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Sustainable Public Procurement: Practical Application in Water Reuse Projects Using Reclaimed Wastewater

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0. Purpose of the Study

Public procurement is a strategic tool for simultaneously promoting innovation and sustainability. Through their purchasing decisions, public authorities can generate demand for innovative products, services and technologies, encouraging businesses to invest in research, development and new solutions that improve the efficiency and quality of public services.

As specified in the objective of Deliverable 3.4 of the project, this deliverable focuses on how public procurement can be harnessed to promote innovation and the green transition, and also on the design of regulatory mechanisms that encourage the adoption of efficient and sustainable practices by businesses and public authorities.

To this end, and building on the analysis of the legal framework applicable to the reuse of water resources, implementation models, regulatory barriers and operational recommendations, this deliverable takes a complementary approach **by identifying which public procurement tools can be used to put into practice, promote, test, scale up or replicate the solutions and recommendations already identified.**

Drawn up by **Cremades & Calvo-Sotelo and coordinated by Funseam**, this deliverable is intended to be a reference tool for understanding the applicable legal framework and the public procurement instruments that may be most appropriate, paying particular attention to sustainable public procurement, public procurement of innovation, preliminary market consultations, green public procurement and other contractual or procedural arrangements that may be useful in this field.



This report translates the previous analysis of water reuse into a contractual and operational perspective: **identifying which public procurement tools can be used to promote, pilot, implement and replicate reclaimed water reuse solutions.**

This approach is fully consistent with the rationale underpinning the legal report drawn up by Cremades & Calvo Sotelo and coordinated by the Andalusian Technology Corporation (CTA). Indeed, that document does not merely describe the current regulatory framework but also expressly addresses legal instruments and management models, implementation barriers and constraints, comparative analysis of different countries and feasibility assessments for various water reuse models, with the stated aim of formulating recommendations to enable the effective rollout of water reuse in Spain and, by extension, across the SUDOE area. Precisely for this reason, the natural next step is to analyse how public bodies can translate these recommendations into procurement, purchasing, piloting, demonstration or scaling-up decisions.

The context of the **SOLLAGUA project** further reinforces this need. It is an initiative under the Interreg SUDOE 2021–2027 programme aimed at fostering sustainable water reuse solutions in rural areas of Spain, Portugal and France experiencing water stress. Water reuse is presented not merely as a technique for tapping into an alternative resource but

also as a driver of water resilience, climate adaptation, the circular economy and the transfer of solutions between territories facing common challenges. The question is no longer simply what the legal framework allows, but instead how the public sector can actively implement the solutions that this very framework makes possible.

1. Introduction

Public procurement is no longer seen as a mere technique, but as a strategic tool for public policy. In a **sector such as the water sector**, characterised by a high degree of regulatory scrutiny, technical complexity, information asymmetries, a significant infrastructure component and the need for institutional coordination, procurement can fulfil a wide range of functions: structuring demand, organising pilot schemes, facilitating the adoption of innovative solutions, incorporating environmental requirements, encouraging competition to address complex functional needs, or enabling the replication of tried-and-tested models.

Law 9/2017 of 8 November on Public Sector Contracts (hereinafter the LCSP) provides, to this end, a range of tools, from properly designed standard procurement procedures to more sophisticated mechanisms such as preliminary market consultations, competitive dialogue and innovation partnerships.



The water sector also provides specific reasons for undertaking this analysis.

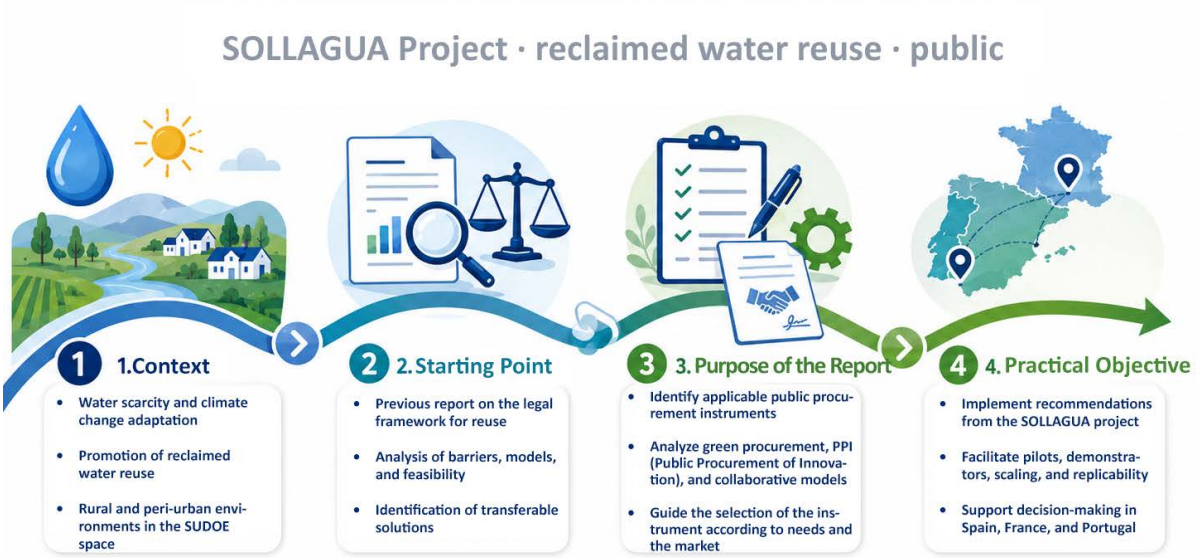
For years now, there has been a recognised need to combine planning, innovation, public-private partnerships, appropriate economic instruments and improved governance in order to tackle droughts, water scarcity, operational efficiency and adaptation to climate change.

Similarly, the *Comisión Nacional de los Mercados y la Competencia* (CNMC) has highlighted structural problems such as sector fragmentation, information asymmetries, shortcomings in the design and implementation of tendering procedures, and limited use of tools that encourage dynamic efficiency and market competition. These ideas remain useful for diagnostic purposes, although the regulatory references they contain need to be updated to reflect the current framework.

Consequently, **the purpose of this report is to identify, describe and systematise the public procurement tools that may be best suited to implementing the recommendations set out in the previous legal report on the reuse of reclaimed wastewater, with particular emphasis on sustainable public procurement, public procurement of innovation, preliminary market consultations, green public procurement and other contractual or procedural arrangements that are useful in this field.**

The report does not aim to draw up an abstract catalogue of the LCSP's legal instruments, but rather to provide a practical guide to which instruments may be most suitable, depending on the requirement, maturity of the solution, technical complexity of the

project, the allocation of risks, or the objective pursued by the public body promoting the project.



From a methodological perspective, the document is based on a fundamental premise: not every requirement relating to reuse calls for the same contractual instrument. There will be cases where a well-designed standard procurement procedure, with appropriate functional and environmental requirements, will suffice; others where it will be advisable to use preliminary market consultations to reduce uncertainty and refine the requirements; and, finally, others where the lack of sufficiently mature solutions or complexity of the problem will make it advisable to consider mechanisms specifically linked to innovation, such as competitive dialogue or innovation partnerships. This distinction will be particularly relevant in the context of SOLLAGUA, where the findings of the previous report show the coexistence of different reuse models, varying degrees of regulatory maturity, and different conditions for replicability.

The specific contribution of this report is therefore not to reiterate the analysis of the reuse regime, **but rather to translate that legal and technical framework into an operational contractual framework,** identifying what should be required of the operator, how the indicators should be configured, how responsibilities are allocated, how remuneration can be structured, and what contractual consequences should be provided for in the event of non-compliance or deviation from the expected results.

2. Sustainable public procurement: current situation and outlook

2.1. Conceptual framework: from standard public procurement to strategic, sustainable and innovative public procurement

Public procurement can no longer be understood, in legal and functional terms, as a mere procurement technique aimed at acquiring works, supplies or services at the lowest immediate cost. In its contemporary form, it serves as a tool for public market regulation and the implementation of public policies, capable of incorporating objectives related to efficiency, sustainability, innovation, regional resilience, **and improvement of public services.** This development is not merely the result of a doctrinal construct, but explicitly reflected in the current regulatory frameworks, both in EU law and in the national legal systems examined. Directive 2014/24/EU remains, as things stand, the general European framework for public procurement, in its current consolidated version. The European Commission will review the European procurement framework in 2026, confirming the current central role of public procurement as a strategic tool.

In the case of Spain, this development is set out particularly clearly in **Article 1 of Law 9/2017 on Public Sector Contracts.** This provision not only links public procurement to the traditional principles of freedom of access, publicity, transparency, equal treatment and free competition, but also expressly adds the requirement for efficient use of public funds. It also stipulates that social and environmental criteria must be incorporated across the board, on a mandatory basis, into all public procurement, provided they are relevant to the subject matter of the contract, in the belief that this provides better value for money and a more efficient use of public resources. This regulatory framework is significant because it shifts the focus of public procurement away from a purely economic approach towards a **strategic one.**

From this perspective, it is useful to distinguish analytically between three levels:

1. At the first level is **standard public procurement**, defined as procurement that meets a public need by using a solution available on the market and traditional contractual methods.
2. At a second level comes **sustainable public procurement**, which continues to operate within the scope of available solutions, but incorporates environmental, social, functional and life-cycle efficiency considerations legally and meaningfully into the definition of the requirement, the tender specifications, the award of the contract and its execution.

3. At a third level lies **innovative public procurement**, where public needs can no longer be adequately met by what the market offers as standard. It becomes necessary either to direct demand towards immature solutions or to promote the development or adaptation of new or substantially improved solutions.



This distinction is important for this report, because the reuse of reclaimed water may involve any of these three approaches, **depending on the technical, regulatory and institutional maturity of the project in question.**

2.2. General European framework: public procurement, sustainability and innovation

European Union law does not define sustainable public procurement as a specific procedure, but provides a **sufficient regulatory and teleological framework** for incorporating environmental, social and innovative objectives into procurement. Directive 2014/24/EU allows the award procedure to be structured around the most economically advantageous tender, assessed against qualitative, environmental, and social criteria, and expressly permits the **use of life-cycle cost** as an evaluation criterion.

This framework is particularly relevant to the **water sector**, where the initial implementation cost rarely adequately reflects the true legal and economic value of a solution, which also depends on its energy efficiency, operating costs, durability, maintenance, traceability and environmental externalities.

European policy has also strengthened the role of public procurement as a driver of innovation. **The European Commission's Guidelines on public procurement of innovation**

emphasise that innovation should not be addressed solely at the time of award, but from the contract preparation stage, through functional identification of the need, appropriate interaction with the market and a proportionate choice of procedural instrument. Although these guidelines do not have the force of law, they establish a useful interpretative framework: innovative procurement is not limited to innovation partnerships, but can also be implemented through the proper use of preliminary consultations, negotiated procedures, competitive dialogue, or conventional contracts defined in terms of functional performance[1].

At the same time, **green public procurement continues to operate at the European level as a cross-cutting approach for shaping contracts**, rather than as a specific procedure. The key factor is not the 'green' label, but the ability to incorporate sustainability objectives into the definition of requirements, technical specifications, award criteria, conditions of execution and life-cycle assessment.

This framework is particularly well suited to the **water sector**, where the sustainability of a contract is measured, amongst other factors, by its contribution to water efficiency, the circular economy, the reduction of pressure on conventional resources, and the resilience of the system.

This reading takes on particular significance within the framework of the **SOLLAGUA** project, which is part of the **Interreg SUDOE 2021–2027** programme, insofar as the SUDOE region brings together territories in Spain, France and Portugal that face converging challenges of water scarcity, drought, climate adaptation, and the need to strengthen water reuse as a means of building territorial resilience. In this context, the comparative analysis of the three legal systems is not merely descriptive. It aims to identify contractual techniques, regulatory approaches, **and public procurement solutions legally transferable and operationally replicable** within a common territorial area.

2.3. The Spanish framework: sustainable and innovative public procurement and its implications for the waste sector.

Under Spanish law, sustainable and innovative public procurement now has a **sufficient and systematically structured regulatory framework**, both in **Law 9/2017 on Public Sector Contracts and in Law 14/2011 on Science, Technology and Innovation**, following the incorporation of Article 36 sexies by Law 17/2022. However, this basis should not be interpreted as implying that sustainability or contractual innovation is limited to the mere inclusion of environmental clauses or the occasional use of special procedures. On the contrary, the current framework allows this approach to be applied to the entire procurement process, from the identification of the public need through to the performance of the contract.

[1] eur-lex.europa.eu

It should also be noted that Article 36 sexies.2 of Law 14/2011 contains a relevant provision. The provision stipulates that **the resulting innovative technologies must be linked to one or more strategic priorities set out in the Spanish Strategy for Science, Technology and Innovation, or to the relevant science, innovation and technology plan of the public procuring authority**. This provision is particularly relevant to this report, as it prevents public procurement of innovation from being viewed as a technique divorced from public planning, and enables its use to be linked to existing strategic frameworks, including R&D&I policies, the circular economy, climate adaptation, water management planning, smart specialisation strategies or, where applicable, regional plans to promote public procurement of innovative solutions (PPI).

In the **context of SOLLAGUA**, this link reinforces the idea that the decision to use innovative instruments should be justified not only by the solution's technical complexity, but also by its alignment with previously defined public priorities.

As regards the provisions set out in the Public Contracts Act, the starting point is **Article 1 of the LCSP**, which links public procurement to the efficient use of public funds, the prior definition of the needs to be met, and the mandatory, cross-cutting incorporation of social and environmental criteria, provided they are relevant to the subject matter of the contract. This provision is not merely a programmatic clause without operational effect, but rather the legal basis for drafting contracts aimed not only at procuring a service, but also at achieving broader public outcomes, including sustainability, resilience, and service improvement.

From the perspective of the award process, the key provision is **Article 145 of the LCSP**, which generally requires a range of criteria based on the best value for money, and expressly permits qualitative criteria of an environmental, social, and innovative nature. The same article also provides the option to choose the most cost-effective option, including a life-cycle cost calculation.



This information is particularly relevant in the **water sector**, where a comparison of alternatives cannot be based solely on the initial price, but must also take into account **factors such as performance, operation, maintenance, energy consumption, durability, traceability, equipment replacement and the environmental externalities associated with the chosen solution.**

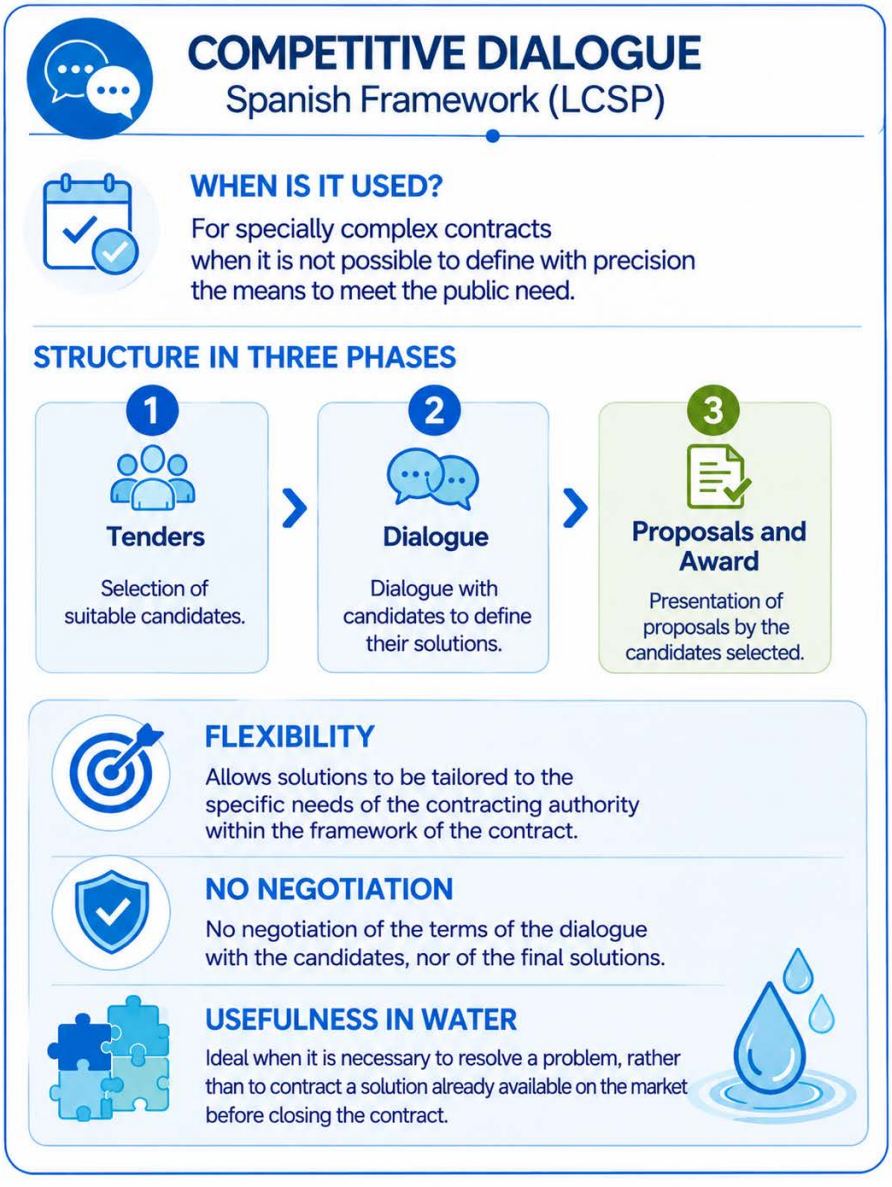
In addition, **Article 115 of the LCSP regulates preliminary market consultations**, empowering contracting authorities to conduct studies and consult with economic operators to prepare the tender properly. **The importance of this mechanism in the water sector is particularly significant.**

In **projects relating to reuse, regeneration, distribution, monitoring or control**, the Government frequently faces technically complex requirements, solutions at varying stages of maturity and diverse markets. In such cases, the preliminary consultation should

not be viewed as a secondary technique, but rather as **a tool for the proper preparation of the tender dossier, which enables one to ascertain the state of the art, verify the existence of available solutions, better define the requirement, and reduce the risk of tenders being closed prematurely or inadequately defined.** The Act, however, imposes strict limits on this practice: it must not distort competition, nor result in a contract tailored to a specific operator, nor confer undue advantages to those who have taken part in the consultation.

Where public needs are particularly complex, the LCSP provides tools specifically suited to non-standard scenarios:

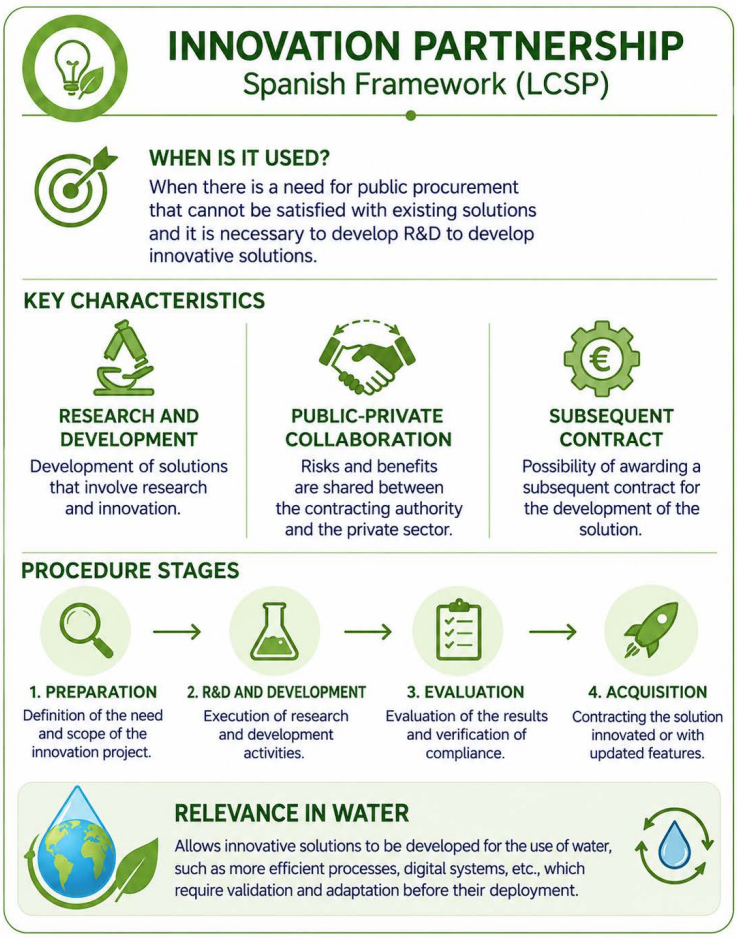
The first is **competitive dialogue**, whose legal framework is based on a simple yet significant practical concept: the public authority is aware of the problem it needs to resolve, but cannot, on its own and in advance, define the appropriate technical, legal or economic-financial solution.



In this context, the Act allows dialogue with the shortlisted candidates to develop one or more suitable solutions that will subsequently serve as the basis for the tender submissions.

In the **water sector**, this approach can be particularly **useful when the contracting authority needs to integrate infrastructure, treatment, digitalisation, operational control, governance and scalability into a single solution, without initially having all the elements required to finalise the contract on fixed terms.**

The second major instrument is the **innovation partnership**, as set out in **Article 177 of the LCSP**, whose purpose is the development of innovative products, services, or works and the subsequent acquisition of the results, provided that the public need cannot be met by solutions already available on the market. The Act allows the partnership to be structured in successive phases, with interim targets and payments appropriate to each stage, and even permits working with several partners in parallel. This approach is particularly well-suited to projects in which the public sector needs not only to procure, but also **encourage the development or adaptation of a solution before its eventual routine implementation**.



In sectoral terms, this may relate to technologies or reuse systems with a high degree of integration, to risk control and management solutions, or to models that require prior validation before being rolled out at scale.

However, the Spanish framework should not be interpreted as sustainable, nor should innovative procurement be limited to these special procedures. Its true scope is broader. The LCSP allows this approach to be incorporated into the overall structure of the contract; that is, into the functional definition of the subject matter, the technical specifications, the division into lots or phases, the selection of award criteria, the use of life-cycle costing, the special conditions of performance and the allocation of risks.

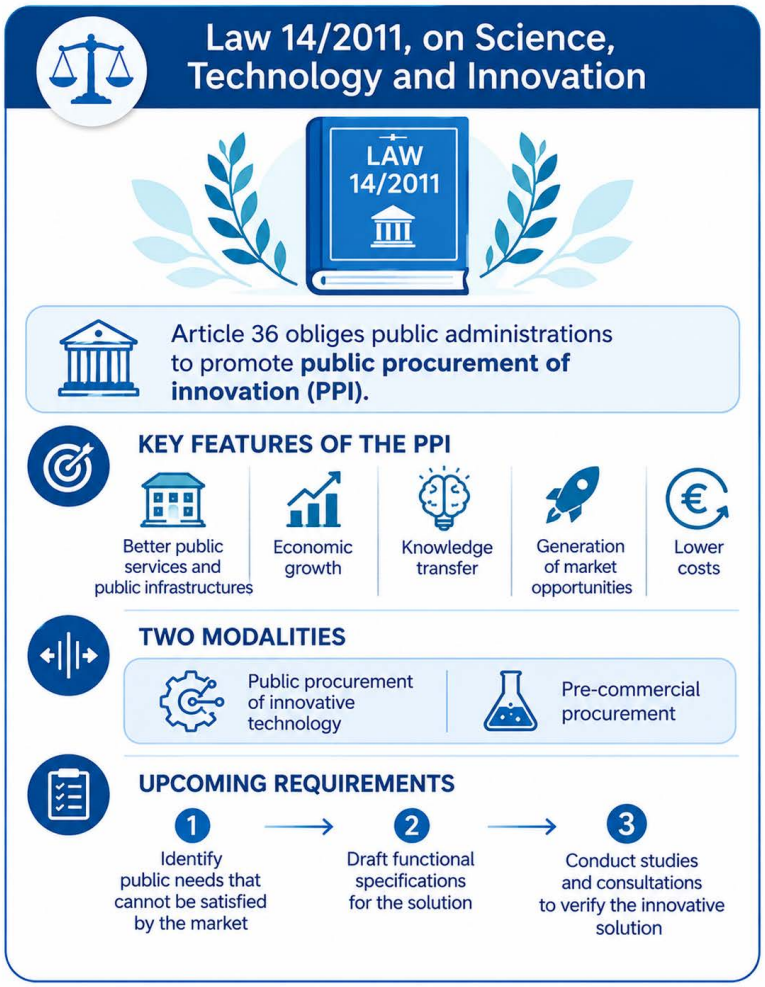
Consequently, **innovation and sustainability are not only matters of procedure, but also of the legal structure of the procurement process**.



In many cases within the **water sector**, public action will not necessarily require an innovation partnership or a competitive dialogue, but **it will require the contract to be drafted to a much higher technical and legal standard than that required for a conventional closed tender.**

This approach is reinforced by **Law 14/2011 on Science, Technology and Innovation, Article 36 sexies of which requires public sector administrations, bodies and entities to promote public procurement of innovation.** The provision sets out the specific PPI objectives: improving public services and infrastructure, boosting the economy, transferring knowledge, creating launch pads for new markets and achieving cost savings.

Furthermore, it distinguishes between **public procurement of innovative technology and pre-commercial public procurement**, and requires that, before these processes are initiated, public needs not met by the market be identified, the functional specifications of the intended solution be drawn up, and the necessary studies and consultations be carried out to verify the innovative nature of the initiative.



This provision is particularly relevant to this report, as it confirms that, under Spanish law, public procurement of innovation is not a rhetorical or purely programmatic category, **but a technique with explicit statutory provisions and specific preparatory requirements.**

In the water sector, this regulatory framework takes on a particular significance. This is a highly regulated, infrastructure-intensive sector, subject to requirements garding continuity, quality, health and environmental safety, and characterised, hermore, by the involvement of multiple public and private actors, different levels of ernance, and solutions with widely varying degrees of maturity.

Consequently, **public procurement in this sector requires greater attention to the eparatory phase, the correct definition of the public need, the identification of the ntended use or model, consistency between the contract and the sectoral regulatory framework, and the potential transition between pilot, demonstration and routine operational phases.**

In projects involving the reuse of reclaimed water, the requirements are even more stringent, as a range of factors relating to authorisation, the environment, public health, economics and jurisdictional issues must be taken into account right from the design stage of the project.

What is decisive, therefore, is not merely the formal existence of these legal forms, but also the contracting authority's ability to select the most appropriate legal approach depending on the nature of the requirement, the degree of market maturity, and the level of technical and institutional complexity of the project. That will, in fact, be one of the key issues addressed in this report regarding water reuse.

The Spanish framework currently has two key features:

- On the one hand, it allows sustainability, efficiency and circularity objectives to be incorporated into properly drafted standard contracts, without always having to resort to exceptional measures.
- Furthermore, it offers sufficiently sophisticated tools for those cases where public needs cannot be met by standardised solutions or require development, adaptation, validation or gradual scaling up.

In the **context of reclaimed water reuse**, strategic public procurement is not merely a matter of adding environmental clauses to the tender documents, but rather of **defining the public need and structuring the contract to achieve verifiable results** in terms of water resilience, circularity, innovation and economic efficiency throughout the entire lifespan of the contracted solution.

The focus of the procurement process should shift from the mere procurement of a work, supply or service towards the achievement of results such as:

- ✓ Effective replacement of conventional water resources with reclaimed water.
- ✓ Reduction in water abstraction from water bodies under stress.
- ✓ Compliance with quality parameters at the point of delivery or use.
- ✓ Continuity and reliability of supply.
- ✓ Energy efficiency in treatment and distribution.
- ✓ Digital traceability, monitoring and early warnings.
- ✓ Compliance with the Risk Management Plan.
- ✓ Reduction of discharges and improvement of the circularity of the system

In this regard, Royal Decree 1085/2024 introduces a crucial element in contract design by framing reuse within a risk management framework and requiring a risk management plan that identifies the system, the risks, the responsibilities of each party, and the measures necessary to keep them at acceptable levels.

In the context of public procurement, this makes it possible to include in the tender documents technical requirements, indicators of coordination mechanisms between stakeholders, and performance-related implementation conditions, control systems, traceability obligations and compliance with the risk management plan itself.

2.3.1. A brief reference to the regional dimension of PPI and strategic procurement

The regional dimension also merits a brief mention. This inclusion is not based on an exhaustive approach, but rather on the very structure of **Article 36 sexies.2 of Law 14/2011,** which links technologies resulting from public procurement of innovation not only to the Spanish Strategy for Science, Technology and Innovation, but also to the **plans and instruments specific to the relevant regional administration.**

From this perspective, some autonomous communities have developed particularly significant frameworks, some of which are set out below:

1. **Aragón** provides the most systematic example of comprehensive regulation of strategic procurement through Law 11/2023, which expressly incorporates environmental, social and innovation considerations and specifically regulates the promotion of innovation in public procurement.

2. **Galicia** stands out as a unique example due to the explicit regulation of public procurement for innovation in Article 28 of Law 14/2013, as amended by Act 2/2017, including market consultations, institutional collaboration, innovation partnerships and monitoring and reporting obligations.

3. The **Principality of Asturias** has incorporated public procurement of innovation into its regulatory framework for science, technology and innovation through Law 1/2025.

4. In the **Balearic Islands**, the fourth supplementary provision of Law 7/2022 requires the promotion of the procurement of innovative solutions or those still in the development phase through the public procurement of innovation scheme.

5. **Andalusia**, which is particularly relevant to this report, does not have a general law comparable to that of Aragon, but it does have a specific organisational and strategic framework for public procurement of innovation (PPI), now updated by Decree 104/2025, which establishes the Interdepartmental Commission for the

Co-ordination of PPI and provides technical support to the PPI Unit, whilst the Andalusian Strategy approved in 2018 remains a relevant precedent.

2.4. The French framework: public procurement, sustainability and innovation instruments

In France, public procurement is governed by the **Code de la commande publique**, which brings together in a single body of law the regulations applicable to **marchés publics** and **concession contracts**.[2] For this report, the significance of the French model lies not only in its formal, systematic approach, but also in its clear framework for public procurement as a means of meeting public needs, guided by the principles of sustainability and efficiency. In particular, Article L3-1 stipulates that public procurement contributes to achieving the objectives of **sustainable development** in its economic, social and environmental dimensions. This provision is legally significant because it places sustainability at the heart of the public procurement system, rather than treating it as a mere ancillary technique for evaluating tenders.

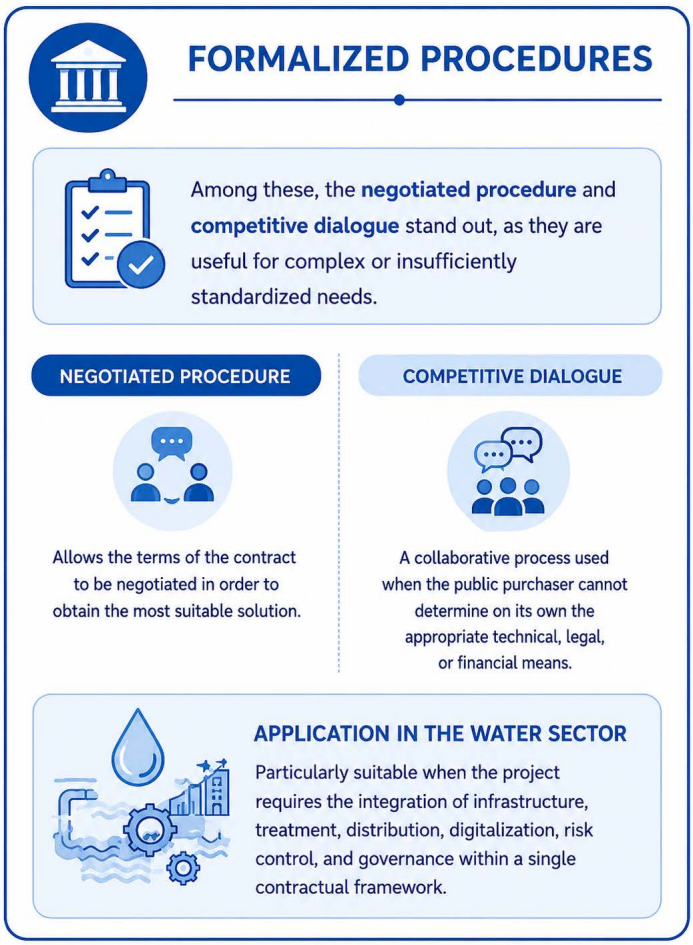
In line with this, French law has progressively strengthened the integration of sustainability into the **public need definition phase**. Article L2111-1 stipulates that the nature and scope of the needs to be met must be determined before the consultation is launched, taking into account the economic, social and environmental dimensions of the Sustainable Development Goals. This approach is particularly interesting from a comparative perspective, as it shifts the focus of sustainable procurement towards the contract preparation stage, thereby avoiding the risk of reducing it to the mere subsequent inclusion of green or social clauses. In other words, **French law emphasises that sustainability should not be added to the contract once it has been finalised, but must be part of the contract's initial definition of its subject-matter.**

From a procedural perspective, the French system distinguishes, in accordance with **Article L2120-1**, between contracts awarded without prior advertising or competitive tendering in cases specified by law, adapted procedures and formalised procedures.

[2] Légifrance – Le service public de la diffusion du droit

Formalised procedures

Among the latter, the following are particularly relevant to this report: the **procédure avec négociation** and the **dialogue compétitif**, both of which are useful for complex and insufficiently standardised requirements.



Competitive dialogue, in particular, provides a forum for jointly developing a solution when the public purchaser is unable to determine on its own the appropriate technical, legal or financial means to meet the requirement.

From the perspective of the water sector, this instrument may be particularly suitable when a project requires integrating infrastructure, treatment, distribution, digitalisation, risk management, and governance within a single contractual framework.

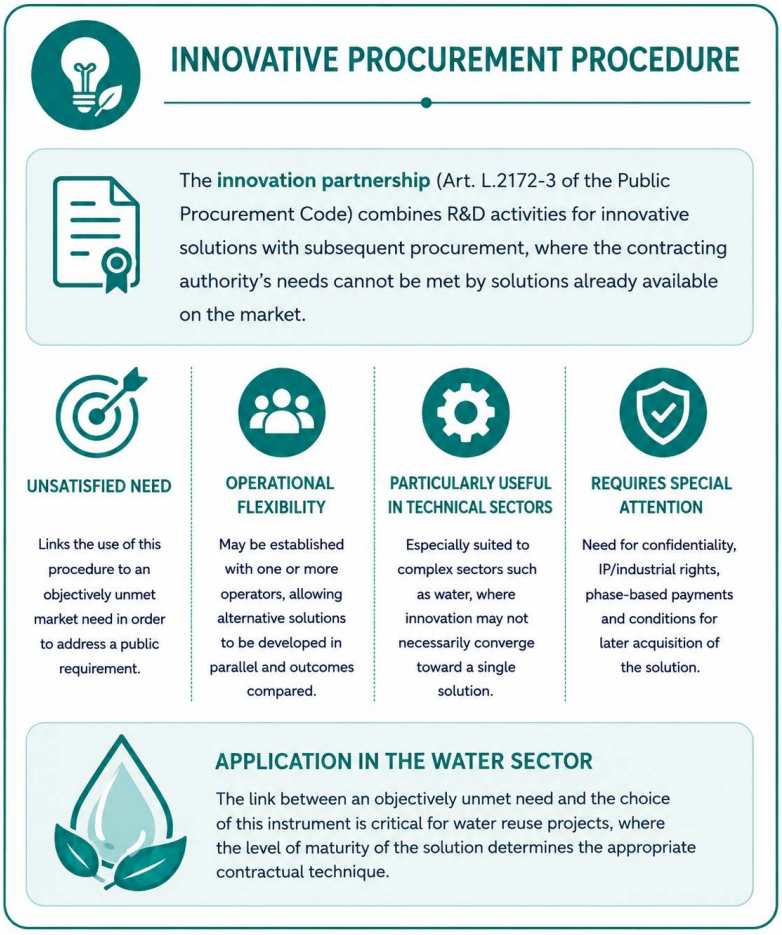
Innovative procedure

A particularly innovative feature of the French system is the **partenariat d'innovation**, governed by **Article L2172-3 of the Code de la commande publique**. This is a public contract, **whose purpose encompasses both the research and development of**

innovative products, services, or works, and the subsequent acquisition of the results, provided that the public need cannot be met through the procurement of solutions already available on the market. From a technical point of view, the French wording is of particular interest because it directly links the use of this mechanism to **an objective market failure** in meeting a public need, rather than merely to the abstract desirability of incorporating innovation.

This link between unmet needs and the choice of instrument is particularly valuable when analysing water reuse projects, where the solution's maturity decisively influences the appropriate contractual approach.

An innovation partnership (partenariat d'innovation) may also be established with one or more economic operators, enabling the contracting authority to organise alternative developments in parallel and compare the results. This gives the French system a degree of operational flexibility that is particularly useful in highly technical sectors, where innovation does not always lead to a single solution.



At the same time, this model requires particular attention to issues such as the functional definition of requirements, confidentiality management, intellectual and industrial property rights, phased payment, and the terms and conditions for the subsequent

acquisition of the developed solution. It is therefore a legally powerful instrument, but one that requires particularly thorough preparation of the procurement dossier.

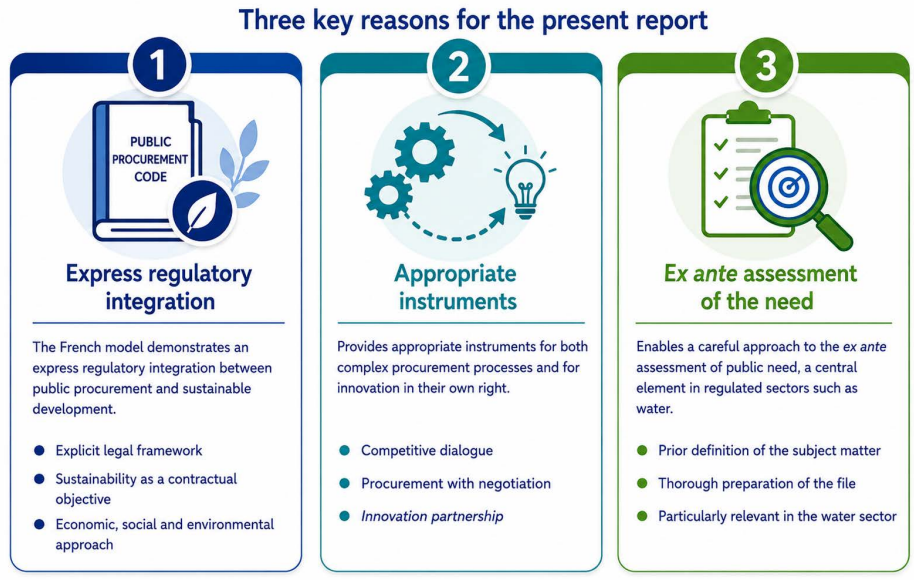
From an environmental perspective, the French system allows the **coût du cycle de vie** to be used as a cost assessment criterion, in accordance with the European approach of moving beyond the initial price as the sole comparative parameter. French regulatory legislation allows the cost to include not only the purchase price, but also the costs of use, maintenance, end-of-life disposal, and environmental externalities, provided the methodology used is objective and set out in the consultation documents.

This technique is of particular interest in the **water sector**, where **the sustainability of the solution depends, to a large extent, on its operational performance and its medium- and long-term operating and maintenance costs.**

All of this makes the French system a useful benchmark for assessing the strategic use of public procurement in projects relating to the reuse and gradual roll-out of solutions in the SUDOE region.

2.5. The Portuguese framework: Public Contracts Code, PPI and green procurement

In Portugal, public procurement is governed primarily by the **Public Contracts Code (CCP)**, adopted by **Decree-Law No. 18/2008**, in its current consolidated version.[3] The appeal of



[3] Diário da República | DR

the Portuguese system lies in its combination of a stable regulatory framework with significant developments in innovation and sustainability, whilst maintaining a close conceptual alignment with the European framework and with some approaches already in place in Spain and France.

From a general perspective, the CCP governs both the drafting of public contracts and the substantive rules applicable to administrative contracts, thereby enabling an integrated analysis of contract preparation and subsequent performance.

The Portuguese system includes, among its most important procedures, the **open tender, the restricted tender based on prior qualification, the negotiated procedure, the competitive dialogue and the innovation partnership.**

Of all these, the most significant for this report are competitive dialogue and innovation partnerships, insofar as they enable the addressing of complex public needs – or those not adequately met by the market. This framework confirms that Portuguese law does not restrict public procurement to closed procurement schemes, but rather allows procedures tailored to contexts characterised by greater technical or functional uncertainty.

Competitive Dialogue

The Portuguese competitive dialogue procedure may be used when a contract is particularly complex, and it is inappropriate to resort to an open or restricted tender following prior qualification.

The regulations contain several interesting features:

- Firstly, **the procedure is divided into three distinct stages**:
    1. An initial phase of applications and selection,
    2. A second phase involving the presentation of solutions and dialogue,
    3. A third phase involving the presentation and analysis of tenders and the award of the contract.



- Secondly, the regulations require the contracting authority to set out the needs and requirements it intends to meet in a descriptive report, postponing the drafting of the tender specifications until after the dialogue.
- Thirdly, the Portuguese system makes it clear that the competitive dialogue **does not include a negotiation phase**, which makes it necessary to distinguish precisely between the stage of developing solutions and the stage of finalising proposals. From the perspective of the water sector, this structure is clearly useful when the contracting authority knows which problem needs to be solved, but must engage with the market before legally finalising the contract terms.



The partnership for innovation

The Portuguese Innovation Partnership, governed by **Article 30. A** of the CCP follows a **logic similar to the Spanish innovation partnership and the French 'partenariat d'innovation'.** The contracting authority may opt for this procedure when it intends to carry out research and development activities relating to innovative goods, services or works with a view to their subsequent procurement, provided that the public need cannot be met by solutions already available on the market, and that the results meet the previously agreed performance levels and maximum prices. The explicit identification of

a need not met by the market is once again a key element here, as it prevents the use of innovative procurement from being trivialised, and requires justification of the genuine functional reason behind the choice of instrument.

The Portuguese system also allows for a **structure organised in successive phases, with interim objectives and progressive remuneration.** This makes the 'parceria para a inovação' a particularly suitable procedure for projects in which development and procurement must be linked within a single contractual framework.

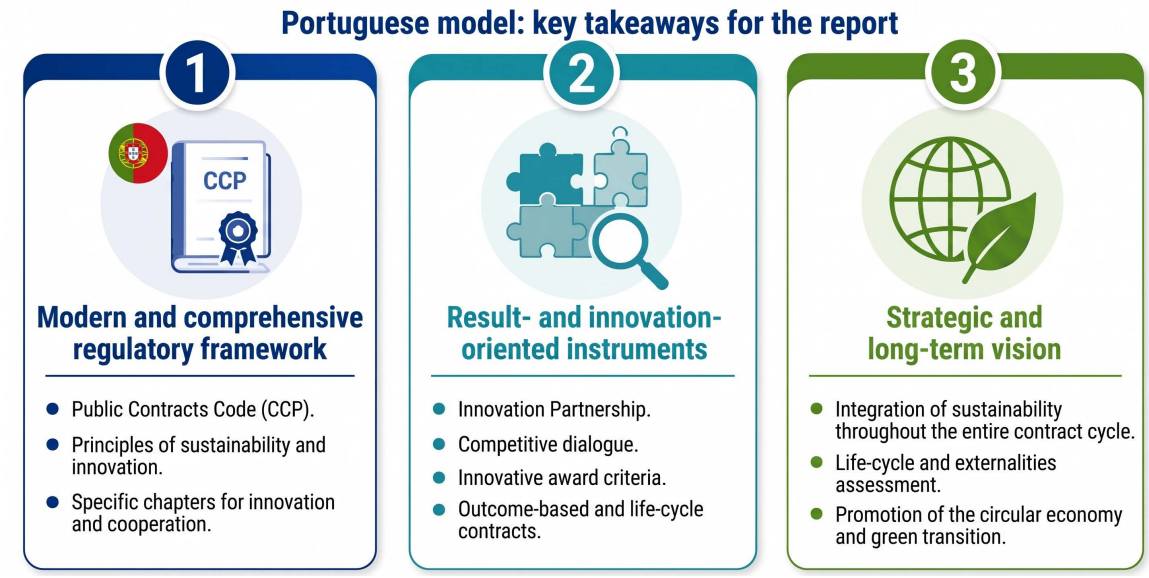
This is of particular interest in reuse, where certain solutions may require prior adaptation, operational validation or performance demonstration before they can be rolled out routinely.

At this point, the Portuguese system again confirms that innovative procurement is not defined solely by a technological component, but rather by the **inability to meet the need with mature-market solutions adequately**.



In terms of sustainability, the Portuguese framework enables the integration of environmental requirements across the board. The CCP permits the use of **life-cycle cost**

as an evaluation criterion, and requires that the relevant methodology be specified in the tender documents when this technique is used. In addition, there is **Council of Ministers Resolution No. 132/2023, which reinforces the incorporation of environmental criteria into certain categories of public sector contracts.** From a functional perspective, this shows that the Portuguese system has made progress not only in innovative procurement techniques but also in consolidating a green procurement approach that is compatible with public planning and sustainability objectives.



From the perspective of this report, the Portuguese model is of interest for two reasons:

- ✓ Because it offers a particularly **useful combination of approaches suited to complexity** (competitive dialogue) and approaches suited to innovation in the strict sense (partnership for innovation).

- ✓ Because its **progress in water reuse**, based on fit-for-purpose approaches, risk assessment, and the gradual development of frameworks for use, makes it particularly valuable to observe how public procurement can be organised within a system similar to the Spanish, but with its own regulatory and institutional solutions.

In terms of knowledge transfer **within the SUDOE region, Portugal is therefore a particularly important point of reference for identifying tools and practices that can be adapted to reuse contexts**, particularly in medium-scale projects or those involving phased implementation.

2.6. The significance of the comparative framework for the water and water reuse sector

A joint examination of Spain, France and Portugal leads to the conclusion that **sustainable and innovative public procurement is not, in any of the three legal systems, a marginal practice or one alien to the general public procurement regime, but rather a functional application of contract law to complex public needs.** All three systems provide sufficient scope to integrate sustainability into the definition of needs, to incorporate environmental and life-cycle cost criteria, and, where the market does not offer suitable solutions, to use instruments specifically geared towards innovation.

The differences between them lie less in the existence of regulatory authorisation than in the degree of institutional maturity, the techniques used to prepare the dossier, and the administrative practices **regarding the use of these tools.**

This finding is particularly relevant in the **context of the reuse of reclaimed water.** We are dealing with a sector in which health and environmental safety requirements, jurisdictional constraints, various management models, infrastructural complexity, and varying degrees of technical and market maturity all come into play. In this context, public procurement cannot be based on the premise of a standardised procedure, but rather on the principle of **tailoring the legal instrument to the need, the intended use, the complexity of the project and the actual maturity of the solution available or capable of being developed**. Consequently, this section does not aim to provide an exhaustive analysis, but rather to establish the framework within which the specific legal instruments will be examined below.

This comparative analysis is also of particular relevance to the SUDOE region, not only because Spain, France and Portugal share a common European framework, but also because they face similar challenges in terms of water stress, water reuse, climate adaptation and territorial sustainability. A comparison of their procurement practices reveals not only regulatory differences, but also varying levels of institutional maturity in the use of public procurement as a tool for public intervention in the water sector.

From the perspective of this report, this is essential for **selecting tools that are not only legally admissible, but also transferable, proportionate and operationally viable in rural and peri-urban settings in south-western Europe.**

3. Key objectives of sustainable public procurement: SWOT analysis[4]

3.1. Preliminary methodological considerations

The SWOT analysis below is not intended to provide a general description of the water sector or to present an abstract assessment of sustainable public procurement.



Purpose: to identify the internal and external factors that influence the effective use of public procurement as a tool to promote, structure, test, procure or scale up solutions relating to the reuse of reclaimed wastewater.

This approach is particularly relevant in this area for two reasons:

- Firstly, because reuse operates within a sector characterised by a high degree of regulatory complexity, the involvement of numerous public and private stakeholders, and a marked diversity of implementation models.
- Secondly, because public procurement, when geared towards sustainability and innovation, is not neutral: its effectiveness depends on the correct definition of the need, the maturity of the solution, the level of market development, and the institutional capacity of the public contracting authority to prepare and manage instruments of varying complexity.

From this perspective, **the SWOT analysis is formulated in functional and applied terms**, linking three levels:

1. The legal framework for sustainable and innovative public procurement in Spain, France and Portugal.
2. The specific characteristics of the water and water reuse sector.
3. The territorial logic of the SUDOE area, within which this report is situated.

The SOLLAGUA project is based precisely on a shared context of water scarcity, climate adaptation, and the need to identify solutions that can be replicated across Spain, Portugal, and France; this also justifies the analysis of strengths, weaknesses, opportunities, and threats being conducted from a comparative and territorial perspective.

3.2. Strengths

The **first strength** lies in the **existence of an adequate legal framework that enables the use of public procurement as a strategic tool for sustainability and innovation**. Both

[4] **Sources for the SWOT analysis:** Law 9/2017 of 8 November on Public Sector Contracts; Law 14/2011 of 1 June on Science, Technology and Innovation; CNMC, *Study on urban water supply and sanitation services* (2020); *Innovation and Research in the water sector. Strategic Guidelines* (2015); official documentation for the SOLLAGUA project (Interreg SUDOE); and a preliminary legal report on the reuse of reclaimed wastewater drawn up as part of the project.

Spanish legislation and the French and Portuguese legal frameworks allow for the incorporation of environmental objectives into the definition of need, the assessment of qualitative and life-cycle cost criteria, and, where appropriate, the use of specifically innovative instruments. In Spain, this possibility is underpinned by the LCSP, in both Article 1 and Article 145, and is reinforced by Article 36 sexies of the Science Act, which requires public authorities to promote public procurement of innovation.

The **second strength lies in the strategic nature of water itself, and in the growing importance of reuse as a means of ensuring water resilience**. The previous report had already highlighted that the reuse of reclaimed water should not be viewed merely as a technical alternative for water supply, but as a means of diversifying water sources, reducing pressure on conventional resources, adapting to climate change and strengthening water security in the SUDOE region. This characterisation helps ensure that public procurement can be justified not only as a procurement mechanism, but also as a tool for implementing public policy with a clear environmental and territorial focus.

The **third strength lies in the technical, operational and institutional expertise built up in the water sector.** Spain has significant expertise in water reuse, treatment, and water cycle management; Portugal has made progress with risk-based reuse approaches; and France has progressively incorporated sustainability into public procurement and maintains advanced instruments for innovative procurement.

From a contractual perspective, this accumulated experience reduces the risk that public procurement in the water sector will have to operate entirely on an experimental basis, enabling it to draw on tried-and-tested solutions, established management models and useful comparative references.

The **fourth strength is that public procurement offers a range of instruments**, from properly designed standard contracts to procedures suited to situations involving innovation or complexity. This flexibility makes it possible to adapt the legal approach to the maturity of the solution: conventional procurement incorporating environmental criteria where the service is well-established; preliminary market consultations where there is uncertainty regarding the state of the art; competitive dialogue where the public authority cannot define the solution on its own; and innovation partnerships or similar arrangements where available solutions cannot meet the need. From a water management perspective, this gradation is a key strength, because reuse is not based on a single model, but on various implementation scenarios.

Finally, the fifth strength is that the new Spanish regulations provide a framework for risks, roles, and controls that can be transformed into a contractual framework.

3.3. Weaknesses

The main weakness lies in the **institutional and operational fragmentation of the water sector.** The structure of service provision and management continues to be characterised by a wide variety of operators, territorial levels, governance models and technical capabilities, particularly at the local level. This fragmentation makes it difficult to aggregate demand, standardise documentation, build up contractual experience and ensure consistent use of advanced tools. From the perspective of competition and efficiency, economic analysis of the urban water sector has consistently highlighted its fragmentation, lack of comparable data, and the structural difficulties in designing and monitoring efficient tendering processes.

The second weakness is the **insufficient maturity of a functional and innovative procurement culture in a significant part of the public sector**. Although the legal framework allows for the consideration of functional requirements, market consultations, the life cycle and complex procedures, in many cases administrative practice remains rooted in a 'closed scope' approach, rigid performance specifications and a prioritisation of the initial price. In the water sector, this inertia can prove particularly problematic, as many initiatives relating to reuse, monitoring, distribution, or risk management do not fit comfortably within procedures designed around a conventional, closed-procurement approach.

The third weakness stems from the **regulatory and jurisdictional complexity surrounding the reuse of reclaimed water.** This is not a sector in which public procurement operates within a legally straightforward framework. On the contrary, there are health, environmental, hydraulic, spatial, and economic factors that require careful coordination of the relationship between the contract and the applicable authorisation or planning regime. The preliminary legal report on the legal framework for the reuse of reclaimed wastewater explicitly identifies administrative and jurisdictional barriers, complexities in obtaining authorisations, technical constraints with legal implications, and economic and social limitations to implementation. All this hinders the immediate translation of the public issue into a standard contractual document.

The fourth weakness is the **uneven maturity of the market in meeting certain public needs in this area.** Not all solutions relating to water reuse, water circularity, advanced treatment, recharge or digitalisation of water management offer the same level of availability or validation. Consequently, the contracting authority may encounter situations in which the market offers partial, immature, or difficult-to-compare solutions, which require more sophisticated preparation of the tender documentation and may increase legal and technical uncertainty.

3.4. Opportunities

The first major opportunity arises from the shared context of water stress, drought, and climate adaptation **across the SUDOE region**. This context makes reuse a **functional and strategic priority**, and creates a clear opportunity for public procurement to act as a catalyst for the implementation, testing or scaling up of solutions. When public need is acute and sustained, public procurement can play a particularly valuable role in shaping demand, encouraging not only the purchase of existing solutions, but also the development of solutions better suited to local or rural contexts.

The second opportunity lies in the **convergence of water policy, the circular economy, the green transition and public innovation**. The reuse of reclaimed water lies at the intersection of all these agendas. This means sustainable and innovative public procurement is underpinned not only by the LCSP or its equivalent legislation in other countries, but also by broader public strategies and policies aimed at circularity, resilience and resource efficiency. From a functional perspective, this convergence enhances the legitimacy of using public procurement as an instrument of intervention and opens up opportunities for funding, coordination and integration with other sectoral policies.

The third opportunity lies in the **comparative transferability within SUDOE**. The joint analysis of Spain, France and Portugal is not merely descriptive: it enables the identification of contractual techniques, methods for preparing documentation, and approaches to sustainability and innovation that may be adaptable across territories facing common challenges. The possibility of transferring solutions does not mean mechanically replicating them, but rather identifying which tools may prove viable and proportionate in similar water-reuse contexts, particularly in rural and peri-urban areas. This aspect of transfer represents a particularly valuable methodological and operational opportunity for this report.

The fourth opportunity lies in the **ability of public procurement to support different stages of a project's development**: from preliminary studies and market consultations, through to pilot schemes, demonstrators, phased rollouts and standard procurement. This flexibility means that procurement does not merely play a role at the end of the process, when the solution has already been defined, but also serves as a tool for developing, validating or scaling it.

3.5. Threats

The first threat is the **risk of a formalistic or procedural overreaction**, that is, the tendency to automatically apply legal concepts or requirements to a case without properly adapting them to the specific public issue at hand. It can be just as problematic to adopt an excessively rigid approach to tendering for a complex requirement as it is to resort, without sufficient justification, to innovative or negotiated procurement methods when the market already offers tried-and-tested solutions. In both cases, the result may be a file that is inefficient, vulnerable or out of step with the intended purpose. From a legal

perspective, the threat lies not only in the inadequacy of the framework but also in the choice of the wrong **instrument**.

The second threat is the **lack of institutional capacity** among certain public developers. The effective use of preliminary consultations, life-cycle costing, competitive dialogue or public procurement of innovation requires technical, legal and organisational capabilities that are not always available, particularly in smaller organisations. In the water sector, this threat is exacerbated by the sector's high level of technical and regulatory complexity, and by the need to coordinate the contract with other elements of the system — authorisations, planning, funding, operation and risk management.

The third threat is the **disconnect between the contract and the sectoral framework for reuse**. If public procurement is structured outside the health, environmental, jurisdictional, or economic framework applicable to the use of reclaimed water, it may create a disconnect between the project's contractual and regulatory viability. In other words, it is possible to enter into a contract that is legally impossible, premature or out of step with the sequence of authorisations and responsibilities. This risk is particularly significant in the context of reuse, where the contract cannot be understood in isolation from the sectoral framework.

The fourth threat stems from the **territorial heterogeneity of the SUDOE region**. Although Spain, France and Portugal share the European framework and face similar challenges, their institutional, administrative and contractual systems are not identical. This implies that a contractual solution that is valid and effective in one context may not be directly transferable to another without significant adjustments. The threat, therefore, is not only legal but also methodological: confusing comparability with uniformity.

To summarise, the main factors influencing the use of sustainable and innovative public procurement in the field of reclaimed water reuse can be summarised in the following SWOT analysis:

Strengths	Weaknesses
☑ The existence of an adequate legal framework in Spain, France and Portugal for incorporating sustainability, innovation and life-cycle costs into public procurement. ☑ The strategic importance of water and the growing significance of reuse as a tool for water resilience, climate adaptation and the circular economy. ☑ The existence of a body of technical, operational and institutional knowledge in the	☒ Institutional and operational fragmentation within the water sector, particularly at local level, which hinders the pooling of demand and the standardisation of documentation. ☒ The persistence of a rigid or overly service-oriented procurement culture, with little focus on functional requirements or non-standardised solutions. ☒ The high level of complexity of regulations, authorisations, and jurisdictional matters in water

water sector, as well as useful comparative experiences. ☑ A range of contractual instruments is available: standard procurement, green procurement, preliminary consultations, competitive dialogue and innovation partnerships. ☑ The Spanish regulations provide a framework of risks, roles and controls that can be transformed into a contractual framework.	reuse projects makes it difficult to translate the public issue directly into the contractual framework. ☒ The market is at varying stages of maturity in meeting specific needs related to reuse, monitoring, risk management, or integrated solutions. ☒ Uncertainty regarding the actual demand for reclaimed water. ☒ Difficulty in measuring environmental outcomes. ☒ Limited administrative experience with public procurement of innovation (PPI) or results-oriented contracts.
Opportunities	**Threats**
☑ Water stress, drought, and climate adaptation are making water reuse an ever-increasing public necessity. ☑ The convergence of water policy, the circular economy, sustainability, and public innovation reinforces the strategic role of public procurement. ☑ The potential to transfer and adapt solutions between Spain, France and Portugal within the territorial framework of the SUDOE area. ☑ The capacity of public procurement to support the various stages of a project: consultation, pilot, demonstration, implementation and scaling up. ☑ Digitisation of the urban water cycle. ☑ Public funds earmarked for modernisation ☑ The potential to develop models that can be replicated across rural municipalities.	☒ Risk of inappropriate selection of the contractual instrument, whether due to excessive rigidity or the improper use of innovative techniques without sufficient justification. ☒ A lack of institutional capacity amongst some public bodies to prepare and manage complex or innovative cases. ☒ A disconnect between the contract and the sectoral framework for reuse may result in projects that are contractually viable but regulatorily infeasible or premature. ☒ The territorial and administrative heterogeneity of the SUDOE region, which prevents the mechanical transfer of contractual solutions from one context to another. ☒ Technically restrictive tender documents. ☒ Non-verifiable environmental criteria. ☒ Confusion between mandatory regulatory requirements and voluntary improvements.

	☒ Lack of coordination between producers and users of reclaimed water.

4. Legal instruments for the contractual implementation of solutions for the reuse of reclaimed water

4.1. Criteria for selecting the contractual instrument: the maturity of the need, the solution and the market

4.1.1. General approach: the choice of legal instrument as a legal and functional decision

The choice of the contractual instrument applicable to projects involving the reuse of reclaimed water cannot be approached from a purely formal perspective or based on a mere preference for a particular procurement method. In this field, there is no 'natural' or universally suitable procedure. The choice of instrument must be based on a prior, legally sound assessment of at least four factors: **the nature of the public need, the extent to which the subject matter of the contract can be defined, the level of maturity of the technical solution, and the actual state of the market** intended to meet that need.

The decision regarding the contractual instrument should not be based simply on whether the project 'allows for' public procurement of innovation, green procurement or a conventional approach, but rather on first determining **which public problem is to be solved**, **what degree of certainty exists regarding the solution**, **whether the market can provide it on suitable terms**, **which risks should be shared between the parties** and **which outcomes should be contractually required**.

This approach is particularly necessary in the water sector, particularly in water reuse projects. These projects are influenced not only by technical or economic factors but also by regulatory, health, environmental, spatial, and governance considerations, which prevent the tender documentation from being drawn up on rigid or undifferentiated contractual models.

The very objective of the report is based on this premise: it is not a question of carrying out an abstract analysis of public procurement, but rather of identifying which tools can

translate the recommendations of the work carried out on the legal framework for reuse into operational terms and enable pilot schemes, demonstrators, scaling up or replicability within the SOLLAGUA context.

The distinctive contribution of this report lies precisely in translating compliance with the reuse regime and the Risk Management Plan into a specific contractual framework: what should be required of the operator, how performance will be measured, who bears each responsibility, how remuneration should be structured, and what contractual consequences should be provided for when targets are not met.

4.1.2. The reuse of reclaimed water as a non-homogeneous subject matter of a contract

One of the main methodological errors to avoid is treating the reuse of reclaimed water as a uniform contractual arrangement. Not all reuse projects have the same structure or involve the same legal requirements. These may include, for example, improvements to an existing wastewater treatment plant to enable clearly defined urban uses; decentralised or modular systems for small rural communities; distribution infrastructure serving multiple end-users; operation and maintenance contracts with enhanced traceability and monitoring requirements; or innovative solutions for advanced treatment, quality forecasting, risk management, remote monitoring or digital system integration.

In addition, the **Regulations on Water Reuse, approved by Royal Decree 1085/2024, frame reuse within a risk management framework** and require the parties responsible for the system to draw up a Reclaimed Water Risk Management Plan, which defines the reuse system, identifies the risks associated with the production, supply and use of reclaimed water, determines the measures necessary to keep them at acceptable levels, and identifies the responsible parties and the responsibilities incumbent upon each of them.

The contractual implication of this framework is clear: reuse cannot be treated in the dossier as an isolated or neutral service, but rather as an activity integrated into a system in which at least the following aspects must be defined from the preparatory phase onwards: the source of the resource, the quality required for its intended use, the interaction between treatment, reclamation, distribution and end use, monitoring and traceability obligations, incident management, the allocation of responsibilities and coordination between the various operators involved.

As highlighted in the legal report on the legal framework for the reuse of reclaimed wastewater, in this regard, wastewater management and the management of the reclaimed resource must not remain separate, as the quality of reclaimed water may be compromised by incidents occurring well before the reclamation plant; therefore, in urban water cycle contracts, reuse should be incorporated, where appropriate, as an integrated function rather than as an ancillary activity disconnected from treatment.

4.1.3. First decision-making criterion: the maturity of the public need

The first criterion for selecting the contractual instrument is the maturity **of the public need**, that is, the degree of precision with which the contracting authority can identify the problem it wishes to resolve, the result it intends to achieve and the functional scope of the project.

There are projects in which the requirements are already sufficiently defined: for example, when the authorities have a clear understanding of the intended use, the approximate volume to be supplied, the location, the existing basic infrastructure, and the functional and regulatory parameters that must be met. In such cases, procurement may generally be geared towards more conventional approaches, albeit strategically tailored to incorporate environmental criteria, life-cycle requirements, special performance conditions, and, where appropriate, performance metrics.

In other cases, however, the public need can only be defined in open-ended or functional terms. This is the case when there are significant uncertainties regarding the optimal configuration of the system, how to integrate technology, operations, control and governance, or how to ensure demand, traceability or continuity of supply. In such scenarios, the process requires more intensive preparation and often more flexible tools, such as preliminary market consultations, negotiated procedures, competitive dialogue, or outcome-based contracts.

Finally, **there are needs which cannot be met by mature market solutions** or which require a solution to be developed or substantially adapted before it can be rolled out on a routine basis. It is in these cases that public procurement of innovation – and, in particular, innovation partnerships or their equivalent schemes – takes on greater significance.

It could therefore be said that **the sequence of instruments 'by level of maturity' is as follows: green procurement, performance-based contracts, preliminary consultation, public procurement of innovation (PPI), innovation partnerships, concessions or public-private partnerships**.

4.1.4. Second decision-making criterion: the maturity of the technical solution and the market

The correct choice of instrument also depends on the **solution's maturity level and market conditions.** It is not the same to adopt a technology or service that is already available and tried and tested as to adopt a solution that exists only in part, requires specific integration, or is not yet available on the market under suitable conditions.

At this point, the comparative classification developed for Portugal proves particularly useful. The CCP's analysis shows that innovative public procurement is not limited to partnerships for innovation, but can also be achieved through functional or performance specifications, award criteria linked to innovation, contracts with a strong innovative component, and results-oriented procurement.

This makes it possible to distinguish between:

a. Cases in which innovation involves acquiring a new or improved solution that is not yet available on the market under suitable conditions.
b. Situations where off-the-shelf solutions are available, but need to be adapted, integrated or specifically configured.
c. Cases in which it is sufficient to provide incentives, through the contract design, to encourage greater innovation or environmental value in relation to solutions that are already well-established.

The comparative analysis of France reaches a similar conclusion: **The negotiated procedure is particularly suitable when the solution does not start from scratch**, but requires adaptation, specific design or progressive clarification; whereas **the competitive dialogue appears to be an ideal technique when the contracting authority needs to develop or refine the solution that will meet a complex need.**

When applied to the field of reuse, this means we must distinguish between several scenarios:

a. If the market already offers sufficient and proven solutions to meet the intended need, the procurement process should focus on how to strategically structure the contract, rather than on initiating a formal public procurement of innovation (PPI) procedure without genuine justification.
b. If the market offers off-the-shelf solutions that are not fully tailored to the project's context (for example, for reasons of scale, integration, operation or risk management), approaches involving interaction and gradual adaptation will be more appropriate.
c. And if, on the other hand, the need cannot be met by existing solutions, then it is indeed justified to turn to instruments specifically designed to develop and subsequently acquire innovative solutions.

In the case of Spain, the Directorate-General for Water, part of the Spanish Government's Ministry for Ecological Transition and the Demographic Challenge (MITECO), follows this same approach by identifying and systematising the public procurement of innovation (PPI) instruments applicable to public water management, including competitive dialogue and the documentation associated with its implementation.[5]

4.1.5. Third decision-making criterion: risk allocation, required outcomes and control system

The choice of contractual instrument must also take into account the project's risk profile and the nature of the required outcomes.

[5] Guide to public procurement of innovation and contracting procedures in the public water sector. MINISTRY FOR ECOLOGICAL TRANSITION AND THE DEMOGRAPHIC CHALLENGE, STATE SECRETARIAT FOR THE ENVIRONMENT, Directorate-General for Water

In the reuse of reclaimed water, a substantial part of the public value of the contract does not lie in the physical execution of works or in the general provision of a service, but rather in the achievement of verifiable functional and environmental outcomes: the volume actually reused, the actual substitution of conventional resources, continuity of supply, compliance with quality parameters, reduction in discharges, energy efficiency, digital traceability, incident response or compliance with the Risk Management Plan.

The legal report on the regulatory framework for reclaimed wastewater already proposes the creation of a common system of implementation and performance indicators, including, among other things, volumes produced, supplied and actually reused; the actual substitution of conventional resources; reductions in discharges; continuity of supply; quality non-compliance; incidents; unit costs; energy consumption; and environmental benefits achieved.

This has a direct consequence: in many projects, **the key will not so much lie in choosing between a standard and an innovative procedure in the formal sense, but rather in determining whether the contract should be structured around fixed deliverables or outcomes.**

In many cases, the most strategic approach will not be formal public procurement of innovation (PPI), but rather a service contract or concession designed to deliver specific outcomes, for example, to "ensure the replacement of X m^3/year of conventional water with reclaimed water suitable for specific uses, subject to a maximum energy consumption limit, minimum availability, digital traceability and compliance with the Risk Management Plan". This approach reduces the risk of excessively prescriptive tender documents and enables a comparison of different technologies or combinations of construction, operation, maintenance and digitalisation.

Here too, Portuguese law provides a particularly valuable point of reference. Article 301-A of the Public Contracts Code (CCP) recognises the specific nature of contracts with a strong element of innovation and allows for the definition of contractual obligations by reference to the results to be achieved, the establishment of payment mechanisms linked to the degree to which objectives are met, the structuring of performance in phases, and the provision for quantifiable indicators and independent evaluations.

The choice of instrument cannot be viewed in isolation from the system of measurement, control, monitoring and, where applicable, payment under the contract.

4.1.6. Fourth decision criterion: project scale, institutional structure and demand aggregation

The fourth relevant criterion is **the project's scale and the institutional structure required to make it viable.** When it comes to reuse, many projects fail not because of a lack of legal framework or technological shortcomings, but because of inadequate coordination between producers, infrastructure managers, end-users and the relevant authorities, or because it is impossible to generate sufficient demand to justify the investment and operation.

The legal report on the regulatory framework for reclaimed wastewater already points out that many projects are not viable if each user negotiates individually, but they can become viable when the water consumption of small industries, scattered irrigators, housing estates, neighbouring local authorities or business parks is pooled. To this end, it identifies as possible instruments accession agreements, user groups, management bodies, centralised procurement bodies, associations of local authorities, framework contracts or systems with affiliated users, highlighting their advantages in terms of demand aggregation, joint financing, the implementation of shared infrastructure, the professionalisation of management and the sharing of costs.

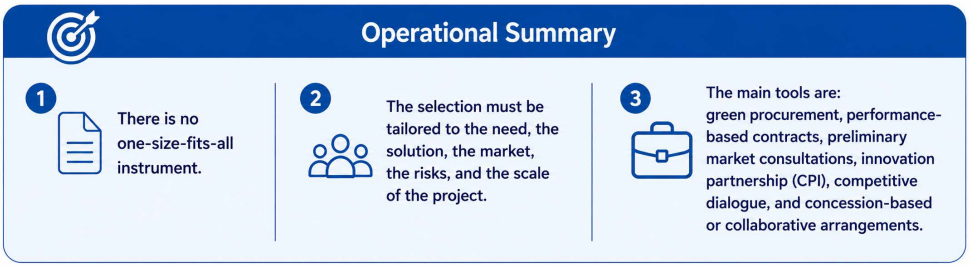
This institutional dimension is crucial to the choice of instrument. Some projects can be organised through a properly defined individual contract. Others will call for collective structures, progressive aggregation models or integrated urban water cycle management models. Others, in short, may justify concessionary or collaborative arrangements, provided there is sufficiently stable demand, an appropriate scale and an acceptable risk profile.

> The contractual decision cannot be viewed in isolation from the project's governance structure and the actual ability to coordinate the parties involved.

4.1.7. Operational summary

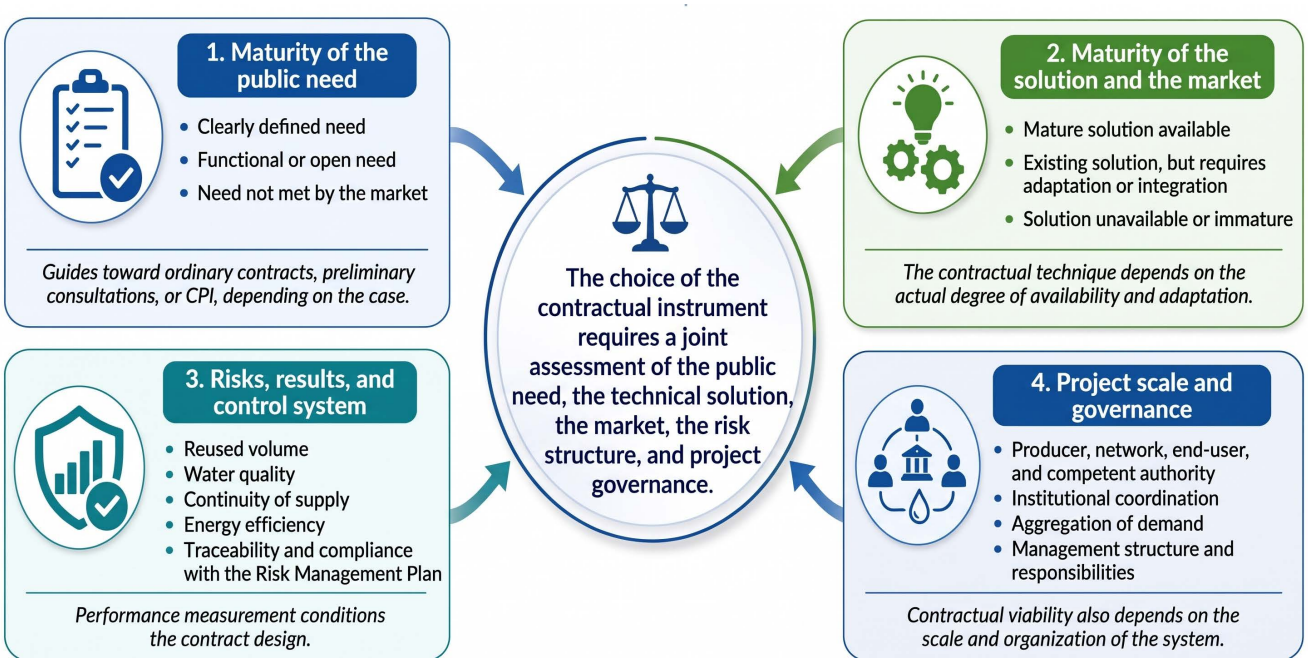
It follows from the foregoing that the choice of contractual instrument in reuse projects must be based on a **comprehensive assessment of the maturity of the need, the solution and the market; the structure of risks and outcomes; and the scale and governance of the project.**

There is no automatic link between sustainability, innovation and a specific procedure. Green public procurement, outcome-based contracts, preliminary consultations, public



procurement of innovation, competitive dialogue, negotiated procedures, concession arrangements and aggregation structures are not mutually exclusive categories or predetermined alternatives, but rather techniques whose suitability depends on the actual nature of the public issue.

On that basis, we shall now examine the main contractual tools that may prove useful for the implementation, validation, scaling up, or operation of solutions for the reuse of reclaimed water.



4.2. Green public procurement and strategic procurement in mature projects.

4.2.1. General remarks

In many projects relating to the reuse of reclaimed water, the most appropriate contractual framework will not be, at least in the initial phase, a specific public procurement of innovation scheme, but rather a **standard contract strategically tailored,** in which environmental sustainability, operational efficiency and a results-oriented approach are integrated from the preparatory stage of the tender documentation.

Green public procurement represents the most immediate and legally sound route to incorporating objectives relating to circularity, resource conservation, energy efficiency, emissions reduction, waste minimisation and improved environmental performance of the system into the contract.

It is worth emphasising that green public procurement is not a stand-alone procedure. Rather, it is a **cross-cutting contract design technique** that can be applied to the definition of requirements, technical specifications, award criteria, life-cycle cost assessment, and special conditions of performance. This is evident from the general framework for public procurement in Spain, in which Article 1 of the LCSP requires the mandatory, cross-cutting integration of social and environmental criteria, whilst Article 145 allows for the assessment of qualitative environmental criteria and the use of approaches that offer better value for money, including life-cycle costing.



In the water sector, this approach is further reinforced by the sector-specific documentation produced by the **Directorate-General for Water** —as mentioned above—which **identifies public procurement (and specifically public procurement of innovation (PPI) and its associated procedures) as a tool for promoting innovation and technology transfer in public water management, as part of a broader approach to modernising and improving the sector**.

4.2.2. Preferred areas of application for the reuse of reclaimed water

Green public procurement is particularly suitable when the public sector is dealing with **mature or well-defined projects, that is, cases in which the public need is clear and the market already offers suitable solutions**, although such solutions should not be compared solely based on the initial price.

This situation may arise, amongst others, in contracts relating to:

- Improvements to or expansion of tertiary treatment processes.
- Adaptation of the wastewater treatment plant for the production of reclaimed water.
- Distribution networks, regulating reservoirs or connecting elements.
- Remote control, monitoring and traceability systems.
- Operation and maintenance services.
- Water supply for the irrigation of green spaces, street cleaning or municipal purposes.

- Urban water cycle management contracts in which water reuse is incorporated as an integrated function.

The main legal issue is not whether or not to use formal public procurement of innovation (PPI), but how to draft the contract correctly so that the chosen solution not only meets the minimum legal and quality requirements, but also delivers the best possible performance in terms of water, energy, environmental and operational efficiency.

For many mature water reuse contracts, the most effective approach involves green and strategic procurement, incorporating factors such as energy efficiency, carbon footprint, loss reduction, continuous monitoring, modularity, life-cycle cost and the minimisation of waste and sludge.

Furthermore, reuse should not be treated as a separate activity disconnected from treatment, but rather as an integrated function of the system, reinforcing the need to draw up these contracts with a systemic rather than a fragmented approach.[6]

4.2.3. Legal implications of green procurement for the procurement process

From technical and legal perspectives, green public procurement can and must be applied at all relevant stages of the procurement process.

1. **On the definition of need**.
   In the context of reuse, public need should not be defined solely in terms of carrying out works or purchasing equipment, but rather in terms of achieving a specific functional and environmental outcome: an increase in reused resources, a reduction in conventional abstraction, continuity of supply, improved system security, or a reduction in energy costs per cubic metre treated or supplied.

2. **On the technical specifications.**
   Technical aspects that may be defined not only in terms of minimum quality requirements, but also in terms of environmental and operational performance. At this stage, requirements may be included relating to:

   - Maximum energy consumption per unit of treated or distributed water;
   - Minimisation of reagents and waste;
   - Compatibility with continuous monitoring systems;

[6] Legalreport on the legal framework for the reuse of reclaimed wastewater

- Traceability of flow rates and quality;
- Ease of maintenance and replacement;
- Modularity and scalability;
- Use of renewable energy or self-consumption;
- Reduction in leaks or wastage.

3. **On the award criteria.**
   Criteria that can assess not only the financial proposal, but also water and energy efficiency, the robustness of the control system, emissions reduction, the quality of the monitoring solution, the operational methodology, the maintenance plan, and the quality of the traceability and incident management system. The LCSP provides a sufficient basis for this by allowing environmental, innovation, and life-cycle criteria to be linked to the contract's subject matter.

4. **On the assessment of life-cycle costs.**
   It is particularly important in reuse projects. In many cases, the solution with the lowest initial cost will not be the most efficient from the perspective of the public interest if it entails higher energy consumption, greater reagent needs, higher maintenance costs, a shorter service life, or more harmful environmental externalities. The life-cycle approach makes it possible to move beyond this short-term mindset and bring the contractual comparison more closely into line with the economic and operational reality of the system.
   This approach is also clearly evident in Portuguese law, as we saw earlier, which expressly permits the use of life-cycle costs and links them to energy, maintenance, end-of-life and environmental externalities.

4.2.4. Strategic procurement in the context of reuse: from price to environmental and functional performance

In the context of reuse, green procurement only realises its full potential when it is integrated into a broader approach to **strategic procurement**. This means that the process should not be limited to procuring infrastructure or services that meet a minimum standard, but should **be geared towards achieving verifiable public outcomes.**

From this perspective, a strategically structured contract relating to reuse should be capable of measuring, as appropriate:

- ✓ The volume actually reused;
- ✓ The actual substitution of conventional resources;
- ✓ Reduction in discharges;
- ✓ The continuity and availability of supply;

- ✓ Compliance with quality standards;
- ✓ Energy consumption;
- ✓ Incidents recorded;
- ✓ Where applicable, the environmental benefits achieved.

The legal report on the legal framework for the reuse of wastewater already proposes, specifically, the creation of a common system of implementation and performance indicators, including potential, authorised, produced, supplied and actually reused volumes; the replacement of conventional resources; reductions in discharges; continuity of supply; quality non-compliance; incidents; unit costs; energy consumption; and environmental benefits.

By way of illustration, the **main public objectives pursued in reuse contracts** can be translated into indicative metrics, as set out in the table below.

Public objective	Indicative indicator	Potential contractual projection
Replacement of conventional resources	m³/year of reclaimed water actually supplied and reused	Subject matter of the contract, award criteria, performance-related payments
Reducing pressure on water resources	Percentage of replacement of conventional water supplies/reduction in water abstraction	Award criteria, special conditions of performance
Quality of reclaimed water	Compliance with quality parameters at the point of delivery or use	Technical requirements, checks, penalties
Continuity and availability of supply	System availability (%) / maximum downtime	Terms of performance, performance indicators, penalties
Energy efficiency	kWh per m³ treated, reclaimed or distributed	Technical specifications, award criteria, life-cycle cost
Reduction in discharges	m³/year of discharge avoided or reduced	Subject matter, impact indicators, conditions of performance
Traceability and control	Existence and quality of the monitoring, logging and alert system	Technical requirements, reporting obligations and monitoring
Risk management	Compliance with, updating of and monitoring of the Risk Management Plan	Special conditions of performance; allocation of responsibilities
Incidents and operational response	Number of incidents, response times and resolution times	SLA, terms of performance, penalties
Total cost of the solution	Life-cycle costs: capital expenditure, operation, maintenance, energy and replacement	Economic criteria, cost-effectiveness assessment
Global environmental benefit	Reducing emissions, improving circularity, saving resources	Environmental criteria, supporting documentation, contract monitoring

The usefulness of these indicators lies not only in their descriptive value but also in their ability to transform environmental and functional objectives into measurable, comparable, and enforceable contractual obligations.

This ties in directly with the **Regulations on Water Reuse, approved by Royal Decree 1085/2024, which introduce the Reclaimed Water Risk Management Plan as a central component of the system**. From a contractual perspective, this plan must not be excluded from the project documentation but must be reflected in the contractor's obligations, the coordination mechanisms between the parties, traceability, monitoring, and the response protocols in the event of non-compliance or incidents.

4.2.5. Special conditions of performance and operational obligations

Green public procurement in the area of reuse does not end at the award stage. Its true scope is particularly evident during the **implementation phase, where the specific conditions of implementation and operational obligations take on decisive importance.**

> In the case of reuse, specific operational conditions may require training for operating staff and end-users, protocols for responding to non-compliance, regular reporting of data on quality, volume, energy and emissions, preventive maintenance plans, leakage and efficiency audits, coordination between the WWTP operator, the network owner, the end user and the competent authority, as well as updating the Risk Management Plan whenever the use, quality or infrastructure changes.

These conditions should not be viewed as mere add-ons, but as essential elements for ensuring that reuse operates safely, continuously and efficiently. In fact, in particularly sensitive reuse projects, the success of the contract will depend largely on the quality of implementation, monitoring, and contractual governance, rather than on the initial design of the infrastructure alone.

4.2.6. Limitations and precautions

Green public procurement is not, however, an automatic solution. To use it correctly, you must **avoid several risks**:

1. Avoid setting out **technical specifications or environmental criteria that cannot be verified**, are excessively general or are unrelated to the subject matter of the contract.
2. Avoid drawing up **technically restrictive tender documents** under the guise of sustainability.
3. Avoid **confusing mandatory regulatory requirements with environmental improvements** that can be offered voluntarily.

4. Avoid projecting onto the contract **expectations regarding performance or impact** that cannot be clearly attributed to the contracted work.

These risks pose a specific threat arising from the inappropriate use of strategic procurement in this area.



A precaution specific to the water sector: green public procurement cannot be designed in isolation from the sectoral framework for water reuse, nor can it ignore the need for coordination between sanitation, water reclamation, distribution and end use. An environmentally ambitious set of specifications, but one that is disconnected from the actual structure of the system and the allocation of responsibilities, may be legally sound in the abstract, yet operationally ineffective.

4.2.7. Conclusion

In short, **green public procurement, in the context of reclaimed water reuse, is a key contractual approach for mature or well-defined projects.**

Its value lies not only in incorporating environmental considerations into the tender documentation, but also in enabling the contract to be designed with a focus on performance, efficiency, circularity and control.

In many cases, it is precisely this technique (rather than formal public procurement of innovation (PPI)) that will enable the recommendations arising from the preliminary reuse analysis to be implemented immediately and in a legally sound manner.



On this basis, the next step is to examine a tool that is particularly relevant when public need is not yet sufficiently established, or when it is necessary to test the state of the art, the structure of demand or the optimal contract design against the market: **preliminary market consultations.**

4.3. Preliminary market consultations

4.3.1. Nature and function

Preliminary market consultations are a tool for preparing the procurement dossier, enabling the contracting authority **to engage with the market before finalising the contractual arrangement**.

Its role is not to select operators or predict the outcome of the tender, but rather **to reduce uncertainty about the contract's terms, particularly in contexts where public needs cannot be defined definitively from the outset, or where there are doubts about** the maturity of the available solutions.



In projects relating to the reuse of reclaimed water, this tool is particularly relevant, given that the government frequently faces **complex, systemic and technically open-ended problems**, in which the interplay between treatment, distribution, end use, risk management and governance has a decisive influence on the contractual solution.

4.3.2. Applicable regulations

Under Spanish law, preliminary market consultations are based on **Article 115 of Law 9/2017 on Public Sector Contracts, which permits contracting authorities to conduct market research and consult economic operators to prepare the tender properly.**

This provision must be interpreted in conjunction with the general principles of public procurement (equal treatment, non-discrimination, transparency and free competition), which require that the consultation:

- ✓ **It must not confer any undue advantage on participating operators.**
- ✓ **It must not unduly restrict competition.**
- ✓ **It must be properly documented in the procurement dossier.**

From this perspective, the preliminary consultation does not constitute a procurement procedure but rather a preparatory step formally incorporated into the contract preparation phase, the results of which must be objectively reflected in the contract documentation.

4.3.3. Role in projects involving the reuse of reclaimed water

In the field of reuse, preliminary market consultations play a particularly important role, as they **enable the definition of public needs to align with the sector's technical, economic, and operational realities.**

In particular, they enable:

- Compare the level of maturity of treatment and regeneration technologies.

- To identify solutions tailored to different territorial scales, particularly in rural or peri-urban areas.
- To analyse the feasibility of distribution and storage models.
- To evaluate monitoring, control and traceability systems.
- To explore ways of ensuring effective demand for the regenerated resource.
- Define risk-sharing arrangements between the various stakeholders in the system.

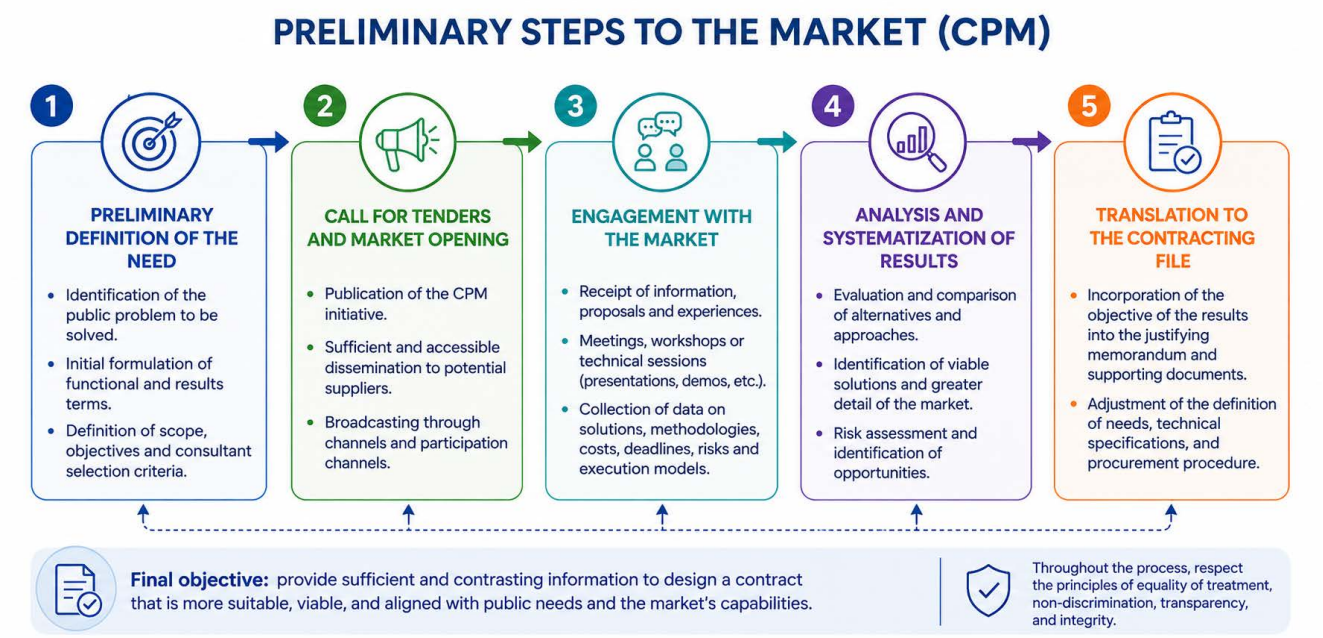
All of this is a key factor in a sector characterised by interdependence among operators (producers, infrastructure managers and end users) and a stringent regulatory framework based on risk management.

4.3.4. Operational development: stages of the preliminary consultation

From a practical point of view, the preliminary market consultation is structured as a sequence of stages that enable the interaction with the market to be transformed into a useful outcome for the dossier:

1. **Preliminary definition of the need**
   Identification of the public issue, initial formulation in functional terms and definition of the scope of the consultation.
2. **Call for proposals and market launch**
   Publication of the initiative and establishment of participation mechanisms open to economic operators, technology centres and other relevant stakeholders.
3. **Technical engagement with operators**
   Receiving proposals, holding meetings, workshops or consultation sessions, and gathering information on solutions, costs, risks and implementation models.
4. **Analysis and systematisation of results**
   Evaluation of the information obtained, identification of viable alternatives and determination of the level of technological and market maturity.
5. **Inclusion in the tender dossier**
   Incorporation of the results into the explanatory report and the rest of the contract documentation, in particular in the definition of the requirement, the technical specifications, the award criteria and, where applicable, the choice of procedure.

This sequence ensures that the consultation ceases to be an informal process and becomes a **structured tool for contract preparation, directly impacting its design.**



On this basis, when the information obtained makes it possible to define public needs in functional terms and to focus directly on achieving verifiable results, a different contractual approach takes on particular significance: **performance- or results-based contracts**.

4.4. Performance- or results-based contracts

4.4.1. Nature and concept

Performance- or results-based contracts are a method of structuring the **contract whereby the public authority defines the public need in functional or performance terms, rather than exclusively through fixed technical specifications.**

Under this model, the subject-matter of the contract is not limited to the performance of a specific work, supply, or service, but rather aims to achieve **a verifiable result**, allowing the economic operator to propose the most appropriate technical solution to achieve it.

This is not a separate contractual category in the strict sense, but rather a **way of structuring the contract** (applicable to both service contracts and, where relevant, concessions or other complex arrangements) which shifts the focus from the 'how' to the 'what is to be achieved'.

4.4.2. Legal basis

Spanish law provides a sufficient basis for this type of contractual arrangement, even though there is no specific legal category under this name.

In particular:

- **Article 1 of the LCSP** requires strategic procurement aimed at achieving the best value for money and incorporating social and environmental objectives.
- **Article 99** allows the subject matter of the contract to be defined in functional terms.
- **Article 145** allows for the use of qualitative criteria relating to performance, efficiency and life-cycle cost.
- The system as a whole enables the configuration of execution conditions, indicators and control mechanisms aligned with outcomes.

From a comparative perspective, Portuguese law reinforces this approach by expressly permitting contracts with a strong innovative element and **outcome-based terms**, including remuneration schemes linked to the degree to which targets are met and phased implementation with interim assessments.

It should also be noted that **where reuse projects are promoted by contracting entities falling within the scope of Law 31/2007 of 30 October, on procurement procedures in the water, energy, transport and postal services sectors, the use of contracts based on performance or results may be favoured by the greater degree of flexibility that characterises this special regime**. However, this Act does not introduce a specific contractual arrangement known as a 'performance-based contract'; rather, the functional structure of the contract continues to depend, essentially, on the proper definition of the public need, the functional specifications and the system of indicators and monitoring set out in the tender documents.

Consequently, the applicability of Law 31/2007 does not depend on the subject-matter of the contract (even if it relates to water or reuse), but rather on the nature of the contracting entity and the sector in which it operates. Consequently, in reuse projects, the applicable legal framework for procurement must be analysed on a case-by-case basis.

4.4.3. Role in projects involving the reuse of reclaimed water

In the context of reuse, performance-based contracts take on particular significance.

In many cases, **the public interest lies not so much in building infrastructure or providing a service in isolation, but in ensuring certain functional and environmental outcomes**, such as:

- ✓ **The effective replacement of conventional water resources.**
- ✓ **The availability and continuity of the reclaimed water supply.**

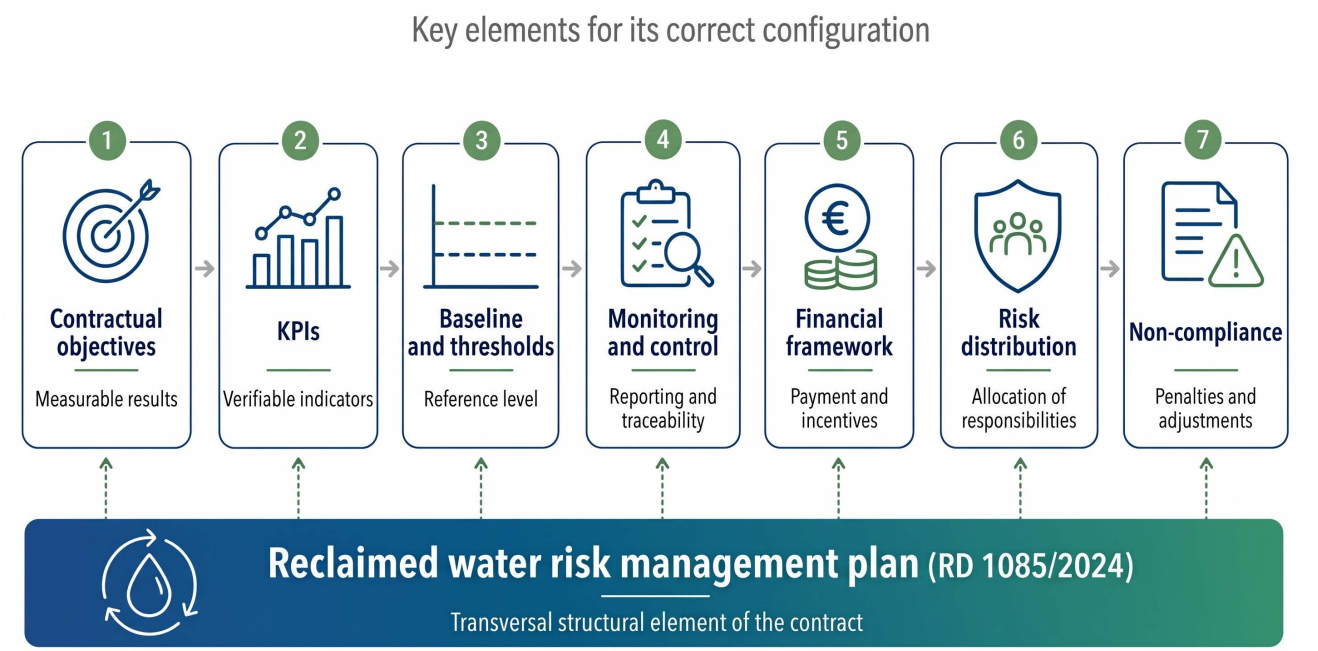
- ✓ **Compliance with quality parameters at the point of use.**
- ✓ **The system's energy efficiency.**
- ✓ **Reduction in discharges.**
- ✓ **Traceability and monitoring of the reuse cycle.**
- ✓ **Operational compliance with the Risk Management Plan.**

This approach is particularly suitable in contexts where there are several possible technical solutions, where integration between the different stages of the cycle (treatment, distribution, use) is crucial, or where the system's performance depends as much on its design as on its operation and maintenance.

4.4.4. Contract structure

Proper structuring of a performance-based contract requires particular attention during the dossier's preparatory phase.

In particular, the basic structure of a contract for specific results includes the following aspects, which must be precisely defined:



In this context, the Reclaimed Water Risk Management Plan, as required by Royal Decree 1085/2024, must be incorporated into the contract as a structural element, setting out the contractor's obligations, the control mechanisms and the coordination between the various parties involved.

4.4.5. Operational benefits

The use of performance-based contracts offers significant advantages in the area of reuse:

- ✓ **It facilitates the integration of the various stages of the water cycle within a single contractual framework.**
- ✓ **It better aligns the contract with the environmental and efficiency objectives being pursued.**
- ✓ **It encourages applied innovation, even without resorting to formal public procurement of innovation (PPI) procedures.**

Furthermore, this approach is **particularly useful in pilot projects or environments where the solution requires gradual fine-tuning, as it allows the implementation to be adapted in line with the results**.

4.4.6. Limitations and precautions

The correct use of performance-based contracts does, however, require certain precautions to be taken:

- The need to define **clear, measurable and verifiable** indicators, whilst avoiding generic wording.
- The **risk of transferring to the contractor risks** it cannot control (for example, actual demand in certain contexts).
- The **difficulty of isolating the impact of the contract** when multiple actors are involved in the system.
- The need for the Administration to have **sufficient technical capacity** to design, supervise and evaluate the contract.
- The importance of **avoiding** the initial lack of clarity regarding the subject matter leading to **legal uncertainty**.



In the **context of reclaimed water reuse**, it is essential to ensure consistency between the contract and the sectoral regulatory framework, as well as appropriate coordination between the producer, the infrastructure operator, the end user and the competent authority.

4.5. Public procurement tools for innovation: technical scope and selection criteria

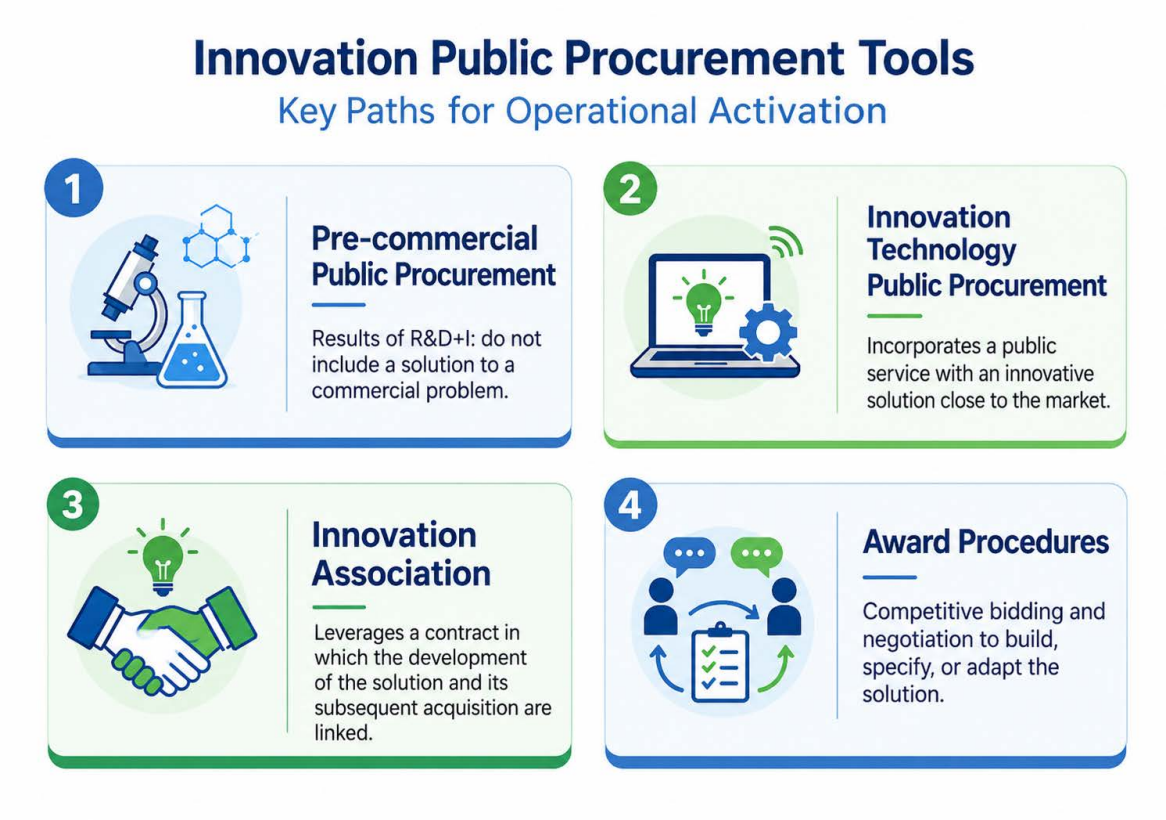
Public procurement of innovation should not be viewed as a single contractual arrangement or a self-contained, closed procedure, **but rather as a set of distinct tools that enable a response to public needs that are not adequately met by the market or are met only in an insufficient, immature, or technically suboptimal manner.**

From this perspective, it is important to distinguish between two aspects which, although closely related, should not be confused:

a. **The type or form of innovation that the Administration needs to implement.**
b. **The award procedure through which that innovation is incorporated into the contract.**

It is not the same to determine whether public need calls for research and development activities, the procurement of innovative technology that is already close to market, the development and acquisition within a single contractual sequence, or the progressive construction of a complex solution, as it is to decide subsequently whether the appropriate means of doing so is an innovation partnership, a competitive dialogue, a negotiated procedure or another contractual method.

Within this framework, public procurement of innovation can, in operational terms, be structured around four main tools:



The practical benefit of this classification is immediate: **not every requirement with an innovative element calls for the same contractual approach**. There will be cases in which the Administration only needs to drive forward a development phase; others in which it may acquire a technology that is already mature or nearly mature; others in which it would be advisable to combine development and procurement into a single process; and, finally, others in which the main need lies not so much in the absence of a solution as in the need to use a flexible procedure to define the contractual response progressively.

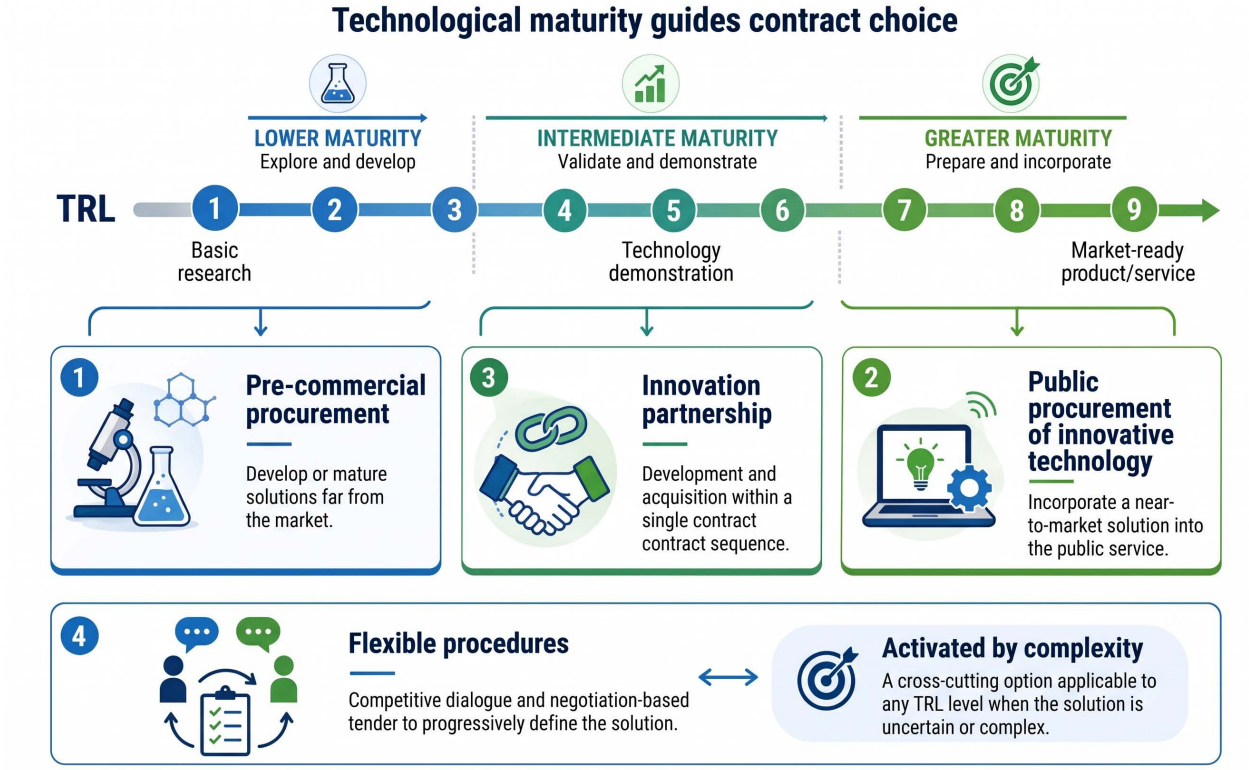
Choosing the right public procurement of innovation (PPI) tool therefore requires an assessment of at least the following factors:

- ✓ **The maturity of public need.**
- ✓ **The extent to which the subject matter of the contract can be defined.**
- ✓ **Whether or not there is supply available on the market.**
- ✓ **Whether or not a preliminary R&D phase is required.**
- ✓ **Whether or not it is advisable to acquire the result within the same contractual sequence.**
- ✓ **The level of technical, legal and operational complexity of the project.**

To these criteria, we must add one that is particularly relevant in the field of public procurement of innovation (PPI): **the solution's level of technological maturity**, typically expressed as Technology Readiness Levels (TRLs**)**. Although the TRL does not replace legal

analysis or the functional definition of public need, it provides a useful technical reference to guide contractual decisions. It enables a distinction to be made as to whether the Administration is dealing with a solution still at the research and validation stage, an advanced prototype or demonstrator, or a technology that is already sufficiently close to operational deployment.

From this perspective, TRLs help to guide the choice of PPI instrument:



In the **specific context of reusing reclaimed water, this approach is particularly useful.** Not all projects require the same level of innovation, nor do they all start from the same level of technical, regulatory and institutional maturity. In some cases, public needs can be met through mature or near-mature solutions, even if they require adaptation or integration. In other cases, it will be necessary first to develop technologies, control and traceability tools, monitoring systems or modular solutions that are not yet available in a form suitable for routine implementation; and in others, finally, the main difficulty will lie not so much in the absence of a solution as in the need to contractually construct a complex response that integrates processing, distribution, storage, digitisation, risk management and governance.

For this reason, public procurement of innovation should not be used in this report as a generic or programmatic concept, but rather as an **operational framework for selecting tools**. What matters is not to state in abstract terms that a project 'incorporates innovation', but to determine precisely **what type of innovation is required, at what stage**

of technological maturity the solution is and **which contractual instrument allows it to be implemented with the greatest legal certainty and practical effectiveness**.

On this basis, it is appropriate to examine separately the main PPI tools, already mentioned in this section, and their usefulness in reuse projects (pre-commercial public procurement, public procurement of innovative technology, innovation partnerships and procurement procedures designed to stimulate innovation), taking into account, in each case, the nature of the public need, the degree of technological maturity of the solution and the type of interaction required with the market.

4.5.1. Pre-commercial public procurement (PCP)

4.5.1.1. What is it?

Pre-commercial public procurement is the appropriate tool when the public sector requires research and development outcomes to meet a public need that an available commercial solution cannot yet meet. It is therefore not aimed at the immediate acquisition of goods, services, or works already ready for routine use, but rather at the research, design, validation, **or prototyping of future solutions.**

From a functional perspective, **PCP operates at a lower stage of technological maturity**, with the solution still some way off the market and requiring a preliminary R&D phase. In this context, its usefulness is linked to low or intermediate TRLs, before the solution's full integration into the public service.

4.5.1.2. Applicable regulations

Under Spanish law, pre-commercial public procurement is not excluded from the LCSP simply because it is classified as 'pre-commercial'. For such exclusion to apply, the requirements set out in Article 8 of the LCSP must be met in substance in respect of certain research and development contracts. In particular, the exclusion applies only where the services in question are genuinely R&D services falling within the relevant CPV codes and where the two conditions preventing such exclusion are not both met: that the benefits accrue exclusively to the contracting authority for use in the course of its own activities, and that the service is paid for in full by the contracting authority.

Although PCP is excluded from the LCSP, it must comply with the LCSP's basic principles of equal treatment, non-discrimination, transparency, proportionality, and integrity.

This regulatory framework is consistent with Article **36 sexies of Law 14/2011, which expressly recognises pre-commercial public procurement as one of the two forms of PPI** and requires, before commencing such procurement, that public needs not met by the market be identified, functional specifications be defined, and the necessary studies and consultations be carried out to verify the innovative nature of the initiative.

The **European Commission Communication COM(2007) 799 final** on pre-commercial procurement defines it as **the procurement of R&D services on market terms, based on competitive, phased development, the parallel participation of several operators, the sharing of risks and benefits, and the separation between the pre-commercial phase and any subsequent commercial procurement.**

4.5.1.3. What is it for?

PCP is particularly **useful when the Administration needs to explore and refine solutions before deciding whether to proceed with their future acquisition or implementation**. Its purpose is not commercial procurement but rather the acquisition of applied knowledge, prototypes, demonstrators, or initial validations to determine whether a solution can meet a public need under appropriate conditions.

In the **context of reclaimed water reuse**, this tool may be particularly suitable when public needs so require, for example:

- ✓ **New technologies for the treatment or removal of emerging pollutants.**
- ✓ **Advanced systems for continuous quality monitoring and control.**
- ✓ **Traceability and intelligent risk management solutions.**
- ✓ **Predictive or digital tools for system operation.**
- ✓ **Modular configurations that have not yet been validated for small rural or peri-urban areas.**

In all these cases, the Government is not yet in a position to purchase a fully developed commercial solution, but it can support an R&D phase to produce results applicable to future public-sector requirements.

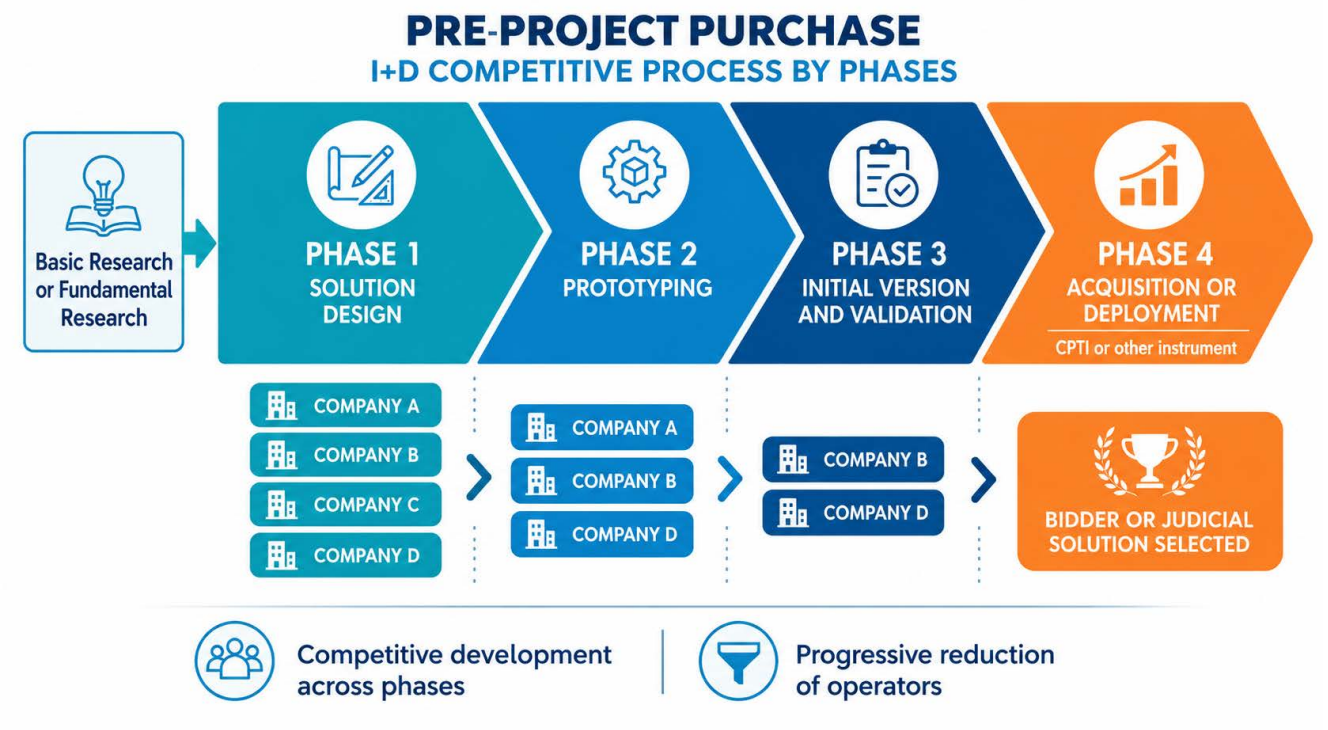
4.5.1.4. How it works

From an operational perspective, **pre-commercial public procurement is structured as a phased, competitive research and development process, in which several market operators participate in parallel in the design, development and progressive validation of innovative solutions aimed at meeting a public need not met by the market.**

Unlike the standard procurement of a commercial solution, **PCP** is not aimed at immediately obtaining a product or service ready for deployment, but rather at **promoting and maturing technological solutions through a sequence of successive stages** —typically solution design, prototyping and the development of a first validated version— during which the Government may progressively reduce the number of participants

depending on the achievement of the expected objectives and results. Only once this pre-commercial phase has been completed will it be possible, where appropriate, to consider the future procurement or roll-out of the most suitable solution through the relevant contractual arrangement.

This logic of competitive and progressive development can be summarised in the following stages:



4.5.1.5. Precautions

The use of pre-commercial procurement requires attention to several legal and operational considerations.

1. Firstly, **one must avoid confusing PCP with the acquisition of a solution that is already sufficiently mature or close to market**. If the innovative technology or solution can already be incorporated into the public service without a genuine and substantial research and development phase, the appropriate procedure will no longer be PCP but, where applicable, will instead be the **public procurement of innovative technology or the relevant contractual instrument.** The justification for PCP therefore requires proof that a commercial solution cannot yet meet the public need and that an effective preliminary R&D phase is necessary.

2. Secondly, **PCP calls for particularly careful regulation of intellectual and industrial property rights.** Given that these are knowledge-intensive contracts aimed at generating innovative results, the arrangements governing ownership, use, exploitation and access to the results obtained must be clearly defined, as must the sharing of risks and benefits between the public authorities and the participating

operators. This issue is not incidental but structural, as it affects both the competition and the potential for scaling up or subsequent acquisition of the developed solution.

3. Thirdly, it is essential that the phased competitive process is properly designed and documented, precisely defining the **objectives of each stage**, the **evaluation criteria**, the **milestones for the continuation or elimination of operators** and the rules governing the transition from one phase to the next. The rationale behind PCP lies precisely in the parallel development of solutions and the gradual reduction in the number of participants in line with the results achieved; consequently, a lack of clarity on these points may undermine the legal certainty of the proceedings.

4. Fourthly, the **exclusion under Article 8 of the LCSP** requires a substantive verification that the specific elements of pre-commercial procurement are present: the actual existence of research and development services; the sharing of risks and benefits between the public administration and the operators; the absence of exclusive reservation of all results in favour of the contracting authority; a clear regime governing intellectual and industrial property; and remuneration in line with market conditions. If these conditions are not met, PCP cannot be used as a separate, excluded category, and recourse must be had to the appropriate contractual instrument in accordance with the LCSP.

5. Fifthly, PCP must not be used artificially as a mechanism to circumvent general contract law when, in reality, the administrative need can already be met through an ordinary procurement procedure or through another form of PPI. The choice of this tool must be based on sound technical grounds and a thorough assessment of the solution's stage of technological maturity.



In the **context of the reuse of reclaimed water**, the pre-commercial phase cannot be viewed in isolation from the **sectoral regulatory framework**, the **intended end use**, **quality and safety**requirements, nor from the **risk management** framework set out in Royal Decree 1085/2024. Although the solution is still at the research stage, the government must define from the outset which public problem it aims to solve, which part of the reuse system the innovation affects — treatment, control, distribution, traceability, monitoring or management — and under what conditions it could subsequently be integrated into a validation, scaling-up or procurement phase.

4.5.2. Public Procurement of Innovative Technology (PPIT)

4.5.2.1. What is it?

The **Public Procurement of Innovative Technology (PPIT) is the appropriate mechanism when the public administration needs to introduce an innovative good, service, or works into the public sector that is sufficiently close to market readiness but is not yet available under standard conditions to meet public needs.**

Unlike pre-commercial public procurement, **PPIT is not intended to fund an entire R&D phase**, but rather to enable the incorporation of an innovative solution into the public service that requires prior work on design, adaptation, scaling, or industrialisation before its routine provision. Its rationale is not to research future solutions without any commercial purpose, but to acquire an innovative solution that can be implemented for the public good within a reasonable timeframe.

From a technological maturity perspective, the PPIT is at an advanced stage, having moved beyond the purely experimental phase and is close to being brought to market. This is a process involving a **maturity leap from TRL 7 to TRL 9.**

4.5.2.2. Applicable regulations

The PPIT operates within the general framework of the LCSP, through works, supply or service contracts, using the award procedures appropriate to the project's level of complexity. The sector-specific documentation expressly places it within the scope of the LCSP and states that it may be invoked through any of the procedures regulated by the Act, except those that are conceptually incompatible with its nature.

This means that the PPIT is not a stand-alone procedure in the strict sense, but rather a **form of public procurement of innovation** which can be implemented through various award procedures. In any event, its use requires sufficient justification regarding the need to incorporate a new or improved technology into the public service and the absence of a solution that is fully available on the market on satisfactory terms.

It should be added that **Article 36.5 of Law 14/2011 expressly stipulates that tenders arising from the public procurement of innovative technology are governed by the LCSP**, without prejudice to the R&D&I exclusions set out in Article 8. This provision is significant because it confirms that the PPIT operates within the general public procurement regime, rather than through the procedures and techniques permitted under the LCSP.

4.5.2.3. What is it for? Application in the field of reuse.

The PPIT is intended for cases where a public need **can be met through an innovative, market-ready solution** without a comprehensive preliminary research and development phase, yet still requires adaptation, final design, scaling up, or industrialisation before **effective implementation.**

Its practical aim is to enable the Government to become **the first customer** of an innovative solution which, whilst not yet fully deployed under normal commercial conditions, has already reached a sufficient stage of maturity to be incorporated into the public service on a significant scale.

The aim of this type of procurement is precisely to carry out work relating to the scaling up, commercialisation or industrialisation of the innovative product or service.

In projects involving the reuse of reclaimed water, the PPIT can be particularly useful, amongst other things, for:

- ✓ **Advanced treatment technologies that have already been prototyped.**
- ✓ **Quality sensors and continuous monitoring systems.**
- ✓ **Control and traceability platforms with advanced validation.**
- ✓ **Digital solutions for predictive or smart management.**
- ✓ **Modular or decentralised systems that have already been technically proven, but which still need to be adapted to the context in which they will be used.**
- ✓ **Energy-efficiency technologies or technologies designed to reduce operating costs that are already close to being put into operation.**

In all these cases, the government no longer needs to fund an ongoing research project, but it does need to use procurement to adopt an innovative solution at an early stage that is not yet fully established in the market under standard conditions.

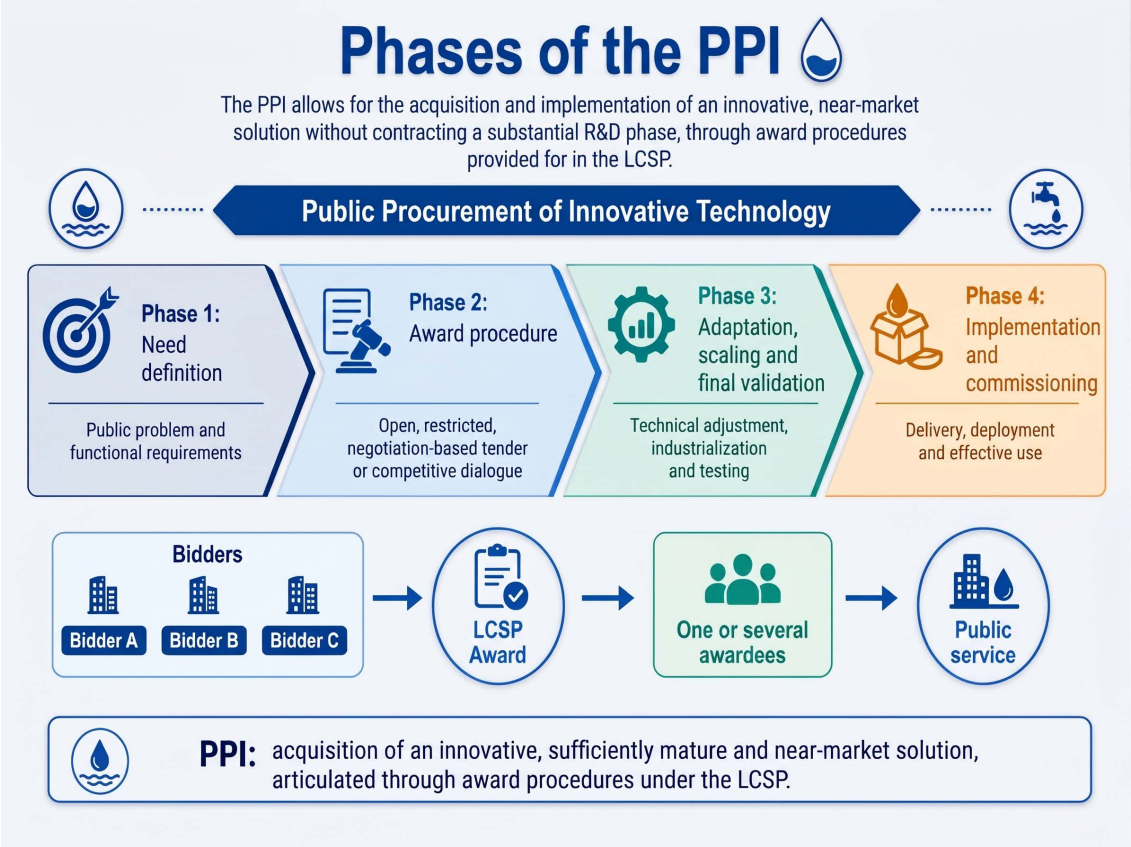
4.5.2.4. How it works

From an operational perspective, the **Public Procurement of Innovative Technology (PPIT)** is structured as a procurement process aimed at incorporating into the public sector an innovative solution **that is sufficiently mature and close to market**, but which still requires a final effort in terms of adaptation, scaling, validation or industrialisation before its effective implementation. The PPIT is not, generally speaking, structured as a competitive R&D&I process involving elimination rounds between several operators, although this could occur, but rather as a commercial procurement process in which the innovation is already at an advanced stage of technological maturity.

The PPIT is used when the innovative solution is close to market readiness; it may require adaptation, scaling up, or final industrialisation, but no longer requires a substantial R&D phase. From a procedural point of view, the PPIT is channelled through the award procedures set out in the LCSP (open procedure, competitive tendering with negotiation, competitive dialogue, restricted procedure or, where appropriate, negotiated procedure without prior publication).

If the public authority already has sufficient information to draft the technical specifications, it may proceed via the appropriate LCSP procurement procedure; if it does not yet have sufficient information to define the subject matter in technical terms, the guide expressly recommends competitive dialogue.

The typical process begins with the functional definition of the requirement and the preparation of the tender documentation, continues with the tendering process and the award of the contract for the innovative solution, and culminates in its final fine-tuning, roll-out and integration into the public service.



4.5.2.5. Precautions

The use of public procurement for innovative technology requires several specific precautions, given its intermediate position between standard procurement and innovation schemes in the strict sense.

1. Firstly, one must **avoid confusing PPIT with pre-commercial public procurement.** If the solution still requires a substantial phase of research and development, involving significant technological uncertainty or the need for advanced prototyping, the appropriate tool will be PCP or, where appropriate, the innovation partnership. **PPIT, on the other hand, presupposes that a technology is sufficiently mature and close to being put into actual use, even if it requires some final adjustments before implementation.**

2. Secondly, **the use of the PPIT to procure solutions that are already fully available on the market and lack any significant innovative component should also be avoided.** In such cases, the procurement process should revert to standard procedures (possibly with a strategic or green focus), but not to a public procurement-of-innovation scheme.

3. Thirdly, **the PPIT requires a particularly rigorous definition of need in functional terms**. As these are non-standardised solutions, it is essential to precisely identify the expected performance, quality parameters, operating conditions and

requirements for integration into the public service. An insufficient or excessively broad definition may compromise both the comparability of tenders and the proper performance of the contract.

4. Fourthly, particular attention should be paid to the **determination of the technology readiness level (TRL)**. The choice of PPIT is only appropriate when the solution is at an advanced stage, close to operational implementation. An incorrect assessment of the TRL may lead to the selection of an unsuitable instrument, with risks of implementation issues or a failure to achieve results.

5. Fifthly, although the scope is narrower than in PCP, it remains **necessary to properly organise intellectual and industrial property rights, particularly regarding the use, maintenance, updating and potential scaling of the acquired solution.** The Government must ensure that technology can be integrated effectively and sustainably into the public service, whilst avoiding excessive dependence or undue restrictions.



In the **context of reclaimed water reuse**, the CPTI will only be effective if the innovative solution is **technically and legally compatible** with the system. This requires consistency with the applicable regulatory framework, in particular with Royal Decree 1085/2024, with the relevant quality and safety requirements, and with the approach set out in the Reclaimed Water Risk Management Plan. **Innovation cannot be assessed in isolation, but rather in terms of its ability to operate within a regulated, multi-stakeholder environment that is highly demanding from a health and environmental perspective.**

4.5.3. Association for Innovation

4.5.3.1. What is it?

The **Innovation Partnership (IP) is the public procurement instrument that enables the public administration to develop an innovative solution and subsequently procure it under a single contract, where public needs cannot be met by solutions available on the market.**

It is, therefore, a **hybrid structure**, which brings together the following within a single contractual framework:

1. A phase of **research, development and validation** of the solution,
2. A subsequent phase of **acquisition or implementation**, subject to the fulfilment of previously established objectives and performance levels.

From a technological maturity perspective, IP enables the entire development cycle to be covered, from the initial stages through to its effective integration into the public service, serving as a bridge between the PCP and PPIT frameworks.

4.5.3.2. Applicable regulations

Under Spanish law, innovation partnerships are governed by **Articles 177 to 182 of Law 9/2017 on Public Sector Contracts**.

It is structured as a specific procurement procedure, fully governed by the LCSP, which allows for the selection of one or more partners, the structuring of the contract into **successive development phases and the provision for the final acquisition of the solution, without the need for a new procedure**, provided that the objectives and financial limits set are met.

This link is reinforced by **Article 36 sexies.5 of Law 14/2011**, which expressly encourages the use of innovation partnerships within the framework of innovative public procurement.

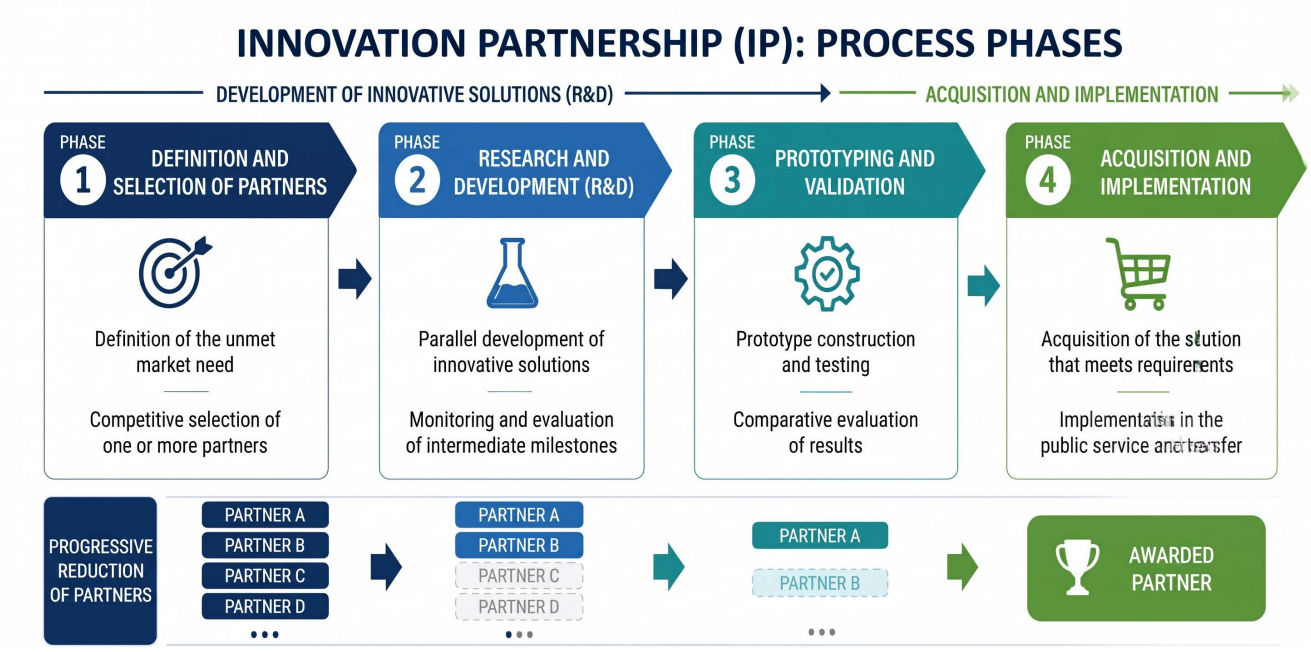
Its use requires justification of the absence of market-based solutions and the need to develop an innovative solution to meet a public need.

4.5.3.3. How it works

From an operational perspective, the innovation partnership is structured as **a sequential, phased process in which the public administration selects one or more economic operators to develop innovative solutions, with the possibility of a gradual reduction in the number of participants and, if the results are satisfactory, a final procurement**.

Unlike PCP, the aim is not merely to generate knowledge or prototypes, but to arrive at a solution that can be implemented; and unlike the PPIT, the contract incorporates a genuine development phase from the outset.

The logic of the process can be represented schematically as follows:



4.5.3.4. Precautions

Using partnerships for innovation requires several specific precautions.

1. Firstly, it must be rigorously demonstrated that the public need **cannot be met by solutions available on the market**. This procedure cannot be used for complex requirements when mature solutions already exist; in such cases, it would be more appropriate to use competitive dialogue or a negotiated tender.
2. Secondly, it requires **particularly thorough preparation of the dossier**, particularly about the functional definition of the need, the setting of **milestones and phases**, the criteria for the retention or exclusion of operators, and the determination of the **performance levels and maximum costs**.
3. Thirdly, it is essential to properly regulate **intellectual and industrial property rights, confidentiality and the exploitation of the results**, given that development and acquisition coexist within the same contract.
4. Fourthly, particular attention must be paid to the **management of the transition between phases**, ensuring there is no uncertainty about when the transition from development to procurement takes place, what conditions must be met and how the results are assessed.



In the **context of the reuse of reclaimed water**, the innovation partnership will only be appropriate where the innovative development is clearly geared towards its **integration into the regulated system**, and must be aligned from the outset with **Royal Decree 1085/2024**, quality and safety requirements, and the **Reclaimed Water Risk Management Plan**.

Where public needs do not require integrating development and procurement into a single contract, but do require interaction with the market to define the solution, it is more appropriate to use **flexible award procedures**, in particular **competitive dialogue** or **tendering with negotiation**, which are analysed in the following section.

4.5.4. Procurement procedures designed to foster innovation: competitive dialogue and tendering with negotiation

4.5.4.1. What are they?

Competitive dialogue and competitive tendering with negotiation are award procedures provided for in the LCSP which enable the public administration to award contracts where the public need cannot be defined with sufficient precision from the outset or requires interaction with the market to develop a solution.

Unlike PCP, the PPIT, or the innovation partnership, these do not, in themselves, constitute forms of public procurement of innovation, but rather procedural instruments based on participation that enable the solution to be better defined, adapted to market capabilities, and for innovation to be incorporated into the outcome of the contract.

Their usefulness lies in enabling the Administration to overcome the rigidity of open procedures when it lacks a fully defined solution.

In projects involving the reuse of reclaimed water, these procedures prove particularly **useful when the main difficulty lies not in the lack of a solution, but in the complexity of its implementation,** for example:

- ✓ A combination of treatment, distribution and control.
- ✓ Integration of technological and regulatory systems.
- ✓ Adaptation to different uses of reclaimed water.
- ✓ Configuring complex operational models.

4.5.4.2. Applicable regulations

Both procedures are governed by **Law 9/2017 on Public Sector Contracts**:

- **Competitive dialogue**: Articles 172 to 176 of the LCSP
- **Negotiated procedure**: Articles 167 to 171 of the LCSP

These procedures, fully governed by the LCSP, allow candidates to be selected based on their financial standing, enable phases of interaction with tenderers, and facilitate the development or improvement of solutions before the submission of final tenders.

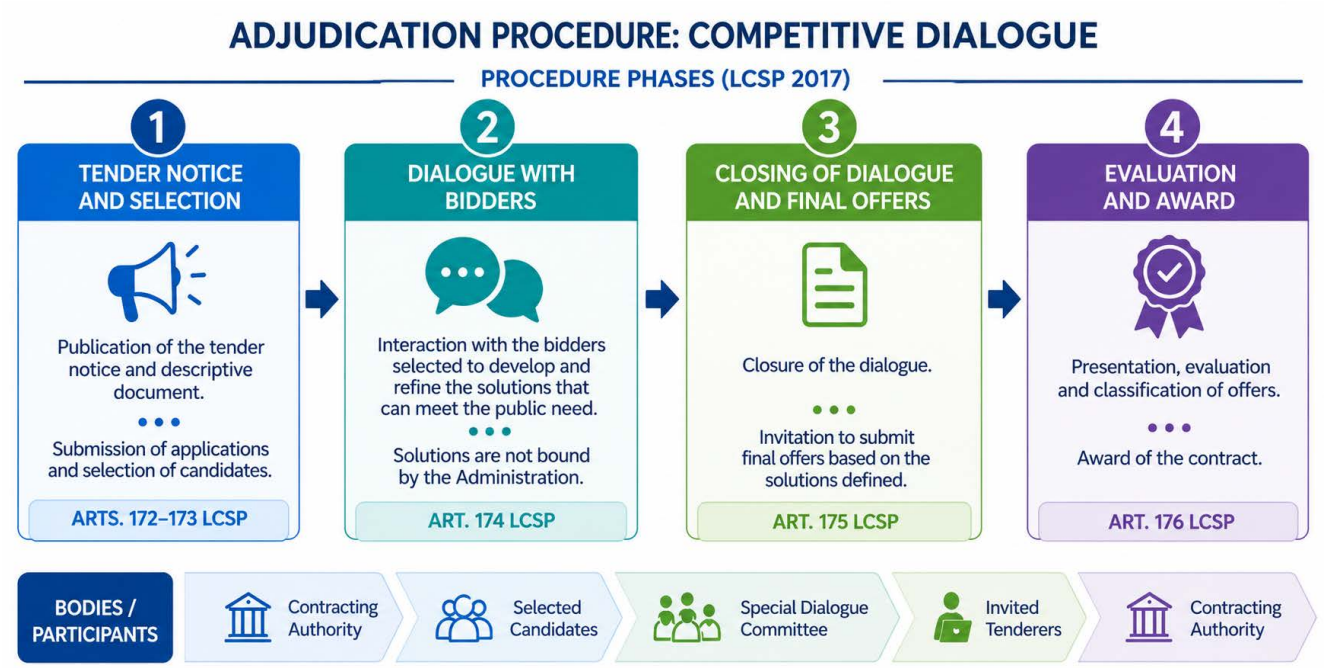
Its use requires justification that the need cannot be met through an open procedure without negotiation, or that the technical, legal or financial complexity of the contract so requires.

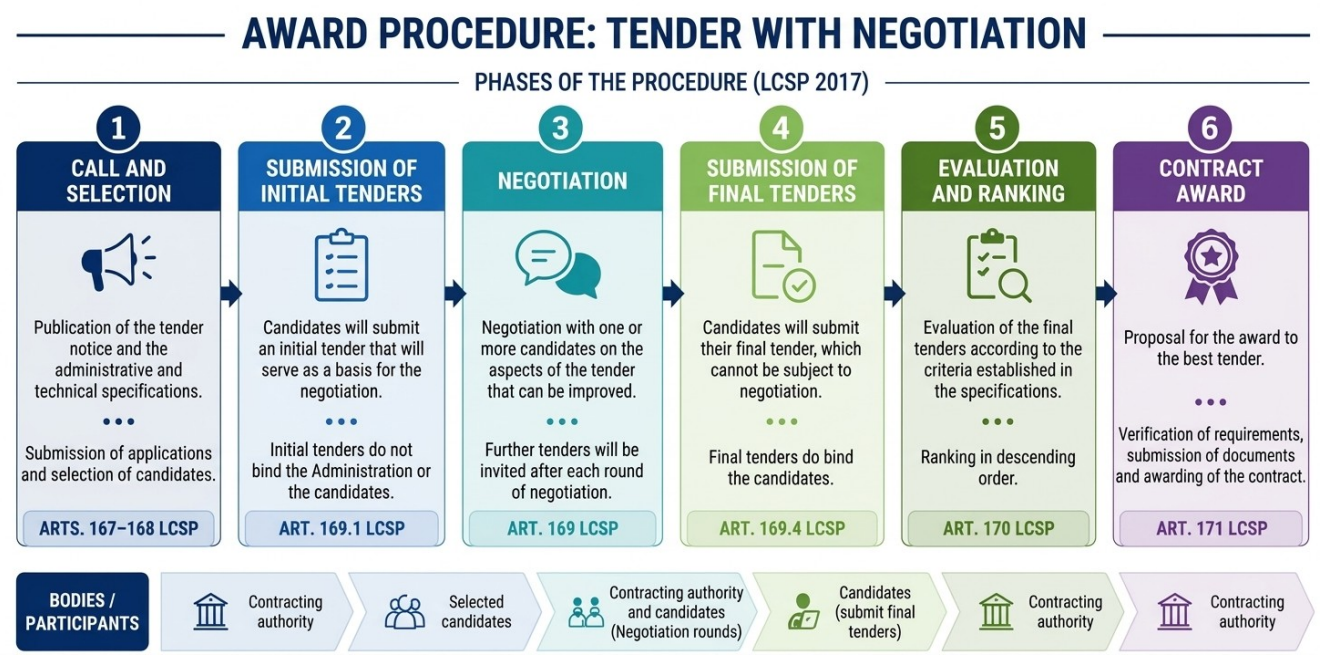
4.5.4.3. How do they work?

From an operational point of view, both procedures are structured as processes of progressive interaction with the market, albeit to varying degrees:

- The **competitive dialogue** enables the solution to be developed jointly with the tenderers before they submit their final tender.
- The **tendering with negotiation** is based on a more clearly defined solution, but allows tenders to be improved through negotiation.

The general logic of these procedures can be summarised as follows:





4.5.4.4. Precautions

The use of these procedures requires several important precautions:

1. Firstly, the need to use interactive procedures must be **properly justified**, and their use should be avoided where the service can be defined with sufficient precision from the outset by means of an open procedure.
2. Secondly, it is essential to **ensure equal treatment and transparency during the dialogue or negotiation stages**, whilst avoiding unduly favouring certain operators or disclosing sensitive information from some tenderers to others.
3. Thirdly, it is necessary to **define precisely which aspects are negotiable and which constitute non-negotiable minimum requirements**, particularly in the case of a tender with negotiation.
4. Fourthly, the Administration must **avoid** the process leading to **excessive vagueness regarding the subject matter of the contract**, ensuring that the outcome is sufficiently clear, assessable and enforceable.



In the **context of the reuse of reclaimed water**, dialogue with the market enables the development of more tailored and viable solutions, always within the applicable regulatory framework, in particular Royal Decree 1085/2024 and the requirements of the Reclaimed Water Risk Management Plan.

4.5.5. Comparative table of contractual and procedural tools relating to innovation

Variable	PCP	PPIT	Association for Innovation	Competitive dialogue / Negotiation
Technology Readiness Level (TRL)	Low–medium	High	Variable (entire cycle)	Medium–high
Solution available on the market	No	Partial / non-standardised	No	Yes / partly
The need for R&D	Yes (core of the contract)	No (final adaptation only)	Yes (integrated)	No
Purpose of the contract	Solution development	Acquisition of innovative technology	Development + procurement	Define/optimise solution
Subsequent acquisition	No (separate)	Yes	Yes (in the same contract)	Yes

Number of operators under development	Various (staged competition)	One or more, depending on the contract's terms	One or more	Various (preliminary stage)
Initial definition of the requirement	Low	Medium–high	Medium	Low
The complexity of the problem	High (technological uncertainty)	Medium	High	High (complex definition)

It should be noted that the concepts compared in this table do not all operate on the same legal level. Thus, PCP and the PPIT are presented as forms or strategies for public procurement of innovation; the innovation partnership, competitive dialogue, and competitive tendering with negotiation are award procedures provided for in the LCSP that, to varying degrees, can facilitate or drive innovative solutions.

In short, the comparison is functional and operational rather than strictly categorical.

4.6. Decision matrix for the selection and configuration of the contractual instrument

4.6.1. General approach: from selection criteria to operational decision

Section 4.1 of this report has highlighted that the choice of contractual instrument in projects involving the reuse of reclaimed water is not based on an automatic approach or an abstract preference for innovative or sustainable techniques, but rather on a comprehensive assessment of the maturity of the public need, the solution and the market, the risk and outcome structure, and the scale and governance of the project.

On that basis, this section does not introduce a separate classification, but rather **translates those criteria into a practical decision-making framework**, with a view to identifying two fundamental issues:

1. **Which core instrument might be most suitable?**
2. **How this should be set out in the contract in each case.**

This distinction is essential. **Not all the categories analysed in the report operate on the same legal basis, nor do they fulfil the same function within the procurement process:**

Standard procurement, PCP, the PPIT, the innovation partnership and interactive procedures constitute, to varying degrees, the basic instruments or channels for contractual arrangements. By contrast, preliminary market consultations take place during a preparatory phase before the tender. For their part, green public procurement, strategic procurement and results-based procurement do not operate as separate, alternative procedures, but rather as techniques or layers of contract design that can be applied to the selected base instrument.

From this perspective, the contractual decision in reuse projects should not be understood as a choice between mutually exclusive options, but rather as a combination of **a core instrument** (selected according to the level of maturity and complexity of the public issue) and **one or more configuration layers** (aimed at introducing sustainability, efficiency, performance or additional strategic objectives).

4.6.2. Key decision: selection of the base instrument.

The choice of the base instrument must, as a matter of priority, address four questions:

1. **Whether the public need is sufficiently defined or can only be formulated in functional terms.**
2. **If the market offers mature and comparable solutions.**
3. **If a research and development phase or a phase involving substantial adaptation is required.**
4. **If the complexity of the project requires close interaction with the market or a more elaborate institutional structure.**

Based on these parameters, the operational selection logic can be summarised as follows:

Project status	Preferred tool or channel	Logic of use
The need is clear, and the market offers mature, comparable solutions	**Standard procurement**	An available, well-defined solution should be procured through conventional procurement methods.
The requirement is reasonably well-defined, but comparing different solutions requires including criteria such as sustainability, efficiency, and life-cycle costs.	**Strategically structured standard procurement**	A formal PPI is not necessary; the key lies in how the contract is drafted.
The requirement is defined solely in functional terms, or there are significant uncertainties regarding the optimal solution configuration.	**Preliminary market consultation + subsequent definition of the instrument (PPI, standard procurement, etc.)**	The requirement should be properly assessed and, where appropriate, a competitive dialogue or a negotiated tender should be initiated.
The market offers basic solutions, but these require adaptation, specific integration or scaling before they can be implemented.	**PPIT**	The aim is to acquire a solution that is close to market readiness, but not yet fully available under standard conditions.
Off-the-shelf solutions cannot meet this need and require a genuine R&D phase, without factoring in a subsequent acquisition at this stage.	**PCP**	The development of solutions should be promoted by procuring R&D or know-how.
This requirement calls for R&D; furthermore, the aim is to bring the development and subsequent	**Association for Innovation**	A sequential approach is required to enable the solution to be developed

procurement together under a single contractual framework.		and, if the milestones are met, acquired.
The viability of the project depends on demand aggregation, a stable operational structure or integrated governance on a larger scale.	**Concessional, collaborative or aggregation models**	The key lies not only in technological innovation, but also in the institutional and economic structure of the project

4.6.3. Second decision-making level: contract terms

Once the underlying instrument has been selected, the sponsor must decide **how to structure the contract**. It is in this broader context that green public procurement, strategic procurement and results-based procurement come into their own.

These techniques do not replace the basic instrument, but rather modulate it. Its purpose is not to determine the procedural framework, but rather to guide the content of the tender dossier, the award criteria, the structure of obligations, the monitoring indicators and, where applicable, the method of remuneration or the means of monitoring compliance.

For practical purposes, three main configuration layers can be distinguished:

Configuration layer	When it becomes more important	Contract terms
Green public procurement	When the market offers available solutions but the public interest requires prioritising sustainability, energy efficiency, circularity, emissions reduction, life-cycle considerations, or a lower environmental impact.	Definition of requirements, technical specifications, award criteria, life-cycle cost and conditions of performance
Strategic procurement	Where the contract is intended to contribute not only to the provision of a service, but also to broader public objectives: territorial resilience, water security, circularity, system efficiency or institutional coordination	Functional design of the subject matter, lots, criteria, special conditions of performance, public impact indicators
Performance-based procurement	When the public value of the contract lies primarily in the achievement of verifiable results and not merely in the physical delivery of a fixed service	Indicators, milestones, performance-related payments, penalties, traceability, performance monitoring and control system

This second level of decision-making is particularly important in reuse projects. Section 4.1.5 itself already pointed out that in many cases the decisive factor will not be so much a choice between an ordinary and an innovative procedure in the formal sense, but rather a determination of whether the contract should be structured around fixed deliverables or outcomes. It was also highlighted there that the public value of the contract can be measured using indicators such as the volume actually reused, the

replacement of conventional resources, continuity of supply, quality, energy efficiency, traceability and compliance with the Risk Management Plan.

Consequently, **green, strategic, or results-based procurement should be understood as a cross-cutting layer that can be applied to standard contracts, PPIT contracts, interactive procedures, and even more complex arrangements, provided** it is compatible with the nature of the selected underlying instrument.

4.6.4. Application in the field of reclaimed water reuse

In the sector of reclaimed water reuse, this dual decision-making approach is particularly useful because the subject matter of the contract is not homogeneous and because the regulatory framework requires, right from the preparatory phase, the integration of elements that go far beyond the mere procurement of a work, supply, or service. As explained in section 4.1, reuse must be treated as an activity integrated into a system in which the following must be defined: the origin of the resource, the quality required for its intended use, the interaction between regeneration, distribution and end use, monitoring obligations, traceability, incident management, the allocation of responsibilities and coordination between stakeholders.

From this perspective:

1. Where there is a mature and clearly definable solution, the appropriate approach will normally be **standard procurement**, albeit structured in accordance with green or strategic principles.
2. When the focus is on ensuring reused volumes, continuity, efficiency, traceability or compliance with the Risk Management Plan, **outcome-based configuration** will take on particular significance.
3. Where there are significant uncertainties regarding the optimal solution, system integration or operational structure, it is advisable to resort to **preliminary consultations** and, where appropriate, **competitive dialogue or negotiation**.
4. Where the solution requires extensive customisation before deployment, a **PPIT may** be justified.
5. Where it is necessary to develop and validate a solution that does not currently exist on the market, with or without a subsequent integrated acquisition, consideration should be given to PCP or the **innovation partnership**.

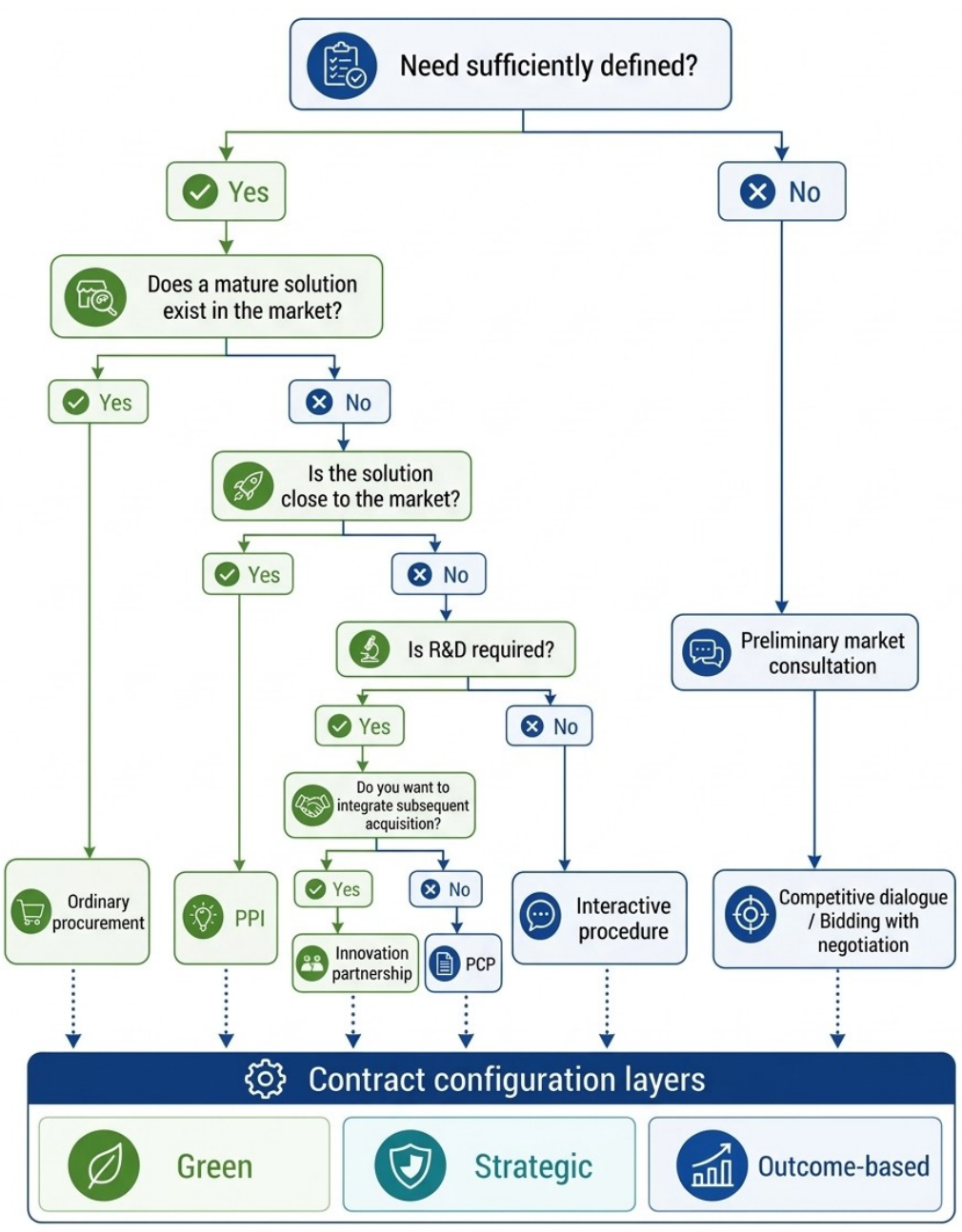
The practical value of this matrix does not, therefore, lie in providing a definitive or uniform answer, but rather in offering a **legally consistent and functionally oriented decision-making method**, capable of translating the logic explained at the beginning of this section 4 into a workable contractual framework for actual reuse projects.

This matrix not only serves an internal decision-support function, but can also be used as a **transfer tool for other public bodies within the SUDOE region.** Its main benefit is that it allows five distinct operational scenarios to be clearly distinguished: pilot or demonstration projects; adaptation or scaling-up projects; the routine procurement of

technologies that are already available; complex contracts requiring interaction with the market; and projects involving genuine research and development activity.

This functional approach makes it easier to replicate contractual solutions and helps to avoid two common mistakes: resorting to PPI instruments when a solution already exists on the market, or, conversely, imposing rigid requirements on a need that still requires further technological exploration.

4.6.5. A diagram illustrating the decision-making logic of the contractual instrument



4.7. Functional equivalences and comparative transferability of instruments in the SUDOE area

The comparative analysis carried out throughout the report leads to the conclusion that **Spain, France and Portugal** do not have fully harmonised legislation on sustainable and innovative public procurement, but **they do offer functional families of clearly comparable instruments**.

The value of this observation lies not in establishing a strict formal equivalence between concepts in the three legal systems, but in identifying contractual solutions that are functionally analogous and capable of addressing similar problems in different regulatory contexts. This approach is particularly well-suited to the SUDOE region, where the purpose of the comparative analysis is not descriptive but operational: to identify legally admissible and transferable tools for tackling converging challenges relating to water reuse, water scarcity and climate adaptation.

From this perspective, what is relevant is not so much the terminological overlap as the existence of **equivalent functions in the three systems:** standard procurement strategically tailored to mature projects, preparation and consultation techniques to reduce uncertainty, interactive procedures for complex requirements, instruments specifically geared towards the development and acquisition of innovation, and cross-cutting layers of sustainability or performance.

In France, the *Code de la commande publique* distinguishes between formalised procedures, including the *procédure avec négociation* and the *dialogue compétitif*, and expressly regulates the *partenariat d'innovation* for needs not met by the market.

In Portugal, the CCP provides for the *procedimento de negociação*, the *diálogo concorrencial* and the *parceria para a inovação*, whilst also recognising a cross-cutting approach to green procurement and contracts with a strong innovative component.

The following table therefore provides a **minimum functional correspondence, which is useful for decision-making in reuse projects**, without overlooking differences in standardisation techniques or the specific characteristics of each system.

Functional equivalences between contractual instruments in Spain, France and Portugal

Functional family	Spain	France	Portugal	Practical benefits of reuse
Strategically structured standard procurement	Standard procurement based on environmental, social and innovation criteria, and life-cycle costing	*Public procurement* incorporating *sustainable development* objectives and, where appropriate, *life-cycle costs*	Open or restricted tender based on innovation and green procurement criteria, taking into account *life-cycle costs*	Mature projects, available solutions and a comparison of water, energy and environmental efficiency
Thorough preparation of the procurement dossier and market analysis	Preliminary market consultations	Requirements analysis, *sourçage* and ex ante definition of the subject matter	Procedural preparation, *memória descritiva* and preliminary market-testing studies	Reducing uncertainty, understanding the state of the art and avoiding tender documents that are closed prematurely
Interactive procedures for complex requirements	Competitive dialogue/tendering with negotiation	Dialogue compétitif / procédure avec négociation	Diálogo concorrencial / procedimento de negociação	Developing or refining complex solutions when the Administration is unable to define them fully in advance
Innovation with integrated development and subsequent acquisition	Association for Innovation	Partenariat d'innovation	Parceria para a inovação	Solutions not currently available on the market, which require R&D, validation and, where necessary, procurement, all within the same framework
Innovation in the broadest sense, without	PPI via PPIT, standard functional	Small-scale direct procurement of innovative	Contracts with a strong innovation component, a	Adapting, integrating or improving

the need for a formal IP	contracts, preliminary consultations and procedures involving interaction	products, R&D contracts, negotiation and dialogue to find innovative solutions	negotiation procedure for innovative solutions, and standard procedures incorporating innovation criteria	existing solutions without always having to resort to a specific innovation instrument
Green procurement as a cross-cutting approach	Green public procurement as a cross-cutting policy approach	Green public procurement through environmental specifications, criteria and conditions	*Green public procurement* as a cross-cutting issue, based on the CCP and RCM No. 132/2023	Circularity, energy efficiency, life-cycle costs, waste reduction and minimisation of environmental impacts
Results-oriented procurement	Contracts based on performance, indicators and verifiable results	A functional and performance-based approach to defining the *marché*	Contracts with a strong focus on innovation and payments linked to targets or results	Reused volume, continuity of supply, quality, energy efficiency, traceability and compliance with the Risk Management Plan

5. Practical application in the context of the reuse of reclaimed wastewater

5.1. General remarks

The practical application of the contractual instruments examined in the previous section requires us to start with a basic premise: the reuse of reclaimed wastewater does not constitute a homogeneous subject matter of contract.

Not all projects have the same technical configuration, the same level of maturity, the same institutional structure, or the same relationship among available solutions, regulatory risk, actual demand, and required outcomes. It is precisely for this reason that an abstract preference for standard procurement cannot determine the choice of contractual instrument, public procurement of innovation or a concession arrangement, but rather through a context-specific assessment of the public problem to be resolved.

In the context of reuse, this requirement for suitability takes on particular significance. The current sectoral framework requires the inclusion in the contract file of elements that go beyond the traditional approach to procuring a single work, supply, or service. The origin of the resource, the quality required by convention, the interplay between regeneration, distribution, and end use, traceability, monitoring, incident management,

the allocation of responsibilities, and coordination between stakeholders are all part of the contractual issues from the preparatory phase onwards. In addition, Royal Decree 1085/2024 places the Reclaimed Water Risk Management Plan at the heart of the system, meaning that this risk-based approach must be applied to the contractor's obligations, control mechanisms, operational coordination, and, where applicable, the system of indicators and required outcomes themselves.

From this perspective, the practical application to the context of reuse cannot be based on a simplistic distinction between 'conventional' and 'innovative' procurement. The analysis carried out in this report itself has highlighted that the suitability of each technique depends on a combination of factors: the maturity of the public need, the extent to which solutions are available on the market, whether or not interaction with economic operators is required, the existence of R&D activities, the risk profile, the weight of the required outcomes, and the scale or governance of the project.

Consequently, **reuse requires working with a range of tools and configuration layers,** ranging from strategically designed standard contracts to mechanisms for market interaction, public procurement of innovative technology, partnerships for innovation, or concessionary or collaborative structures where scale, exploitation or demand aggregation so warrant.

For practical purposes**, this means we need to distinguish between different types of scenarios**. The adaptation of an existing wastewater treatment plant to produce reclaimed water for pre-defined uses does not entail the same contractual requirements as a decentralised project for small rural communities; nor is an operating contract with stricter requirements for traceability and continuity equivalent to a system requiring advanced technological integration, prior validation or the development of solutions not available on the market. Nor can a project with stable aggregate demand and governance be treated in the same way as one whose viability depends on coordinating multiple users, operators and infrastructure systems.

For this reason, **this section does not seek to reiterate the abstract description of the instruments already analysed, but rather to link them to the needs that may arise within the SOLLAGUA framework and during the subsequent phase of transferring and replicating its results, to identify which tools may prove most useful for launching pilot schemes or demonstrators, scaling up already-tested solutions, incorporating functional or environmental requirements aligned with the project, and providing useful references for future organisations seeking to replicate the project.**

In short, the practical application to the field of reuse must be based on the principle that the contract should be functionally tailored to the project. What matters is not assigning a formal label to each action, but rather determining which combination of the underlying instrument, the strategic structure of the contract, the control system, the allocation of risks and governance enables a public need for reuse to be transformed into a viable contractual arrangement with greater legal certainty and operational effectiveness.

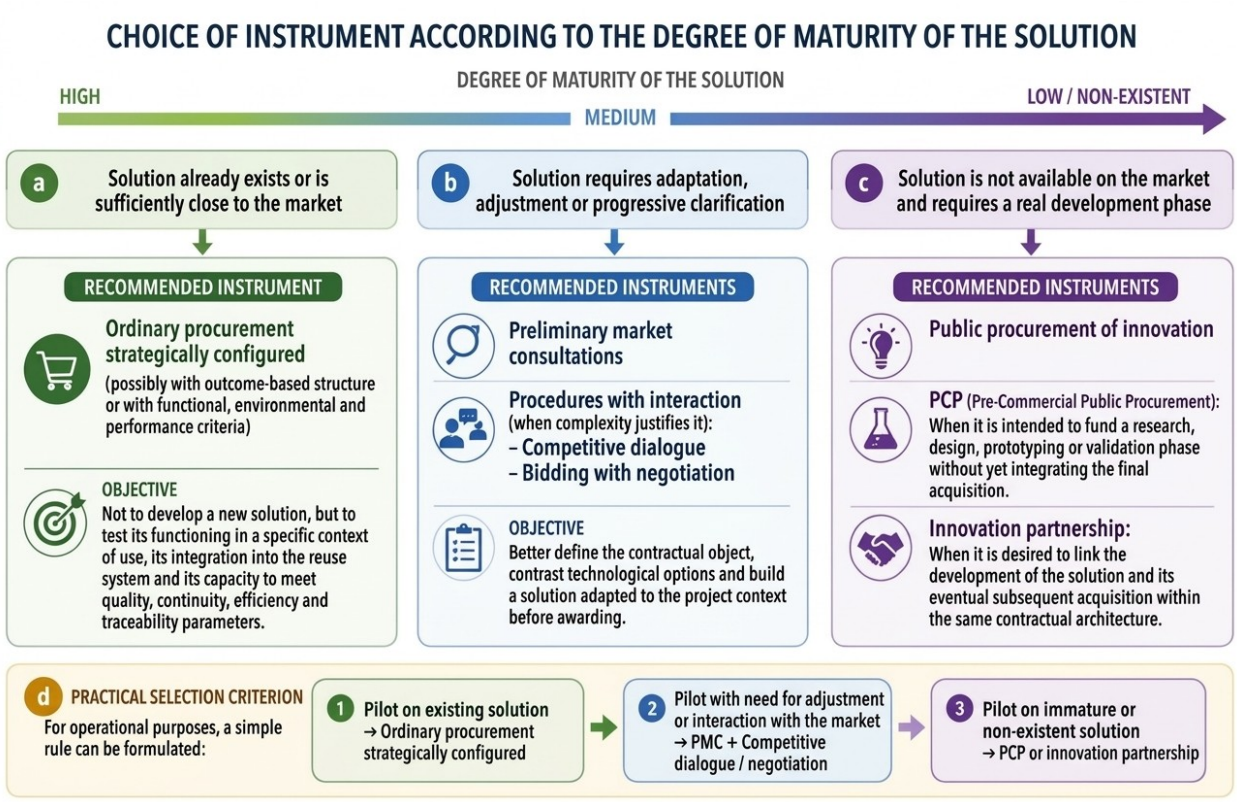
5.2. Launch of pilot schemes or demonstration projects

In the context of SOLLAGUA, one of the clearest applications of public procurement is to **launch pilot schemes or demonstrators that enable the technical, operational, environmental and contractual viability of specific reuse solutions to be verified under real-world conditions.**

From a practical point of view, this type of action may be appropriate in a variety of situations, including, amongst others:

- Validation of solutions in small towns or rural areas.
- Testing of decentralised or modular systems.
- Testing of treatment, control, traceability and monitoring technologies.
- Review of management, operational or coordination models between stakeholders.

The choice of tool will depend, above all, on the **maturity of the solution**:



Within the **SOLLAGUA framework**, this approach enables public bodies not only to identify theoretically transferable solutions, but also to test them in specific settings, generate evidence of their effectiveness and establish a more solid foundation for their subsequent scaling up or replication.

5.3. Scaling up tried-and-tested solutions

Within the SOLLAGUA framework, **once certain solutions have been validated through pilot projects or demonstrators, the next step is their contractual scaling**, that is, their implementation on a larger scale under real and sustainable operational conditions.

From a practical point of view, scaling up requires a different approach to the pilot phase: it is no longer a matter of testing whether the solution works, but of ensuring its stable implementation, ongoing performance, and economic and operational viability.

a. Preferred base instrument

Where the solution has been previously tested and is sufficiently mature, scaling is generally organised through **standard procurement**, without the need to resort to PPP instruments in the strict sense.

However, this procurement process must be designed with a strong strategic focus, incorporating functional specifications (which should not be overly restrictive), award criteria linked to efficiency and performance and, where appropriate, special performance conditions aligned with the project's objectives.

b. The role of the PPIT in scaling up

In cases where the solution has been validated but still requires adaptation, fine-tuning, or a phased roll-out, it may be appropriate to use the **Public Procurement of Innovative Technology (PPIT)**.

In such cases, **the Government acts as the first customer for an innovative solution**, facilitating its implementation in real-world conditions and helping to establish it in the market.

c. Results-based configuration

When scaling up reuse solutions, **outcome-based contracting** takes on particular significance, especially when the value of the contract is measured in terms of:

- ✓ Volume of reused water.
- ✓ Continuity of supply.
- ✓ Quality of the resource.
- ✓ Energy efficiency.
- ✓ System traceability.

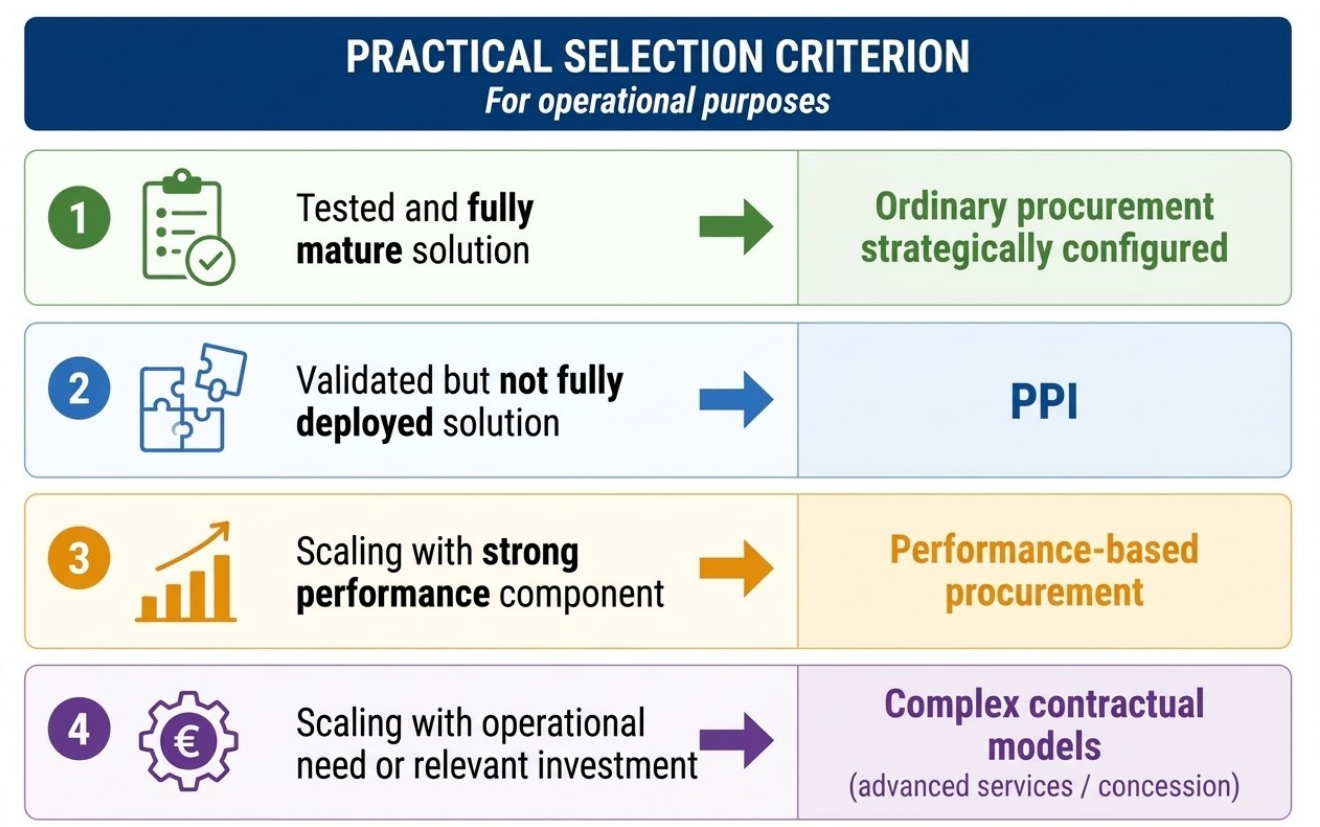
This approach makes it possible to align the contract with the project's actual objectives and to transfer part of the performance risk to the contractor.

d. Scale, operation and contractual models

Where a project involves significant investment, ongoing operation or the integration of different stages of the water cycle, it may be necessary to consider **more complex contractual arrangements**, in particular:

- Long-term service contracts.
- Mixed contracts,
- Concession or collaborative models.

In such cases, **the key lies not only in the technical solution but also in the contract's economic and governance structure.**



5.4. Incorporation of functional, environmental and performance requirements in line with SOLLAGUA

In the context of SOLLAGUA, one of the most important factors is not just which contractual instrument is used, but **how the contract is defined and structured**.

In many cases, the difference between an effective contract and a merely formal one does not lie in the procedure chosen, but in the **quality of its provisions, criteria and monitoring system**.

a. Functional definition of the subject matter

Wherever possible, the contract should be drafted in functional terms, avoiding overly prescriptive descriptions of technical solutions.

This makes it possible to incorporate a range of technological options, encourage competition and tailor the solution to the specific context of the project.

Practical example: Rather than specifying a particular technology → **define water quality standards, continuity of supply or required efficiency.**

b. Incorporation of environmental and life-cycle criteria

In reuse projects, environmental considerations are not incidental, but fundamental.

They must be integrated into:

1. **Technical requirements** (energy efficiency, resource consumption, reduction of emissions),
2. **Award criteria** (life-cycle cost, environmental footprint),
3. **Conditions of performance** (maintenance, consumption monitoring, waste management).

This enables the contract to align with the objectives of sustainability, the circular economy, and the optimisation of water resources.

c. Configuration based on results and key performance indicators (KPIs)

In many of SOLLAGUA's projects, the value of the contract lies not in the provision of a specific service, but in the result achieved.

It is therefore advisable to structure the contract around **measurable objectives** (reused volume, quality, availability), **clear indicators (KPIs), monitoring and reporting systems** and, where appropriate, **performance-related payments**.

This makes it possible to align incentives, improve contract monitoring and transfer part of the performance risk to the contractor.

d. Integration of the Risk Management Plan

The Reclaimed Water Risk Management Plan must be incorporated as a structural element of the contract.

This involves incorporating these requirements into the contractor's obligations, linking the Plan to the control and monitoring systems and coordinating it with the various stakeholders (operator, user, administration).

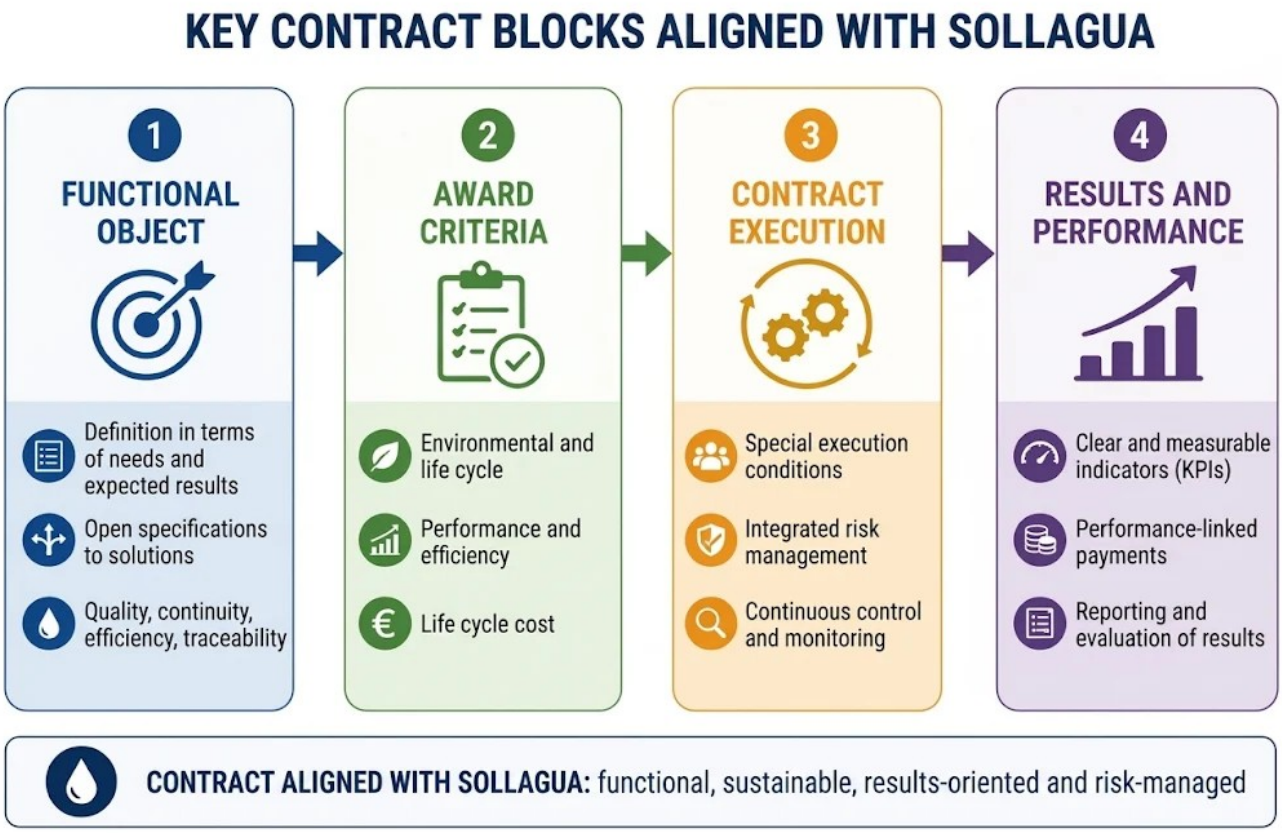
It should not be treated as an external document, but as part of the operational core of the contract.

e. Practical design guidelines

For operational purposes:

- **Contract focused on the technical solution** → less flexibility and less adaptability
- **Functionally defined contract + environmental criteria** → greater competition and better alignment with SOLLAGUA
- **Performance-based contract + KPIs** → greater control and improved performance
- **Integrated contract with risk management** → greater legal and operational certainty

Specific relevance to SOLLAGUA: This approach ensures that the solutions identified in the project are not incorporated into contracts as fixed templates, but rather as functional and replicable references, enabling other public bodies to adapt the solutions to their own context, incorporate environmental and performance requirements, and structure contracts that are more effective and aligned with the project's objectives.



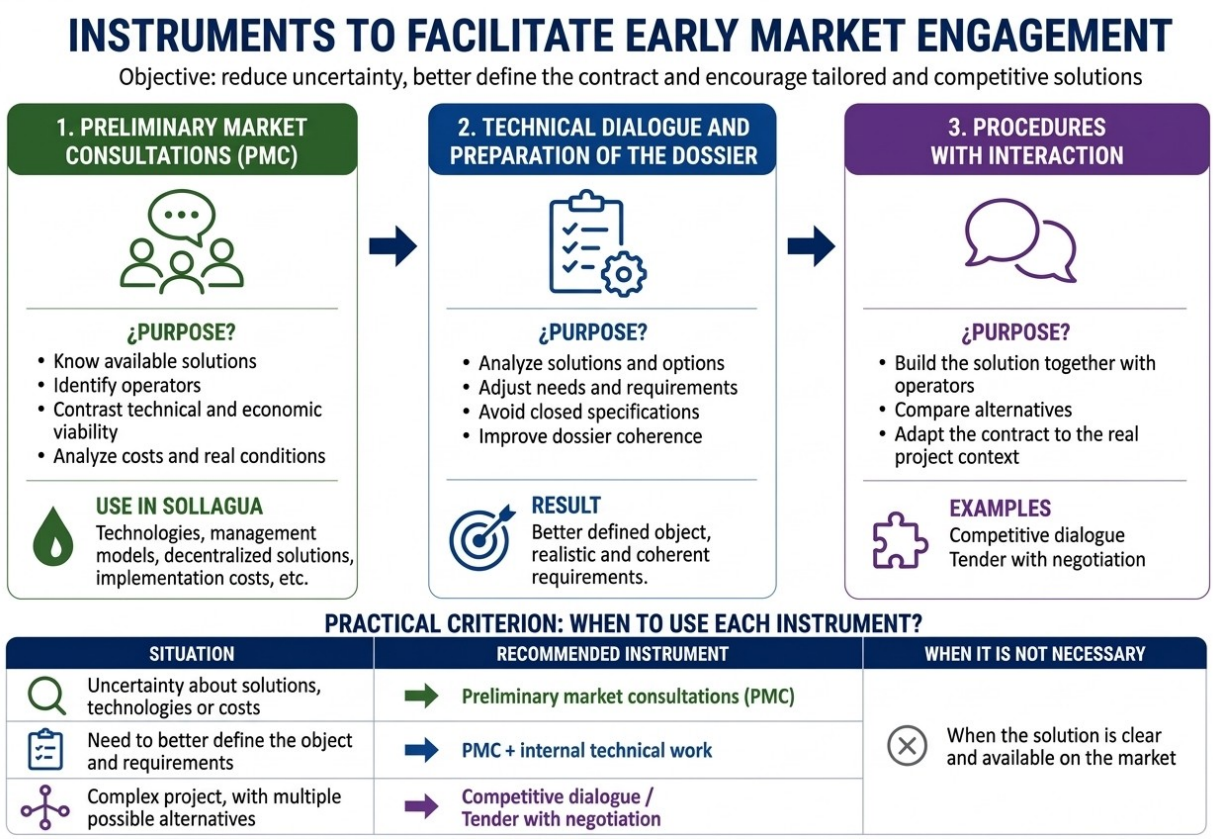
5.5. Tools to facilitate early market participation

In the context of **SOLLAGUA**, **one key to the success of reuse projects is early engagement with the market**.

In many cases, the difficulties do not stem from a lack of contractual instruments but rather from an insufficient definition of the requirement, a lack of awareness of the market's current state, or excessive rigidity in the dossier's initial structure.

For this reason, before putting a project out to tender, it is advisable to put in place mechanisms that enable solutions to be compared, alternatives to be identified and uncertainty to be reduced.

5.5.1. Recommended types of instruments



5.5.2. Essential precautions

Early market engagement must be carried out in accordance with:

- ✓ The principles of **equality, transparency and non-discrimination**.
- ✓ The **confidentiality of the proposed solutions**,
- ✓ The **prohibition on undue advantages** for specific operators.

Furthermore, the information obtained must be documented and used to improve the procurement dossier, not to restrict competition.

Specific relevance to SOLLAGUA: The use of these tools enables participating organisations to reduce the risk of poorly defined procedures, tailor solutions to the specific context of each region, and establish more robust and replicable contractual frameworks.

Furthermore, it ensures that SOLLAGUA's findings are not confined to theoretical solutions but are translated into contractual models that have been tested in the market and can be easily reused by other public authorities.

5.6. Transfer and replication of results by other public bodies

One of SOLLAGUA's main objectives is to ensure that the solutions identified are not limited to isolated experiences, but can be **transferred and replicated by other public bodies** in different contexts.
From a contractual point of view, this requires that the project's results be translated into usable operational guidelines, rather than closed models that are difficult to replicate.

5.6.1 Basic principle: replication is not the same as copying

Replication does not involve literally reproducing a previous contract, but rather **adapting the solution to the local context**, adjusting the contractual instrument, and redefining the balance among the subject matter, criteria, implementation, and outcomes.

Key factors to adapt:

- ✓ Scale of the project.
- ✓ Type of reclaimed water use.
- ✓ Existing demand.
- ✓ Institutional framework.
- ✓ Level of maturity of the solution.

5.6.2 What SOLLAGUA should provide to facilitate replication

For the transfer to be effective, the project's solutions should be accompanied by:

- ✓ **Model tender documents or standard contractual frameworks**.
- ✓ Examples of **functional definition of the subject matter**.
- ✓ References for **award criteria and KPIs**.
- ✓ Frameworks for **monitoring, control and risk management.**
- ✓ Guidance on the **most appropriate core instrument for each case**.

These are not fixed documents, but adaptable templates.

5.6.3. Instrument selection in replication contexts

In practical terms, an organisation wishing to replicate SOLLAGUA's results should follow a simple approach:

- **A scalable solution, but not yet fully rolled out** → PPIT
- **Complex or ill-defined solution** → PMC + competitive dialogue / negotiation
- **Solution not available on the market** → PCP or innovation partnership
  The key is to reuse the knowledge generated, not necessarily the same tool.

5.6.4. The importance of contractual terms

In many cases, replication will fail not because the procedure has been chosen poorly, but because the subject matter has been poorly defined, appropriate criteria have not been incorporated, or contract monitoring has not been properly structured.

Therefore, the handover must focus in particular on **functional requirements**, **environmental and performance criteria**, **indicators and outcomes** and **risk management**.

5.6.5. Scalability and governance

Replication may require adaptation to rural or urban environments, demand aggregation, coordination among different authorities, or integration into broader water-cycle systems.

In such cases, it may be necessary to **adjust the contract duration, consider collaborative models, or redefine the project's financial structure.**

5.6.6. Practical guidelines for replication

For operational purposes:

- ✓ **Replicate the logic of the contract, not its exact form.**
- ✓ **Prioritise flexibility and local adaptation.**
- ✓ **Use SOLLAGUA's guidelines as a guide, not as a rigid template.**
- ✓ **Focus the design on results and operational feasibility.**

The **value of the SOLLAGUA project** lies not solely in the technical solutions identified, but in its ability to generate tried-and-tested contractual models, clear decision-making criteria, and replicable benchmarks for other public bodies.

In this way, **SOLLAGUA not only helps to improve specific water reuse projects, but also promotes the dissemination of good contractual practices in the field of water and sustainability.**

6. Best practices and useful resources

6.1. General remarks

Comparable experiences should not be used as rigid models to be copied wholesale, but rather as **operational references that help to illustrate why public procurement can act as a real lever** for:

- ✓ **Activate pilot schemes or demonstration projects**.
- ✓ **Scale up tried-and-tested solutions.**
- ✓ **Co-ordinating distribution networks and infrastructure**,
- ✓ **Incorporate environmental or performance requirements**,
- ✓ **To facilitate transfer or replication** by other public bodies.

The legal report on the legal framework for the reuse of reclaimed wastewater, which has already been drawn up, proposes selecting cases that offer specific insights and, to ensure the chapter remains manageable, suggests Spanish, Portuguese, and French case studies that are particularly relevant to the SUDOE region.

The selected case studies are not limited to infrastructure or services already implemented; they also include experiences with contractual preparation, such as preliminary market consultations, which prove decisive in structuring future innovative initiatives in wastewater.

6.2. Experience sheets

Below is a list of real-life water reuse examples that may serve as illustrative case studies and good practice within the sector.

Sheet 0. NovaEDAR Project (Andalusia, Spain) – preliminary market consultation for a future PPI in wastewater treatment	
Element	**Contents**
Experience	NovaEDAR, a project promoted by the Directorate-General for Water Infrastructure of the Regional Government of Andalusia, is a PPI project aimed at energy optimisation and the circular economy in water treatment in medium-sized towns.
Project phase	**Preparation and finalisation of the forthcoming contract, through a preliminary market consultation.**
Public challenge addressed	The project stems from the need to improve wastewater treatment in small and medium-

	sized towns, where specific energy consumption is higher, automation levels are low, and there is greater scope for improvement through more efficient technologies and coordinated regional management models.
Legal, administrative or contractual instrument	Preliminary Market Consultation (PMC), to gather information from the sector on the innovative nature of the challenges, the technical feasibility of their development, cost estimates and other elements required to draw up the future PPI tender.
Key features	The PMC should assess the state of the market and technology, refine functional requirements, identify potential future solvency clauses or criteria, hold meetings or demonstrations as necessary, and conclude the consultation once sufficient information is available to initiate a potential PPI.
What it teaches	That, in the field of wastewater, innovation does not begin with the tender process but with a preliminary phase that involves defining the challenge, consulting with operators, and rigorously preparing the tender documentation. It demonstrates that public procurement can act as a catalyst even before a contract is awarded, bringing order to technological uncertainty and enabling a better-designed future procurement process.
Of interest to SOLLAGUA	It serves to justify, in a very practical way, the use of preliminary market consultations when the Administration is aware of the problem to be resolved but has not yet finalised the technical solution or management model.
Practical lesson	In projects involving the reuse, advanced treatment or digitalisation of wastewater treatment plants, the PMC enables the identification of potential solutions, the assessment of technological maturity, the estimation of costs, the exploration of circular economy models and the reduction of the risk of making poor tendering decisions.

Sheet 1. Cheles (Extremadura, Spain) – SOLLAGUA pilot demo

Element	Contents
Experience	Works for the construction of a pilot demonstration plant for the reuse of water from the Cheles WWTP, specifically linked to the SOLLAGUA project.
Project phase	**Pilot/demonstrator**.
Legal, administrative or contractual instrument	Works contract, awarded through a simplified open tender procedure, with price as the sole criterion.
What it teaches	Public procurement can be used to launch a real-world demonstration project with a simple contractual framework when the main objective is to carry out a limited pilot scheme.
Of interest to SOLLAGUA	It is the most obvious justification for the testing and validation phase in a real-world environment.
Practical lesson	When the main objective is to launch a demonstrator, a conventional, streamlined procurement process may suffice; however, if the aim is also to capture functional, environmental, or learning value, it is advisable to enhance the contract design with technical, environmental, or performance-based criteria.

Sheet 2. Villapérez (Asturias, Spain) – mature distribution infrastructure	
Element	**Contents**
Experience	Works contract for the reclaimed water distribution infrastructure at the Villapérez Wastewater Treatment Plant, Phase I, designed to supply reclaimed water to industrial estates, including a pumping system, storage tanks and energy recovery.
Project phase	**Scaling-up and structural implementation.**
Legal instrument – administrative or contractual	Works contract subject to harmonised regulations, involving an open procedure and awarded based on the best value for money.
Key features	The assessment allocates 48 points to the technical construction report and the technical environmental report, compared with 52 automatic points. Furthermore, it sets out a specific performance requirement stipulating that at least 20 per cent must consist of by-products, secondary raw materials, recycled materials or materials prepared for reuse.

What it teaches	That when the solution is fully developed, the main mechanism need not be a formal PPP, but rather a standard contract strategically structured to incorporate sustainability, circularity and technical quality.
Of interest to SOLLAGUA	It illustrates the transition from the pilot to the stable infrastructure and is of great use to future organisations wishing to replicate the project.

Sheet 3. Murcia Region / ESAMUR (Spain) – structural reuse at regional level	
Element	**Contents**
Experience	Murcia / ESAMUR is the clearest example in Spain of structural regional reuse, with a strong agricultural focus.
Project phase	**A mature and well-established model.**
Legal, administrative or contractual instrument	A regional management model based on the sanitation levy and on agreements signed with local councils, under which ESAMUR is responsible for the operation, maintenance and monitoring of public sanitation and wastewater treatment facilities, whilst ownership of the infrastructure remains with the local authorities.
Key fact	ESAMUR highlights that the Region of Murcia treats 99 per cent of its wastewater and reuses 98 per cent of the reclaimed water, with 121 hm^3 of reclaimed water made available to irrigators in 2023.
What it teaches	Reuse works particularly well when there is organised demand, institutional continuity, stable funding and a clear link to the agricultural sector.
Of interest to SOLLAGUA	It provides a strong argument for the view that reuse should not be seen as a marginal solution, but as a planned structural resource.
Practical lesson	Public procurement, on its own, does not account for the model's success; it works best when embedded within a system of governance, operation, funding and genuine demand.

Sheet 4. Chiclana de la Frontera (Spain) – urban regeneration, tourism and golf	
Element	**Contents**

Experience	Chiclana as a case study for analysing water reuse in tourism, golf, green spaces, and groundwater substitution.
Project phase	**A mature model for urban and tourist use.**
Key fact	Chiclana Town Council states that the town is a pioneer in using reclaimed water to irrigate golf courses and green spaces, that it has used this resource for 25 years, and that this practice has helped reduce groundwater consumption and strain on aquifers.
Legal, administrative or contractual instrument	Co-ordinated reuse through the discharge and reuse authorisations granted by the Regional Government of Andalusia, which have historically been linked to discharge authorisations, and complemented by local planning driven by the Town Council and its public company, Chiclana Natural, through the Local Reclaimed Water Plan.
What it teaches	Reuse can be particularly useful when it replaces conventional resources in high-demand non-potable applications, especially in areas under pressure from coastal development and tourism.
Of interest to SOLLAGUA	It is directly comparable to several SUDOE territories and provides a basis for justifying contracts for urban, recreational and tourist uses.
Practical lesson	Reuse gains legitimacy when it is linked to saving drinking water, relieving pressure on aquifers and promoting regional sustainability, rather than simply to the availability of effluent.

Sheet 5. Lisbon / Beirolas Water Treatment Plant / Água+ (Portugal) – non-potable urban water reuse and communication	
Element	**Contents**
Experience	Lisbon / Beirolas / Água+ is a leading example of the Portuguese approach to urban non-potable water reuse and communication.
Project phase	**Established pilot / visible urban service.**

Key fact and unique feature	The project combines the production of reclaimed water for non-potable uses with a specific communication strategy centred on the Água+ brand, strengthening signage, traceability and social acceptance.
Legal, administrative or contractual instrument	The production and use of reclaimed water are governed by the Portuguese 'Água para Reutilização' (ApR) scheme, with licensing in accordance with Regulation No. 119/2019, and further implemented through projects and supply/partnership agreements between Águas do Tejo Atlântico and the municipality of Lisbon for non-potable urban uses.
External verification	Águas do Tejo Atlântico confirms the use of Água+ produced in Beirolas to irrigate Parque Tejo and the northern part of Parque das Nações, using Class A recycled water, as well as the continued use of this solution at high-profile events.
What it teaches	Urban reuse requires not only infrastructure and quality, but also public communication, a sense of identity for the resource and positive visibility.
Of interest to SOLLAGUA	It is an excellent reference for non-potable urban projects and for the carefully communicated replication of reuse solutions.
Practical lesson	Acceptance of reclaimed water increases when the system clearly distinguishes between the resource itself, its uses and the guarantees it offers.

Sheet 6. Algarve / Vilamoura–Quinta do Lago (Portugal) – water reuse for tourism and golf	
Element	**Contents**
Experience	Algarve / Quinta do Lago–Vilamoura is a Portuguese tourism-related case that is directly comparable to Andalusia and other SUDOE coastal areas.
Project phase	**Sectoral scaling in the tourism sector.**
Key fact and unique feature	It highlights the importance of the transmission and distribution network in connecting the treatment plant to golf courses and public parks, as well as the need

	to ensure continuity of supply during periods of peak demand.
Legal, administrative or contractual instrument	A project based on the Portuguese ApR scheme, but implemented primarily through public investment and specific infrastructure for pumping, conveyance and distribution, linked to the Vilamoura wastewater treatment plant, together with the relevant supply agreements for golf courses and green spaces.
External verification	Águas do Algarve has announced investments in the production of reclaimed water in Vilamoura, with an average capacity of 16,000 m³/day and a peak capacity of 1,000 m³/h, intended for five golf courses and green spaces, with a distribution network of around 12 km and an expected volume of 2.24 million m³, equivalent to 66 per cent of the treated effluent from the Vilamoura wastewater treatment plant.
What it teaches	That the reuse of water in tourist destinations requires not only high-quality tertiary treatment, but also specific water supply and distribution infrastructure, as well as a sufficiently concentrated demand.
Of interest to SOLLAGUA	It is very useful for coastal areas with a strong focus on tourism, golf and green spaces.
Practical lesson	The contractual viability in such cases depends as much on the technology and the physical link between production and demand as it does on the project's reputational and social balance.

Sheet 7. Argelès-sur-Mer (France) – a new generation of Mediterranean agricultural land-use practices	
Element	**Contents**
Experience	Argelès-sur-Mer is one of the most significant recent French initiatives due to its scale, agricultural focus and Mediterranean location.
Project phase	**A large-scale, emerging agricultural and land-use project.**
Key fact and unique feature	It highlights the link between urban effluent, local agricultural demand and seasonal pressure on conventional water resources, as well as the importance of precision irrigation, high-quality water and institutional support.

Legal, administrative or contractual instrument	A project falling within the French framework for reuse, involving administrative authorisation, compliance with technical requirements, health and environmental controls, and risk management.
External verification	In June 2026, the French Ministry stated that the project would enable up to 1.3 million m^3 of water per year – which had previously been discharged into the sea – to be reused, and would supply 60 farmers and around 700 hectares, presenting it as France's largest agricultural REUT project.
What it teaches	Agricultural reuse can be considered a regional tool for climate adaptation when there is a clear link among effluent availability, agricultural demand, and water conflicts.
Of interest to SOLLAGUA	It is a very significant point of reference for the SUDOE region of the Mediterranean.
Practical lesson	Replicability requires sufficient quality, widespread adoption, committed users, health and environmental monitoring, and adequate funding.

Sheet 8. Nice / Haliotis (France) – non-potable urban water reuse linked to municipal services	
Element	**Contents**
Experience	Nice / Haliotis is designed as a non-potable urban water scheme to irrigate green spaces and support urban cleaning.
Project phase	**Modernisation of metropolitan infrastructure with urban regeneration of the resource.**
Key fact and unique feature	The project relates to the Haliotis plant in Nice and the production of reclaimed water for non-potable municipal uses, replacing conventional water for watering parks, street cleaning and other urban services. The project is set within a Mediterranean context characterised by urban, tourism, and climate-related pressures, and is based on the principles of the circular economy and the reduction of environmental pressure.
Legal, administrative or contractual instrument	It forms part of the modernisation of the Haliotis infrastructure and of a scheme to reuse it for non-potable municipal services.

What it teaches	Visible urban water reuse has great demonstrative value because it enables drinking water to be replaced in applications where it is not required and shows the public a concrete use of reclaimed water.
Of interest to SOLLAGUA	It is useful for illustrating contracts relating to non-potable municipal uses and the modernisation of major infrastructure.
Practical lesson	In urban settings, reuse works particularly well when it is linked to clearly identifiable municipal services that are highly visible and promote the circular economy.

6.3. Practical lessons drawn from the experiences analysed

The case studies examined confirm the following conclusions:

1. Firstly, **public procurement can fulfil different functions depending on the stage of the project.** It can be used to develop the need and test it against the market, as demonstrated by NovaEDAR; to launch pilot schemes or demonstration projects, as in Cheles; to roll out mature infrastructure, as in Villapérez; or to sustain stable models of urban, agricultural or tourist reuse, as evidenced by Murcia, Chiclana, Lisbon, the Algarve, Argelès-sur-Mer and Nice.

2. Secondly, the cases analysed show that reuse does not depend solely on the availability of treated effluent, but on the existence of a **real, imminent and sufficiently stable demand**. In fact, demand is just as important as resource availability, as confirmed by the agricultural, urban, and tourism models considered. Similarly, various examples show that water reuse is particularly effective when **it enables the replacement of conventional water sources,** reduces pressure on aquifers or avoids the use of drinking water in applications where it is not required.

3. A third lesson is that the practical viability of the system often depends less on the regeneration technology than on the **infrastructure for connection, distribution and governance.** Villapérez highlights the importance of networks and pumping systems in large-scale industrial projects. The Algarve demonstrates that in tourist areas, reuse requires specific investment in pumping, water supply, and distribution, as well as coordination among the regional operator, local authorities, and concentrated users. Furthermore, Argelès-sur-Mer confirms that agricultural reuse only makes sense at the local level when there is a clear link among urban effluent, nearby agricultural demand, and pressure on conventional resources.

4. Finally, the Portuguese and French experiences highlight that the acceptance and replicability of reclaimed water also depend on **risk management, traceability, signage and public communication.** Beirolas / Água+ demonstrates that visible urban water reuse requires not only quality and control but also a clear understanding of the resource and a positive narrative about the circular economy. The French examples also confirm that the expansion of reuse is underpinned by rigorous health and environmental control frameworks, combined with a gradual simplification and adaptation to larger-scale projects.

Taken together, these experiences suggest that **public procurement can be a real catalyst for promoting sustainable and innovative water-related solutions, provided that the chosen instrument is appropriate to the project phase, the demand model, and the local context in which the initiative is to be implemented.**

7. Final recommendations and best practice

In light of the analysis conducted, the contractual instruments examined, and the comparative experiences, the final recommendations should be formulated in operational terms. The aim is not to propose a single procurement technique for all reuse projects, but rather to **provide practical criteria for choosing the right instrument, drafting the tender documents correctly, and minimising risks relating to design, tendering, and execution**.

The aim is to put into practice the principle that developers must demonstrate demand, end-use, required quality and the temporal availability of the effluent; to integrate the risk management plan, governance and the viability of the infrastructure from the outset; to finalise the economic and contractual model before major investments are made; and to maintain traceability, performance indicators and adaptive review during operation.

7.1. Guidelines for selecting a procurement instrument

The first recommendation is to start from the premise of **ensuring that the contract is functionally suited to the project**. When it comes to the reuse of reclaimed wastewater, effective public procurement depends not only on the type of procedure but also on the tender documentation's ability to correctly link needs, demand, resource quality, infrastructure, governance, risk, and outcomes. The CTA report summarises this rationale with particular clarity by recommending that demand, end-use, the required quality and the temporal availability of the effluent be verified from the outset; verifying responsibilities, water resources planning and land-use constraints; integrating the risk management plan, governance and the viability of the infrastructure into the design; and finalising the economic model, financing and contracts before the main investments are made.

From this perspective, two common mistakes should be avoided: assuming that every complex requirement necessitates a PPI, and, conversely, treating projects that still

require market comparison or the gradual definition of a solution as standard closed-tender contracts. Making the right decision requires distinguishing between mature projects, complex projects, projects that require adaptation or phased roll-out, and projects that require genuine R&D.

Background information	Choice of procedure
Uncertainty regarding the state of the market or the level of maturity of the solution	Prior PMC
A complex need that requires the solution to be developed or refined in collaboration with the market	Competitive dialogue or tendering with negotiation
Need for R&D without immediate integrated procurement.	PCP
The need for development and subsequent acquisition within the same framework	Innovation Partnership
Solution validated but not fully rolled out.	PPIT
A proven solution	Standard procurement strategically tailored to deliver results, green procurement, operating or partnership models, etc.

7.2. Guidance on choosing the appropriate contractual instrument

The choice of instrument must be appropriate to the nature of the project.

1. When the solution already exists, and the aim is to implement, scale up or configure it appropriately, the preferred option will normally be a **strategically configured standard contract**, incorporating functional requirements, environmental criteria, life-cycle criteria, performance conditions and, where appropriate, performance-related payment terms. Once the project is at a mature stage, the key will not be to innovate in the abstract but to implement the tender process properly.
2. When the Administration is aware of the problem but should not prematurely decide on the technical, financial or management solution, it is advisable to carry out **preliminary market consultations** and, if the complexity of the matter so requires, to **use competitive dialogue** or **tendering with negotiation**. The procedural phase should be based on the conclusions of the PMC's final report, and at that stage, the procedure, the intellectual property clauses and the drafting of tender documents geared towards innovation should be determined.

3. Where there is a genuine need for research and development, but the final procurement has not yet been finalised, the most suitable tool will be **Pre-commercial Public Procurement (PCP)**. Where the intention is to develop the solution and subsequently procure it within the same framework, an **Innovation Partnership** may be justified. When the solution is sufficiently close to market readiness but still requires phased implementation or further adaptation, the **Public Procurement of Innovative Technology (PPIT) will become more relevant.** These are the main types of PPI.

4. Finally, where the project does not merely involve carrying out construction works or acquiring technology, but rather **ensuring ongoing operation, investment, maintenance, distribution and the assumption of operational risks**, the suitability of complex service contracts, mixed contracts or concession arrangements should be assessed. In such cases, the decision no longer depends solely on the degree of innovation but also on the project's economic structure, the time required to recoup investments, and the allocation of risks in accordance with the LCSP.

7.3. Best practice during the preparatory stage of the procurement process

Experience from other countries shows that most problems stem from a poor preparatory phase. The process is structured around identifying needs, conducting market consultation, selecting the type of contract, and subsequent monitoring, and emphasises the importance of anticipating public needs and carefully planning the tender process.

In practical terms, the preparatory phase should include at least the following:

- ✓ Definition of the requirement in **functional terms** and not overly restrictive.
- ✓ Verification of **actual demand, end use, required quality and temporal availability** of the effluent.
- ✓ Early identification of **jurisdictional, health, environmental and territorial constraints.**
- ✓ Incorporation of the **Reclaimed Water Risk Management Plan** into the contract design.
- ✓ **Verification of the connection, transmission, storage and distribution infrastructure.**
- ✓ Prior definition of the **economic and contractual model** before undertaking major investments.

In projects involving technological, operational or economic uncertainty, it is good practice not to put the project out to tender too early.

7.4. Recommendations on strategic, green and results-based standard procurement

One of the conclusions of the analysis in this report is that many reuse projects do not require a formal PPI **but rather a well-designed standard procurement process.** In such cases, the tender documentation must use the tools provided by the LCSP to incorporate sustainability, functionality, and performance without distorting the nature of the contract.

In particular, the following is recommended:

- ✓ Define the subject matter in terms of **functional performance** rather than a specific technology.
- ✓ Incorporate **environmental and life-cycle cost criteria** where relevant.
- ✓ Use **special performance conditions** relating to energy efficiency, recycled materials, the circular economy, emissions reduction or waste management.
- ✓ When the contract value relates to performance, structure the procurement process around **verifiable results.**

Results-based contracting, in particular, requires **the precise definition of objectives, indicators, baselines, compliance thresholds, a verification system, financial arrangements and the consequences of non-compliance**. To this end, the use of KPIs, monitoring, milestones, and evaluation of results is recommended, thereby reinforcing the merits of this approach in water cycle projects.

7.5. Guidance on preliminary market consultations

The **Preliminary Market Consultation** should be regarded as a standard tool to ensure the dossier is properly prepared when there is uncertainty about the state of the art, market maturity, or the best way to address the public challenge.

In the water sector, the PMC serves to ascertain the actual state of the market and technology, refine functional requirements, guide future solvency clauses and criteria, and gather additional information through meetings, interviews or demonstrations.

Best practice in this regard is as follows:

- ✓ **Identify challenges and needs**, not ready-made solutions.
- ✓ **Request information on TRL**, state of the art, applicability and technological risks; the water guide expressly requires the current TRL, the target final TRL and the estimated progress by milestones to be specified.
- ✓ **Ensure there is sufficient publicity, that documentation is available, and that a final report on the results is produced.**

- ✓ Document the process by means of a **final PMC report**, to guide future procurement.
- ✓ Strictly adhere to the **principles of transparency, equal treatment, non-discrimination and the prevention of distortion of competition.**

NovaEDAR is a particularly good example in this regard because it shows that, in the field of wastewater, innovation often begins with a thorough consultation and needs assessment phase, rather than with the award of the contract.

7.6. Best practice in drafting tender documents

The tender documents must be a legal translation of the chosen project model. To this end, there is a list of key points that should be expressly regulated: **purpose, administrative requirements, reference to the PMC or early demand map, ownership of the works, data protection, confidentiality, phases, milestones, penalties, method of payment, amendments, intellectual property and warranty.**

In practical terms, and specifically in the case of the water and water reuse sector, the following **suggested clauses should** be considered:

Type of clause	Contents
Clause defining the purpose of the subject matter	It must describe the public need in terms of outcomes or functionalities, avoiding unnecessarily specific references to brands, solutions or specific processes.
Clause on the quality and end use of reclaimed water	The service must be linked to the required quality standard, the intended use, any use restrictions, and the applicable controls.
Integration clause of the Risk Management Plan	The risk management plan must be incorporated as a structural requirement of the contract, linking it to monitoring, reporting, incident management and coordination between parties.
Clause on phases, milestones and deliverables	This is particularly important in PPI, phased rollouts or complex contracts. It must identify phases, verifiable milestones, deliverables and the conditions for progressing to subsequent phases.
Clause on milestone or performance-based payments	You must specify whether payment will be made in instalments, against milestones, based on results, or through interim payments.
Clause on KPIs, monitoring and traceability	It must set out the indicators, measurement frequency, verification method, reporting procedures and the auditing of results.

Environmental or circularity clause	It must allow for the incorporation of energy efficiency, recycled materials, waste minimisation, the recovery of by-products or life-cycle criteria.
Amendment and escalation clause	It must set out, with the precision required by the LCSP, which adjustments are possible, under what conditions, and how any scaling-up would be organised.
Continuity and contingency clause	Particularly useful in the context of reuse, for managing quality issues, supply disruptions, contingency measures and service continuity.

7.7. Intellectual and industrial property: practical guidelines

Intellectual and industrial property must be treated as a central issue, not a peripheral one.

In this regard, there are two main strategies: **granting the Government a licence to use the results, or assigning ownership of the rights to it**, and this decision is linked to the provisions of Article 308 of the LCSP.

That said, this issue is not unique to PPI. It is also advisable, in standard contracts involving technology, digital elements, automation, or advanced processing, to expressly set out the arrangements for ownership, licensing, and use.

The following are recommended best practices regarding intellectual property:

- ✓ **Distinguish between the contractor's background or pre-existing rights and the foreground or results generated under the contract. Ownership of each one.**
- ✓ **Distinguish between intellectual property, industrial property, software, databases, know-how and technical documentation.**
- ✓ **Specify whether the Administration acquires ownership, a licence to use, an extended licence for the public sector or limited exploitation rights.**
- ✓ **Explicitly state whether other public sector organisations will be able to use the solution.**
- ✓ **Regulate the framework governing improvements, versions, derivative developments and interoperability.**
- ✓ **Require assurances that the contractor can licence or assign the rights without infringing the rights of third parties.**

As **suggested clauses**, the following should be considered, in relation to the best practices detailed above:

1. Clause on the identification of pre-existing rights.
2. Clause on the transfer or licensing of the results of the contract;
3. Clause on technical documentation to be provided and access to manuals, configurations, code or specifications.
4. Clause regarding the contractor's subsequent use of the solution.
5. Liability clause regarding infringement of third-party rights.

7.8. Confidentiality, data protection and security

Water reuse and innovation projects may involve sensitive technical information, operational data, proprietary solutions or critical information relating to infrastructure. To this end, it is advisable to **include confidentiality and data protection clauses.**

In this regard, the following precautions constitute good practice in the water and water reuse sector:

- ✓ **Define what information may be treated as confidential.**
- ✓ **To ensure that confidentiality does not undermine the transparency of the procedure.**
- ✓ **Regulate access to, use of and custody of operational data.**
- ✓ **Provision should be made for cybersecurity, interoperability and business continuity obligations where digital components are involved.**
- ✓ **Ensure a clear distinction is made between drinking water and reclaimed water where public perception may be a sensitive issue.**

7.9. Monitoring, follow-up, evaluation and transfer of results

During monitoring of the procurement process, project progress, objectives achieved, and relevant aspects of the procedure must be documented, producing at least one **results evaluation report and one best practice report.**

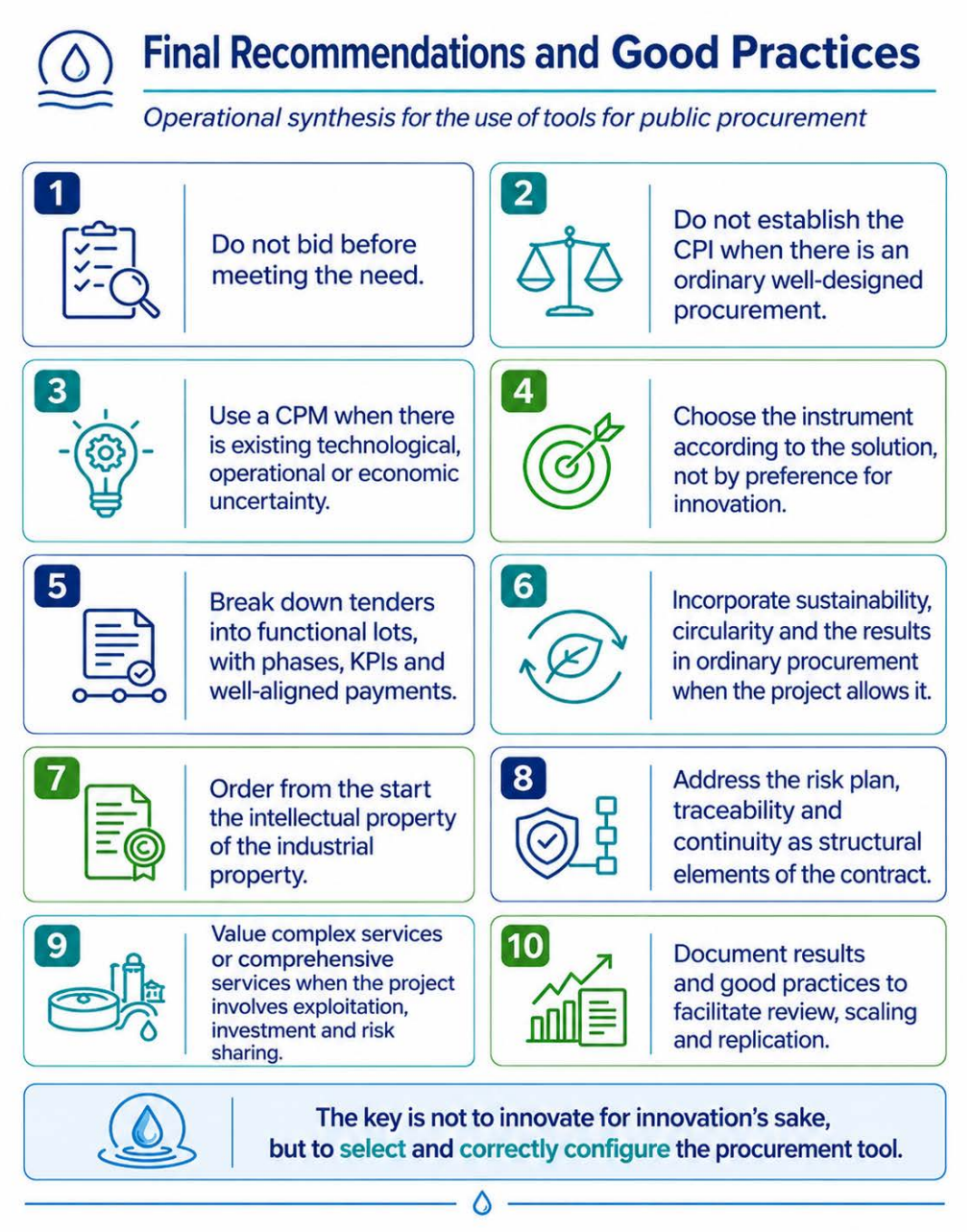
Consequently, the following are recommended as best practice:

- ✓ **Appoint a contract manager with the actual capacity to monitor the contract.**
- ✓ **Set out in the tender documents the indicators that will serve as benchmarks.**
- ✓ **Document milestones, incidents, deviations and results.**

- ✓ **Use this documentation to review the template and avoid repeating mistakes in future tenders.**
- ✓ **Turn the lessons into a transferable skill, particularly useful in the SUDOE region.**

7.10. Summary of final recommendations

To summarise, the following recommendations can be made:



In short, **good public procurement in the field of reuse is not merely a matter of selecting an admissible procedure, but of assembling a useful, legally clear, technically sound, and**

results-oriented dossier. That is the condition under which public procurement (whether innovative, standard, green, strategic or results-based) can truly become a driver of sustainability, resilience and effective implementation.

ANNEX I Sources used

In compiling this report, regulatory, institutional, documentary, comparative, and doctrinal sources have been used, selected for their relevance to the analysis of public procurement instruments applicable to reclaimed wastewater reuse. The list below sets out the sources actually used in this work, including both those cited in the background literature and those verified against official and specialist sources.

1. European Union legislation

- Directive 2014/24/EU of the European Parliament and of the Council of 26 February 2014 on public procurement.
- Directive 2014/23/EU of the European Parliament and of the Council of 26 February 2014 on the award of concession contracts.
- Regulation (EU) 2020/741 of the European Parliament and of the Council of 25 May 2020 on minimum requirements for the reuse of water.
- Commission Communication 2022/C 298/01, Guidelines to support the implementation of Regulation (EU) 2020/741.
- Commission Communication COM(2007) 799 final, *Pre-commercial Procurement: driving innovation to ensure sustainable, high-quality public services in Europe*, and its working document SEC(2007) 1668.

2. Spanish national legislation

- Law 9/2017 of 8 November on Public Sector Contracts.
- Law 14/2011 of 1 June on Science, Technology and Innovation.
- Law 17/2022 of 5 September, amending Law 14/2011 and introducing the current Article 36e on public procurement of innovation.
- Royal Decree 1085/2024, approving the legal framework for the reuse of water.
- Spanish sector-specific legislation and regulations cited in the report relating to water, public procurement, sustainability and planning.

3. Relevant Spanish regional legislation

- Law 11/2023 of 30 March on the strategic use of public procurement in the Autonomous Community of Aragon.
- Law 14/2013 of 26 December on the rationalisation of the regional public sector in Galicia, in particular Article 28 thereof, concerning public procurement of innovation.

- Law 1/2025 of 19 February on Science, Technology and Innovation in the Principality of Asturias, in particular its provisions on public procurement of innovation.
- Law 7/2022 of 5 August on science, technology and innovation in the Balearic Islands, fourth supplementary provision on innovative public procurement.
- Decree 104/2025 of 27 May of the Regional Government of Andalusia, establishing and regulating the Interdepartmental Commission for the Coordination of Public Procurement of Innovation.

4. A comparison of legislation and regulatory frameworks in Portugal

- Public Contracts Code (CCP), adopted by Decree-Law No. 18/2008, as the basic legislation governing the Portuguese public procurement system.
- Decree-Law No. 119/2019 of 21 August, establishing the legal framework for the production and use of water for reuse (ApR).
- Ministerial Order No. 266/2019, of 26 August, on information and signage for ApR.
- Regulation (EU) 2020/741, as applied to the Portuguese framework for reuse.
- Portuguese strategic documents on water and reuse, used as a sectoral framework, in particular the official information from the Portuguese Environment Agency on ApR and PENSAARP 2030.

5. A comparison of regulations and legal frameworks in France

- The Public Procurement Code, as the general framework for *public procurement* and concession contracts.
- Decree No. 2023-835 of 29 August 2023, concerning the uses and conditions of use of rainwater and treated wastewater.
- Decree of 18 December 2023, concerning the conditions for the production and use of treated wastewater for crop irrigation.
- French references on green and sustainable public procurement cited in the report, in particular the Climate and Resilience Act, the National Plan for Sustainable Procurement (PNAD) and the SPASER, as discussed in the comparative documentation on France.

6. Institutional documents and guidelines used

- Guide to Innovative Procurement, published by the Regional Ministry of Finance and European Funding of the Regional Government of Andalusia.
- Guide to Public Procurement of Innovation and Contracting Procedures in the Public Water Sector, Directorate-General for Water, MITERD, supplementary

document to the "Supplementary Report on the Promotion of Innovation and Technology Transfer in the Water Sector".

- Green Public Procurement Report 2025, Chair in Eco-friendly Public Procurement, University of Alcalá / Biodiversity Foundation / MITECO.
- List of European sector-specific standards with implications for public procurement, cited in the 2025 Green Public Procurement Report as a recent tool developed by the JCCPE.
- European technical resources on Green Public Procurement (GPP) criteria, cited and used as a reference for green public procurement.

7. Reports, studies and working papers submitted to the procurement dossier

- Legal report on the legal framework for the reuse of reclaimed wastewater, commissioned by CTA.

8. Sector-specific reports and studies used

- Study on urban water supply and sanitation services, CNMC, 30 January 2020.
- Strategic Lines for Innovation and Research in the Water Sector IDi agua. Directorate-General for Water. SEMA.MAGRAMA.
- Status report and outlook on public procurement of innovation. (CTA-CCS)

9. Official websites and institutional resources consulted

- Regional Government of Andalusia – Public Procurement of Innovation, including official information on NovaEDAR and other PPI projects relating to water and the environment.
- Regional Government of Andalusia – BOJA / Decree 104/2025, concerning the verification of the current Andalusian governance of PPI.
- Portuguese Environment Agency (APA): official pages on Water for Reuse (ApR), applicable instruments, risk assessment and sectoral strategy.
- Águas do Tejo Atlântico, on the Água+ project / Lisbon / Beirolas.
- Águas do Algarve, on the production of water for reuse in Vilamoura and reuse in the tourism sector.
- Cerema, on the Programme d'accélération de la REUT en littoral.
- Ministry for Ecological Transition (France), both for the Water Plan and as the official reference for the Argelès-sur-Mer project.
- CNMC, for analytical documents on public procurement and competition.

- MITECO / Chair in Green Public Procurement, as the institutional framework for the 2025 Green Public Procurement Report.