How-To Guide for Implementation of Innovation Oriented Public Procurement (IOPP) Procedures (EU Level)

This project has received funding from the European Union’s Seventh Framework Programme for Research and Technological Development under Grant Agreement nº 619069.

www.waterpipp.eu
# Table of contents

1. Room for Innovation by means of IOPP in the Water Sector ........................................ 2
   - Room for Innovation in the Water Sector ........................................................................ 3
   - Room for IOPP in the Water Sector .................................................................................. 3
   - Expected Outcomes for Innovation by applying IOPP in the Water Sector ...................... 3

2. Introduction to IOPP ........................................................................................................ 4
   - What is IOPP? ..................................................................................................................... 4
   - Who is this Guide for? ....................................................................................................... 4
   - The General Provisions on EU Public Procurement ........................................................... 5
   - How are PCP and PPI regulated in the new EU Public Procurement Directives? .............. 5
   - What IOPP Procedure should I choose? .......................................................................... 5

3. How-To Procure Innovation in the Water Sector Step-by-Step ........................................ 6
   - Step 1: Design water procurement strategy ...................................................................... 7
   - Step 2: Planning and identification of needs. Training and professional expertise capable of handling innovation ................................................................. 7
   - Step 3: Market consultation on the state of the art and early communication of future needs map to stakeholders ............................................................... 8
   - Step 4: Managing intellectual property rights (IPR) .......................................................... 9
   - Step 5: Dealing with risks .................................................................................................. 10
   - Step 6: Qualitative selection of suppliers ......................................................................... 10
   - Step 7: Award criteria ....................................................................................................... 11
   - Step 8: Advertisement and publicity .................................................................................. 12
   - Step 9: Evaluation of results ............................................................................................ 12
“Water innovation can apply not only to new sustainable technologies but also to new partnerships extending across public administration, research and industry.

New business models and new forms of water governance that are not only innovative themselves but can also stimulate and support innovations. Furthermore, innovation need not be an entirely new technology or concept; novel combinations or innovative ideas for improvements on current technologies, business models and systems, all have a role to play.”

Room for Innovation in the Water Sector

The European Innovation Partnership on Water (EIP Water), in its Strategic Implementation Plan, identified eight thematic priority areas in which innovation could play an important role:

- Water re-use and recycling.
- Water and wastewater treatment; including recovery of resources.
- Water-energy nexus.
- Flood and drought risk management.
- Water ecosystem services.
- Smart technologies. Modelling and Decision Support Systems.

Room for IOPP in the Water Sector

In this scenario, IOPP can help overcoming the bottlenecks for innovation in the water sector. Following sectorial bottlenecks could be identified:

- **Risk Aversion of the Water Sector** as it has a high capital-intensity, there is a low preparedness to act as an innovator or launching customer for innovative processes or products. Due to health issues, this risk aversion is also prominent in the public regarding drinking water.
- **Lack of Demonstration Sites** which leads to no national market, and hence to no international market. The reason of the lack of demonstration sites is very much linked to the risk aversion of the water sector.
- **Inconsistency and Fragmentation of Policies and Regulations**, as there are different regulations and standards per region.
- **Water Authorities and Water Sector Fragmentation** means that there is only a low cooperation between the various sectors and thus potential synergies are not recognized. Moreover, the utilities are relatively small, lacking strategic, technological and planning competencies as well as necessary funds to implement innovative solutions.
- **Conservative Procurement**. Current approaches give preference to the lowest cost offers, neglecting longer-term operational or lifecycle costs.
- **Little Competitive Tension on the Market** as a consequence of this demand fragmentation. The public sector lacks in ability to require open standards and interoperability/scalability conditions and finds itself thus in a condition of restriction of its procurement channel and lock-in.

An additional problem is that the public sector asks for the developments on an exclusive basis, which means taking on board all the technology risk of their suppliers and paying a very high price.

**Expected Outcomes for Innovation by applying IOPP in the Water Sector**

In such a difficult context, IOPP can help to foster innovation in the water sector by:

- Pooling the demand for/of innovation in order to share not only the risks but also the economic benefits derivable from the innovation and wide marketing and sale of the developed solutions.
- Enabling exploitation of innovation by suppliers to scale-up business to other clients and markets, avoiding to require exclusive conditions;
- Providing the right incentive to industry to innovate, enabling an earlier reality check of industry R&D against concrete public purchasing needs and pursuing the commercialization of R&D results (efficient IPRs allocation).
- Promoting the use of standard and interoperability conditions, preventing lock-in situation;
- Fostering the competition not only during and for the "award" phase of a public procurement, but also during the execution, specially by enabling the participation of SMEs to procurement processes and the emergence of new players.

---

Introduction to IOPP

What is IOPP?

In Innovation Oriented Public Procurement (IOPP), also called Public Procurement of Innovation, seeking innovative solutions can mean the seeking of a new product or process, the delivery of a new service or the way in which the Public Procurement process is conducted. The innovation process encompasses research and development (R&D) and later phases such as preproduction, production, distribution, training, market preparation and new organisational or marketing methods.

Who is this Guide for?

This guide is addressed to public and semi-public water authorities who are involved in the procurement procedure, hereafter Public Procurers. It intends to provide a comprehensive overview of the legal and practical dimensions of IOPP.
The General Provisions on EU Public Procurement

In 2014 new Procurement Directives (Directive 2014/23/EU on the award of concession contracts, Directive 2014/24/EU on public procurement and repealing Directive 2004/18/EC and Directive 2014/25/EU on procurement by entities operating in the water, energy, transport and postal services sectors and repealing Directive 2004/17/EC) were adopted. The new Directives open up a number of opportunities for PPI and PCP (being the last one not included under the scope of the Directives) maintaining however the basic requirements of competition, transparency, equal treatment and compliance with EU state aid rules.

Two (other) new procedures are likely to be particularly relevant for authorities who wish to purchase innovative goods, services or works: the innovation partnership and the competitive procedure with negotiation. The competitive dialogue will also become more freely available with clearer rules at the final stages.4

How are PCP and PPI regulated in the new EU Public Procurement Directives?

PCP takes place when there are no near-to-the-market solutions and new R&D is needed.5 The risk allocation tends to be in the supplier side and its award is not subject to the dispositions of the Directives. However, the contractual activity of a public administration remains subject to compliance with the general principles of the Treaty and in no case would the exclusion cover commercial development activities.

On the other hand, Public Procurement of Innovative solutions (PPI) can be used when challenges can be addressed by innovative solutions that are nearly or already in small quantity on the market and don’t need new R&D.

This second modality of IOPP is subject to the provisions of the Directives. Another of the differences with PCP is that the field of PPI is not solely limited to the field of services, but is likewise applicable when the object of the contract is the acquisition of innovative works and supplies.6

What IOPP Procedure should I choose?

These procedures have the advantage of allowing greater interaction with the market in order to refine requirements and award a contract. Nevertheless, they normally take longer to conduct and therefore it is important to consider how the procedure chosen will be managed, keeping in mind that preliminary market consultation and PCP may be combined with other procedures in order to obtain the best results.


4. See “Policy related Frequently Asked Questions on Pre-Commercial Procurement (PCP) and the link with Public Procurement of Innovative Solutions (PPI)”, p. 21. In this sense, the latter also points out that the European Strategy Horizon 2020, supports both: pre-commercial procurement (PCP) and public procurement of innovative solutions (PPI) across all areas of research. <http://cordis.europa.eu/fp7/ict/pcp/docs/faq-v9.pdf>


Figure 1: Differences between PCP and PPI: Product innovation cycle*


How-To Procure Innovation in the Water Sector Step-by-Step

In this section we will go through the procurement for innovation in the water sector step-wise.

The following graphic gives a clarifying overview of the steps >>

Step 1: Design water procurement strategy

Step 2: Planning and identification of needs. Training and professional expertise capable of handling innovation

Step 3: Market consultation on the state of the art and early communication of future needs map to stakeholders

Step 4: Managing intellectual property rights (IPR)

Step 5: Dealing with risks

Step 6: Qualitative selection of suppliers

Step 7: Award criteria

Step 8: Advertisement and publicity

Step 9: Evaluation of results
Step 1: Design water procurement strategy

The starting point should consist of the delimitation by the contracting authority (when existing, within the frame given by its own innovation agenda) of broad objectives that should be promoted within IOPP.

The responsibility for the development of IOPP strategies should lie within contracting authorities, who should also develop their own implementation guidelines on water IOPP, as far as unfortunately, in many cases, they lack on the required expertise.

Successful IOPP requires government purchasers to be intelligent customers who plan well in advance what they will need to buy and how to buy it. Therefore the contracting authorities should develop a water IOPP strategy which should take as starting point the guidelines mentioned above.

In any case, an IOPP strategy shall include a Needs assessment that takes into account trends developing in the medium to long term: How will you determine which areas are priorities for IOPP within your organisation? How should a needs assessment be conducted? Which type of needs may be suitable for PCP and PPI respectively?

Other aspects that need to be considered in the drafting of an IOPP strategy are:

- **Project team and steering group:** Who within your organisation is best-placed to drive IOPP and which departments should be involved? Is it worthwhile to include external experts or organisations in the group?
- **Making a business case:** What kind of information will contribute to your business case for IOPP and where can it be found? How should future costs and savings/income from IOPP be calculated?
- **Joint procurement:** Are any of your organisations needs suitable for joint procurement of innovation? Does it make sense to set up a framework agreement so that others can access the end results?
- **Engaging suppliers:** Should suppliers be contacted informally prior to starting a procedure? Is it better to meet with suppliers one by one or in groups? How will confidentiality and open sharing of information be balanced? How will the outcomes be captured in your specifications?
- **Legal considerations:** What kind of contract terms will best support innovation? Are key performance indicators an effective way to monitor performance and should they be linked to incentives or penalties? How can the risk of legal challenge to IOPP be minimised?
- **Whole-life and life-cycle costing:** How will the costs of new products and services be assessed across their life-cycle? Have relevant tools for this been developed within the sector you are targeting?
- **Risks and financial support:** What approaches will you take to manage risks? Is external funding or assistance available to help defray the risks and make stronger business case for IOPP?
- **Standardisation:** European Standardization is a key instrument for the consolidation of the Single Market and for strengthening the competitiveness of European companies, thereby creating the conditions for economic growth.

Step 2: Planning and identification of needs. Training and professional expertise capable of handling innovation

Communicating long-term procurement plans to the market, to both existing and potential suppliers, gives the market time to react and develop solutions to the defined need. Timely communication of plans to the marketplace can take many forms, including organising open days for potential bidders, publishing annual public procurement plans and providing information directly via government websites.

The following are simple steps that can contribute to an appropriate planning:

- Adopt a “Buying Innovation” Policy as part of your Corporate Procurement Plan or Innovation Agenda.
- Identify in the tender or in the heading that an innovative solution is being sought. This facilitates reporting annually on the % budget spent on buying innovation. This will also be tracked and measured by the TED website.
- With support of the (technical) experts of your organisation, prepare and understand the market – Become a knowledgeable and demanding customer. Collect information routinely from the market on emerging innovations and technological solutions for your organisation’s needs. Be aware of trends in technology and identify areas where new and improved solutions exist. Challenge the market and give it time to prepare and to find partners.
- Be open to new ideas proposed by the market.
- Involve key stakeholders throughout the procurement life cycle [users of the service, technical experts and legal advisors].

7. This differs from the Prior Information Notice (PIN), which is mandatory.
Handling IOPP requires intelligent organisation, and well-trained staff with a multitude of integrated skills. These include good procurement skills, but also skills in project management and contract management. Also, knowledge on the specific public service is demanded, too. Moreover, a purchaser needs access to technological knowledge to draw up specifications, evaluate proposals and follow through and learn from the purchasing process.

The need for such skills will be most evident when an innovative acquisition requires organisational change. Incentives for purchasers, where the key is if the corporate procurement plan is translated into targets for purchasers, to be well trained can easily be provided by, for example, external experts (e.g., training allowances). To properly fulfil its function in the policy cycle and to be able to deal with innovative offers, the procurement function needs to be well embedded in the organisation. This applies to all forms of organisation, be they centralised or decentralised or with a separate procurement agency. Strong communication between procurement personnel, financial planners and policy makers is essential. Early communication of policy needs and budget availability enables procurement personnel to plan accordingly.

**Step 3:**
**Market consultation on the state of the art and early communication of future needs map to stakeholders**

**Market consultation on the state of the art**
Public procurers ought to identify what is actually available on the market, before selecting the proper procedure, or conclude that IOPP is required to meet corporate goals. Defining the objectives and requirements before discussions are held with the market is an essential first step in the public procurement process, because it determines whether potential suppliers can make innovative proposals.

In order to assure broad market coverage, public procurers have to publish their intentions to start a technical dialogue with a Prior Information Notice (PIN) because it will give the market the opportunity to better understand the problem to be addressed and to offer optimum solutions.

To ensure transparency, any information provided by public procurers during the technical dialogue would need to be circulated to any potential suppliers. To allay any concerns of suppliers that sensitive information might be disclosed to other parties, public procurers can provide an assurance of confidentiality, stating that this kind of information will not be disclosed (see below, Step 4).

Public procurers can also promote the celebration of open and public market events, especially when they want to launch an IOPP procedure.

Furthermore, it is essential to ensure that the Request for Tender (RFT) is structured in a way that establishes effective competition, with appropriate qualifying criteria that does not discourage SMEs and young companies from participating (see below, Step 6).

**Early communication of future needs map to stakeholders and market engagement**
After having identified their needs, public procurers and water utilities should communicate their upcoming needs to the supplier markets well in advance: the early communication of future procurement needs is one of the factors that influences firms’ innovation activities. When a tender notice is published, it is usually too late for firms to start developing completely new products within the time frame given. A good idea is to publish PINs on the TED website.

That’s why a practice which firms appreciate and which is of vital importance through all the tendering process is pre-tender interaction with the public procurer. This can take place through a variety of market engagement methods such as supplier seminars, online communication, market studies, pilots, etc.
Step 4: Managing intellectual property rights (IPR)

In contrast to public procurement of non-innovative products and/or services, in IOPP Inteligent Property Rights (IPR) are a matter of concern for public procurers. This is due to the performance-based description of the procured products and/or services (instead to specifications-based description), to the use of non-value-for-money award criteria, such as “fostering of innovation”, and especially to the importance for bidders of IPR assignment (instead of bidders’ indifference because of applying well-known or public domain technology). In fact, issues associated with the inaccurate management (ownership and administration) of IPR prevent industry from participating in IOPP.

Prior to deal with this issue, it shall be noted that all activities oriented to identify needs and create technical dialogue (see above, Step 3) shall be accompanied by specific confidentiality clauses, i.e., so called “Non-Disclosure-Clauses” (NDA); furthermore, the dissemination of useful information shall be done in a way which does not imply disclosure, the loss of trade secrets or novelty.

Successful IOPP gives rise to outcomes in form of new technical solutions and/or innovative knowledge. Such outcomes can be protected by means of IPR (e.g., copyrights and neighbouring rights, trade secrets, including know-how, design rights, patents). It shall be determined in an early stage of IOPP procedure who is going to own and commercially exploit such rights, including the regulation of both Background and Foreground IPR.

This decision will be crucial to avoid both “vendor lock-in” (i.e., if public procurer lets IPR to the supplier and does not grant itself enough access to IPR, it remains tied to the supplier for a specific product and/or service despite of the fact of having paid to develop the innovative solution) and “vendor back-out” (i.e., if public procurer retains IPR coming out from IOPP, suppliers will exit of the procedure because of having no incentive to develop an innovative solution). Apart of this, price is going to increase if suppliers cannot exploit the innovative solution in the market.

Because of this, IPRs on results of IOPP shall be shared in order to create proper incentives and balanced risk distribution for both industry and public authorities. Doing so, the public procurer ensures use and application of IPR, while leaves IPR and the opportunities to commercialise it with suppliers. The public procurer is protected from a vendor lock-in and, at the same time, suppliers have a strong incentive to innovate. Further, sharing IPR is the way to inject innovation into the market, by allowing suppliers to transfer the innovative outcomes in their commercial offer.

In IOPP, both public procurer and supplier(s) are interested in using IPR at the present or in the future, but in a different way. The proper allocation of IPR can be achieved by combining:

- **Licensing.** If suppliers are owners of IPR, they act as licensors and the public procurer acts as licensee. The regulatory framework of IPR licence agreements is flexible. This allows to adapt the conditions of the license (i.e., timeframe of validity, renewal, geographic area or industry in which it applies) to the particular needs of the case.
- **Royalties.** They are payments from the licensee to the licensor for the use of IPR.

Combining this patterns, free non-exclusive licences for the own use of the public procurer (free of royalties) or open licences (to the public procurer and to third parties) under payment of royalties are accurate IPR management scenarios.

It exists the option of sharing ownership on IPR, too. In such cases, some risks related to IPR may arise. E.g., vendor lock-in due to lack in competence in future procurements because of advantageous position of the supplier co-owner of IPR. In that case, public procurer shall keep the right to grant sublicenses to third parties for implementation or development purposes. Or the case of absence of exploitation of IPR by supplier, which can be faced including a call-back clause in favour of the public procurer.

---

8. For further information, see: Procurement of Innovation Platform, Introduction to intellectual property rights in Public Procurement of Innovation, in: <www.innovation-procurement.org>
Step 5: Dealing with risks

Risk is inherent when buying something innovative. IOPP will usually promise a higher return but it may also entail higher risk than buying off the shelf.

Where an innovative solution is considered, it is especially important to:

- Identify the risks involved;
- Assess their potential impact on the project; and
- Assign ownership for the management of these risks in the Terms and Conditions of the contract.

These steps need to be clearly identified in the decision making process and made part of the evaluation. Purchasers can ask bidders to include an analysis of the risks in their proposals and how these could be mitigated, with a view to making it easier to judge whether the risks are acceptable. It is particularly important to decide who is best placed to bear and to mitigate a specific risk and to allocate responsibility accordingly. Innovation can involve a higher degree of risk, but the right response to this is for public procurers to become better at assessing and managing risk, not avoiding it.

One way to do this is by having a project steering group which is able to handle both informal and formal communication, so that risks can be dealt with as they arise as well as through an initial strategy.

The risk allocation within contracts is one of the most important barriers for the tendering and implementing parties to propose innovative solutions. Therefore it is crucial to make a clear distinction between the risks for final project performance inherent to any project and applicable to the business as usual situation, for which the implementing party can be held responsible; and the risks to perform “introduced” by the innovative nature of the technology being deployed for which even the implementing parties can hardly prepare for or are able to mitigate.

The occurrence of such risks should be closely monitored and ideally shared and managed in close collaboration between both parties.

Step 6: Qualitative selection of suppliers

It is important to select the best supplier to satisfy the public procurer’s needs, but also to facilitate the participation of SMEs. Hence, it is essential to ensure that the Request for Tender (RFT) is structured in a way that establishes effective competition, with appropriate qualifying criteria that does not discourage young companies from participating.

This may involve greater use of methods such as split tendering (tendering in lots) or encouraging the use of sub-contractors or joint tendering. Large suppliers can be encouraged to form alliances with smaller, creative partners. To SMEs, a public sector contract may be the signal to take the bold step to grow and recruit more employees. Where SMEs are not in a position to be a prime contractor, there are opportunities for them to be sub-contractors, particularly where they can provide specialist or innovative products or services.

Figure 2: Risk management in IOPP.
In order to foster participation of SMEs in IOPP procedures:

- Allow for tender submissions where sub-contracting is proposed.
- Be open to consortia bids from SMEs as this is one way in which small businesses can tackle large procurements.
- Split tenders into lots where appropriate, to encourage SMEs and to stimulate innovation and competition. The purpose of this is not to lower the contract to below threshold levels, as the Directives will still apply where the total requirement exceeds the relevant threshold, but to subdivide the supply into lots and eliminate the risk of no supply.
- Encourage the use of sub-contractors and make subcontracting opportunities more visible.
- Use the TED website to advertise small contracts, where the anticipated response would not be disproportionate.
- Keep administrative requirements to a minimum, as SMEs normally do not have large and specialised administrative capacities.
- Use the online official verification services for the requested certificates, rather than requesting the original from the company.

**Step 7: Award criteria**

When a contracting entity wants to promote innovative solutions, the mechanism of variants (see art. 45 Directive 2014/24/EU) and/or the reduction of the technical specifications in terms of functionality or efficiency (see art. 42 Directive 2014/24/EU) are two good instruments.

The use of performance-based specifications (PBS) in procurement has great potential to create room for the adoption of new technological solutions by public bodies as launching customers. PBS allow to buy innovation by specifying the functional requirements and/or desired outcomes, not prescribing the solution.

In designing functional specifications (which must be laid in the planning and research undertaken before the drafting of the tender documents begins) the requirements are less detailed than in conventional procurement. Don’t over specify as it can kill innovation.

Functional requirements must be **SMART**:

- **Specific**: Describe the objective clearly and concretely, linked to a number, amount, percentage or other quantitative data.
- **Measurable**: There must be a system, method and procedure to determine the extent to which the objective has been achieved at a certain moment.
- **Acceptable**: Is there support for what we are doing? Is it in line with policy and the organisation’s objectives?
- **Realistic**: Is the objective achievable?
- **Fixed Timeframe**: Clear start and end date

IOPP ensures value for money through the Most Economically Advantageous Tender (MEAT) as the selection and awarding criteria. In this framework, the awarding criteria should take into account not the current but the whole life-cycle costs. Furthermore, in order to award procedures there are some additional golden rules to be taken into account:

- Ensure the requirements (minimum levels of turnover, insurance cover, years of trading, financial standing of the company) are appropriate and not over-estimated, as innovation capabilities pertains equally to small, medium, as well as big sized companies.
- Be sure that all of the elements included in your selection and award criteria are clearly explained and set out.
- Assure and encourage the adoption of open standards, rather than including a standard list as routine.
- Consider environmental performances, such as the use of raw materials, sustainable production methods, energy efficiency, renewable energies, emissions, etc.
- Reflect your needs, not your wants.


Step 8: Advertisement and publicity

Competition is not just a formality, it is a tool for obtaining the best the market has to offer. However, as it can also be true that there are not several bidders, the Directives allow the public procurers to not hold competition only if exceptional circumstances apply. That is why, public procurers need to ask themselves if the relevant market actors are aware of their intentions and if there are suppliers on other markets/states, if sufficient interest was raised in the market consultation phase and if they have clearly communicated their functional requirements and performance targets as well as given the companies sufficient time to respond to their needs.

Good practices to achieve competition are:

- Publish, even if not mandatory, the tender in TED and assure a broad coverage through different channels.
- Use electronic means as they reduce transaction and communication costs.
- Ensure the electronic means you use are well adapted to your needs.
- Encourage and accept electronic tenders.
- Include a "Doing business with us..." section on your website.
- Publish PINs on the TED website. If a formal tender process is the first indication that a supplier gets of a complex requirement, the timescale may be too short for innovative solutions to be developed.

In TED (Tenders electronic Daily, accessible through SIMAP) it is possible to identify all the opportunities of IOPP in a special and single section. This section gives information about notices, documents, award decisions and others.

Another helpful tool to ensure publicity is The Procurement of Innovation Platform (1) that aims to make public procurement of innovation a widespread reality by public authorities, procurers, policy makers, researchers and other stakeholders.

Step 9: Evaluation of results

In which ways can the IOPP results be coherently measured throughout economical and technical indicators?

In 2014 EC has commissioned a study aimed to measure the impact of PCP, starting from the evidence that the existing indicators on the impact of procurement or of supply side policies do not allow to fully capture the long term impact of procuring R&D and innovative goods and services.

New economic indicators that the study proposes to investigate and monitor include those regarding:

- **Increase in European market contestability:**
  - (Raising the level of) access to the market for SMEs (in a specific sector).
  - Reduction rate of dominant market positions (in a particular sector or situations of high supply concentration).
  - (Raising the level of) internalization of EU industry through competition amongst European bidders.

- **Increase in European public sector sustainability, efficiency and effectiveness:**
  - (Raising the level of) emergence of new EU open standards (in a specific sector).
  - (Raising the level of) rationalization and interoperability of public services.
  - (Raising the level of) economies of scale determined at EU level thanks to cooperation and demand pooling.
  - (Raising the level of) re-investment of efficiency gains in the economy.

In this last step it is crucial to extract lessons for future procurement actions:

First of all, if you find an effective new solution to your requirements, share this knowledge with other public authorities and the general public. This will not only help others, but will likely help to drive down costs further for the future, as it demonstrate your commitment to innovation.

Secondly it is of vital importance to monitor how users adopt the innovation and also the performance of the solution both in economic terms and in resource consumption to identify deviations and apply, if necessary, the penalties foreseen in the contract.

11. Developed by ICLEI with support from the European Commission, and in partnership with PIANOs – the Dutch Public Procurement Expertise Centre, REC – the Regional Environmental Center for Central and Eastern Europe and IWT – the Flemish Agency for Innovation by Science and Technology.
<table>
<thead>
<tr>
<th>TITLE</th>
<th>AUTHOR</th>
<th>LINK</th>
<th>SUBJECT</th>
<th>BRIEF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-commercial procurement: Driving innovation to ensure high quality public services in Europe</td>
<td>European Commission</td>
<td><a href="http://ec.europa.eu/invest-in-research/pdf/download_en/com_2007_799.pdf">http://ec.europa.eu/invest-in-research/pdf/download_en/com_2007_799.pdf</a></td>
<td>PCP</td>
<td>How R&amp;D services can be procured in a way that applies risk-benefit sharing between procurers and suppliers and how can public authorities use research results to obtain better value for money</td>
</tr>
<tr>
<td>Review of Pre-commercial Procurement approaches and effects on Innovation: Compendium of evidence on the effectiveness of Innovation Policy Intervention.</td>
<td>Manchester Institute of Innovation Research (Manchester Business School, University of Manchester)</td>
<td><a href="http://www.research.mbs.ac.uk/innovation">http://www.research.mbs.ac.uk/innovation</a></td>
<td>PCP</td>
<td>What is PCP, reasons to use it, its legal rules and some European Union observations of Pre-commercial Procurement initiatives</td>
</tr>
<tr>
<td>Buying innovation: the 10 step guide to SMART procurement and SME access to public contracts</td>
<td>The Department of Enterprise, Trade &amp; Employment (DETE)</td>
<td><a href="http://etenders.gov.ie/Media/Default/SiteContent/LegislationGuides/25.%20Buying%20Innovation%2010%20Step%20Guide.pdf">http://etenders.gov.ie/Media/Default/SiteContent/LegislationGuides/25.%20Buying%20Innovation%2010%20Step%20Guide.pdf</a></td>
<td>PCP and PPI</td>
<td>Range of actions that should be considered at each step of the procurement process with the aim of stimulating innovation in our economy and better solutions to public service needs</td>
</tr>
<tr>
<td>Public Procurement of Innovation Policy Framework</td>
<td>Rijkswaterstaat</td>
<td><a href="https://staticresources.rijkswaterstaat.nl/binaries/Factsheet%20Policy%20Framework%20-%20Public%20Procurement%20of%20Innovation_tcm21-36762.pdf">https://staticresources.rijkswaterstaat.nl/binaries/Factsheet%20Policy%20Framework%20-%20Public%20Procurement%20of%20Innovation_tcm21-36762.pdf</a></td>
<td>PPI</td>
<td>Rijkswaterstaat is facing new challenges such as technological advances, political and social pressures, budget cuts. Traditional solutions are no longer sufficient. Therefore, there is a need for innovations which lead to smarter, safer, cheaper and more sustainable performance. The procurement policy plays a crucial role, as it pertains to ‘how’ an innovation is procured.</td>
</tr>
<tr>
<td>Risk management in public procurement of innovation</td>
<td>Direktoratet for forvaltning og IKT</td>
<td><a href="http://www.anskaffelser.no/e-procurement">http://www.anskaffelser.no/e-procurement</a></td>
<td>Risk</td>
<td>What is risk, how to assess it and which precautions to take in order to avoid it, as well as some practical examples.</td>
</tr>
<tr>
<td>Recommendations for Standards and Standardisation in the European SMART Water Market</td>
<td>ICT4WATER</td>
<td>Link not available</td>
<td>Standar-disation</td>
<td>Will the introduction of standards facilitate the creation of a market that will lead to the attainment of the EC’s energy goals? And, if so, what action should the EC take to bring this about? SMART water metering</td>
</tr>
<tr>
<td>European Innovation Partnership Water Strategic Implementation Plan</td>
<td>EIP Water</td>
<td><a href="http://www.eip-water.eu/sites/default/files/sip.pdf">http://www.eip-water.eu/sites/default/files/sip.pdf</a></td>
<td>Water sector</td>
<td>It aims to develop Europe’s strategy with regard to water and innovation, combining a long term perspective with concrete short term actions.</td>
</tr>
</tbody>
</table>
WATER PIPP
PUBLIC INNOVATION PROCUREMENT POLICIES
How-To Guide for Implementation of IOPP Procedures (EU Level)
www.waterpipp.eu