D5.8
Open market consultations report

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List of acronyms

Acronym	Description
AECID	Spanish Agency for International Cooperation to Development
AI	Artificial Intelligence
AIA	Athens International Airport
ANAC	Italian Anti-Corruption National Agency
A2O	Anaerobic-anoxic-aerobic method
CAPEX	CAPital EXpenditures
CCMSNS	Control and Monitoring Centre of the Portuguese National Health Service
CCP	Portuguese Public Contracts Code
CNMC	Spanish National Commission for Markets and Competition
CDTI	Spanish Centre for Technological Development and Innovation
CPV	Common Procurement Vocabulary
CSIC	Spanish Superior Centre for Scientific Research
DAG	Portuguese General Administration Department
DGAJ	Portuguese Directorate-General for the Administration of Justice
DG-CNECT	Directorate General for Communications, Networks, Content and Technology
D. Lgs	Italian Legislative Decree
EAFIP	European Assistance for Innovation Procurement
EC	European Commission
ECJ	European Union Court of Justice
EPC	Engineering, Procurement and Construction

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Acronym	Description
EPE	Portuguese public business entity
ERAC	European Research Area and Innovation Committee
ERDF	European Regional Development Fund
ESIF	European Structural and Investment Fund
EU	European Union
Ε.Σ.Η.ΔΗ.Σ.	Greek national system of electronic public contracts
FAQ	Frequently Asked Questions
FID	Fomento de la Innovación desde la Demanda (Demand-pulled innovation)
GHG	GreenHouse Gases
GWB	German Act against Restraint of Competition
ha	Hectare
HEMS	Helicopter Emergency Medical Service
hm^3	Cubic Hectometre (millions of cubic metres)
HSPPA	Hellenic Single Public Procurement Authority
H2020	Horizon 2020
ICT	Information and Communication Technology
IMPIC	Portuguese Institute of Public Markets, Real Estate and Construction
IoT	Internet of Things
IPR	Intellectual Property Rights
KDEOD	Greek Centre for International and European Economic Affairs Law
KonzVgV	German Procurement Regulation for Concessions
KPI	Key Performance Indicator

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Acronym	Description
KS	Norwegian Association of Local and Regional Authorities
L	Litre
LCSP	Spanish Public Sector Contracts Law
LH	Lighthouse City/Region
MASub	Groundwater Mass
MBR	Membrane Bioreactor
mg	Milligrams
MSW	Municipal Solid Waste
m^3/y	Cubic metres per year
N	Nitrogen
NBS	Nature-Based Solutions
NDA	Non-Disclosure Agreement
NEPPS	Greek National Electronic Public Procurement System
NH4-N	Ammonia nitrogen
No	Number
OECD	Organisation for Economic Cooperation and Development
OFMSW	Organic Fraction Municipal Solid Waste
OMC	Open Market Consultation
OPEX	OPerating EXpenditures
PCP	Pre-Commercial Procurement
PDA	Project Development Assistance
PIN	Prior Information Notice

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Acronym	Description
PPI	Public Procurement of Innovative solutions
Q&A	Questions and Answers
R&D	Research and Development
R&I	Research and Innovation
R&D&I	Research, Development and Innovation
RO	Reverse Osmosis
RUR	Urban Irrigation Network (in Spanish)
SektVO	German Procurement Regulation for Utilities
SME	Small and Medium-sized Enterprise
SNS	Portuguese National Health Service
SPMS	Shared Services of the Portuguese Health Ministry
TACRC	Spanish Central Administrative Court for Contractual Matters
TED	Tenders Electronic Daily
TFEU	Treaty on the Functioning of the European Union
TPA	Greek Tender and Contracts Monitoring Unit
TRL	Technology Readiness Level
TRLCSP	Consolidated Text of the Spanish Public Sector Contracts Law
UVgO	German Procurement Rules for Supplies and Services below the EU-thresholds
UWWS	Urban WasteWater Sludge
VAT	Value Added Tax
VC	Venture Capital
VgV	German Procurement Regulation for Supplies and Services

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Acronym	Description
VOB/A	German Procurement and Contract Rules for Public Works
WTO GPA	World Trade Organization Government Procurement Agreement
w/v	Weight-volume
WWTP	WasteWater Treatment Plant

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1. Executive summary

The Open Market Consultation (OMC) is part of the preparation for an innovation procurement action, which involves the proactive analysis of the offer system and provides a pre-information to the market in order to give a congruous time for the preparation of fit-for-purpose proposals.

The legal basis for the conduct of an open market consultation is:

- The **Treaty on the Functioning of the European Union** principles and derived principles (equal treatment, non-discrimination, transparency).
- EU **competition rules** (e.g. related to distortion of competition and information exchange between competitors).
- The articles 40 and 41 of the **EU public procurement directives** and their transposition into national legislation.

According to the derived Treaty principles, the market consultation will not distort competition when i) all relevant information that the procurer provides to economic operators in the market consultation is also communicated to the other economic operators in a transparent, non-discriminatory manner, ii) all interested economic operators receive equal chances to formulate an offer in the subsequent procurement and iii) all requirements imposed in the subsequent procurement are not biased towards a specific economic operator or towards a specific proprietary technology.

The analysis of the legal frameworks across **six** (out of eight) EU Member States — Italy, Spain, Portugal, Greece, the Netherlands, Germany and Norway — is based on national legislation, complemented by analytical contributions and selected case law provided by national experts from **five** EU Member States, who formed the **HOOP Legal Advisory Board**, coordinated by the project partner and expert **SBE.** This comparative overview considers key dimensions such as legislative provisions, procedural safeguards, enforcement mechanisms, relevant jurisprudence, and documented best practices.

In the Italian regulatory framework, a central objective of the Open Market Consultation (OMC) is to broaden competition and reduce information asymmetries. However, OMCs are strictly tied to the preparation of a concrete and planned procurement, and their use is limited to non-standard or innovative acquisitions.

In contrast, the Greek legal framework assigns broader flexibility to contracting authorities. Preliminary market consultations may be conducted at their discretion and are not required to be preceded by a defined procurement procedure. They may also serve exploratory purposes, including identifying matches between supply and demand or mapping specific technical or functional challenges, without restrictions on subject matter or actor type.

Similarly, in Spain, Portugal, and the Netherlands, OMCs may be used for exploratory and informative purposes, even in the absence of a finalized procurement plan. These systems allow market engagement to support both technical needs assessments and strategy development, provided that such consultations are conducted in an open, transparent, and non-discriminatory manner.

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In Germany, while preliminary consultations can also precede concrete procurement planning, the regulatory framework explicitly states that using market surveys solely for price or cost estimation purposes is inadmissible. Instead, the emphasis is on collecting justified and objective input to support the design and competitive integrity of future tenders.

Building on this legal foundation, the HOOP project developed and tested a comprehensive OMC Toolkit—a structured package of resources, templates, and guidance materials aimed at supporting public buyers in preparing and conducting open, transparent, and innovation-oriented market consultations.

Developed initially for LIPOR (Porto), the Toolkit was designed to be scalable and adaptable, and was subsequently extended to other Lighthouse Cities and Regions. It includes:

- A template for the Prior Information Notice (PIN),
- A structured technical prospectus,
- Guidelines for market registration and survey tools,
- Participation rules,
- Formats for meet-the-market events and data collection.

As part of the HOOP project's capacity-building support, this Toolkit was not only disseminated but also customised and deployed in three real-world OMCs: Porto (Portugal), Bergen (Norway), and Murcia (Spain).

- *Porto (LIPOR) applied an analytically mature, confirmatory model, aimed at validating market feasibility for a specific challenge (treatment of the liquid digestate fraction). Although participation was slightly lower than expected, the process yielded high-value insights and informed future procurement steps, albeit with the decision to decouple this innovation from the main investment and reserve space for future deployment.*
- *Bergen (BIR AS) pursued a collaborative model, confirming choices already made regarding the core biogas facility, while using the OMC to explore collaboration opportunities on the valorisation of solid digestate. While participation was adequate, the benefit to suppliers was perceived as limited, possibly due to the consultation's confirmatory character and limited engagement depth.*
- *Murcia (EMUASA) used a highly exploratory and formative model, leveraging the OMC to identify and prioritise innovation needs in anticipation of a Pre-Commercial Procurement (PCP) under the national funding programme. This approach maximised early-stage intelligence gathering and clarified the scope of potential R&D needs—positioning Murcia to act as an upstream innovation enabler, even in the absence of a defined investment.*

These experiences serve as case studies demonstrating different methodological pathways and degrees of procurement readiness. The legacy of HOOP lies not only in the documentation of past actions but in the creation of actionable knowledge, reusable tools, and tested approaches that cities across Europe can adopt to design better, more coherent innovation procurement processes.

Ultimately, the OMC is not simply a compliance tool—it is a strategic lever to shape markets, foster dialogue, reduce risks, and advance public value through innovation

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2. Introduction

The Horizon 2020 project HOOP has been set up to support 8 European cities and regions, called Lighthouses (LHs) to accelerate the transition to urban circular bioeconomy. HOOP technical partners provide project development assistance (PDA) to foster investments for the valorisation of biowaste into high added-value products like biowaste-based materials, circular fertilizers, bioplastics, among others. Within HOOP, innovations that go beyond the state-of-the-art are presented to materialise investments to valorise Organic Fraction of Municipal Solid Waste (OFMSW) and Urban Wastewater Sludge (UWWS) in urban areas.

Innovation procurers aren't always the driving force behind the transition to a new economic and technology paradigm. Customers often respond to what's being developed or already available on the market. On this page, we take LHs through the different steps to determine the roots of change in the market, under competition conditions.

An innovation procurement process essentially means moving from a «waiting for demand» to «creating the demand».

One of the branches of the PDA provided to the LHs focuses on innovation procurement actions in order to ensure the development or deployment of innovative or newly technologies to make bio-based products from urban biowaste and wastewater, while maintaining a competitive pressure between suppliers from the early design stages until the large-scale deployment in the domain of urban biowaste and wastewater valorisation.

This Deliverable D5.8 "Open market consultation(s) report" focuses on the innovation procurement preparatory step, namely the preliminary open market consultation, to analyse thereof legal relevance.

Open market consultation is preferable compared to hiring one private adviser to help prepare tender specifications. By consulting all interested operators and experts, the risk of favouring certain suppliers or certain technologies can be effectively mitigated. More information on the rationale and advantages of the innovation public procurement is available in the following chapter.

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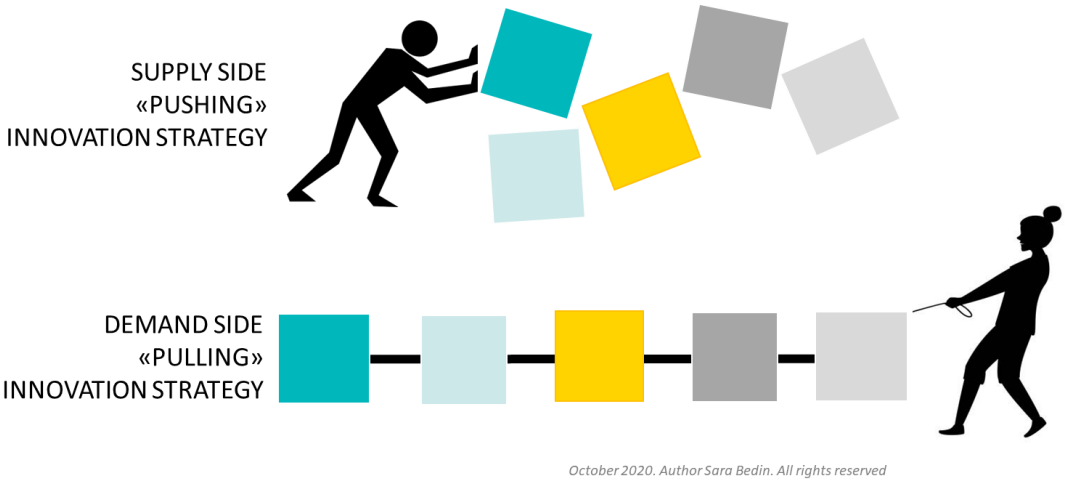
3. Innovation Public Procurement Framework

3.1. The innovation public procurement rational

Innovation procurements are demand-side driven rather than supply-side driven strategies.

Innovation procurement starts from specific public customers' needs and triggers industry to develop concrete solutions. They are "directed" Research, Development and Innovation (R&D&I) efforts addressed by the needs and specifications put forward by the public procurer, that is purchased at market price from commercial entities. The rational that support demand side measures that while the costs of adapting design at early stage based on the requirements of the customer are limited, modifications at commercialization stage that impact core product features can increase the overall risk of failure and cost of deployment of the final product as well as the time to market for suppliers.

Figure 1. Innovation procurement supply side vs demand-side driven (author: Sara Bedin, 2022**).**



However, public procurement is traditionally based on short-term tactical purchasing considerations, usually prioritizing low cost over quality or looking only at immediate instead of longer-term cost/quality impact. Procurement decisions are driven more by considerations to avoid deployment risks (fear to introduce 'new' solutions) instead of maximizing cost / quality improvements. The problem that procurers already select or preselect specific vendors for deployment based on past credentials (they should be able to develop me the desired solution) 'before' collecting first the hard test evidence that proves whether their innovative solutions can truly generate better value for money compared to other solutions on the market. This often leads to suboptimal overall value for money and technology / vendor lock-in. It is perfectly understandable that their obligation to wisely spend taxpayers' money makes procurers inevitably risk-averse.

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However, when innovation procurement is implemented strategically, to systematically improve the quality/efficiency of public services it is not a risky adventure, but an instrument to mitigate the technical risk.

Shortly, an innovation procurement process essentially means moving from a «waiting for demand» to «creating the demand».

3.2. Definitions

Authors provide definitions of the actors who drive purchases and the relevant categories and taxonomy in innovation procurement.

Public procurers are organisations that are contracting authorities or contracting entities according to the definition of those terms in the EU public procurement directives 2014/24/EU, 2004/25/EU, 2009/81/EC.

‘Contracting authority’ means the State, regional or local authorities, bodies governed by public law, associations formed by one or several of such authorities or one or several of such bodies governed by public law (for the full definition, see Article 2(1)(1) of Directive 2014/24/EU). Bodies governed by public law also include entities financed mostly by the State, regional or local authorities, or other bodies governed by public law and entities controlled by those bodies (for the full definition, see Article 2(1)(4) of Directive 2014/24/EU). This includes for example ministries, regions, cities, road management authorities, public hospitals, central purchasing bodies etc.

‘Contracting entities’ refers to entities operating in specific sectors (such as utilities for water, energy, transport, postal services covered by Directive 2014/25/EU and contracting entities in the field of security covered by Directive 2009/81/EC). They may be contracting authorities, public undertakings or entities operating based on special or exclusive rights (for the full definition, see Article 4 of Directive 2014/25/EU).

According to the State aid framework, the **Research and Development (R&D) categories** are:

- ‘Fundamental research' means experimental or theoretical work undertaken primarily to acquire new knowledge of the underlying foundations of phenomena and observable facts, without any direct commercial application or use in view.
- 'Industrial research' means the planned research or critical investigation aimed at the acquisition of new knowledge and skills for developing new products, processes, or services or for bringing about a significant improvement in existing products, processes, or services. It comprises the creation of components parts of complex systems and may include the construction of prototypes in a laboratory environment or in an environment with simulated interfaces to existing systems as well as of pilot lines, when necessary for the industrial research and notably for generic technology validation.
- 'Experimental development' means acquiring, combining, shaping, and using existing scientific, technological, business, and other relevant knowledge and skills with the aim of developing new or improved products, processes, or services. This may also include, for example, activities aiming at the conceptual definition, planning and documentation of new products, processes, or services. Experimental development may comprise prototyping, demonstrating, piloting, testing and validation of new or improved products, processes, or services in environments representative of real-life operating conditions where the primary objective is to make further technical improvements on products, processes or services that

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are not substantially set. This may include the development of a commercially usable prototype or pilot which is necessarily the final commercial product, and which is too expensive to produce for it to be used only for demonstration and validation purposes. Experimental development does not include routine or periodic changes made to existing products, production lines, manufacturing processes, services, and other operations in progress, even if those changes may represent improvements.

A public procurer can choose between three types of procurement contracts depending on what is the objective of the procurement:

1. **public works contracts:** if the objective is to procure the execution of works, meaning the outcome of building or civil engineering works taken which is sufficient of itself to fulfil an economic or technical function.
2. **public supply contracts:** to procure the supply of products, that cover the purchase, lease, rental or hire purchase, with or without option to buy, of products.
3. **public service contracts:** to procure the provision of services, that are public contracts other than public works or supply contracts having as their object the provision of services. A public contract having as its object both products and services within the meaning of Annex II of the Directives shall be a 'public service contract' if the value of the services in question exceeds that of the products covered by the contract.

Innovation procurement is a public procurement in which a public procurer buys 'innovation'. As defined by the 2014 EU Public Procurement Directives, which is based on the OECD definition, **'innovation'** means the implementation of a new or significantly improved product, service, or process, including but not limited to production, building or construction processes, a new marketing method, or a new organisational method in business practices, workplace organisation or external relations. According to the C(2018)3051 Commission guidance "Innovation procurement" refers to any procurement that has one or both of the following aspects:

- buying the process of innovation – research and development services – with (partial) outcomes.
- buying the outcomes of innovation created by others.

Therefore, innovation procurement covers:

1. **R&D SERVICES procurement (or R&D PROCUREMENTS or PUBLIC PROCUREMENT of R&D services), not including the procurement of the resulting innovation.**

- According to the EU public procurement directives, research and development covers fundamental research, applied research and experimental development. Experimental development may according to the WTO Government Procurement Agreement continue up to original development of a first product or service and this may include limited production or supply to incorporate the results of field testing and to demonstrate that the product or service is suitable for production or supply in quantity to acceptable quality standards. It does not extend to quantity production or supply to establish commercial viability or to recover research and development costs. **The R&D service procurement can be implemented through:**
    - Ordinary R&D procurement, which follow the ordinary procedures (e.g. open, negotiated, restricted….).
    - Pre-Commercial Procurement (PCP), which is a specific approach to implement a public procurement of R&D services that follows three principles:

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- Competitive development in phases.
- Sharing of Intellectual Property Rights (IPR) risks and benefits (IPR ownership is allocated to the contractors and the procurer obtains usage and licensing rights) at market conditions.
- Separating the PCP from the subsequent purchase of commercial volumes of solutions PCPs are exempted from the EU public procurement directives and WTO GPA.

2. Public procurements of innovative solutions (PPI).

- Public procurement of innovative solutions happens when public procurement procedures (e.g. open, restricted, negotiated, competitive dialogue[1] *(see 7)*) are used to buy innovative solutions which are not yet available on large scale commercial basis. In public procurements of innovative solutions, the public procurer is an early adopter of innovative solutions. Early adopters are typically referred to as the first 20% of customers on the market that buy an innovative solution (i.e. a new or significantly improved product, service, or process). This includes procurements of products, services or processes that have already been demonstrated on a small scale and may be nearly or already in small quantity on the market, but that have not been widely adopted by the market yet. This also includes existing solutions that are to be utilised in a new and innovative way. Ordinary procedures can be used to buy:
  - Transformative innovations:
    - Totally new products, services, processes, organisational or marketing methods.
    - Significant improvement of an existing product, service, process, organisational method, or marketing method.
  - Incremental innovations:
    - Combination of existing products, services, processes, organisational or marketing methods that results in significant improvements.
    - New use of existing products, services, processes, organisational or marketing methods that results in significant improvements (e.g. use of an existing solution in an innovative way in another sector, in a new application field etc.).

3. Public procurements that purchase a combination of both R&D and the resulting innovative solutions.

- To buy R&D and the resulting innovation in one single tender procedure, combining in one procurement the purchase of R&D and of the resulting innovation.
  - Innovation Partnership is the procedure that combine R&D services and the supply of the innovation, which is considered State aid free only if the procedure is implemented in line with the conditions to avoid State aid listed in the 2014 R&D&I State aid framework and the procurer demonstrates beforehand that the procedure is used for the development and the subsequent purchase of 'unique or specialized products or services'.

The boundaries of what R&D and Innovation may be covered under PCPs or PPIs are set by the following schema, which maps to Technology Readiness Levels (TRLs).

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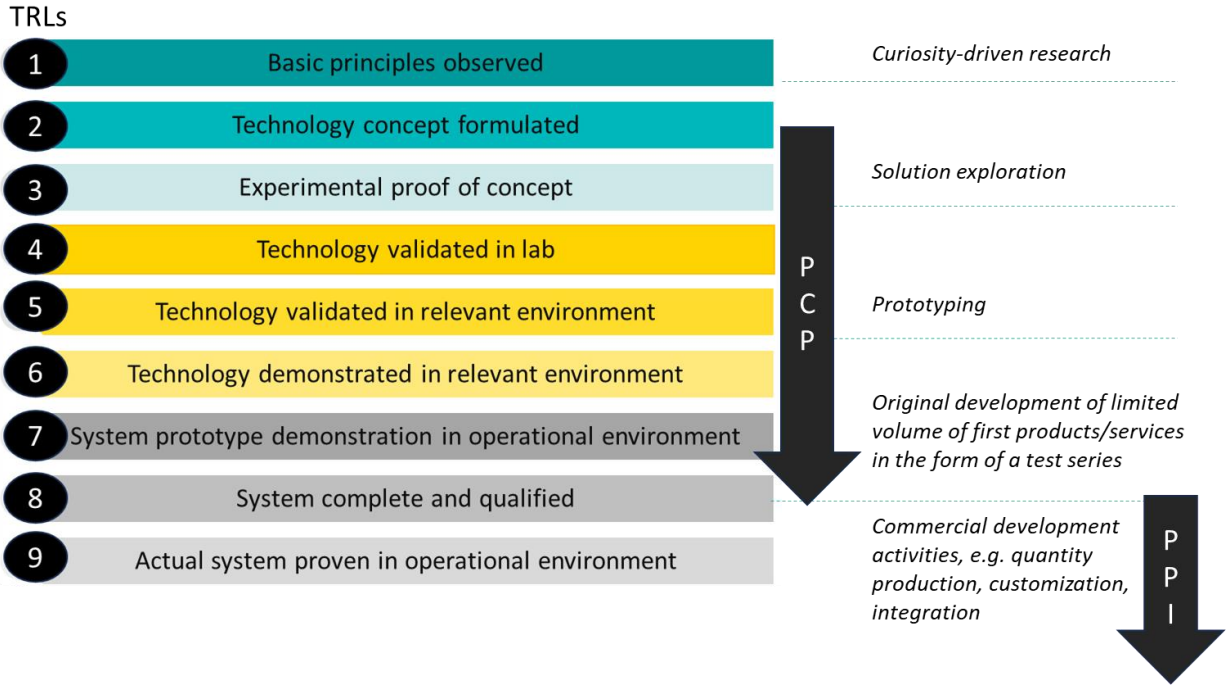
Figure 2. TRLs and Innovation procurement instruments.



As explained under footnote 40 of the 2014 EU R&D&I State aid framework, the different R&D categories can also be considered to correspond to TRL 1 (fundamental research), 2-4 (industrial research – the type of activities targeted by phase 1 of a PCP) and 5-8 (experimental development – the type of activities targeted by phase 2 and 3 of a PCP). Therefore, PCP calls for tenders will cover R&D activities ranging from TRLs 2 to 8, while PPI calls for tenders focus on incremental innovation starting from TRLs 8–9. The Innovation Partnership concerns a single procedure that combines research and development services (being based on the same assumptions as PCP) with the procurement of the resulting solutions, thus covering TRLs from 2 to 9.

The following systematic approach helps procurement cultivate new sources of new ideas and improvements in the supply chain. Innovation procurement involves 4 stages and several steps per stage:

1. **Preparatory stage (before procurement), covering the following steps:**

- Assessment of the business as usual and problem identification
- Description of the needs of the procurer (and end-users).
- Elaboration of the business-case for the procurer to start an innovation procurement (to verify that the procurement achieves a positive cost/benefit outcome for the procurer).
- Assessment of the needs against the state-of-the-art.
    - Verification of what already exists (prior art analysis & patent search).
    - Verification of what the market can deliver (open market consultation).
- Selection and description of the innovation needs (functional and performance requirements).
- Drafting the tender documents (including setting IPR, confidentiality and standardisation requirements).

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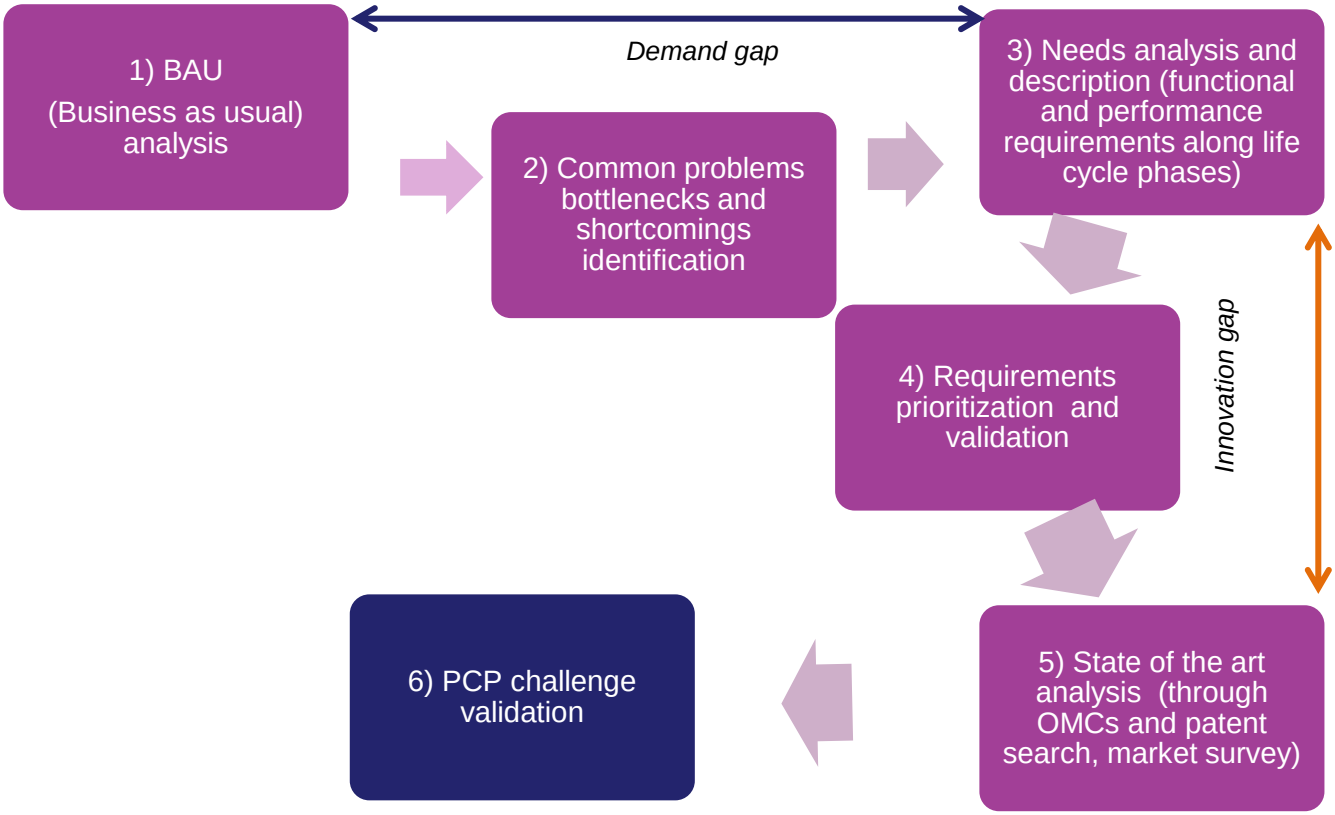
Figure 3. Methodological steps.



2. **Tendering stage (procurement), covering the following steps:**
- Conducting the tender procedure (publication of tender documentation, tendering, evaluation of offers, awarding the contract).
- In case of PPI, conformance testing may take place before or during the tendering stage, to test whether solutions are compliant with minimum requirements that need to be met for offers to be eligible (e.g. conformance with standards, certification requirements).

3. **Contract implementation stage, covering the following steps:**
- Continuous monitoring and assessing the intermediate and final results of the R&D or deployment (PPI),
- Payment of supplier(s);

4. **Contract evaluation stage:**
- Evaluating and reviewing contracts in order to determine the validity of the results.
- Evaluating and reviewing contracts in order to determine the effectiveness of outcomes and impacts.

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3.3. European innovation procurement policy initiatives

Europe mostly relies on "supply side" R&D policy measures such as R&D subsidies to financially stimulate industry to undertake R&D relevant to public services interest. Even when complemented by measures to support take-up of the developed solutions in the public sector, in practice, too few of these projects result in products and services that really get deployed afterwards. Pre-commercial procurement enables an earlier reality check of industry R&D against concrete public purchasing needs, which can help to maximize the effectiveness of the R&D process and optimize public R&D spending.

A better balance between supply and demand side measures to stimulate innovation could help bridge the gap between research push and market pull in Europe. Today supply-side R&D programs are 'pushing' industry and academia to be innovative, but there is little 'market pull' from the public demand side to pull promising innovations that are addressing challenges of public interest into the market. By the research turns into prototypes, there is little interest from public sector customers to try out and experiment with innovations to prepare the public sector for future challenges.

In sectors where public procurers are large buyers, their procurement provides significant leverage to stimulate innovation. Several EU institutions and other organizations expressed opinions on public procurement as a driver for R&I:

European Council:

- 17th November 2022, the EU Competitiveness Council conclusions underline the key importance of public procurement of innovative solutions and of pre-commercial procurement and encourage Member States to develop more impactful innovation procurement policies and to strategically use innovation procurement as an instrument to boost innovation.
- 29th September 2021, at the European Competitiveness Council, Greece with the support of Italy, Germany, Austria, Luxembourg and Cyprus, invite other Member States to co-sign a ministerial declaration on mainstreaming innovation procurement in Europe.
- 30th November 2020: EU Council conclusions urges the Member States and the EC to measure the progress in achieving innovative and sustainable objectives in public procurement investments and calls on the Member States to opt for an ambitious implementation of the new generation of standard forms (eForms), including, where appropriate and feasible, as mandatory fields areas, such as green, socially responsible and innovation procurement.
- 12th March 2018: EU Council conclusions underlines the importance of using PCP and PPI as a strategic tool for improving competitiveness of the EU industry and fostering a transition to a more innovative economy.
- 20th February 2017: 3519th Competitiveness Council Conclusions identified as a priority for the Economic semester process "making better use of strategic procurement, in particular to support innovation".
- 23rd June 2015: ERAC opinion on innovation procurement makes 5 concrete recommendations to Member States and the European Commission to mainstream PCP and PPI implementation across Europe.
- 21st February 2014: 3295th Competitiveness Council Conclusions (Contains conclusions on the benefits of creating clusters/cooperation at European level on PCP to modernise public services).
- 25th October 2013: EU Council Conclusions (Section I.16 contains conclusions on PCP and link with VC).
- 26th April 2012: EU Council Conclusions (Section I.18 contains conclusions on PCP).

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- 4th February 2011: EU Council Conclusions (Section II.20 contains conclusions on public procurement as driver for innovation).
- 26th May 2010: 3016th Competitiveness Council Conclusions (Section II.1 contains conclusions on PCP).
- 30th May 2008: 2871th Competitiveness Council Conclusions (Section 2.3 contains conclusions on PCP).

Starting in 2007, the European Commission is reinforcing the policy framework in Europe for procurers to use Pre-Commercial-Procurement (PCP) and Public Procurement of Innovative Solutions (PPI).

EC recommends Member States to step up innovation procurement investments. In the 2023 report on the State of the Digital Decade, the EC recommends Member States to develop action plans in support of innovation procurement and to step up efforts to increase public procurement investments in developing, testing, and deploying innovative digital solutions.

The New European Innovation agenda (2022) highlights the need to develop national strategies that foster innovation procurement and leverage the role of the public sector as lead customer to modernise public services and strengthen Europe's industrial competitiveness globally.

Beginning 2023, the new Innovation Procurement Observatory appointed by DG CNECT started benchmarking of national policy frameworks and investments on innovation procurement in Europe for the second time.

In 2022 the EC organised a webinar explaining the legal framework and sharing good practices that are already leaving IPR ownership with contractors. This took place in the context of realising the objectives of the EU Action plan on IPR (2020) that highlights the need to improve the conditions for companies to protect and use IPR in public procurement with a view to stimulating innovation and boosting the economy. Member States should consider leaving IPR ownership to the contractors where appropriate unless there are overriding public interests at stake or incompatible open licensing strategies in place.

In March 2021, DG CNECT published a study that benchmarked national policy frameworks and spending on public procurement of innovative solutions across Europe.

The EU's research and innovation funding program for 2021-2027, Horizon Europe, reinforced EU co-financing for PCP and PPI procurements undertaken jointly by public procurers from different Member States and/or associated countries. The EU also has undertaken PCP and PPI procurements.

In May 2018, the EU published a Commission notice "guidance on innovation procurement". In July 2021, the guidance was updated.

DG CNECT has appointed experts to provide local assistance on PCP and PPI (incl. legal assistance) to public procurers that intend to start concrete PCP and PPI procurements for ICT based solutions across all EU Member States and launched the European Assistance for Innovation Procurement (EAFIP) program.

A consultation on the interest of public procurers for innovation procurements of ICT based solutions for Horizon 2020 work programme 2018-2020 was conducted between mid-February and mid-October 2016.

The European Research Area and Innovation Committee (ERAC) of the European Council adopted in June 2015 an opinion on innovation procurement that recommends EU Member States to: 1. Create a strategic framework for innovation procurement, together with a clear action plan; 2. Raise public buyers' awareness and

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set up a coordinating service offering support for procurers; 3. Develop and provide financial incentives for undertaking innovation procurement; 4.Set up innovation procurement targets with monitoring systems on European and national level.

2014 EU State aid framework on R&D&I (Research, Development and Innovation): reassures procurers that PCP and follow-up PPI procurements to deploy commercial volumes of innovative solutions do not involve State aid, when the PCP is implemented in line with the 2007 PCP communication and the PPI is implemented as a separate open procurement procedure as provided for in the EU public procurement directives (see new section 2.3). For procedures that combine the procurement of R&D with follow-up deployment of commercial volumes of products (long term innovation partnerships with vendors) the presumption that there is no State aid involved only holds in the exceptional case of unique/specialised products.

2014 EU public procurement directives: maintain and word more clearly the exemption for R&D services that is used by PCP (see also the new reference to PCP in preambles 47 and 57 of directives 24 and 25). Public procurers can thus continue to carry out PCP procurements based on exemption for R&D services in the new articles 14 in Directive 2014/24/EC and article 32 in Directive 2014/25/EC. PCP can also be applied in the defence sector as the same exemption for R&D services is also available in article 13(f)(j) of the 2009 defence procurement directive COM(2009)81.

2014-2020 European Structural and Investment Funds: encourage public procurers to encourage more PCP and PPI procurements. Concrete scenarios for implementing synergies between H2020 and ESIF funding for implementing PCP and PPI procurements.

Reinforced EU co-financing for PCP and PPI in Horizon 2020: the EU's research and innovation funding program for 2014-2020, Horizon 2020, provided EU co-financing for PCP and PPI procurements undertaken jointly by public procurers from different Member States and/or associated countries. The EU or EU funding bodies can also participate themselves in PCP and PPI procurements.

Creating a measurement framework for ICT and R&D procurement: September 2014 DG CONNECT published a study that quantified the amount of public procurement of R&D, ICT and ICT related R&D across Europe and developed guidelines for a measurement framework for the future. The study happened in the context of measuring progress on the below Innovation Union and Digital Agenda for Europe policy ambitions and targets.

Quantifying the impact of PCP compared to other procurement approaches: End of April 2014 DG CONNECT started a study to quantify the impact of PCP in Europe. The study compares impacts of national procurement cases across different countries and makes recommendations for new actions to be undertaken at EU and national level to encourage wider use of PCP and PPI. Results on the impacts of EU funded cross-border PCP projects here.

EU targets for innovation procurement: In 2011, the Innovation Union and Digital Agenda for Europe proposed targets to encourage Member States to increase the use of PCP and PPI.

Overview of national legal basis for implementing PCP across the EU: The EC's 2010 survey across the Member States public procurement authorities confirms to procurers where the legal basis for doing PCPs is transposed in their own country's legal framework.

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Commission communication and staff working document on PCP: The December 2007 communication introduces the concept and potential benefits of PCP. The staff working document illustrates how PCP can be implemented in line with the legal framework. Both are bundled in the Pre-commercial Procurement Brochure (English):

The EC has encouraged the financing of innovation procurement actions:

- The Horizon Europe program offers the following types of funding that enables groups of procurers: i) To prepare and undertake together a PCP or PPI procurement (calls for PCP actions or PPI actions); ii) To cooperate on identifying opportunities and preparing for future PCPs / PPIs (calls for coordination and support actions). The calls for proposals to apply for this funding are published via the Horizon 2020 participant portal: calls exist in several domains like Health, Security, Energy, Transport, Space, Climate Change / Environment, European Research Infrastructures, Information and Communication Technologies.
- Starting from 2014, ESIF rules encourage investments in R&D and innovative solutions that increase the capacity and efficiency of public administration and address key societal challenges. Including innovation procurement as condition for receiving structural funds is possible due to the fact that ESIFs support massive investments, mostly via large scale public procurements, in the following sectors: transport, environment, energy, ICT infrastructure, urban development, health, research and education infrastructure. These sectors “are employment-intensive, have a great need for innovation and are areas in which European industries are world leaders”.

Finally, EC has encouraged synergies between Horizon 2020 and ESIF funding for PCP/PPI:

- Joint or simultaneous use of funds (when different activities in a PCP/PPI are funded either by Horizon 2020 or by ESIF). For example, the coordination and preparation of a PCP is co-funded by ESIF, while the execution of the PCP contracts is co-funded by Horizon 2020.
- Sequential funding (e.g. when PCP is funded under Horizon 2020 and the PPI under ESIF).
- Additional funding (e.g. when ESIF money is used to enhance the skills of national/regional public procurers and end-users to use innovative products procured via Horizon 2020).
- Alternative funding (when ESIF is used to fund projects that have received positive evaluation under Horizon 2020, but were not funded due to the insufficient funds).

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4. Open Market Consultation

4.1. European general legal framework

The Open Market Consultation is part of the preparation for an innovation procurement action, which involves the proactive analysis of the offer system and provides a pre-information to the market in order to give a congruous time for the preparation of fit-for-purpose proposals. Considering the execution, an open market consultation is a dialogue between procurer(s) and the market, in which the procurers ask for the view of the market to identify the ability thereof to meet the procurer needs.

The legal basis for the conduct of an open market consultation is:

- The **Treaty on the Functioning of the European Union** principles and derived principles (equal treatment, non-discrimination, transparency).
- EU **competition rules** (e.g. related to distortion of competition and information exchange between competitors).
- The **EU public procurement directives** and their transposition into national legislation.

Article 40 of the Public Sector Directive and article 58 of the Utilities Directive provide that “Before launching a procurement procedure, contracting authorities may conduct market consultations with a view to preparing the procurement and informing economic operators of their procurement plans and requirements. For this purpose, contracting authorities may, for example, seek or accept advice from independent experts or authorities or from market participants. That advice may be used in the planning and conduct of the procurement procedure, provided that such advice does not have the effect of distorting competition and does not result in a violation of the principles of non-discrimination and transparency.”

Furthermore, article 41 of the Public Sector Directive and, respectively, article 59 of the Utilities Directive complete the general provisions aforementioned and provide the rules for the prior involvement of candidates and tenderers: “Where a candidate or tenderer or an undertaking related to a candidate or tenderer has advised the contracting authority, whether in the context of Article 40 / 58 (market consultation) or not, or has otherwise been involved in the preparation of the procurement procedure, the contracting authority shall take appropriate measures to ensure that competition is not distorted by the participation of that candidate or tenderer.” Such measures shall include the communication to the other candidates and tenderers of relevant information exchanged in the context of or resulting from the involvement of the candidate or tenderer in the preparation of the procurement procedure and the fixing of adequate time limits for the receipt of tenders. The candidate or tenderer concerned shall only be excluded from the procedure where there are no other means to ensure compliance with the duty to observe the principle of equal treatment. Prior to any such exclusion, candidates or tenderers shall be given the opportunity to prove that their involvement in preparing the procurement procedure is not capable of distorting competition.

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For preparing an innovation procurement, organizing an open market consultation is preferable compared to hiring one private adviser to help prepare tender specifications. By consulting all interested economic operators, the risk of favouring certain suppliers or certain technologies can be effectively mitigated. Also, the open market consultation helps cross-check the procurer's analysis of the prior art/IPR and standardization/regulatory environment.

According to the derived Treaty principles, the market consultation will not distort competition when:

- All relevant information that the procurer provides to economic operators in the market consultation is also communicated to the other economic operators in a transparent, non-discriminatory manner.
    - Prior Information Notices (PIN) serve the purpose for public procurers to make known in a transparent way to all potentially interested actors any preparatory activities (e.g. open market consultations) that the procurer plans to organize before the actual purchase.
- All interested economic operators receive equal chances to formulate an offer in the subsequent procurement and all requirements imposed in the subsequent procurement are not biased towards a specific economic operator or towards a specific proprietary technology.
- The market consultation is really open to all potentially interested bidders on the entire market.
    - According to the derived Treaty principle of non-discrimination, the market consultation may not restrict participation to the market consultation to national economic operators or operators of a certain type (e.g. SMEs), in the detriment of economic operators from other EU countries or other company types or sized. This obligation applies also to PCPs that are exempted from the EU public procurement directives.

Specifically, in EU funded innovation procurement projects, it is recommended:

- To announce 60 days in advance the intention to organise a market consultation to all possibly interested vendors (via announcement of the open market consultation in the European Tender Database, using the instrument of Prior Information Notice), allowing sufficient time to interested economic operators to express their interest in participating.
- After the market consultation, to publish the information provided by the procurer to economic operators (e.g. by means of a FAQ list, by videotaping the entire Open Market Consultation, etc.).

Such Q&A should be anonymised (not mentioned the name of the tenderer who asked the question) and stripped of any references to confidential solutions/products of specific vendors (to respect the confidentiality/equal treatment principles.

During open market consultation, interested tenderers shall be able to indicate to the procurer that is organising the open market consultation which information that they are providing to the procurer is confidential and cannot be disclosed to other market players. Such confidential information should then be provided under a non-disclosure agreement.

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4.2. Other market engagement approaches

When "engaging the market" the private and public sectors may adopt different approaches, which respond to different system of rules. The private sector normally goes to pitch as a practice to see if an on-going contract is still competitive and before establishing new agreements or contracts. The public sector may not restrict consultation and cannot limit information to specific/preferred subjects or operators, but any consultation should be advertised and open to all potentially interested bidders on the entire market.

The legal basis for the engagement of the market by the public sector is represented by the “open market consultation” pursuant to the Public Sector Directive and competition rules.

In this section we compare the rationale for market consultation with the pitching approach.

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Table 1. Market consultation vs pitching approach (author Sara Bedin, 2023**).**

OPEN MARKET CONSULTATION	PITCHING
It is a dialogue between procurer(s) and all potentially interested bidders on the entire market and/or experts in which the procurers ask for the view of the market to assess the stage of development of the needed solutions and provide a pre-information to the market in order to give a congruous time for the preparation of fit-for-purpose proposals. **OMC can consist of a combination of formats, that takes place in public and as one-to-one meetings**	**It is a concise and compelling presentation or proposal that outlines the key elements of a product(s), service(s), or business idea(s) with the aim of persuading potential investors, partners, or customers. The goal of a business pitch is to make your listeners interested in the business and either invest money or become customer.**
They are not used as a mean of calling for offers	
• **It (openly) provides early overview on procurement objective(s) and need, and it is organised in preparation of this procurement.** • **It can broach the views of the market not only on the tender specifications, but any aspect that may be relevant for the planning and conduct of the procurement (e.g. technological possibilities, standardization/regulatory environment, suitable procurement procedure, suitable IPR conditions, feasibility of budget and time limitations on the procurement etc.).** • **It is used to detect the innovation gap and to confirm the legal justification for the choice of a procurement instrument, depending on the market structure and TRLs,** • **It is an approach that drives innovation from the demand side,** • **It is promoted and managed by the procurers for the view of the market,** • **It responds to a public need to achieve maximum value and reduce public spending, while enlarging and stimulating the competition.**	• It does not presuppose a procurement plan, but it can be aimed at determining it (in future) • It is focused on the features and distinctive elements of the solutions, • It is aimed at promoting technological transfer, encouraging the large-scale adoption of existing solutions, • It is an approach that pushes innovation from the supply side, • It can be managed by intermediaries or the suppliers themselves to showcase what's being already developed, • It responds to encourage the matching of supply and demand.

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4.3. Italian Legal Framework

Table 2. Italian legislative and soft regulation sources.

Legislative and soft regulation sources
Legislative Decree 36/2023, in force from 1st April 2023, effective from 1st July 2023 *(which replaced the D. Lgs 50/2016).*
Resolution dated 6th March 2019 approving Guidelines no. 14 "Information on preliminary market consultations"[2] (see 7).

According to Articles 77 and 78 of Legislative Decree No. 36/2023 (Italian Public Contracts Code), contracting authorities are permitted to conduct preliminary market consultations to prepare tender documents, select appropriate procurement procedures, and inform economic operators about upcoming procurements and their requirements. These consultations may involve independent experts, market operators, authorities, or other suitable parties. The 2023 Code emphasizes that this pre-tender tool serves to enhance the contracting authority's understanding of available market offerings and supply dynamics, thereby supporting the identification of the most suitable procedural route.

Compared to the previous legislation (Legislative Decree No. 50/2016), the 2023 Code introduces clarifications and improvements. Notably, it replaces the term "market participants" with "market operators" and expands the range of consultable parties to include "other suitable subjects." This broader formulation, endorsed by prevailing jurisprudence, clarifies the possibility of allowing the holders of collective and/or widespread interests, such as, for example, trade associations, to be involved in the consultations. This innovation removes any residual ambiguity about the legitimacy of involving such representative entities in the consultation process.

While the primary function of preliminary market consultations lies in improving procurement planning and ensuring market awareness, a specific application involves justifying the use of negotiated procedures without prior publication. This applies when a contracting authority asserts the technical infungibility of a product or service—meaning that only one operator is capable of delivering the performance due to the absence of viable alternatives. In these cases, Article 76(2)(b) of the Code requires clear evidence, potentially emerging from the outcomes of market consultation, including a thorough verification of both European and extra-European markets, and comparisons with the procurement behavior of other contracting authorities. A simple supplier declaration asserting exclusivity is not sufficient; the authority must actively assess and verify the absence of alternative suppliers or solutions.

In all instances, preliminary market consultations must comply with principles of transparency and maximum participation. The process must avoid granting undue advantage to any individual operator and must not distort competition. Participation is voluntary, non-discriminatory, and open to all operators meeting the general conditions set out in the consultation notice. The consultation may guide the authority in choosing the most appropriate procurement procedure, but it must not pre-emptively distort the fairness or accessibility of the upcoming tender phase.

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Before the 2023 Code entered into force, Italian soft regulation—particularly ANAC Guidelines No. 14—provided key non-binding recommendations which, although no longer in force, continue to serve as a strong basis for interpretation and are often cited in relevant jurisprudence. From the Italian soft regulation, it is clear that the main objective of the Open Market Consultation (OMC) is to enlarge competition and achieve economies, also in relation to the market structure, in order to identify and define the most suitable means to satisfy a contracting authority's concrete needs before launching a procurement.

The OMC process is non-selective in nature—it is not aimed at choosing suppliers—but is rather intended to reduce the information asymmetries existing between contracting authorities and market operators. Through this process, contracting authorities are able to acquire market knowledge to make more informed choices, while all participants benefit from early and relevant information about the upcoming contract. The consultation aims to improve the drafting of tender documents, inform economic operators of the authority's intentions and requirements, and ensure that future contracts are awarded under the most technically and competitively favorable conditions. It also enables the contracting authority to better align internal objectives with actual market offerings, generating efficiency and saving public resources.

The Italian Council of State, in its decision no. 6302 of 23 September 2019 (Section III), emphasized that preliminary market consultations constitute a preparatory, pre-tender phase intended to enhance the authority's awareness of the availability, capabilities, and expertise of economic operators regarding a specific procurement need. This process aims to reduce the asymmetry of information between public buyers and the market, allowing procurement to proceed under conditions of optimal transparency and competition.

The Italian guidelines also make a clear distinction between open market consultations and other instruments such as competitive dialogue or market surveys conducted for negotiated procedures. The latter are intended to select which economic operators will be invited to tender, while the OMC is exclusively focused on gathering market intelligence and facilitating transparency. Contracting authorities may not use the consultation to anticipate the outcome of the procurement or transform its procedural nature outside of the established framework.

According to the same soft regulation, OMC may only be conducted in preparation for a specific and concrete procurement action. It should be launched after the authority has formally planned the procurement and before the procedure for selecting the contractor is initiated. The use of consultations for purely informative or speculative purposes, disconnected from an actual procurement plan, is not permitted. In line with the OMC's purpose, it is not allowed to carry out consultations relating to selection procedures that have already been initiated, even if those procedures are currently suspended.

The Italian Guidelines limit, according to the Council of State, the scope of application of OMC exclusively to contracts that involve innovative or non-standard solutions. The use of consultations for contracts that are routine in nature or related to standardised services or products should be excluded. However, contracting authorities may conduct partial consultations when appropriate, for example when clarifying only certain technical aspects of a forthcoming procurement. In all cases, the information exchanged must not amount to technical or economic offers. Submissions must not include price quotations or product/service proposals that could distort the competitive dynamics of the future procurement phase.

Consultation notices should clearly specify the information needs of the contracting authority, the type and format of contributions requested, the timelines for submission, and, where available, the indicative timeline for launching the procedure and awarding the contract. They must also explain any potential incompatibilities that

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may result from participation and must explicitly state that contributions are voluntary and will not be reimbursed in any way.

Participation in the consultation does not give rise to any legal obligation between the public authority and the participating economic operators. Choosing not to participate does not exclude an operator from future procedures, nor does participation offer preferential treatment. To ensure compliance with the principles of equal treatment and transparency, contracting authorities must ensure that relevant information shared during consultations is made equally available to all potential tenderers. They must allow sufficient time for the preparation and submission of offers and, when appropriate, organize publicly advertised events for collective consultation. Under no circumstances should commercially sensitive information be disclosed in a way that enables coordination among competitors. To that end, all such information must be anonymised where necessary.

Through this regulatory framework, Italy ensures that preliminary market consultations fulfill their primary objective: improving the quality, strategic orientation, and competitive fairness of public procurement, while safeguarding procedural integrity and preventing market distortions.

From the Italian soft regulation, it is clear that the main objective of the OMC is to enlarge the competition and achieve economies, also in relation to the market structure - in order to identify and define the most suitable means to satisfy a concrete procurer's needs, before launching an upcoming procurement.

Table 3. Relevant case law or pre-litigation opinion and resolutions – Italy.

	RELEVANT CASE LAW OR PRE-LITIGATION OPINION AND RESOLUTIONS
State Council, 23rd September 2019 n. 6302	The Council of State has highlighted that "the institution of preliminary market consultations is a simple pre-tender phase, aimed at achieving a better awareness of the availability and knowledge of economic operators with respect to specific procurement needs" aimed at reducing the information asymmetries existing between contracting authorities and market operators, so that the procurement takes place according to the best competitive criteria.
ANAC Resolution of 27th January 2021, n. 83	The ANAC, in response to Cmr Surgical S.r.l., specified that the Contracting authority that launched a preliminary market consultation for the “supply of a system for robotic surgery and related consumables” made a distorted use of the market consultation, which was deviated from the correct purpose of the

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	instrument, of outlining a clear and complete understanding of the reference market and to reduce information asymmetries that create obstacles to development of competition, in compliance with the principles of non-discrimination and transparency. Based on the parameters of the consultation, the Contracting Authority have limited in advance the field of investigation to those products equipped with the same (or equivalent) technical robotics characteristics, with prejudice of those, which have also proven to exist, capable to provide different technologies. The contracting authority should have benefited from an open and complete consultation, aimed not only at market operators operating in the robotic surgery field, but also at other qualified subjects.
ANAC Resolution of 14th September 2022, n. 417	the ANAC, in response to an Emilian health authority, specified that the contracting authority does not have the obligation to evaluate all the documentation acquired by the operators and to draw up a formal verbal process, unlike what it is required to do during the tender phase for the evaluation of the technical and economic offers, nor is there an obligation to justify the use or non-use of the information acquired.

BEST PRACTICE (compliant with the national law)

Authority: Azienda Regionale dell'Emergenza Urgenza della Sardegna

Period: July - September 2019

Procurement need identified/described: "innovative solution that allows to perform missions of HEMS aid in adverse weather environmental conditions by means of instrumental approach to the event site and safe landing even on occasional heli-surfaces".

Link: Ricognizione dei fabbisogni pubblici di innovazione - Consultazione di mercato AREUS (Milano) (youtube.com).

Procurement planned/budgeted: Euro 1,219,601.64 (VAT 22% excluded), Funded by ERDF (Regional Operating Program – European Regional Development Funds) Sardinia 2014-2020, Axis I - Action 1.3.1.

Objective and contribution requested: Complementing an extensive patent search and scientific literature review, the open market consultation process has involved the proactive analysis of technology offerings and ongoing developments with the aim to:

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- Find out whether technologies are commercially available and acquire information about the advantages and disadvantages and the level of fulfilment of the desired functionalities, in order to confirm the assumption for the innovation procurement scope, investigating the supply side offering system and (other) demand-side investments.
- Provide an overview on the intended contract objectives, the tendering process and the main clauses of the planned procurement contract.
- Enable the networking between the market operators.

Main findings: The open market consultation confirmed that the solution was not readily available.

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Table 4. OMC at a glance – Italy.

OMC at a glance	Italy
What is the key objective in terms of broadening the competition versus identification of potential /valid solutions?	The main objective of OMC is to broaden competition. It aims to reduce information asymmetries and help identify the most suitable means to meet the contracting authority's needs.
Can the consultation be done without having defined the procurement need and requirements?	No, OMC should be launched having defined the procurement need and requirements.
Can the consultation be launched if not preceded by the planning of a concrete procurement?	No, OMC should be conducted in preparation for a specific and concrete procurement action.
Can the OMC be implemented for the purpose of market exploration and to identify potential matching between supply and demand (to promote future procurement actions)?	No, the OMC cannot be used for generic market exploration or scouting. It must be linked to a specific procurement and cannot serve as an informal tool to promote future tenders without defined objectives
Can the consultation be done to search for a particular pre-identified technology?	NO, if the consultation is limited to a pre-identified technology and excludes other potentially valid alternatives, it is considered a distorted use of the instrument. Such narrowing of scope would restrict competition.
Can be implemented to identify potential and promising challenges suitable to be solved by particular type /identified subjects (e.g. SMEs, national companies, beneficiaries of other fundings…)?	NO, the OMC cannot be directed toward specific types of operators and cannot be designed to favor certain categories (to identify challenges suitable to particular type of subjects).
Are there any limitations in the field of application of the consultations (e.g. Innovation purposes)?	Yes, the field of application is limited. OMCs should be used only for innovative or non-standard contracts. Routine or standardized supplies/services are excluded from the appropriate scope of the OMC.

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4.4. Greek Legal Framework

Table 5. Greek Legislative and soft regulation.

Legislative and soft regulation sources
L. 4412/2016 (OJ 147 /A/ 08.08.2016) Public Works, Procurement and Services (adaptation to Directives 2014/24 / EU and 2014/25 / EU).
Law 4782/2021 (OJ 36/A/09.03.2021) Modernization, simplification, and reformation of the public procurement framework' entered into force, introducing in-depth reforms. Directive 17/2016 of the Hellenic Single Public Procurement Authority (HSPPA) on the participation of SMEs in public procurement.

In Greece, preliminary market consultations are foreseen in art. 46, 47 and 48 and art. 278, 279 and 280 of the L. 4412/2016 (Government Gazette A 147 / 08.08.2016 Public Works, Procurement and Services (adaptation to Directives 2014/24/EU and 2014/25/EU).

To that end, a dedicated section in the Greek National Electronic Public Procurement System (NEPPS) has been created and is compulsory to be used (https://cerpp.eprocurement.gov.gr/deliberation/#/deliberation-search/). The website in in Greek and in English, user friendly with a manual for guidance.

The purpose of the preliminary market consultations according to the Greek legislation is the assessment of market capacity, determination of needs, preparation of the procurement procedure, definition of technical specifications, setting of contract award conditions, briefing of economic operators on the plans and their requirements regarding contracts. When the contracting authorities/contracting entities cannot identify ways to satisfy their needs or assess the technical solutions being tendered, a preliminary market consultation has been proved very useful.

Consultations are conducted based on a special invitation for the open, non-binding participation of interested economic operators posted on the National Electronic Public Procurement System (NEPPS) and the website of the contracting authority and, at the discretion of the contracting authority, in the print and online media. The expenditure of publications in the media and all other means of publicity shall be borne by the contracting authority/contracting entity.

Where a candidate or tenderer or an undertaking related to a candidate or tenderer has advised the contracting authority/contracting entity, whether in the context of preliminary market consultation or not, or has otherwise been involved in the preparation of the procurement procedure, the contracting authority/contracting entity shall take appropriate measures to ensure that competition is not distorted by the participation of that candidate or tenderer (cf. Articles 48 and 280 'prior involvement of candidates or tenderers').

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In article 46, the basic elements of the preliminary market consultations are presented:

- Prior to the commencement of a procurement procedure, contracting authorities may consult with the market in order to prepare the procurement procedure and to inform economic operators of their plans and contract requirements. To this end, contracting authorities may, for example, seek or receive advice from independent experts or authorities, such as the Authority and the Tender and Contracts Monitoring Unit (TPA) of the Centre for International and European Economic Affairs Law (KDEOD) or market participants. Such advice may be used in the design and conduct of the procurement procedure, provided that such advice does not distort competition or violate the principles of non-discrimination and transparency.
- Based on the above, the preliminary market consultation is up to the discretion of the contracting authorities, therefore it is not compulsory to be preceded by the planning of a concrete procurement. When decided it can have a double scope: to prepare the procurement procedure and to inform economic operators of their plans and contract requirements.

In Article 47, rules for conducting preliminary market consultations are foreseen.

- The consultations are conducted on the basis of a special invitation for open, non-binding participation of the interested economic entities, which is posted on Ε.Σ.Η.ΔΗ.Σ. and on the website of the contracting authority and at the discretion of the contracting authority, via printed or electronic press. The cost of publications in the press and any other means of publicity shall be borne by the contracting authority. In the case of contracts for which the application of this provision would oblige contracting authorities to provide information the disclosure of which is contrary to their essential interests, or which may be prejudiced in secret, the special invitation referred to in the first subparagraph shall not be made public but shall be sent with each convenient way.
- The invitation shall state the details of the contracting authority, the subject of the contract, the way and time limit for the submission of comments. A descriptive document is attached to the invitation, which includes any other information related to the contract to be concluded. In the case of the third subparagraph of paragraph 1, before sending an invitation to selected economic operators active in the subject of the contract, the contracting authority shall ensure the confidentiality of the economic operators, in accordance with Article 21 (2).
- The consultation process shall be conducted in accordance with the provisions of Articles 22, 36 and 37 and shall last at least fifteen (15) days and may not exceed sixty (60) days from the posting of the relevant announcement or from the dispatch of the relevant invitation. This period may be extended, in particular in cases of contracts of major economic value or with a particularly complex object. After the deadline set in the invitation to complete the consultation, the contracting authority collects, posts on its website and processes the submitted comments. The last subparagraph shall not apply in the cases referred to in the third subparagraph of paragraph 1.

According to the art. 46 in connection with 47 and in particular par. 1 and 2, the market consultation can be done for informative reasons, informing the market on the subject of the planned upcoming contract, including any other information related to the contract, such as the challenge brief, the identified need and eventual requirements.

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The above provisions do not exclude the possibility to implement the market consultation for market exploration and to identify potential matching between supply and demand neither to search for a particular pre-identified product. Moreover, market consultation can be implemented to identify potential and promising challenges suitable to be solved by type /identified subjects (e.g. SMEs, national companies, beneficiaries of other fundings…), without setting any limitation in the field of application of the consultations.

Finally, in art. 48, the previous involvement of candidates or tenderers and the measures to be taken in compliance with the EU treaty principles are foreseen:

- If a candidate, tenderer or undertaking related to a tenderer or tenderer has provided advice to the contracting authority either within or outside the scope of Article 46 or has been involved in any way in the preparation of the contract award procedure, the contracting authority shall take appropriate measures. to ensure that competition is not distorted by the participation of that candidate or tenderer. These measures include the disclosure to the other tenderers and tenderers of relevant information exchanged in the context of the previous involvement of the tenderer or tenderer in the preparation of the procurement process and the setting of sufficient deadlines for the receipt of tenders. The tenderer or tenderer involved shall be excluded from the procedure only if there is no other way to ensure compliance with the obligation to observe the principle of equal treatment. Prior to any such exclusion, the Competition Commission, responsible for the implementation of L. 3959/2011 (A` 93) and the Authority are informed and the candidates or tenderers are given the opportunity to prove that their participation in the preparation of the contract award process. it is not possible to distort competition. Documents and particulars submitted by tenderers or tenderers to prove this shall be recorded and submitted to the Competition Commission and the Authority with the care of the contracting authority. The measures taken shall be recorded in the special report required under Article 341.

An important aspect to be taken into consideration by each contracting authority conducting a market consultation, in compliance with the EU legal framework and EU treaty principles of equal treatment and transparency, is the previous involvement of candidates or tenderers. In case that a tenderer, tenderer or undertaking related to a tenderer or tenderer has provided advice to the contracting authority either within or outside the scope of Article 46 above or has been involved in any way in the preparation of the contract award procedure, the contracting authority shall take appropriate measures. to ensure that competition is not distorted by the participation of that candidate or tenderer.

Measure that can be taken include the disclosure to the other tenderers and tenderers of relevant information exchanged in the context of the previous involvement of the candidate or tenderer in the preparation of the procurement process and the setting of sufficient deadlines for the receipt of tenders.

In case there is no other way to ensure compliance with the obligation to observe the principle of equal treatment the candidate or tenderer involved shall be excluded. Prior to any such exclusion, the Competition Commission, responsible for the implementation of L. 3959/2011 (A` 93) and the Authority are informed and the candidates or tenderers are given the opportunity to prove that their participation in the preparation of the contract award process. it is not possible to distort competition.

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Table 6. Relevant case law or pre-litigation opinion and resolutions – Greece

RELEVANT CASE LAW OR PRE-LITIGATION OPINION AND RESOLUTIONS
Case Law No 403/2022 Administrative Court of Thessaloniki • Appeal against a decision of the Authority for the Examination of Preliminary Appeals. • Remedies Review Body. • Open e-procurement for the provision of medical equipment for a hospital. Requirements. • The scope for choosing the specific technical requirements falls out of the judicial review. • The fact that one product does not comply with a set criterion does not mean that this criterion. • Distorts competition, considering that requirements limit, in principle, the number of economic. • Operators eligible to participate.
Resolution No 1349/2020 Court of Auditors • Open e-procurement. Previous involvement of candidates or bidders. • If a candidate, or bidder or company related to a candidate or to a bidder has provided advice to the contracting authority or has been involved in any way in the preparation of the process, the contracting authority must take appropriate measures to ensure that competition is not distorted by the participation of that candidate or tenderer. These measures include the disclosure to the other candidates and tenderers of relevant information exchanged in the context of the previous involvement of the tenderer or tenderer in the preparation of the procurement process and the setting of sufficient deadlines for the receipt of tenders. The candidate or tenderer involved shall be excluded from the procedure only if there is no other way to ensure compliance with the obligation to observe the principle of equal treatment. Two different contracts. • No link between them which could give an advantage to the bidding company, the contracting authority has not activated art. 48 of L. 4412/2016, checking whether a potential conflict of interest, no violating thus this article.
Pre-litigation decision No 1272/2021 Authority for the Examination of Preliminary Appeals, Remedies Review Body. • Open e-procurement for the provision of medical equipment for a hospital. Requirements. • Specific technical requirements not changed following a market consultation. • Distortion of competition. Not valid following the Case Law No 403/2022 of the Administrative Court of Thessaloniki.

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BEST PRACTICE (compliant with the national law)

Authority: Athens International Airport S.A.

Period: 2021

Procurement need identified/described: AIA published its intention to conduct a tender related to the provision of “Purchase of Fuel Truck at Athens international Airport”. In that respect, and prior to the launching of the said tender, AIA communicated the main aspects of the tender to potential market participants having experience in similar projects, vehicle and equipment provisioning, for a preliminary market consultation so to receive their comments, remarks and opinions.

Objective and contribution requested: AIA expected from the participants to provide their inputs for this market consultation by submitting the below information:

- Comments and remarks on the provided Technical Description.
- A rough cost of the requested vehicle.
- The years of availability for the requested vehicle.
- The delivery time of the proposed new requested vehicle.
- The availability of local technical support for new vehicle (in Greece).
- Special reference should be made to the possible availability of green technology products, accompanied by all relevant information, regarding operational / technical specifications and maintenance support, compared against similar vehicles with conventional thermal engines.

Participants wishing to be involved in the consultation process expressed their interest by submitting a written application by email to AIA along with a confidentiality statement.

Main findings: the elaboration of the participants’ comments, remarks, and opinions in the Operational and Technical Specifications lies under AIA’s sole discretion.

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Table 7. OMC at a glance – Greece.

OMC at a glance	Greece
What is the key objective in terms of broadening the competition versus identification of potential /valid solutions?	The OMC serves the dual purpose of informing economic operators of the needs, to broadening the competition, as well as assessing market capacity and identifying valid solutions
Can the consultation be done without having defined the procurement need and requirements?	Yes, OMC should be launched to assist contracting authorities in identifying ways to satisfy their needs. Therefore, consultations can be initiated even if the procurement requirements have not yet been defined.
Can the consultation be launched if not preceded by the planning of a concrete procurement?	Yes, OMC is optional and can be carried out independently of formal procurement planning
Can the OMC be implemented for the purpose of market exploration and to identify potential matching between supply and demand (to promote future procurement actions)?	Yes, OMC may be used as a non-binding exploratory tool with the aim to clarify market capabilities and potential matches between supply and demand, and may legitimately inform and shape future procurement decisions.
Can the consultation be done to search for a particular pre-identified technology?	Yes, there is no explicit prohibition against focusing the consultation on specific and pre-identified technologies as long as alternatives are not unfairly excluded
Can be implemented to identify potential and promising challenges suitable to be solved by particular type /identified subjects (e.g. SMEs, national companies, beneficiaries of other fundings…)?	Yes, there is no legal prohibition on structuring consultations around specific actor profiles - such as SMEs, to be encouraged to participate in public procurement, by law - however any targeting must be objectively justified. The invitation must remain open or clearly reasoned, and must not exclude other qualified market players who may offer viable solutions.
Are there any limitations in the field of application of the consultations (e.g. Innovation purposes)?	No, there are no legal restrictions on the scope or subject matter of market consultations

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4.5. Spanish Legal Framework

Table 8. Spanish legislative and soft regulation sources.

Legislative and soft regulation sources
Law 9/2017, 8th of November, Public Sector Contracting Act, (Ley de Contratos del Sector Público).

Based on article 134 LCSP, contracting authorities can publish a prior information notice to inform about contracts they intend to award in the following twelve months. This notice should also be published in the Official Journal of the European Union and on the contracting authority's profile. Starting from this point until the initiation of the contracting preliminary market consultations can be conducted to prepare for the procurement and inform interested parties about the contracting plans and requirements.

Acquisitions should begin with a description of the needs to be met, expressed in sufficient terms to allow for market research or consultation. The evaluation will determine whether the subject of the contract is commercial (the goods or services are already available on the market) or if they are innovative, pre-commercial items, or can be modified from existing ones to meet the specific needs of the public buyer.

Article 115 of Law 9/2017, of 8th November, on public sector contracts (LCSP 2017), introduces Open Market Consultations in the Spanish legal system, named preliminary market consultations.

Preliminary market consultations in public procurement procedures can be conducted during the planning or preparation of the tender procedure or during the conduct of the tender procedure.

This legal provision states that contracting bodies may conduct market studies and direct inquiries to economic operators active in the same market in order to properly prepare for the tender process and inform said economic operators about their plans and the requirements they will impose for participating in the procedure.

Regarding the recipients of the OMC, art. 115 LCSP states that "*For this purpose, the contracting authorities may seek the advice of third parties, which may include experts or independent authorities, professional associations, or, in exceptional cases, economic operators active in the market*." Contracting bodies have the option to seek advice from third parties, which may include experts, independent authorities, professional associations, or, in exceptional cases, economic operators active in the market (LCSP 2017 provides for consulting with economic operators as an exceptional measure when, although often they are the most common and suitable participants. Directive 2014/24/EU does not contain this limitation).

Before initiating the consultation, the contracting body will publish, on the contracting authority's profile located on the Public Sector Contracting Platform or an equivalent information service at the regional level, the purpose of the consultation, its start date, and the names of the third parties participating in the consultation, so that all potential stakeholders can access it and make contributions.

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The purpose is the planning of the bidding procedure and, also, it can be carried out during its development, as long as it does not distort competition or violate the principles of non-discrimination and transparency. The consultations conducted should not lead to a specific and narrowly defined contractual object that only aligns with the technical characteristics of one of the consulted parties.

LCSP 2017 specifies that the results of the studies and consultations, if applicable, should be reflected in the introduction of generic characteristics, general requirements, or abstract formulas that ensure better satisfaction of public interests. Under no circumstances should the consultations provide advantages in the contract award process for the companies participating in them.

Section 3 of Article 115 of LCSP 2017 states that when the contracting authority has carried out the consultations referred to in this article, it shall document these actions in a report. The report will list the studies conducted and their authors, the entities consulted, the questions posed to them, and their responses. This report will be substantiated, become part of the contracting file, and be subject to the same publication obligations as the contract specifications, always being published on the contracting authority's profile. In general, when drafting the terms, the contracting authority must take into account the results of the consultations; if not, the reasons must be documented in the previously referred report.

Participation in the consultation does not preclude subsequent involvement in the contracting procedure if one is initiated. Although it is not a common circumstance, the situation may arise where a company participating in the preliminary market consultation is subsequently excluded from the bidding process if, for any reason, it can be demonstrated that the company has gained an unfair competitive advantage through the definition of the object of the consultation.

It is necessary to emphasize that, under no circumstances, during the consultation process, the contracting authority may disclose to the participants the solutions proposed by other participants, as these solutions are to be known exclusively by the contracting authority.

In general, when drafting the terms, the contracting authority must take into account the results of the consultations; if not, the reasons must be documented in the previously referred report. Participation in the consultation does not preclude subsequent involvement in the contracting procedure, if one is initiated.

Key elements of OMC under Spanish Law:

- **Dual Purpose**: The preliminary market consultation serves two purposes: to prepare the tender properly and to inform economic operators about their plans and the requirements for participating in the procedure.
- **Optionality of the OMC**: Contracting authorities have the OMC as an option to conduct market studies and seek input from economic operators active in the market. They can also seek advice from third parties. Therefore, the use of OMC is potestative.
- **Eligible consultation recipients**: The consultation can be directed towards experts, independent authorities, professional associations, or, in exceptional circumstances, market-active economic operators, as well as any potential interested parties.
- **Purpose for which the consultation can be used**: The consultation can be carried out in the planning or during the undergoing of the tendering procedure, prior to the awarding of the contract.

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- **Publicity of the consultation**: The consultation will be advertised on the contracting authority's contracting profile on the Public Procurement Platform or an equivalent service at the regional level. It will specify the purpose of the consultation, its start date, the names of third parties involved, and allow all interested parties to make contributions. Additionally, the reasons for selecting external advisors, if any, will be explained. There is a duty of confidentiality over the individual proposals.
- **Preventive measures**: Measures are established to prevent the consultation from negatively impacting competition and violating principles of non-discrimination and transparency. Solutions proposed by other participants will not be disclosed, and the contract object will not be so specific as to benefit a particular consultant. The results of the consultations should be reflected in more general requirements in the tender documents.
- **Conclusion of the consultation**: After concluding the consultation, a motivated report will be included in the procurement file. This report will include the studies conducted, the consulted entities, the questions asked, and the responses. The report will be subject to the same transparency requirements as the tender documents and will be published on the contracting authority's contracting profile.

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Table 9. Relevant case law or pre-litigation opinion and resolutions - Spain

RELEVANT CASE LAW OR PRE-LITIGATION OPINION AND RESOLUTIONS
A- Tribunal Administrativo Central de Recursos Contractuales (TACRC) Central Administrative Court for Contractual Matters: **TACRC resolution nr. 1093/2017.** Appeal against specifications in a Framework Agreement for service contracts under TRLCSP (Public Sector Contracts Law). Prior market consultations: effects and limitations. Requirement for technical specifications suitable for the purpose of the supply. **Lack of evidence that the required technical specifications substantially restrict competition and competitive participation.** No violation of Article 117.2 of TRLCSP and the principles of public procurement (Articles 1 and 139 of the current TRLCSP). Dismissal. **TACRC resolution nr. 139/2012.** Appeal against the **Exclusion from the Service** Contract for the Analysis, Design, Parameterization, and Implementation of New Features and Improvements Identified by AECID for the SAP System, as well as for its Maintenance. The incompatibility regulated in Article 56.1 of TRLCSP is applicable, as **the company cannot participate if it has been involved in the preparation of technical specifications or preparatory documents for the contract**, provided that such participation could restrict free competition or confer privileged treatment compared to other bidding companies. Dismissal. **TACRC resolution nr. nº 726/2022 Appeal against Announcements and Specifications in Service Contracts under LCSP**. Rejection and Dismissal. Rejection of Appeal 604 due to the supervening loss of the appeal's subject matter, as the contracting authority has withdrawn from the procedure. The appeal is based on the **lack of publication of the preliminary market study report required by Article 115.3 of the LCSP**. Initially, the contract was conceived as a complex unit, but perhaps due to the information obtained from the responses of interested parties, the contracting authority decided to tender three separate contracts. **The results of the preliminary consultations did not serve as the basis for the disputed tenders**, except for some secondary issues related to the determination of certain prices that the contracting authority acknowledges having derived from the results of the preliminary consultations.
B- Comisión Nacional de los Mercados y de la Competencia (CNMC) National Commission for Markets and Competition. The Report of the National Commission for Markets and Competition AM 14/2017, dated 26th October, on the terms governing the establishment of the Framework Agreement for the supply of passenger vehicles**.** "The CNMC has pointed out on several occasions the advantages but also the necessary precautions that must be maintained when conducting preliminary market consultations. Without prejudice to the positive aspects that come with a better understanding of the market, these consultations, **if not properly designed, can increase the risk of the contracting authority being captured, thereby reducing and potentially even undermining the principles of equal access to tenders, non-discrimination, and non-distortion of competition**."

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BEST PRACTICE (compliant with the national law):

1- Universidad Miguel Hernández -Elche, Spain- servicio de gestión de la contratación. expediente 2023_072.Preliminary Market Consultation

Link: University Miguel Hernández - Elche- OMC

The purpose of this preliminary market consultation is to obtain market price information, given the current economic and social context, with a continuing trend of price inflation primarily influenced by the cost of energy, which affects the production, handling, and transportation of products to the final supply, making it necessary to be aware of updated prices determined by the intended contracting object.

2- Centro para el Desarrollo Tecnológico y la Innovación, E.P.Ep. (CDTI) Hadronterapia Preliminary market consultation

Link: CDTI EPE Hadronterapia OMC

The purpose of the Preliminary Market Consultation is to encourage the participation of economic operators active in the market in the submission of innovative proposals aimed at addressing the technological challenge: A compact accelerator as the primary instrument of an advanced clinical radiobiology facility and a constituent of the initial acceleration stage of a future ion therapy facility. The future tender will consist in Pre-Commercial Procurement of R&D services.

It is intended that, based on the results of the OMC, CDTI and CSIC will have information to define technical specifications that enhance the definition and scope of potential projects to be tendered.

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Table 10. OMC at a glance – Spain.

OMC at a glance	Spain
What is the key objective in terms of broadening the competition versus identification of potential /valid solutions?	To better prepare the tender and to inform the market of the intentions of the public buyer and the requisites that will be asked to participate.
Can the consultation be done without having defined the procurement need and requirements?	No, the needs must be sufficiently identified—even if only in general terms—to justify the consultation and to enable market operators to provide relevant and meaningful input.
Can the consultation be launched if not preceded by the planning of a concrete procurement?	Yes, the OMC can be launched during the early planning stage, even if no formal preparatory act has yet been issued or the procurement has not been fully defined. The legal framework only requires a general intention to contract
Can the OMC be implemented for the purpose of market exploration and to identify potential matching between supply and demand (to promote future procurement actions)?	Yes, OMC is allowed to conduct market studies and inquiries to better understand market conditions. While the regulation requires a general intention to procure, it allows consultations to serve an exploratory function to assess the market's capacity, maturity, and potential to respond to public needs.
Can the consultation be done to search for a particular pre-identified solution?	No, the OMC must not be oriented toward a specific pre-identified solution and must remain neutral.
Can be implemented to identify potential and promising challenges suitable to be solved by particular type /identified subjects (e.g. SMEs, national companies, beneficiaries of other fundings…)?	No, the consultation must not be directed to or designed for specific types of operators. Consulting economic operators is allowed only as an *exceptional* measure, and mandates compliance with transparency and non-discrimination. Favoring certain categories (e.g., SMEs or national champions) would go against these principles.
Are there any limitations in the field of application of the consultations (e.g. Innovation purposes)?	No, there are no specific legal limitations regarding the type of procurement. Consultations may support both standard and innovative contracts.

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4.6. Portuguese Legal Framework

Table 11. Portuguese legislative and soft regulation sources

Legislative and soft regulation sources
Decree-Law no. 18/2008, from 29th January, as amended
Technical orientation no. 004/CCP/2019 issued by IMPIC (Institute of Public Markets, Real Estate and Construction)
Technical Orientation regarding Preliminary Market Consultations and establishment of the basic price issued by DGAJ (Directorate-General for the Administration of Justice)

Presently, Portuguese legislation does not specifically regulate Public Procurement for Innovation, including in what concerns Open Market Consultations. It should also be noted that Part II of the Code of Public Contracts (which regulates, *inter alia*, the types and the selection of pre-contractual and contract award procedures) is not applicable to contracts for the acquisition of research and development services, with the exception of contracts with CPV codes 73000000-2 to 73120000-9, 73300000-5, 73420000-2 and 73430000-5, but only so far as the latter also fulfil both of the following conditions: (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.

Notwithstanding this exclusion from the applicability of Part II of the Code, such contracts and the procedures leading to their execution are still subject to the general principles of public procurement, notably open competition, equal treatment, and transparency. These principles compose the main framework to be considered when establishing the legal requirements for OMC, in particular in the absence of jurisprudential guidelines in this matter and considering the relatively wide margin of discretion granted to contracting authorities in this context.

Due to the proximity between the two instruments, a parallel can be drawn between OMC and Preliminary Market Consultations (Article 35-A of the Code of Public Contracts) which, under Portuguese law, imply the participation of experts, independent authorities, or economic operators.

According to IMPIC's Technical Orientation no. 04/CP/2019, Preliminary Market Consultations are "(…) *an instrument that can be employed by the contracting authority in order to plan the tender procedure. The contracting authority may, before initiating such a procedure (i.e., before it has decided to tender), consult the market informally in order to plan the acquisition and, consequently, obtain better knowledge for improved preparation of the tender documentation, thus increasing the chances of acquiring with fewer costs and increased quality and suitability* (…)". Thus, without prejudice to the fact that the consultation makes the market aware of the potential interest of the contracting authority (which, in turn, may increase competition), the main highlight appears to be placed on scouting, planning, and general information-gathering, including information related to the market itself. The conclusions drawn from the consultation may, in fact, influence the type of tender

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procedure that follows, depending on, e.g., whether or not the market can present an adequate solution that corresponds to the contracting authority's public need.

In order to comply with the aforementioned public procurement principles, contracting authorities shall employ specific and objective terms under which the consultation will take place and announce them in a clear and transparent manner. This is particularly relevant taking into consideration not only the above-mentioned information-gathering purposes (and the corresponding need to avoid biases from an earlier stage) but also the fact that terms that are not drawn in an objective manner may increase the risk of distortion of competition in a subsequent tender procedure.

It goes without saying that establishing objective terms or questions must be done in such a way where the potential universe of interested parties is not artificially restricted by the contracting authority: after all, the principle of open competition forbids, even in this case, the employment of specifications that "mirror" those of a product or service already available on the market – a situation which would, in any case, defeat the purpose of initiating a market consultation.

Compliance with the general principles of public procurement shall be done *ex-ante* and *ex-post*. On one hand, the contracting authority, when soliciting or accepting inputs from economic operators, shall do so whilst observing the principles of transparency, equal treatment, and open competition. The law does not establish which measures shall be applied by the contracting authority in this case, but, in particular in a PPI scenario, this could imply that the consultation is announced openly, allowing for wide participation from the potentially interested parties. On the other hand, if a tender procedure is subsequently launched by the contracting authority (and without prejudice to the fact that the contracting authority is not obliged to do so at the end of the consultation), the Code of Public Contracts foresees, as one of the adequate measures that can be employed to avoid competition distortion, the communication to candidates or tenderers of all relevant information resulting from the participation of an economic operator in the preparation of the procurement procedure (i.e., in the Preliminary Consultation). In principle, this information shall be included in the tender documentation. Other adequate measures – albeit not established by law – include establishment of adequate deadlines for the submission of tenders.

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Table 12. Relevant case law or pre-litigation opinion and resolutions – Portugal.

RELEVANT CASE LAW OR PRE-LITIGATION OPINION AND RESOLUTIONS
Court of Auditor's Decision no. 29/2019 from 23.07.2019 In this case, the successful tenderer in a tender limited by prior qualification had participated in the preliminary market consultation that preceded it. The contracting authority submitted the contract to the Court of Auditor's review for the purpose of obtaining its approval. The Court found that the fact that the contracting authority: (i) did not provide any documentation related to the preliminary market consultation in the tender documentation; (ii) did not disclose the communications exchanged with the participants in the consultation/candidates in the tender; nor (iii) demonstrated that the consultation complied with the applicable provisions, including in what concerns the employment of adequate measures destined to ensure compliance with the principle of open competition, violated the principles of impartiality, equal treatment and open competition. The Court refused the approval of the contract.

RELEVANT PRACTICE
Authority: Serviços Partilhados do Ministério da Saúde, EPE (SPMS) - DAG/CCMSNS n.º 7 Period: 06/06/2023-26/06/2023 Procurement need identified/described: Acquisition of a solution for digitization, indexing, automatic data capture and archiving of documents that support the billing validation process for products and health care provided and reimbursed by the SNS and verified in the CCMSNS, according to the information contained in the Preliminary Consultation. Procurement planned/budgeted: YES Link: Consulta Preliminar DAG/CCMSNS n.º 7 | Solução de Digitalização, Indexação, Captura Automática de Dados e Armazenamento – SPMS (min-saude.pt) Objective and contribution requested: Acquiring inputs to decide about: the base price to be considered by the contracting entity in light of the desired solution; the deadline considered necessary for delivering the solution (and the need for phased deliveries, if applicable); the identification of the solution type and respective architecture; the identification of the support infrastructure technological solution; the identification of relevant infrastructure requirements; the initial cost forecast and 10 years of the support infrastructure technological solution; the identification and characterization of the various components that make up the proposed solution (frontend, backend…), if applicable; the high level Roadmap for implementing the solution and remaining components; the solution acquisition model, particularly with regard to possible transfer of ownership or, alternatively, licensing; the identification of the cloud services to be integrated (supplier, specific service) and their associated costs; the forecast of maintenance costs over 10 years. Participants have been required to provide success stories (with significant dimensions), presenting the (efficiency) results obtained. Main findings: Not yet disclosed.

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Table 13. OMC at a glance - Portugal.

OMC at a glance	Portugal
What is the key objective in terms of broadening the competition versus identification of potential /valid solutions?	The main objective is to better prepare the tender and inform the market about the buyer's intentions and the requisites that will be asked to participate, which indirectly promotes broader competition by making the market aware of upcoming opportunities
Can the consultation be done without having defined the procurement need and requirements?	Yes, the OMC can be launched once the need is identified, even if the specific requirements are not yet fully described. The goal is precisely to gather insights before requirements are finalized.
Can the consultation be launched if not preceded by the planning of a concrete procurement?	Yes, the consultation can take place even before a final decision to procure has been made.
Can the OMC be implemented for the purpose of market exploration and to identify potential matching between supply and demand (to promote future procurement actions)?	Yes, OMC is aimed at market exploration, scouting, and gathering general information that may influence the design or even the decision to tender
Can the consultation be done to search for a particular pre-identified technology?	Yes, the consultation may have the extension deemed necessary by the contracting authority and may focus on a specific type of solution if duly justified, but it must not restrict competition or "mirror" the features of a single product/service already on the market, as that would violate the principle of open competition.
Can be implemented to identify potential and promising challenges suitable to be solved by particular type /identified subjects (e.g. SMEs, national companies, beneficiaries of other fundings…)?	The regulation does not establish which measures shall be applied in this case, but it shall make the information related to the consultation accessible and transparent to all potential interested parties in the subsequent tender process.
Are there any limitations in the field of application of the consultations (e.g. Innovation purposes)?	No, there are no legal limitations regarding the subject or field of application

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4.7. German Legal Framework

Table 14. German legislative and soft regulation sources.

Legislative and soft regulation sources (non-exhaustive selection)
Act against Restraint of Competition *(Gesetz gegen Wettbewerbsbeschränkungen – GWB)*
Procurement Regulation for Supplies and Services *(Vergabeverordnung – VgV)*
Procurement Regulation for Utilities *(Sektorenverordnung – SektVO)*
Procurement Regulation for Concessions *(Konzessionsvergabeverordnung – KonzVgV)*
Procurement Rules for Public Works *(Vergabe- und Vertragsordnung für Bauleistungen – VOB/A)*
Procurement Rules for Supplies and Services below the EU-thresholds *(Unterschwellenvergabeordnung – UVgO)*

The EU legal framework for procurements above the EU-thresholds on preliminary market consultations and prior involvement of candidates or tenderer was transposed into German law, in particular for procurement of supplies and services as well as utilities. For example, sections 28 and 7 VgV provide with respect to the procurement of supplies and services as follows:

- **Section 28 Market survey:**
  - Prior to initiating a procurement procedure, the contracting authority may conduct market surveys in preparation of the procurement and for the purpose of informing the enterprises about its procurement plans and requirements.
  - The conduct of procurement procedures solely for the purpose of market investigation and for the purpose of cost or price determination shall be inadmissible.
- **Section 7 Participation in the preparation of the procurement procedure:**
  - (If an enterprise or an enterprise related to it has advised the contracting authority or has otherwise been involved in the preparation of the procurement procedure (pre-involved enterprise), the contracting authority shall take appropriate measures to ensure that competition is not distorted by the participation of this enterprise.
  - The measures referred to in paragraph 1 shall include, in particular, informing the other enterprises participating in the procurement procedure of the relevant information exchanged in connection with or resulting from the involvement of the pre-involved enterprise in the preparation of the procurement procedure and setting reasonable time limits for the receipt of tenders and requests to participate.
  - Prior to exclusion pursuant to Section 124 (1) No. 6 of the Act against Restraints of Competition, the pre-involved enterprise shall be given the opportunity to prove that its involvement in the preparation of the award procedure cannot distort competition.

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The objective of such market survey or market consultation is to prepare a procurement procedure and to inform the enterprises. It is therefore a communication tool that serves the information needs on part of the contracting authorities and on part of the economic operators. A market survey may only take place *prior* to launching a procurement procedure. *After* the initiation of a procurement procedure, the rules for communication between contracting authority and candidates or tenderers are stricter and must be in line with the chosen type of procurement procedure.

By conducting a market survey, the contracting authority may collect information necessary for preparing the procurement documents and making informed decisions, for example, on the definition of the subject-matter and the specification of requirements, the division into and sizing of lots, the estimated contract value, the availability and readiness, or contractual modalities. The contracting authority must not use the frame of a market survey with the aim to enter into a binding contract, for example by engaging in contract negotiations; it must equally not use the frame of a procurement procedure to merely investigate the relevant market and pricing without the aim to enter into a binding contract for a concrete procurement need.

Conducting a market survey is not mandatory for the contracting authority, in principle. However, the contracting authority must justify its preparatory decisions designing the procurement procedure. To that end, the contracting may rely on the results of a carefully conducted market survey. Where the contracting authority chooses to refer to a specific make or source or engages in direct negotiations with a single economic operator, for instance, it is hardly conceivable that such a decision can be justified without a thorough market survey that also takes into account reasonable alternatives and substitutes.

A market survey may be conducted in various ways such as researching publicly available information on the internet, specialized databases, scientific literature; visiting trade fairs; consulting with experts, other public authorities as well as economic operators; using external service providers; publication of a prior information notice.

The right to conduct an open market consultation prior to initiating the procurement procedure gives the authority the tool to collect the “material” as the basis for its decision-making in the preparatory phase of a concrete procurement procedure. The contracting authority still has to abide by the legal procurement framework.

When conducting an open market consultation, the contracting authority must especially focus on ensuring that the involvement of enterprises prior to the launch of the procurement procedure does not lead to a distortion of competition. It needs to be assessed whether a specific involvement may potentially lead to a distortion of competition and whether certain measures (e.g. sharing of relevant information, allowing for sufficient time to prepare the tender) are appropriate to avoid any distortion.

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Table 15. Relevant case law or pre-litigation opinion and resolutions – German.

RELEVANT CASE LAW OR PRE-LITIGATION OPINION AND RESOLUTIONS
Karlsruhe Higher Regional Court (Procurement Senate), 29th April 2022 – 15 Verg 2/22 The Karlsruhe Higher Regional Court recently ruled in line with the jurisprudence that a market survey is not mandatory but could be required in cases of non-competitive procurement: *"As the wording of Section 28 (1) VgV already shows, there is in principle no obligation on the part of the contracting authority to conduct a market investigation. It can be left open whether, in the light of the decision of the ECJ of 15.10.2009, C-275/08 - Datenzentrale Baden-Württemberg - this is to be assessed differently in the case of the choice of the negotiated procedure without a call for competition pursuant to Section 14 (4) No. 2 VgV, because the respondent did not choose this, but a negotiated procedure with a call for competition. Therefore, there was no obligation to comply with certain requirements, such as that the market investigation convey a certain depth of decision. Irrespective of this, the seriousness of the market investigation cannot be measured by the fact that each interested party was given a maximum of 1 hour to present its products, because this only made up part of the market investigation to be carried out by the respondent, which also included the evaluation of the interviews and the documents submitted - which the interested parties had been requested to do."*
Mecklenburg-Western Pomerania Procurement Tribunal, 4th May 2021 – 3 VK 1/21 The procurement tribunal of Mecklenburg-Western Pomerania (the subsequent decision of the Rostock Higher Regional Court, 1st September 2021 – 17 Verg 2/21, did not touch upon the market survey) highlighted that the market survey may be conducted prior to defining the subject-matter and services, but may also be used to further specify the requirements or weigh in on alternatives and substitutes: "*The service may also be determined after a market survey; it does not necessarily have to be determined before the market survey. The contracting authority may conduct a needs analysis and determination prior to the initiation of the actual procurement procedure. However, the obligation of the contracting authority to conduct market research is limited by the freedom to determine the subject of the procurement. […] The intensity and depth of the measures required for the market investigation are to be examined on the basis of reasonableness. […] Even if one does not require that a contracting authority carries out market investigations into possible technical alternatives even before the contract specification, there is an obligation to carry out market investigations with regard to alternative sources of supply as a minimum requirement […].*"

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Düsseldorf Higher Regional Court (Procurement Senate), 12th July 2017 – VII-Verg 13/17

The Düsseldorf Higher Regional Court, which is competent for procurement cases of the German federal state, summarized the limits for the contracting authority's freedom to determine the services as follows: *"It is already recognized for the award of a contract within a competitive procedure that the freedom of the contracting authority to determine whether and what is to be procured - which in principle precedes the procurement procedure - and thus also the question of which requirements may be placed on the services to be procured, is subject to limits under procurement law, taking into account the principle of procurement open to competition. According to the established case law of the Senate, these are complied with if the determination is objectively justified by the subject matter of the contract, the contracting authority has stated comprehensible, objective and contract-related reasons for this and the determination has consequently been made without arbitrariness, such reasons actually exist (can be established and, if necessary, proven), and the determination does not discriminate against other economic operators […]."*

It continued to expressly require "more" justification for specifications that lead to a non-competitive procurement procedure, arguably requiring the contracting authority to undertake a prior market survey in order to ascertain the facts: *"If the determination of the subject matter of the contract by the contracting authority leads to the fact that, within the meaning of Section 14 (4) no. 2 a) or b) VgV, the contract can only be performed or provided by a specific company, the corrective of Section 14 (6) VgV intervenes, according to which the conditions for the application of the negotiated procedure without a call for competition, i.e. an award outside of competition, only apply if there is no reasonable alternative or substitute solution and the lack of competition is not the result of an artificial restriction of the contract award parameters. The contracting authority's freedom of determination is thus subject to narrower limits under procurement law than is the case when a competitive procedure is conducted. A performance specification which, in the case of Section 14 (4) no. 2 VgV, leads to a complete waiver of competition, requires greater depth of justification than one which, while maintaining competition in the award of the contract, leads in the result (only) to a manufacturer- or product-related performance specification pursuant to Section 31 (6) VgV […]."*

Federal Procurement Tribunal, 8th August 2016 – VK2 – 39/16

The Federal Procurement Tribunal decided that the visit of a trade fair is also an appropriate means for a market survey and that the contracting authority is not required to talk to all companies present: *"The visit of the respondent to the trade fair did not oblige it to talk to all the companies present; depending on the size of the trade fair, this would hardly be feasible in practice. Incidentally, it is not clear whether the applicant itself was represented at the trade fair at all. A visit to a trade fair as such is a tried and tested means of obtaining information for the preparation of an award procedure. Moreover, the respondent spoke exclusively with fiber manufacturers at the trade fair; according to the information on the applicant's homepage at […], the applicant is not a fiber manufacturer, but purchases the goods from third parties. This is then processed by the applicant into linen. The omission of a market investigation involving the applicant does not constitute unequal treatment of the applicant."*

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Table 16. OMC at a glance – Germany.

OMC at a glance	Germany
What is the key objective in terms of broadening the competition versus identification of potential /valid solutions?	The objective is to better prepare the tender and to determine whether alternative or substitute solutions exist and are available on the market, while avoiding unjustified restrictions of competition
Can the consultation be done without having defined the procurement need and requirements?	Yes, the consultation can be carried out even before the subject-matter and technical requirements are fully defined. The OMC can therefore support both needs analysis and technical definition.
Can the consultation be launched if not preceded by the planning of a concrete procurement?	Yes, the consultation may be conducted before the concrete procurement planning starts, but investigation for the purpose of cost or price determination shall be inadmissible.
Can the OMC be implemented for the purpose of market exploration and to identify potential matching between supply and demand (to promote future procurement actions)?	Yes, it may serve exploratory purposes to understand supply conditions and technical alternatives, to assess market readiness or decide whether a competitive procedure is feasible.
Can the consultation be done to search for a particular pre-identified technology?	Yes, the consultation may have the extension deemed necessary by the contracting authority. The contracting authority has discretion to explore particular technologies, however this must be objectively justified. If a pre-identified technology is investigated, the authority must still assess alternatives and justify exclusions.
Can be implemented to identify potential and promising challenges suitable to be solved by particular type /identified subjects (e.g. SMEs, national companies, beneficiaries of other fundings…)?	The regulation does not establish which measures shall be applied in this case, but the consultation of one single provider is not conceivable and limiting the scope of the consultation to specific actors risks distorting competition.
Are there any limitations in the field of application of the consultations (e.g. Innovation purposes)?	No, there are no legal limitations to the field of application.

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4.8. Dutch Legal Framework

Table 17. Dutch legislative and soft regulation sources.

Legislative and soft regulation sources
Revised Procurement Act 2012 as of 1st July 2016
Proportionality Guide, 3rd revision, January 2022

The Dutch Public Procurement Act 2012, updated on 1st July 2016, incorporates comprehensive regulations for procurement processes in the Netherlands, aligning with European procurement directives 2014/23, 2014/24, and 2014/25. This legislation sets the framework for tendering procedures, ensuring that (semi-) public institutions achieve the best price-quality ratio when issuing contracts. It specifies that the value of a contract dictates whether it should be tendered at a European or national level, based on predefined threshold amounts. The Dutch government decided not to explicitly incorporate Article 40 and 41 of the Public Sector Directive. However, it implicitly supports these principles.

Proportionality and the Proportionality Guide

A cornerstone principle of the Public Procurement Act is proportionality, ensuring that the requirements and conditions set forth in a tender are commensurate with the contract's nature and size. The Proportionality Guide, mandated for use since 1st July 2016, and updated as of 1st January 2022, provides detailed guidelines for applying this principle, including changes related to legal processing clauses. Its application spans European tenders, national tenders, and multiple private procedures, emphasizing a balanced approach to tendering requirements.

Open Market Consultation

Open Market consultations are form-free within the limits of tendering and the contracting authority can choose how to shape the interaction with market parties before they start tendering. It serves several purposes in the procurement process:

- Enhancing understanding: it helps contracting authorities understand the capabilities and interests of the market, allowing for more realistic and attainable project specifications.
- Encouraging innovation: by consulting the market, authorities can discover new and innovative solutions that they may not have been considered.
- Improving competition: through early engagement, the process can stimulate competition by ensuring that potential suppliers are aware of upcoming opportunities and are prepared to bid.

In addition, a market consultation is without obligation for both the contracting authority and the tenderers. This also implies that there is no obligation for a contracting authority to initiate a tender after going through the process of an open market consultation.

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The application of market consultation is not unlimited

The Public Procurement Act does not stipulate explicitly, like the Public Procurement Directive, that a market consultation may not lead to distortion of competition and may not give rise to a violation of procurement law principles. But even without an explicit regulation, a contracting authority will have to guard against this. This obligation can be directly derived from the principles of equal treatment and transparency.

Article 1.8 and Article 1.9; a contracting authority or a special sector company acts transparently and treats entrepreneurs equally and in a non-discriminatory manner.

Article 2.25 “The contracting authority applies one of the procedures in this section to place a government contract, with or without open market consultation.” No specific standards are prescribed in this provision.

Article 2.51 paragraph 1, which has its origins in Article 41 of the Public Sector Directive, stipulates that the contracting authority must take “appropriate measures” to ensure that competition is not distorted by the participation of candidates or tenderers (or associated companies) involved in the preparation of a tender. Involvement in the preparation of a tender can also include participation in a market consultation.

Article 2.51 paragraph 2; the “appropriate measures”, as defined in this article, must in any case be understood to mean that information is exchanged in the context of the preparation of a tender is shared with all parties and that an appropriate period for receiving tenders must be set. The latter is necessary to also allow parties that were not involved in the consultation sufficient time to prepare for a registration.

Article 2.51 paragraph 4 states that, in the case of exclusion, the party in question must be given the opportunity to prove that its involvement in the preliminary phase has not distorted competition.

Exclusion as a last resort

The rules and principles that apply to market consultation are aimed at contracting authorities. They must comply with the procurement rules. But entrepreneurs themselves also have an interest in correct market consultation procedure as it could potentially lead to exclusion.

Article 2.87 introduces the grounds for the contracting authority to exclude certain tenderers or candidates.

Article 2.87 paragraph 1 sub f provides that a candidate or tenderer can be excluded from participation in a tender procedure if it has been involved in the preparation of the tender procedure and a distortion of competition, as referred to in Article 2.51, has occurred.

Article 2.87, paragraph 1a states that exclusion of a tenderer or candidate is only possible if the distortion of competition cannot be remedied with less drastic measures.

Legal considerations and risks

The legal framework surrounding open market consultations aims to ensure that such engagements do not compromise the principles of transparency, equality, and non-discrimination. Key legal considerations include:

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- Avoiding distortion of competition: Care must be taken to ensure that no economic operator gains an undue advantage from the open market consultation process. This includes sharing any inside information obtained during consultations with all potential tenderers.
- Managing confidential information: Contracting authorities need to balance the need for open information sharing with the protection of sensitive commercial information.
- Remedial actions: In cases where participation in open market consultation could potentially distort competition, contracting authorities are required to take appropriate measures to mitigate this risk. This may involve setting longer tender periods or ensuring broader dissemination of consultation insights.

Open market consultations, when conducted properly, can significantly enhance the efficiency and effectiveness of public procurement processes. By fostering an open dialogue between contracting authorities and market participants, these consultations can lead to more competitive tender processes, innovative solutions, and ultimately, better value for public funds. However, to achieve these benefits, it's imperative that the principles of transparency, non-discrimination, and fair competition are rigorously upheld throughout the open market consultation process.

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RELEVANT CASE LAW OR PRE-LITIGATION OPINION AND RESOLUTIONS

Several court cases in the Netherlands prove that an open market consultation is always a possibility. In past years different cases show that open market consultation is part of a tender process in a wide range of branches; passenger transport, medical devices, exploitation of a marina, military equipment and radio communications equipment.

Table 18. Relevant case law or pre-litigation opinion and resolutions – Netherlands.

RELEVANT CASE LAW OR PRE-LITIGATION OPINION AND RESOLUTIONS
https://www.ndfr.nl/content/ECLI_NL_RBZWB_2015_5028#ECLI_NL_RBZWB_2015_5028_4_De_beoordeling Concerning a tender for passenger transport the plaintiff stated at the hearing that it was surprised that the contracting authority held a close market consultation prior to the tender, to which it was not invited and of which it was not informed. The contracting authority explained that they chose to invite only the two largest market parties for this consultation because they did not want to have too many parties at the table. It is certain that closed market consultation is permissible in itself, provided that the information thus obtained is shared. According to the municipalities, this is the case. The plaintiff has suggested that the two parties that have been invited to the market consultation may have a knowledge advantage, but it has not further specified this comment and has not stated or made plausible that there are indications that this possibility has materialized. The court in summary proceedings ruled in favour of the contracting authority.
https://uitspraken.rechtspraak.nl/details?id=ECLI:NL:RBMNE:2015:4685 In a tender for medical devices, the contracting authority held a market consultation to research the market and its parties and how the tender can be best placed on the market. It was decided not to break up the tender in several lots, because there are different suppliers who can provide a majority of the devices and no logical grouping is possible. However, the court in summary proceedings ruled that only on the basis of the market consultation alone it cannot be concluded that the present assignment does not exceed the relevant market for medical devices. In addition, the market consultation provided mainly the financial and logistical benefits for the contracting authority but it remained unclear whether these advantages are present for the suppliers. Therefore, the motivation on this point was inadequate.

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Furthermore, article 1.5 Procurement Act 2012 requires the division of a contract into lots. The contracting authority does not seem to find division necessary since the market consultation concludes that no logical division is possible. The court in summary proceedings cannot follow this argument. After all, it is likely that framework agreements would have to be concluded with several suppliers based on the procedure followed.

Thus, the conclusions of the market consultation were not according to the tender procedure requirements.

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https://vhadvocaat.nl/media/1051/jaan-2015_178-aanvulling-gunningsbeslissing.pdf

In this case the question of distortion of competition and conflict of interest was raised. The plaintiff argued that a certain tenderer should have been excluded on the basis of article 3.4.3 of the Program of Requirements, which states: “Parties that contributed to the preparation of tender documents are excluded from registration; This does not include the parties that participated in the market consultation.” On the basis of that article the court rules that the tenderer should not have been excluded.

ECLI:NL:GHSHE:2019:974, Gerechtshof 's-Hertogenbosch, 200.213.270_01 (rechtspraak.nl)

Concerning a tender for services for special passenger land transport the way in which the municipalities have organized the market consultation was unlawful regarding to the accuser, because the municipalities have not taken sufficient measures to prevent the knowledge advantage that the two other tenderers have obtained as a result of the market consultation:

- The municipalities have failed to submit the market consultation report to the tender documents, which means they do not have sufficient measures taken to prevent distortion of competition and have acted in violation with the principle of equality and transparency, according to the plaintiff.
- The market consultation shows that municipalities find it risky to work with subcontractors. Because the accuser was not aware of this, it contacted subcontractors registered. Had she been aware of this, she would not have had it subcontractors registered for the tender.

The court of summary proceedings judged as follows:

- A closed market consultation cannot lead to actions that are contrary to the principles of equality and transparency and that its level playing field is disrupted. This occurs if the parties involved in the closed market consultation (i) through the information that is exchanged a build a (knowledge) advantage over the other tenderers, (ii) the influence award criteria in their favour or even (iii) eliminate competition.
- In general, it cannot be judged that in the case where a closed market consultation has been held, the contracting authority is simply acting in violation procurement law if they do not submit the report of that market consultation makes tender documents available to all tendering parties. The argument of plaintiff that the municipalities have acted unlawfully because of the not submitting the report prior to the closing of the registration period, is not followed by the court.
- The court has the opinion that the accuser has insufficiently specific substantiated that by the way in which the closed market consultation took place the accuser has been found to be in a more

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disadvantageous position and that the municipalities are therefore in conflict have acted with procurement law

The conclusion is therefore that the plaintiff's claim that the municipalities have acted insufficiently and unlawful in the implementation of the closed market consultation. The claim for compensation of the accuser cannot be made on this basis.

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https://uitspraken.rechtspraak.nl/details?id=ECLI:NL:RBMNE:2023:5525

In this case the registration period of four weeks and two days is not acting in contrary to the principle of proportionality because of the market consultation relevant parties were aware that a tender would be put in the market. From that moment parties could prepare to meet the requirements.

In this market consultation the contracting authority asked questions to determine her purchasing strategy and changed the project based on her findings.

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https://uitspraken.rechtspraak.nl/details?id=ECLI:NL:RBLIM:2022:8150

In this case the tenderer or candidate argued that the contracting authority did not comply with the transparency rules. However, during the market consultation at which they were present they could ask questions. Later they did ask questions and the contracting authority did answer these. Via the market consultation the contracting authority has complied with the transparency principles.

More cases. To find more cases which include verdict concerning or discussions about the juridical framework to open market consultations, see the link below:

https://uitspraken.rechtspraak.nl/resultaat?zoekterm=marktconsultatie&inhoudsindicatie=zt0&publicatiestatus=ps1&sort=PublicatieDatumDesc

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BEST PRACTICE (compliant with the national law) / RELEVANT PRACTICE

Market consultation Future-proof sports fields

Procurement need identified/described

Between 2006 and 2018, the number of sports fields with artificial grass in Amsterdam grew from 10% to 50% of the total number of sports fields and that is still growing, also in the rest of the Netherlands and France. Artificial grass is widely used in Germany, Portugal, Spain, Italy and Sweden. Artificial grass is good against all kinds of weather conditions and can be used intensively all year round. This is important in cities where more and more people live: everyone who wants to exercise should be able to exercise.

But artificial grass sports fields also have disadvantages: they pollute the environment with microplastics, use 70% less water than natural sports fields and can heat up to over 70 degrees Celsius in the summer. Future-proof sports fields, with a more sustainable effect, can have a positive impact on the climate and the environment. That is why the municipality of Amsterdam explored the possibility to develop artificial grass and natural grass sports fields that are non-polluting and make a positive contribution to the climate.

The municipality of Amsterdam has set itself the following objectives:

- A sustainable construction process;
- Material circularity;
- Generate energy;
- Climate adaptive.

Link Toekomstige sportvelden in Amsterdam (tenderned.nl)

Objective and contribution requested

Main findings:

- Interested parties currently experience many disadvantages from lowest-price tenders from contracting authorities and certifications and standards from sports associations. This creates obstacles to offering innovative products;
- The intention of the municipality of Amsterdam to focus on this form of tendering is welcomed with open arms by those interested, although the assignment still needs to be further specified to actually indicate whether they are participating in this tender;
- Knowledge sharing within collaborations is actually a must, with attention to patents;
- For the best application of a solution, the effect of all-weather seasons should be included in the monitoring;
- The period for the R&D phase is perceived as ambitious and perhaps too short;
- The municipality could consider the option of using various plots in its tender. For example, based on renewal or renovation, the relevant ambition for the location or the part that makes up the field. Consideration may be given not to award for the entire solution, but for part of the solution.

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Table 19. OMC at a glance – Netherlands

OMC at a glance	Netherlands
What is the key objective in terms of broadening the competition versus identification of potential /valid solutions?	The OMC serves a dual purpose: assessing the feasibility of the preconditions of the tender and identifying valid solutions for the need, and generating interest and stimulating competition by informing and engaging market actors early on.
Can the consultation be done without having defined the procurement need and requirements?	Yes, OMC can be launched even if the need and requirements are not yet fully developed. It is designed precisely to gather input to shape the procurement strategy and improve specs.
Can the consultation be launched if not preceded by the planning of a concrete procurement?	Yes, OMC can be carried out even without a firm intention to launch a tender. This also implies that there is no obligation for a contracting authority to initiate a tender after going through the process of an OMC.
Can OMC be implemented for the purpose of market exploration and to identify potential matching between supply and demand (to promote future procurement actions)?	Yes, OMCs can be used for exploratory purposes, to understand the market landscape, identify challenges, stimulate innovation, and assess the interest and capacity of the market — all without formal commitment to tender.
Can the consultation be done to search for a particular pre-identified technology?	Yes, the OMC may have the extension deemed necessary by the contracting authority. While the contracting authority may shape the consultation around specific technologies, it must ensure compliance with the principles of transparency and equal treatment. Focusing too narrowly may raise risks of distorted competition.
Can be implemented to identify potential and promising challenges suitable to be solved by particular type /identified subjects (eg. SMEs, national companies, beneficiaries of other fundings…)?	The regulation does not establish which measures shall be applied in this case, however contracting authorities must act transparently and treat all economic operators equally and without discrimination, and these principles apply from the very start of the procurement process — including during pre-tender market consultations. Therefore, while it is legally allowed to shape consultations around specific innovation challenges that might be particularly relevant to SMEs, start-ups, or other identified groups, the contracting authority must ensure that such focus does not result in exclusion or restriction of access for other potential participants.
Are there any limitations in the field of application of the consultations (eg. Innovation purposes)?	No, there are no legal limitations on the subject or sector.

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4.9. Norwegian Legal Framework

The Norwegian *Public Procurement Act* (*Lov om offentlige anskaffelser*) of 17th June 2016, along with the accompanying *Regulation on Public Procurement* (*Forskrift om offentlige anskaffelser*) of 12th August 2016, establishes the legal framework for public procurement in Norway. These documents outline the principles and procedures that contracting authorities must follow to ensure transparency, competition, and the efficient use of public resources.

To support early engagement with the market, the regulations include specific provisions on Open Market Consultation (OMC), which are found in **Part III: Procurements Above the EEA Threshold Values**

Chapter 12: Dialogue with the Market Before Competition

§ 12-1. Preparatory Investigations:

Under this provision, contracting authorities may conduct market investigations to prepare for procurement and inform suppliers about their plans and needs.

Additionally, they may seek or receive advice from independent experts, authorities, suppliers, or other market participants. Such advice can be used in planning and executing the procurement, provided it does not distort competition or breach the principle of equal treatment.

§ 12-2. Dialogue with Suppliers Before the Competition:

When a supplier or a related entity has provided input prior to the launch of a procurement, the law requires the contracting authority to take appropriate measures to prevent that supplier from gaining an unfair competitive advantage. The same applies if the supplier was involved in planning the competition in another way.

To ensure fairness, the regulation specifies that such measures must include:

a. Ensuring that other suppliers participating in the competition receive the same relevant information exchanged during the planning phase.
b. Setting a sufficient deadline for the receipt of tenders to level out any advantages.

Practical Use of Market Consultations in Norway

In Norway, contracting authorities routinely conduct market consultations to explore innovation potential and shape their procurement strategy in collaboration with market actors. A key model for such engagement is the **National Supplier Development Program (Leverandørutviklingsprogrammet)**, managed jointly by Innovation Norway (*Innovasjon Norge*) and the Norwegian Association of Local and Regional Authorities (*KS*).

Within this framework, the following procedural patterns emerge:

- **Public Announcement & Invitations**: Consultations are launched via official procurement portals (such as Doffin) and the websites of relevant public authorities. Invitations are generally published in **Norwegian**, with some cases also including **English versions** for international reach.

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- **Written Input from Suppliers**: Authorities often request written feedback from suppliers, including technical descriptions of solutions, innovation readiness, and scalability. This input supports needs analysis and requirement formulation.

- **Forms of Dialogue**: Both **collective workshops** (where all participants meet simultaneously) and **one-on-one meetings** (to avoid early disclosure of sensitive ideas) are employed. The format is selected based on the type of innovation sought and the level of maturity of the market.

- **Purpose**: These consultations aim not only to understand the market offering but also to **co-develop tender specifications** and evaluate which **procurement procedure** (e.g., open procedure, innovation partnership, or competitive dialogue) is best suited.

- **Follow-up**: In most cases, these consultations are followed by a **public tender** based on the information gathered. However, conducting a consultation does **not** oblige the authority to proceed with a procurement.

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Table 20. OMC at a glance – Norway

OMC at a glance	Norway
What is the key objective in terms of broadening the competition versus identification of potential /valid solutions?	OMCs aim to explore available solutions, generate supplier interest, and define procurement strategies in collaboration with the market. § 12-1 explicitly allows authorities to inform suppliers about needs and plans.
Can the consultation be done without having defined the procurement need and requirements?	YES, OMC is a preparatory activity, which means it can be used to develop needs and refine requirements.
Can the consultation be launched if not preceded by the planning of a concrete procurement?	YES, there is no legal requirement that a market consultation must result in a procurement. OMC can be exploratory
Can the OMC be implemented for the purpose of market exploration and to identify potential matching between supply and demand (to promote future procurement actions)?	YES, OMCs can be used for exploratory purposes and allows market dialogue to understand capabilities, identify risks and innovation potential, even without launching a tender
Can the consultation be done to search for a particular pre-identified technology?	YES, the consultation may have the extension deemed necessary by the contracting authority, provided the process remains transparent and ensures equal treatment. The regulation permits narrowing the focus but mandates safeguards against bias
Can be implemented to identify potential and promising challenges suitable to be solved by particular type /identified subjects (eg. SMEs, national companies, beneficiaries of other fundings…)?	The regulation does not prohibit targeting certain challenges, but any such focus must not lead to the exclusion of other potential participants. Equal treatment remains binding from the pre-procurement phase
Are there any limitations in the field of application of the consultations (eg. Innovation purposes)?	No, there are no legal limitations on the subject or sector. Innovation-related OMCs are explicitly supported

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4.10. Comparative Approaches to Open Market Consultations in EU Member States: Legal Focuses and Practical Nuances

The presented comparative analysis is based on national legal frameworks and complemented by analytical insights and selected case law contributed by national experts. It examines how six EU Member States — Italy, Greece, the Netherlands, Germany, Spain, and Portugal — regulate and implement Open Market Consultations (OMCs) within their public procurement systems.

While all countries operate under the overarching principles of transparency, equal treatment, and non-discrimination as derived from the EU Treaty and procurement directives, national legal frameworks differ in how they focus, structure, and safeguard the use of OMCs. The analysis considers key regulatory dimensions, such as procedural discretion, scope of application, safeguards against competition distortion, and formalization of consultation outcomes.

EU. European Union – General Legal Framework

The EU directives define OMCs as non-binding preparatory tools intended to inform the market and improve procurement design, without distorting competition. Key EU-level safeguards include openness, equal access, and the transparent handling of information exchanged during the consultation. While consultations need not be linked to a specific tender, they must not result in bias or undue advantage.

IT. Italy

Italy focuses on procedural discipline. OMCs are permitted only in preparation for a specific, concrete procurement, and primarily for innovative or non-standard contracts. The Italian legal framework seeks to reduce asymmetries while preventing premature narrowing of scope or implicit favoritism. Consultations must not involve price quotations or technology selection.

GR. Greece

Greece offers a dual-function model for OMCs, supporting both procurement preparation and market exploration. The legal framework encourages inclusive participation — especially of SMEs — and allows consultations even when no formal procurement planning exists. Regulatory provisions clarify how prior involvement is managed to protect competitive neutrality.

NL. Netherlands

The Dutch system allows for flexible and form-free consultations, giving wide discretion to contracting authorities while ensuring alignment with core principles of fairness and transparency. OMCs can be exploratory and may be shaped around particular innovation needs, provided this does not restrict competition or result in discriminatory outcomes.

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DE. Germany

Germany frames OMCs as market surveys, aimed at improving the definition and justification of procurement parameters. While consultations can take place ahead of a defined procurement, price estimation alone is not a valid purpose. Case law reinforces the duty to consider alternative solutions and uphold objective reasoning, especially in non-competitive procedures.

ES. Spain

Spain adopts a structured and formalized approach, requiring consultations to be tied to an intended procurement action. The law emphasizes documentation, neutrality, and transparency, with published reports explaining how the consultation shaped the procurement. Selective targeting is only allowed under exceptional and justified circumstances.

PT. Portugal

Portugal, though lacking dedicated legislation on OMCs for innovation procurement, uses soft-law guidance to encourage early-stage, strategic consultations. These are primarily intended for market intelligence and planning, without the need for a concrete procurement plan. The principles of openness and non-discrimination govern their design and execution.

All national systems uphold the same core EU principles governing public procurement. However, their legal and procedural approaches to Open Market Consultations reflect distinct regulatory focuses:

- Italy emphasizes procedural linkage to concrete procurement and restricts application to non-standard needs.
- Greece stresses accessibility and the dual purpose of OMCs, balancing preparation and market exploration.
- The Netherlands focuses on flexibility and innovation, underpinned by general principles of transparency and equality.
- Germany prioritizes justification and structured preparedness, especially in relation to non-competitive awards.
- Spain underscores formal traceability, transparency, and the impartial use of consultation outcomes.
- Portugal promotes strategic planning and information gathering, guided by broad principles rather than detailed regulation.

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5. HOOP Capacity building framework

5.1. Supporting Resources

Throughout the HOOP project, Lighthouse Cities and Regions (LHs) were engaged in a structured and progressive capacity-building programme designed to strengthen their competencies in the field of innovation procurement—specifically Pre-Commercial Procurement (PCP), Public Procurement of Innovation (PPI), and Open Market Consultations (OMC).

This capacity-building process was intentionally designed as a learning-by-doing journey, aligning theoretical understanding with hands-on experience and real-life application. The activities evolved in parallel with project development milestones, ensuring that LHs could immediately apply the knowledge gained to practical procurement initiatives. The following key activities were carried out:

- April 2021: Initial introduction to innovation procurement instruments—PCP and PPI—was provided during the annual meeting of all LHs as part of the Local HOOP Committee. This session focused on raising awareness and building a common understanding across diverse LH contexts.

- March 2022: LHs were actively involved in the co-design of a PCP action, including the preliminary development of an Open Market Consultation process. This collaborative effort was embedded in the preparation of a Horizon 2020 funding application (COREv PCP), enabling participants to gain firsthand experience in drafting technical documents, defining needs, and aligning them with funding instruments.

- October 16th, 2023: A dedicated webinar titled “Understanding and implementing Open Market Consultation: why, when, what, and how?” was held as part of the HOOP Virtual Academy. Led by experts from the HOOP Legal Advisory Board, the session offered a deep dive into the legal framework, rationale, objectives, and procedural aspects of OMCs. The presentation included:

    - A breakdown of EU legal principles relevant to OMCs—transparency, equal treatment, open competition.
    - A step-by-step guide to designing and executing an OMC, including when and how to use tools like Prior Information Notices (PINs), questionnaires, and structured dialogue formats (e.g., one-on-one meetings, public events).
    - Practical guidance on managing confidentiality, ensuring non-discrimination, and avoiding anti-competitive behaviour.
    - Real-world examples and best practices, emphasizing how OMCs can serve to reduce information asymmetries, improve specifications, and select the appropriate procurement method.

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This webinar was instrumental in consolidating the knowledge gained and provided a platform for structured Q&A and peer learning among the LHs. The material remains available on the HOOP Virtual Academy (see webinar) for continued reference.

Figure 4. Slides of the webinar "Understanding and implementing Open Market Consultation: why, when, what, and how?".

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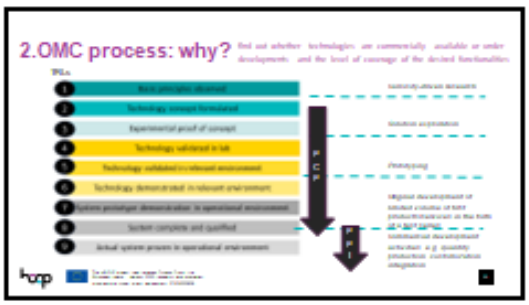

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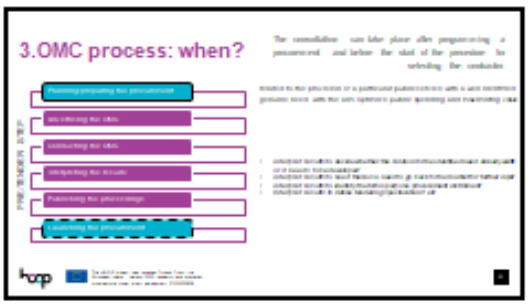

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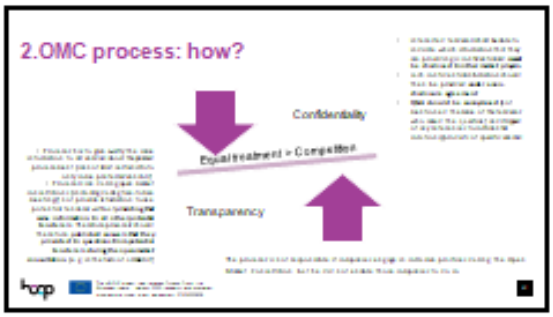

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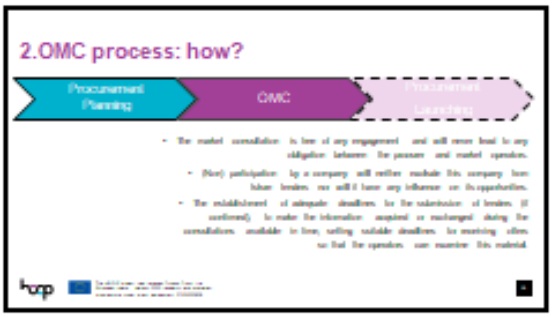

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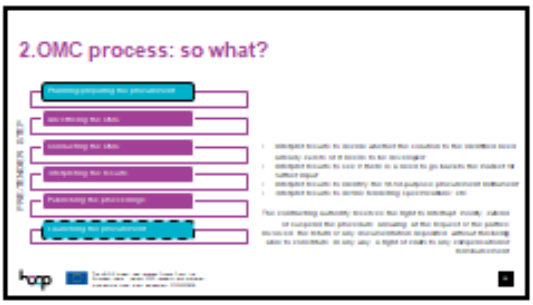

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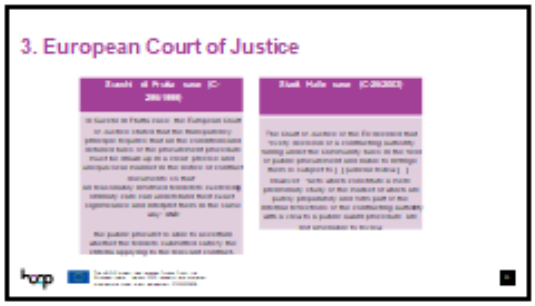

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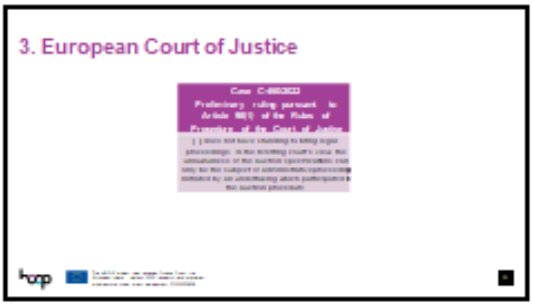

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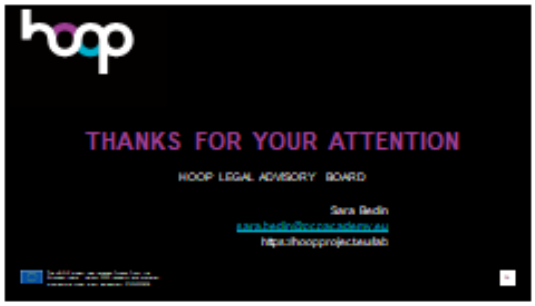

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5.2. HOOP Practical Toolkit for Planning and Conducting Open Market Consultations

A core outcome of the HOOP capacity-building activities was the development of this structured OMC toolkit, designed to support public authorities in planning and conducting Open Market Consultations for innovation procurement.

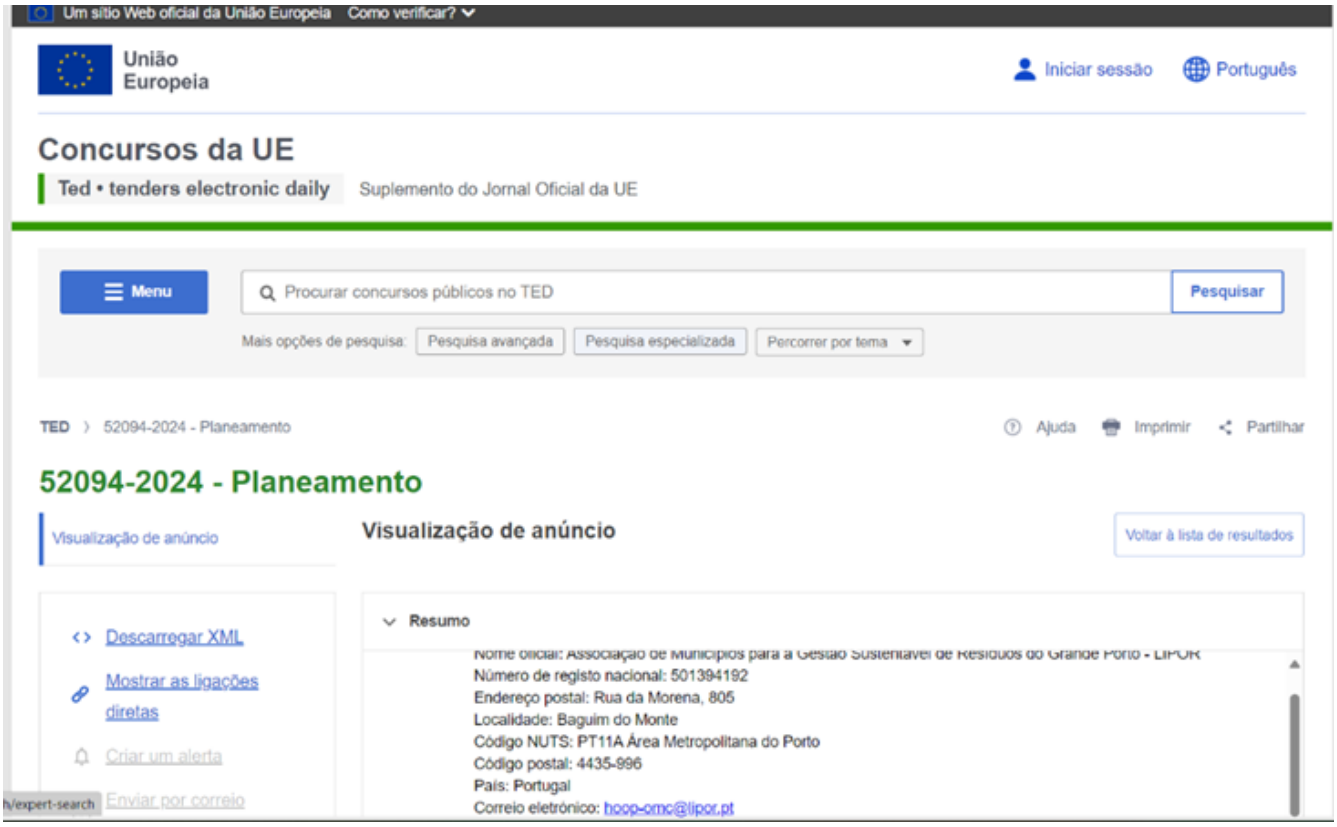
The toolkit includes the following elements, all of which have been adopted and customized for the LIPOR Open Market Consultation, which was planned, launched, and executed with end-to-end support from the HOOP technical partner (SBE).

5.2.1. PRIOR INFORMATION NOTICE (PIN)

A PIN should be published on the Tenders Electronic Daily (TED) platform to announce the OMC and invite participation. It ensures transparency and broad dissemination.

Reference example: TED Notice 52094-2024

Figure 5. Publication of Porto Open Market Consultation PIN in TED.



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5.2.2. TECHNICAL PROSPECTUS

A technical prospectus typically includes:

- An **overview of the innovation challenge** and the broader policy and strategic context (e.g., circular economy, bioeconomy goals).
- A description of the **functional needs**, defined in terms of the purpose and operations the desired solution must perform.
- **Performance expectations**, expressed as measurable targets or key indicators that proposed solutions should meet.
- Baseline contextual information, including **volumes, inputs, processes, and regulatory requirements**.

Reference example: OMC_Prospectus_LIPOR_Nutrient_Recovery.pdf

5.2.3. PARTICIPATION RULES

When organising an Open Market Consultation:

- it is essential to define and communicate a clear set of participation rules to ensure transparency, manage expectations, and support meaningful engagement from market actors. The rules should address the non-competitive nature of the consultation, explicitly stating that participation does not constitute pre-qualification nor grant any rights or advantages in subsequent procurement phases. The process should be framed as voluntary, non-binding, and exploratory in nature. Moreover, participants must be made aware of the format of the consultation, which may include a hybrid meet-the-market event, an online market survey under non-disclosure agreement (NDA), and the possibility of additional follow-up interactions. It is necessary to ensure that participants understand the purpose and structure of each activity, including whether sessions will be recorded or if the names of attending organisations will be published to promote networking.

- Information shared by participants should be handled with care. They must be instructed to clearly mark any commercially sensitive or proprietary information they wish to remain confidential; such data should be protected in accordance with data privacy rules and NDA provisions. Participants should also be encouraged to provide insightful and constructive feedback, including describing their solution's relevance to the identified challenge, its level of technological maturity (e.g., TRL), deployment readiness, regulatory compliance, and economic viability. The contracting authority should commit to publishing all relevant materials (e.g., agendas, presentations, Q&A summaries, outcomes) on institutional or project websites, ensuring equal access to knowledge for all current and potential stakeholders.

- Finally, it should be emphasised that the OMC is entirely separate from any future competitive tendering procedure. The procurement process—if pursued—will be launched independently and conducted in full compliance with EU public procurement principles, ensuring equal treatment for all bidders. By clearly outlining these rules and expectations, public authorities help ensure that the consultation remains fair, legally robust, and productive for both sides of the dialogue. No pre-qualification or rights are granted.

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5.2.4. REGISTRATION FORM

In preparation for an Open Market Consultation (OMC), it is recommended to design a registration form that collects essential information about prospective participants. This form typically serves multiple purposes: to confirm attendance, facilitate follow-up communications, and support the organisation of a structured and inclusive consultation process.

The registration form may appropriately include basic organisational data, such as company name, country, contact person, email, and phone number. Additionally, it may request information on the type and size of organisation, sector of activity, and main area of expertise. This allows the organisers to better understand the market landscape and tailor parts of the consultation accordingly.

Participants should also be asked to indicate whether they consent to the use and limited sharing of their contact details with other attendees, strictly for the purpose of facilitating networking and potential future collaboration among market actors. It is important to clarify that Open Market Consultations are open to all companies and organisations, regardless of their geographic location, size, or governance structure.

As part of the form, organisers may also include a disclaimer or release clause that informs participants that consultation sessions may be recorded (e.g., for internal documentation or broader dissemination), and that attendees are expected to be aware of this. The form should also explicitly state that participants are responsible for marking any sensitive or confidential information they may later provide during the consultation process, in line with data protection and non-disclosure principles.

5.2.5. COMMUNICATION MATERIALS

The communication strategy accompanying an Open Market Consultation (OMC) plays a crucial role in ensuring transparency, inclusiveness, and broad market engagement. It must clearly convey the nature of the consultation as a **pre-procurement dialogue**, aimed at informing a potential future tender—not as a call for tenders or a pre-qualification exercise. Key messages should highlight the **innovation challenge** the public authority intends to address, the **type of solutions being sought**, and the **opportunities for suppliers, researchers, and other stakeholders** to contribute insights and showcase capabilities. Communication materials—such as dedicated webpages, press releases, social media posts, and newsletters—should explain the relevance of the challenge in practical and economic terms, for instance, by referencing circular economy goals or value-added outcomes such as the recovery of critical materials or creation of new bio-based products. Additionally, announcements should explicitly state the **open, non-discriminatory nature of the consultation**, welcoming participation from all interested parties regardless of size, geography, or governance structure. Practical details, including how to participate, key dates, and available resources (e.g., Prior Information Notice, Technical Prospectus, registration links, recordings of past sessions), must be easily accessible. Finally, communications must reinforce **legal disclaimers**, clarifying that participation does not grant any preferential treatment in subsequent tenders, and ensuring that data protection and confidentiality rules are respected—especially regarding sensitive commercial information shared during the consultation process.

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5.2.6. MARKET SURVEY

The HOOP market consultation questionnaire is designed as a comprehensive instrument to collect structured information from stakeholders across the innovation ecosystem in response to a defined public challenge. It is organised into four main sections, each serving a distinct function within the Open Market Consultation (OMC) process and aligned with the objectives of innovation-oriented procurement.

The first section—General Information—gathers essential factual data to characterise the respondent organisation. This includes legal identity, contact details, type and size of organisation, year of establishment, business focus, and current operational reach. Additionally, it requests consent for future contact and, optionally, for making organisational information publicly available to support networking. This ensures compliance with data protection principles and fosters transparency.

The second section—State of the Art and Organisational Capabilities—focuses on the respondent's direct experience with technologies or services relevant to the innovation challenge. Participants are invited to provide detailed descriptions of existing solutions, highlight their commercial maturity (including Technology Readiness Level), innovative components, intellectual property status, and prior implementations. The section also collects information on potential market uptake, supplier networks, and expected product lifetime, offering a clear view of the respondent's capacity to contribute meaningfully to the solution space.

The third section—Functional and Performance Requirements—is designed to validate the alignment of proposed technologies with the technical needs outlined in the Prior Information Notice (PIN) and Technical Prospectus. Respondents are asked to assess whether their solutions fulfil each listed functional and performance requirement. These include the recovery of nutrients (phosphorus and ammoniacal nitrogen), effluent treatment capabilities, ability to generate marketable end-products (e.g., compliant fertilisers), cost-efficiency over the full life cycle (CAPEX/OPEX), environmental sustainability, and minimisation of secondary waste streams. Each answer is accompanied by an indication of TRL and, where possible, by quantitative performance data.

The fourth section—Barriers and Enabling Factors—offers insight into the broader ecosystem in which the proposed innovations may be deployed. Respondents are encouraged to highlight any technological, regulatory, or market-related barriers that could hinder the implementation or scale-up of their solution, both domestically and abroad. This includes issues such as permitting processes, certification constraints, supply chain dependencies, or limited infrastructure. Conversely, participants are also asked to identify enabling conditions—such as recent policy changes, favourable regulatory frameworks, or existing partnerships—that could support and accelerate deployment. These insights are crucial to anticipating risks, identifying entry points for innovation, and shaping a procurement strategy that is not only technically sound but also context-sensitive.

The questionnaires developed for the LIPOR and Murcia Open Market Consultations are included and comparatively discussed in ***Annex 1. Comparative Analysis of the LIPOR and Murcia Open Market Consultation Questionnaires***.

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5.2.7. AGENDA TEMPLATE FOR MEET-THE-MARKET EVENT

An effective Open Market Consultation event should follow a structured agenda that facilitates clarity, engagement, and mutual knowledge exchange between the contracting authority and potential suppliers. The session typically begins with a **welcome and introductory segment** (e.g., 10:00–10:10) to establish context and formally open the consultation. This is followed by an **opening session** featuring key project partners and stakeholders, offering institutional framing and strategic alignment. A brief **project overview** helps participants understand the broader initiative and its relevance. Subsequently, a dedicated presentation on the **innovation procurement strategy and the specific goals of the OMC** should clarify the process, legal framework, expected outcomes, and participation rules. The contracting authority (e.g., LIPOR) should then present its **institutional profile**, core operational areas, and innovation vision, which sets the stage for articulating the **challenge statement**—detailing the technical need or performance gap to be addressed by the market. A key component is the **dialogue session**, where selected stakeholders or facilitators present the **state of the art**, including advanced commercial solutions and relevant R&D&I projects, allowing participants to reflect on technological readiness and innovation potential. The agenda should provide ample space for **interactive engagement**, such as a **Q&A segment**, to ensure that all participants can clarify doubts and provide feedback. The event typically concludes with **closing remarks** summarising the session and outlining next steps. Time slots should be well distributed over 2.5–3 hours to ensure a dynamic but manageable pace, supporting focus and sustained interest throughout the consultation.

Table 21. Agenda of the Meet-the-Market event for the OMC in Porto (9th April 2024).

Meet-the-Market Agenda

Date: April 9th, 2024
Format: Hybrid Session

Time	Session
10:00	**Welcome**
10:10	**Opening Session** – LIPOR & CETENMA
10:15	**HOOP Project Overview** – CETENMA
10:25	**Innovation Procurement Strategy & OMC Objectives** – Sara Bedin, HOOP
10:45	**LIPOR Presentation**: • Who We Are • Biowaste Management • Innovation Strategy & Product Development
11:00	**Innovation Challenge**: Solutions for Nutrient Recovery from Liquid Digestate – LIPOR
11:30	**State of the Art**: Advanced Solutions & R&D&I Projects – Dialogue Moderated by CETENMA
12:30	**Q&A Session**
13:00	**Closing Remarks**

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5.2.8. INTERNAL GENERAL GUIDANCE

An Open Market Consultation (OMC) is a critical early step in the innovation procurement process, allowing public authorities to engage with the market in a transparent and non-discriminatory manner before launching a formal tender. When properly designed and implemented, an OMC helps reduce uncertainty, identify viable technical pathways, and refine procurement strategies based on real-world market intelligence.

However, to achieve these goals, it is essential to follow best practices and avoid common pitfalls. The table below outlines the key do's and don'ts derived from practical experience and regulatory guidance. These recommendations support public buyers in structuring meaningful market dialogues that are legally sound, strategically aligned, and technically insightful—ultimately increasing the likelihood of successful procurement outcomes.

Table 22. Do's and Don'ts open market consultation.

DO's	DON'Ts
1. Appoint a Competent and Technically Informed Coordination Team The organisation and facilitation of an OMC should be entrusted to a team (or individual) possessing relevant expertise across three core domains: technological, industry-specific, and scientific. This ensures the ability to evaluate whether the solutions proposed by market actors are functionally equivalent to the innovation objectives set by the public authority. Without such interdisciplinary competence, there is a heightened risk of misinterpreting market input, undervaluing emerging technologies, or failing to identify feasible, high-performance alternatives. **2. Clearly Define the Problem and Functional Needs** The OMC should focus on describing the problem to be solved—its bottlenecks, inefficiencies, and critical trade-offs—rather than pre-defining any technical solution. The need should be articulated in clear, simple terms, linked to expected outcomes, performance objectives, and investment drivers. A robust and comprehensive baseline must be presented, including process characteristics, waste volumes, impurity levels, seasonal variability, affected services and KPIs. Needs must be expressed in	1. **Don't pre-define the solution**: avoid prescribing how the problem should be solved. Focus on what needs to be achieved. 2. **Don't narrow the consultation to known or pre-identified technologies**: Begin from a well-defined problem and allow space for multiple innovation paths. 3. **Don't neglect or outsource the baseline definition**: The authority must take responsibility for clearly presenting key data such as waste volumes, variability, contamination levels, and technical constraints. Avoid launching the OMC if this information is missing. 4. **Don't formulate the need vaguely**: A generic or imprecise need statement will lead to misaligned solutions. Be specific and measurable.

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DO's	DON'Ts
the form of functional requirements—what the solution should achieve, not how it must be built. These should cover the entire life cycle of the expected solution to encourage higher long-term performance and lower total cost of ownership. **3. Provide Contextual and Regulatory Clarity** The desired solution must be contextualised within the operational environment in which it will be deployed. This includes local infrastructure, legal and environmental constraints, and specific use-case conditions. Such clarity enables potential suppliers to assess the feasibility of implementation and develop solid business cases. Highlighting apparent or hidden trade-offs or contradictions—especially those imposed by differing regulatory systems—can stimulate more innovative and practical proposals. **4. Use the OMC to Strengthen the Market's Understanding** The OMC is also an opportunity to understand what information suppliers need in order to assess feasibility and formulate proposals. This includes technical, environmental, and economic data necessary to build strong investment cases. Public buyers should substantiate their innovation needs, particularly where transforming waste streams into bio-based products is concerned, and bring these arguments into the open dialogue with the market. **5. Gather Intelligence from Diverse Sources** Insights collected through the OMC should be complemented by intelligence from online and offline innovation channels. These include trade fairs, product roadmaps, vendor literature, ongoing R&D and innovation projects, scientific publications, and industry reports. This provides the public authority with a more comprehensive understanding of the current state of the art and foreseeable future developments.	5. **Don't use the OMC to pre-select providers**: The OMC is not a tender or selection process. Only an open, competitive procurement can ensure fairness and provide real incentives for suppliers to innovate.

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DO's	DON'Ts
6. Enable Participation, Questions, and Feedback Suppliers must be given sufficient time to engage with the consultation, ask clarifying questions, and provide their feedback—especially regarding the proposed procurement approach and its feasibility. Opportunities for both written and verbal engagement (e.g. surveys, webinars, bilateral meetings) should be offered.	
7. Ensure Legal Compliance and Equal Access All steps of the OMC must comply with the core principles of the Treaty on the Functioning of the European Union (TFEU): equal treatment, transparency, non-discrimination, and proportionality. Participation must be open to all economic operators regardless of geography, size, or governance structure.	
8. Avoid Competitive Distortion Care must be taken to ensure the OMC does not provide unfair competitive advantages to participants. All suppliers must have equal access to information. Public buyers must never share privileged or confidential insights with a limited group of participants.	
9. Disseminate Transparently via Formal Channels The OMC should be announced through a Prior Information Notice (PIN) published on the Tenders Electronic Daily (TED) platform. Additionally, dissemination should occur via institutional websites, relevant national portals, and EU project channels when applicable.	
10. Communicate the Innovation Challenge Proactively Communications should clearly present the innovation need and strategic motivation behind the OMC. This includes stating the functional objectives, expected impacts and the openness of the process to diverse technical approaches. Targeted outreach should ensure all potentially relevant stakeholders are reached.	

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DO's	DON'Ts
11. Reinforce the Separation from Procurement It must be clearly stated in all communications that the OMC is not part of a pre-selection or qualification process. Participation does not offer any rights or privileges in future tendering. The procurement process that may follow the OMC will be open, competitive, and equally accessible to all. **12. Ensure Equal Knowledge Sharing Through Q&A Publication** All clarifications provided during the consultation should be compiled into a Q&A document. This must be shared publicly and referenced in any subsequent tender documents to ensure that all potential bidders operate with the same information. **13. Protect Confidential and Proprietary Information** Participants must be instructed to clearly indicate any sensitive commercial information. Public buyers are responsible for ensuring this information is protected, either through confidentiality clauses or appropriate legal safeguards.	

5.2.9. HOOP LEGACY IN SHAPING OPEN MARKET CONSULTATIONS

The development and deployment of the **HOOP Open Market Consultation (OMC) Toolkit** represents a significant step forward in equipping public authorities to engage more effectively with the market during the early, pre-procurement phase of innovation-driven projects.

By integrating **capacity-building resources**, a **tested operational model**, and a **replicable methodology**, the toolkit addresses a pressing need: enabling public buyers to act not merely as purchasers of solutions, but as strategic orchestrators of innovation ecosystems.

The real-world application of the toolkit across multiple Lighthouse Cities and Regions (LHs) confirmed both its **practical relevance** and **flexibility**. The experience also underscored three critical success factors for conducting effective OMCs:

- The **establishment of a clear legal and procedural framework** to ensure compliance and fairness;

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- The provision of **structured, transparent, and inclusive formats** that facilitate meaningful engagement across a broad spectrum of stakeholders;
- The cultivation of a **co-creation mindset**, promoting shared learning and trust between the public and private sectors.

As innovation procurement gains momentum as a strategic policy tool—especially in the context of the circular economy and urban bioeconomy—the HOOP Toolkit offers a **scalable and ready-to-use foundation**, adaptable to a wide range of challenges and institutional contexts.

As part of the Project Development Assistance (PDA) services offered within the HOOP framework, the partner **SBE** provided tailored, end-to-end support to Lighthouse Cities and Regions seeking to prepare and implement Open Market Consultations.

These services were designed to promote legally sound, inclusive, and accessible consultation processes, aligned with EU best practices in innovation procurement. Specifically, SBE's support included:

- Drafting the **Prior Information Notice (PIN)** and developing associated templates and document formats;
- Structuring and delivering the **technical prospectus**, with a clear articulation of the innovation challenge, functional needs, and expected outcomes;
- Designing the **online registration system and market survey instruments** to ensure smooth and effective stakeholder engagement;
- Defining transparent **participation rules**, ensuring legal compliance, neutrality, and data protection;
- Facilitating the **meet-the-market event**, including preparatory work, moderation, and post-event reporting.

This full suite of resources was originally designed to support **LIPOR's OMC in Porto**, but it was conceived from the outset as a modular and adaptable package. As such, the materials were made available to other HOOP Lighthouse Cities and Regions.

Upon request, SBE extended tailored advisory services to two additional OMCs, providing expert input, adaptable templates, and procedural guidance. Importantly, the **final design choices remained with each LH**, allowing full alignment with local strategic priorities, legal frameworks, and procurement objectives.

Beyond a catalogue of activities, **HOOP leaves behind a legacy of actionable knowledge**: methods, formats, and templates that empower public authorities to drive systemic transformation through smarter, innovation-oriented procurement practices.

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6. Open Market Consultations in practice: operational analysis and lessons from HOOP

6.1. Descriptive Elements of the Open Market Consultation Conducted in Porto by LIPOR

As part of its commitment to circular economy objectives and sustainable waste management, LIPOR, the intermunicipal waste management authority of Greater Porto, launched an Open Market Consultation (OMC) on 22nd January 2024. The consultation was carried out with the support of the HOOP Project, which provided technical assistance on innovation procurement strategies and guidance on potential funding pathways, including EU-level programmes.

The OMC was designed as an early, exploratory step preceding the procurement phase for a new anaerobic digestion plant. While the core investment decision had already been outlined and the environmental impact assessment was in progress, LIPOR sought to use the market dialogue to systematically assess technological trade-offs, better understand downstream treatment challenges, and de-risk procurement choices through market intelligence. The consultation aimed to generate a robust evidence base before finalising technical specifications—particularly for the treatment and valorisation of the liquid digestate produced by the plant.

The focus of the consultation was on the liquid fraction (effluent) remaining after dewatering, which is not to be recirculated into the digester. This effluent must comply with strict discharge regulations and—ideally—allow for the recovery of nutrients such as ammoniacal nitrogen and phosphorus, both of which have strong market value for regional agriculture.

Through this OMC, LIPOR aimed to:

- Identify technologies commercially available for nutrient recovery and wastewater treatment that meet regulatory discharge thresholds;
- Understand the advantages, limitations, and readiness level of such solutions in real operational contexts;
- Evaluate market risks that could impact supplier performance or long-term investment value;
- Clarify potential contractual frameworks and key features of the upcoming tender process.

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The initiative also served to minimise the risk of technological lock-in by fostering a competitive and open dialogue across a diverse range of suppliers and stakeholders. In line with EU best practices, the process was open to all interested economic operators, regardless of location, size, or organisational form, and included a "meet-the-market" hybrid event, a structured online survey, and a non-disclosure protocol to protect sensitive inputs.

By engaging the market at this early stage, LIPOR demonstrated a forward-looking approach: not only preparing for procurement, but also shaping it through an inclusive and informed process. This OMC illustrates how public authorities can strategically use market consultations to align procurement with innovation goals, optimise investment impact, and ensure regulatory compliance—while contributing to the advancement of circular, nutrient-smart waste infrastructure.

Table 23. Key Facts about the Market Consultation in Porto.

Starting date:	**22nd January 2024**	**(Expected) Ending date:**	**The OMC phase designed within the framework of the HOOP project was completed on December 2024; however, the preliminary phase prior to the procurement process is still ongoing.**
Reference Link(s)	52094-2024 - Planeamento - TED (europa.eu) ; 2024-OJS019-00052094-fullEN.pdf (hoopproject.eu)		
SUBJECT MATTER	Starting from a project to build an anaerobic digestion plant for 60,000 tons of food waste, the challenge for the market is related to the treatment of the liquid fraction of the digestate produced, after phase separation (effluent), in order to respond to legal requirements for discharge/treatment in a WWTP and, at the same time, recover nutrients (phosphorus and ammonia nitrogen) for valorisation and production of new bioproducts. Both nitrogen and phosphorus are valuable nutrients essential for fertilizer products. This is of interest for regional agriculture		
FORMATS	The open market consultation has been held in English in the form of: • Open "meet-the-market event" managed in hybrid form, held at least 60 days from this notice (the registration to the events was made available on the HOOP project website https://hoopproject.eu). • On-line market survey, made available on the HOOP project website within 40 days of the notice and completed by filling in and submitting a questionnaire (under a non-disclosure agreement, the collected info was not revealed publicly during event and/or meetings).		

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OBJECTIVES of THE OMC	The market consultation has been aimed to: • Find out whether technologies were commercially available and the level of fulfilment of the desired functionalities, in order to confirm the assumptions for the innovation procurement scope. • Identify market risks that could endanger business goals and supplier performance. • Provide an overview of the intended contract objectives, the tendering process, and the main clauses of the contract.
BASELINE INFORMATION (AS-IS)	• Every year, LIPOR treats about 500,000 tons of municipal solid waste (MSW) that are produced by about 1 million inhabitants. • The future anaerobic digestion plant will have a capacity of 60,000 tons per year. It is expected that this unit will receive a fraction of biowaste (food waste) from a separate collection. • The anaerobic digestion plant will produce biogas/biomethane and a raw liquid digestate. • The produced raw liquid digestate is expected to be about 160,000 tons per year • The raw liquid digestate will be dewatered. The solid part will be composted and used as fertiliser/soil amendment. The liquid part (effluent) will need to be recirculated and/or treated. • The maximum estimated amount of liquid part (effluent) is around 150,000 m^3/y (cubic meters per year). The open market consultation will concern a treatment capacity module of 25,000 ton/year (basic solution which only refers to the excess effluent stream) and a module of 150,000 ton/year (solution which refers to the entire liquid fraction of digestate) • Most of the nitrogen in the effluent is in form of ammoniacal nitrogen (NH4-N). • LIPOR plans to recirculate a large part of the effluent back to the anaerobic digestor (estimated 125,000 m^3/y). • High concentrations of ammoniacal nitrogen can inhibit the anaerobic digestion. • The untreated effluent (liquid part - effluent) in similar plants has an ammoniacal nitrogen content of 3000 – 4500 mg NH4-N/L. • The untreated effluent (liquid part - effluent) in similar plants has a total phosphorus content of 50 – 250 mg/L (milligrams per litre).
DESIRED SOLUTIONS (TO-BE)	As a first goal, the area where the innovation should be adopted is the treatment of the liquid fraction from the digestate after dewatering (effluent), that is not recirculated to the anaerobic digestor, in order to both comply with the is charge requirements and recover nutrients (phosphorus and ammoniacal nitrogen) to make a marketable product. Both nitrogen and phosphorus are valuable nutrients essential for fertiliser products for regional agriculture. • The treated effluent needs to have a total nitrogen content lower than 40 mg/L. • The treated effluent needs to have an ammoniacal nitrogen content lower than 30 mg NH4-N/L. • The treated effluent needs to have a total phosphorus content lower than 20 mg/L.

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6.2. Descriptive Elements of the Open Market Consultation Conducted in Bergen by BIR AS

BIR AS, a Norwegian public waste management company based in Bergen, has initiated the construction of a large-scale biogas plant in Voss, which is expected to become operational in the first half of 2026. The project is embedded within a broader regional strategy to promote a circular economy based on bioresources, and it represents the cornerstone of Voss Biopark—a future hub for innovation in agriculture, waste management, and sustainable food systems.

The construction of the plant has been fully defined and contracted. Two main contractors are involved:

- LAB Entreprenør AS has been entrusted with the full responsibility for the design and construction of buildings and infrastructure under a turnkey contract.
- Suomen Biovoima Oy, a Finnish EPC company specialised in cleantech solutions, has been awarded the contract for delivering the core process systems of the biogas facility, including the technological components required to convert organic waste into renewable energy and by-products.

The foundation stone was laid in August 2024, and the works are progressing in accordance with the established timeline. Once completed, the plant will represent the first biogas facility of its kind in the Vestland region.

Well before construction began, BIR AS launched a market consultation as part of its participation in the Horizon 2020 HOOP Project. This Open Market Consultation (OMC), titled BIOREST, was designed to explore post-treatment opportunities for the valorisation of digestate, particularly the solid fraction. The consultation was conducted promptly in order to gather relevant market insights ahead of the plant's realisation, allowing BIR to address trade-offs, pursue optimisations, and understand potential regulatory or technological constraints.

The central objective of the consultation was to initiate a dialogue with market actors and gather perspectives on how to create value from digestate through collaboration, product development, and regional integration.

Participants were invited to share ideas and proposals regarding:

- Potential synergies within the Voss Biopark ecosystem, such as opportunities for industrial symbiosis with other bioeconomy actors and connections with local agriculture;
- Cooperation models, including long-term supply agreements, joint ventures, or other strategic partnerships;
- The potential to upgrade solid digestate into market-ready fertiliser products, with a focus on phosphorus recovery and sustainable nutrient reuse;
- The design of systems for treating and returning liquid digestate to agriculture as a high-quality, organic fertiliser tailored to the needs of local farmers.

Through this process, BIR sought to shape the interface between the biogas facility and future markets for fertiliser and bio-based products, identifying how innovation and cooperation could enhance the long-term value chain of the plant.

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The consultation also helped assess how the digestate—rich in nutrients—could serve the needs of local and regional agriculture, thus closing the loop in nutrient cycles and advancing the circular bioeconomy.

The formal phase of the BIOREST consultation under the HOOP project began in 2023, marked by the publication of a Prior Information Notice (PIN) [OJ S 241/2023 – Notice No. 756905-2023]. However, BIR AS has kept the consultation open-ended, and reserves the right to continue, resume, or refocus the dialogue with stakeholders based on future needs and opportunities.

No final conclusions were issued at the end of the HOOP consultation, and from BIR's perspective, the initiative remains active as part of its flexible, long-term engagement strategy.

This reflects BIR's commitment to ensuring that the development of Voss Biopark is guided not only by infrastructure delivery but also by the market's capacity to innovate in the valorisation of bio-based resources.

Table 24. Key Facts about the Market Consultation in Bergen.

Starting date:	**14.12.2023**	**(Expected) Ending date:**	**31.05.2024**
Reference Link(s)	756905-2023 - Planning - TED		
SUBJECT MATTER	**Bergen, through BIR AS, intends to address the management of the solid fraction of digestate produced by the forthcoming biogas plant in Voss, scheduled to commence operations in the first half of 2026. The primary objective is to ensure the optimal utilization of nutrients present in the digestate, particularly phosphorus, by upgrading the solid digestate into a marketable fertilizer product**		
FORMATS	The market consultation has been held in the form of: 1. Market Dialogue: encouraging open discussions with market participants to solicit input on collaboration models and technological solutions for digestate utilization. 2. One-to-One Meetings: offering individual meetings for interested market actors to discuss feasible solutions and potential partnerships in detail.		
OBJECTIVES of THE OMC	The market consultation aims to: • Identify potential synergies within the Voss Biopark ecosystem, such as opportunities for industrial symbiosis with other bioeconomy actors and connections with local agriculture; • Explore cooperation models, including long-term supply agreements, joint ventures, or other strategic partnerships; • Assess the potential to upgrade solid digestate into market-ready fertiliser products, with a focus on phosphorus recovery and sustainable nutrient reuse;		

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	• Acquire information about the advantages and disadvantages of alternative systems for treating and returning liquid digestate to agriculture as a high-quality, organic fertiliser tailored to the needs of local farmers.
BASELINE INFORMATION (AS-IS)	The biogas plant at Voss is projected to process approximately 15,000 tonnes of organic municipal and household waste from the Bergen area and 40,000 tonnes of cattle manure annually. This process will yield about 6,000 tonnes of solid digestate with a dry matter content of around 25% and approximately 40,000 tonnes of liquid digestate with a dry matter content of 3–4% each year. The solid digestate contains valuable nutrients, such as phosphorus, which are currently underutilized. There is a recognized local and regional demand for these nutrients; however, BIR requires market dialogue to identify viable processing technologies and define conditions to fully valorize the digestate. Innovative solutions are necessary to optimize nutrient recovery and facilitate the integration of these products into the market.
DESIRED SOLUTIONS (TO-BE)	BIR envisions a future where the digestate is fully valorized through technology-driven solutions that maximize its nutrient recovery and market readiness. The objectives include: 1. Development of Sustainable Partnerships: Collaborate with partners to upgrade the digestate into fertilizers or soil improvement products. 2. High-Quality Standards for Liquid Digestate: Ensure that the liquid digestate meets quality standards comparable to conventional agricultural fertilizers, facilitating its return to local agriculture. 3. Facilitation of Circular Economy Synergies: Leverage the Voss Biopark to create one of Norway's most innovative industrial symbiosis hubs, integrating agriculture, waste management, and food and feed production. 4. Regulatory Compliance: Establish compliance frameworks for the use of digestate in fertilizer and agricultural applications. The plant will be an integral part of Voss Biopark, which aspires to become one of the country's most innovative industrial symbioses based on bioresources. The industrial development project encompasses agriculture, waste management, and food and feed production, while also developing new physical and digital infrastructure. The park aims to achieve increased resource utilization through collaboration, knowledge, and regional value creation.

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6.3. Descriptive Elements of the Open Market Consultation Conducted in Murcia by Aguas de Murcia

The market consultation launched by Aguas de Murcia, within the framework of the Horizon 2020 HOOP project, represents an early and exploratory phase in the innovation procurement cycle, as envisaged by Spanish and EU regulations. While not directly tied to an immediate procurement procedure, this initiative was designed to support the preparation of a future innovation strategy in the field of circular economy and public service transformation.

In Spain, Open Market Consultations (OMC) may be initiated even in the absence of a fully defined procurement procedure, provided that a general intention to contract exists. This regulatory flexibility allows public buyers to use the OMC mechanism not only to inform tender planning but also to explore the maturity of the market, assess innovation potential, and identify promising areas for development. The consultation in Murcia reflects precisely this exploratory use.

HOOP provided technical assistance to Aguas de Murcia in the design and implementation of the consultation, as part of its broader support activities on innovation procurement. This included identifying relevant national funding lines such as the Línea de Fomento de la Innovación desde la Demanda (Línea FID)—a flagship programme of the Spanish Ministry of Science, Innovation and Universities. Línea FID aims to stimulate innovation by supporting the adoption of advanced products and services through public procurement. It facilitates access to European Structural Funds (ERDF), notably by co-financing projects that combine technological development with the improvement of public services. Another key institutional actor in this ecosystem is CDTI (Centre for Technological Development and Innovation), which plays a strategic role in managing R&D&I funding and fostering collaboration between public and private innovation stakeholders. Notably, HOOP provided guidance on the Spanish “Línea FID” and also facilitated dialogue with CDTI.

The consultation launched by Aguas de Murcia thus serves multiple purposes: it meets preliminary regulatory requirements to access innovation-oriented funding, supports the identification of priority areas for development, and lays the groundwork for a future Early-Demand Map (Mapa de Demanda Temprana)—a strategic roadmap of innovation needs that can be used to articulate future procurement calls.

Unlike other OMCs focused on targeted procurement, this initiative took a broader and more anticipatory approach. The market was invited to reflect on wide-ranging challenges and to contribute insights that could help shape the most promising innovation pathways—those that merit prioritisation for public investment and strategic collaboration. In parallel, Aguas de Murcia consulted the market on an additional challenge, reinforcing the exploratory and agenda-setting nature of the exercise.

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Table 25. Key Facts about the Market Consultation in Murcia (First Challenge).

Starting date:	**03.12.2024**	**(Expected) Ending date:**	**On-going**
Reference Link(s)	Plataforma de Contratación del Sector Público		
SUBJECT MATTER	**The innovation challenge, promoted by Aguas de Murcia, concerns the optimization of urban water usage by eliminating the use of potable water for non-essential activities—particularly the irrigation of urban green areas. This challenge seeks to implement a sustainable and integrated solution to enhance water conservation, improve water quality, reduce operational costs, and meet environmental regulations. It also aims to mitigate the impact of recurring droughts, overexploitation of aquifers, and compliance with the EU Water Framework Directive (2000/60/EC).** **The overarching goal is to achieve zero potable water use for urban green area irrigation and transition towards large-scale reuse of regenerated water.**		
FORMATS	The open market consultation has been held in Spanish, which has been selected as the official language for all documentation and exchanges. Both written and oral formats have been designed to facilitate participation. The process began with a written phase, in which participants were asked to complete a structured questionnaire provided by EMUASA. Following the evaluation of written submissions, EMUASA reserved the right to invite selected participants to take part in individual interviews, to be conducted either in person or virtually. These bilateral meetings will allow for further clarification and elaboration on the information submitted, supporting a deeper understanding of the proposed solutions. In terms of contributions, participants were encouraged not only to respond to the questionnaire but also to submit relevant technical documentation or case studies, and, where applicable, to provide feedback on both the scope of the consultation and the envisioned future procurement process. To ensure the protection of intellectual property and sensitive information, participants were informed that all data shared would be treated with strict confidentiality in line with applicable regulations. EMUASA indicated that a summary report of non-confidential findings might be elaborated and made available at the conclusion of the process		
OBJECTIVES of THE OMC	The market consultation aims to: • Explore and prioritize sub-challenges in water reuse, aquifer recharge, and potable water reduction. • Gather technical and market intelligence to support the design of an innovation procurement framework. • Assess market readiness in order to confirm the assumptions for the innovation procurement scope. • Identify potential barriers to the adoption of sustainable water resource management technologies. • Understand the innovation landscape for water treatment, reuse, and environmental protection solutions.		

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BASELINE INFORMATION (AS-IS)	• Murcia currently has approx. 405 hectares of green areas distributed across 1,137 plots, with an estimated irrigation requirement of 2.43 hm^3/year (based on 6,000 m^3/ha/year). • The authorized water extraction volume is 0.95 hm^3/year, resulting in a current irrigation water deficit of 1.48 hm^3/year. • A significant portion of green spaces rely on potable water, exacerbating stress on the Segura River Basin, which has a structural water deficit of 330 hm^3/year - largely covered through overexploitation of aquifers like Vega Media, Vega Alta, Calasparra, Guadalentín and Cartagena. • The MASub 070.036 Vega Media and Baja del Segura aquifer, supplying irrigation water, is in poor chemical condition due to nitrate concentrations exceeding 25 mg/L, linked to aquifer discharges into the river. • Murcia has an alternative network to potable water since 1994, consisting of wells, pumps, storage, and pipe systems distributing groundwater for irrigation and cleaning. In 2014, the Hydrographic Confederation set a limit of 950,000 m^3/year for irrigation and street cleaning, requiring a network redesign. Due to reorganization, only 14 wells remain, and many green areas now rely on potable water. • A Master Plan was drafted to expand the RUR, interconnecting it into a hydraulic ring to supply reused or groundwater for irrigation in southern Murcia and support northern zones—an € 8.6 million investment. Still, this remains insufficient, especially given Murcia's large area and scattered green zones. • To address this, the municipality launched technical trials to verify the viability of groundwater treatment. A pilot reverse osmosis (RO) plant was installed in Rincón de Beniscornia, concluding that RO is effective for purifying groundwater to meet Royal Decree 3/2023 standards for drinking water.
DESIRED SOLUTIONS (TO-BE)	The proposed comprehensive solution involves five coordinated actions across water regeneration, treatment, recharge, and distribution: 1. **Water Regeneration at Murcia East WWTP**. Maximize the output of regenerated water for irrigation and aquifer recharge. Upgrade treatment systems to comply with reuse standards and environmental requirements. 2. **Artificial Recharge at Rincón de Beniscornia**. Recharge the aquifer using regenerated water in a controlled, sustainable manner. Aim to restore aquifer balance and ensure compliance with environmental safety standards. 3. **Potabilization via Reverse Osmosis in Zarandona**. Treat groundwater to meet potable standards, enhancing local supply resilience. Integrate into existing potable water infrastructure. 4. **Extraction from Zarandona Regeneration Station**. Utilize treated regenerated water for non-potable municipal activities (e.g., irrigation). Ensure consistent and efficient distribution within the urban network. 5. **Expansion of the Urban Irrigation Network (RUR)**. Extend infrastructure to cover currently unserved green zones. Employ advanced trenchless drilling and cast iron piping technologies. Integrate chlorination stations and RUR junction points. **EXPECTED BENEFITS** 1. Increased availability of groundwater during drought or surface water shortages. 2. Saline intrusion prevention in vulnerable coastal aquifers. 3. Environmental sustainability through reduced potable water usage. 4. Soil subsidence prevention by stabilizing groundwater levels.

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5. Improved groundwater quality by diluting contaminants with regenerated water.

EXPECTED INNOVATION

1. Improved Water Quality:

- **Emerging Contaminant Removal**. Development of technologies to eliminate pharmaceuticals, microplastics, endocrine disruptors, and industrial chemicals. Innovations include nanofiltration, activated carbon adsorption, membrane bioreactors (MBR), and photocatalytic materials.
- **Real-Time Monitoring Systems**. Implementation of IoT-enabled sensors for real-time detection of heavy metals, pathogens, and organic contaminants. Integration with AI for early warning and adaptive treatment response.
- **Enhanced Biological Treatment**. Advanced biofiltration using engineered microorganisms or microbial consortia to improve treatment efficiency and sustainability.

2. Increased Water Resource Availability

- **Efficient Recharge Infrastructure**. Optimized infiltration systems and injection wells using innovative filtration materials to maximize recharge efficiency.
- **Rainwater Capture and Integration**. Combine rainwater harvesting with reclaimed water in urban and rural settings. Use smart platforms for optimized aquifer recharge.
- **Modular Treatment Plants**. Mobile and flexible water treatment units powered by renewable energy, tailored to localized needs and reducing cost.

3. Environmental Protection and Ecosystem Resilience

- **Nature-Based Solutions (NBS)**. Implementation of wetlands and rain gardens to pre-treat regenerated water and enhance biodiversity.
- **Saltwater Intrusion Mitigation**. Use of predictive AI models to monitor and prevent saline intrusion in coastal aquifers under recharge conditions.
- **Biodiversity Monitoring**. Deploy drones and remote sensing to study recharge zone impacts on ecosystems and guide environmental management.

4. Cost Reduction and Energy Efficiency

- **Energy Optimization**. Integrate renewable energy sources and energy recovery systems in water treatment infrastructure to lower operational costs.
- **Circular Water Economy.** Encourage synergies across sectors (urban, industrial, agricultural) to maximize the reuse of treated water and reduce potable water demand.

In addition to its involvement in the HOOP project, the Municipality of Murcia—through Aguas de Murcia (EMUASA)—has promoted a complementary innovation challenge that extends beyond HOOP immediate scope and reflects Murcia's broader ambition to position itself as a frontrunner in circular and climate-resilient infrastructure planning.

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Table 26. Key Facts about the Market Consultation in Murcia (Second Challenge).

Starting date:	03.12.2024	(Expected) Ending date:	On-going
Reference Link(s)	Plataforma de Contratación del Sector Público		
SUBJECT MATTER	The innovation macro challenge promoted by Aguas de Murcia focuses on the implementation and management of a circular economy and sustainable development model. This challenge seeks to address critical environmental and economic issues requiring innovative and sustainable solutions. The core of the challenge lies in responding to the pressing need for more efficient and sustainable systems for managing organic waste and wastewater. Current practices are marked by inefficiencies and a heavy dependence on synthetic chemical fertilizers, which have significant environmental and energy impacts. Furthermore, there is a growing imperative to mitigate greenhouse gas (GHG) emissions as part of broader climate change strategies. Equally important is the transformation of agricultural practices to not only ensure sustainability but also to enhance soil health and promote the sequestration of atmospheric carbon in the soil, contributing directly to the reduction of the global carbon footprint. A critical goal is to close the loop on material and nutrient flows—particularly nitrogen and organic matter—by converting organic waste streams into high-value resources such as fertilizers and renewable fuels. Addressing these interconnected challenges requires the development and deployment of comprehensive, forward-looking solutions. These must enable the effective recovery and reuse of nutrients and energy from waste while supporting environmental preservation, economic efficiency, and long-term social benefit—fully aligned with the principles of circular economy and sustainable development.		
FORMATS	The open market consultation has been held in Spanish, which has been selected as the official language for all documentation and exchanges. Both written and oral formats have been designed to facilitate participation. The process began with a written phase, in which participants were asked to complete a structured questionnaire provided by EMUASA. Following the evaluation of written submissions, EMUASA reserved the right to invite selected participants to take part in individual interviews, to be conducted either in person or virtually. These bilateral meetings will allow for further clarification and elaboration on the information submitted, supporting a deeper understanding of the proposed solutions. In terms of contributions, participants were encouraged not only to respond to the questionnaire but also to submit relevant technical documentation or case studies, and, where applicable, to provide feedback on both the scope of the consultation and the envisioned future procurement process.		

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	To ensure the protection of intellectual property and sensitive information, participants were informed that all data shared would be treated with strict confidentiality in line with applicable regulations. EMUASA indicated that a summary report of non-confidential findings might be elaborated and made available at the conclusion of the process
OBJECTIVES of THE OMC	The market consultation aims to: • Explore and prioritize sub-challenges in nitrogen recovery, organic waste valorization, and the application of treated sludge to improve soil quality and carbon sequestration. • Gather technical and market intelligence to support the design of an innovation procurement framework focused on circular solutions within wastewater treatment plants. • Assess market readiness in order to confirm the assumptions for the innovation procurement scope, particularly regarding the feasibility of high-efficiency nitrogen recovery systems and pilot plants for renewable fuel production. • Identify potential barriers to the adoption of sustainable resource recovery technologies within WWTPs, including regulatory, operational, and economic challenges. • Understand the innovation landscape for integrated wastewater and sludge treatment solutions that enable nutrient recovery, reduce GHG emissions, and support climate adaptation.
BASELINE INFORMATION (AS-IS)	The Murcia East Wastewater Treatment Plant (EDAR Murcia Este) was commissioned in 2002 with a design capacity of 100,000 m^3/day and peak-season pollutant loads of 588 mg/L BOD_5 and 548 mg/L of suspended solids. The biological treatment uses an A2O activated sludge process with anaerobic and anoxic selectors for nutrient removal, particularly nitrogen and phosphorus. The sludge line includes thickening, anaerobic digestion, and dehydration using centrifuges with polymer addition. Biogas generated is utilized in a cogeneration plant, while treated effluent is discharged into the Segura River to maintain ecological flow. Nitrogen, present in wastewater, can reduce dissolved oxygen levels in water bodies, harm aquatic ecosystems, and pose public health risks. Along with phosphorus, it contributes to eutrophication. Currently, the WWTP treats approximately 5% more than its designed capacity, and discharge limits for nitrates have become more stringent over time. In 2007, the limit was 15 mg N/L, reduced to 12 mg N/L today, due to the plant's location in a nitrate-vulnerable zone, as designated by regional legislation. Nitrogen removed in the water line accumulates in the sludge. During anaerobic digestion, part of this nitrogen is released into the liquid phase, leading to operational issues. These include the uncontrolled precipitation of struvite (magnesium ammonium phosphate), especially after digestion, which causes maintenance problems in equipment and pipes. Additionally, some nitrogen returns to the plant's headworks, increasing treatment costs and the risk of non-compliance with discharge limits. There is thus a clear need for technologies that can extract and recover nitrogen from these liquid flows, converting it into high-value, low-impact products such as ammonium salts, which can be used as fertilizers. Industrial nitrogen production is energy-intensive and environmentally harmful, making recovery from wastewater both sustainable and economically beneficial.

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DESIRED SOLUTIONS (TO-BE)	To address pressing environmental and operational challenges linked to wastewater and organic waste management, the desired solution envisions the deployment of an integrated system of innovations that embrace circular economy principles, optimize resource recovery, and foster long-term environmental sustainability. This multifaceted approach is articulated across three interrelated intervention domains: nitrogen recovery, renewable fuel production from organic waste, and the application of treated sludge to enhance soil health and capture carbon. At the core of the solution lies the transformation of waste into valuable resources—fertilizers, renewable fuels, and soil enhancers—through scalable and energy-efficient technologies that meet the highest environmental standards. The proposed strategy is not only technological but also systemic, aiming to convert the WWTP from a treatment facility into a resource recovery hub. **1. Nitrogen Recovery and Valorization via Ammonium Salts** The solution will include a high-efficiency system for the extraction and recovery of nitrogen in the form of ammonium salts from internal process streams, particularly centrate and sidestreams generated during sludge digestion and dehydration. The target is to recover ammonium-rich liquid fertilizers with nitrogen concentrations between 8% and 21% (w/v), suitable for commercial agricultural use. To achieve this, the technology must enable: • Advanced process control over key parameters such as flow direction, tank volume, sweep gas rate, and gas-liquid interaction, ensuring precise, real-time operation. • The prevention of struvite precipitation and associated maintenance risks, through optimized process sequencing and controlled chemical conditions. • The design of modular and scalable systems adaptable to a range of treatment plant sizes, facilitating flexible deployment. • Integration with renewable energy sources and on-site biogas recovery, reducing energy consumption and enhancing economic viability. • Full compliance with existing regulatory frameworks, particularly nitrogen discharge limits applicable in nitrate-vulnerable zones, currently set at 12 mg N/L. The recovered ammonium salts must be stabilized for distribution, with options for nutrient fortification (e.g., with phosphorus or potassium), allowing for the production of customized, multi-nutrient liquid fertilizers. The entire process must be supported by intelligent monitoring systems to track nitrogen concentrations and system performance, enabling automated control and immediate corrective responses. **2. Renewable Fuel Production from Organic Waste** The second component of the solution involves the conversion of organic residues—such as food waste, agricultural by-products, sewage sludge, and process effluents—into renewable fuels, notably bioethanol and biomethanol. This requires the design, construction, and operation of a pilot-scale biorefinery facility capable of: • Demonstrating the technical viability of digestate-derived biofuel production, with emphasis on the transformation of stabilized sludge into fermentable substrates. • Enhancing the anaerobic digestion process to produce higher yields of digestate suitable for subsequent conversion.

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- Upgrading raw biogas into biomethane and integrating its use into energy recovery circuits.
- Capturing and utilizing CO_2 released during fermentation, supporting decarbonization goals.
- Enabling downstream commercialization of produced biofuels and biofertilizers derived from fermentation by-products.

The solution must align with the principles of circularity and sustainability, ensuring that by-products from one process become inputs for another, thereby maximizing overall resource efficiency.

3. Soil Regeneration and Carbon Sequestration through Treated Sludge Application

A third pillar of the solution consists in the strategic reuse of treated sewage sludge to regenerate soils, restore fertility, and increase organic carbon stocks, particularly in degraded or erosion-prone agricultural lands.

The approach includes:

- The application of four types of treated sludge—namely aerobic, biometanized, dried, and composted—in both laboratory and field-scale trials, assessing their efficacy in improving soil structure and nutrient content.
- Enhancing the soil's capacity for water retention and infiltration, while reducing runoff and erosion.
- Stimulating soil biodiversity and biological activity, supporting resilient agroecosystems.
- Quantifying carbon sequestration potential and reductions in greenhouse gas emissions, particularly through the substitution of synthetic fertilizers and the avoidance of conventional sludge disposal.

These actions directly support climate change mitigation targets, reinforce sustainable agricultural practices, and provide an outlet for the environmentally safe valorization of sludge generated by the WWTP.

EXPECTED OUTCOMES AND STRATEGIC BENEFITS

The implementation of this comprehensive solution is expected to generate measurable benefits across environmental, economic, and social dimensions:

- A significant reduction in the volume of waste and sludge sent to landfill, lowering disposal costs and environmental impact.
- Increased energy self-sufficiency of the WWTP through biogas valorization and renewable fuel production.
- The creation of circular value chains that transform wastewater and sludge into economically viable products.
- Improved compliance with water and waste regulations at the regional and EU levels.
- Enhanced public perception of wastewater treatment facilities as sustainability drivers rather than pollution sources.
- Job creation and the stimulation of innovation ecosystems in the fields of waste treatment, agritech, and bioeconomy.
- Expansion of scientific and technological knowledge through pilot testing, field validation, and industrial scalability.

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INNOVATION EXPECTATIONS

The desired solution must demonstrate high levels of technological innovation, with the following expectations:

- Development of advanced separation techniques for ammonium recovery, including precipitation, ion exchange membranes, or low-energy electrodialysis systems.
- Stabilization and formulation of high-quality liquid fertilizers with potential for market uptake.
- Real-time sensing and digital process optimization for nitrogen removal and fertilizer production.
- Biofuel production pathways adapted to municipal sludge and local organic waste streams, with CO_2 capture and energy integration.
- Field-proven models for the sustainable reuse of treated sludge in agriculture, contributing to soil carbon storage and reduced reliance on chemical inputs.

6.4. Outcomes of the OMC: Comparative Analysis and Methodological Insights

Across the three HOOP cities—Porto, Bergen, and Murcia—the main motivation for launching an Open Market Consultation was consistently the need to assess whether technologies meeting their innovation goals were already commercially available. This objective was rated as a high priority by all, establishing a common strategic ground. Secondary motivations such as identifying market risks and outlining contractual elements were also acknowledged, although ranked with moderate to low importance across the board.

Porto approached the consultation as a structured yet pragmatic pre-procurement step, with its needs already well-defined following internal analytical work. This explains why the outcome was described as moderately helpful in clarifying procurement scope: the OMC served primarily as a tool for validation and market feasibility testing, not for redefining needs. The value derived from the exercise resided in verifying alignment with regulatory thresholds, operational realities, and innovation availability—rather than uncovering unknowns.

Bergen, by contrast, reported that the OMC had limited impact on either procurement clarification or information asymmetry. This is coherent with its stated approach: the technological solution was already identified before the consultation, and the OMC focused more on cooperation models and ecosystem readiness than on technology discovery. The process in Bergen functioned more as a collaborative pre-engagement, oriented toward shaping future partnership frameworks rather than informing core technical requirements. While not exploratory in the traditional sense, this use of the OMC is nonetheless legitimate and strategic—especially in settings where stakeholder alignment and long-term collaboration are critical to implementation.

Murcia offers a strikingly different model. Here, the OMC was used as a fully exploratory mechanism, embedded within a broader innovation funding preparation strategy. The consultation, supported methodologically by the HOOP project, was conducted to identify promising technological directions and innovation gaps prior to the definition of a procurement scope. The city explicitly declared that the OMC “completely” helped to clarify its

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needs—an outcome that reflects the open, problem-driven posture of the exercise. Importantly, Murcia's declared intention to follow up with a Pre-Commercial Procurement (PCP) underscores the logic behind this exploratory use: understanding how much R&D is still required before launching any actual solution deployment. This aligns with EU best practices on demand-side innovation policy, where PCP is meant to fund the development of technologies that are not yet ready for commercial uptake but hold strong potential to meet public needs.

Overall, the different outcomes reported by the three cities do not reflect a divergence in quality, but rather a divergence in **consultation purpose and methodological maturity**. Porto entered the OMC with a defined scope, using the process to refine and test it. Bergen used the OMC more to map stakeholder collaboration potential than to shape technical content. Murcia adopted a discovery-oriented OMC to structure its future innovation agenda and access funding aligned with the pre-commercial stage of solution development.

Figure 6. Evaluations of the OMCs by Porto, Bergen and Murcia based on a structured feedback questionnaire.

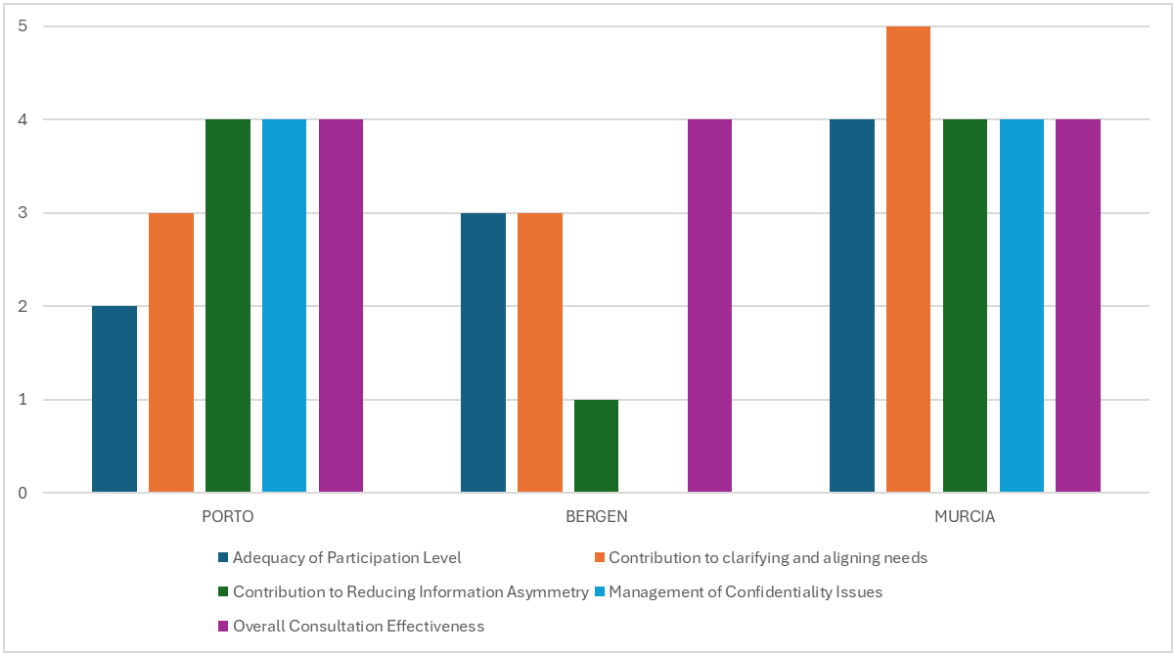

Figure 6 presents the **self-assessed, semi-quantitative evaluations** provided by the three public authorities—Porto, Bergen, and Murcia—at the conclusion of their respective Open Market Consultations (OMCs), based on a structured feedback questionnaire. These ratings offer valuable insight into how each procurer perceived the performance and effectiveness of their own OMC across five dimensions: (1) adequacy of participation, (2) contribution to clarifying and aligning needs, (3) contribution to reducing information asymmetry, (4) management of confidentiality, and (5) overall consultation effectiveness. While the scale is numerical (1–5), the underlying assessment is qualitative and subjective, reflecting the internal perspective of each organisation.

Porto rated the adequacy of participation at a modest level (2), indicating that the turnout fell slightly below expectations. Nonetheless, the consultation was judged moderately useful in clarifying needs (3) and particularly valuable in reducing information asymmetry (4), suggesting a high level of meaningful exchange with those who did participate. The management of confidentiality was also evaluated positively (4), in line with the

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preventive measures adopted, even if implemented informally. Overall, Porto considered the consultation effective (4), despite its limited breadth, demonstrating that process quality and preparation can offset lower participation.

Bergen assigned itself a satisfactory score for participation (3), reflecting alignment with its outreach expectations. However, the contribution to reducing information asymmetry was rated low (1), revealing that the consultation offered limited mutual learning or market discovery—perhaps due to a pre-defined technological path. No assessment was provided for the management of confidentiality, which might suggest that no sensitive information was exchanged or that confidentiality measures were not formally in place. Nonetheless, Bergen rated the overall consultation as effective (4), which may reflect its value in validating existing plans or confirming the viability of future partnerships.

Murcia reported the strongest self-assessments across the board. Participation was rated high (4), and the consultation was considered extremely helpful in clarifying and aligning needs (5)—the highest score among the three cities. Similarly, the process was deemed effective in reducing information asymmetry (4), and confidentiality was actively managed through a formalised approach (4). The overall effectiveness score (4) reflects the strength of this structured, exploratory process, which Murcia used as a strategic learning opportunity ahead of launching a Pre-Commercial Procurement (PCP).

Rather than viewing these differences hierarchically, the HOOP experience illustrates the importance of tailoring the design of OMCs to the **specific maturity level of the buyer**, the **stage in the innovation cycle**, and the **nature of the funding or procurement pathway** being pursued. When this alignment is achieved, even OMCs with “moderate” outputs—as in Porto and Bergen—can serve their purpose effectively. Conversely, exploratory consultations like Murcia's play a catalytic role in shaping demand when no prior assumptions are held.

In short, the self-assessed effectiveness of each OMC correlates closely with its underlying methodology: **confirmatory** in Porto, **collaborative** in Bergen, and **formative** in Murcia. Each represents a valid and valuable model for innovation-oriented market engagement

6.4.1. OBJECTIVES AND VALUE

Despite different contexts and innovation challenges, all three entities—LIPOR (Porto), BIR AS (Bergen), and EMUASA (Murcia)—ranked the identification of commercially available technologies as their **primary motivation**, assigning it “high importance”. Secondary goals, such as identifying market risks and clarifying future contractual expectations, were generally considered of **moderate** to **low** priority.

The self-assessed outcomes of the OMCs mirror these initial objectives. Porto and Bergen both indicated that the consultation helped to clarify their needs only **“to a moderate extent”**, while Murcia marked that the OMC **“completely” clarified** its procurement needs. This discrepancy stems not from the success or failure of the consultations themselves, but from their **underlying strategic function**.

Porto, for instance, had already outlined a core investment to build a new anaerobic digestion facility. The OMC was not intended to question that decision but to explore the feasibility of **integrating an additional technology** for treating the **liquid fraction** of the digestate in compliance with discharge standards, while recovering

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nutrients like phosphorus and ammoniacal nitrogen. However, the TRL for such technologies was not deemed mature enough to be embedded in the main procurement. As a result, LIPOR has **identified and reserved a separate site** to host this solution at a later stage—thus decoupling the innovation pathway from the core project.

Bergen adopted a similar strategy, but from the opposite angle: its consultation focused on **valorising the solid fraction** of digestate from a forthcoming biogas plant. The core technology had already been selected; the OMC was used to explore **collaborative models** and downstream applications for nutrient recovery, particularly in the context of regional industrial symbiosis. Consequently, Bergen's OMC helped identify possible uses and partnerships but did not substantially modify the main procurement plan, which will proceed under an **Innovation Partnership** model.

Murcia, by contrast, used the OMC not to confirm an existing project but to **define** one. The process was clearly exploratory, seeking to identify **innovation gaps** and orient future public investment in sustainable water reuse. It enabled EMUASA to engage the market broadly, gather a wide range of proposals, and refine its strategic thinking. The consultation's outcome will serve as the **basis for prioritising R&D efforts** and will inform a **Pre-Commercial Procurement (PCP)** to be launched—pending funding—within a structured national innovation programme (Línea FID). This use of the OMC to shape future procurement needs—rather than refine existing ones—fits well within a **problem-driven innovation logic** and reflects the maturity model described in Edler & Yeow (2016), where public buyers learn through market dialogue before designing the instrument.

While Porto and Bergen used the OMC more in a **confirmatory** role—testing feasibility and market alignment—Murcia employed it as a **discovery tool**, which explains why it rated the process as more decisive. However, the trade-off here is not trivial: exploratory OMCs may surface more options, but they also risk procurement drift, where market offerings start shaping public needs (rather than the reverse). In this sense, each approach must be judged by its alignment to the underlying stage of procurement readiness.

6.4.2. MARKET ENGAGEMENT AND PARTICIPATION PATTERNS

The three public authorities reported significantly different levels of market response to their Open Market Consultations (OMCs). LIPOR (Porto) found that participation was slightly below expectations, despite deploying a broad mix of outreach tools—including a Prior Information Notice (PIN), targeted invitations, and updates via the HOOP project channels. In contrast, BIR AS (Bergen) reported participation levels fully in line with expectations, and EMUASA (Murcia) registered a strong turnout, with engagement levels exceeding initial forecasts.

This variation likely reflects the different timing and purpose of each OMC. While Porto and Bergen conducted consultations on the basis of well-defined investment plans, Murcia's OMC was framed as an exploratory step to shape future innovation agendas and support a PCP application, which may have attracted stakeholders interested in influencing that agenda upstream.

The composition of stakeholders further illustrates this divergence. Porto managed to mobilise a broad spectrum of actors, including well-established suppliers, SMEs, large corporations, other public procurers, and consultants—an effort clearly aligned with the European Commission's recommendation to cast a wide net during early engagement. Bergen also reached a diverse and promising mix, involving established players, SMEs, and

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notably, new entrants and emerging companies—suggesting an intentional push toward market diversification and innovation scouting. Murcia, by contrast, engaged primarily with established suppliers and research centres or universities. This academic tilt is consistent with its intention to identify research gaps and stimulate demand-side innovation in collaboration with scientific institutions, though it may have limited exposure to disruptive or startup-driven solutions

6.4.3. TRL LEVELS, INNOVATION NEEDS, AND PROCUREMENT STRATEGY COHERENCE

Each city drew different conclusions regarding their grasp of the technological frontier:

- **Porto** found that the OMC brought new insights to light, especially regarding downstream treatment challenges and nutrient recovery potential.
- **Murcia** used the consultation to confirm existing assumptions and better structure its internal innovation agenda.
- **Bergen** concluded that additional sources of intelligence—such as literature reviews and patent analyses—were still necessary.

All three acknowledged the importance of industry fairs, OMCs, and active participation in research projects as key channels for monitoring technological development.

A closer look at the reported TRLs and corresponding procurement instruments reveals key differences in strategic alignment and timing across the three cases.

LIPOR (Porto) identified solutions at **TRL 5–6** (validation in relevant environments). These technologies referred specifically to the treatment and valorisation of **liquid digestate**, not the core anaerobic digestion plant, which will be procured via a **restricted procedure**. Given the **immaturity of the nutrient recovery solutions**, LIPOR made the strategic decision **not to integrate** them into the main procurement. Instead, it plans to keep this technology pathway open, by developing a **dedicated site for future deployment**, thereby allowing further testing and development before engaging in a PPI.

BIR AS (Bergen) reported a higher TRL of **7–8**, consistent with the biogas technology already selected for its main investment. Its OMC focused on unlocking value from the **solid digestate fraction**, identifying synergies with regional partners. The results informed two complementary strategies: an **Innovation Partnership** to develop and procure the core facility, and a **Collaboration Agreement** to explore new valorisation solutions for the by-products. This dual-track model allows Bergen to anchor the investment in operational readiness while keeping channels open for further innovation.

Murcia, in contrast, identified solutions at **TRL 5–6**, similar to Porto, but took the opposite route in procurement planning. EMUASA has chosen to proceed with a **Pre-Commercial Procurement (PCP)**, explicitly acknowledging that the proposed solutions require further development. This decision reflects a clear understanding of the **gap between innovation ambition and technological maturity**, and the need to de-risk investment through staged development and testing.

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However, it is worth noting that all three cities rated their innovation need as requiring **"incremental innovation"**, which is typically associated with TRL 8–9, not 5–6. This misalignment suggests that the procurers may have slightly **underestimated the R&D effort** still required. Porto and Murcia in particular would benefit from more systematic diagnostics of innovation maturity, to avoid prematurely assuming market readiness when further piloting or system integration is still needed.

The summary can be found in Table 27.

Table 27. Procurement strategy for Porto, Bergen and Murcia after the OMCs.

City	TRL Identified	Innovation Need	Procurement Strategy	Strategic Alignment
Porto	TRL 5–6	Postponed	Restricted Procedure (future PPI possible)	Coherent, with decoupled innovation stream
Bergen	TRL 7–8	Incremental	Innovation Partnership + Collaboration	Coherent, combines maturity with innovation space
Murcia	TRL 5–6	Not yet defined	PCP	Most consistent, aligned with early-stage strategy

Porto's case reflects a cautious yet strategic approach. Although it identified TRL 5–6 technologies still under validation—particularly concerning the treatment of liquid digestate—the authority did not abandon its innovation ambitions. Instead, LIPOR chose not to integrate this challenge into the main procurement of the anaerobic digestion plant. Rather, it designated a dedicated area for future technological expansion, aligned with a phased, step-by-step innovation strategy.

Bergen adopted a mirror strategy: it is proceeding with plant construction based on a mature technological foundation, while leaving the door open for future enhancement of solid digestate valorisation via partnerships and collaborative models.

Murcia, by contrast, represents a more anticipatory and formative case. With no immediate investment planned, the OMC served to guide the construction of a strategic innovation agenda in view of launching a PCP. It is the only case in which the need to explore upstream R&D gaps was clearly acknowledged, making it the most coherent with the logic of pre-commercial innovation procurement.

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6.4.4. MARKET STRUCTURE AND COMPETITIVE DYNAMICS

Across the three OMCs, the perception of the reference market varied in degree but not in direction. Porto and Bergen both characterised their respective markets as highly fragmented—indicative of a landscape populated by many small players and lacking dominant incumbents. In contrast, Murcia described its market as balanced and competitive, with several actors sharing influence more evenly.

Despite these structural differences, a shared recognition emerged: all three authorities considered the stimulation of competition as a critical factor in shaping their procurement strategies. Such an outlook aligns closely with European procurement doctrine, where competitive pressure is viewed as both a safeguard against vendor dependency and a driver of innovation. Notably, only Bergen acknowledged a risk of vendor lock-in, though it judged it manageable through careful design of contractual mechanisms.

6.4.5. TRANSPARENCY AND INFORMATION HANDLING

All three authorities rated their consultations as fully transparent, assigning the maximum score (5/5). However, the approaches they adopted to uphold neutrality and manage sensitive information diverged significantly.

LIPOR (Porto) anticipated risks of competitive distortion and proactively addressed them through strategic planning. Confidentiality protocols were present but applied in an informal manner. Rather than relying on rigid procedures, LIPOR's approach was anchored in the robustness of its preparatory work—ensuring that its needs were clearly defined and its communication structured in a way that discouraged unsolicited sensitive disclosures.

BIR AS (Bergen) similarly affirmed that the consultation was neutral and competitive. However, it did not indicate whether confidentiality mechanisms were in place. This omission creates ambiguity. Either sensitive data were not shared—due to the nature of the consultation—or the process lacked safeguards, which could be problematic in case of challenge.

EMUASA (Murcia) implemented the most procedurally structured model. The consultation included formal Non-Disclosure Agreements (NDAs), anonymised response summaries, and clearly defined mechanisms for handling confidential information. This level of formality aligns well with exploratory consultations, particularly when the goal is to gather early-stage input and create a roadmap for future pre-commercial procurement.

These differences do not reflect inconsistencies in quality but illustrate the proportionality principle at work: when innovation needs are well defined (as in Porto), lighter processes may suffice. When uncertainty is high (as in Murcia), a structured framework ensures both legal robustness and market trust.

6.4.6. COMMUNICATION AND OUTREACH STRATEGY

All three entities deemed their communication efforts adequate. The Prior Information Notice (PIN) published on TED was generally seen as moderately effective (average score around 3), while the most impactful tools were official websites and direct invitations—especially in Porto, where these scored highest. Social media campaigns and project platforms were rated lower across the board.

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This suggests that in high-stakes, innovation-driven sectors such as circular bioeconomy infrastructure, traditional institutional channels remain the most effective means of engaging serious market actors. Passive or open-access dissemination may not reach the right audience, especially when the solutions sought are technically complex and capital-intensive.

In terms of format, public webinars and one-to-one meetings received the highest ratings (4–5), while written surveys and online submissions were seen as less impactful. All three cities confirmed that timelines and procedures were clear and well-structured, in line with EU procurement best practices.

6.4.7. BENEFITS TO SUPPLIERS AND IDENTIFIED BARRIERS

LIPOR and EMUASA both assessed their consultations as beneficial to economic operators. Porto indicated that the OMC helped suppliers better understand public needs. Murcia reported that it enabled suppliers to express key barriers to innovation—creating a two-way channel of insight generation. Bergen, on the other hand, did not perceive significant benefit for market actors, which may point to a more unidirectional consultation or insufficient intensity in engagement formats.

The principal barriers flagged by suppliers across the three consultations included:

- Technological immaturity or gaps
- Financial constraints
- Administrative and compliance burdens
- Shortage of relevant expertise and skills

These are common obstacles in innovation procurement contexts and suggest that further support mechanisms—such as capacity-building, co-creation platforms, or innovation funding—might be needed to fully unlock supplier potential.

6.4.8. CONCLUSION

The three Open Market Consultations conducted under the HOOP project illustrate distinct yet complementary models of pre-procurement engagement. Porto demonstrates an analytically grounded and confirmatory use of the OMC, employing it to validate a well-defined investment plan while remaining open to future innovation extensions. Bergen reflects a phased and pragmatic strategy—advancing with mature technologies while leveraging the OMC to explore collaborative avenues for the valorisation of digestate. Murcia, by contrast, represents a forward-looking, formative model, using the OMC not to finalise procurement specifications, but to construct an innovation agenda and explore the potential for Pre-Commercial Procurement (PCP).

Together, these cases underscore the adaptability and strategic relevance of OMCs when aligned with the maturity of the procurement strategy, the nature of the innovation challenge, and the enabling legal and financial ecosystem. Far from being mere procedural steps, OMCs emerge as high-value instruments to de-risk investments, foster supplier diversity, and engage with innovation ecosystems in meaningful and transparent ways.

One important lesson, however, is the need for coherence between procurement design and the actual readiness level of market solutions. In HOOP, the innovation needs reported by procurers were sometimes

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understated relative to the TRLs of the technologies discussed—suggesting a risk of underestimating the R&D effort still required. Such misalignments may result in implementation delays or suboptimal outcomes. Recognising that incremental innovation is most appropriate at TRLs 8–9, while technologies at TRL 5–6 may demand more extensive development, is essential to selecting the right procurement instrument—be it R&D services, PCP, innovation partnerships, or PPI.

Ultimately, the HOOP experience reinforces that Open Market Consultations are not merely about compliance—they are strategic levers for cities seeking to align public demand with technological innovation and to shape more resilient, sustainable urban futures through smarter procurement

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7. Footnotes

(1) *When awarding PPI contracts, contracting authorities shall apply the national procedures, as adjusted to be in conformity with the Directive 2014/24/EU of the European Parliament and of the Council of 26th February 2014, provided that, without prejudice to Article 32, a call for competition has been published. The PPI procedures are essentially:*

i. *Article 27: Open procedure > any interested economic operator may submit a tender in response to a call for competition;*

ii. *Article 28: Restricted procedure > any economic operator may submit a request to participate in response to a call for competition but only those economic operators invited to do so by the contracting authority following its assessment of the information provided may submit a tender;*

iii. *Article 29: Competitive procedure with negotiation > any economic operator may submit a request to participate in response to a call for competition but only those economic operators invited by the contracting authority following its assessment of the information provided may submit an initial tender which shall be the basis for the subsequent negotiations;*

iv. *Article 30: Competitive dialogue > any economic operator may submit a request to participate in response to a contract notice by providing the information for qualitative selection that is requested by the contracting authority, but only those economic operators invited by the contracting authority following the assessment of the information provided may participate in the dialogue.*

v. *Article 32: Negotiated procedure without prior publication > in any of the following cases:*

vi. *(a) where no tenders or no suitable tenders or no requests to participate or no suitable requests to participate have been submitted in response to an open procedure or a restricted procedure, provided that the initial conditions of the contract are not substantially altered and that a report is sent to the Commission where it so requests.*

vii. *(b) where the works, supplies or services can be supplied only by a particular economic operator for any of the following reasons: (i) the aim of the procurement is the creation or acquisition of a unique work of art or artistic performance; (ii) competition is absent for technical reasons; (iii) the protection of exclusive rights, including intellectual property rights; The exceptions set out in points (ii) and (iii) shall only apply when no reasonable alternative or substitute exists and the absence of competition is not the result of an artificial narrowing down of the parameters of the procurement;*

viii. *(c) in so far as is strictly necessary where, for reasons of extreme urgency brought about by events unforeseeable by the contracting authority, the time limits for the open or restricted procedures or competitive procedures with negotiation cannot be complied with. The circumstances invoked to justify extreme urgency shall not in any event be attributable to the contracting authority.*

ix. *The negotiated procedure without prior publication may be used for public supply contracts:*

x. *(a) where the products involved are manufactured purely for the purpose of research, experimentation, study or development; however, contracts awarded pursuant to this point shall not include quantity production to establish commercial viability or to recover research and development costs;*

xi. *(b) for additional deliveries by the original supplier which are intended either as a partial replacement of supplies or installations or as the extension of existing supplies or installations where a change of supplier would oblige the contracting authority to acquire supplies having different technical characteristics which would result in incompatibility or disproportionate technical difficulties in operation and*

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maintenance; the duration of such contracts as well as that of recurrent contracts shall not, as a general rule, exceed three years;

xii. *Contracting authorities may apply a competitive procedure with negotiation or a competitive dialogue in the following situations:*

xiii. *(a) with regard to works, supplies or services fulfilling one or more of the following criteria: (i) the needs of the contracting authority cannot be met without adaptation of readily available solutions; (ii) they include design or innovative solutions; (iii) the contract cannot be awarded without prior negotiations because of specific circumstances related to the nature, the complexity or the legal and financial make-up or because of the risks attaching to them; (iv) the technical specifications cannot be established with sufficient precision by the contracting authority with reference to a standard, European Technical Assessment, common technical specification or technical reference within the meaning of points 2 to 5 of Annex VII;*

xiv. *(b) with regard to works, supplies or services where, in response to an open or a restricted procedure, only irregular or unacceptable tenders are submitted. In such situations contracting authorities shall not be required to publish a contract notice where they include in the procedure all of, and only, the tenderers which satisfy the criteria set out in Articles 57 to 64 and which, during the prior open or restricted procedure, submitted tenders in accordance with the formal requirements of the procurement procedure. In particular, tenders which do not comply with the procurement documents, which were received late, where there is evidence of collusion or corruption, or which have been found by the contracting authority to be abnormally low, shall be considered as being irregular. In particular tenders submitted by tenderers that do not have the required qualifications, and tenders whose price exceeds the contracting authority's budget as determined and documented prior to the launching of the procurement procedure shall be considered as unacceptable.*

(2) *With the new Code n. 36/2023 (art. 222, paragraph 2), from July 2023, the ANAC, as part of its role as guarantor of the promotion of the efficiency and quality of the activity of the contracting authorities, will lose the prerogative of issuing new Guidelines. With regards to the Guidelines already issued, paragraph 16 of the art. 225 provides that, again from 1 July, "in place of the ANAC regulations and guidelines adopted in implementation of the public contracts code, referred to in legislative decree no. 50 of 2016, where not otherwise provided for by this code, the corresponding provisions of this code and its annexes apply". Therefore, adhering to the letter of the titles of the same Guidelines issued, the Guidelines nos. will be "absorbed" into the new Code (except for the different regulations contained therein). 1, 2, 3, 4, 5, 6, 7 and 9. All the others, including the n. 14 on "Information on preliminary market consultations", should continue to be valid points of reference for the Contracting Authorities, with the appropriate regulatory contextualizations and without prejudice to the different and express regulations specifically contained in Legislative Decree no. 36/2023.*

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8. Annex 1. Comparative Analysis of the LIPOR and Murcia Open Market Consultation Questionnaires

8.1. Comparative analysis

The Open Market Consultation (OMC) questionnaires developed by LIPOR (Portugal) and Aguas de Murcia (Spain) represent two distinct approaches to stakeholder engagement in the context of public innovation procurement. Both align with the overarching goals of the HOOP project, which promotes circular economy solutions for the valorization of urban biowaste and wastewater. While pursuing a shared objective, the two instruments differ significantly in structure, thematic emphasis, and methodological depth, reflecting complementary strategies to gather market intelligence and assess technological and organizational readiness.

The LIPOR OMC played a pioneering role within the HOOP project by establishing a reference model to evaluate technological maturity, functional fit, and commercial viability. This made it particularly suitable for identifying near-market or market-ready solutions to be potentially integrated into an already programmed investment framework.

In contrast, the Murcia questionnaire does not respond to an immediate procurement need but rather anticipates a potential pre-commercial procurement (PCP) process. The emphasis is thus on defining a governance and legal framework—particularly concerning intellectual property rights (IPR)—that aligns with the provisions of COM(2007) 799 final of the European Commission. As outlined in Deliverable 5.9, Murcia's approach adopts the PCP model to explore innovation potentials, laying the groundwork for future funding opportunities where IPR management is critical.

1. Purpose and focus

The LIPOR questionnaire is designed to identify existing, deployable technologies. It centers on state-of-the-art solutions, collecting concrete data on TRLs, compliance, and deployment experience. The approach is predominantly technology scouting, with a clearly defined technical challenge at its core.

The Murcia questionnaire adopts a broader innovation policy perspective. It invites suppliers to articulate their innovation capabilities, R&D trajectories, and potential contributions to systemic goals. It places particular emphasis on understanding the ecosystem around emerging technologies, including stakeholder networks, collaborative models, and development pathways.

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2. Structure and format

LIPOR's format is structured and analytical. It features closed-ended questions with some qualitative elaboration, providing a standardized evaluation matrix. Key elements include TRLs, IPR status, regulatory compliance, and estimated deployment timelines.

Murcia's format is more narrative and exploratory, enabling respondents to elaborate on technical concepts, organizational strategies, and development roadmaps. The structure reflects a developmental logic, in which the proposed solution is contextualized within the respondent's broader project and innovation strategy.

3. Treatment of Intellectual Property and Licensing

LIPOR's questionnaire addresses IPRs pragmatically, inquiring about existing protections and potential for future registration. The objective is to assess the maturity and ownership status of proposed solutions.

Murcia, however, includes a dedicated section on IPR, consistent with the PCP financing model. It outlines expected licensing frameworks, including shared or transferred ownership, unlimited usage rights by the contracting authority, and royalty mechanisms. These elements follow the guidelines of the European Commission's PCP framework (COM 799/2007), establishing clear criteria for public ownership, access, and exploitation of results arising from publicly funded innovation processes.

4. Innovation Readiness and Market Positioning

LIPOR's questions are focused on present-day solutions that are ready or nearly ready for market deployment. It aims to map existing capabilities, reference cases, and competitive positioning.

Murcia, on the other hand, emphasizes the innovation process itself: how ideas are conceived, prototyped, tested, and aligned with public value objectives. It seeks to evaluate not only technical capacity but also strategic alignment with larger environmental goals, such as aquifer recharge, nutrient recovery, or carbon footprint reduction.

5. Deployment Planning and Implementation

LIPOR focuses on the short- to medium-term applicability of solutions, requesting information on expected technology lifespans, potential implementation barriers, and indicative funding needs to support future tenders.

Murcia explores full project development paths, including phases, subtasks, resource needs, validation activities, and strategies for regulatory alignment. This long-view approach reflects the questionnaire's orientation toward shaping a PCP process, where co-development and phased R&D investment are key components.

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8.2. Questionnaire developed and administered as part of the Open Market Consultation in Porto

General Information

2. Organisation
☐ [Free text] (Required)

3. Organisation Full Address
☐ [Free text] (Required)

4. Organisation Country
☐ [Free text] (Required)

5. Contact Person
☐ [Free text] (Required)

6. Contact Email Address
☐ [Free text] (Required)

7. Phone Number
☐ [Free text]

8. Type of Organisation (Required)
☐ Manufacturer / Industrial Company
☐ Commercial Company / Retailer
☐ Research Entity
☐ University
☐ Independent Expert (natural person)
☐ Designer
☐ System Integrator
☐ Business Process Outsourcer
☐ Consultancy
☐ Other: *[Free text]*

9. Size of Organisation (Required)
☐ Micro Enterprise
☐ SME
☐ Large Company
☐ Start-up
☐ Spin-off
☐ Other: *[Free text]*

10. Year Organisation Was Founded
☐ [Free text]

11. Number of Employees
☐ [Free text]

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12. Main Focus of the Company/Organisation
☐ [Free text]

13. Number of Years Trading

☐ Less than 3 years
☐ 3–10 years
☐ More than 10 years

14. Do you have experience in developing technologies making bio-based products from urban bio-waste and wastewater? (If yes, please specify)

☐ [Free text] (Required)

15. We would like to retain your contact details for other potentially relevant direct emails and/or newsletters around HOOP initiatives. (Required)

☐ I accept
☐ I don't accept

16. To facilitate networking, we would like to share and make public your contact details on the HOOP website.

☐ I accept
☐ I don't accept

State of the Art and Organisation's Development / Deployment Plan

17. Are your business activities directly related to LIPOR innovation needs?

- If Yes: Briefly describe your company, main sectors, and activities related to the LIPOR challenge.
- If No: Explain your interest in participating in the OMC process.

☐ [Free text]

18. What (private or public) market potential do you foresee for a commercial technology for the LI-POR challenge "recover and valorize phosphorus and/or ammoniacal nitrogen from the anaerobic digestion effluent"?

☐ [Free text]

19. What is the commercial name of the technologies and/or services you already supply that could address the LIPOR challenge?

☐ [Free text]

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20. Describe the bioproduct(s) your solution expects to obtain, including characteristics and usage.
☐ *[Free text]*

21. Are there any characteristics or labelling of the solution regulated by legislation or standards? Indicate terms of compliance.
☐ *[Free text]*

22. Provide a brief description of the innovative aspects of your commercialized technology/service.
☐ *[Free text]*

23. Where, when and by whom has your technology/service been adopted (if relevant to the LIPOR challenge)?
☐ *[Free text]*

24. If implemented in a similar scenario, provide the reference site.
☐ *[Free text]*

25. Are there pre-existing IPRs over the solution? Is there scope for further IPR protection?
☐ *[Free text]*

26. What competitive advantage does your solution offer over existing technologies/services?
☐ *[Free text]*

27. What are the key success factors for LIPOR's intended innovation deployment project?
☐ *[Free text]*

28. Do you rely on any suppliers for implementing your solution?
☐ *[Free text]*

29. What is the expected technical lifetime of your solution?
☐ *[Free text]*

Functional Requirements

Refer to the PIN and Technical Prospectus here: hoopproject.eu OMC link

30. Is the LIPOR challenge scope clear? What further information would be helpful?
☐ *[Free text]*

31. Regarding phosphorus recovery, could you provide or are you aware of a near-to-market solution within:
☐ Less than 6 months
☐ Less than 1 year
☐ Between 1–3 years
☐ More than 3 years

32. Please explain your answer to the previous question.
☐ *[Free text]*

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33. Regarding ammoniacal nitrogen recovery, could you provide or are you aware of a near-to-market solution within:
☐ Less than 6 months
☐ Less than 1 year
☐ Between 1–3 years
☐ More than 3 years

34. Please explain your answer to the previous question.
☐ *[Free text]*

35. Which scenario does your solution address?
☐ Basic solution (25,000 t/year)
☐ Secondary solution (150,000 t/year)

36. Please explain your answer to the previous question.
☐ *[Free text]*

37. Does your solution meet the effluent treatment requirements (Table 1 & 2)? Indicate TRL.
☐ *[Free text]*

38. Does your solution recover ammoniacal nitrogen (≥40%)? Indicate TRL.
☐ *[Free text]*

39. Does your solution recover phosphorus (≥15%)? Indicate TRL.
☐ *[Free text]*

40. Does your solution allow recirculation of liquid digestate? Indicate TRL.
☐ *[Free text]*

41. Does your solution provide a marketable product (e.g., fertilizer) compliant with legislation? Indicate TRL.
☐ *[Free text]*

42. Is your solution economically sustainable (CAPEX/OPEX)? Indicate TRL and provide performance guarantees (e.g., energy use, consumables).
☐ *[Free text]*

43. Does your solution avoid generating new waste streams? Indicate TRL.
☐ *[Free text]*

44. Are there any technological, regulatory, or market barriers in your country or abroad?
☐ *[Free text]*

45. Are there any specific technological, regulatory, or market requirements in your country or abroad?
☐ *[Free text]*

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8.3. Questionnaire adopted for the Open Market Consultation in Murcia

The purpose of this Preliminary Market Consultation is to gather the necessary information to prepare one or more potential innovation procurement procedures within the framework of the GeHMA project, and to inform economic operators about its contracting plans and requirements.

This form is intended to be used for submitting information on proposals that respond to the challenges identified:

- Challenge 1: Water Resource Management and the Environment
- Challenge 2: Circular Economy and Sustainable Development

1. Datos Básicos	
Nombre de la/s entidad/es participante:	
Reto al que aplica la propuesta:	☐ Reto 1. Gestión de Recursos Hídricos y Medio Ambiente.
	☐ Reto 2. Economía Circular y Desarrollo Sostenible.
Nombre de la propuesta:	
Acrónimo:	

2. Datos participante	
Persona Física:	☐
Persona Jurídica:	☐
Sector o ámbito de actividad (CNAE):	
Principales actividades de la/s empresa/s (Diseño, Fabricación, Venta, Distribución, etc.):	

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2. Datos participante			
Tipo de Entidad/es (Autónomo, Empresa privada, Empresa pública, Centro de Investigación, Universidad, Centro Tecnológico, Otro):			
Año de constitución:			
Respuesta conjunta de varias personas físicas o jurídicas: Marque SÍ o NO.	SÍ ☐	NO ☐	
Tamaño de la/s entidad/es en la actualidad (Nº de personas en plantilla):			
Centros y principales recursos de I+D (personales y materiales) en UE, España y resto del mundo:			
Facturación total de la/s entidad/es en los últimos 3 ejercicios (€):	**2023**	**2022**	**2021**
3. Datos del interlocutor/representante			
Nombre del Interlocutor (o representante de la respuesta en caso de respuesta conjunta):			

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2. Datos participante	
Teléfono:	
Correo Electrónico:	
Dirección:	

4. Información adicional		
¿Su entidad tiene experiencia previa con las tecnologías clave plasmadas en la propuesta?: ***Responda SÍ o NO***.	SÍ ☐	NO ☐
En caso de haber respondido SÍ a la pregunta anterior, exponga brevemente dicha experiencia ***(5.000 caracteres)***:		
¿Considera que su entidad dispone de certificaciones relevantes para acometer las necesidades que se propone?: ***Responda SÍ o NO.***	SÍ ☐	NO ☐
En caso de haber respondido SÍ a la pregunta anterior, indique cuáles son esas certificaciones ***(máx. 300 caracteres)***:		
¿Considera que el personal de su entidad tiene calificaciones que son específicamente relevantes para acometer las necesidades que se propone?: ***Responda SÍ o NO.***	SÍ ☐	NO ☐
En caso de haber respondido SÍ a la pregunta anterior, indique cuáles son esas calificaciones ***(máx. 300 caracteres)***:		
¿Ha realizado inversión en I+D en los últimos 3 ejercicios?: ***Responda SÍ o NO***.	SÍ ☐	NO ☐
En caso de haber respondido SÍ a la pregunta anterior, indique cuál ha sido el importe de dicha inversión en los últimos 3 ejercicios y naturaleza:		

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4. Información adicional		
Indique las capacidades tecnológicas que dispone para hacer frente al desarrollo de nuevas soluciones innovadoras:		
¿Su entidad ha obtenido financiación pública de concurrencia competitiva para proyectos de I+D en alguno de los 3 últimos ejercicios?: ***Responda SÍ o NO.***	SÍ ☐	NO ☐
En caso de haber respondido SÍ a la pregunta anterior, indique el volumen de financiación captada en los últimos 3 ejercicios (dato agrupado de los 3 ejercicios):		
¿Su entidad cuenta con experiencia en la ejecución de proyectos en el ámbito de alguna de las necesidades que se proponen o similares?: ***Responda SÍ o NO.***	SÍ ☐	NO ☐
En caso de haber respondido SÍ a la pregunta anterior indicar un breve resumen de la experiencia (ámbito, cliente, periodo de ejecución y breve descripción).		
Para las necesidades planteadas, aportar información detallada con relación a investigaciones, desarrollo de soluciones, publicaciones, etc., realizados o realizándose cuyo objeto sea similar al indicado.	Investigaciones Desarrollo de soluciones Publicaciones Otros	

5. Soluciones comerciales de las que dispone

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¿Dispone de soluciones comerciales que aborden el reto planteado?	SÍ ☐	NO ☐
En caso afirmativo, indique sus nombres comerciales y las tecnologías en las que se basan ***(máximo 5.000 caracteres)***		
¿Cubren esas soluciones todas las necesidades planteadas?	SÍ ☐	NO ☐
En caso negativo, incida en los aspectos que no cubren de la necesidad planteada ***(máximo 5.000 caracteres)***		

6. Descripción general de la propuesta innovadora	
Breve resumen de la solución que plantea para satisfacer la necesidad indicada y los proveedores implicados indicando claramente si la propuesta incluye la cesión de prototipos desarrollados en la fase de I+D ***(máximo 5.000 caracteres)***	
Identifique las tecnologías en que se basaría, así como su grado de madurez detallando el punto de partida del proyecto el cual deberá estar en un TRL entre el 4 y el 7 ***(máximo 5.000 caracteres)***	
Indique los beneficios que reportaría la solución propuesta en relación con el planteamiento del proyecto, incluyendo el impacto en términos de ahorros de costes ***(máximo 5.000 caracteres)***	
Duración estimada y fases implicadas en el proyecto, diferenciando tanto la fase de I+D como la de posible despliegue e indicando, para cada una sus subtareas (meses):	
Coste estimado desglosando las principales partidas (equipamiento, gastos de personal,	

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6. Descripción general de la propuesta innovadora	
fungibles, subcontrataciones, licencias…) y diferenciando entre el coste de la fase inicial de I+D hasta obtener un prototipo funcional y, posteriormente, el coste de su posible despliegue (€):	
Estimación de recursos humanos necesarios (perfiles y dedicación):	
Indique el contexto normativo y regulatorio del proyecto justificado, y cómo abordaría su alineamiento con el mismo	
Su entidad, ¿tiene experiencia en desarrollos relacionados con el proyecto planteado? ¿Cuáles? (indicar por cada proyecto: año de ejecución, importe, breve descripción de los resultados) (***máximo 2.000 caracteres)***	

7. Existencia de otras soluciones en el mercado		
¿Ha realizado algún estudio de mercado de las soluciones disponibles en el mercado que puedan dar respuesta al reto planteado?	SÍ ☐	NO ☐
En caso afirmativo, indique brevemente los competidores identificados, sus soluciones, en qué tecnologías se basa y que carencias entiende que presentan en relación con el reto		

8. I+D+i	
Indique las propiedades intelectuales ya existentes sobre las que se basaría para articular su propuesta (background IPR)	

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8. I+D+i	
Indique los elementos de innovación (nuevas tecnologías entregadas y soluciones innovadoras) o resultados de I+D esperados. Específicamente, diga cuáles son los elementos diferenciadores de su solución frente a los productos y servicios que se encuentran ya disponibles en el mercado ***(máx. 850 caracteres):***	
Necesidades tecnológicas para la aplicación de su solución:	
Nivel de madurez actual en el que se encuentra cada elemento a integrar en su solución (en caso de conocer en nivel de madurez tecnológica (TRL[1]) en el que se encuentra, indíquelo):	
Resultados de I+D que se espera generar ***(máx., 850 caracteres):***	
Identificar fases de integración con tecnologías y servicios preexistentes:	

[1] Los códigos TRL pueden consultarse en "HORIZON 2020 – WORK PROGRAMME 2016-2017 General Annexes: G. TRL"

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8. I+D+i	
Identificar las fases de pruebas y ensayos (en entornos reales del servicio público):	
Indicar fases de validación, cualificación, certificación, estándares y/o marcado:	
Indique, de manera desglosada, cómo su solución daría respuesta a los objetivos específicos del proyecto planteado.	
Reto 1. Capacidad de mejora de la conservación de los recursos hídricos disponibles mediante la recarga artificial del acuífero con agua regenerada. Aumento cuantitativo de las masas de agua subterráneas.	
Reto 1. Mejora de la calidad del agua al introducir en la red de agua potable y correcto funcionamiento y mantenimiento de las instalaciones compaginándolo con la introducción de aguas con menor cantidad de sales disueltas.	

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8. I+D+i	
Reto 1. Mejorar los sistemas de monitorización y control en tiempo real mediante el desarrollo de sensores avanzados e integrados con IoT capaces de medir en tiempo real los parámetros críticos de la calidad del agua (niveles de metales pesados, patógenos, contaminantes orgánicos) antes y después de la inyección en los acuíferos.	
Reto 1. Aumento de la resiliencia hídrica de la ciudad de Murcia. Contribuir a que los recursos hídricos de la ciudad sean sostenibles e independientes de periodos de escasez o sequía que se puedan originar en la cuenca hidrográfica situada en la ciudad.	
Reto 1. Mejora de la calidad de las masas de agua subterráneas. El empleo de agua regenerada procedente de la EDAR de Murcia Este que contempla procesos de eliminación de nitratos y su posterior inyección al acuífero para su recarga, al tratarse de un agua regenerada con menor contenido en nitratos, contribuirá a la mejora del estado cualitativo de las masas de aguas subterráneas.	
Reto 1. Reducción de los costes y mejora de la eficiencia energética a largo plazo, que conlleva una optimización del consumo energético en las plantas de tratamiento y la aplicación de economía circular en el ciclo del agua.	
Reto 2. Desarrollar e implementar una solución tecnológica para la recuperación de nitrógeno, altamente eficiente, que permita la producción de fertilizantes a partir de sales de amonio recuperadas, reduciendo las pérdidas de nitrógeno al medio ambiente y minimizando el consumo energético.	

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8. I+D+i	
Reto 2. Desarrollar una tecnología de recuperación de sales de amonio que sea modular, adaptable a diferentes tamaños de plantas depuradoras, y escalable según las necesidades de la EDAR de distintas capacidades.	
Reto 2. Diseño y puesta en marcha de una planta piloto para la transformación de residuos orgánicos en combustibles renovables como el bioetanol.	
Reto 2. Conservación de aguas subterráneas. Mejora de la capacidad de infiltración del agua en el suelo y reducción de la escorrentía superficial y la erosión.	
Reto 2. Reducción de la huella de carbono mediante la disminución de las emisiones asociadas con la producción y transporte de fertilizantes sintéticos y la reducción de las emisiones de la gestión convencional de lodos.	
Reto 2. Cumplimiento de normativas ambientales. Mejorar el cumplimiento de las regulaciones sobre gestión de residuos y protección del suelo, y contribuir a los objetivos de reducción de emisiones de gases de efecto invernadero**.**	

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8. I+D+i	
Reto 2. Contribuir a la protección de los ecosistemas a través de la reducción de la contaminación de aguas superficiales y subterráneas y la mejora de los hábitats para la flora y fauna del suelo.	

9. Despliegue	
Indique las regulaciones y normativa asociada a la necesidad planteada:	
Considera que existe alguna limitación o barrera específica para el despliegue del producto en el mercado ¿Cuál?:	
¿Cuáles son las principales ventajas de la solución que propone respecto de otras alternativas?:	
¿Qué criterios considera importantes para evaluar las propuestas de solución?:	
10. Derechos de propiedad intelectual e industrial	
En caso de que se formalice el pliego correspondiente, se establecería un esquema de gestión de los Derechos de Propiedad Intelectual e Industrial (DPI) en el que confluyan los intereses de ambas partes y en el que exista un equilibrio entre los diferentes parámetros comerciales en torno al mismo. En este sentido, se añadirían cláusulas obligatorias de DPI en el siguiente sentido: - Conceder, en favor de EMUASA, acceso ilimitado a los resultados de la investigación de forma gratuita para su uso. - Conceder en favor de EMUASA, una licencia irrevocable, ilimitada, para	

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9. Despliegue	
todo el mundo, totalmente pagada, sin derechos de autoría y hasta la expiración de los respectivos DPI incluyendo DPI preexistentes. - Conceder acceso a terceros mediante licencias no exclusivas en condiciones de mercado, entendidas como tales las que se deriven del contraste con el mercado en el marco de la presente consulta. - Devolver los DPI generados en el proyecto en caso de que no puedan ser explotados por los propios adjudicatarios o sean utilizados en detrimento del interés público, sean transferidos a EMUASA. ***A este respecto, puede trasladar las consideraciones que estime oportuno.*** ***(máximo 1.000 caracteres)***	
Respecto del acceso de terceros a las propiedades intelectuales derivadas del proyecto financiado con fondos públicos, la adjudicataria deberá ofrecer a terceros, licencias no exclusivas en modalidades de regalía fija o como porcentaje de las ventas. A este respecto, indique en cada modalidad (regalía fija o como porcentaje de las ventas) el método de cálculo que considera adecuado y su aplicación orientativa en el marco de su propuesta (IMPORTANTE: la información de esta respuesta será considera confidencial y altamente sensible, por lo que en ningún caso será publicada y se restringirá su acceso) ***(máximo 1.000 caracteres)***	
Del mismo modo, las licitaciones que se publiquen podrán contemplan el pago de regalías por parte de los proveedores en compensación por la cesión total de los DPI generados. Dichas regalías podrían definirse como un elemento obligatorio o ser objeto de valoración	

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9. Despliegue	
en función de las propuestas de los licitadores, y abarcaría un periodo de 3 años. A este respecto, puede trasladar las consideraciones que estime oportuno. ***(máximo 1.000 caracteres)***	
Igualmente, las licitaciones que se publiquen podrán contemplan de cofinanciar el proyecto, es decir, de que el contrato no remunere el 100% del coste como compensación económica por atribuir a las entidades adjudicatarias la titularidad de los DPI generados. A este respecto, puede trasladar las consideraciones que estime oportuno. ***(máximo 1.000 caracteres)***	

11. Documentación complementaria a la solicitud (solo se admiten formatos Word o PDF)	
Descripción del archivo	**Indique si debe considerarse confidencial el archivo (SI / NO)**

Esta información, o parte de ella, se podrá publicar en las conclusiones de la Consulta Preliminar del Mercado en aras de favorecer la colaboración entre los participantes, así como de estos agentes interesados que no hayan participado en la misma. Nunca se publicará información de los documentos o apartados declarados como confidenciales.

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