS PVT Antwerpen

Van Schoonbekestraat 54/2 . 2018 Antwerpen



Polikliniek
ZAS Polikliniek Regatta

Blancefoerlaan 303 . 2050 Antwerpen (Linkeroever)



Psychiatrisch ziekenhuis
ZAS PZ Stuivenberg

Pothoekstraat 109 . 2060 Antwerpen



Algemeen ziekenhuis
ZAS Sint-Jozef

Molenstraat 19 . 2640 Mortsel



Algemeen ziekenhuis
ZAS Vincentius

Sint-Vincentiusstraat 20 . 2018 Antwerpen



Psychiatrisch ziekenhuis
ZAS UKJA (Universitaire Kinderen Jeugdpsychiatrie Antwerpen)

Lindendreef 1 . 2020 Antwerpen



What does ZAS have to offer?

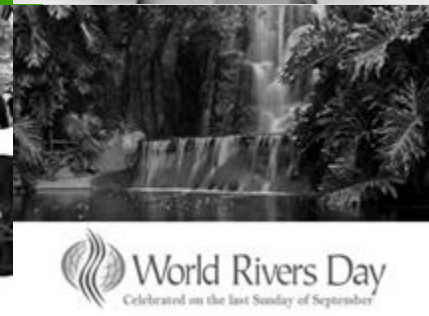
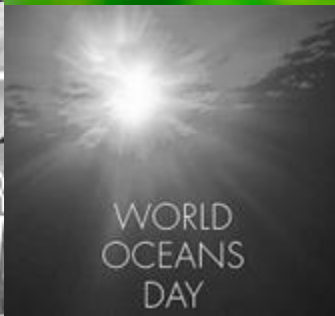
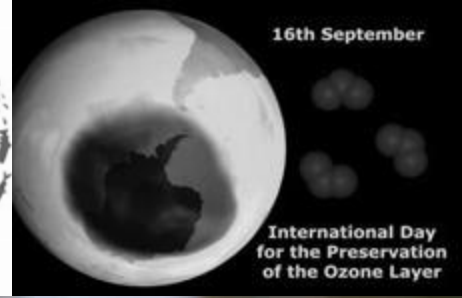


Accessible basic healthcare close to our patients' home: acute campuses, outpatient clinics and a medical centre

Specialised and high-tech healthcare for those who need it: concentrated, but with optimal regional distribution

38 medical specialties





Setting the scene... Our strategic priorities@ZAS

Strive for excellence in integrated care and patient XP
Continuous focus on sustainability, innovation, quality and proces improvements

Promote entrepreneurship within a dynamic work environment

Realise ZAS merge and harmonize processes

Redesign healthcare landscape while ensuring care continuity

Secure long-term financial plan with smart investments



From strategic priorities to sustainability strategy@ZAS

- Sustainability is one of our strategic priorities
=> Everything we do, we do with attention to sustainability.
- Strategy is based on three pillars, this project touches on each of them
 - **Care for the planet:** Flanders is the most vulnerable region in Europe in terms of (drinking) water supply.
 - **Care for People:** We pollute our own drinking water and makes ourselves vulrnable for drought and floods.
 - **Strong organization:** Water is the new gold, we must handle it carefully.



Care for the planet



Care for people



Strong organization



WHAT THERESA IS AIMING FOR?

What is THERESA?

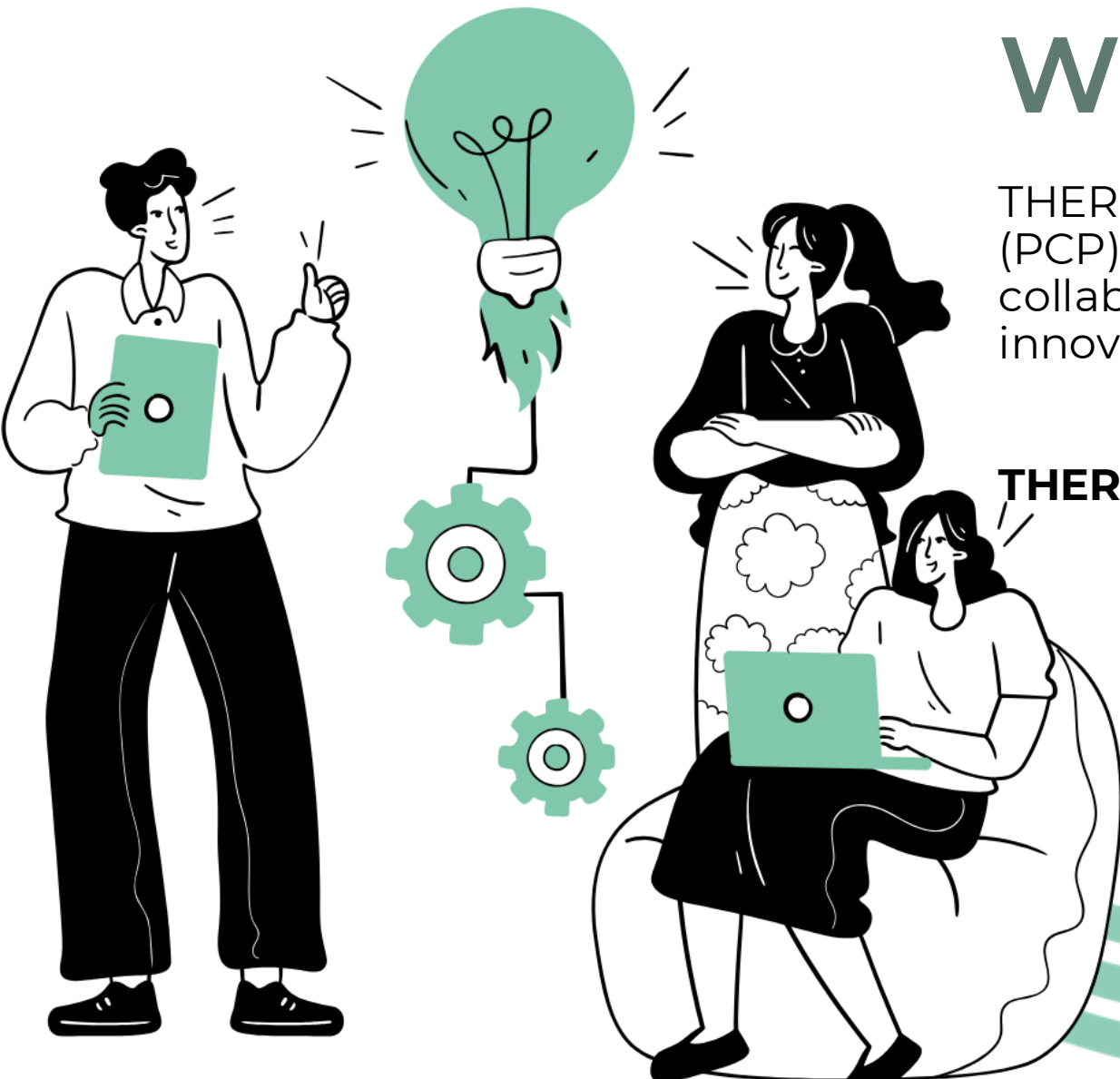
The Challenge

The goal

The Public Buyers Group

THERESA PCP partners





What is THERESA?

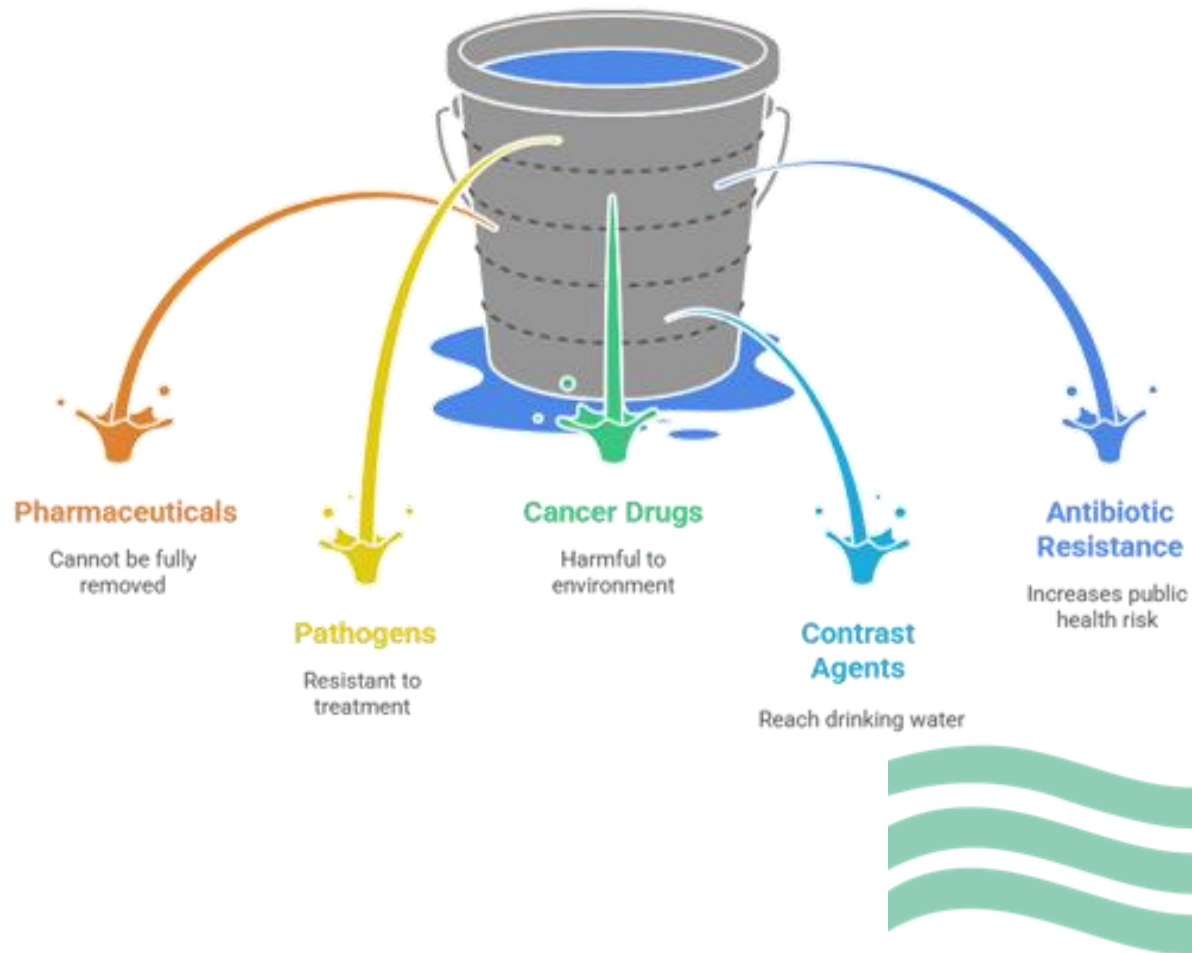
THERESA is an European Pre-Commercial Procurement (PCP) project through which public organisations collaborate with the market to develop and test innovative solutions **not yet available commercially.**

THERESA will invest €2.9 million through this process.



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

- 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** the **priority contaminant groups**.
- ➔ Must demonstrate **technical feasibility, cost-effectiveness and readiness for integration into real-world infrastructures**

Robust, sustainable on-site Hospital Wastewater Treatment

Robust, Cost-Effective, Easy-to-Maintain

Environmentally responsible



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

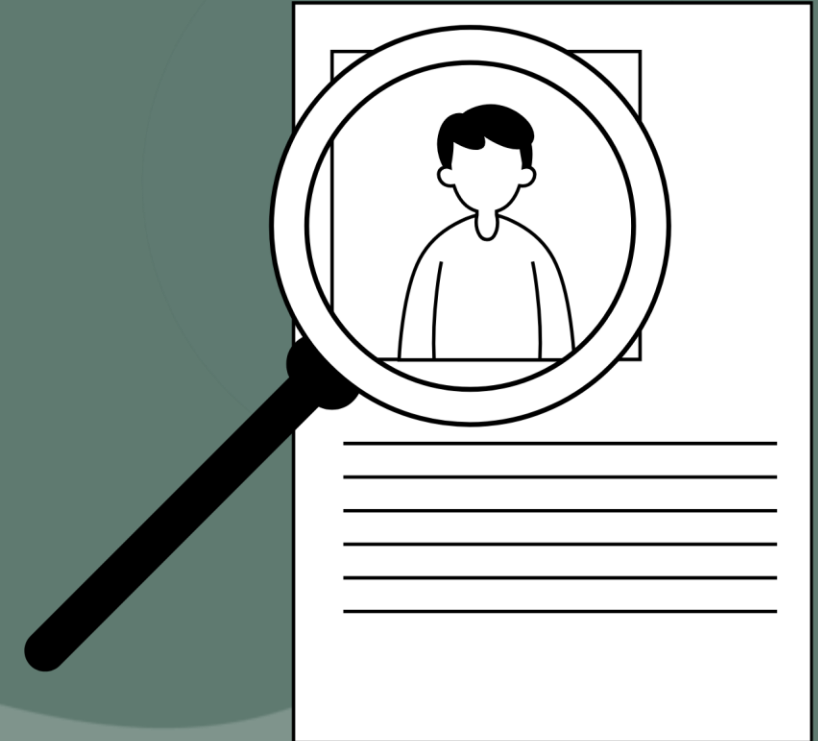


TECHNICAL ASPECTS: BELGIUM

PCP and its legal framework

PCP Intellectual Property Rights

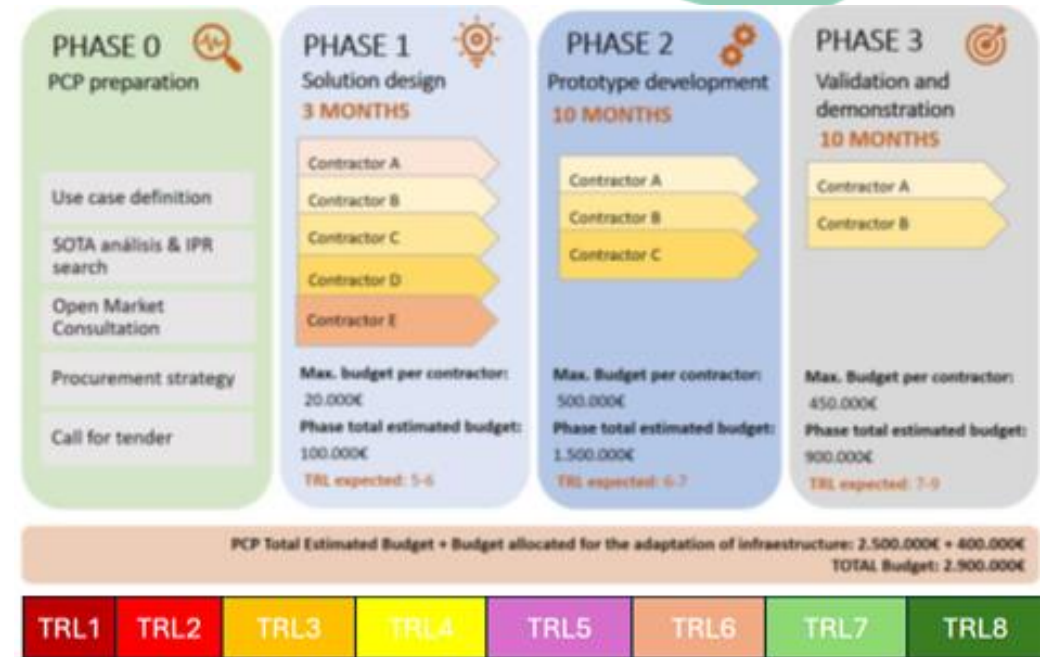
Confidentiality



PCP and its legal framework

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 Intellectual Property Rights (IPR) (1)

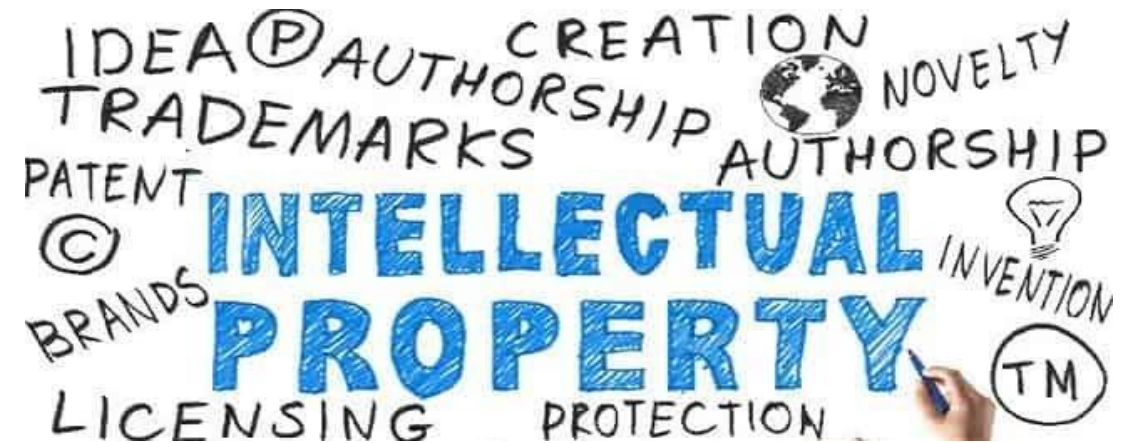


Contractor(s) keep ownership of IPR of Results (Price explicitly include a discount).

+ ensure that results are not subject to control or other restrictions by entity/country which is not eligible.

+ inform PBG of the results of each phase that can be exploited, whether they can be protected or no.

If the contractor does not seek protection, the PBG will have the right to do so.



PCP Intellectual Property Rights (IPR) (2)



PBG receives an irrevocable, royalty free, non-exclusive, non-commercial license to use the technology for indefinite time. IPRs of the PCP and needed pre-existing rights.

PBG has the right to require the contractors to grant non-exclusive licences to third parties under Fair, Reasonable and Non-Discriminatory (FRAND) conditions.

PBG has the right to require the contractors to transfer ownership of the IPR if they do not protect them, do not protect public interests (including security interests) or do not commercialize the solution.

Request for Tenders gives a generic explanation and Framework Agreement describes it in detail, including obligations of the parties

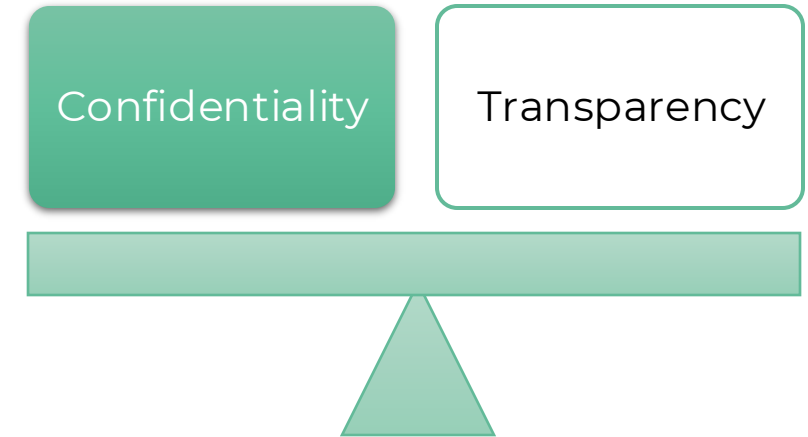


Confidentiality (1)

OMC

Confidentiality & fair treatment

- Your identity will remain anonymous in all published Q&A.
- All questions and answers will be published to ensure that all participants receive the same information.
- All responses are reviewed to guarantee equal treatment and to prevent any competitive advantage.
- Private or bilateral clarifications are not permitted.
- Questions that fall outside the scope of the OMC may not receive detailed responses.
- This consultation is non-binding and does not guarantee participation in any future procurement process.
- Suppliers must not submit confidential, proprietary, or commercially sensitive information during the OMC. Any such information received inadvertently will not be taken into consideration.



Confidentiality (2)

Tenderers must keep confidential any information obtained in the context of the tender procedure

Breach of confidentiality as a cause for contract termination and penalties

Article 9 FA— Confidentiality

9.1. The **parties shall keep confidential any data, documents or other material (in any form) that is identified as confidential at the time it is disclosed.** This applies during the **implementation of the Framework Agreement and Specific Contracts and up 4 (four) years after their end.**

9.2. If information has been identified as confidential **only orally, it shall be considered to be confidential only if this is confirmed in writing** within 15 (fifteen) days of the oral disclosure.

9.3. Unless otherwise agreed between the parties, they may **use confidential information only to implement the Framework Agreement and Specific Contracts.**

9.4. The **parties may disclose confidential information to their staff** or to third parties involved in the PCP implementation **only if:**

- (a) They **need to be aware of this information in order to implement the PCP activities** under the Framework Agreement and Specific Contracts, and
- (b) They are **bound by an obligation of confidentiality.**

9.5 FMS and members of the PBG may disclose confidential information to the EU granting authority if required under their Horizon Europe grant agreement.

9.6. The **confidentiality obligations cease to apply** if:

- (a) The **disclosing party agrees** to release the other party from the obligation,
- (b) The **information becomes generally and publicly available**, without breaching any confidentiality obligation, or
- (c) The **disclosure of the information is required by EU or national law.**



Confidentiality (3)



TD6. PCP END OF PHASE REPORT

Treated as confidential. Except ABSTRACT PCP END OF PHASE REPORT.

TD8. TECHNICAL FORM

6. Professional secrecy

Please indicate which parts of the information in the tender is confidential, and indicate why disclosure of such information may be harmful to you.

It is not possible to mark all the tender form/full sections as confidential

Please, write your response in the space provided here.



WHAT IS AN OMC? OMC STRUCTURE AND EVENTS

Why an OMC?

Who can participate?

Engaging mechanisms

How to provide feedback?



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



3



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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Engaging mechanisms

Events	Dates	Topic
Spain	January 08	General presentation
Estonia	January 13	Introducing PCP to tendering and
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

Matchmaking tool

At THERESA PCP's web



Pitch sessions

At the end of the events



Bilateral meetings

Between 6-24 February



Questionnaire



Submission deadline:

24 February



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:

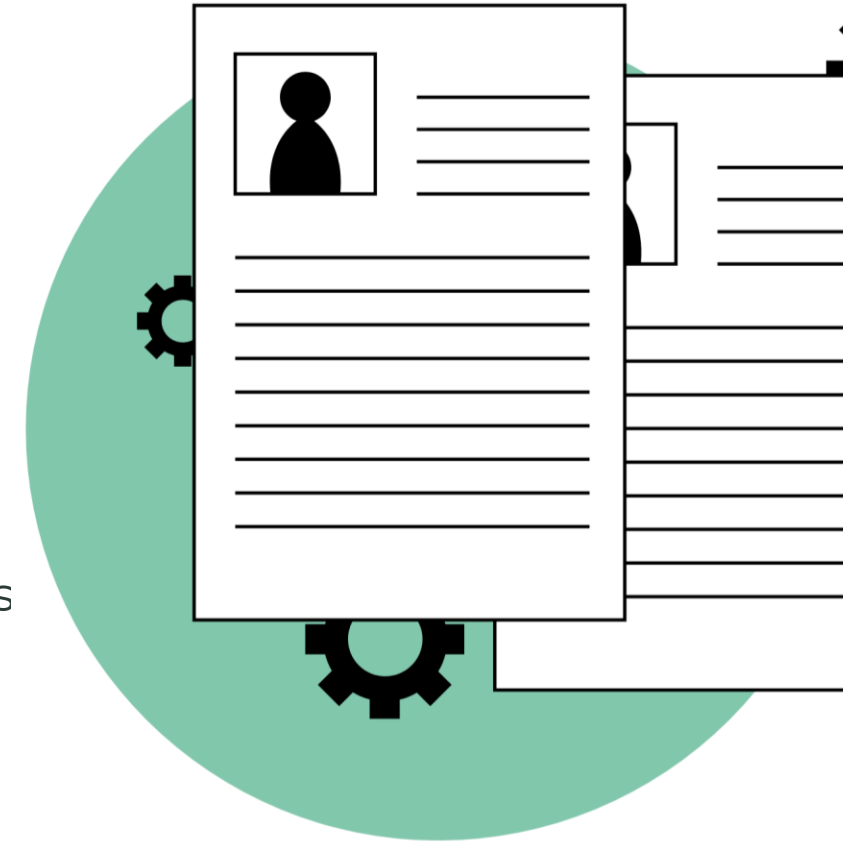
- Find the right partners early
- Build balanced, competitive consortia
- Increase your chances of success



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.



PARTICIPATING HOSPITAL CONTEXT

ZAS



Participating Hospital context Belgium

Key Characteristics of ZAS:

- **Total annual water consumption:** ~221,000 m³ across all campuses
- **Average daily wastewater flow:** ~605 m³/day combined (individual campus flows range from 20 m³/day to 250 m³/day)
- **Hospital size and specialization:** Multi-campus network providing comprehensive services including oncology, surgery, intensive care, maternity, mental health (a.o. Campus PZ Stuivenberg), and emergency care
- **Wastewater characteristics:** Highly variable across campuses; some generate high pharmaceutical loads (oncology, ICU), others are more residential (long-term care, rehabilitation)



Hospital participants context Belgium

Why ZAS?

ZAS is strategically important for THERESA because it represents **the most complex and diverse hospital environment** in the consortium:

- **Multi-campus network:** Designing solutions across multiple campuses allows validation of **scalability, modularity, and adaptability** under varying conditions (large vs. small facilities, high vs. low pharmaceutical loads, urban vs. suburban settings).
- **Rainwater separation for reuse:** Campuses ZAS Cadix, ZAS PZ Stuivenberg, and ZAS Palfijn already use separated rainwater for **toilet flushing**, demonstrating ZAS's commitment to water sustainability. THERESA solutions that enable **non-potable water reuse** (e.g., treated HWW for irrigation, cooling, toilet flushing) are particularly relevant.
- **Radioactive wastewater segregation:** We segregate radioactive streams (holding tanks). There is an inconsistency in processes, and therefore there is the need for **flexible treatment approaches** that can handle both mixed and partially segregated wastewater.
- **Belgian regulatory context:** Legislation regarding (waste)water in Flanders is regulated by the Flemish government, legislation is described in **VLAREM (Flemish Environmental Permit Regulations)**
- **Micropollutant regulations are under development** following Flanders' Blue Deal for water management, making ZAS an early adopter of future compliance requirements



CONTEXT: Watertreatment

ZAS



What suppliers need to know about ZAS?

- **Wastewater Infrastructure:**

ZAS's wastewater system is characterized by **extreme diversity across campuses**, with **over 16 discharge points** distributed across the network. Pre-treatment varies by campus and includes amalgam separators, hydrocarbon separators, grease separators, mechanical coarse screening, and septic tanks. However, **no centralized pre-treatment system exists**, and most campuses discharge mixed wastewater directly to municipal sewers.

- **Space limitations:**

ZAS faces **campus-specific space constraints** due to old buildings, urban locations, and differences in infrastructure layout:

- **Available outdoor space** is limited
- **Modularity is emphasized as a strong advantage:** ZAS requires solutions that can be deployed **campus-by-campus**, with each campus potentially receiving a different configuration
- **Multiple connection points to sewer** (16+ discharge points) complicate centralized treatment; **decentralized, modular pre-treatment** at individual campuses is likely the most feasible approach

- **Operational and Maintenance Capacity:**

- **Staffing:** Limited technical staff (FTEs) with **no in-house wastewater expertise**.
- **Maintenance strategy: All supervision, maintenance, and monitoring to be outsourced.** ZAS requires solutions with **extremely low operator input** and **clear service contracts** for external contractors.
- **Training requirements:** Hospital administrative staff can perform basic tasks (acknowledge alarms, visually inspect equipment), but all technical work must be handled by specialists



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



Open Market Consultation
Events
Questionnaire
Matchmaking

OMC

May 2026



Tender Publication
Evaluation of bids
Contract award

Tendering

January 2027–
March 2027



Phase 1.
Solution Design

July 2027–April
2028



Phase 2.
Prototype development

Execution

August 2028–
May 2029



Phase 3.
Validation in real operational environment



...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!

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

