
FINAL REPORT

Feasibility study on future EU support to public procurement of innovative solutions: Obtaining Evidence for a Full Scheme [Contract Notice 2010/S 103-155769]

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Executive Summary

Main Policy Recommendations

Support of public procurement by the European Commission (EC) is a potentially very significant policy lever with which to unlock the innovation potential of the public procurement budgets of Member States (MS). This feasibility study has found strong evidence of support for such a policy to be launched, and that such a policy should have both top-down and bottom-up instruments or modalities to support procurement, including actual procurements of innovative goods and services. We propose three Strands of activity. These are described under the next three points.

1. **Strand One** is a support mechanism defined by EU policy objectives (e.g. societal challenges, industrial policy). This first Strand could be organized within the institutionalized form of the European Innovation Partnerships or LMI type activities, operating under Horizon 2020 or COSME programmes and providing a vehicle for the implementation of innovative procurements either PCP/ PPI level or at both levels. The new procurement procedure may be used. Such policy vehicles should be developed across the European landscape to meet broad public benefit goals. Contracting authorities would drive the needs assessment process, but in doing so, they should have the support of the Partnerships and Lead Markets in the key activities of coordination, learning and specification development.
2. **Strand Two** is a support mechanism based on a response mode facility to assist public buyers' (contracting authorities') meet their needs for innovative procurement. It may also encompass market needs in case of catalytic procurement (definition page 20).

Both of these Strands seek to place contracting authorities in a position to drive demand for innovation and to have a clear impact upon the technological and industrial and services' innovations of the EU. This could be implemented using a broad institutional and collaborative framework, such as European Innovation Partnerships (EIP) or Lead Markets type initiatives for Strand one, and a complementary bottom-up approach for Strand two. Both of these Strands will operate across EC Directorate Generals (DG) but with central coordination at EC level to facilitate learning and ensure coherence.

Following a significant stakeholder consultation, we can say that there is strong support for both top-down and bottom-up procurement assistance. Both schemes would operate on a principle of cross border procurer networks, thereby ensuring EU added-value. These networks (particularly in the case of Strand One) could also involve third organisations, (e.g. chamber of commerce, SME support organisation, cluster, sectoral platform, designers and end users of innovative solutions procured) that will help procurers to prepare and run successful procurements of innovation.

3. **Strand Three** develops capabilities amongst all relevant parties to the procurement of innovation (e.g. Strand 1 & 2 networks), contracting authorities mainly, but also multiplier organisations and, potentially SMEs (Small and Medium Enterprises). Support will be given to organisations that can most effectively show how contracting authorities and SMEs can engage in procurement of innovation.

Strand One Strategic Sectors	Strand Two Contracting Authority Driven
Lead Market Initiative & European Innovation Partnership Led (60%)	Response Mode Contracting Authority Innovation Needs (35%)
Strand Three Horizontal Support	
Community Development, Capability, Learning, Measurement / Evaluation & Dissemination (5%)	

Figure 1 Main Policy Options

4. The split of an overall budget within the three activities is:
 - 60% for the European Innovation Partnership (EIP) and Lead Market type actions¹; Strand 1;
 - 35% for the bottom-up procurement support, Strand 2;
 - An additional 5% is to be used for community and capability development, information sharing and dissemination of results and know-how, Strand 3.

5. The balance of support between the two main Strands has been set in such a way as to ensure that opportunities that already exist in the form of sector priorities grand challenges can be funded (approach of the future Horizon 2020 programme of the EC²), but that there is sufficient resource left to support and leverage contracting authorities own procurement of innovation. This is a balance that attempts to ensure that the potential of the procurement of innovation approach is realized in the short to the medium term, but also that in the medium to longer term, the significant demand of European public authorities is able to connect to our product and service industry base to enhance our industry and our quality of life.

6. While success in encouraging more widespread use of procurement of innovation will require leverage in the form of EC support in the short to medium term, in the long term the success will result only when there are widely available and easily understood procedures that are legally certain that can be used by contracting authorities and entities to carry out the procurement of innovation. A central goal of policy should be to embed procurement of innovation into the practice of contracting authorities and ensure that the procurement of innovation is the rule and not the exception.

¹ Refer to Lead Market Initiative of DG ENTERPRISE: http://ec.europa.eu/enterprise/policies/innovation/policy/lead-market-initiative/index_en.htm

² Refer to: http://ec.europa.eu/research/horizon2020/index_en.cfm?pg=home

7. An Annex considers a number of recently formulated recommendations for the exploration of novel legal approaches to the procurement innovation. These proposals are based on 'out-of-the-box' thinking, and do not fall within the current EU public procurement legislation or policy and would need legislative amendment or policy /guidance drafting. The proposals regard the following:
- Embedding into the directive reference to PCP;
 - Including definitions of the concept around PCP (sharing of Intellectual Property Rights (IPR); paying a market price for the R&D services; what research and development (R&D) means);
 - Allowing the application of the negotiated procedure without prior publication by the purchasing authority who previously conducted a PCP procedure, for the purpose of purchasing the product/service developed during that PCP procedures, provided that at the moment when the negotiated procedure is conducted, the contracting authority is still the first customer;
 - Imposing compliance with the principle of best value for money when conducting PCP or PPI, in order to ensure that innovation entails added-value for the performance of the public task and that EU-wide competition is guaranteed;
 - Including the possibility to use value engineering as contractual clause;
 - Encouraging the involvement of purchasing authorities from different Member States from the start of a PCP procedure, by including in the contractual terms of a PCP procedure the requirement for firms to allow the use of the developed products/ services by these other contracting authorities, against discounted (license) prices.

Origins of the Study

8. This document is the **Final Report** of the Feasibility study on *future EU support to public procurement of innovative solutions: Obtaining Evidence for a full Scheme*³ which was begun in November 2010 at the initiative of DG ENTERPRISE & INDUSTRY (DG ENTR). The staged process and the date for its delivery has been agreed following discussions with DG ENTR:
- **First Part of the Study:** publication of the Study Team's Report⁴ of recommendations on the definition of a Pilot Call for Proposal dedicated to EC support to Public Procurement of Innovation under the Competitiveness and Innovation Programme (CIP-EIP)⁵. Presentation and discussion of Stage One during the "High Level Experts Workshop on Public Procurement of Innovation: Towards a European Scheme" in Brussels on 31 March 2011⁶;

³ Contract number: No 18/PP/ENT/CIP/10/E/N02C011 LOT 3.

⁴ Refer to: http://ec.europa.eu/enterprise/policies/innovation/policy/lead-market-initiative/files/conference2011/feasibility-study_en.pdf

⁵ Refer to: http://ec.europa.eu/cip/eip/index_en.htm

⁶ Refer to: http://ec.europa.eu/enterprise/policies/innovation/policy/lead-market-initiative/pp-conf2_en.htm

- Publication of the Pilot Call for Proposal on 23 June 2011 by DG ENTR⁷, and presentation of the Call for Proposal during the High Level Conference on the Procurement of Innovation which took place in Turin June 27th and 28th, 2011⁸;
 - **Second Part of the Study:** seeks to determine in what way the Pilot Call for Proposal and Scheme which the Commission designed from the recommendations of the first part of the study of our work could be extended. While the Pilot Call for Proposal and Scheme (the Pilot) was developed to operate under the legal instrument of the CIP, and to explore the demand, scope and practicability of support to the procurement of innovation generally, it was acknowledged and understood by both the EC and the Study Team that the full scheme would operate within a different context, in the future "Horizon 2020" or "Programme for the Competitiveness of enterprises and SMEs (COSME)"⁹ frameworks from 2014 to 2020.
9. While the European Union has quickly assumed there was scope for public procurement of existing goods and services to be used to promote innovation in the economy generally, awareness has grown that public support of innovative procurement through the purchase of R&D services was a possible complement or alternative to the support of demand through the procurement of innovative products. Understanding of this aspect of purchasing of innovation through the support of R&D services came, to a very significant degree, from the US, where the SBIR programme¹⁰, established in 1982, supports the procurement of R&D services, in the EU known by the term, Pre-Commercial Procurement (PCP). While the US SBIR scheme has been an inspiration for similar initiatives in the European Member States, and also potentially for the European Commission, the element of 'public procurement' in this scheme has often been overstated, and it is important to note that the US SBIR is not a public procurement programme *per se* and a model for what the European Union is seeking to achieve in this respect.
10. The US SBIR scheme has many variants (depending on the US Agency involved) and a majority of the SBIR (Small Business Innovation Research) agencies do not move towards actual procurement of the outputs of the R&D –projects, with the exception of some R&D projects conducted for the Department of Defense (DOD) and NASA (National Aeronautics and Space Administration). Notwithstanding, the DOD-SBIR has additional incentive schemes to stimulate companies to be successful in the commercialisation phase of their projects. Thus there is no automatic link between the SBIR R&D project and the actual public procurement, which is the responsibility of different parts of the DOD. In this sense the US SBIR programme mobilises R&D funds with the various agencies from all policy domains, and only to a limited degree public procurement funds. Nevertheless, the sheer size of the SBIR-programmes with all involved US Agencies (roughly \$2.5 billion per year) makes its overall impact on small firms quite large.

⁷ Refer to: http://ec.europa.eu/enterprise/newsroom/cf/_getdocument.cfm?doc_id=6921

⁸ Refer to: <http://www.comune.torino.it/relint/PPI/>

⁹ Refer to : <http://ec.europa.eu/cip/cosme/>

¹⁰ Refer to: <http://www.sbir.gov/>

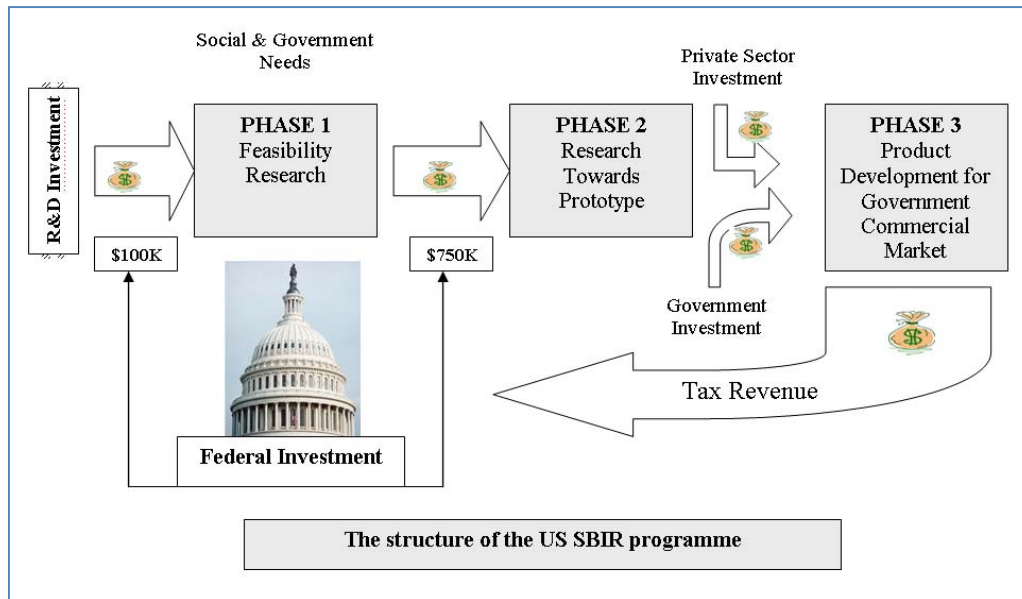


Figure 2 Charles Wessner (The National Academies) Scheme of SBIR©, presented at the invitation to DG ENTR in a Workshop "Linking Innovation and Public Procurement" 20-21 October 2009¹¹

11. The European scheme that we have been tasked to assist with the design of is explicitly intended to mobilise the vast pool of public procurement budgets, budgets that could stimulate innovative solutions. Although our original brief was to consider *inter alia* a European type SBIR scheme, in fact we are not tasked to develop another type of R&D grant scheme for companies, but rather (a set of) scheme(s) that mobilise(s) public procurers (i.e. contracting authorities) to purchase innovations. A range of possible government interventions are available to achieve this.

¹¹ Refer to: http://ec.europa.eu/enterprise/policies/innovation/policy/lead-market-initiative/pp_workshop_en.htm

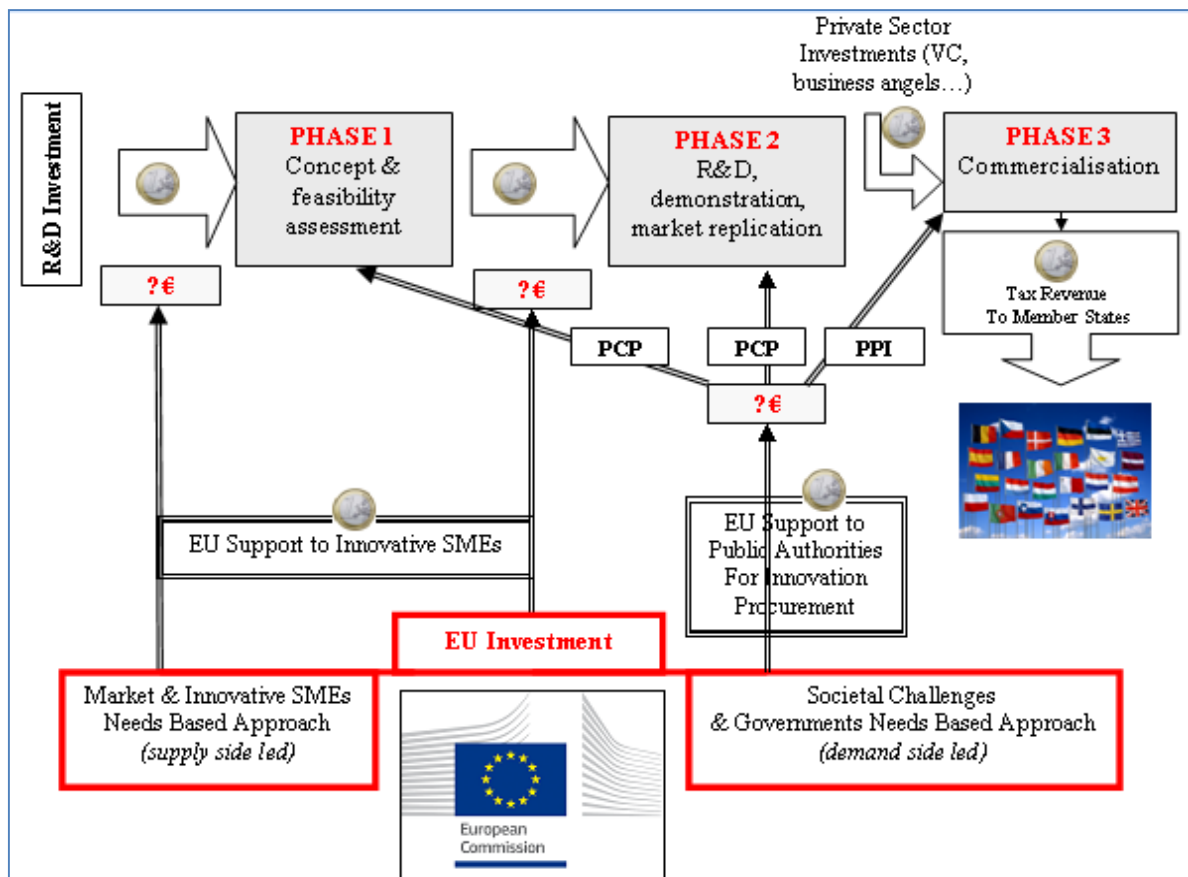


Figure 3 Potential EU SBIR and Innovation Procurement Scheme Options Working under Horizon2020 Programme

12. Key questions for the study have been:

- Who should decide what demand should be met by the procurement of innovation and receive the support of the EU (and Member States, if acting together)?
- Who should check whether the procurement product/service qualifies as ‘innovative’?
- What is the best procedure (Pre-Commercial Procurement (PCP), Public Procurement of Innovation (PPI) or some combination of approaches) to use to achieve the goal identified? Who should operate the procedures involved in the procurement?
- What support should be given to procurement organisations?

Context and Methods of the Study

13. The Pilot has been effective in promoting the goal and rationale of innovative procurement and demonstrating the EC’s willingness to support it. The evidence of interest has come from the applications to the Pilot, and also from the positive light in which the policy development in this area is viewed by contracting authorities and by most Member States. The case for EU-level support is strong, both due to the risk of fragmentation of innovative markets and the link to existing EU policy priorities under Horizon 2020, Innovation Union, and the size and potential of the public procurement budget (€2 trillion per annum or 18% of EU GDP) to be used on encouraging innovation in the economy of the Union.

14. The current policy context is one that is immensely fluid. The Horizon 2020 proposals have just been published¹²; the EC proposals for revision of the Public Procurement Directives have been published in December 2011¹³; and the Industrial Policy flagship is in implementation phase¹⁴. These are all important contexts for the operation of any policy that would support the procurement of innovation. Nevertheless, these changes do not justify doing nothing now to implement policy to promote the procurement of innovation. Much can be gained by continuing the efforts that have begun.
15. Economic difficulties add a further edge and imperative to make sure that the EU's budgets are used constructively, effectively and efficiently to implement the vision of the Innovation Union. And while the introduction of the Horizon 2020 is some distance away (2014-2020), and the possible changes to the legal framework for procurement are more distant (first transposition in Member States legal framework foreseen at the earliest for 2015-2016), it is important to begin to act now in establishing a role for a policy to promote the procurement of innovation, putting it at the heart not only of EU innovation policy but of EU policy as a whole.
16. Contracting authorities and their spending power provide the major justification for demand side initiatives that encourage the procurement of innovation, whether PCP or PPI. Without the strong pull of demand, many innovations stay on the shelf, never achieving the impact that those developed with a large market can.
17. Disseminating information about innovation procurement experiences and outcomes of PCP and PPI projects is important to avoid duplications. We would recommend that while support schemes are prudent in their financial support of innovations, the appropriate assessment procedure ensures that projects are truly innovative as a prerequisite for any financial support.
18. The conventional view of policy making has been that pre-commercial procurement is the prior step that precedes in all cases the actual procurements of final goods and services (through the public procurement directives). But while there is an important link between these two forms of procurement, it should be not be assumed that PCP always precedes PPI. Indeed, all procurement procedures should start with need assessment and market consultation run by the procurer.

Scenarios and Policy Options

19. Two broad policy scenarios were identified as potential orientations for EU support for PCP/PPI. These formed the basis for consultation in the second phase of the study. The two scenarios correspond to "bottom-up" (lead by needs identified by contracting authorities) and "top-down" (lead by common policy priorities identified at EU level) approaches to the support of PCP/PPI. Although in reality the modality of support is likely to involve elements of both scenarios, examining them separately allowed for their respective strengths and weaknesses to be assessed.

¹² Ibidem: http://ec.europa.eu/research/horizon2020/index_en.cfm?pg=home

¹³ Refer to: http://ec.europa.eu/internal_market/publicprocurement/modernising_rules/reform_proposals_en.htm

¹⁴ Refer to: <http://ec.europa.eu/enterprise/policies/industrial-competitiveness/industrial-policy/>

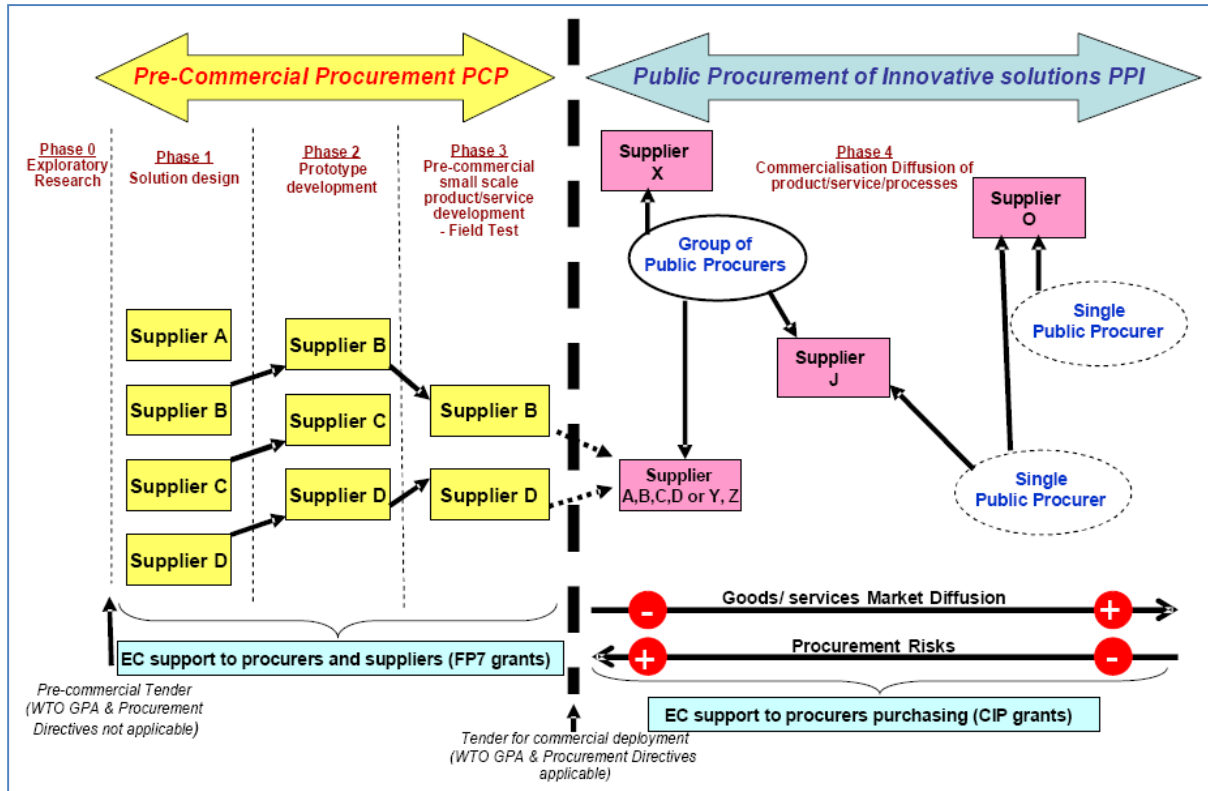


Figure 4 Current EC Possible Approaches to Support Innovation Procurement via PCP (FP7) and PPI

Terms of reference of the Study

Background

The importance of public procurement as a driver of innovation has been clearly recognised in EU innovation policy, including the 2006 "Broad Based Innovation Policy"¹⁵, the 2007 "Guide of Dealing with Innovative Solutions in Public Procurement"¹⁸, the 2007 "Lead Market Initiative for Europe"¹⁶, and the 2007 Commission Communication on "Pre-commercial procurement: driving innovation to ensure sustainable high quality public services in Europe"¹⁷.

For the implementation of these policies, the Commission has supported specific networks of public procurers under the Lead Market Initiative¹⁸ and on Pre-commercial procurement¹⁹.

In the context of the development of a new European Research and Innovation policy under the Europe 2020 strategy²⁰ the Commission is considering possible new approaches to strengthening public procurement of innovation. An expert workshop was held in October 2009²¹ and a conference organised in March 2010²².

One of the proposals under consideration is to introduce a support mechanism modelled on the US SBIR scheme²³ which would support public procurers in EU Member States to implement public procurements of innovative solutions, including pre-commercial procurements. Such schemes are being introduced in some Member States²⁴ but there may be added value to support such developments at EU level. Such support could consist of access to expertise (for example on definitions, preparations, implementation, evaluation, and assessments) and/ or co-funding the procurement costs. EU added value could come from, inter alia, access to transnational expertise, trans-national collaboration in the preparation, evaluation and/or implementation of procurements, joint or coordinated procurements across several Member States, promoting the access of tenderers from other countries, promoting the innovative solutions developed in such procurement contracts to be taken up in procurement markets across the EU, and relevance of the procurement topics to EU policies and objectives in areas such as environment, energy, health and transport policies.

The feasibility study should examine: the potential barriers and benefits for procurement authorities (contracting authorities within the meaning of Directive 2004/17/EC and Directive 2004/18/EC) to undertake procurements of innovative solutions, including pre-commercial procurements; how such barriers could be overcome and benefits enhanced through EU support; and how an EU support scheme could be designed to maximise benefits and EU added value.

The results of the feasibility study will be used to prepare a possible pilot call to test a new EU support scheme and for the development of future EU innovation support programmes.

¹⁵ Refer to: http://ec.europa.eu/enterprise/policies/innovation/policy/index_en.htm

¹⁶ Refer to: http://www.proinno-europe.eu/doc/procurement_manuscript.pdf

¹⁷ Refer to: http://ec.europa.eu/information_society/tl/research/priv_invest/pcp/index_en.htm

¹⁸ Information on the Lead Market public procurement networks can be found at http://ec.europa.eu/enterprise/policies/innovation/policy/public-procurement/index_en.htm and http://ec.europa.eu/enterprise/policies/innovation/policy/lead-market-initiative/public-proc_en.htm

¹⁹ Information on the Pre-commercial procurement networks can be found at Refer to: <http://www.P3ITS.eu> and <http://preco.share2solve.org/main/>

²⁰ Refer to: <http://ec.europa.eu/eu2020/>

²¹ Refer to: http://ec.europa.eu/enterprise/policies/innovation/policy/lead-market-initiative/public-proc_en.htm

²² Refer to: http://ec.europa.eu/enterprise/policies/innovation/policy/lead-market-initiative/public-proc_en.htm

²³ Refer to: <http://www.er.doe.gov/sbir/>

²⁴ Presentations on experiences in Member States can be found in the documentation for the workshop at: http://ec.europa.eu/enterprise/policies/innovation/policy/lead-market-initiative/public-proc_en.htm

Description of tasks

The successful contractor will be expected to undertake the following tasks.

1. Provide options and recommendations for how an EU scheme should be conceived and implemented, including scale of such a scheme to have critical mass and impact; whether an open call or other procedure should be used to identify which contracting authorities should be awarded support for innovative procurements; the most efficient delivery mechanism as close as possible to the end user, having in mind that no new structures at EU level will be created; the extent to which the thematic subjects/topics of the procurements should be defined or left open to contracting authorities to propose; how to ensure a common framework to which all the support scheme would need to comply; and the terms and conditions that could apply to EU support, notably in terms of requirements for trans-national collaboration.

2. To assess the feasibility of the identified options.

The identification and assessment of options will have to be based on:

- **An assessment of the barriers and benefits** for contracting authorities to undertake procurements of innovative solutions, including pre-commercial procurements.

- **An assessment of the EU added value** of possible financial support from the EU level. This could include identification of activities and objectives that could not be optimally realised at local, regional or national levels, and to what extent it would be desirable and feasible to require trans-national collaboration. Such transnational collaboration could include access to trans-national expertise, transnational collaboration in the preparation, evaluation and/or implementation of procurements, joint or coordinated procurements across several Member States, promoting the access of tenderers from other countries, promoting the innovative solutions developed in such procurement contracts, and relevance of the procurement topics to EU policies and objectives in areas such as environment, energy, health and transport policies. This assessment should also consider whether EU support should require participating contracting authorities to comply with a framework of good practice (for example in treatment of Intellectual Property Rights) such that there is a certain level of commonality in the procurements implemented in different countries.

- **An assessment of potential legal barriers to procurements of innovative solutions** including those stemming from the EU Directives²⁵, implementation of the Directives into national legal frameworks, and 'soft law' (guidance, interpretations etc.).

The methodological approach used to make the above assessments and reach recommendations, could include **interviews, surveys or case studies** to understand the real situation of contracting authorities. The analysis and recommendations should also draw on existing evaluations and information on comparable schemes in other countries, notably the US SBIR scheme, as well as those in EU Member States. Innovative methodological approaches in addition to these elements would be welcomed.

The successful contractor will be invited to **present and discuss the development and results of services in policy discussions** organised by the European Commission services. In addition, the Commission services will provide support to the work on the basis of information and expertise available, for example in identifying contracting authorities that are currently participating in EU funded networks and projects and providing access to data from contracts notified in the Official Journal (i.e. TED database).

²⁵ Directive 2004/17/EC and Directive 2004/18/EC

1 Introduction and Context for the Study

1.1 This Report

This document is the **Final Report** of the Feasibility study on *future EU support to public procurement of innovative solutions: Obtaining Evidence for a full Scheme*²⁶; that has been launched in November 2010 at the initiative of DG ENTERPRISE & INDUSTRY (DG ENTR). The staged process and the date for its delivery have been agreed following discussions with DG ENTR:

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- Publication of the Pilot Call for Proposal on 23 June 2011 by DG ENTR³⁰, and presentation of the Call for Proposal during the High Level Conference on the Procurement of Innovation which took place in Turin June 27th and 28th, 2011³¹;
- **Second Part** of this Study seeks to determine in what way the Pilot Call for Proposal and Scheme which the Commission designed from the recommendations of the first part of our work could be extended. While the Pilot Call for Proposal and Scheme (the Pilot) was developed to operate under the legal instrument of the CIP, and to explore the demand, scope and practicability of support to the procurement of innovation generally, it was acknowledged and understood by both the EC and the Study Team that the full scheme would operate within a different context, in the future Horizon 2020 framework from 2014 to 2020.

²⁶ Contract number: No 18/PP/ENT/CIP/10/E/N02C011 LOT 3.

²⁷ Refer to: http://ec.europa.eu/enterprise/policies/innovation/policy/lead-market-initiative/files/conference2011/feasibility-study_en.pdf

²⁸ Refer to: http://ec.europa.eu/cip/eip/index_en.htm

²⁹ Refer to: http://ec.europa.eu/enterprise/policies/innovation/policy/lead-market-initiative/pp-conf2_en.htm

³⁰ Refer to: http://ec.europa.eu/enterprise/newsroom/cf/_getdocument.cfm?doc_id=6921

³¹ Refer to: <http://www.comune.torino.it/relint/PPI/>

1.2 Schedule and Reporting of the Project

1.2.1 Main Aims

The work of the second part of the study continues a consultation design and advice process begun following the submission of the Interim report. The Interim report was the basis that allowed the Commission to design a Pilot Scheme, launched in June 2011. The work of Stage Two comprises a further consultation on the appropriate design of the larger scheme and has taken the opportunity to observe feedback on and reaction to the Pilot itself from potential users, actual users and experts. Our analysis and recommendations for possible schemes or initiatives that could be employed in the future is based upon various sources of evidence including a review, undertaken under conditions of strict confidentiality, of the applications to the Pilot, 22 interviews with the EC, members of the European Parliament, and a small number of key innovation actors, and input from the Expert Panel members.

1.2.2 Schedule and Reporting

The Study concludes on the December, 2011 allowing the Study Team to present its work during a High Level meeting at the European Parliament on 9th February 2012.

1.3 Context for the Second Part of the Study – Development of a Major European Scheme to Support Public Procurement of Innovation (PCP/PPI)

The Second Part of this Study sought to determine in what way the Pilot Scheme (2011 CIP call for proposals n°N02C011)³², which the Commission designed from the recommendations of the first part of the study, could be extended. While the Pilot Scheme (the Pilot) (European Commission Directorate General Enterprise and Industry, 2011) was developed to operate under the legal instrument of the Competitiveness and Innovation Programme (the CIP), and to explore the demand, scope and practicability of support to the procurement of innovation generally, it was acknowledged and understood by both the EC and the Study Team that the full scheme would operate within a different context.

This context was understood to be likely to be the successor to the current Framework Programme, Horizon 2020. However, given extensive range of contexts in which public procurement occurs and the potential importance of public procurement within the European economy, and in keeping with the invitation to tender which was broad in scope, it was agreed with the Commission that the Study Team should in second part consider how support to the procurement of innovation by the Union could be achieved in a range of contexts, including the Framework Programme 7³³ and beyond, for example within the area of the Regional Structural Funds³⁴.

This wide scope for the implementation of policies to support the procurement of innovation and the current preparations for Horizon 2020 have required the focus of the second part of the study (also applicable to first part) to be on the possibilities and options for action by the EC rather than on the implications for support of the procurement of innovation within known policy framework.

The Study Team believes that framework of activities outlined in draft report remains relevant to the full scheme, but that a number of other aspects should also be considered. These other aspects are the support to PCP itself, an issue that while covered in the first set of consultations could not be an explicit goal of the Pilot (the legal basis of the CIP does not permit the financing of R&D activities (e.g. PCP) that are vested to FP7); and the basis on which support scenarios can be assessed and compared.

The (pre) and actual procurement activities that could potentially be included by an EU scheme and that were explored in the study are:

1. Supporting the process of **Needs Assessment** by contracting authorities
2. **Capacity Building** (e.g. training, exchanges, secondment of personnel)
3. **Coordination** (between multiple contracting authorities)
4. **Market Consultation** (supporting the process of dialogue with potential contractors to assess the state-of-the-art and technological limitations for potential innovative solutions)
5. **Specification Development** (supporting contracting authorities to articulate their needs in a way that ensures the best response from potential contractors)
6. **Co-Financing Of Actual Purchase Costs Or Pre-Commercial Procurement**
7. **Risk-Management**
8. **Linking PCP With Public Procurement Of Innovation** (enhancing the actual commercialisation of the outcome of research and development projects)

³² Refer: http://ec.europa.eu/enterprise/newsroom/cf/_getdocument.cfm?doc_id=6921

³³ Refer to: http://cordis.europa.eu/fp7/home_en.html

³⁴ Refer to: http://ec.europa.eu/regional_policy/index_en.cfm

The evaluation criteria proposed for potential support scenarios are:

1. Ability of the scenario to support the eight activities
2. EU added value
3. Compliance with Public Procurement and State Aid rules
4. Effectiveness in supporting innovation
5. Suitability for funding under Framework Programmes and/or Structural Funds
6. Potential to attract co-financing at MS level
7. Complementarity with existing EU/MS support measures (including supply side measures)
8. Practical implementation issues
9. Responsiveness to address the needs of contracting authorities
10. Sectoral fit/ coverage

1.3.1 Current Economic Policy Challenges

Governments around the world face difficult choices in how to promote secure, sustainable and competitive economic growth against a backdrop of challenging problems or societal challenges: climate change, resource depletion, energy shortage, demographic changes, changing migration patterns. In Western Europe, both within the European Union and its Member States, a wide variety of initiatives have been taken to promote growth and competitiveness. Important opportunities for the promotion of trade have come from the creation of the European Single Market by the Treaty of Maastricht in 1992.

Despite the development of the Single Market and the adoption of a single currency, there have remained concerns about the competitiveness of the European Economy as a whole. These concerns have particularly focused on the innovation capabilities and investment in research development and innovation. In 2000, the Lisbon Process marked the new focus of attention on the R&D intensity of the European economies, outlining a target for increased R&D spending across the EU as a whole and other measures to promote innovation.

Reflection on the Barcelona / Lisbon process by policy makers within the EU and by academic commentators and by the business sector supported the development of a new consensus on what measures might be taken to address the challenges identified. This reflection led to the adoption of the view that government could itself do more to promote innovation by ensuring that its own procurement of goods and services achieve greater investment in new technologies, with all the benefits that might bring with it. Examples can be found in green procurement and the procurement of smart buildings. A new set of public procurement directives (European Parliament and the Council, 2004a, 2004b) and more recently a defence procurement directive (European Parliament and the Council, 2009) also provided opportunities for public procurement to be used to exploit the advantages of the single market to increase competition and stimulate innovation.

In the last decade, since the key studies on the raising of EU R&D intensity, and in particular the Direct Measures Study, (European Commission, 2003a, 2003b) Aho Report (Aho, 2006), there has been greater awareness of the role which government could play in the economy by acting as a demanding customer through public procurement. This re-emergence of the policy of using government procurement places a new emphasis on government as a stimulator of innovation to drive economic growth. The policy has some successful and unsuccessful examples (J. Edler, Ruhland, S., Hafner, S., Rigby, J., Georghiou, L., Hommen, L., Rolfstam, M., Edquist, C., Tsipouri,

L. and Papadakou, M., 2005; Flyvbjerg, Holm, & Buhl, 2006; Han et al., 2009; Reeves & Ryan, 2007; Uyarra & Flanagan; Uzuegbunam, 2005) many of which provide lessons for policy makers. The conclusion of much of this research is that the implementation of procurement of innovation should not be regarded as a simple policy exercise.

While the European Union has quickly assumed there was scope for public procurement of existing goods and services be used to promote innovation in the economy generally, awareness grew that public support of innovative procurement through the purchase of R&D services was a possible complement or alternative to the support of demand through the procurement of innovative products and services. Understanding of this aspect of purchasing of innovation through the support of R&D services came, to a very significant degree, from the US, where the SBIR programme, established in 1982, supports the procurement of R&D services, in the EU known by the term, “pre-commercial procurement”.

While the US SBIR scheme has been an inspiration for similar initiatives in the European Member States, and also potentially for the European Commission, the element of ‘public procurement’ in this scheme has often been overstated, The US SBIR scheme has many variants (depending on the US Agency involved) and a majority of the SBIR agencies do not move towards actual procurement of the outputs of the R&D – projects, with the exception of some R&D projects conducted for the Department of Defense (DOD) and NASA. Notwithstanding, the DOD-SBIR has additional incentive schemes to stimulate companies to be successful in the commercialisation phase of their projects (Figure 2 Charles Wessner (The National Academies) Scheme of SBIR©, presented at the invitation to DG ENTR in a Workshop "Linking Innovation and Public Procurement" 20-21 October 2009). Thus there is no automatic link between the SBIR R&D project and the actual public procurement, which is the responsibility of different parts of the DOD. In this sense the US SBIR programme mobilises R&D funds with the various agencies from all policy domains, and only to a limited degree public procurement funds. Nevertheless, the sheer size of the SBIR-programmes with all involved US Agencies (roughly \$2.5 billion per year) makes its overall impact on small firms quite large.

The European scheme that we have been tasked to design explicitly aims to mobilise the very significant public procurement budgets that could stimulate innovative solutions across the EU on a grand scale. Our task is not to develop another type of R&D grant scheme for companies, but rather (a set of) scheme(s) that mobilise(s) public procurers (i.e. contracting authorities) to purchase innovations and works at the European level.

Few major policy approaches are constituted by a single modus operandi, and take one single form. Rather, major policy approaches, right across the range of government activities, are capable of implementation in a wide range of forms. Policy makers have wide scope in how they might wish to put into effect policy principles. Support to the procurement of innovation is very much a case in point.

Both pre-commercial procurement, and the wider concept of the procurement of innovation, which normally refers to the procurement of innovative products in Phase 4 of the innovation cycle (Figure 4 Current EC Possible Approaches to Support Innovation Procurement via PCP (FP7) and PPI), can take many forms; moreover, within the context of the European Union, the scope for implementation of policy is diverse in terms of levels, scale, target group, etc. This broader scope for implementation comes, however, with both opportunities and threats.

The dimensions to support for pre-commercial procurement and procurement of innovation are broad. Under existing rules and directives, these activities are already defined. They are what one might call modalities of innovative procurement. PCP is already available as a methodology for the

procurement of innovation. Likewise, under the procurement directives, a range of procedures are already available to promote innovative procurement. A number of alternatives and new options within PCP and within PPI are being developed. For example, in the Netherlands, an integrated approach to PPI was tested (Apostol, 2012 Forthcoming). The approach is based on the idea that the contracting authority/entity should gather information on the available innovative solutions through a market dialogue and should incrementally implement the solution (through piloting) in order to minimize the risks and uncertainties related to large innovative projects. During the execution of the awarded contract, providers are stimulated to propose cost reductive innovations through value engineering clauses and the success of the project and the points of improvement are identified through audits.

Within PCP there are currently three modalities, following the work of (Gavras et al., 2005):

- where procurement of R&D services is undertaken by the public user for the same user;
- where it is done by a public agent or a PPP (Public Private Partnership) for another public user (the UK TSB model includes a number of instances of this kind);
- where it is done by a public agent for a possible private set of clients and where there is a clear public benefit (i.e. that is a public good will result). This type of PCP can be assimilated to what is called a "catalytic procurement".

The Inno Partnering Forum³⁵ (e.g. ad hoc group of Member States innovation agencies) considers these options (Inno Partnering Forum, 2010a)³⁶ but without sufficient experience on the part of the EC and MS with the concept, the challenge of design and implementation has been left until the moment in the policy cycle when key frameworks of the EU were again open to review (European Commission, 2011). The key contexts at this stage are the Framework Programme (FP7 or R&D European Funding Programme), the most recent of which will be known as Horizon 2020, and the public procurement directives (2004: 17/18), a consultation for which took place during 2011.

Options for PPI are also being developed. For example, in the Netherlands, an integrated approach to PPI was tested (Apostol, 2012 Forthcoming). The approach is based on the idea that the contracting authority/entity should gather information on the available innovative solutions through a market dialogue and should incrementally implement the solution (through piloting) in order to minimize the risks and uncertainties related to large innovative projects. During the execution of the awarded contract, providers are stimulated to propose cost reductive innovations through value engineering clauses and the success of the project and the points of improvement are identified through audits.

³⁵ Refer to: <http://www.proinno-europe.eu/partnering-forum>

³⁶ Refer to: www.proinno-europe.eu/sites/default/files/newsroom/2011/12/8Feasibility%20Study_Final%20Report_final%20version_6_Insufficient%20use%20of%20public%20procurement%20to%20foster%20innovation%20in%20SMEs.pdf

The Likely Scope of the Activities

In the first phase of the study, the Study Team elaborated seven types of activities that could be supported by the European Commission, following an extensive and detailed consultation with stakeholders in the Member States and the European Commission.

Activity 1 – Assessment Of Needs

These activities can range from:

1. Structured needs assessment activities
2. Analysis of existing policy problems with other organisations in the same country / region
3. Analysis of existing policy problems with organisations in other Member States
4. Defining needs together with other public organisations in order to achieve critical mass
5. Secondment or exchange of personnel

Activity 2 – Capabilities And Capacity Building For PPI/PCP

This could for instance be:

1. Networking activities at EU level
2. Development of guidelines at EU level
3. Training and workshops at EU level
4. Dissemination of good practice examples at EU level
5. Secondment or exchange of personnel at EU level

Activity 3 – Setting Up Cooperation

This could potentially include:

1. Set-up of cooperation for purpose of joint tendering e.g. via a common procurement entity, lead authority, or piggy backing
2. Direct organisation by the EU/Commission of a procurement for public authorities to be involved in
3. Support in the form of guidelines/agreements of understanding on cross-border collaboration
4. Help desk at the disposal of contracting authorities during the procurement

Activity 4 – Market Consultation

Which includes:

1. Market consultation to establish state-of-art for innovative products/services
2. Joint market consultation with other bodies in your country / region
3. Joint market consultation with bodies in other Member States
4. Establishment of mechanisms to allow for market consultation (e.g. platform for structured interaction with suppliers)
5. Secondment or exchange of personnel

Activity 5 – Specification Development

This includes the following potential forms of support:

1. Expert advice on performance-based specifications
2. Obtaining access to performance-based specifications developed by other organisations (e.g. via an EU database or a platform of exchange)

3. Carrying out a technical dialogue in collaboration with other contracting authorities to develop specifications
4. Reducing the cost of consulting relevant standards and certifications
5. Testing specifications against innovative solutions not yet widely available on the market (e.g. a prototype)

Activity 6 – Purchasing Innovation

The following potential forms of support (for PPI only) could be envisaged:

1. Costs directly associated with running a competition – (e.g. preparing tender documents, advertising, hosting site visits, joint evaluation and selection processes)
2. Funding for design contests (e.g. jury and prize costs)
3. Direct co-funding of some (i.e. not 100%, but rather 10% to 20% as a form of incentive for innovation costs related to risk taking & novelty) of the purchase costs of innovative products or services procured by public authorities
4. Help desk at the disposal of contracting authorities during the procurement

Activity 7 – Addressing Risks

This could include the following potential forms of support:

1. Ensuring the availability of references/testimonials from contracting authorities who have been involved in R&D, PCP or first-purchase of innovative products/services
2. Opportunity to carry out site visits
3. Secondment or exchange of personnel
4. Certification of innovative products or services supported by contracting authorities with direct experience of their development/implementation
5. Providing an indemnity against the risk of failure of innovative products or services purchased by a public authority
6. Insurance scheme

After consultation with many stakeholders (see Interim Report³⁷) the team suggested to support the following types of activities in the DG Enterprise Pilot call.

In this final report we refer back to these types of activities in our scenarios and recommendations of how a scaled up version of the European Commission activity or scheme could be designed. Given that the constraints upon funding R&D activities based on the CIP, no longer apply in the framework of Horizon 2020 starting in 2014, pre-commercial procurement activities can now also be added to the list. Activity 6 can therefore be expanded to include co-financing of costs for both R&D services and procurement of final products/services. An eighth activity should also be added to connect these two phases.

Activity 8 – Linking PCP and PPI

The following activities could facilitate the transfer of innovations from PCP to PPI stage:

1. Creating a common methodology for the application of PCP results in procurement, including guidelines for the handling of intellectual property rights

³⁷ Refer to: http://ec.europa.eu/enterprise/policies/innovation/policy/lead-market-initiative/files/conference2011/feasibility-study_en.pdf

2. Support for the dissemination of PCP results to other contracting authorities, (e.g. via a platform, central purchasing bodies or joint investment vehicles)
3. Support for the use of specific procurement techniques (such as the proposed *Innovation Partnership* procedure in the revised Procurement Directives³⁸) to link PCP and PPI activities together.

³⁸ Ibidem: http://ec.europa.eu/internal_market/publicprocurement/modernising_rules/reform_proposals_en.htm

1.3.2 Policy Design

Rationales

The use of the demand side – and related to that, the public procurement budget – as a means of driving innovation in the economy with a substantial power of demand has a number of rationales, and a number of possible choices are available to policy makers. The rationales for policy have generally been considered to be the following:

- a) The procurement of innovation can use the power of demand (e.g. first buyer or lead customer) to stimulate the economy and increase competitiveness of firms in future markets, creating new businesses and increasing the level of employment;
- b) such procurement brings new ideas into being which may provide direct benefits to the public as the users of public services which are then provided more efficiently and effectively, and also more cheaply;
- c) new products and processes can also be created which, while not used directly by the public services, have substantial public benefits (externalities) that ultimately reduce the costs of government and increase public welfare³⁹.

Growth or Sustainability?

We note that public procurement of innovation has been assumed by some to be a way of increasing economic growth and that increasing economic growth is the sole purpose of this form of demand side measure. However, government's responsibilities have to extend beyond growth to other policy priorities, and one very important priority, which the European Union recognizes with some of its grand challenges areas; such as the six Societal Challenges mentioned in "Horizon 2020"⁴⁰

1. Health, demographic change and wellbeing;
2. Food security, sustainable agriculture, marine and maritime research and the bio-economy;
3. Secure, clean and efficient energy;
4. Smart, green and integrated transport;
5. Climate action, resource efficiency and raw materials;
6. Inclusive, innovative and secure societies.

IPR Issues

The creation of intellectual property (IP) within a public procurement (particularly within a pre-commercial procurement) is a desirable goal of procurements and a sign that the procurement has resulted in innovation of economic and social importance. The PCP procedure and related documents outline the way in which the various IPRs arising from procurement (foreground) can be allocated so as to ensure that the PCP constitutes a shared risk activity between supplier and contracting authority.

³⁹ An example often given is of the UK's purchase of R&D services to improve mobile phones so as to deter theft (could you indicate a web link to this example?)

⁴⁰ Refer to: http://ec.europa.eu/research/horizon2020/pdf/proposals/communication_from_the_commission_-_horizon_2020_-_the_framework_programme_for_research_and_innovation.pdf#view=fit&pagemode=none

The allocations of IPRs that arise from a PCP require very detailed consideration, particularly with regard to licensing terms and the pricing of IPRs so as to meet the condition of shared risk. Of relevance also to public procurers, although not greatly considered, is the important legal question of how IPR generated within a PCP might affect the competitiveness of markets. It is not possible at the point at which contracts for a PCP are drawn up to consider the implications of licensing and pricing of IPRs upon the competitiveness of other markets however.

Options for Policy Action

Government use of demand based policies can take a number of forms. Two general options are available, the share of government procurement can increase as a proportion of government expenditure⁴¹, and government's priorities for procurement can change⁴².

Changing the Focus of Government Expenditure

As we note above, government can switch its expenditure between different forms (from procurement on the one hand to research and development through grants on the other), and it can change its expenditure so that it is the private sector that provides goods and services to the public rather than organisations that are publicly owned and managed, a position that would be achieved by a privatization policy or public private partnership. However, the question of how the balance of this funding should be struck is a major one since both public procurement and its alternatives such as grant funding have major implications for the operation of the science and innovation system. This Study did not intend to deal with this issue, but nevertheless notes its importance and draws attention to the need to consider how changes in overall priorities for government spending, resulting from a commitment to greater demand side measures, will affect the science and innovation system (Bosetti, Carraro, Massetti, & Tavoni, 2008; Flanagan, Uyarra, & Laranja, 2011).

Changing Priorities

Government can change the priorities for its expenditure on procurement by altering the way in which contracting authorities procure goods and services. A number of options are open here. Governments can provide enabling frameworks that facilitate more innovative procurement. The existing PCP procedure drawn by the European Commission⁴³ is an example of this. Government can also change or attempt to change the criteria used by public procurement organisations to justify their purchases. The procurement directives and their respective national transpositions constitute one major form of control of the actions of contracting authorities. They can be changed to require or to allow a greater level of innovation required in products or services. On top of these initiatives, government can provide further enabling grants to public procurers to assist the costs of innovation related expenditure. Government can also support contracting authorities to acquire the capability to operate in these new contexts.

⁴¹ Procurement can be increased as a share of government expenditure, vis a vis direct transfers in the form of welfare payments for example, or through raising taxation.

⁴² The culture and objectives of policies for procurement can be changed to increase the novelty and innovative character of the goods and services procured.

⁴³ Refer to: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2007:0799:FIN:EN:PDF>

Mapping Policies to Aims

In the following table we suggest how policies can be mapped to various aims of policy in the context of demand side support for innovation. Along the top of the table we show the various policy mechanisms that can be used, down the left hand side of the table, the justifications are shown. The table contains specific notes on how the various policy mechanisms contribute to the realization of the goals.

Justifications and Aims	Policy Mechanisms			
	PCP Procedures	Procurement Directives	Capability Development for Innovation Oriented Procurement	Funding Streams to support Contracting Authorities in running Public Procurement of Innovation PPI
Efficiency and effectiveness of the public services	<i>Should be long term impacts</i>	<i>PDs should make major direct contribution</i>	<i>Underpins public sector strategy for procurement of innovation (PCP and PPI)</i>	<i>Supports acquisition in the short term</i>
Positive externalities (largely catalytic procurement)	<i>Not immediate benefits but will occur in the longer term through catalytic procurement</i>	<i>Indirect impacts are restricted</i>	<i>Capabilities development of contracting authorities supports actual procurements; some positive externalities are possible also</i>	<i>Government funding streams for contracting authorities generally do not support catalytic procurement where positive externalities are intended</i>

Figure 5 Policy Mechanisms for Procurement of Innovation and Their Rationales

Barriers to Success

The use of demand side policies (of which procurement is one example) to promote economic growth and ensure the competitiveness of the European economy is not a simple prescription for governments to follow. While total public sector procurement budgets within Member States are large (2.300 Mi euro per annum in 2009), the demands which the public sector places upon the economy to provide goods and services to the public – through public procurement – is distributed and diverse: some public procurement organisations have very large budgets, but many do not; some public procurement organisations are highly sophisticated and have adopted innovation strategies in which procurement plays a central role, but many are not. Amongst many public authorities, risk averseness is widespread, and by many, considered to be a virtue as risk has been associated in the public imagination with waste of public money, not with improvement to the quality of public services. Additionally, silo budgeting, capability shortcomings, lack of interaction between suppliers and public buyers create further barriers to success (J. Edler, 2009, 2010; J. Edler, Ruhland, S., Hafner, S., Rigby, J., Georghiou, L., Hommen, L., Rolfstam, M., Edquist, C., Tsiouri, L. and Papadaku, M., 2005; Georghiou, 2007; Uyarra & Flanagan, 2010).

The Decisions to Take

Government has a number of choices to make in the area of demand side initiatives that are procurement related. Government action on procurement of innovation can take a number of forms, for example the co-funding of procurements, development of capabilities, support for

learning amongst contracting authorities and professional and sectoral networks, changes to the legal framework for procurement, and changes to the regulations and standards or systems of financial and political accountability that contracting authorities must comply with. The varied impacts of these forms of policy upon the range of activities involved in the procurement of innovation needs careful examination. Without a good understanding of these impacts of policy it will be difficult to achieve coherence. Naturally there is considerable variation between and within Member States and regions, and between different types of public authority.

Key questions for support of demand side policy are therefore those that focus on the following:

1) Who should decide what demand should be met by the procurement of innovation and receive the support of the EU (and Member States, if acting together)?

What should be innovated? How in the context of catalytic procurement in particular can this be done?

2) Who should check whether the procurement product/service qualifies as 'innovative'? And how?

What definitions should be used and what sectors, priorities, technologies or public interest should be promoted?

3) What is the best procedure (PCP PPI or some combination of approaches) to use to achieve the goal identified?

Is there an objective test to use to determine what procedures should be used?

What demand side mechanisms are most appropriate and make impact upon SMEs (for example, is the PCP more appropriate and are SMEs more likely to provide what is required?)

What supply side measures can be useful in combination of the demand-side measures (e.g. grants support scheme to finance R&D&I of innovative SMEs)?

4) Who should operate the procedures involved in the procurement?

Should contracting authorities be allowed to get on with procurement of innovation through the existing legal procedures, for PCP (for example through the EC's procedure or their own) and for PPI (through the public procurement directives or some other procurement methodology consistent with them) or should the EC give encouragement to such activities through expertise and capacity building or further financial assistance, for example co-funding of procurements?

If the decision is made to assist contracting authorities, what part of the procurement of innovation process should be left to their discretion?

5) What support should be given to procurement organisations?

If the decision is made that the EC should support contracting authorities directly or indirectly in procuring innovation in services or goods, how much financial or/and organisational support is

appropriate, what levels of support are legal and commensurate with the nature and scale of the benefits?

These five main questions are those identified in the invitation to tender and which the Study Team has attempted to provide answers to.

1.4 Methodology – Use of Scenarios for EU support of PCP and PPI

The Study Team used a scenarios approach to work on the design of the full-scale scheme to support innovation procurement (Second Phase of the study). Two scenarios were developed based on an analysis of the actors and roles involved in supporting the key activities of pre-commercial procurement (PCP) and the procurement of innovation (PPI). The two scenarios were distinguished by the level at which the need for the procurement is defined (policy level or authority level), as this is where the procurement or pre-commercial procurement process actually starts and clearly this determines the different roles actors take and functions that need to be supported. These scenarios were then used as means to question policy staff of the EC on the key elements of a future support to the procurement of innovation. It was from these two scenarios that responses emerged about the key issues for the design of policy. The resulting evidence from interviews is presented in Section Two of this study, the conclusions are presented in Section Three and the Recommendations of what specific steps can be taken now are presented in Section Four.

Following a discussion with a number of EC Directorate Generals, two scenarios were identified as being the most plausible on which consultation should take place.

1. Contracting Authority Led
2. Innovation Gap Led

Aspects of these two scenarios have been tested within the framework of the European Lead Market Initiative (LMI) from 2009 to 2012, where three networks of public procurers have been set-up⁴⁴. Following the LMI evaluation⁴⁵ it has been recommended that such an approach should be extended to other sectors and always combined with other demand-led innovation policy tools (e.g. regulation and standardisation).

The Commission (DG RTD) is currently developing an approach to the support of procurement of innovation, the European Innovation Partnerships - which are envisaged as a means of integrating supply and demand side measures. The European Innovation Partnerships are intended *‘to accelerate research, development and market deployment of innovations to tackle major societal challenges’*⁴⁶. The European Innovation Partnerships may cover, among other instruments, the PCP and PPI. A Pilot European Innovation Partnership has in fact already been introduced, the European Innovative Partnership on Active and Healthy Ageing.

⁴⁴ Refer to the three Public Procurement Networks of innovation of the Lead Market Initiative (LMI-PPN): www.sci-network.eu; www.lcb-healthcare.eu; www.enprotex.eu

⁴⁵ Refer to: http://ec.europa.eu/enterprise/policies/innovation/policy/lead-market-initiative/final-eval_en.htm

⁴⁶ Europe 2020 Flagship Initiative Innovation Union, SEC(2010) 1161, p.7

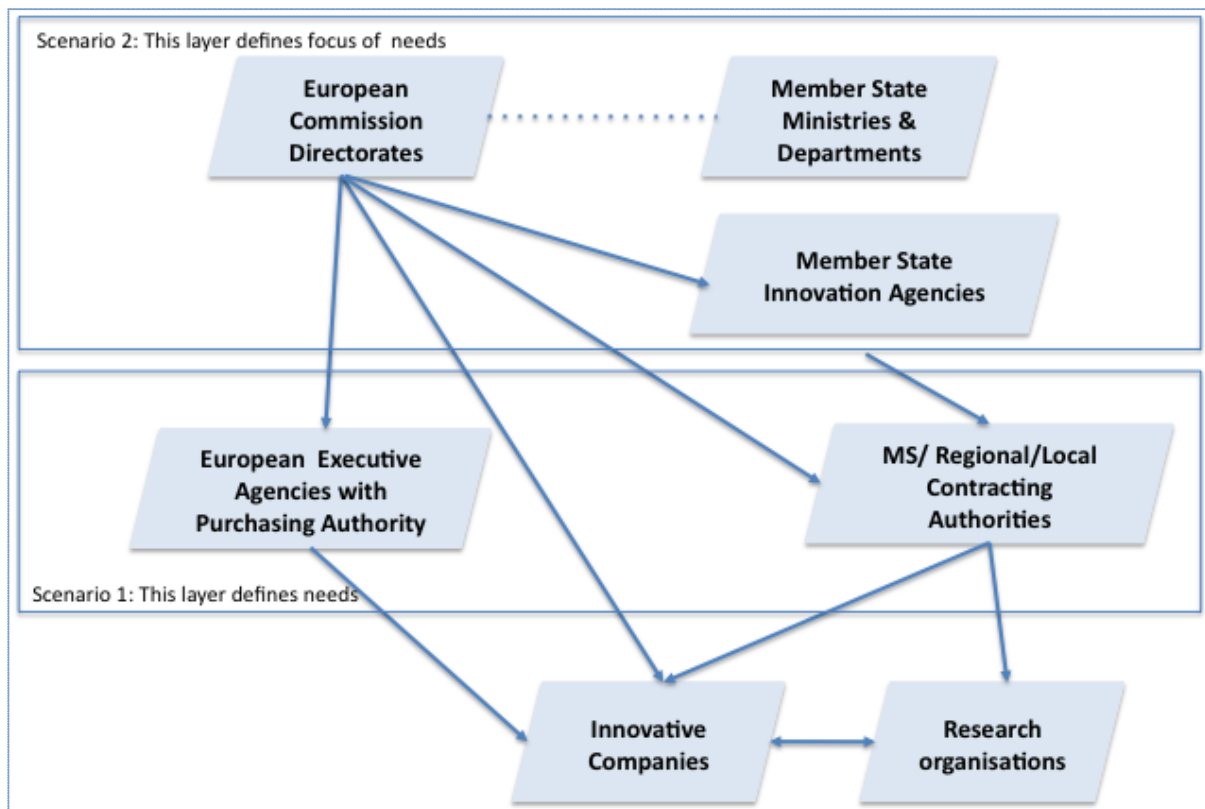


Figure 6 Scenarios for PCP and PPI Implementation

1.4.1 Scenario 1: Contracting Authority Led

In this scenario, funding is designed to be applied in pre-procurement and procurement activities (PCP/PPI) defined according to the needs of contracting authorities (CAs). CAs would apply either solely, or preferably in consortia (to stress the European value if the action) or under the auspices of a coordinating partner to be the direct beneficiaries of co-financing for their own PCP/PPI activities. This would include central purchasing bodies conducting procurement on behalf of a number of CAs, or jointly in case of joint procurement, and national or EU agencies would also be eligible to apply, in their capacity as contracting authorities.

Scenario 1 would constitute the enlargement of the existing Pilot Scheme (PPN LMI networks, and 2011 CIP call for proposals n°N02C011). Enlargement could be achieved by any combination of the following: increasing the number of procurements paid for, increasing the rate of reimbursement of costs, increasing the co-funding share paid for by the EU, increasing sectoral coverage, and including funding for PCP and risk management activities.

In Scenario 1, no formal process to encourage and support requests for EC funding exists. Under Scenario 1 contracting authorities and other organisations including Member State organisations (including technology transfer organisations) will need to bring forward proposals for (part) EC financial support of procurement using their own initiatives.

We doubt that the existing process of integration, networking, collaboration and co-working are sufficient to achieve successful applications to the EC for funding across all sectors and across all

Member States. It is probable therefore that these processes will need some further development and that resourcing and support from the EC would be required to achieve it.

1.4.2 Scenario 2: Innovation Gap Led

In this scenario funds would be available for pre-procurement and procurement activities targeting areas identified at EU level as corresponding to an existing innovation gap (within the framework of a LMI approach or of a EIP). The 'gap' may be between successful R&D work which has been carried out and commercial development, or between commercial development and first customer stages.

The (pre)procurement activities would be carried out in the same manner as in Scenario 1, but would be limited to PCP/PPI for goods, services and works in specific areas defined in the call. These would be areas where promising R&D with clear potential public sector applications has already been carried out. For example, a call might relate to low-energy data centre services, alternative-fuel vehicles or medical devices incorporating nanotechnology. As with Scenario 1, the recipients of this funding would be contracting authorities including central purchasing bodies, with supporting roles played by innovation agencies or other eligible bodies (e.g. chamber of commerce, SME support organisation, cluster, sectoral platform, designers and end users of innovative solutions procured, etc.⁴⁷).

Both scenarios could encompass all eight of the (pre)procurement activities and other activities:

1. **Needs Assessment** (contracting authorities to identify and pool their needs)
2. **Capabilities And Capacity Building** (e.g. training, exchanges, secondment of personnel)
3. **Coordination** (between multiple contracting authorities) and
4. **Market Consultation** (supporting the process of dialogue with potential contractors to assess the state-of-the-art and technological limitations for potential innovative solutions)
5. **Specification Development** (supporting contracting authorities to articulate their needs in a way that ensures the best response from potential contractors)
6. **Co-Financing Of Purchase Costs** (R&D services and actual procurement)
7. **Risk-Management**
8. **Linking PCP and PPI**

1.4.3 Methodology – Sources of Evidence Considered in Developing the Full European Scheme

The second stage is a follow-on consultation exercise that gives particular attention to how a PCP and PPI support scheme (not therefore CIP 2009 and 2011 Pilots as such) could operate:

- a) at a larger scale, and
- b) in light of changes to the legal and financial frameworks. This second stage of work gathered evidence from further consultation with the following:

The European Parliament

- Members of the Internal Market and Consumer Protection Committee

⁴⁷ A closer involvement of end-users from early stages of research, product and standards development remains an important challenge.

The European Commission

- ENTR
- INFSO
- REGIO
- RTD
- MOVE
- ENV

Member States

- Ministries
- Contracting authorities across MS

Representative Bodies

- Enterprise Europe Network and Chambers of Commerce
- Innovation Agencies

Documentary Review

- The academic literature
- The 2011 consultation on modernisation of public procurement policy
- Programme and policy documentation (including Horizon 2020)
- Lead cases of the procurement of innovation

Broader and more extensive engagement with the Expert Group advising the Study; [Consultation by phone and including written material with the experts]

- Marieke van Putten from PIANOo (expertise centre for procurement) – Netherlands
- André Roos from the Ministry of Economic Affairs – Netherlands
- Fergus Harradence, Department of Business, Innovation and Skills - United Kingdom
- Mark Glover, Technology Strategy Board - United Kingdom
- Professor Irwin Feller, Director of the Institute for Policy Research and Evaluation (IPRE) Professor of Economics, The Pennsylvania State University - USA
- Sven-Eric Hargeskog, Procurement Consultant - Sweden

Review of the earlier questionnaire which contained a number of pieces of evidence on PCP (for which collaborative funding was not eligible under the Pilot).

Building on the very extensive consultation achieved already in Stage One the team sought to ensure that added value beyond the first consultation round by interviewing new stakeholder groups (e.g. other EC DGs) and partly by asking for feedback on the pilot scheme from interested parties. The Study was extended by a further 6 weeks by the mutual agreement of the EC and the Study Team to facilitate review by the Study Team of proposals submitted to the Pilot.

2 Evaluation of Evidence on the Key Questions

This section of the report considers the evidence from the interview programme and the documentary review. The interview programme used two scenarios to compare how the procurement of innovation could be supported by fundamentally different approaches to procurement support. The criteria used ensure that answers are provided to the following issues: how well do the scenarios support procurement of innovation in terms of the eight activities, that there is compliance with the various legal and policy frameworks (EU added-value, and public procurement and state aid rules); that the need for innovative procurement are effectively addressed; that, as best as can be achieved, there is consistency with EU umbrella programmes thought which procurement can be supported (i.e. the CIP, FP, the Structural Funds); there is a likelihood of engaging and building upon support at MS level; implementation systems and structures are considered; that the policy is responsive and flexible; that variations across sectors in terms of opportunities and potential are addressed.

2.1 Ability of the Scenarios to support the Activities

This section considers how the scenarios support the key activities of procurement. In the Pilot and elsewhere, the Study Team have emphasized the importance of the following activities as underpinning the procurement of innovation. Without sufficient attention paid to the activities in which procurement organisations engage, no support system will provide the specific and targeted help that will lead to innovation.

Activity 1 Needs Assessment

A general call for PCP/PPI should allow time / resources for a process of common needs analysis, between the participants. Specialist expertise could be hired to do market analysis.

A specific lot should be included in the Full scheme where the needs assessment activities of CAs across borders are funded. This should be accompanied by support facilities that make 'good practice' (e.g. specifications) available to the CA community. Given the thematic focus of the calls there is a stronger scope to define needs and develop specifications horizontally/ collectively, which are subsequently adapted to the specific regional requirements. If this is done top-down by the European Commission it is most likely that themes will be chosen that fit the Grand Challenges but might not be specific enough to mobilise specific procurement interest. This does mean that needs should be defined by sectoral Directorates rather than DG RTD or DG ENT who are less in touch with specific domain needs.

Activity 2 Capabilities and capacity building

The CAs are mobilised to define their needs and to benefit from their own PPI/PCP activities. Thus participating in the scheme helps capability building of the participants. However there is a need for a support to disseminate capabilities to avoid that the scheme will only be used by CAs who have prior experience with PCP/PPI. A major problem remains in the lack of awareness, willingness, and expertise present within CAs, despite ongoing Commission networking initiatives (PPN of LMI and

EU-Lab.) and the leading examples provided by some authorities and regions. Thus any PCP/PPI programme should be scaled up slowly and accompanied by capability and capacity development. The definition of a specific thematic area of the PCP/PPI call by the European Commission is likely to attract specialised CAs in the EU and/or innovation agencies that are responsible for a particular topic. The advantage could be that the CAs/ Agencies are more likely to know their counterparts abroad and are more easily triggered by an EU call because of its specific content. The pool of likely participants across EU countries is however smaller so the number of potential applicants – depending on the topic- is limited. This would require additional awareness campaigns, targeted to the CAs active in the thematic domain.

Activity 3 Market Consultation

In Scenario One, the CAs would need to organise market consultation locally in the participating countries/ regions. This will most likely be challenging due to differences in cultures, languages, national/regional business networks across the participating entities. Whether there is opportunity for more collective market consultation, for instance organised by the EU depends on the scope of the topic or theme of the societal need chosen. The more specific the theme the more room for a coordinated market consultation, but the smaller the potential group of CAs that can be reached. A more openly defined theme will allow more adaptation to the needs of local CAs but then market consultation should be done locally.

Activity 4 Setting up Cooperation

Both scenarios allow for cooperation between CAs across countries. The requirement of cross-border collaboration should be in balance with the increased transaction costs that CAs face by taking part in an EU call. Thus relatively small scale PCP/PPIs are not likely to be an incentive to engage into more complex cross-border collaborations. A point for further discussion is whether in light of EU added value cooperation between enterprises across borders is an obligatory feature. This would increase the transaction costs and bottlenecks for smaller firms that do not necessarily have cross-border partnership available. On the one hand PCP/PPI initiatives should have a sufficiently large scale to merit the complexities of cross-border procurements, without excluding the possibility for SMEs to compete, but not be, on the other too large that decision making is not coherent, quick and effective.

Activity 5 Specification Development

Experience with existing PCP/PPI schemes shows that innovation procurement asks for a radical change in specification development compared to the common practice in public procurement. This needs to be closely aligned to the needs of the CA and also reflect the particular functional and contractual (including IPR) delicacy of innovative goods, services and works. The first scenario puts the specification development in hands of the CAs and thus it will be closely aligned to local needs. However guidelines are necessary to help CAs with specification development for high-risk and innovative purchases.

In the second scenario themes are already pre-specified by the European Commission services. There is a risk that if the scope of the specifications is set very widely, the link with achieving the specific policy goal will be more difficult to establish. On the other hand if the European Commission

sets the specification too narrowly it is not in touch with the demand. Joint Specification development with the participating CAs would be a better option.

Activity 6 Purchasing Innovations and R&D Services

A scaling up of the current pilot would allow the CAs to contract more PCPs or innovations that have not yet reached commercialisation. This would however need a strong checks and balances system to ensure the societal added value of co-funding the research and development activities and to establish the innovative nature of the purchases.

Any scheme should be aware of pervasive effects (market distortions, purchase of innovations that do not represent value for tax-payers money) of co-funding of the actual procurement. It would be a safer option to have the financial responsibility and liabilities with the CAs rather than with the European Commission. If the themes are set beforehand – based on societal needs defined by the European Commission - there is a risk that these are not in touch with the specific needs of the CAs. Therefore there is less chance of successful commercialisation as the link between setting demand and willingness to procure is not made. The likelihood of the purchased service or product to be commercialised on the private market would need an early check on the commercial viability and not only the societal contribution. Balance and checks need to be built into the process to ensure that commercial viability is also used as a criterion for selection.

Activity 7 Addressing Risks

Both scenarios could build in certain features and accompanying measures to assess risks such as ensuring the availability of references/testimonials from contracting authorities who have been involved in R&D, PCP or first-purchase of innovative products/services. This is a more horizontal activity that can be supported through a PCP/PPI platform. Specific risk-reduction measures could also be envisioned for certain sectors or types of purchase, for example the sharing of costs to ensure security of supply for vital products or services (e.g. amongst health or emergency services).

Activity 8 Linking PCP and PPI

Assuming that the above activities will be supported for both PCP and PPI, the question arises of how to link these two phases of the innovation procurement cycle effectively. In schemes which support procurement of R&D services only, a gap often arises after the PCP phase, where it is unclear whether the CA can proceed directly to procurement based on the outcome of the PCP. The development of guidelines for how to conduct procurement based on the outcome of one or more PCP procedure should be developed, reflecting the actual experiences of CAs benefitting from this support scheme or others. This may include specific reference to new procedures such as the proposed "European Innovation Partnership" in the revised procurement directives.

Scenario 1 is less likely to result in broad take-up of PCP than Scenario 2, as the focus on the R&D phase falls outside the operational remit of many public authorities. However under both scenarios effective linking of PCP and PPI should be possible by allowing both entry routes to the funding scheme (starting at the R&D phase, or starting at the procurement phase) and, where PCP is undertaken, requiring application of a common methodology/procedure which will allow the results to be effectively procured either by the same authority or others.

2.2 EU Added-value

EU Added value in this area of policy will arise when PCP or PPI will aim to stimulate innovative solutions for EU-wide challenges. This will be reflected in the cross-border collaboration between contracting authorities where joint procurement could happen. Such cross border activity creates the economies of scale and realizes the benefits of a common market and common legal frameworks that are largely, but not wholly, converged. The barriers to such cross border tendering and supply are not however insignificant. In both scenarios, the context of EU supported PCP and PPI and outside it within the context of procurement without specific supports (of co-funding and capability building), there are significant barriers to cross-border operation. And yet there are with cross border cooperation real opportunities for learning and economic development.

We have noted in our Interim Report that while EU Added-Value is both desirable and likely from cross-border procurements, it will be difficult to engage the active support of Member States in this process when Member States place undue weight on their short term gains in terms a) of meeting the precise needs of their own procurement organisations and b) supporting their own national commercial interest. We believe that in respect of these *juste retour* barriers, where the attempt is made to focus upon short term and specific gains within a Member State's own country, a bottom-up system such as that envisaged in Scenario One is more likely to give rise to the first risk. Where a top-down model applies, such as envisaged in Scenario Two, there will be a greater risk of the second type.

Given the high costs involved and the expertise needed to overcome these barriers, it seems likely that such cross border activities are probable to arise on a short term only amongst a core of countries where procurement of innovation is already a MS policy. But the opportunities for the smaller countries to learn from the larger ones should be a big incentive for them to accelerate their development and modernize their public services, as well as their generally levels of expertise in public procurement.

2.3 Compliance with Public Procurement and State Aid Rules

There is evidence that significant differences in MS' procurement rules even with common directives for procurement, important legal differences appeared to remain and were clearly taking effect in that they led to different views of what actions were legal. In his view that could make EU policy for PCP and PPI difficult to implement. Implementation was likely to be an opportunity from which much could be learned.

We note continued legal uncertainty over the relationship between PCP and PPI, particularly as regards the continuity of the winners of PCP to PPI. There is sufficient evidence that the important connection between the twin activities of PCP and PPI is not easy to bridge in some countries. While it is the case that not all PCP support will immediately lead to significant public demand for goods or services from contracting authorities⁴⁸, it is important to ensure that such a connection can be made, and that the full power of demand can be connected to the procurement of innovation when the public sector is the ultimate client. As the report of the ERAWatch project notes (Technopolis, 2011) the procurement law in Belgium and Denmark makes particular difficulties for those who have developed prototypes and who then wish to supply the final good at Phase 4 of the innovation cycle. The existence of such uncertainty is a very significant barrier both to contracting authorities, and to firms. Legal uncertainty is a very effective barrier to the implementation of policy and needs to be

⁴⁸ For example in the case of PCPs that support the development of goods that are intended for private markets but which have positive externalities – and so justify public subsidy.

removed. Neither suppliers nor contracting authorities will wish to engage in activity that could result in legal action that would almost certainly be costly, but which would also prevent the realization of their organisational goals. Legal uncertainties such as these also create a barrier to the cross-border and eventual joint procurement activity that would give substantial EU added value to the policy. Countries where this uncertainty exists are likely not to participate in cross-border procurement activities, both when it is supported under Scenario One and under Scenario Two.

As has been noted in the Interim Report, the Pilot Call (2011 CIP call for proposals n°N02C011) provided EU funds for the support of actual procurement of innovation (rather than co-funding of pre-commercial procurement) since support of R&D was not permitted under the CIP. This support of actual procurement (albeit not of PCP) was included in the Pilot Call because of the likelihood that "early adopter" contracting authorities could indeed make use of such a facility; and to provide a strong signal to contracting authorities and procurement authorities about the EC's willingness to develop a support mechanism in this area.

As we note above, under current arrangements for R&D funding and innovation, not all EC Directorates General may support PCP. There is evidence, however, that a number of Directorates General that do not have the legal powers to support PCP could usefully employ such powers and also such powers that would allow them to co-fund actual procurement. Justification for extending to a DG the power to fund a PCP and or a PPI would be the presence of significant market failures constituted by risks for suppliers and appropriability constraints, and where wider social impacts are possible from government spending.

We noted earlier that IPR rights generated within a PCP might affect the competitiveness of markets. While IPR agreements within a PCP may comply with the shared risk requirement, the IPR in question may give the supplier an advantage in other markets that constitute a barrier to competitiveness.

2.4 Effectiveness in supporting innovation – lessons from existing evidence

The evidence collected at this stage of the project indicates that an important objective attached to applying PCP/PPI is to use the innovative capacities of small and medium sized enterprises (SMEs) as well as those of the larger firms. Both Scenario One and Scenario Two approaches to the support of procurement of innovation (PCP or PPI) can lead to success. However, the two approaches differ in how they are likely to achieve success to leverage the private sector involvement and the likelihood of commercial success. A general concern has been how public procurement and particularly procurement that involves complex systems or high-risk, high-technology products, can mobilise the innovation potential of SMEs. In the absence of set aside and a legal framework that encourages positive discrimination in favour of small firms in Europe, as opposed to the USA, there are obstacles for SMEs to enter innovation procurement procedures.

Typical barriers for small and medium firms are the complex procurement procedures, the lack of finance for high-risk projects that are not certain to lead to commercial access and the lack of a previous track record and business relationship with the contracting bodies. The Small Business Act for Europe (COM 2008 (394) Final) asks for tools to help SMES access to procurement, especially by alleviating requirements imposed by contracting authorities in award procedures. PCP/PPI will however heighten the requirements for procurement, making it relevant for innovative firms mostly.

There are a number of examples where the SME involvement has been quite encouraging. While the UK TSB's SBRI programme (see Figure 7 below) and the UK DOH NHS Innovation Centre, which are successful in attracting SMEs to participate in its R&D competitions, the majority of participating firms are not in the SME category. In the Dutch SBIR-programme⁴⁹ however, a vast majority (almost 90%) of the participating companies does fit the SME category (Deuten, 2010).⁵⁰ While the contractors were mainly SMEs a majority of them entered into partnerships with other firms and research centres to achieve the contractual deliverables. What attracted the SMEs to the Dutch SBIR programme rather than to more traditional grant programmes was:

- Easy and fast proposal procedures of the first stage which required a short feasibility study for relatively little funding; this also discouraged large firms to participate as they were not always able to make such quick decision and are hardly triggered by the small sized contracts
- The opportunity to enter into a direct client dialogue with the potential users (which is not the case in traditional grant programmes)
- Entering into a contractual relationship with the funder that requires a functional deliverable, rather than an agreement to perform agreed research efforts without a specified outcome
- Clear IPR rules that allow them to keep the IPR developed in the project
- The possibility of finding a first client/ customer.

⁴⁹ For a full presentation of it, refer to:

<http://www.agentschapnl.nl/sites/default/files/bijlagen/SBIR%20the%20Power%20of%20public%20procurement.pdf>

⁵⁰ Deuten, J., P. Boekholt, M. Nagle, B. Mostert, G van der Veen and F. Zuijdam, First Evaluation of the Dutch SBIR Programmes in The Netherlands (Eerste evaluatie van de SBIR programma's in Nederland), Report for the Ministry of Economic Affairs, The Hague, Techopolis, March 2010

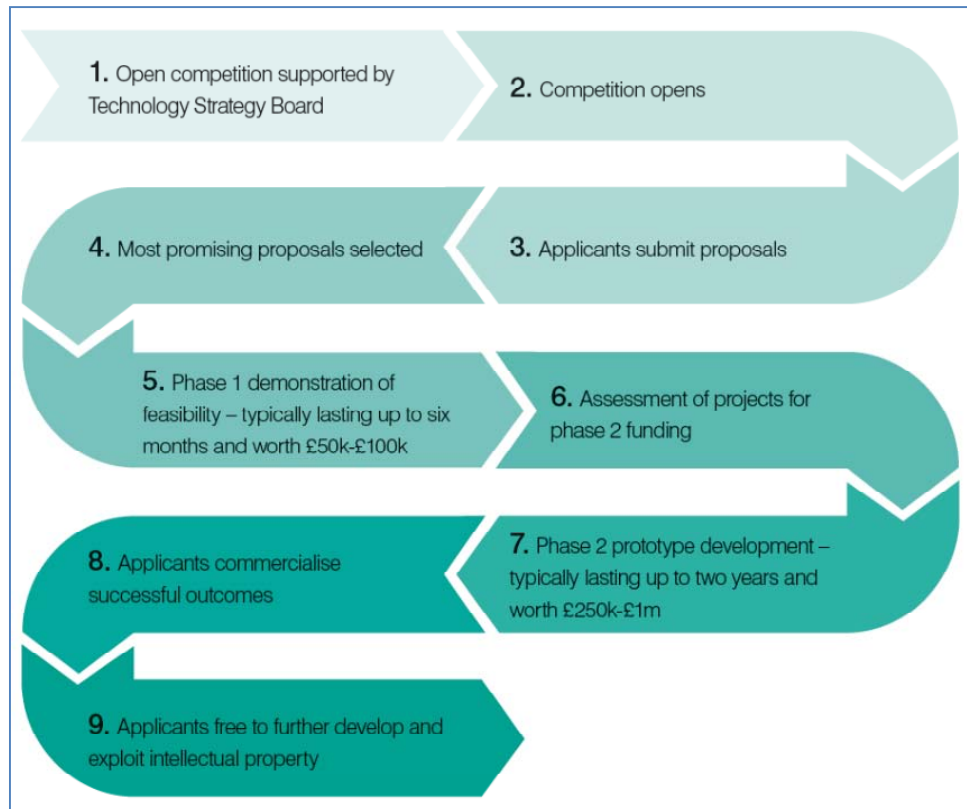


Figure 7 SBRI (UK-TSB) Brochure, September 2011

In all examples of existing schemes (in The Netherlands, the United Kingdom and the United States) the ‘third commercialisation phase’ is not publicly funded and remains the main responsibility of the enterprise. However the chances for commercialising these R&D projects is higher when potential users (i.e. public contracting authorities, consumers, civil parties (e.g. patient groups) or the private sector) have been closely involved in defining the need (user oriented) to which the innovation is a response. This is the essence of demand led policies. For our assignment: to design a scaled up PCP/PPI scheme it is thus crucial to address the question: what party in the process is going to present the demand side? Or in other words which actors are defining the specifications for the specific need for the PCP/PPI call should seek solutions. Thus in our scenarios an important question is: which actors are best positioned to articulate the specific demand that asks for innovative solutions. Are these local / regional and national contracting authorities who know how to articulate their needs? Are these the sectoral departments and Directorates that can articulate a strong societal demand for innovations?

Another potential approach to support innovations is to use catalytic procurement, which means that public authorities fund the development and prototyping of innovations that have a strong societal value and for which there is a clear market failure, e.g. the producers find this too high risk to be a first mover or the demand side (business sector/ consumers) has not yet been exposed to innovative solutions. The challenge here is how to support innovations that are not only societally desirable (e.g. low emission vehicles) but also commercially viable. In the US, the role of assessing the commercial viability is mostly left to private sector financiers (venture capital firms) who decide whether the outcome of funded R&D projects merit further investment to prepare market introduction. One policy option is to combine this type of PCP/PPI with regulation for the market sector in order to increase the chance that the market takes up the innovations.

What this means for our two scenarios is that in scenario 1 the articulation of demand is done by the national and regional contracting authorities cooperating with their counterparts across the border. For Scenario 2 the specific need is defined by the Commission services (or EU procuring agencies) or alternatively by the Commission services together with CAs from member states and regions. This should then be translated in specifications that are also accessible to SMEs. We will come back to this issue of involving the demand side in the chapters below.

2.5 Suitability for funding under Framework Programmes and/or Structural Funds

A number of respondents have noted the size and scope of the structural fund budgets and consider it appropriate for the European Union to attempt to ensure that this budget, much of which is spent on procurement, is spent in such a way as to encourage innovation. However, it has been difficult to establish how the significant budget of the Structural Funds could be used to support the procurement of innovation. SF fund money is allocated to geographical areas of the EU where public procurement expertise is usually less developed, and, consequently, the scope for contracting authorities to carry out PCP or PPI is less. In such a context therefore, action to support the procurement of innovation is more likely to be successful through top-down activity with support of experts from outside contracting authorities. The need to engage with users remains, however. Also it could be noted that the INTERREG programme could be a good framework to experiment such developments at regional level, in using EU structural funds.

The new mechanisms for cross border collaboration, the European Grouping of Territorial Cooperation (EGTC) Regulation (European Parliament and the Council, 2006) , may provide a mechanisms for such cooperation, but it is too early to say if this has been working well. Such measures could in due course be used as a framework for the implementation of policy. Examination of the potential of such measures should be investigated within the next two years as after that period, knowledge of and understanding of PCP and PPI will be more widely dispersed and the contribution that the EGTC mechanism could make to economic stimulation through procurement will be more widely understood by those actors who will be most closely affected. Those interviewed who have expertise in the operation and management of the Structural Funds confirmed the importance of successful examples in disseminating the good practice.

2.6 Potential to attract co-financing at MS level

The Study Team also collected the views of the respondents on how MS could become involved in support of the procurement of innovation under the two scenarios. MS assistance to an EU policy for the support of public procurement could be given in a number of ways, through additional financial assistance, through information dissemination activities by MS governments, through contributions of help, information and advice built up in the course of procurement and contacting activity. MS can provide such assistance directly or by carrying out some of the administrative, management or other activities themselves. National technology transfer organisations and very large scale public procurement bodies are in a position to undertake such activities.

Across the EU it is clear from interviews and surveys currently carried out that interest in this area of procurement is rising. Two kinds of activity are observable. On the one hand, MS are providing information and advice to their own national contracting authorities on how to engage in and pursue the procurement of innovation. In the UK for example, the Office of Government Commerce has published a number of guides on this subject, giving contracting authorities in the UK direction in how to undertake the procurement of innovation through the directives, and also referring indirectly

to other measures, such as the PCP procedure (Office of Government Commerce (the OGC), 2006, 2007). It is the same in Netherlands where a broad publicity on procurement of innovation and SBIR programme has been made. A number of MS have already or are taking steps to create organisations that can provide support to or take responsibility for carrying out innovative procurements. The latest developments occurred in Spain following a law passed in 2010, that initiated the "INNODEMANDA programme"⁵¹. Such organisations are engaging also in the development of European policy in this area through the PRO-INNO Framework networking activity of the INNO- Partnering Forum (or IPF) and a set of recommendations has emerged (Inno Partnering Forum, 2010a, 2010b).

Under Scenario One, which is contracting authority led in terms of priority setting and implementation (procurement), a European wide scheme could be justified if there was cross-border procurement and eventually joint procurement (and or cross-border supply). Without a cross border element to procurement or supply, there would be little justification for the additional support of EU funds, especially considering that MS have established or are starting to establish their own support mechanisms.⁵² Thus Scenario One recommends and requires cross border involvement. The provision of co-financing by MS under these circumstances could usefully support contracting authority involvement to defray the transaction costs (of coordinating across geographical and cultural space) and actual purchase costs. Procurements taking place across the EU under an EU wide Commission scheme would then have co-funding from the contracting authorities for support activities, the costs of which are incurred by the contracting authorities, and the purchase costs, which are incurred by the supplier, (in the case of PCP by the R&D performer).

Under Scenario Two, while contracting authorities again lead the procurement, the topic areas/ themes/ sectors in which their procurements take place are defined by the EC. The costs of procurement are again jointly funded however, as in Scenario One.

The question remains as to how much funding of support costs and procurement will be expected and how the balance will be shared between the MS contracting authorities and the European Union in the context of PCP. While it might be expected that the EC and MS contracting authorities will share the funding of the transaction and or procurement costs evenly (50% by the EC and 50% by the contracting authorities), there may be some variation in the balance. In certain circumstances, the EC may wish through its support programme to fund greater proportions of both the transaction (CSA type expenditure that exists under the FP7 programme – CSA: Co-ordination and Support Actions) and the procurement cost, particularly where clear market failures exist in terms of low levels of capabilities; there is a greater likelihood of broader social and economic impacts of the procurements.

2.7 Complementarity with existing EU/MS support measures (including supply side measures)

Procurement constitutes both a purchase by a contracting agent on the one hand and the meeting of that demand by a supplier. We have assumed that the requirement for EU level action assumes cross border procurement and or cross-border supply. The requirement for cross border procurement and cross border supply can give rise to very significant administrative and management costs. These costs will arise at the point of market consultation, needs specification,

⁵¹ Refer to: <http://www.cdti.es/index.asp?MP=7&MS=641&MN=3>

⁵² This is being done in terms of capability development, dissemination of good examples of the procurement of innovation, and budgets and institutional frameworks (SBIR like schemes) specifically to support the procurement of innovation.

development of the service and management of the performance of the contract. Significant legal expertise will be required on the part of procurement organisations to conclude agreements between multiple procurement organisations from more than one country and multiple suppliers from more than one country. Our evidence from interviews of contracting authorities is limited on this question. Nevertheless, we have received comments from a number of individuals that such agreements would stretch the expertise of contracting authorities and would give rise to uncertainties, particularly regarding the IP generated. How extensive would EC grants need to be to incentivize contracting authorities to engage with each other cross border and with suppliers on a cross border basis? What incentives would be required for suppliers to enter such arrangements (into a PCP for example)?

2.8 Practical implementation issues

The process of procurement is a long and complicated one. It begins with needs assessment which at its best is a strategic decision for an organisation. Procurement organisations in the public sector – the contracting authorities have also had occasion in the past to consider the structure of the industry that supplies them, such that, in the long term public procurers can avoid becoming locked in to technologies and suppliers that might offer short term gains at the expense of long term savings and technological advances. However, such secondary considerations, while part of the experience of contracting authorities, are not covered here.

The implementation of PCP and PPI support measures will require at a minimum the administrative machinery to carry out the following tasks, and to obtain EU added value this will need to be achieved with a minimum of two countries⁵³: within the scope of both a PCP and a PPI, a needs assessment, a specification development, a calls competition, the PCP competition or a procurement. Within the two scenarios, these tasks can be allocated in various ways. Generally, within Scenario 1, proposals for support would need to be approved for funding by the EC and possibly MS, however Scenario Two might not need involve close interaction with contracting authorities if grand challenge ideas are used as a framework for the calls and experts are used to choose between them.

The main question is what parts of this process the EC should step in to and lead, and which should be left to the contracting authorities, or whether some other specialist agency be involved. Should for example the contracting authorities be left to come up with the needs assessment, collaboration agreement between the procurers and a specification and then approach the EC for funds so that the contracting authority procurement consortium can run the procurement competition on their behalf, having already decided between a pre-commercial procurement or a procurement under the directives (including some forms of highly innovative methods involving piloting could be applicable). This would require the EC to simply pass over in the form of a grant the funds that are needed by the contracting authority for them to operate the competition. However, such a grant would have to be conditional on a number of criteria. In our Interim Report we published a wide range of criteria which we proposed were available to the European Commission to help it judge between proposals it received for funding under the Pilot, and to help with the evaluation of its policy overall. Such criteria should be used both to assess individual proposals but also to ensure to that the portfolio of supported procurements achieves some optimisation in terms of sectors addressed and breadth of the public benefit across citizen groups and across Member States.

⁵³ Not necessarily all at once.

2.9 Sectoral fit

The Study Team has attempted to determine at this stage of the project what areas (sectors) should be prioritized for the procurement of innovation policies. This has been done partly at the Interim Report Stage, where information was collected from contracting authorities, and also at the second stage of the research where responses to the Pilot have given some indication as to the strength of interest for policy action in various areas. Furthermore, our interview programme, within the EC and our feedback from the expert group, has given additional information about which sectors should be supported and how this support should be given.

The prioritization of sectors for the procurement of innovation is an essential task of policy and programme design. Prioritization attempts to make available resources for those areas which can best use them. Prioritization can be seen though not only as means of selecting certain sectors, or adjusting resource to some sectors rather than others; it can involve choosing within sectors certain targets for support rather than others, what we might call secondary prioritization. However, prioritization is an activity that can be carried too far. And the risks of taking priority setting too far are that bureaucratic oversight will make the wrong choices. We believe that prioritization by the EC at this secondary level should be avoided and that at this secondary level, contracting authorities should be the ones that can determine the object of their procurements, either PCP or PPI.

The Pilot Call (2011 CIP call for proposals n°N02C011) invited applications for innovative procurements in a number of sectors. The Study Team was asked to determine on the basis of the evidence from the Pilot and from other sources, including the EC itself, whether the choice of sectors to be supported by a Full Scheme should be changed. The Study Team considered whether the sectors chosen for the Pilot should be reduced and whether other sectors should be added.

The choice of sectors for such a policy is an issue that cannot be disconnected from other issues of enlargement and design, and is therefore a matter that is relevant to the overall configuration of the Main Scheme. For example, certain sectors may be appropriate for top-down modalities, whereas other sectors may be ones where contracting authorities propose solutions and then seek, through PCP and or PPI to procure them.

Support to the procurement of innovation is already developing within EU DGs. In the area of green procurement, there is already expertise developing with DG Environment. Actions taken so far include the diffusion of good practice including handbooks, diffusion of examples, and some collaborative working on capability development. An important question for the EU is whether this kind of activity that promotes capability development should be left where it is, or centralized within the EU decision making and implementation structure. In relation to the question of where the expertise for supporting PCP activities within different theme areas should lie, there is some consensus amongst interviewees. Should the support be located entirely within a new unit of EC Directorate General RTD or ENTR (where it could be linked to industrial policy) focused or should it be within the DGs that have responsibility for the theme areas? This is a matter of internal organisation within the EC.

3 Conclusions

3.1 Policy Interest

The Pilot launched in mid 2011 has promoted the goal and rationale of innovative procurement and clearly demonstrated the EC's willingness to support the procurement of innovation as a policy⁵⁴. There is strong evidence of interest in the promotion innovation through procurement. This has come in the form of the applications to the Pilot, and also from adoption of this policy goal by many Member States.

There are now many initiatives taking place across the EU on the procurement of innovation notwithstanding the Commission's own initiatives in this area. It will be important to draw on these initiatives in the design and operation of the EU's own schemes for the support of the procurement of innovation; and it will be important for these MS schemes and initiatives to reflect the best practice that takes place elsewhere within the EU both within the EU's own initiatives and amongst MS own.

The procurement of innovation should now be supported at EU level, where is an EU added-value justification, and locally within MS where the rationale for EU support is not present, as, in some cases it will not be. We note that the activity of Member States is in regard to the procurement of innovation is varied. Some countries have a decade of experience, some, including some leading economies, are looking at the policy for the first time.

3.2 Policy Context

The current policy context is one that is immensely fluid. The Horizon 2020 proposals have just been published⁵⁵; The EC proposals for revision of the Public Procurement Directives have been published in December 2011⁵⁶; and the Industrial Policy flagship is in implementation phase⁵⁷. These are all important contexts for the operation of any policy that would support the procurement of innovation. Furthermore, economic difficulties add a further edge and imperative to make sure that the EU's budgets are used constructively, effectively and efficiently to implement the vision of the Innovation Union. And while the introduction of the Horizon 2020 and new procurement directives is some distance away (around 2015-2016), it is important to begin to act now in establishing a role for a policy to promote the procurement of innovation.

It has not been possible within the scope of this project to explore an important question that has arisen during the course of fieldwork, namely, what should be the relationship between demand side policy instruments of the kinds under discussion here and the existing forms of innovation support? Such support to innovation through grants, support for standards development, mobility, business support and financing should be more fully investigated.

We understand that the EC is aware of the links between policies that support the financing for small firms and PCP, but a full, system wide view of the interactions and likely possible uses of the whole range of instruments would be valuable, particularly as the new instruments might lead to changes

⁵⁴ Evidence of how the success of the Pilot will not be available for some time.

⁵⁵ Ibidem: http://ec.europa.eu/research/horizon2020/index_en.cfm?pg=home

⁵⁶ Ibidem: http://ec.europa.eu/internal_market/publicprocurement/modernising_rules/reform_proposals_en.htm

⁵⁷ Ibidem: <http://ec.europa.eu/enterprise/policies/industrial-competitiveness/industrial-policy/>

to incentive systems for research performers in universities and in firms. Clearly, until more is known about the most effective ways of implementing the procurement of innovation it will be difficult to attempt to understanding the systemic effects of the introduction of demand side measures and how best to mix policies.

Contracting authorities and their spending power provides the major reason for demand side initiatives that encourage the procurement of innovation, whether PCP or PPI. Without the strong pull of demand, many innovations stay on the shelf, never achieving the impact that those developed with a large market can. In a wide range of sectors, cross-border action across the EU could achieve significant procurement volumes, with implications for the cost effectiveness, efficiency and effectiveness of the public services.

3.3 Policy Barriers

A number of distinct barriers exist to the procurement of innovation. Many of these barriers affect contracting authorities in particular. Amongst many contracting authorities, there is a distinct lack of capability for PCP and PPI. Furthermore, there is significant legal complexity affecting cross-border procurement and cross-border supply. Also, there is some uncertainty about the entry to the PPI process of the winners of PCP process in some countries.

Such uncertainties are in need of resolution. Without clear rules of procedure, opportunities for the procurement of innovation are likely to be missed. Even when an EU scheme is in existence for the support of the procurement of innovation, and cross border procurements can be facilitated, there is need for clear and certain frameworks at the level of Member States in which the procurement of innovation can be implemented by contracting authorities and governments.

We have noted that innovation while not difficult to define is not necessarily the same across all sectors and Member States. State of the art technology in some areas is not necessary state of the art in more advanced economies. In addition, the availability of existing innovations to address specific needs is not transparent for CAs across Europe. Should any of the schemes provide co-funding of the purchase of innovations, technical expertise is needed to assess whether solutions sought are really innovative and functional. Therefore disseminating information about innovation procurement experiences and outcomes of PCP and PPI projects is important to avoid duplications. We would recommend that support schemes are prudent with financially supporting innovations, without the assurance of appropriate assessment procedures to ensure that projects are truly innovative.

3.4 Design, Scale, Financing and Implementation

There is a view within policy making that pre-commercial procurement is the required step that precedes the actual procurements of final goods and services (through the public procurement directives) in all cases. While there is an important link between these two forms of procurement, it should be not be assumed that PCP always precedes PPI. In many cases, PCP will take place to create design and specifications that have private purchasers; and in some instances, PCP will be an alternative to PPI.

The decision to follow one route rather than another needs careful judgement and a case by case approach. In fact a proper systematic approach to this question about which route to follow should be adopted across all programmes of support. The challenges presented to public procurers rarely come with a clear indication of which route, PCP or PPI, (or both) should be followed. A systematic

approach to assessing which approach to follow needs to be at the heart of any policy or programme that is adopted. This a feature of the state of the art approaches to innovative procurement already adopted around the European Union.

The size of the financial resource which should be applied to this policy needs careful assessment. A budget that would be spent mainly upon the co-funding of procurements should be large enough to take advantage of the opportunities of EU cross border procurements, and potentially cross-border supply. The scope of such a budget could be established by two methods, one top-down, the other bottom-up. The first top-down approach would assume that a certain proportion of the EU public procurement budget could be directed at the procurement of innovation (rather than at existing procurement activities) and to allocate a sum of money in the form of an EU procurement of innovation budget to support this procurement. Such an approach would need to show that the financial support was additional in terms of leading to cross border procurements (and possibly cross-border supply) of *innovative products and services*. An assumption would need to be made about how much of the EU procurement budget could be spent upon cross-border procurement, and how much of this could be spent upon innovation.

A second approach would identify specific procurements that have been already been undertaken or which could be undertaken and estimate a budget for a larger scheme on the basis of multiplying the value of the successful example by factors that reflect the likelihood of scaling up the activity across different sectors and the number of such procurements that could be achieved over time, (i.e. a rate of spending). We suggest that the second approach while being potentially a more accurate means of forecasting the size of the budget requires significant further research to implement it as very little of the information needed to operate it has been collected. In the absence of reliable data which can be used to operate the second method, we propose that the first method be used for assessing the budget. We provide a recommendation in the next section.

4 Recommendations of Policy Options

4.1 The Schemes

We recommend that two main Strands of activity be started. Both are support of innovation procurement activities. Embedded within them is a further Strand of community/capability development and learning which we believe should support procurement of innovation activities within the other Strands.

Strand One is a top-down support mechanism. This could use the institutional framework of the European Innovation Partnerships or current and future LMI type activities, and use the areas of the grand challenges to theme procurement activity; Strand Two is a response mode support system operating across DGs but with central coordination at EC level to facilitate learning and ensure coherence. Both of these Strands place contracting authorities in a position to drive demand for innovation. This may have a strong and important impact upon the technological, industrial and services’ innovations of the EU. In the consultations the study team has made, there is significant support for both top-down and bottom-up procurement support. Both schemes would operate on a cross-border procurement basis since this would satisfy the requirement of creating EU added-value.

Strand One Strategic Sectors	Strand Two Contracting Authority Driven
Lead Market Initiative & European Innovation Partnership Led (60%)	Response Mode Contracting Authority Innovation (35%)
Strand Three Horizontal Support	
Community Development, Capability, Learning & Dissemination (5%)	

Figure 8 Policy Options

Strand One

This first Strand could be organized within the institutionalized form of the European Innovation Partnerships or LMI type activities. Working under Horizon 2020 or COSME programmes, these could provide, on the present view, a vehicle for the implementation of innovative procurements either PCP/ PPI level or at both levels, possibly making use of the new procurement procedure, if this proposal of the European Commission is adopted⁵⁸. These policy vehicles will, we understand, be developed across the European landscape. They will aim to meet broad public benefit goals. Contracting authorities would drive the needs assessment process. But in doing so, they will have the support of the Partnerships and Lead Markets in the key activities of coordination, learning and specification development.

⁵⁸ This proposal would not in any case become law until transposition of the new directive was completed in 2014.

Strand One activities capitalize upon the volume of demand, and have the additional benefit of using existing, albeit new, structures and expertise of innovation procurement. The balance between these two forms of procurement will have to be determined on a case by case basis within the thematic priorities addressed by the Partnerships or Lead Markets. The thematic priorities from the grand challenges agenda provide a ready-made set of priorities to be used in the first instance to guide the selection of activities.

Strand Two

Strand Two is a response mode (or bottom-up) procurement of innovation challenge scheme that provides EU resources to contracting authorities of more than one MS to carry out needs assessment and procurements of innovative technologies and services. Open calls will be announced on a periodic basis and contracting authority partnerships with clear business plans for procurement will be solicited by the European Commission.

Proposals will be assessed according to the following criteria: scope for adding EU value, for innovation, for dealing with the societal challenges, including sustainability, and the scope for wider economic impact upon the economies of the EU. The EC will co-fund the procurements of PCP and PPI. It will also need to establish a review process to handle these applications and to monitor the procurements. Applicants will need to provide detailed plans as to the activities they will undertake, using the framework of activities that have been outlined in this Report and the Interim Report⁵⁹.

Strand Three

Strand Three develops capabilities amongst all relevant parties to the procurement of innovation, contracting authorities mainly, but also supplier organisations and, potentially SMEs. Support will be given to organisations that can most effectively show how contracting authorities and SMEs can engage in procurement of innovation. Strand Three will operate best when other actors in the innovation process, including suppliers are involved in dissemination and advice. There is likely to be a role for organisations and individuals which have specialist experience in procurement of innovation to provide consultancy on strategy, technology, and the law.

Regardless of whether EU support to the procurement of innovation is provided top-down or bottom-up, the opportunities for learning from experience should be taken by supporting a broad capability building activity in both and between both areas. To increase the rate of progress with Strand One and Two activities, there should be a dedicated activity to ensure that the development of expertise in the procurement of innovation is captured, deepened, and disseminated.

Legal Framework Changes

A key issue for the design of policy is what mechanisms of support are to be used to promote the procurement of innovation. We believe that an EU support to the procurement of innovation (PCP and PPI) through Strand One (the European Innovation Partnerships and Lead Markets type schemes) and Strand Two should be able to make use of a clear legal framework that allows PCP and PPI activities to be connected. This may make possible the award of the actual procurement to those

⁵⁹ Refer to: 2.1 Ability of the Scenarios to support the Activities.

suppliers successful at the PCP stage(s). An Annex (I Annex Enhancing CA's Innovation Credibility) discusses some of the existing difficulties and ways of removing them.

In essence, so far as the EU support is concerned, the legal mechanisms through which procurement of innovation can be carried out at EU wide level should allow grants under Strand One and Strand Two to support the management and preparation of procurements, the co-financing of actual procurement costs (as in the Pilot, 2011 CIP call for proposals n°N02C011) at both PCP and PPI, give support across a broad spread of sectors.

Implementation and Decision Making

In Strands One and Two, decisions have to be taken about what procurements are to receive funding. It is desirable that these decisions about what should be funded are made as close as possible to the needs of contracting authorities and preferably by the contracting authorities themselves, acting together. Only in this way will procurement lead to substantial societal benefit.

4.2 Budgeting

We have sought to make an estimate of a realistic financial commitment to the procurement of innovation by the EC, on an annual basis, through this policy model. On the assumption of Annual Public Procurement published at European level which consultants have estimated (PwC, London Economics, & Ecorys, 2011)⁶⁰ as €400 billion specified and above threshold, we have attempted to identify how much of this amount (P) might be spent upon the procurement of innovation (PI). We first suggest a factor FI to reflect the proportion of this amount P would be subject to innovation, a further factor amenable to cross border procurement FC, and a final factor reflecting the general rate of co-funding by the EU, FF. Two cases are presented, one where the assumption is made of a total overall co-funding rate of 55%, as has been the case with the Pilot; the second reflects the extent of co-funding at the higher rate found elsewhere in the support of the ICT PCP under the FP7, where the co-financing rate has been around 75%.

We note that overall public procurement in the EU is in fact larger than the amount indicated above, the above amount of around €400 billion being that identified as above threshold and published in the OJ. At around 2 trillion Euros per annum, total EU public procurement noted elsewhere which might ultimately be subject to more innovative procurement is therefore larger than the amount we have used here (Deutsche Bank, 2011). Our reason for using the smaller amount is to provide an estimate that may be closer to the amount that can be subject to actual cross-border and collaborative procurement and which is therefore open to influence by EU policy when a central criterion for action is EU-Added Value.

Innovation Potential – FI

We used an innovation potential proportion equivalent to the headline target of the Spanish Government's recent estimate of 3%, which is similar to the US SBIR PCP ratio of 2.5%.

⁶⁰ Refer to: http://ec.europa.eu/internal_market/publicprocurement/docs/modernising_rules/cost-effectiveness_en.pdf

Cross Border Procurement Proportion - FC

We suggest that value for the procurement budget within the EC that is currently cross-border be considered as the estimator (around 3%) of the minimum for the innovative cross border procurement. A value of closer to 6% is chosen to represent a current limit and target to which the policy should aspire.

EC Co-Funding Share of Procurements - FF

The co-funding share of the purchases under the Pilot Call was 20% of the value of the procurements. We present two options for funding, a low option, and a high option to reflect differences in the co-funding previously available to procurement activity. We assume a low estimate of 55% co-funding and a high estimate of 75% co-funding.

Budget for Support

The budget for support will be $P \times FI \times FC \times FF = PI$. Assuming €400 billion as the value for P, the total volume of EC public procurement, the EC contribution to the three stands would be €396 million per year of co-funding low estimate and €540 million as high estimate per annum. A higher rate of co-funding, greater expectations of the innovation potential and greater scope for cross-border procurement would all contribute to setting the budget higher. This budget is twenty times larger than the current Pilot spend on the low estimate and the larger estimate is seventy five times the current Pilot.

The split of budget within activities is 60% for the European Innovation Partnership and Lead Market type Strand, 35% for the bottom-up procurement support. An additional 5% is to be used for capability development, information sharing and dissemination of results and know-how.

Amounts	Low Estimate		High Estimate		
	Factor	Amount €	Factor	Amount €	
Annual EU Public Procurement Spending Estimate (PWC et al, 2011 ⁶¹)		€400 <u>Billion</u>		€ 400 <u>Billion</u>	CURRENT ESTIMATE
"Innovation Union" targets ⁶² Annual		€ 10 <u>Billion</u>		€ 10 <u>Billion</u>	TARGETS
Innovation Potential Proportion of Annual EU spending (€400 Billion)	3.0%		3.0%		
Public Procurement Actual Annual Budget to Stimulate		€ 12 <u>Billion</u>		€ 12 <u>Billion</u>	
Cross Border Procurement Proportion	6.0%		6.0%		
Cross Border Procurement Budget Annual Potential Spend		€ 720 <u>Million</u>		€ 720 <u>Million</u>	
EC co-financing share of innovation procurements projects CIP (DG ENTR) & FP7 (DG INFSO) applied to Cross Border Targets	55.0%		75.0%		CURRENT PILOTS
Total Annual EU Budget Spend all Strands 1,2,3		€ 396 <u>Million</u>		€ 540 <u>Million</u>	BUDGET NEEDED
Strand 1 Share of Budget Proportion	60.0%	€ 2376 <u>Million</u>	60.0%	€324 <u>Million</u>	
Strand 2 Share of Budget Proportion	35.0%	€ 138.6 <u>Million</u>	35.0%	€189 <u>Million</u>	
Strand 3 Per Year Share of Subtotals	5.0%	€ 19.8 <u>Million</u>	5.0%	€27 <u>Million</u>	
Seven Year EU Budget Spend on this Policy €		€ 2.77 <u>Billion</u>		€ 3.78 <u>Billion</u>	

Table 1 Indicative Budgetary Implications – EU Level

Further Considerations for the Allocation of Support

Our assessment of the likely spend by the EU on all three of the Strands can only be indicative at this stage. Further work is required to develop understanding of which sectors should receive greater levels of support. This balance of support will depend to some extent on priority setting within the new Horizon 2020 and COSME, and on further reflection about which of the grand challenges can be most effectively addressed by demand led policy rather than more conventional grant based approaches. These grant based approaches might include a possible EU SBIR style programme that will support SMEs. The balance will also depend upon where European Added-Value is most likely to occur.

The balance of support between the two main Strands (One and Two) which we have proposed has been set in such a way as to ensure that opportunities that already exist in the form of grand challenges can be funded, but that there is sufficient resource left to support contracting authorities in their own purchasing. This is a balance that attempts to ensure that the potential of the

⁶¹ Refer to: http://ec.europa.eu/internal_market/publicprocurement/docs/modernising_rules/cost-effectiveness_en.pdf

⁶² Refer to "Innovation Union" COM(2010) 546 final: "From 2011, Member States and regions should set aside dedicated budgets for pre-commercial procurements and public procurements of innovative products and services (including those defined by the Innovation Partnerships). This should create **procurement markets across the EU starting from at least €10 billion a year** for innovations that improve the efficiency and quality of public services, while addressing the major societal challenges. The aim should be to achieve innovative procurement markets equivalent to those in the US."

procurement of innovation approach is realized in the short to the medium term, but also that in the medium to longer term the significant demand of European public authorities is able to connect to our product and service industry base.

We recommend that the Strand Three resource should be allocated across Strands One and Two and not divided pro rata (60/35) between them or considered separately. We make this recommendation because we believe that the experience and understanding of the procurement of innovation that will occur within each of two main Strands of activity will be relevant to the other one. The Strand Three activity should ensure that the dissemination of experience and learning that occurs is considered together and shared.

Annexes

A The Study Team

The Study team is comprised of the following organisations:

- Manchester Institute of Innovation Research (MIOIR), MBS, University of Manchester;
- Technopolis Group;
- ICLEI - Local Governments for Sustainability;
- Corvers Procurement Services BV.

B Innovation and PCP – the EU Context

Innovation – or “ideas successfully applied” (Gann, 2010) - is the hallmark of the modern world. Private sector firms must innovate at an increasing rate merely to stay in business; and more and more it is realised that public authorities have a vital role to play in encouraging innovation through their procurement activities because of the immense size of their role in the economy (European Commission, 2007a; Thai, 2009).

In the last decade, governments across the developed world have rediscovered the potential for demand-based instruments of innovation policy and implemented new measures. Public procurement is increasingly considered as one of the most important of the demand side policy levers governments can use. Buying innovative solutions at public sector level comes along with great expectations, such as the creation of lead markets, boosting industrial innovation, better performing government and solving societal problems, faster growth of small innovative businesses, and, within the EU itself, exploiting other important policies and developments such as the Single Market.

Recent EU Policy statements have reiterated a commitment to innovation and the use of procurement as a means of achieving it. The “Innovation Union” Communication (European Commission, 2010) points to a number of weaknesses in the current European landscape:

“Unsatisfactory framework conditions, ranging from poor access to finance, high costs of IPR, to slow standardisation and ineffective use of public procurement. This is a serious handicap when companies can choose to invest and conduct research in many other parts of the world.”

The Communication identifies public procurement as a significant opportunity to foster innovation, combined with other demand and supply-side measures:

“Remaining barriers for entrepreneurs to bring “ideas to market” must be removed: better access to finance, particularly for SMEs, affordable Intellectual Property Rights, smarter and more ambitious regulation and targets, faster setting of interoperable standards and strategic use of our massive procurement budgets. As an immediate step, agreement should be reached on the EU patent before the end of the year. “

The importance of public spending both to stimulate innovation and improve public services, as well as potentially save public money is underlined:

“Public procurement accounts for some 17% of the EU's GDP. It represents an important market, particularly in areas such as health, transport and energy. So, Europe has an enormous and overlooked opportunity to spur innovation using procurement. Moreover, public procurement of innovative products and services is vital for improving the quality and efficiency of public services at a time of budget constraints.”

Against this backdrop, the Innovation Union Communication argues that MS should act urgently and decisively on public procurement, dedicating specified budgets for the procurement of innovation to include both pre-commercial procurement and the procurement of (existing) innovative products:

“From 2011, Member States and regions should set aside dedicated budgets for pre-commercial procurements and public procurements of innovative products and services (including those defined by the European Innovation Partnerships, see Section 5). This should create procurement markets

across the EU starting from at least €10 billion a year for innovations that improve the efficiency and quality of public services, while addressing the major societal challenges. The aim should be to achieve innovative procurement markets equivalent to those in the US. The Commission will provide guidance and set up a (financial) support mechanism to help contracting authorities to implement these procurements in a non-discriminatory and open manner, to pool demand, to draw up common specifications, and to promote SME access.”

And that the Structural Funds could themselves be used to promote innovative procurement:

“Greater use can be made of financial instruments to leverage private finance for research and innovation. Public procurements co-financed by the Structural Funds should also be used to increase demand for innovative products and services.”

The procurement of innovation is a complex set of activities involving many actors. It can be used to support a variety of goals. It can refer to:

- Pre-commercial procurement (PCP) of research and development services, which is not covered by the EU Procurement Directives;
- Public Procurement of Innovation (PPI) involving the purchase under procurement rules of innovative goods, services or works, including First Commercial Procurement (FCP);
- The implementation in the public sector of existing goods or services in a new way, or the adoption of new processes where these have procurement implications.

Policy responses for innovative procurement should consider pre-commercial procurement (PCP) and the public procurement of innovation (PPI) (which are governed by different legal frameworks - (European Commission, 2007b)) as part of a whole. The Study Team understands the need to link and consider these different approaches to innovation procurement together.

C Recap of Stage One (Preparation of the CIP call for Proposals to Design the Future Full Scheme)

The Study Team's understanding has therefore been that this first Stage would be an investigation of the details of a Pilot PCP/PPI scheme that would operate within the existing Competitiveness and Innovation Framework Programme (CIP) context only, and would therefore not be a scheme that supports PCP directly. The Study Team has investigated this issue with the relevant actors (staff from DG BUDG and DG SJ) and has determined that support for PCP could be given indirectly, i.e. to capability building activities. Work to develop such a scheme within these limits comprised the following tasks:

- Review of possible schemes, EU and beyond;
- Review of EU priorities;
- Consultation with the EC and other policy makers (national ministries) on the Pilot;
- Review of the legal context for the Pilot including use of internal legal expertise and resources and consultation with the relevant EC authorities;
- Open consultation with contracting authorities, public procurement offices, policy makers and innovation agencies from across the EU by way of a detailed questionnaire setting out potential support activities and seeking feedback;
- More detailed consultation with a limited number of the above stakeholders by way of telephone interview;
- Presentation of the PCP/PPI scheme including a proposed design for the pilot based on the results of the feasibility study.

Deliverables for Stage One Were:

- Methodological report, D1 – Inception Report: feasibility study on future EU support to public procurement of innovative solutions submitted on the 15th January 2011, including the basis of the interview protocols, analysis process and intended interview targets;
- Consultation with EC and selected national administrations and procurers during later January, February and early March 2011;
- Draft Interim Report D2 Indicating the Design of the Pilot;
- Workshop March 31st 2011.

D Review of the Pilot

D1 Questions we asked in reviewing the applications to the Pilot

Appropriateness of Call

- Number of applications for the pilot call;
- Spread of applications amongst different Lots (sectors) and Activities;
- Spread of applications amongst different types of beneficiaries;
- Involvement of beneficiaries from different Member States;
- Spread of applications across EU27;
- Total financial value of applications versus allocation;
- Overall quality of applications, and feedback on appropriateness of call.
- Involvement of SMEs /Quality of SME involvement
- Establishment of Pilots

Launch

- Spread of pilots amongst different Lots (sectors) and activities;
- Spread of pilots amongst different types of beneficiary;
- Spread of pilots across EU27;
- Balance of allocation of resources amongst pilots;
- Total value of pilots including co-financing from beneficiaries.

Impact – Demand Side

Amongst the Strand 1 applications⁶³

- New areas for procurement not covered or previously considered – i.e. to answer the question about the scope for novelty.
- Coherence of plans to procure

Amongst the Strand 2 of the pilot call applications⁶⁴

- Development and dissemination of information on state-of-the-art in key sectors;
- Development and deployment of performance-based specifications;
- Establishment of cooperation between contracting authorities, innovation agencies, public authorities and other demand-side stakeholders;
- Availability of specifications, references and other specific resources for PPI to contracting authorities across the EU;
- Increased public sector spend on innovative products and services;
- Increased awareness of PCP/PPI and availability of good practice examples and guidelines;
- Potential for replication of successful pilot projects.

⁶³ Strand 1 of the 2011 CIP call for proposals n°N02C011 was dedicated to the development of public procurement of innovative solutions (preparation phase and implementation phase).

⁶⁴ Strand 2 of the 2011 CIP call for proposals n°N02C011 was dedicated to create and run a European platform dedicated to "public procurement as tool for innovation.

Impact – Supply Side

- Specific opportunities for market consultation leading to PPI/PCP;
- Increased transparency of public sector procurement linked to PPI/PCP;
- Linking of needs and specifications from contracting authorities in different Member States;
- Support from public sector clients in the form of references and testimonials;
- Scope for Improved risk management leading to fairer contractual terms;
- Scope for Increased public sector spend on innovative products and services;
- Scope for increased EU-wide competition in key sectors for innovation;
- Scope for creation of an early market and spill over potential to other markets.

EU Added Value and synergy with other initiatives

- Outcomes of pilot contributing directly to Europe 2020 objectives;
- Activities undertaken which complement without duplicating national, regional and local initiatives and other EU supports (Structural Funds, Framework Programmes etc.);
- Link to specific supply-side initiatives undertaken within CIP;
- Link to PCP support activities undertaken within FP7;
- Link to Lead Market Initiative and other procurement-based policy measures such as Green Public Procurement, e-procurement, regulation and standardisation;

D2 Examination of the Pilot – Results

Despite the relatively short period of time in which proposers were able to respond, the call for proposals for the Pilot clearly stimulated interest and resulted in over 10 applications for Strand 1. Strand 2 proposals were few in number however, perhaps reflecting the lower budget amount available to this part of the call. Three of the applications were judged by the EC as of excellent quality and were felt to exceed the criteria for evaluation (outlined in the Interim Report).

Involvement of SMEs was not a specific objective of the Pilot; five of the Strand One proposals involved SMEs however. The responses to the first Strand all, apart from one, indicated a clear project to procure an innovation, confirming the interest in and a need for policy to assist in the procurement of innovation. Responses to Strand One came from 16 countries of the EU.

The coverage of sectors by the submitted proposals was wide and included coverage of climate change, health and social care, energy efficiency, mobility infrastructure and working conditions. The bodies which submitted proposals also reflected a broad interest in the call, and included the following classes of organisation: ministries, i.e. central government bodies, local government organisations of large and small cities, hospitals both large and small, an airport, and a number of platforms or representative bodies comprising cities and hospitals.

Applicants focused their proposals on the general topic or themes identified in the call and within the LMI areas of activity. Proposals indicated a needs assessment process should begin procurement and in nearly all cases, such a needs assessment was sufficiently broad in its terms as to suggest that the procurers were likely to demand innovative products. Needs assessment across organisations was envisaged in some of the proposals where joint procurement was planned. There is a small risk

that specifications will be too detailed to provide the necessary incentives for suppliers to innovative, but the call suggests that while there is evidence of this risk, it is not large.

Staging of the procurement process was a feature of most of the bids; however some bids did not give a clear outline of the framework that could be used to manage the process of procurement. It is difficult to determine on the basis of the evidence we have whether lack of time in the drafting of proposals or a lack of capability on the part of contracting authorities was responsible for the absence of a management framework for the procurement in a small number of bids. Management frameworks for the process of procurement are clearly a key pre-condition for success, especially when the activity is complex, involves multiple actors, and may extend over a long period of time.

Amongst the Strand Two applications are activities to support development and dissemination of information on state-of-the-art in key sectors, activities that were outlined in the Interim Report. Strand Two applications also included a commitment to develop and use performance based specifications. Successful proposals also emphasized and undertook to promote cooperation between contracting authorities, innovation agencies, public authorities and other demand-side stakeholders; plans to make more available specifications, references and other specific resources for PPI to contracting authorities across the EU; plans to promote increased public sector spend on innovative products and services; Increased awareness of PCP/PPI and availability of good practice examples and guidelines; and plans to examine the potential for replication of successful pilot projects.

The following graphics resulting from the Commission’s evaluation of the proposals for the Pilot indicate the key actors involved in the Pilot projects, the countries taking an interest and the amount of the budget bid for by applicants.

Member States or associated countries involved in submitted proposals	AT, BE, BU, DK, FI, FR, GE, HU, IT, LT, LU, NO, PL, SE, PL (17)
Value of the call for proposals	14.400.000 €
Overall programme size (EC co-fundings + co-funding from applicants)	27.661.389 €
Average EU support	51,9%
Total value of innovative purchases (co-funding from applicants)	16.171.890 €
Innovation procurement aims	To combat climate change, to improve care for senior citizens, to foster energy efficiency, to supply better mobility infrastructure, to provide quality healthcare and to create more healthy working conditions.

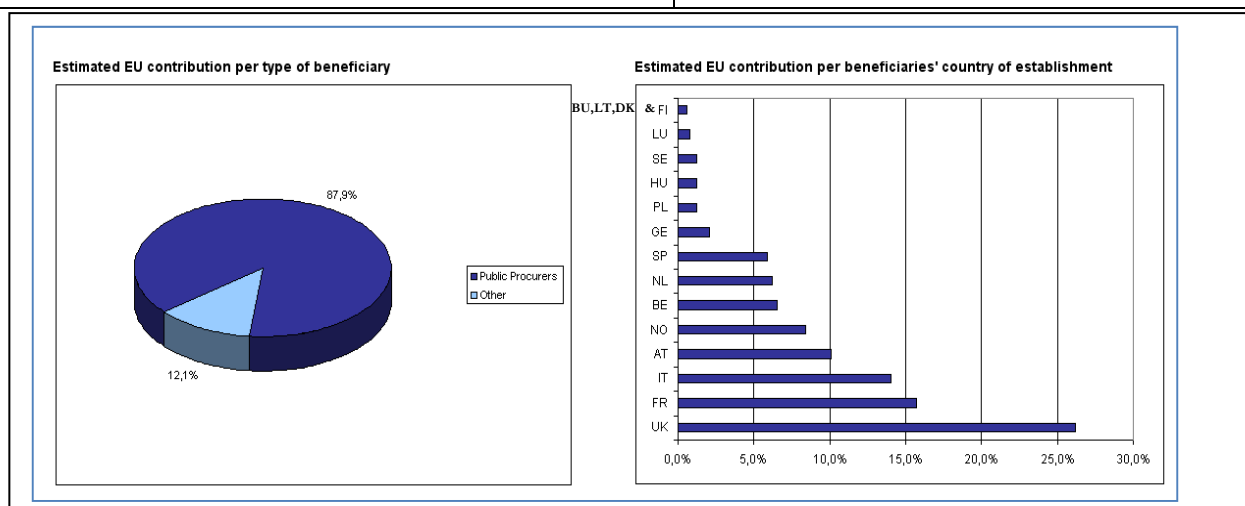


Figure 8 Analyses of the Pilot Call for Proposal n°ENT/CIP/11/C/N02C011

All proposals received indicated that they would carry out market consultations, and that proposers understand that they should plan to engage in a broad consultation process that is EU wide. The extent of collaboration on procurement cross border proposed by applicants was however limited in scope. Only 3 proposals gave sufficiently detailed plans to link needs and specifications from contracting authorities in different Member States. Most of the proposals claim that they will ultimately support deployment of procured products or services through references and testimonials. Very few proposals plan activities that would enhance risk management methods.

Proposals showed evidence that they would provide EU Added Value and synergy with other initiatives and Outcomes of pilot contributing directly to Europe 2020 objectives. There was evidence also of some complementarity with other policy initiatives locally, regionally and nationally. There was also some evidence that proposals would link to other supply side initiatives of the CIP on the area of standardization.

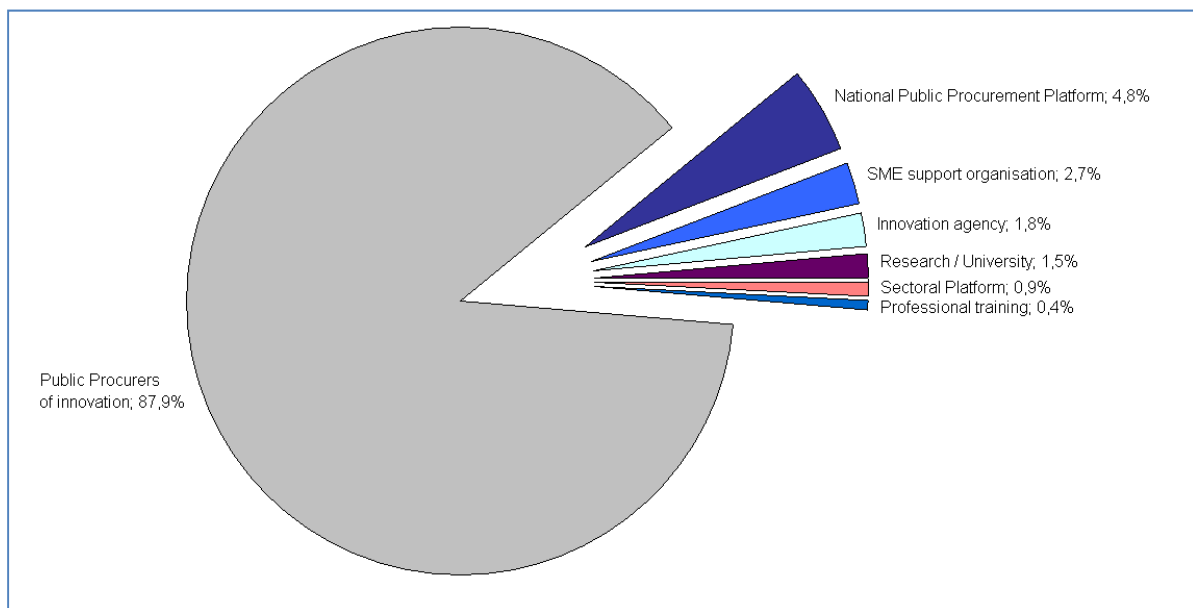


Figure 9 Analyses of the Pilot Call Applications 2

The responses to the Call suggest that there is interest in the procurement of innovation on the part of contracting authorities, and that contracting authorities, from a range of sectors are ready to work with contracting authorities from other member states on public procurement. As the Pilot provided resources with which to support procurement of innovation, rather than pre-commercial procurement, we must be guarded in what conclusions we come to in respect of how successful a support mechanism for such procurements at EU level could be. The range of countries from which bids were submitted suggests interest in the activities which a procurement of innovation support programme would assist. The proposals substantially indicate outcomes that contribute directly to Europe 2020 objectives, some proposals show that they plan to link their activities to PCP support activities undertaken within FP7.

E Methodology for Second Part of the Study of the Study

E.1 Priorities for Stage Two

The priorities for Stage Two can be seen to be develop an understanding of whether and how to implement an EU support scheme for PCP /PPI and the link to procurement of innovation, what is normally understood to be Phase 4 of the procurement process – spectrum of activities. The focus will however be more on PCP than in the first stage, and on embedding PCP in the policy mix and the overall policy context.

The Study Team aims to retain the activity based framework for help to contracting authorities used in Stage One, but to modify it to reflect the needs of those engaging in PCP which include IPR administration, risk management, control, and valuation.

Account will be taken in Stage Two of a number of contextual issues or factors that affect the successful implementation and operation of the PCP support. These contextual factors, some of them with legal implications for the promotion of innovation, include at a minimum the following:

- the Procurement Directives and possible changes to them;
- the Structural Funds and changes to them potentially to promote innovation;
- changes to the rules of FP for Horizon 2020 / possibly also for CIP if this information becomes available; the role of Member States and MS own schemes in relation to the EU SBIR. It is unlikely that we will be able to take account of the full and adopted Horizon 2020 proposal however as this will only be public in November.

We would propose examining these contextual factors in our report, to assess their potential effect on the operation of the Scheme.

In relation to the Pilot, the Study Team does not intend to evaluate the Pilot as a policy instrument except in so far as to establish from feedback and early use of the Pilot those issues which are important for the implementation of a full and actual pre-commercial procurement programme.

E.2 Main Questions for Stage Two

The Study Team will develop with the help of experts and the EC three possible scenarios for a larger scale of support to the procurement of innovation. This will include a larger version of the Pilot call for proposals published in Turin in June 2011.

These scenarios will be used to answer the following main questions which we assume to be the main priorities of work for Second Part of the Study.

E.3 Possible Scenarios and Questions

E.3.1 Scenario 1: Contracting Authority Led

In this scenario, funding is designed to be applied in pre-procurement and procurement activities (PCP/PPI) defined according to the needs of contracting authorities (CAs). CAs would apply either solely, in consortia or under the auspices of a coordinating partner to be the direct beneficiaries of co-financing for their own PCP/PPI activities. This would include central purchasing bodies conducting procurement on behalf of a number of CAs and national or EU agencies would also be eligible to apply, in their capacity as contracting authorities.

Scenario 1 would constitute the enlargement of the existing Pilot Scheme. Enlargement could be achieved by any combination or all of the following: increasing the number of procurements paid for, increasing the rate of reimbursement of costs, increasing the co-funding share paid for by the EU, increasing sector coverage, and including funding for PCP and risk management activities.

While in Scenario 2, general areas and needs for procurement (of goods or services) are defined prior to the direct involvement of contracting authorities and provide a means for eliciting bids for funds from contracting authorities, in Scenario 1, no such formal process to encourage and support requests for EC funding exists. Under Scenario 1 contracting authorities and other organisations including member states organisations will need to bring forward proposals for (part) EC financial support of procurements using their own initiatives. We doubt that existing process of integration, networking, collaboration and co-working are sufficient to achieve successful applications to the EC for funding across all sectors and across all Member States. It is probable therefore that these processes will need some further development and that resourcing and support from the EC would be required to achieve it.

Assessment Criteria	Preliminary Assessment	Questions to ask and potential interviewees
Ability to support the eight (pre)procurement activities ⁶⁵	Pre-commercial procurement:	How can this scenario support this activity? What other support will be needed? How will it be provided?
	Linking PCP and PPI: Here we may wish to consider a range of legal problems that relate to the procurement process: there are a number of these. We may wish to highlight these – whether we can answer them is another matter. What I have in mind is as follows: a) What legal problems might face a contracting authority who wished to prevent firms that took part in a pre-commercial procurement from participating in a linked / related procurement of	How can this scenario support this activity? What other support will be needed? How will it be provided?

⁶⁵ These are: Pre-commercial procurement (PCP); Linking PCP and PPI; Needs Assessment; Market Consultation; Specification Development; Innovation Competitions (co-financing of procurement costs); Capacity Building and Co-ordination and Risk Management.

	<p>goods and services? b) what legal redress would be available for firms that have been participants in a pre-commercial procurement that are subsequently prevented from participating in a commercial procurement?</p>	
	Needs Assessment:	<p>How can this scenario support this activity? What other support will be needed? How will it be provided?</p>
	Market Consultation:	<p>How can this scenario support this activity? What other support will be needed? How will it be provided?</p>
	Specification Development:	<p>How can this scenario support this activity? What other support will be needed? How will it be provided?</p>
	Innovation competitions (co-financing procurement costs):	What other support will be needed?
	Capacity building and co-ordination:	How will it be provided?
	Risk management:	How can this scenario support this activity?
EU Added Value	<p>Minimum criteria issues? 3 countries in a procurement or two? Is one country procurement ever justified, say when a “catalytic procurement” is carried out? We might consider that a catalytic procurement could be carried out at pre-commercial procurement stage or later, in, for example, the case of a pilot procurement (following the Verhaegen, Apostol, Corvers Green Paper)</p>	<p>DG Budget: Is cooperation between contracting authorities in different MS required for all activities? Or could EU added value be achieved in other ways, e.g. a thematic link to EU policy priorities or sharing of results at EU level?</p>
Compliance with Public Procurement and State Aid Rules	Identify current legal frameworks, and likely changes	Do the existing legal frameworks of the EU facilitate or impede this scenario? What changes might be made?
Effectiveness in promoting innovation	As CAs would be defining the areas for PCP/PPI, unlike in Scenario 2, more effort would need to be invested in determining whether applications for funding are likely to lead to the procurement of innovative goods or services.	<p>How, when, and by whom would the ‘innovativeness’ of applications be determined?</p> <p>Can a role for a jury be envisioned, and if so who should sit on it?</p>
Suitability for funding under FP8/ Structural Funds	What schemes are currently available to support these activities – under which they could be supported – directly and indirectly?	Can SF resources be used to support procurement of innovation? Can the FP8 be used?
Potential to attract co-financing	What will be relationship between EC money and procurement budgets – leverage rates required?	How much will Scenario 1 attract funding from contracting authorities and other actors?

		How much co-funding will the EC need to provide? What are the legal limits on co-funding of innovation?
Complementarity with existing EU/MS innovation support measures⁶⁶	Does Scenario 1 work with other initiatives?	Does Scenario 1 complement or work against any of the EU's direct support measures (CIP, EIP, JEREMIE) indirect (FP7, LIFE+ Intelligent Energy Europe, Marco Polo II)
Practical implementation issues	Generating and channeling demand for the scheme? Evaluation of proposals of contracting authorities for funds? Who would carry this out?	How will the scheme determine which applications to fund? Who is best placed to make this assessment? Which DGs should be involved?
Sectoral fit and coverage	This Scenario is less likely to lead to even sectoral coverage than Scenario 2, as this will depend on the number and quality of CA applications in various sectors, and this will not be easy to predict.	How should the EC allocate funds to the different bids from contracting authorities? What system can be used to choose between sectors?

⁶⁶ Including supply-side measures

E.3.2 Scenario 2: Innovation Gap Led

In this scenario funds would be available for pre-procurement and procurement activities targeting areas identified at EU level as corresponding to an existing innovation gap. The activities would be carried out by contracting authorities in the same manner as Scenario 1, but would be limited to PCP/PPI for goods, services and works in specific areas defined in the call. These would be areas where promising R&D with clear potential public sector applications has already been carried out. For example, a call might relate to low-energy data centre services, alternative-fuel vehicles or medical devices incorporating nanotechnology.

As with Scenario 1, the recipients of this funding would be contracting authorities including central purchasing bodies, with supporting roles played by innovation agencies or other eligible bodies.

Assessment Criteria	Preliminary Assessment	Questions to ask and potential interviewees
Ability to support the eight (pre)procurement activities	Pre-commercial procurement:	How can this scenario support this activity? What other support will be needed? How will it be provided?
	Linking PCP and PPI:	How can this scenario support this activity? What other support will be needed? How will it be provided?

	Needs Assessment:	How can this scenario support this activity? What other support will be needed? How will it be provided?
	Market Consultation:	How can this scenario support this activity? What other support will be needed? How will it be provided?
	Specification Development:	How can this scenario support this activity? What other support will be needed? How will it be provided?
	Innovation competitions (co-financing procurement costs):	How can this scenario support this activity? What other support will be needed? How will it be provided?
	Capacity building and co-ordination:	How can this scenario support this activity? What other support will be needed? How will it be provided?
	Risk management:	How can this scenario support this activity? What other support will be needed? How will it be provided?
EU Added Value	Potentially top down definition will select as the first instance topics that have broad interest and therefore high EU-Added Value	DG Budget: Is cooperation between contracting authorities in different MS required for all activities? Or could EU added value be achieved in other ways, e.g. a thematic link to EU policy priorities or sharing of results at EU level?
Compliance with Public Procurement and State Aid Rules	What rules apply?	Do the existing legal frameworks of the EU facilitate or impede this scenario? What changes might be made?
Effectiveness in promoting innovation	Relevance of top-down EC defined needs to	
Suitability for inclusion in Horizon2020/ Structural Funds	Involvement of DGs	Which DGs will be involved? How will priorities be set across the FP and within SF expenditure?
Potential to attract co-financing	What will be the relationship between EC money and procurement budgets – leverage rates required?	What areas will need more and which less leverage from EC funding?

Complementarity with existing EU/MS innovation support measures	Link to grant and industrially focused funding schemes should be considered	Where do top down modes work best with other EU funding methods? Will this mode ensure engagement with SMEs?
Practical implementation issues	A potential drawback of this scenario is that it would be difficult to judge in advance the extent of CA demand for the specific needs defined.	Survey of contracting authorities would in the long term be required to assess demand.
Sectoral fit and coverage	This scenario offers the ability to pre-define the sectors which will be covered, potentially leading to better coverage.	How should the EC allocate funds to the different bids from contracting authorities? What system can be used to choose between sectors?

E.3.3 General Issues of Approach in Design

A scheme operating with two parts with one part based on one of the principles underpinning the two Scenarios and the other part based on the other principle would need to have some mechanism of determining how to balance resources between two parts. A range of methods will need to be devised to determine how to balance resources between the two areas. Account needs to be taken of the likely nature of the tasks to be defined and the technological difficulties involved in meeting them. A market research activity might be appropriate.

The design and rules of each of the strands would also need to be achieved in such a way as to make clear to applicants which scheme would give them greater opportunity to realize their goals. However, it should be noted that if one scheme or approach appears to hold out a greater likelihood of success, there may be more applications to it, even when the procurement in question may be more appropriate to carry out under the other scheme.

E4 EU Support for PPI/PCP: Feasibility Study Phase 2 Interview Brief

E4.1 Introduction: the aim of the study

The Innovation Union has strongly embraced the opportunities to use public procurement to spur innovation. The Communication states that this is an enormous overlooked opportunity and that if such an approach could be applied more widely and combined with joint procurement between different contracting entities, huge markets could be created that would boost innovation and new innovative businesses. DG Enterprise and Industry (DG ENT) has asked a consortium of the University of Manchester (MIOIR), ICLEI, Technopolis Group and Corvers Consulting, to conduct a feasibility study on future EU support to public procurement for innovative solutions.

The feasibility study should examine; the potential barriers and benefits for procurement authorities to undertake procurements of innovative solutions, including pre-commercial procurements; how such barriers could be overcome and benefits enhanced through EU support; and how an EU support scheme could be designed to maximise benefits and EU added value. In the first phase of this study we conducted extensive stakeholder consultations in the Member States to assess the barriers and benefits as well as their views on a potential EU role. On the basis of this work we supported DG ENT to develop a pilot scheme within the context of the CIP programme. A call for this pilot scheme for public procurement of innovations has been opened in the summer of 2011. In the current second stage we are exploring how a European scheme or European support actions could be defined at a larger scale. We are considering approaches concerning both Public Procurement for Innovation (PPI) as well as those concerning Pre-Commercial Procurement (PCP). For this purpose we are interviewing representatives from Member States, but particularly the Commission services and other European representatives to assess how far this approach could be useful to support various policy objectives. Information on the project and the consortium can be obtained from the project officer, Bertrand Wert at DG Enterprise and Industry (bertrand.wert@ec.europa.eu). We kindly ask some of your time to explore potential options for innovation procurement with you.

E4.2 Block 1: Your involvement with PPI and PCP

1. How familiar are you with the approaches and activities regarding PPI and PCP? Would you like us to elaborate further on what the concepts mean and how these approaches are currently evolving?
2. In how far are these approaches taken on board in your (part of the) organisation?
3. For member of Commission Services: are initiatives already in place in your Unit /Directorate to develop such approaches? If yes could you tell us more about how they are set up exactly
4. In case that a scheme has been set up or is in preparation:
 - a. Who are eligible for support? (E.g. Firms, Procurement Authorities, other .),
 - b. How are the needs for procurement defined (or who sets the themes of calls and how specific are they?
 - c. Are they specifically focused on Grand Challenges?
 - d. What is the link with actual procurement or commercialisation of the outcome of the projects?

E4.3 Block 2: The Future Role of the European Commission

1. In your view should the European Commission or its Agencies play a more active role in PPI or PCP in the future?
2. Do you have specific suggestions about what that role should be?
3. Were you familiar with the Call sent out by DG ENT with the CIP pilot scheme addressed to PCP/PPI? If yes what do you expect in terms of interest for the call in the various communities it tries to address?
4. Should a future scheme be part of Horizon 2020 or do you see a lead role somewhere else?
5. In your view are there any specific types of actions or activities that the European Commission should definitely NOT do?
6. If so, should they be undertaken by anyone else? Who should do them?

E4.4.1 Scenario 1: Contracting Authority Led

In this scenario, funding is designed to be applied in pre-procurement and procurement activities (PCP/PPI) defined according to the needs of contracting authorities (CAs). CAs would apply either solely, in consortia or under the auspices of a coordinating partner to be the direct beneficiaries of co-financing for their own PCP/PPI activities. This would include central purchasing bodies conducting procurement on behalf of a number of CAs and national or EU agencies would also be eligible to apply, in their capacity as contracting authorities.

Scenario 1 would constitute the enlargement of the existing Pilot Scheme. Enlargement could be achieved by any combination or all of the following: increasing the number of procurements paid for, increasing the rate of reimbursement of costs, increasing the co-funding share paid for by the EU, increasing sector coverage, and including funding for PCP and risk management activities.

While in Scenario 2, general areas and needs for procurement (of goods or services) are defined prior to the direct involvement of contracting authorities and provide a means for eliciting bids for funds from contracting authorities, in Scenario 1, no such formal process to encourage and support requests for EC funding exists. Under Scenario 1 contracting authorities and other organisations including member states organisations will need to bring forward proposals for (part) EC financial support of procurements using their own initiatives. We doubt that existing process of integration, networking, collaboration and co-working are sufficient to achieve successful applications to the EC for funding across all sectors and across all Member States. It is probable therefore that these processes will need some further development and that resourcing and support from the EC would be required to achieve it.

E4.4.2 Scenario 2: Innovation Gap Led

In this scenario funds would be available for pre-procurement and procurement activities targeting areas identified at EU level as corresponding to an existing innovation gap. The activities would be carried out by contracting authorities in the same manner as in Scenario 1, but would be limited to PCP/PPI for goods, services and works in specific areas defined in the call. These would be areas where promising R&D with clear potential public sector applications has already been carried out. For example, a call might relate to low-energy data centre services, alternative-fuel vehicles or medical devices incorporating nanotechnology. As with Scenario 1, the recipients of this funding would be contracting authorities including central purchasing bodies, with supporting roles played

by innovation agencies or other eligible bodies. Both scenarios could be foreseen to support a number of activities:

- Pre-commercial procurement (e.g. financing the R&D phase of an innovation)
- Linking PCP with Public procurement for Innovation (enhancing the actual commercialisation of the outcome of these research projects)
- Supporting the process of Needs Assessment of Contracting Authorities
- Market Consultation (supporting the process of dialogue with potential contractors to assess the state-of-the-art and technological limitations for potential innovative solutions)
- Specification Development (supporting Contracting Authorities with the articulation of their specific needs to ensure the best response from potential contractors)
- Innovation Competitions (co-financing of procurement costs)
- Capacity Building
- Coordination and Risk-Management

E4.4.3 The questions on these scenarios

For each of the scenarios we would like you to give a view on the following issues:

1. At what level of actors would in your view the European Commission best focus its support?
 - a. If schemes are focused on Contracting Authorities to purchase innovations what type of conditions would you expect (e.g. at least three countries involved, innovations new to the market or new to the purchasing authorities?, ...)?
 - b. If schemes are directly focused on contracting firms/research organisations, how could the commercialisation/ public procurement link be established?
 - c. Do you see a role in a European scheme for the national Innovation Agencies, some of which are already actively involved in schemes to support PCP/PPI?
2. Which of the scenarios in your view has the most potential to provide European added value?
 - a. Is cooperation between contracting authorities from different MS a minimum condition? Or could EU added value be achieved in other ways, e.g. a thematic link to EU Policy priorities or sharing results at EU level?
3. Please elaborate on how in your view these scenarios would support the various activities mentioned above?
4. Would you rather propose a completely different scenario? If yes, what would that look like?
5. If relevant: how do these scenarios compare with the types of schemes/ actions your Unit is currently developing?
 - a. Where do they differ?
 - b. Would the scenarios be complementary to your scheme?
6. What framework conditions or accompanying measures need to be addressed to make these scenarios viable and effective?
 - a. Do the existing legal frameworks of the EU facilitate or impede this scenario? What changes might be made?
7. What part of the Commission services is best placed to develop a scaled up scheme as we are sketching?

- a. Who should be delivering the scheme?
 - b. In Scenario 2 where there is more attention for, for instance needs coming from Grand Challenges: what part of the Commission is best placed to define demands? What role could various other DGs (e.g. sector policy oriented) play?
 - c. How could the Member States be involved in this?
8. Could these type of schemes be implemented to make better use of the Structural Funds?
 9. How would these schemes relate to existing financial support available from the EC, e.g. JEREMIE?

F Engagement of Experts

Experts were engaged with the analysis, conclusions and recommendations at the end of the Study. Experts were written the following note

Dear ----

As you may be aware, the Study Team to which you have kindly accepted an invitation to assist as an expert has since April been working on the second stage of its project, a “Feasibility study on future EU support to public procurement of innovative solutions”. Thank you for all the help you have given us thus far.

In the first stage, the Study Team developed a Pilot which was launched in June (a link to the can be found here call) and has now closed at the end of September. The EC is now considering the applications.

The Study Team is now reviewing the evidence for the expansion of the Pilot and would like to share with you some of our conclusions on the research we have conducted. We would also very much appreciate your views on the issues that we raise and would ask that you respond by email to me John Rigby and, if you wish, please circulate your responses to the other experts if you wish to draw their attention to your views and widen the debate.

The questions we have prepared a number of questions are below:

- a) Do you believe that the Pilot continue in larger form?
- b) If the Pilot is capable of enlargement, how should enlargement occur? (sectors, budgets, timespan...)
- c) Should the EC attempt to coordinate or influence the PCP and procurement of innovation (PPI) activities of MS?
- d) What form should that coordination take?
- e) Should EU support to procurement of innovation through PCP be catalytic, taking the form of grants to SMEs or larger firms only?
- f) If so, how should priorities be set?
- g) Are the EU defined Grand Challenges a sufficiently detailed framework in which to set priorities for procurements (either PCP or PPI)?
- h) What should the scale of this activity be?
- i) Should EU support to procurement take the form of co-funding of actual procurements by contracting authorities (PCPs or goods and services)?
- j) If so, at what level of support should this be set?
- k) Are cross border procurements (PCP or PPI) under an EU support scheme or outside it realistic given the lack of capabilities amongst contracting authorities and the complexities of existing legal systems?

If you believe we have missed any important issues from those under discussion above, please let me know. Attached to this email is the interview brief that we have been using with EC officials and others in this final stage of the research. This is provided as background to our study.

Yours sincerely,
John Rigby

G Glossary of Procurement of Innovation Terms

The Study Team is aware that the area of policy to promote public procurement of innovation is a complex area of policy making, involving economic, management, organisational and legal aspects. Those making policy in this area require not only a specialist level of expertise and knowledge but a broad understanding of the interrelationships between these aspects. In this study the following terms are widely used and we provide a short definition to assist the reader.

Competitiveness and Innovation Framework Programme (the CIP) We believe that the following provisions of the CIP constitute the legal basis for support actions for the procurement of innovation under the Pilot, and they would continue to apply to innovation support by DG ENTR in the absence of changes brought about by Horizon 2020.

Article 13: Under the Entrepreneurship and Innovation programme, 'action in relation to innovation may include: (...) (c) supporting the take-up of innovative technologies and concepts and the innovative application of existing technologies and concepts; (d) supporting services for trans-national knowledge and technology transfer and for the protection and management of intellectual and industrial property; (f) fostering technology and knowledge through data archiving and transfer'.

Article 22 (Innovation and eco-innovation pilot and market replication Projects):

'The Community shall provide support to projects concerned with the first applications or market replication of innovative or eco-innovative techniques, products or practices of Community relevance, which have already been technically demonstrated with success but which, owing to residual risk, have not yet significantly penetrated the market. These shall be designed to promote broader utilization of such techniques, products or practices within the participating countries and facilitate their market uptake'.

Government Procurement Agreement

The GPA is a plurilateral agreement within the WTO creating obligations on signatories concerning government procurement. Each signatory party opens its public procurement market to different extents towards each of the other signatory parties (see Appendix I). According to the European Commission, the results of the R&D contract within a PCP procedure may not be bought by the contracting authority without a competitive procedure, because the EU did not make any reservations to this end, as did the US.

Grand Challenges

The EU has defined a set of major challenges to society across a broad range of categories as grand challenges. Such challenges include food safety, human and environmental health, climate change or energy. Grand challenges are characterized by the extent of the challenge in that the problems are systematic and

broadly applicable and the complexity of the problems denoted. Such challenges call for broad coordinated and urgent action at EU or broader level. Such challenges are often comprised of a whole range of subsidiary problems or issues which need individual and linked consideration. Collective action at EU or higher levels based upon focused scientific research that is applied to the problems appears essential to the finding of solutions.

Innovation

While innovation might appear to need to be the subject of an open-ended definition for policy purposes, in practice, a definition of innovation is essential to allow policy makers and those affected by policy to know to what activities and objectives support schemes apply.

Innovation can be seen as it is the framework of the Oslo Manual as “the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organisational method in business practices, workplace organisation or external relations” (OECD & Eurostat, 2005) page 46. However, despite the apparent applicability of the Oslo definitions to public sector organisations, the concept of innovation varies its meaning depending upon geographical location and market.

PCP

Pre-commercial procurement: PCP is a possible route for procurement organisations to follow when they procure R&D services which they do not fully pay and whose benefits do not accrue entirely to them. PCP is based on the exception of article 16(f) of Directive 2004/18/EC and 24(e) of Directive 2004/17/EC

Phases

Stages of the procurement cycle – defined by the Commission’s communication on Pre-Commercial Procurement. Phases 1-3 apply to the competitive phase of R&D service procurement. Phase 4 is phase at which the procurement becomes subject to the GPA.

PPI

The procurement of innovative goods, services or works under the Procurement Directives (2004/18/EC and 2004/17/EC) and/or national procurement regulations.

Procurement of innovation

The procurement of innovative goods, services or works including the procurement of R&D services to support a further procurement of a final product or service at some later point. Procurement of innovation refers therefore to both procurement of R&D services (PCP) and the procurement of innovative products or services (PPI).

Small Business Innovation Research

The SBIR is the US programme of long standing (since 1982) that funds on the basis of competitive entry US small firms (SMEs) to carry out research or research and development.

State Aids

The European Union's legislation in this area limits government support to a certain level and under certain conditions on the assumption that free, open and competitive markets make better use of resources and that government support should therefore be minimized. State support (from the EC or MS) to R&D or procurement can only occur under certain conditions. These rules are important to the design of PCP and PPI.

Aid is considered legal and automatically exempted from the notification obligation, if: the project is predominantly fundamental research and the aid is under EUR 20 million per undertaking, per project/feasibility study; if the project is predominantly industrial research, and the aid remains under EUR 10 million per undertaking, per project/feasibility study; for all other projects, EUR 7,5 million per undertaking, per project/feasibility study; (see Commission Regulation (EC) No 800/2008 of 6 August 2008 declaring certain categories of aid compatible with the common market in application of Articles 87 and 88 of the Treaty (General block exemption Regulation)). Procurements that embody risk-benefit sharing as defined in PCP procedure in the COM 2007 do not however constitute State Aid.

H Acronyms

CIP	Competitiveness and Innovation Programme
COSME	Programme for the Competitiveness of enterprises and SMEs
CSA	Co-ordination and Support Actions
DG ENV	EC Directorate General for Environment
DG ENTR	EC Directorate General for Enterprise & Industry
DG MOVE	EC Directorate General for Mobility and Transport
DG REGIO	EC Directorate General for Regional Policy
DG RTD	EC Directorate General for Research and Innovation
DG SANCO	EC Directorate General for Health and Consumers
DOH NHS	Department Of Health National Health Service (UK)
DOD	Department of Defense (USA)
EC	European Commission
EGTC	European Grouping of Territorial Cooperation
EU	European Union
FP7	Framework Programme n°7
EGTC	European Grouping of Territorial Cooperation
IPR	Intellectual Property Rights
MS	Member States
NASA	National Aeronautics and Space Administration
PCP	Pre-commercial procurement
PPI	Public procurement of innovation
SBIR	Small Business Innovation and Research programme
SF	European Structural Funds
SME	Small and medium enterprises
TSB	Technology Strategy Board (UK)

I Annex Enhancing CA's Innovation Credibility

S. Corvers and R. Apostol



This Annex outlines several proposals for action to support the broader application of pre-commercial procurement (PCP) and public procurement of innovation (PPI) by public authorities in the EU, while guaranteeing EU-wide competition. These proposals are based on 'out-of-the-box' thinking. They do not fall within the current EU public procurement legislation or policy and would need legislative amendment or policy /guidance drafting.

The proposals regard:

- Embedding into the directive reference to PCP;
- Including definitions of the concept around PCP (sharing of Intellectual Property Rights (IPR); paying a market price for the R&D services; what research and development (R&D) means);
- Allowing the application of the negotiated procedure without prior publication by the purchasing authority who previously conducted a PCP procedure, for the purpose of purchasing the product/service developed during that PCP procedures, provided that at the moment when the negotiated procedure is conducted, the contracting authority is still the first customer;
- Imposing compliance with the principle of best value for money when conducting PCP or PPI, in order to ensure that innovation entails added-value for the performance of the public task and that EU-wide competition is guaranteed;
- Including the possibility to use value engineering as contractual clause;
- Encouraging the involvement of purchasing authorities from different Member States from the start of a PCP procedure, by including in the contractual terms of a PCP procedure the requirement for firms to allow the use of the developed products/ services by these other contracting authorities, against discounted (license) prices.

1. Embedding into the directive references to PCP

The European Commission has developed official policy regarding PCP in 2007 and has ever since undertaken important steps to stimulate contracting authorities in the EU to start cross-border collaboration for the application of PCP (e.g. subsidies for networks, and subsidies for organizing PCP procedures).

Including reference to the PCP procedure into the public procurement legislation would enhance the legal certainty around the application of PCP, and would thus boost its application by contracting authorities across the EU.

- ### 2. Including definitions of the concept around PCP (sharing of Intellectual Property Rights (IPR); paying a market price for the R&D services; what R&D means);

The PCP procedure will have a better chance of being applied, if the conditions for its application are clearly defined. The new procurement directives could include clarifying provisions regarding the conditions for the application of the PCP, as outlined into the Communication of the European Commission on pre-commercial

procurement of 2007⁶⁷. A definition of the concept of R&D could be defined in line with the definitions included into Directive 2009/81/EC on defence and security procurement.

3. The purchase of products/services developed through a PCP procedure through the negotiated procedure without prior publication of a contract notice (direct negotiations)

According to various studies commissioned by the European Commission, contracting authorities throughout the EU consider the fact that they are not allowed by legislation to purchase the products/services developed through a PCP procedure as an important disincentive to the application of PCP.

According to the EU legislation for public procurement, a contracting authority may organise a PCP procedure to fund the research and development of a solution (for an own need), for which there is no (satisfactory) solution on the market, provided certain conditions are complied with (the solution requires R&D activities, the risks and the benefits of the R&D contract are shared with the private party). At the end of the PCP procedure, which, for example, yielded two successfully tested solutions, the contracting authority is not allowed to enter into direct negotiations with the two suppliers of the solutions in order to purchase one of these solutions, but is mandated by the public procurement legislation to conduct an open or a restricted procurement procedure. This obligation deters contracting authorities from initiating PCP procedures. Practice shows that in Europe only a handful of innovation agencies implement PCP-like programs while contracting authorities endowed with executing public tasks do not take the initiative to conduct PCP procedures.

We consider that the public procurement legislation should expressly allow the application of the negotiated procedure without prior publication by the purchasing authority who previously conducted a PCP procedure, when it decides to purchase the product/service developed during that PCP procedure. This possibility should only be allowed if the contracting authority is still the first customer at the moment when the negotiated procedure is started (thus the products/services have not been commercialized between the end of the PCP and the start of the PPI).

This proposal falls within the framework of the newly agreed Government Procurement Agreement (GPA). Article XIII(1)(f) of the agreement allows for the application of limited tendering (the equivalent of the negotiated procedure without prior publication) when a contracting authority wants to buy the 'first good or service' which has been developed during a previous R&D contract, commissioned by the same contracting authority.

Article XII of the GPA provides (emphasis by the author):

'1. Provided that it does not use this provision for the purpose of avoiding competition among suppliers or in a manner that discriminates against suppliers of any other Party or protects domestic suppliers, a procuring entity may use limited tendering and may choose not to apply Articles VII through IX, X (paragraphs 7 through 11), XI, XII, XIV and XV only under any of the following circumstances:

(f) where a procuring entity procures a prototype or a first good or service that is developed at its request in the course of, and for, a particular contract for research, experiment, study or original development. Original development of a first good or service may include limited production or supply in order to incorporate the results of field testing and to demonstrate that the good or service is suitable for production or supply in quantity to acceptable quality standards, but does not include quantity production or supply to establish commercial viability or to recover research and development costs;'

In other words, according to the GPA, a contracting authority is allowed to act as first or 'launching' customer of a new innovative good or service whose development has been commissioned by itself within the framework of a previous contract. The term of 'first good or service' indicates that the contracting authority may only apply the limited tendering if the new innovative products or services have not been commercialized in the period between the end of the first research, experiment, study or original development contract and the start of the commercial procurement.

⁶⁷ COM(2007) 799 final.

While the GPA text allows direct negotiations for the purchase by a contracting authority of innovative products/services developed at its request during a previous contract, this flexibility is not transposed into the EU public procurement directives.

Article 31(2)(a) of Directive 2004/18/EC allows the contracting authority to apply a negotiated procedure without prior publication when it intends to purchase a prototype for the purpose of further research, experimentation, study or development:

- (a) *when the products involved are manufactured purely for the purpose of research, experimentation, study or development; this provision does not extend to quantity production to establish commercial viability or to recover research and development costs;*

Article 40(3)(b) of Directive 2004/17/EC allows the use of a procedure without prior call for competition under similar conditions:

- (b) *where a contract is purely for the purpose of research, experiment, study or development, and not for the purpose of securing a profit or of recovering research and development costs, and insofar as the award of such contract does not prejudice the competitive award of subsequent contracts which do seek, in particular, those ends;*

We consider that the scope of the above mentioned articles could be extended to expressly allow the purchase by a contracting authority of first products/services developed during a previously conducted PCP procedure. As already mentioned, this possibility should be restricted to the situation when the contracting authority is the launching customer. This entails that the contracting authority may not use direct negotiations with PCP participants if these have already commercialized the developed products/services.

We consider that such a clear reference in the text of the Directives would boost the application of PCP by contracting authorities.

4. Imposing compliance with the principle of best value for money in the case of PPI (whether it entail procurement of innovation developed through a PCP procedure or beyond)

The value for money principle should be observed when the decision is taken to conduct a PCP or a PPI (whether it complements a PCP procedure or not). The value for money principle would entail that a contracting authority drafts a business-case on the basis of which it concludes whether the PCP or PPI potentially brings added value to the fulfillment of its public tasks. Only in case of a positive conclusion, will the contracting authority be in a position to be a reliable partner for stimulating innovation (through PCP or PPI).

In case of the purchase of products/services developed through PCP (proposal 3), the value for money principle would provide the guarantee against an arbitrary choice for a PCP-supplier, to the detriment of more valuable solutions developed outside the PCP procedure. This is particularly a risk, when a Member State legislation does not include a value for money obligation for the purchasing authorities.

To achieve the above mentioned guarantees, the obligation to observe the value for money principle should be expressly worded into a provision of the new Directives and further developed in subsequent communications from the European Commission.

The value-for-money principle could be related to the life cycle cost methodologies. The application of a certain life-cycle-cost methodology at the award stage could be considered as sufficient proof that value-for-money principle has been taken into consideration.

5. Including the possibility to use value engineering (VE) procedures and processes

Innovation can and should also play a role after a procurement procedure has ended and the awarded contract is being executed. Thus, a contracting authority should be allowed by legislation and even required to obtain the latest innovative solutions during the execution of the contract, which provide better value for money. This is possible when VE clauses are included into the awarded contract and VE procedures and

processes are put in place within the organization of the contracting authorities in order to ensure that the VE clause is implemented and enforced.

A VE clause is a provision included in the awarded contract, which requires the commitment of the service provider to seek and propose innovative solutions during the execution of the contract. As incentive to the private contractor, the VE clause could provide that savings generated by the innovative solutions are shared between itself and the contracting authority.

VE clauses and the related procedures and processes have been used with demonstrated success by the US Federal government since 1954.

Already in 1959 provisions on VE were added to the forerunner of today's Federal Acquisition Regulation (FAR). Since 1996, FAR requires '*each executive agency in the U.S. Government to establish and maintain cost-effective VE procedures and processes*'⁶⁸. The uptake of rules on value engineering in legislation and the pursue of improvements during the execution of projects by specially designated personnel of the public agency makes the impact of value engineering in the US substantial. For example, since 1981, the savings achieved through the VE program only within the Department of Defense (DOD) count \$47 billion⁶⁹.

The use of VE clauses could be stimulated through legislative provisions into the new procurement directives.

6. Discount for the use of PCP products/services by other contracting authorities

We consider that the goals of the PCP procedure (to pull innovative solution onto the market and improve the quality of the public service) could be better served, if more contracting authorities than the ones which conducted the PCP procedure would be stimulated to adopt the products/services developed during PCP procedures.

This might be achieved if a contracting authority who decides to conduct a PCP would include the requirement to the PCP participant to allow or license the use of the developed products/services by other contracting authorities in the EU, against discounted prices.

⁶⁸ Office of Deputy Assistant Secretary of Defense Systems Engineering, Value Engineering: A Guidebook of Best Practices and Tools, 13 June 2011, p.3

⁶⁹ Idem, p.5

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