European Commission

Mutual Learning Exercise on Innovation related procurement

Capacity building for innovation related procurement:

evidence and lessons learned

Thematic Report B

November– 2017

Research and Innovation

Capacity building for innovation related procurement: evidence and lessons learned

European Commission
Directorate-General for Research and Innovation
Directorate Policy Development and Coordination

Contact: Xavier Vanden Bosch
E-mail Xavier.vanden-bosch.@*ec.europa.eu*
RTD-PUBLICATIONS@ec.europa.eu
European Commission
B-1049 Brussels

Manuscript completed in November 2017.

This document has been prepared for the European Commission however it reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

© European Union, 2017.
Reuse is authorised provided the source is acknowledged. The reuse policy of European Commission documents is regulated by Decision 2011/833/EU (OJ L 330, 14.12.2011, p. 39).

EUROPEAN COMMISSION

Mutual Learning Exercise on innovation related procurement

Capacity building for innovation related procurement:

evidence and lessons learned

Thematic Report B

Author: Eva Buchinger

Directorate-General for Research and Innovation

2017 EN

Table of content

1 Introduction: Why a lack of motivation & capacity for innovation related procurement? 4

2 Capacities needed for successful innovation related procurement 6

2.1 Coping with the comprehensiveness of innovation related procurement 7

2.2 Effective use of procurement procedures and approaches 9

2.3 Effective use of technical specifications: Function, performance and standards 11

2.4 Catalytic procurement: Making use of professional procurement expertise 12

2.5 Making use of additional technical & organisational expertise 12

3 Evidence of capacity building initiatives for innovation related procurement 13

3.1 Most important capacity building issues for MLE participants 14

3.2 Political dimension: Expectations and commitment concerning innovation related procurement 14

3.3 Service dimension: Who offers what kind of service to whom 16

3.4 Knowledge dimension: Importance of tacit knowledge and central purchasing bodies as enablers 17

4 Lessons learned 18

5 References 21

6 Annex A: Rating results ”most important capacity building questions” 23

7 Annex B: Country profiles 24

7.1 Capacity Building Country profile: Austria 24

7.2 Capacity Building Country profile: Estonia 28

7.3 Capacity Building Country profile: France 29

7.4 Capacity Building Country profile: Germany 32

7.5 Capacity Building Country profile: Greece 34

7.6 Capacity Building Country profile: Latvia 36

7.7 Capacity Building Country profile: Lithuania 37

7.8 Capacity Building Country profile: Netherlands 39

7.9 Capacity Building Country profile: Norway 42

7.10 Capacity Building Country profile: Portugal 44

7.11 Capacity Building Country profile: Spain 46

7.12 Capacity Building Country Profile: Sweden 50

8 Annex C: Agenda ”Country seminar on Topic B - Capacity building” 53

Summary

Innovation related procurement requires organisational capacities and individual skills beyond the typical professional qualification in public procurers. Consequently, capacity building is an important factor to strengthen public procurers' readiness and ability to initiate and execute innovation related procurement. In this report, we consider the capacities and capabilities needed, recipients of capacity building activities, and capacity building enablers and supporters.

Note:

This text is one of four thematic reports as listed below. They will build the basis for the final report of the Mutual Learning Exercise (MLE) on 'Innovation Procurement', which was carried out 2017 and 2018.

> *Thematic Report Topic A | Developing strategic frameworks for innovation related public procurement (Charles Edquist)*
>
> *Thematic Report Topic B | Capacity building for innovation related procurement: evidence and lessons learned (Eva Buchinger)*
>
> *Thematic Report Topic C | Financial mechanisms in support of innovation-enhancing procurement and pre-commercial Procurement (Gaynor Whyles)*
>
> *Thematic Report Topic D | Monitoring, evaluation and impact assessment of innovation-enhancing procurement (Jon Mikel Zabala-Iturriagagoitia)*

Acknowledgements

I would like to thank the responsible European Commission policy officer Xavier Vanden Bosch; the MLE expert team members Charles Edquist, Gaynor Whyles, and Jon Mikel Zabala-Iturriagagoitia; the quality reviewer Jari Romanainen; the coordinator Viola Peter and last but not least the participating country representatives for their inputs and highly valuable comments.

1 Introduction: Why a lack of motivation & capacity for innovation related procurement?

Ideally, innovation related procurement should get high on the agenda of each public entity as soon as the availability, quality or effectivity of public services is under pressure (see box 1). This happens quite often due to the fact that public entities exist to fulfil a task within the welfare-state context which is not static, but dynamic. To cope with societal developments and related changes in citizens' needs, public entities must continuously adjust the delivery of their services which requires the procurement of innovative solutions among others[1].

Thereby, public entities can be *re-active* and procure best available solutions already offered by the market or be *pro-active* in demanding innovation (which may require prior research and development (R&D) services) satisfying not only current, but also future needs. Both procurement strategies do have their advantages and disadvantages and must be carefully chosen. In the context of this MLE innovation related procurement means pro-active demanding and excludes off-the-shelf supplies provided by many different operators on the market.

Once pro-active demanding of innovation turns out to be appropriate and successful, the following two advantages can be realized. First, the acquisition of innovative work/supply/service[2] contributes to the effectiveness and quality of public services while specifically addressing major societal challenges (e.g. long-term challenges such as migration, pressure on resources, and ageing[3]). Second, in sectors such as energy, transport, waste management, social protection and educational and health services, public entities are often principal buyers and therefore (potentially) powerful in stimulating innovation[4] while strengthening the competitiveness of suppliers and thus supporting the economy.

The appropriateness of innovation related procurement (or its success thereof) will very much depend on its design and implementation. And for such a process to work smoothly, certain capacities are required. This is the purpose of this thematic paper on Topic B in the MLE.

Regardless of all the above-mentioned advantages, it is a common observation that the innovation stimulating purchasing power of public entities is 'somewhat untapped'[5]. For example, a survey asking for the financial volume of public procurement promoting innovation in Austria indicates a range between 2.3% and 3.3% in the state sector (Buchinger 2016: 4)[6] whereas targets up to 10% are mentioned in ambitious discussions[7]. Why does this potential remain somewhat untapped? Generalizing[8] it can be said that within public entities there exists a lack of motivation & experience with innovation related procurement because

---

1 Procurement of innovative solutions does not substitute in-house innovativeness of public entities, but should be part of it.

2 See box 2 for the respective definitions as 'work/supply/service' in the European procurement directive.

3 (EC 2010/C/2020); see for a recent and more detailed perspective on societal challenges' https://ec.europa.eu/programmes/horizon2020/en/h2020-section/societal-challenges [2017-08-02].

4 Overall, public procurement accounts for over 14% of European Union gross domestic product (GDP) (EC 2016b).

5 See (EC 2014a: 96; ERAC 2015:4; OECD 2017: 62ff).

6 Three types of innovation procurement have been included: 1) goods/services developed for the procurer (R&D), 2) goods/services were the procurer was the first buyer, 3) goods/services new on the market and new for the procurer. Survey executed by Statistik Austria.

7 To mention only one example, in its 'Sustainable Procurement Strategy' the City of Ghent has decided to allocate 10% of the budget for ICT to procure innovative products and services (Ghent 2014).

8 See (EC 2007: 6, 19f; 2007/C/799: 3, 6ff; EC-Expert-Group-Tsipouri 2010; OECD 2011: 11ff; EC 2014b; Georghiou et al. 2014; Buchinger et al. 2015; PoI-Platform 2015; Buchinger et al. 2017) and Chapter 6.5 of the report on 'Topic A Strategic Frameworks' of this MLE.

- the nature of public procurement is inherently conservative and risk-averse (safety standards, bureaucracy, avoidance of law-suits etc.) and procurement and innovation are therefore often seen as antagonists;

- innovation related procurement requires more effort compared to routine procurement (more time, more knowledge & skills, more staff or external expertise e.g. for identifying/defining needs, formulating technical/functional specifications, executing negotiations/dialogs, managing tender comparison and evaluation);

- procurement-departments are usually oriented towards cost-saving as an economic necessity and innovation related procurement may be more expensive concerning the procurement process (see above 'effort') and (possibly) concerning the higher cost of the actual procured work/supply/service; and

- innovation related procurement often requires the commitment of the top-management to receive the formal support and to overcoming the problem of short-term-budgeting – with its inherent financial disincentive towards innovation related procurement – by establishing 'total cost of ownership', 'life-cycle costing', 'indirect benefits', and 'long term savings' calculations.

Consequently, there must be a clear need to adopt innovation related procurement.

This report will first deal with capacities needed for successful innovation related procurement – i.e. the effective use of procurement procedures and approaches, of technical specifications (function & performance & standards), of catalytic procurement, and of additional technical & organizational expertise (chapter 2). This will be followed by collected evidence of capacity building initiatives for innovation related procurement, considering thereby the political dimensions, the service dimension and the knowledge dimension (chapter 3). Finally, from the various lessons learned within the MLE on innovation procurement the most important are discussed – i.e. addressees and barriers & opportunities of capacity building initiatives as well as good practices (chapter 4).

Note: The empirical material for the chapter on evidence and the chapter on lessons learned is derived from the plenary and breakout discussions of the MLE seminars and meetings on the one hand, and the structured country profiles (Annex B) provided by the MLE participants as a follow up of the seminar on capacity building on the other.

Box 1: Research and innovation within the European Procurement Directive

1. The European Procurement Directive contains a **clear acknowledgement** of the **importance of research and innovation** in public procurement.

"*Research and innovation, including eco-innovation and social innovation, are among the main drivers of future growth and have been put at the centre of the Europe 2020 strategy for smart, sustainable and inclusive growth. Public authorities should make the best strategic use of public procurement to spur innovation. Buying innovative products, works and services plays a key role in improving the efficiency and quality of public services while addressing major societal challenges. It contributes to achieving best value for public money as well as wider economic, environmental and societal benefits in terms of generating new ideas, translating them into innovative products and services and thus promoting sustainable economic growth*." (OJEU 2014/L/94-24: 72)

2. The Directive includes **procurement of research and innovation** (R&D) under specific circumstances and refers beyond that to **'pre-commercial procurement'**.

"*This Directive shall only apply to public service contracts for research and development services which are covered by CPV codes 73000000-2 to 73120000-9, 73300000-5, 73420000-2 and 73430000-5 provided that both of the following conditions are fulfilled: (a) the benefits accrue exclusively to the contracting authority for its use in the conduct of its own affairs, and (b) the service provided is wholly remunerated by the contracting authority*." (OJEU 2014/L/94-24: Art. 14)*

"*It should be recalled that a series of procurement models have been outlined in the Commission Communication of 14 December 2007 entitled 'Pre-commercial Procurement: Driving innovation to ensure sustainable high quality public services in Europe', which deals with the procurement of those R&D services not falling within the scope of this Directive*." (OJEU 2014/L/94-24: 72)**

3. The Directive highlights that **certain procedures** – competitive procedure with negotiation, competitive dialogue – are likely to be of value for contracts including innovative solutions and that the specific procedure 'innovation partnership' should foster the intensified development of innovative solutions (without foreclosing the market). (OJEU 2014/L/94-24: 72f)

With reference to the European Procurement Directive especially the following capacities are requested: (i) capacity to understand and use procurement as a mean to improve the efficiency and quality of public services; (ii) capacity to reflect and value the wider economic, environmental and societal benefits of procurement and the relation to major societal challenges; (iii) capacity for the effective use of procurement procedures and approaches. This will be detailed in the following chapters.

*The mentioned CPV codes specify: R&D services and related consultancy services; research and experimental development services; research services; research laboratory services; marine research services, experimental development services; development consultancy services; pre-feasibility study and technological demonstration; test and evaluation (OJEU 2008/L/74)

**(EC 2007/C/799)

2 Capacities needed for successful innovation related procurement

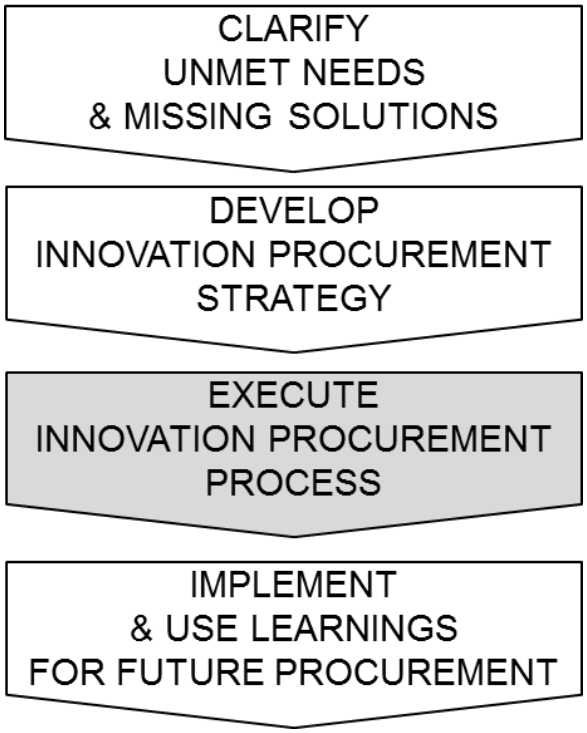
Innovation related procurement is a comprehensive undertaking going beyond standard procurement routines[9]. That is, the preceding and the follow-up phases matter at least as much as the execution of the procurement process in the narrower sense (i.e. core phase). Thereby, preceding phase means the clarification of unmet needs and missing solutions as well as the development of an innovation procurement strategy; core phase means the activities from the publication of the contract notice to the contract closing (contract award notice; purchase, leasing or other contractual forms)[10]; follow-up phase means the implementation of the awarded work/supply/service and the use of the learnings for future procurement. Thus, an idealized innovation related procurement cycle[11] can be depicted as a 4-phase process (Figure 1) requiring each specific capacities.

[9] The empirical basis for these perspective on innovation related procurement is derived from various innovation related procurement examples in Austria and Finland, including the modernization of the Austrian Mint's wastewater facility which received the European Procurement of Innovation Award 2015, the joint procurement project INNOBOOSTER (co-financed by DG GROW and finalized in 2016), several PCP projects and learnings and insights from the innovation related procurement workshops within the INNOVATIA conference in Vienna 2016 in which more than 50 public procurers participated. On this basis a group of procurement experts identified and condensed main learnings (Buchinger et al. 2017).

[10] Core phase includes the preparation of tender documents with the definition of selection criteria, award criteria and their weighting; the ensuring that compliant tenders are received and selected according to the rules and criteria established in the tender dossier; and the evaluation of tenders; see (OJEU 2014/L/94-24; EC 2015).

[11] The term 'procurement cycle' is adopted from the OECD where the "entire procurement cycle" is understood as integrating "public procurement with other elements of strategic governance such as budgeting, financial management and additional forms of services delivery" (OECD 2015: 3).

Figure 1: Idealized innovation related procurement cycle in a public entity



Source: (Buchinger et al. 2017: 5)

In the following, the capacity for coping with the comprehensiveness of innovation related procurement (section 2.1) as well as innovation specific capacities related to the core phase (section 2.2 and 2.3) will be addressed. This will be completed by the discussion of the option to use external expertise (section 2.4 and 2.5).

2.1 Coping with the comprehensiveness of innovation related procurement

The comprehensiveness of innovation related procurement is caused by the various groups of actors involved. First of all, users with a certain need are not those who execute the procurement core phase. In everyday procurement the communication between users and procurement professionals is (usually) simple because of standardized routines. On the contrary, innovation related procurement requires (usually) multiple back-and-forth communications between these two groups plus the involvement of the top management[12]. The top management requires thereby capacity for integrating innovation procurement in the public entity's overall strategy by (ideally) including user's future needs early in the overall strategy development. Whereas the procurement department requires capacity for the execution of the core procurement process by delivering the work/supply/service necessary to accomplish a public entity's mission in a timely, economical and efficient manner and assuring a correct understanding of the markets[13].

Following the logic of the idealized innovation related procurement cycle, the first phase of successful innovation related procurement consists of the clarification of unmet needs and/or missing solutions. It requires 'cross-over' communication capabilities between users (i.e. need owners) and procurement professionals. This phase is often somewhat neglected since there is a habit of 'we know it already' when needs and/or market assessments are concerned. Neglecting this aspect may bear the risk of early failure. To succeed in the starting phase, capacities in the form of sufficient time and intelligence must be provided for the need-clarification including all which later on will use the

[12] Plus possibly further external actors such as politicians and experts (see for details the following sections).
[13] See for public procurement principles (OECD 2015).

procured work/supply/service (this can also mean including end-users outside the public entity such as citizens)[14]. Simultaneously, capacity is required to execute market analysis (is there a need for innovation, are there other users with the same need) and early market engagement (e.g. early information of procurement plans to the market, market sounding, open market consultation, supply chain feedback) properly. Beyond that, capacity is required to decide if an early start of testing and even a test-buy and its evaluation (by users and independent experts) will prove beneficial and worth its efforts because of its contribution to risk reduction.

Also, the second phase – i.e. the development of a specific innovation related procurement strategy as part of the public entity's overall strategy – is often underestimated concerning its success/failure relevance. Even if innovation procurement is generally included in a public entities' overall strategy, capacity for each specific innovation procurement project is required 'to get and maintain the support of the hierarchy' to secure the provision of the necessary personnel and financial resources for this specific case, and in possibly also the external commitment of the politician/s responsible (mayor, minister). Multiple 'cross-over' communications enfold in this phase. Thereby it is important that the (top-)management is able to optimize between the public entity's overall mission-related needs, specific user needs, investment needs and major societal challenges[15]. The capacity for the development of an innovation related procurement strategy/plan is crucial for coordinating the distributed innovation related procurement responsibilities, and providing a convincing pro-innovation-procurement argumentation based on calculations. As part of the innovation strategy/plan Total Cost of Ownership[16] calculations as a further capacity can contribute very much to the success of innovation related procurement, by pre-calculating reduction of energy, reduction of maintenance costs etc. It is important that all these activities (especially user involvement and calculations) are strategic (and not operative) oriented to avoid the risk that they prohibit the use of functional specifications (i.e. tension between concrete needs & numbers and abstract thinking & openness). Only if the first and the second phase are executed thoroughly, a sufficient 'commissioning'[17] for the execution of the third phase is given.

Within the third phase – i.e. the core phase – the capacity for the effective use of procurement procedures/ approaches (procedure with negotiation, competitive dialog, pre-commercial procurement, innovation partnership) and technical specifications (functional requirements, performance requirements, reference to standards) is important. This is discussed in detail in the two subsequent sections. Here only three aspects should be highlighted because of their prominence in recent discussions. First, the application of functional requirements – which are crucial in innovation related procurement –require capacities to cope above all with the tension between the necessity of being concrete (i.e. define criteria in a way that the parameters are sufficiently precise to allow tenderers to determine the subject-matter of the contract and to allow contracting authorities to easily compare the received tenders) and being open (i.e. comparison and evaluation of the solutions provided by the suppliers is sometimes very difficult and tricky since this solutions are suggestions and not yet existing). A mix of functional and performance requirements may therefore be a robust solution (see for an example box 5). Second, capacity is required for mutual learning within negotiations/dialogs between procurers and suppliers to allow for optimal (i.e. realistic) formulation of functional requirements. Third, the division into lots may prove helpful to receive a broader range of innovative solutions as well as make it easier for small and medium sized enterprises to submit a tender.

---

[14] See in this context for the approach of 'Forward Commitment Procurement'(Whyles/Meerveld/Nauta 2015).

[15] See for experiences of how to successfully embed a project within the organisation (Whyles/Meerveld/Nauta 2015).

[16] Total cost of ownership (TCO); may be done as part of an overall life cycle cost analysis including thereby the costs, borne by the contracting authority as well as those of other users (including producers, recyclers etc.).

[17] See for the discussion that 'commissioning' is one of the most important milestones in innovation related procurement processes (Georghiou et al. 2014: 3, 5).

After completion of the core phase (third phase) it is important to monitor the implementation and use all the learnings for the setup of future procurements. A great amount of tacit knowledge (experience knowledge) may be accumulated during all phases. It is crucial to reflect and articulate this tacit knowledge as far as possible and share it within the organization as well as with other public entities (via platforms etc.) in the fourth phase. Thereby, it may be beneficial to invite additional staff from other departments of the public entity (or other interested public entities) to give feedback (i.e. sounding board) or even to install a follow-up group that is active throughout the entire procurement cycle.

Summarizing it can be said that coping adequately with the comprehensiveness of innovation related procurement contributes to success because several risks are mitigated:

- the risk of identification failure can be reduced through providing sufficient time and intelligence for need-clarification at the beginning of innovation related procurement;

- the risk of use/implementation failure can be reduced through early testing together with early market engagement (stimulate the appetite and capacity if the supply chain to deliver a solution) and even a test buy and its evaluation may prove beneficial;

- the risk of tendering & awarding failure – including the legal risk of lawsuits – can be reduced through the effective use of procurement procedures/approaches and technical specifications, if necessary via making use of additional (external) technical & organizational expertise;

- and last but not least, the risk of an untimely stop of innovation related procurement can be reduced through getting the support of the internal hierarchy (and in some cases by getting the political support).

2.2 Effective use of procurement procedures and approaches

The capacity for the effective use of the procurement procedures specified by law is important in innovation related procurement. Although the European Procurement Directive is individually translated into national law, the main reference here is the EU directive (OJEU 2014/L/94-24, 2014/L/94-25) to avoid to get lost in country specific details. Nevertheless, country specific details are import for public entities and have to be known and obeyed and member states require not only legal but also stakeholder-participation capacity to adequately adapt the European Procurement Directive to the national conditions. This 'tailored' translation into national law may have significant impact on the effective use the innovation related procurement procedures and approaches.

The capacity for the use of the ***competitive procedure with negotiation*** is widespread in EU member states. This procedure allows the step-by-step clarification of both, procurer's needs on the one hand and supplier's willingness and ability to respond to that needs.

- Competitive procedure with negotiation (OJEU 2014/L/94-24: Art. 29): any economic operator may submit a request to participate in response to a call for competition by providing the information for qualitative selection that is requested by the contracting authority; only those economic operators invited by the contracting authority following its assessment of the information provided may submit an initial tender which shall be the basis for the subsequent negotiations

The capacity for the use of the ***competitive dialogue*** procedure is given too, but the procedure is less in use (as it is known from countries such as Austria). Nevertheless, it is emphasized within the directive that the application of the competitive dialogue has

significantly increased in terms of contract values. "It has shown itself to be of use in cases where contracting authorities are unable to define the means of satisfying their needs or of assessing what the market can offer in terms of technical, financial or legal solutions. This situation may arise in particular with innovative projects, the implementation of major integrated transport infrastructure projects, large computer networks or projects involving complex and structured financing." (OJEU 2014/L/94-24: 72)

- Competitive dialogue (OJEU 2014/L/94-24: Art. 30): any economic operator may submit a request to participate in response to a contract notice by providing the information for qualitative selection that is requested by the contracting authority; only those economic operators invited by the contracting authority following the assessment of the information provided may participate in the dialogue the aim of which shall be to identify and define the means best suited to satisfying their needs

The capacity for the use of ***pre-commercial procurement*** approach – which is not part of the European procurement directive, but explicitly mentioned there as desirable approach – increased significantly after being included in the European Framework Programme Horizon 2020, accompanied by the commercial procurement scheme (see for the distinction and the cross-reference Box 1) on the basis of (pilot) learnings. The brochure "Innovation related procurement: The power of the public purse" gives an illustrative overview of H2020 funded pre-commercial and commercial projects (EC 2016a).

- Pre-commercial procurement (EC 2007/C/799; OJEU 2014/L/94-24: 71f): The scope is R&D services only, covering activities such as solution exploration and design, prototyping, up to the original development of a limited volume of first products or services in the form of a test series. The original development of a first product or service may include limited production or supply in order to incorporate the results of field testing and to demonstrate that the product or service is suitable for production or supply in quantity to acceptable quality standards. Excluded are activities such as quantity production, supply to establish commercial viability or to recover R&D costs, integration, customization, incremental adaptations and improvements to existing products or processes. A further rule is that the public procurer is not allowed to reserve the R&D results exclusively for its own use.

A lot of attention has been recently attracted by the new instrument ***innovation partnership***. It is especially designed to close the gap between the pre-commercial and the commercial dimension. The European procurement community is discussing the opportunities and barriers of this new instrument and the first applications will certainly be observed with high attention. Therefore, capacity building is just starting now on the basis of the first (pilot) projects.

Innovation partnership (OJEU 2014/L/94-24: Art. 31): any economic operator may submit a request to participate in response to a contract notice by providing the information for qualitative selection that is requested by the contracting authority; the contracting authority may decide to set up the innovation partnership with one partner or with several partners conducting separate research and development activities; the innovation partnership shall aim at the development of an innovative product, service or works and the subsequent purchase of the resulting supplies, services or works.

Box 2 Basic terms of the EU procurement directive

CONTRACTING AUTHORITY (PUBLIC ENTITY, BUYER): the State, regional or local authorities, bodies governed by public law or associations formed by one or more such authorities/bodies

TENDERER (SUPPLIER): an ECONOMIC OPERATOR that has submitted a tender, i.e. any persons and/or entities which offer the execution of works, the supply of products or the provision of services on the market, irrespective of the legal form under which they have chosen to operate

CONTRACT: contracts between one or more economic operators and one or more contracting authorities having as their object the execution of works, the supply of products or the provision of services

WORK | SUPPLY | SERVICE

Work: outcome of building or civil engineering works taken as a whole which is sufficient in itself to fulfil an economic or technical function.

Supply: purchase, lease, rental or hire-purchase, with or without an option to buy, of products

Service: provision of services other than those referred to in works

INNOVATION: the implementation of a new or significantly improved product, service or process, including but not limited to production, building or construction processes, a new marketing method, or a new organizational method in business practices, workplace organization or external relations

(OJEU 2014/L/94-24: Article 2)

2.3 Effective use of technical specifications: Function, performance and standards

Technical specification shall lay down the characteristics required of a work, service or supply. All forms – performance requirements, functional requirements and reference to standards – are basically instrumental in innovation related procurement. For example, performance requirements can demand solutions presently not existing at the market and the same is true for standards if the call for tenders specify criteria such as 'being 5% more energy efficient than a certain standard'. But the most important approach of these is in innovation related procurement the specification of functional requirements.

This has to be emphasized because public procurers try to avoid functional based formulations. They require capacities to face difficulties such as[18] (i) end-users (need owners, clients) may have a tendency to prescribe solutions ('we know exactly what we want') instead of formulating functional requirements; (ii) risk-averse behaviour to avoid mistakes and/or aiming for certainty may result in performance requirements instead of functional requirements; (iii) well know standard products or products well-known in technical terms may be preferred; (iv) lack of time to formulate functional requirements and to evaluate and compare the proposed functional solutions may become a hindrance; and (v) norms/standards, interoperability, and (internal) regulations may limit the functional space.

Box 3: Specific terms of the EU procurement directive

TECHNICAL SPECIFICATIONS: shall be formulated in terms of **PERFORMANCE** or **FUNCTIONAL** requirements or by **REFERENCE TO STANDARDS** (or by a mix of them); may also specify whether the transfer of intellectual property rights will be required. (OJEU 2014/L/94-24: Article 42)

"*Functional and performance-related requirements are also appropriate means to favour innovation in public procurement and should be used as widely as possible. Where reference is made to a European standard or, in the absence thereof, to a national standard, tenders based on equivalent arrangements should be considered by contracting authorities*." (OJEU 2014/L/94-24: 78f)

[18] These are the results of eleven case studies conducted in The Netherlands, including different types and sizes of contracting authorities (PIANOo 2017).

2.4 Catalytic procurement: Making use of professional procurement expertise

There exists several conceptualizations of catalytic procurement such as (Edquist/Hommen 1998; Edler/Georghiou 2007). In this text, catalytic procurement is understood as the activity of professional public procurement organizations which are buying on behalf of other public entities. "In other words, the procuring agency serves as a catalyst, coordinator and technical resource for the benefit of end-users. The needs are located 'outside' the public agency acting as the 'buyer'." (Edquist et al. 2015: 8) The EU procurement directive distinguishes two types of catalytic procurers, i.e. 'wholesalers' and 'intermediaries' (Box 4).

Box 4: Catalytic procurement according to the EU procurement directive

"*Central purchasing bodies are responsible for making acquisitions, managing dynamic purchasing systems or awarding public contracts/ framework agreements for other contracting authorities, with or without remuneration*. […] *Firstly, they should be able to act as wholesalers by buying, stocking and reselling or, secondly, they should be able to act as intermediaries by awarding contracts, operating dynamic purchasing systems or concluding framework agreements to be used by contracting authorities*." (OJEU 2014/L/94-24: 77)

Wholesalers and intermediaries must dispose capabilities for identifying the need e.g. of a cluster of procurers. There exists experience in areas such as healthcare where single and/or collective procurement is executed for a broad range of members. EHAPPA is an example for this. As a European alliance of 'non-profit group procurement organizations' it aims to pool expertise, leverage performance and provide its members with a strategic position in the European health procurement market[19]. Concerning capacity building, such specialized central procurement organizations as well as overall central purchasing bodies could potentially serve as knowledge accumulators on the one hand and as knowledge distributors on the other. But since such intermediating organizations may primarily be oriented towards large scale procurements (and therefore standardized work/supply/service) and also potentially widening the distance between users and suppliers, other forms could be beneficial. For example, knowledge accumulation and distribution could take place in communities of practice (peer-to-peer learning) organized by service centres supporting innovation related procurement.

2.5 Making use of additional technical & organisational expertise

To achieve optimal innovation related procurement results it is often helpful to complement in-house expertise with further technical & organizational external expertise beyond those described above. Although each innovation related procurement case may require its specifically tailored external support, some generalizations are possible:

- Optimal innovation related procurement is itself an innovation of cumulative nature and external support can facilitate internal learning and help to make the acquired tacit knowledge (experience knowledge) explicit and therefore accessible for others.

- It is important that the external expert has his/her internal counterpart – serving as the an 'anchor', 'information source' and 'distributor' within the organisation – and that for both parties the resources (time, money) are committed in advance.

- The inclusion of independent[20] external experts can be useful in all phases of the idealized innovation related procurement cycle (figure 1); either the same experts or different experts (different phases, different expertise). For example, a

[19] See for EHAPPA and its members in 9 European countries http://www.ehppa.com/
[20] I.e. not related with the supplier/s.

facilitator may accompany the innovation procurement project from the beginning to the end, and a technical expert may be hired in the core procurement process to support the formulation of the functional requirements, the definition of the award criteria and the tender evaluation and comparison[21].

Box 5: Example "Indoor-lighting for the passenger terminal of the Blue Danube Airport Linz"*

The Airport Linz has already gained some experience in the past 5 years using modern solid-state lighting technology. The airfield lighting was completely retrofitted to this technology in 2014, and also at the new freight terminal only modern SSL luminaires were built in. However, when retrofitting the lighting for the passenger terminal, they faced the additional challenge that the necessary solutions were not available on the market. Therefore, a two-stage competitive procedure with negotiation in 4 lots was conducted. The technical specifications of the call for tenders included a **combination of performance and functional requirements** and the award criteria followed the best price-quality ratio. **External experts** were included who provided procurement expertise (Austrian federal procurement agency BBG) as well as technical expertise (e.g. tools to calculate light intensity/lumen & light temperature/kelvin & colour rendering index & integration into the light-control-system; compliance with mandatory electrical safety regulations norms/standards) to support the compliance with procurement/technical regulations, the formulation of requirements and criteria, and the evaluation of tenders.

The lighting for the passenger terminal consists of the following parts:

(i) luminaires for general lighting
(ii) luminaires for effect lighting, accentuation and targeted lighting
(iii) luminaires for the advertising lighting

The main challenge for the (i) general lighting was that the metal ceiling and the built-in luminaire system was a custom-made design. Consequently, available standard luminaires for general lighting do not fit into this system and this is why a further customer-specific but also cost-effective solution had to be looked for.

The (ii) effect and accentual lighting should give the terminal a new look and appearance. This system also had to be integrated in the metal ceiling with dimensions not available on the market. In addition, the system should of course harmonize with the general lighting and together form a coherent whole. Therefore, an architectural competition was part of this procurement process.

In the case of (iii) advertising lighting, there exist eighteen different sizes and designs of the advertising boxes at the airport. Thus, the goal was to find a technical solution that can be implemented in all sizes/designs, from the smallest box in the interior area up to the largest boxes in the outdoor area.

The procurement **resulted** in a satisfying solution for the Airport Linz. The final TCO calculation showed that in the case of general lightening and effect lightening a reduction of 65% in energy costs and a reduction of 93% in maintenance costs could be achieved; in the case of advertising lighting it was a reduction of 60% in energy costs and a reduction of 83% in maintenance costs.

*One of several procurement examples of the INNOBOOSTER project.
Source: (Buchinger et al. 2017)

3 Evidence of capacity building initiatives for innovation related procurement

The following described evidence of capacity building initiatives in European countries is based on the respective discussions with the MLE seminars and meetings and the country

[21] Within the CIP projects LCB-Healthcare and EcoQUIP an external facilitator played a key role by acting as innovation procurement coach and as project facilitator; helping to coordinate the project, assist team members and question the 'seemingly obvious'. Beyond that the help of an external advisor was invaluable in helping to define award criteria and determining mechanism to enable the different solutions to be compared fairly. (Personal communication: Gaynor Whyles)
Within the CIP Project INNOBOOSTER external experts cooperated to provide procurement- as well as technical-expertise to support the compliance with procurement/technical regulations, the formulation of performance and functional requirements, the definition of award criteria, and the evaluation of tenders to identify the bidder with the best price-quality ratio (see box 5).

profiles provided by the MLE participants as a follow up of the Frankfurt 'MLE Seminar on Capacity Building' (June 1st, 2017).

3.1 Most important capacity building issues for MLE participants

To elaborate a list of the most important capacity building issues, each participant of the MLE seminar on capacity building was invited to select the three most important questions for his/her country out from a template with ten questions by allocating points (including the possibility to add further issues)[22]. This resulted in the following three issues.

- The most important question concerns the *political* dimension: How is the situation in MS concerning political expectations and political commitment for establishing and/or maintaining capacity building activities?

- This was followed by a block of *service* related questions: Do MS offer services tailored to target groups? Which target groups? Which services are offered by MS and which would be desirable? What are the pros/cons of establishing a service & support & advisory centre?

- The third important dimension concerns *knowledge*: What is MS experience concerning the importance of tacit knowledge, i.e. cumulative nature of experience knowledge in innovation procurement? What is the role of central purchasing bodies as knowledge accumulators on the one hand and as knowledge distributors (enablers) on the other?

On basis of the ranking and the discussions within the MLE seminar on capacity building, each participating country was requested to provide evidence in the form of a structured country profile as a follow up of the seminar[23]. This evidence of capacity building initiatives in European countries is described below. It covers twelve countries: Austria (AT), Estonia (EE), France (FR), Germany (DE), Greece (GR), Latvia (LV), Lithuania (LT), Netherlands (NL), Norway (NO), Portugal (PT), Spain (ES), and Sweden (SE).

3.2 Political dimension: Expectations and commitment concerning innovation related procurement

Generally, political expectations concerning innovation related procurement are high in European countries (

[22] See for details of the ranking Annex A.
[23] See for the country profiles Annex B.

Table 1). These expectations are in many countries accompanied by commitments in the form of action plans, strategies, government declaration etc. (Austria, France, Germany, Greece, Lithuania, Netherlands, Norway, Spain and Sweden). Beyond that many countries have a specific commitment for establishing and/or maintaining capacity building activities, some do this as part of a general development or support measures (see chapter 3.3).

The political responsibility for these commitments remains mainly in the economics ministry of a country (Estonia, France, Germany, Lithuania, Netherlands, Norway, Spain), sometimes in the finance ministry (Sweden) and in several cases two or more ministries are jointly responsible (Austria, Greece, Portugal). In southern and eastern countries, the European Structural and Investment Funds (ESIF) and related initiatives such as the Research and Innovation Strategies for Smart Specialisation (RIS3) can provide a specific opportunity for the financing and/or organizing of capacity building activities (Latvia, Greece, Spain).

Table 1: Political expectations and commitment for establishing and/or maintaining capacity building activities

Country	Expectations
Austria	political expectations are high; capacity building activities exist; commitment via the "Action Plan Public Promoting Innovation PPPI"; joint political responsibility at the Ministry of Science, Research and Economy & Ministry for Transport, Innovation and Technology
Estonia	currently no independent political expectations and commitment; innovation procurement support and capacity building activities are part of a general support measure; political responsibility at the Ministry of Economic Affairs and Communication
France	political commitment at the Prime Minister level; political responsibility for several capacity building activities at the Ministry of Economy and Finance including three departments: Directorate General for Companies, DG of State Procurement, Directorate for Legal Affairs
Germany	political expectations and commitment are high; main responsibility at the Ministry of Economic Affairs and Energy; promotion of innovation is part of the High-Tech-Strategy which is a joint strategy of several ministries (including the Ministry of Economic Affairs and Energy)
Greece	extremely high on the political agenda; promotion of innovation is part of the 'National Public Procurement Strategy'; joint political responsibility at the Ministry of Economy and Development & Ministry of Education, Research and Religious Affairs among others; RIS3 includes PCP
Latvia	new for Latvia; in the future political responsibility may be at the Ministry of Finance, the Ministry of Economics or the Procurement Monitoring Bureau; RIS3 includes "Guidelines for the practical application of innovation procurement" which may result in capacity building activities
Lithuania	political expectations and political backing are high; demand side instruments and especially innovation related procurement is a core pillar of the 'Innovation Development Program'; political responsibility at the Ministry of Economy
Nether-lands	political expectations and political backing are high and capacity building activities exist; commitment via the 'Action Plan for Innovation Procurement'; political responsibility at the Ministry of Economic Affairs (to which PIANOo belongs)
Norway	political expectations and political backing are high; capacity building activities exist; commitment via the 'Strategy for Innovation Procurement'; political responsibility at the Ministry of Trade, Industry and Fisheries
Portugal	political expectations especially on "partnerships for innovation"; presently no formal political mandate - but a public procurement commission (CAF) was active 2008-2017 within the political responsibility of the Ministry of Science, Technology and Higher Education & Ministry of Public Works, Transport and Communication
Spain	political commitment and expectations are high; capacity building activities exist; commitment via the 'Strategy on Science, Technology and Innovation'; political responsibility at the Ministry of Economy, Industry and Competitiveness; ERDF includes innovation procurement
Sweden	political expectations and political backing are high; capacity building activities exist; commitment via the 'National Public Procurement Strategy'; political responsibility at the Ministry of Finance; substantial activities at the regional level

Conclusion: The double backing of the political commitment – action plan, strategy, or government declaration on the one hand and the maintenance of capacity building activities on the other – as well as the declaration of the responsibility for these commitments provide a good basis. However, it turned out that due to political changes (elections) and because of the 'slowness' of the progress in innovation related procurement it is sometimes difficult to (re)achieve and maintain political momentum and commitment.

3.3 Service dimension: Who offers what kind of service to whom

In all countries, at least some services are offered by public institutions, which are accompanied by services from the private sector (Table 2)[24]. Many countries have established (or will establish) a specific centre for innovation related procurement: Austria, Estonia, Germany, Greece, Latvia, Netherlands, and Sweden. However, including services for innovation related procurement in the portfolio of general innovation/technology service providers seems also to be adequate for France, Lithuania, Norway, Portugal and Spain (see 'Institutions offering services for innovation related procurement as one of several tasks', Table 2). Several times both approaches are combined, i.e. in Austria, Estonia, Netherlands, and Sweden.

Table 2: Public institutions offering capacity building services

Country	Specific centre for innovation related procurement	Institutions offering services for innovation related procurement as one of several tasks
Austria*	PPPI Service Centre as part of the Federal Procurement Agency (BBG)	together with: FFG (PCP), AWS (commercial procurement), BIG & GSV & AEA (sectoral support), Procurement Expert Conference of the Provinces & City of Vienna
Estonia	Estonia is member in the Procure2Innovate project with aims to establish a competence centre among others	Enterprise Estonia
France		several directorates within the Ministry of Economy and Finance; Le Médiateur (mediation for companies, resolves legal disputes); DIRECCTE (local directorate for companies)
Germany	KOINNO as part of the Association for Supply Chain Management, Procurement, and Logistics e.V. (BME)	
Greece*	proposal for establishing a competence centre within the General Directorate of Public Contracts and Procurements is currently under evaluation	
Latvia	in the future, RIS3 could optionally be used to establish a service centre	
Lithuania		Agency for Science, Innovation and Technology (MITA) (PCP coordinating authority)
Netherlands*	PIANOo as part of the Ministry of Economic Affairs	Europa Decentraal (legal matters)
Norway		Difi (national procurement agency), Innovation Norway, Norwegian Research Council, NHO (industry organization), KS (association of local and regional Authorities)
Portugal		National Laboratory of Energy and Geology (LNEG)
Spain*		a network of helpdesks at regional, local and central levels (Regional Health Services, Ministry of Health, Regional Innovation Agencies, Universities …)
Sweden*	Strategic procurement service centre as part of the National Agency for Public Procurement (Upphandlingsmyndigheten)	together with: Vinnova (methods, transferring learnings from financed projects etc.), Swedish Competition Authority (supervision of contracting authorities' applying to legislation)

*Additional services offered by private firms are explicitly mentioned

[24] Even if services offered by private firms are not explicitly mentioned, it can be assumed that in most countries legal firms or similar organizations are providing services on request.

Concerning the type of service training, networking, and information & awareness are the most frequent forms (Table 3). Some countries offer the service of a financial support, either through national government agencies (grants, vouchers) or via European Structural and Investment Funds (ESIF) and related initiatives such as the Research and Innovation Strategies for Smart Specialisation (RIS3) (see chapter 3.2). Some countries offer beyond that guides, methodology, consulting and online services (market places, tools, advice/helpdesk).

Table 3: Type of service offered

	Services[1]	Targeted stakeholder group(s)
Austria	training, advice, networking, information & awareness, online-platform, financing	all types of stakeholders, focus on public procurers and suppliers
Estonia	Training	public procurers
France	roadmap (individual), training, networking, information & awareness, online-platform	public procurers
Germany	training, advice, networking, information & awareness, online-platform, financing	public procurers
Greece	networking, information & awareness, financing	public procurers, suppliers
Latvia	information & awareness	public procurers
Lithuania	training, consulting, information & awareness, financing	public procurers, suppliers
Netherlands	self-assessment, advice, guide, networking, information & awareness, online-tools/advice	all types of stakeholders, focus on public procurers
Norway	advice, guide, networking, financing	public procurers (attention to top-management), suppliers
Portugal	training, advice, networking, toolbox, helpdesk	public procurers (especially local authorities)
Spain	guide, networking, information & awareness, helpdesk, financing	public procurers, suppliers
Sweden	training, networking, information & awareness, financing	all types of stakeholders

[1] since training includes guides or similar material – guides are only mentioned if training is not explicitly quoted

Conclusion: The providers of public capacity building services are specific competence centres for innovation related procurement, as well as institutions offering services for innovation related procurement as one of several tasks (i.e. usually federal and/or regional innovation agencies). There is up to now no evidence that one form is superior to the other. The addressees of these services are mainly public procurers. However, in several cases suppliers and all other types of stakeholders are addressed too. From the broad range of services offered, most are targeting public procurers as well as suppliers and other stakeholders (networking, information and awareness raising are frequent types). Whereas trainings (and also guides, toolboxes) are primarily targeting public procurers. Since many of the service provisions were established only recently, the learnings concerning 'tailored services' are ongoing. Presently there is an overall focus on 'procedural' support and providers try to engage in 'strategic' support (which reveals to be somewhat difficult). Legal and technical support is mainly offered by specialized private service providers.

3.4 Knowledge dimension: Importance of tacit knowledge and central purchasing bodies as enablers

There is a general understanding that the accumulation and diffusion of explicit and especially implicit – i.e. tacit/experience – knowledge is import in innovation related procurement. Networking events are seen as appropriate means to share experiences

and facilitate peer-to-peer learning which could afterwards be condensed in guides or other useful documentations. Specific areas are mentioned to be:

- qualification requirements and which procurement procedure to choose for a specific project (Estonia);

- sourcing and dissemination of innovation solutions carried out by SMEs and ETIs (entreprises de taille intermédiaire) (France)[25]

The role of central purchasing bodies as knowledge accumulators and distributors (enablers) is an issue of discussion (i.e. of learning) in several countries.

- In Austria, the federal procurement agency (BBG) is hosting the PPPI (public procurement promoting innovation) Service Centre and has been involved in H2020 innovation procurement projects such as INNOBOOSTER. It therefore has a role as knowledge accumulator and knowledge distributor but is also realizing the limits. The Federal Real Estate Agency (BIG) owns a large number of public buildings in Austria and is therefore an important purchasing body sharing its innovation procurement related knowledge related to smart (energy efficient) buildings.

- In France, UGAP is the principal purchasing centre that intervenes at the national level for all public structures (state, decentralized, hospitals ...). This structure has a significant ability to sign contracts for innovation procurement and has a dedicated team working on this topic. Innovation procurement through UGAP (central procurement structure) avoids the customers of UGAP (public procurers) any competitive tendering.

- In Sweden, there exist many central purchasing bodies. One of them is run by Kammarkollegiet and they have the role to carry out framework agreements used by all the governmental agencies in Sweden. (Governmental authorities account for about 1/5 of all announced procurements in Sweden). With that role, they can be an enabler and spread knowledge to agencies in correspondence with the National Public Procurement Strategy.

Conclusion: The discussion of the role of central purchasing bodies as knowledge accumulators and distributors (enablers) is notable because they are often strictly oriented towards cost-saving and/or standard (mass) procurement. The latter is true for the central purchasing bodies in countries such as Lithuania and Norway. In countries such as the Netherlands, no central purchasing body exists but shared service centres (SSC) on the basis of the notion that the decentral nature of public procurement gives rise to creativity and diversity. It will be an issue of future evaluations whether central or decentral (network and peer-to-peer like) are the more efficient enablers of tacit knowledge accumulation and diffusion.

4 Lessons learned[26]

One of the most important learnings concerning 'capacity building for innovation related procurement' is that the ***political dimension*** is at least as important as the service dimension. Although the political expectations are generally high in the participating MS (see section 3.2), the need to get politicians 'on board' was emphasized in the discussions. For some countries, it has been difficult up to now to achieve 'active political backing' and there has been a consensus that capacity building means for political leaders to understand the overall societal and long-term benefits of innovation related

[25] SMEs less than 250 employees; ETIs 'intermediate sized' between 250 and 5.000 employees.

[26] The lessons learned within the MLE on innovation procurement are derived from the plenary and breakout discussions of the MLE seminars and meetings on the one hand and from the country profiles provided by the MLE participants on the other.

procurement. Beyond that due to political changes (elections) and due to the 'slowness' of the progress in innovation related procurement it may be difficult to re-achieve and maintain political momentum and commitment.

Several approaches were discussed to better achieve and maintain political momentum and commitment: (i) the formulation and establishment of long term innovation procurement strategies at the policy level; (ii) the multi-annual earmarking of budget allocations; (iii) the establishment of a regulation – either in the form of 'hard law' (legislation, see next point) or in the form of 'soft law' (monitoring and reporting requirements); (iv) the mandatory inclusion of innovation related procurement within a public entities' overall strategy or the mandatory drafting of a strategy for innovation related procurement at the organisational level; (v) the winning of lobbies such as associations of entrepreneurs and enterprises for directing political attention towards innovation related procurement; and (vi) the use of the European Structural and Investment Funds (ESIF) and related initiatives such as the Research and Innovation Strategies for Smart Specialization (RIS3) for the financing and/or organizing of capacity building for innovation related procurement. These approaches should not only reduce the uncertainties related to political cycles but also provide expected security for public entities.

Concerning the ***service dimension,*** it has been learned that in all countries (who provided structured empirical evidence), at least some services are offered by public institutions (see section 3.3). Many countries have established (or will establish) a competence centre for innovation related procurement and others opt for institutions offering services for innovation related procurement as one of several tasks (i.e. usually federal and/or regional innovation agencies). Thereby a broad range of services is offered. Training, networking, and information & awareness are the most frequent forms. Some countries offer financial support and some countries offer guides, methodology, consulting and online services. The addressees of these services are mainly public procurers, but suppliers and other stakeholders (e.g. technicians and managers of professional procurement agencies and research institutions) are addressed too in several cases. What kind of capacity is required by different stakeholder groups has been discussed with the following generalized result:

- Public entities in their roles as <u>need owners</u> (and in case users of the procured work/supply/service) require capacities for (i) the participative clarification of unmet needs (i.e. including internal users as well as end-users outside the public entity such as citizens).

- Public entities in their roles as <u>buyers</u> require capacities on the organizational level for (ii) developing innovation related procurement strategies to coordinate the distributed innovation related procurement responsibilities (top-management, procurement department, use-department) and achieve thus internal 'commissioning'; (iii) receiving external (political) backing; and (iv) dealing with innovation related risks (e.g. need-clarification failure, untimely stop).

- Public entities in their roles as <u>procurers</u> require capacities on the department level for (v) executing market analysis (is there a need for innovation, are there other users with the same need) and conducting early market engagement; (vi) effectively using procurement procedures and approaches (e.g. competitive dialogue, pre-commercial procurement, innovation partnership), technical specifications (performance requirements, functional requirements, reference to standards) and external expertise; and (vii) dealing with legal risks (lawsuits because of tendering & awarding failure).

- <u>Suppliers</u> and especially SMEs require capacities for the better understanding of the public entities' needs (e.g. how to engage, used procurement procedures and approaches).

- Politicians require capacities for the better understanding of the use of procurement as a mean to improve the efficiency and quality of public services and for better reflecting and valuing the wider economic, environmental and societal benefits of procurement and the relation to major societal challenges to have a basis for respective policy decisions and actions.

- All these and further stakeholders (procurement agencies, legal/technical advisors, lobbies etc.) require capacities in their specific profession and in effectively communicating with each other in order to better dealing with risks and eventually achieving optimal innovation procurement results.

Understanding that importance of the accumulation and diffusion of explicit and implicit knowledge (i.e. tacit/experience knowledge) and the thus required services is the main learning concerning the ***knowledge dimension***. This includes information & awareness, networking, training, advice, guides, helpdesks etc. and emphasizes therefore the role of service centres and other experts being instrumental as knowledge accumulators and distributors (enablers).

Summarize the learnings results in the following points:

- National capacity building initiatives are helpful and even necessary to achieve a broader mobilization of public entities for conducting innovation related procurement. This general observation of the MLE participants is presently under investigation (i.e. ongoing evaluations).

- These initiatives require a strong and enduring political commitment (beyond political election cycles). However, with the accumulation of experience and the widespread establishment of entire innovation related procurement cycles politics may reduce intervention.

- The services offered as part of these initiatives may be provided by competence centres for innovation related procurement as wells as by (innovation) agencies/programs offering services for innovation related procurement as one task among others. This may depend on national/regional requirements and infrastructures.

- The recipients of these initiatives are just as diverse as the required capacities and the existing national capacity building initiatives are still in their exploration phase. Substantial conceptual and empirical work remains to be done to achieve optimal tailored capacity building support and eventually fully capable procurers, and suppliers and satisfied citizens.

5 References

Buchinger, Eva (2016) PPPI Policy Notes: Austria's innovation procurement performance in the EU and OECD context. Vienna: Austrian Institute of Technology.

Buchinger, Eva, Grabuschnig, Wolfgang, Kienegger, Manuela, King, Ross, Modre, Robert, Schwabach, Helmut (2015) Neue Themen und neue Instrumente für das Programm „IKT der Zukunft": Innovationsfördernde öffentliche Beschaffung zur Weiterentwicklung von "IKT der Zukunft" im Rahmen eines modernen und flexiblen Themenmanagements [New themes & new instruments for the program 'ICT of the Future': Public procurement promoting innovation]. Wien: Austrian Institute of Technology.

Buchinger, Eva, Schieg, Albert, Unger, Jürgen, Ylipalo, Sari (2017) Towards optimal public procurement of innovation: Case based success & failure learnings. Vienna-Helsinki-Linz: INNOBOOSTER Consortium.

EC-Expert-Group-Tsipouri (2010) Risk management in the procurement of innovation: Concepts and empirical evidence in the European Union [Expert Group: Tsipouri L./chair, Edler J., Uyarra E., Bodewes H., Rolfstam M., Sylvest J., Kalvet T., Hargeskog S.E., Waterman D., Banciu D., Vass I., Creese S., Thevissen P.]. Brussels: European Commission.

EC (2007) Guide on dealing with innovative solutions in public procurement: 10 elements of good practice. Brussels: European Commission.

EC (2007/C/799) Pre-commercial procurement: Driving innovation to ensure sustainable high quality public services in Europe. Brussels: European Commission.

EC (2010/C/2020) Europe 2020: A European strategy for smart, sustainable and inclusive growth. Brussels: European Commission.

EC (2014a) Flash Eurobarometer 394: The role of public support in the commercialisation of innovations. European Commission.

EC (2014b) Public procurement as a driver of innovation in SMEs and public services. Brussels: European Commission.

EC (2015) Public procurement guidance for practitioners. Brussels: European Commission.

EC (2016a) Innovation procurement: The power of the public purse. Brussels: European Commission.

EC (2016b) Single market scoreboard: Public procurement. Brussels: European Commission.

Edler, Jakob; Georghiou, Luke (2007) Public procurement and innovation: Resurrecting the demand side. Research Policy 36:949-963.

Edquist, Charles; Hommen, Leif (1998) Government technology procurement and innovation theory. Linköping: Linköping University - Systems of Innovation Research Program (SIRP).

Edquist, Charles, Vonortas, Nicholas S., Zabala-Iturriagagoitia, John Mikel, Edler, Jakob (Eds.). 2015. Public procurement for innovation. Cheltenham: Edward Elgar Publishing.

ERAC (2015) ERAC opinion on innovation procurement. Brussels: European Research Area and Innovation Committee (Task Force Members: Laatsit M./rapporteur, Adolphe

D., Beley B., Buchinger E., Ortiz Pajares M., Garrido M., Kalytis R., Pavlaković I., Rajalo S., Svendsen L., Vermeulen H., Vilén K., Voort L., Putten M.).

Georghiou, Luke, Edler, Jakob, Uyarra, Elvira, Yeow, Jillian (2014) Policy instruments for public procurement of innovation: Choice, design and assessment. Technological Forecasting & Social Change 86:1-12.

Ghent (2014) DIGIPOLIS Ghent's innovation charter. Ghent: City of Ghent.

OECD (2011) Demand-side innovation policies. Paris: Organisation for Economic Co-operation and Development.

OECD (2015) OECD Recommendation of the council on public procurement. Paris: Organisation for Economic Co-operation and Development.

OECD (2017) Public procurement for innovation: Good practices and strategies. Paris: Organisation for Economic Co-operation and Development.

OJEU (2008/L/74) Regulation (EC) No 213/2008: Revision of common procurement vocabluary CPV. Brussels: Official Journal of the European Union.

OJEU (2014/L/94-24) Directive 2014/24/EU: Public procurement. Brussels: Official Journal of the European Union.

OJEU (2014/L/94-25) Directive 2014/25/EU: Procurement by entities operating in the water, energy, transport and postal services. Brussels: Official Journal of the European Union.

PIANOo (2017) Zachte én harde factoren bepalend voor toepassing functioneel specificeren (english summary). Den Haag: PIANOo Expertisecentrum Aanbesteden https://www.pianoo.nl/actueel/nieuws/functioneel-specificeren-uitdaging-voor-hele-organisatie [2017-10]

PoI-Platform (2015) Introduction to risk management in the public procurement of innovation. Procurement of Innovation Platform.

Whyles, Gaynor, Meerveld, Hendrik, van Nauta, Joram (2015) Forward Commitment Procurement: a practical methodology that helps to manage risk in procuring innovative goods and services. Innovation: The European Journal of Social Science Research 28(3):293-311.

6 Annex A: Rating results ”most important capacity building questions”

MLE Innovation Related Procurement - Topic B Capacity Building - June 1st, 2017	
Rating - What is most important for **YOU?**	
3 Points: Most important question	
2 Points: Second most important question	
1 Point: Third most important question	
	Total
In many countries service centers exist which are promoting innovation related procurement. For example: Austria/IÖB-Service Network; Germany/KOINNO; Italiy/CONSIP; Netherlands/PIANOo; Sweden/Upphandlingsmyndigheten.	
(1) What are the pros/cons of establishing a service & support & advisory centre?	11
(2) What do MLE participants value as good practice concerning the promotion of innovation related procurement?	9
These centres (or further entities) are providing various services. For example: support for clarifying unmet needs & missing solutions & market readiness; facilitating networking and knowledge-sharing among stakeholders; support for the use of non-standard procurement approaches and procedures (such as functional/ outcome based specifications, competitive/ technical dialogue, PCP, innovation partnership); provision on financial incentives; offering trainings, online platforms, trade shows etc.	
(3) Which services are offered by MS and which would be desirable?	13
(4) What do MLE participants value as good practice?	4
It was one of the results of the MLE up to now that each stakeholder group has specific capacity building needs; Public entities (procurers, users); Suppliers; Politicians; Further stakeholders such as professional procurement agencies and research institutions.	
(5) Do MS offer services tailored to target groups? Which target groups?	18
(6) Do the following types of procurement need each specific capacity building? I.e. direct, catalytic, functional, pre-commercial procurment or other types?	6
It is an observation that tacit knowledge plays an important role in innovation related procurement	
(7) What is MS experience concerning the importance of tacit knowledge, i.e. cumulative nature of experience knowledge in innovation procurement?	10
(8) What is the role of central purchasing bodies as knowledge accumulators on the one hand and as knowledge distributors (enablers) on the other?	17
Politicians have been identified as an important stakeholder group in this MLE	
(9) How is the situation in MS concerning political expectations and political commitment for establishing and/or maintaining capacity building activities?	21
(10) Are there political expectations & experiences in “using” private actors driving capacity building in innovation related procurement?	5
Other issue	
Which are the MS experiences in 'using' private actors driving capacity building in innovation?	
Would NCP people be interested to meet in BXL after the MLE? (for capacity builduing)	
Buyers groups. How to get knowledge sharing, activating the groups, resources?	

*Results from 23 country representatives (excluding the Commission representatives and the MLE experts)

7 Annex B: Country profiles

7.1 Capacity Building Country profile: Austria

Political expectations and political commitment for establishing and/or maintaining capacity building activities

Political expectations and political backing of innovation procurement capacity building in Austria are quite high. This is documented within the "Austrian Action Plan on Public Procurement Promoting Innovation PPPI" (2012) as a follow up of the "Austrian Strategy for Research, Technology and Innovation" (2011). The Federal Ministry of Science, Research and Economy (BMWFW) and the Federal Ministry for Transport, Innovation and Technology (BMVIT) are jointly responsible for the political commitment, the strategic governance as well as for the financing of the PPPI initiative.

Services tailored to target groups

The Austrian PPPI service network (see below) provides services for all types of stakeholders.

(a) Basic services include

- dedicated training courses for public procurers,
- networking opportunities for suppliers & procurers, and
- information & awareness events for all stakeholders (users/procurers/management, suppliers, policy makers, professional procurement agencies etc.).

(b) These services are complemented by an online-platform that creates a bridge between procurers and suppliers. The online platform enables public authorities to announce their specific needs and problems (so-called "challenges") free of charge. In line with the principles of the "Open Innovation" approach, companies can post their innovations online in an ideas submission phase. The most suitable solution for the "challenge" is selected and implemented by the public administration. Furthermore, suppliers have the opportunity to present their innovative solutions on the platform ("marketplace") after receiving the PPPI Certificate on the basis a jury decision http://www.innovationspartnerschaft.at/.

(c) Last, but not least, three forms of financial incentives for procurers are available in Austria. First, the awarding of vouchers on the basis of a contest which can be used by public procurers for PPPI-support such as technology consulting, legal advice, or project management support. Second, the awarding of PCP grants. Third, the awarding of R&D grants with mandatory inclusion of public end-users.

Role of central purchasing bodies as knowledge accumulators and knowledge distributors (enablers)

The federal procurement agency (BBG) is hosting the PPPI Service Centre and has been involved in H2020 innovation procurement projects such as INNOBOOSTER. It therefore has an important role as knowledge accumulator and knowledge distributor. The Federal Real Estate Agency (BIG) owns a large number of public buildings in Austria and is therefore an important purchasing body sharing innovation procurement related knowledge.

Services offered by publicly financed organizations

The above-mentioned services (i.e. tailored to target groups) are all publicly financed. In addition, a broad range of services exist (addressing innovation procurement among

others) that are offered by private firms (such as law firms, consulting firms, firms specialized on industry related trainings etc.).

Existence of a service & support & advisory centers

In Austria, there exists a comprehensive PPPI Service Network consisting of the following actors & activities:

- BMWFW Federal Ministry of Science, Research and Economy (Political Responsibility & Financing)
- BMVIT Federal Ministry for Transport, Innovation and Technology (Political Responsibility & Financing)
- AIT Austrian Institute of Technology (Scientific Advice & Monitoring)
- FFG Austrian Research Promotion Agency (PPPI Service Partner focusing on pre-commercial procurement)
- BBG Austrian Federal Procurement Agency (hosts the PPPI Service Centre as an overall support facility)
- AWS Austrian Federal Promotional Bank (PPPI Service Partner focusing on commercial procurement)
- BIG Austrian Federal Real Estate Company (PPPI Service Partner focusing on the buildings sector)
- GSV Austrian Association for Transport and Infrastructure (PPPI Service Partner focusing on the transport sector)
- AEA Austrian Energy Agency (PPPI Service Partner focusing on the energy sector)
- WKO Austrian Economic Chamber & IV Federation of Austrian Industries (PPPI Service Partners focusing on the exchange with the economy/industry)
- Procurement Expert Conference of the Provinces & City of Vienna (PPPI Service Partners focusing on the exchange with the provincial governments)
- PPPI Council (provides a forum for PPPI stakeholders to discuss their specific interests, identify synergies, report on developments, and achieve agreements on PPPI support measures)

Austrian PPPI Service Network

Experiences concerning tacit knowledge (i.e. experience knowledge) in innovation procurement

The cumulative and tacit nature of innovation procurement knowledge is a basic issue in Austria's PPPI approach. Empowering and mobilizing public procurers by co-operatively accumulating and subsequently sharing innovation procurement related experiences is a main pillar of the Austrian PPPI approach.

Country's most important good practice in capacity building for innovation related procurement

Austrian good practice in PPPI is above all the 'empowerment approach' and its institutional backing. That is, the design of various interlinked measures for innovation procurement capacity building and their establishment in already existing innovation supporting institutions. This is especially reflected in the comprehensive PPPI Service Network.

Sources & References

http://www.ioeb.at
http://www.ioeb.at/ueber-ioeb-und-die-servicestelle/ioeb-kompetenz-und-kontaktstellen

BMWA (2007) procure_inno: Praxisorientierter Leitfaden für ein innovationsförderndes öffentliches Beschaffungs- und Vergabewesen [Guide on public procurement promoting innovation]. Wien: Bundesministerium für Wirtschaft und Arbeit.

BKA, BMF, BMUKK, BMVIT, BMWFJ, & BMWF (2011) Strategy for research, technology and innovation of the Austrian Federal Government. Vienna: Austrian Federal Chancellery.

BMWFJ & BMVIT (2011) Ministerratsvortrag: Entwicklung eines österreichischen Leitkonzeptes für eine innovationsfördernde öffentliche Beschaffung (IöB) [Government mandate to formulate an action plan on public procurement promoting innovation]. Wien: Bundesministerium für Wirtschaft, Familie und Jugend & Bundesministerium für Verkehr, Innovation und Technologie.

BMWFJ & BMVIT (2012) Leitkonzept für eine innovationsfördernde öffentliche Beschaffung (IÖB) in Österreich [Austrian Action Plan: Public procurement promoting innovation PPPI]. Wien: Bundesministerium für Wirtschaft, Familie und Jugend & Bundesministerium für Verkehr, Innovation und Technologie.

BMWFJ & BMVIT (2012) Ministerratsvortrag: Umsetzung des österreichischen Leitkonzeptes für eine innovationsfördernde öffentliche Beschaffung (IÖB) [Government mandate to implement the action plan on public procurement promoting innovation]. Wien: Bundesministerium für Wirtschaft, Familie und Jugend & Bundesministerium für Verkehr, Innovation und Technologie.

Brünner, Heinz-Christian, Eva Buchinger, Dirk Jäger, Albert Schieg, Michael Steiger & Jürgen Unger (2012) 4 x Good practice: Public procurers as drivers of innovation Vienna: AIT Austrian Institute of Technology.

Buchinger, Eva (2012) PPPI Policy Notes: The Austrian innovation procurement strategy process 2011/12. Vienna: Austrian Institute of Technology.

BMVIT, ASFINAG, ÖBB & FFG (2014) Results: Transport infrastructure research Austria Wien.

Buchinger, Eva (2014) PPPI Policy Brief: Implementation of the Austrian innovation procurement action plan 2013/2014. Vienna: Austrian Institute of Technology.

BMVIT, und BMWFW (2015) IÖB-Jahresbericht 2013/2014 [PPPI Annual report 2013/2014]. Wien: Bundesministerium für Verkehr, Innovation und Technologie & Bundesministerium für Wissenschaft, Forschung und Wirtschaft.

Buchinger, Eva (2016) PPPI Policy Notes: Austria's innovation procurement performance in the EU and ORCD context. Vienna: Austrian Institute of Technology.

BMVIT & BMWFW (2017) IÖB-Jahresbericht 2015/2016 [PPPI Annual report 2015/2016]. Wien: Bundesministerium für Verkehr, Innovation und Technologie & Bundesministerium für Wissenschaft, Forschung und Wirtschaft.

7.2 Capacity Building Country profile: Estonia

Political expectations and political commitment for establishing and/or maintaining capacity building activities

Currently there are no independent political expectations and commitment for innovation procurement capacity building activities. However there is existing political support for general innovation procurement topic and the capacity building activities are part of that general support measure. Within the measure, different forms of training, seminars and conferences are held and guides and other reference materials have put together.

(https://www.mkm.ee/en/objectives-activities/economic-development/entrepreneurship-and-innovation#state-as-a-smart-customer10)

Services tailored to target groups

Public sector contractors can apply for innovation grants when the application round opens. The first two funding rounds were closed in June 2016 and in February 2017. The next round is scheduled of the spring of 2017. Within the funding rounds, specific capacity building training seminars for public sector contractors are carried out. https://www.eas.ee/teenus/innovatsiooni-edendavate-hangete-toetamine/

Role of central purchasing bodies as knowledge accumulators and knowledge distributors (enablers)

In Estonia the role of central purchasing body (Riigi Tugiteenuste Keskus) is to carry out relatively easy and routine procurements. (Cars, office furniture, fuel etc.) Right now there is no active plan to add new innovation procurement related assignments to this organisation.

Services offered by publicly financed organizations

The "State as a smart customer" measure (mentioned above) is offered by the publicly financed organisation called Enterprise Estonia. (https://www.eas.ee/?lang=en)

Existence of a service & support & advisory centres

Currently the only support for capacity building activities are coming from Enterprise Estonia. Estonia is also a member in the Procure2Innovate project and one goal of this project is to establish a working competence (service, support and advisory) centre.

Experiences concerning tacit knowledge (i.e. experience knowledge) in innovation procurement

The idea of innovation procurement and the benefits are relatively well known amongst Estonian procurers. Problems arise from the details like which should be the qualification requirements and which procurement procedure to choose for the specific project.

Country's most important good practice in capacity building for innovation related procurement

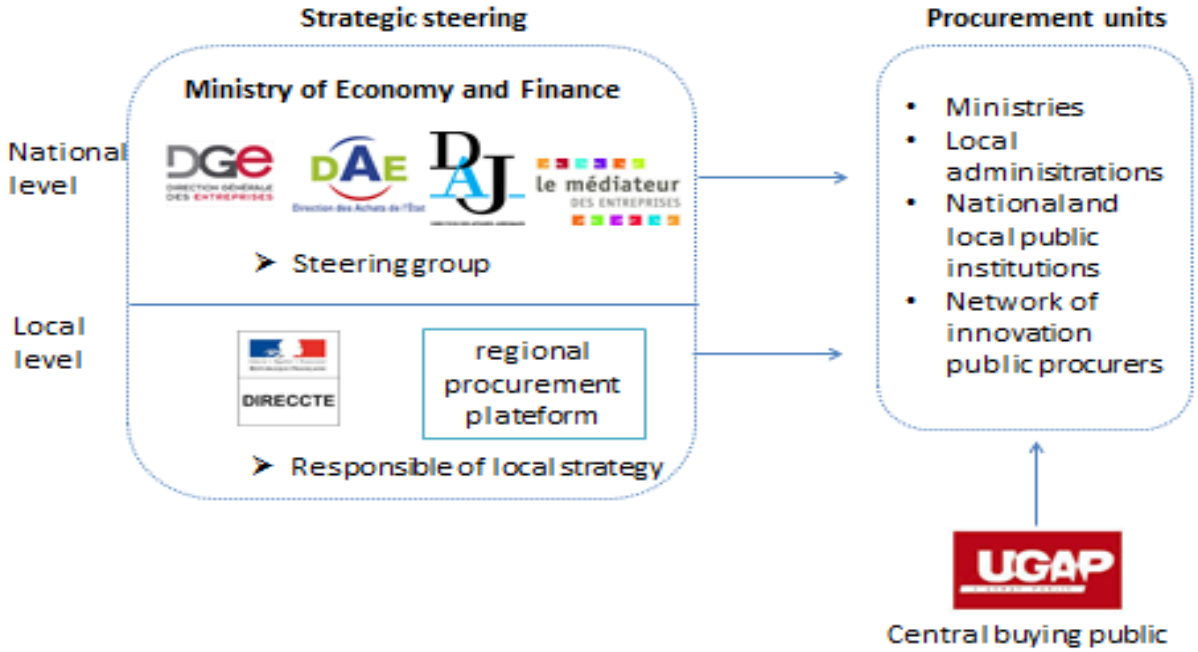
Until now the best practices for building capacity among Estonian procurers have been different trainings, seminars and conferences.

7.3 Capacity Building Country profile: France

Political expectations and political commitment for establishing and/or maintaining capacity building activities

Launched at the Prime Minister level in 2013, PPI policy is steered and managed by the Ministry of Economy and Finance (See scheme below). Three departments of the Ministry implement several capacity building actions: DGE (Directorate general for Companies), DAE (Directorate of state procurement), DAJ (Directorate for Legal Affairs).

Scheme: France PPI Organisation



Services tailored to target groups

Since 2014, several actions have been identified and implemented to support public procurement of innovation. These measures were primarily aiming at informing public procurement organizations about innovation (1), and facilitating the encounter between offer (Innovative SMEs) and demand (public institutions) (2):

- Definition of an annual roadmap for innovation procurement, for each ministry and public institution.
  Organisation responsible: Department of State Procurement (Ministry of Economy and Finance)

- Creation of a network innovation procurers in each ministries in order to fostering the implementation of PPI strategy in these structures and ensuring consistency with the strategy implemented by the DAE
  Organisation responsible: Department of State Procurement (Ministry of Economy and Finance)

- Creation of a social network ("Respae") for all purchasers of the State: pooling good practices and feedback, and sharing sourcing companies
  Organisation responsible: Department of State Procurement (Ministry of Economy and Finance)

- Distribution to all public procurers of a "public procurement innovation" guide and other tools to advise procurers and to facilitate the understanding of the regulation to contract with innovative companies
  Organisation responsible: Directorate of legal affairs (Ministry of Economy and Finance)

- Creation of an online platform "public procurement innovation purchasers " to put SMEs in contact with public buyers.
  Organisation responsible: Department of State Procurement (Ministry of Economy and Finance)

- Creation of a network of Innovation procurement officers in each Region in order to raise awareness of public stakeholders and SMEs on innovation procurement issues.
  Organisation responsible: Directorate general for companies (Ministry of Economy and Finance)

- Organization of events where innovative SMEs presented their innovative products to public procurers
  Organisation responsible: Department of State Procurement (Ministry of Economy and Finance) and Directorate general for companies (Ministry of Economy and Finance)

- Training program on innovation procurement dedicated to public procurers in order to develop their understanding of innovation
  Organisation responsibles: Department of State Procurement (Ministry of Economy and Finance) and Directorate general for companies (Ministry of Economy and Finance)

Role of central purchasing bodies as knowledge accumulators and knowledge distributors (enablers)

UGAP is the principal purchasing center that intervenes at the national level for all public structures (state, decentralized, hospitals ...)

This structure has a significant ability to sign contracts for innovation procurement and has a dedicated team working on this topic. Innovation procurement through UGAP (central procurement structure) avoids the customers of UGAP (public procurers) any competitive tendering and prior advertising. Thereby procurers reduce tendering time and the incumbent risk.

Services offered by publicly financed organizations

Other capacity building policy initiatives are not addressed by structures other than those described in the document.

Existence of a service & support & advisory centres

- DGE (Directorate general for Companies): political strategy, company advice, monitoring

- DAE (Directorate of state procurement): political strategy, network of procurers, procurers advice, monitoring

- DAJ (Directorate for Legal Affairs): legal advice

- DIRECCTE (local Directorate for companies): responsibility of local network stakeholders

- Ministries (innovation procurers referent): strategy, support, advice in each procurement unit of ministries

– Mediation for Companies: resolves legal disputes

Experiences concerning tacit knowledge (i.e. experience knowledge) in innovation procurement

Tacit knowledge sharing is achieved through networking and stakeholder engagement (at the local and national level). One of the most effective actions is the creation of a social network of public procurers and stakeholders regarding PPI. This tool allows to answer several objectives:

- Contribute to the development of skills and expertise of community members
- Support the detection actions (sourcing) and the dissemination of innovative solutions carried out by SMEs and ETIs (discrimination by families and purchasing segments)
- Share, enrich and co-build expertise documents, methodology and reflex sheets on the Innovation domain
- Make available the applicable regulations
- Share lessons learned and good practices
- Facilitate networking of innovation procurement referents
- Inform about any event (internal or external) related to innovation and its ecosystem

Country's most important good practice in capacity building for innovation related procurement

Procurers' awareness of innovation is a priority objective. Since two years, a training programme is proposed for State procurers (during 2 days). This training allows them to understand what an innovative company is, its environment, its business model, the new markets covered and finally how to be accompanied (by the existing networks) to sourcing these innovative companies. The existence of this training has allowed a real awareness within the buying structures. Procurers adopt new reflexes upon the analysis of their need taking into account the innovative character.

7.4 Capacity Building Country profile: Germany

Political expectations and political commitment for establishing and/or maintaining capacity building activities

Political expectations and political commitment to support innovation in procurement is based on the High-Tech Strategy of the German government, which is a joint strategy of the Ministry of Education and Research (BMBF), the Ministry of Economic Affairs and Energy (BMWi) and other ministries (www.hightech-strategy.de). However, in Germany, the regions and communities purchase the bulk of goods and services. They also have agreed on a political commitment to foster procurement of innovation. For example, the conference of the ministers responsible for economic affairs took unanimously the decision to support innovative and sustainable procurements (4 and 5 June 2014).

Services tailored to target groups

In 2012 the BMWi decided to establish the competence center for innovative procurement, which is executed by "Bundesverband Materialwirtschaft, Einkauf und Logistik (BME). The first contract (2013 to 2016) concentrated on basic information, networking and seminars for procurers. One case of pre-commercial procurement was executed as a pilot project. Moreover, prizes for a procurement of an innovative product and for an innovative procedure were started.

The actual contract is also executed by BME. The competence center offers the following services in the current period:

- Information and awareness on legal and organizational matters
- Regional and Technology oriented events
- Seminars and Learning Tools
- Individual counseling
- Prizes for the procurement of innovation and for an innovative process
- International networking
- Counseling on European support programs (Horizon 2020)

The consultancy for Horizon 2020 (PPI and PCP) and the coordination of an European network (supported by the EU-KOM) to exchange best practice and preparing common calls is offered in co-operation with ZENIT (Zentrum für Innovation und Technik in Nordrhein-Westfalen).

The main goal of the current contract is to empower and mobilize public procurers by offering tailored support. The activities are focused on procurers, strategic decision makers and suppliers. All services are to be found on the Web site: (www.koinno-bmwi.de).

Role of central purchasing bodies as knowledge accumulators and knowledge distributors (enablers)

KOINNO functions as knowledge accumulator and knowledge distributor. However the large purchasing bodies, such as, Kaufhaus des Bundes, Deutsche Bundesbahn, Bundeswehr, DLR, the large hospitals and the big cities are also focal points for innovative procurement.

Services offered by publicly financed organizations

The KOINNO is financed by the BMWi. Besides this center, there exist a broad range of services – addressing innovation procurement among others – offered by private firms (such as law firms, consulting firms, firms specialized on industry related trainings etc.).

Existence of a service & support & advisory centre

See services tailored to target groups

Knowledge (i.e. experience knowledge) in innovation procurement

KOINNO as well as the big procurers have substantial knowledge in innovation procurement. Many years of prizes in innovation procurement have created numerous good examples of how to purchase an innovative good or service or modernizing the procurement processes.

Country's most important good practice in capacity building for innovation related procurement

The most important example of capacity building in innovation procurement is the competence center for innovative procurement (KOINNO).

Sources & References

http://www.hightech-strategy.de

http://www.koinno-bmwi.de

7.5 Capacity Building Country profile: Greece

Political expectations and political commitment for establishing and/or maintaining capacity building activities

Establishing and/or maintaining capacity building activities on public procurements generally is extremely high on the political agenda. Although capacity building on innovation procurements has not yet been established, promotion of innovation is part of the table of actions reflecting the National Public Procurement Strategy. The relevant table was approved by the Greek Government Council for Economic Policy within this year. General Secretariat of Commerce and Consumer Protection (Ministry of Economy and Development) and General Secretariat of Research and Technology (Ministry of Education, Research and Religious Affairs) are among other authorities together responsible for the following actions concerning innovation procurement.

a) Feasibility report / study in order to promote innovation in the health, energy, environment and transport sectors

b) Development of support actions aiming at broad cooperation with the market, diffusion of electronic evolutions, research and development results and the promotion of clusters

Greece's smart spezialisation strategy (RIS 3) 2014-2020 includes a programme of PCP conducted by the General Secretariat of Research and Technology. The programme has a budget of 40 million €. A pilot is under preparation.

Services tailored to target groups

In Greece at present no services tailored to targeted groups exist. Yet the General Secretariat of Commerce and Consumer Protection is preliminary involved in the diffusion of innovation public procurement in the public sector by answering relevant questions set by contracting authorities as well as dedicating a relevant link in its web page specially for the matter.

Role of central purchasing bodies as knowledge accumulators and knowledge distributors (enablers)

General Directorate of Public Contracts and Procurements of the General Secretariat of Commerce and Consumer Protection is defined as the CPB responsible for goods and general services in Greece. One of the competences of the General Directorate is supporting central and ancillary activities for purchasing goods and general services (already does so by offering technical support, training for the e-procurement system, design of tenders as well as legal support). In its competencies innovation procurements is also potentially included therefore it maintains the right to act as a knowledge accumulator and knowledge distributor for the relevant matter.

Services offered by publicly financed organizations

Central and ancillary services concerning procurement (including innovation) are all publicly financed. Beside them, the National Centre of Public Administration and Local Government is offering certified training courses on public procurement matters (not including innovation procurement yet). Furthermore, in Greece there exist a broad range of services regarding public procurements offered by private firms (such as law firms, consulting firms etc. Also the matter of innovation is in the scope of relevant incentives or contests organized by private banks or the Hellenic federation of Enterprises, but not in the innovation procurement scope.

Existence of a service & support & advisory centres

In Greece, there is no formally set service, support & advisory center concerning innovation procurement with the exception mentioned in the above section "Services tailored to target groups". A proposal for establishing a competence center on innovation procurement within the General Directorate of Public Contracts and Procurements is currently under evaluation.

Experiences concerning tacit knowledge (i.e. experience knowledge) in innovation procurement

Tacit knowledge concerning innovation procurement is at a preliminary stage in Greece since very few contracting authorities have applied innovation procurement procedures. Nevertheless, it is an increasing matter of conversation among General Secretariat of Commerce and Consumer Protection and other contracting authorities in order to create synergies of actions as well as sufficient volume of information concerning innovation procurement procedures.

Country's most important good practice in capacity building for innovation related procurement

General Secretariat of Commerce and Consumer Protection, in cooperation with the European Commission, organized in 18-19 October 2016 the annual major EAFIP (European Assistance for Innovation Procurement) event in Athens. This two-day event aimed at raising awareness about the most recent outcomes from major PCP/PPI initiatives across Europe and organizing networking sessions between stakeholders to discuss best practices, new ideas, initiatives and current funding opportunities for PCP/PPI projects. As a follow-up to this, that event was certainly successful as the significant attendance of Greek public authorities proved followed by increasing interest in innovation procurement procedures by certain contracting authorities.

7.6 Capacity Building Country profile: Latvia

PPI is something extremely new for Latvia and information about it is therefore limited.

Institutions which could be responsible for the PPI in future, e.g. the Ministry of Finance, the Ministry of Economics or the Procurement Monitoring Bureau do not provide such measures (e.g. trainings, seminars, informative materials etc.) regarding the PPI issues.

New is that the Smart Specialization Strategy Progress Report (RIS3 Progress Report) has been drafted and currently is under the public consultation. The RIS3 Progress Report is accompanied by an Action Plan for years 2017-2020. Under the Action Plan's direction "Promotion of Innovation" there is a new activity called "Development of guidelines for the practical application of innovation procurement". So, it can be expected that this will change the status quo in terms of PPI and also regarding the capacity building on PPI.

7.7 Capacity Building Country profile: Lithuania

Political expectations and political commitment for establishing and/or maintaining capacity building activities

Political expectations and political backing of innovation procurement capacity building in Lithuania are quite high. One of the strategic goals of Lithuanian Innovation Development Program 2014 – 2020 is to enhance competitiveness of the Lithuanian economy through the development of the effective innovation system promoting economic innovation where development of demand-side policy instruments on PCP and PPI is one of the core pillars.

Services tailored to target groups

Agency for Science, Innovation and Technology (hereinafter – MITA)[27] is the main institution responsible for knowledge accumulation and distribution. MITA provides:

- training for public procurers,
- consultation for public procurers and bidders;
- methodologies on PCP and PPI;
- information & awareness events for all stakeholders.

MITA also plans to launch an online PCP and PPI platform this year.

Role of central purchasing bodies as knowledge accumulators and knowledge distributors (enablers)

- Public Procurement Office has no role in knowledge accumulation and distribution.
- Services offered by publicly financed organizations

All above mentioned services (i.e. tailored to target groups) are all publicly financed. Since Lithuania is taking only first steps in promoting PCP and PPI, consultations provided by offered by private firms are not yet developed.

Existence of a service & support & advisory centres

There is no separate service & support & advisory centre on PCP and PPI in Lithuania. The main institution responsible for service, support and advisory is MITA. But it is only one of the functions thereof. MITA is entitled to be a coordinating authority for pre-commercial procurement. MITA asses PCP documents and gives permission for the performance of PCP (public procurer can start PCP only if has MITA permission), takes part in all the meetings of the commission of public procurers regarding PCP, consults (contracting authorities and bidders, co-funds, organizes training about PCP, monitors, collects, systematizes and analyses data on accomplished and ongoing PCP.

Ministry of Economy of the Republic of Lithuania is national policy on PCP and PPI forming institution.

Financial support is provided only for PCP. There are 2 options:

1. EU Structural Fund's instrument "Pre-commercial Procurement LT". Funding institution is Lithuanian Business Support organization.

[27] Promotion of PCP and PPI is only one function of MITA which itself is mainly reseach funding organzation. Main objective of MITA is to promote innovation, cooperation of science and business.

2. National budged co funding. Co funding institution is MITA.

Experiences concerning tacit knowledge (i.e. experience knowledge) in innovation procurement

Since only one PCP is launched yet, there was no events on experience sharing organized. But at the end of this year – beginning of next year it should be launched about 20 PCP. So, MITA has plans to organize experience sharing events.

Country's most important good practice in capacity building for innovation related procurement

Awareness rising seminars for public procurers, business and science.

7.8 Capacity Building Country profile: Netherlands

Political expectations and political commitment for establishing and/or maintaining capacity building activities for innovation related procurement

Political expectations and political backing of innovation procurement capacity building in The Netherlands are quite high. This is documented in the "Dutch Action Plan for Innovation Procurement (2013)" and "Dutch Action Plan for Sustainable Procurement" (2015)". Next to that multiple departments, executive agencies and local and regional governments agree on the importance of innovation procurement.

Services tailored to target groups

PIANOo is responsible for the execution of the innovation procurement program in the Netherlands. This includes capacity building activities for all types of stakeholders, is particularly focused on (semi)public organizations. This includes:

- Guidance for policy makers, innovation managers, internal clients and public procurers;
- Information & awareness events for all stakeholders in innovation procurement;
- Stimulate knowledge exchange between (semi)public organizations;
- Ensure an accessible information toolbox for innovation procurement for all stakeholders (www.innovatiekoffer.nl);
- Self-assessment on innovation procurement for public procurers (https://www.pianoo.nl/zelfscan-innovatiegericht-inkopen)

Especially, the information & awareness events and the knowledge exchange activities are executed together with a network of (semi)public organizations that agree on the importance of innovation procurement such as other central departments, executive agencies and local and regional governments. These bottom-up activities make up a significant portion of all the capacity building events in the Netherlands and are generally not institutionalized.

Furthermore, PIANOo answers questions in word and writing (via info@pianoo.nl) on innovation procurement and all other purchasing-related topics. It is important to note that PIANOo does not provide operational support or statements about the legality of a particular procurement.

Role of central purchasing bodies as knowledge accumulators and knowledge distributors

In the Netherlands are no central purchasing bodies. However, provisions for central purchasing bodies exists in the Dutch procurement laws a result of the implementation of the European procurement directives.

In the Netherlands, the use of coordinated and joint procurement is rising, both at a central and a decentral level. In these cases, public bodies conduct their procurements together and/or develop their tender specifications together.

Also, numerous public bodies have created shared service centers (SSC). These SSC are responsible for the execution of a certain public services, the facility management or the ICT-services a number of public bodies in a particular region. This is of course not a dedicated central purchasing body.

One reason of this alternative approach might be the institutional set up of the Netherlands and the Dutch view on democratic legitimacy. For example, central

departments, local and regional governments and other (semi)public organizations in the Netherlands have a fairly high level of autonomy in the execution of their responsibilities. In the Netherlands PIANOo attempts to accumulate and disseminate relevant knowledge of these contracting authorities.

Services offered by publicly financed organizations

The above-mentioned services (i.e. tailored to target groups) are all publicly financed and executed by the Dutch Public Procurement Expertise Centre, PIANOo. PIANOo is part of the Dutch Ministry of Economic Affairs.

Next to the innovation procurement program, PIANOo executes multiple additional "expert programs" to raise awareness, support contracting authorities and stimulate knowledge exchange on special interest themes. These include, sustainable procurement (incl. bio-based and circular), public private partnership, infrastructure procurement, procurement of social services and e-invoicing. Innovation procurement has strong synergy with sustainable procurement program. Important partners of PIANOo for sustainable procurement program are sector associations and CSR Netherlands.

In addition to PIANOo, Europa Decentraal provides information on the procurement directives and the state aid framework. Their activities are preliminary focused on local governments.

Beside these organizations, a broad range of services exists in the Netherlands – also addressing innovation procurement– offered by private firms (such as law firms, consulting firms and industry trainings).

Existence of a service & support & advisory centres

The service for service & support is executed by PIANOo, with the expert program Innovation procurement. There is no institutionalized network on service & support & advisory centers.

Experiences concerning tacit knowledge in innovation procurement

The cumulative and tacit nature of innovation procurement knowledge is importance in the Dutch approach. In the Netherlands, we focus on empowering and mobilizing a network of public procurers that accumulates and subsequently shares experiences on innovation procurement. To stimulate this exchange PIANOo organizes a yearly congress with approximately 700 contributors and multiple additional events. All of these events empower the learning ecosystem for individuals and organizations, peer to peer learning and the whole network around this topic as well.

Country's most important good practice in capacity building for innovation related procurement

A good example is the network approach on innovation procurement where not all activities are initiated by one organisation individually but jointly with other organizations that agree on the importance of innovation procurement.

A good instrument is the innovation toolbox (http://www.innovatiekoffer.nl/) that provides all practical information on innovation procurement: procurement instruments, innovation routes and cases of innovation procurement.

Sources & References

Dutch Action Plan for the Innovation Procurement programme (2013) https://www.pianoo.nl/document/14291/plan-van-aanpak-programma-inkoop-innovatie-urgent

Dutch Action Plan for Sustainable Procurement" (2015) https://www.rijksoverheid.nl/documenten/kamerstukken/2015/09/11/plan-van-aanpak-maatschappelijk-verantwoord-inkopen-2015-2020

https://www.pianoo.nl/public-procurement-in-the-netherlands/about-pianoo

https://www.pianoo.nl/public-procurement-in-the-netherlands/sustainable-public-procurement-spp

7.9 Capacity Building Country profile: Norway

Political expectations and political commitment for establishing and/or maintaining capacity building activities

Political expectations and political backing of innovation procurement capacity building in Norway are quite high. Several policy documents and statements from the government emphasize the importance of innovative procurement in order to solve public needs and create growth in the private sector. In 2013 a national strategy for innovation procurement was launched.

Services tailored to target groups

- Advising services

– The National programme for Supplier development assists public procurements departments in innovative procurement processes. The focus has primarily been on early market dialogue and advising public procurers in regards to different public procurement procedures. An important target group has also been the top management in public agencies. The objective has been to implement innovative procurement in public procurement strategies.

- Creating guidelines/methodology:

– The Agency for Public Management and eGovernment (Difi) has a responsibility to develop innovation procurement methodologies and to collect best practice. Difi publish guidelines for innovation procurement on www.anskaffelser.no/innovasjon. The target groups are public procurement departments and the top management in public agencies. The development of more interactive guiding tools will be an important objective for the coming years.

- Networking:

– Difi and the National programme for Supplier development has created a network of public procurers – "Team innovative procurement". The network serves as a platform for knowledge exchange in regards to innovative procurement.

– Conferences and seminars are held around different topics. Conferences and seminars are often videotaped and published on www.anskaffelser.no

- Financing:

– Innovation Norway gives financial grants to SMEs. «Public Research and Development Contracts" is a strategic support programme for the industry and public sector. The objective is to support development of new solutions and more innovative procurement.

– The Norwegian Research Council administer different financing programs. The Research Council is the contact point for the Horizon 2020 programme.

Existence of a service & support & advisory centres

The National programme for Supplier development was established in 2010. The programme is owned by Difi, (the national procurement agency), NHO (an industry organization) and KS (an association of Local and Regional Authorities). The National programme for Supplier development provides some assistance in regards to the preparation of innovative procurements (including early market dialogue).

The Agency for Public Management and eGovernment (Difi) is the national procurement agency in Norway. Difi publish guidelines on how to conduct innovative procurement on the website www.anskaffelser.no/innovasjon

Innovation Norway and The Norwegian Research Council gives some advice regarding support programmes and contracts that they administer.

Role of central purchasing bodies as knowledge accumulators and knowledge distributors (enablers)

Norway established a central purchasing body (CPB) in 2016. The task of the Norwegian CPB is to enter into and manage framework agreements on behalf of government and state entities. The CPB will conduct public procurements of standard products, and will therefore not have a role as knowledge distributors of innovative procurement methodology.

Services offered by publicly financed organizations

The National programme for Supplier development, Difi, Innovation Norway and the Research Council all offer publicly financed services.

Experiences concerning tacit knowledge (i.e. experience knowledge) in innovation procurement

The National programme for Supplier development has conducted over 120 pilot projects. The pilot projects consist of both innovation friendly procurements and innovation procurements. The societal effects have been evaluated in 8 of the pilots' projects.

Experiences from the pilots are distributed to the Norwegian public sector via the website www.anskaffelser.no, conferences and seminars.

Country's most important good practice in capacity building for innovation related procurement

One of the success factors in Norway is the close co-operation between the organizations that have a role to spread knowledge of innovative procurement. The organizations (National programme for Supplier development, Difi, Innovation Norway, KS, NHO and the Norwegian Research Council) meet every year in order to discuss how to build capacity on innovation related procurement. There is clear division of roles between the organizations which make it easy for public procurers to get relevant assistance.

7.10 Capacity Building Country profile: Portugal

Political expectations and political commitment for establishing and/or maintaining capacity building activities

a) At present, there is no formal political mandate for the establishment of a PCP/PPI competence center;

b) In 2008, the Public Procurement Code created a commission to monitor and supervise research and development projects (CAF), among other competences, to support contracting authorities. The elements that compose the CAF were defined by joint order of the Ministers of Science, Technology and Higher Education and Public Works, Transport and Communications. CAF was extinguished in 2017.

c) There are good expectations regarding the contours of the attribution of the competencies that were attributed to the CAF in the context of contracts of "partnerships for innovation".

Services tailored to target groups

There are no formal or informal structures that provide knowledge transfer, brokerage, technical and financial services to stakeholders or target groups. In spite of being still embryonic in the University of Oporto, school of engineering (UP/FEUP) the theme of public procurement (with emphasis on GPP/SPP within the circular economy) was introduced in the curricular program of masters in environmental engineering. We are cooperating with the local authority and other European public bidders in carrying out scientific work focusing on public procurement.

Role of central purchasing bodies as knowledge accumulators and knowledge distributors (enablers)

The Government Shared Services Entity (ESPAP) and The Institute of Public Markets, Real Estate and Construction (IMPIC) are the main purchasing bodies involved in the discussion and implementation of the national public procurement code, which includes the legislative framework of innovation procurement and pre-commercial procurement.

Services offered by publicly financed organizations

Since 2003 LNEG (the National Laboratory of Energy and Geology) has implemented several initiatives concerning GPP, SPP and PPI in Portugal, through European projects (GreenMed; Pro-EE, Smart-SPP, Building –SPP, GPP 2020). Additionally, LNEG offers services on GPP, SPP and PPI that can entail the development of procurement processes with special characteristics (environmental, social, innovation aspects), comprehensive approaches to organizations, as the development of GPP/SPP/PPI strategies, tools and methodologies and tailored training activities.

Existence of a service & support & advisory centre

Although there is not a competence centre established, during the period 2010-2015 there was a relevant support activity to procurers in a project basis context.

The Building-SPP project (LIFE+ programme, 2010-2014) coordinated by LNEG, focused in the capacity building of Portuguese public procurers in SPP, and implemented: a network of 33 public organisations with regular meetings, thematic workshops, selected discussion topics and procurers' training activities (63 public procurers trained); good practices catalogue; market involvement activities to prepare the tenders developed in the scope of the project. This resulted in a Study on the preparedness level of the Portuguese market to fulfil the EU GPP sets of criteria for 5 product categories; development of the SPP Toolbox, which is a step-by-step tool to guide local authorities and public organisations in the development of sustainable procurement at strategic and

operational level; 3 pilot projects in Portuguese local authorities, which developed a SPP Policy, SPP action plan, in-house training, market involvement activities, monitoring and reporting and 9 sustainable procurement tenders; the SPP Training Package; recommendations for public procurement policies.

During the period of 2010-2015 the GPP 2020 (http://www.gpp2020.eu/home/) project implemented several initiatives in Portugal. LNEG was the National Support Partner for Portugal and its main role has concerned: development of a SPP helpdesk for public procurers; assistance to public authorities in implementing 12 tenders; these were documented in the format of Tender Models, both in English and Portuguese; training activities, involving 102 procurement officials and other procurement-related technicians, both from central and local public administration

Experiences concerning tacit knowledge (i.e. experience knowledge) in innovation procurement

(*)

Country's most important good practice in capacity building for innovation related procurement

(*)

(*) Information with a high level of uncertainty - not gathered.

7.11 Capacity Building Country profile: Spain

Political expectations and political commitment for establishing and/or maintaining capacity building activities

Political commitment and expectations for future in Spain in order to increase and maintain capacity building activities are very high since the endorsement of the State Strategy of Innovation (e2i) in 2010, that was continued in 2013 by the Spanish Strategy on Science, Technology and Innovation[28], currently implemented and executed by the State Secretary for R&D and Innovation of the Ministry of Economy, Industry and Competitiveness (MEIC). Among other Innovation related Procurement (IP) competencies, this body is also responsible of the presentation and pre-financing, under the formula of set-aside budget allocation, of Spanish proposals of IP to the Technological Fund of ERDF- ESIF, through its General Secretariat of Science and Innovation.

Regional Governments of the nineteen Autonomous Communities and Cities are also with competencies in IP and are progressively devoting greater budget amounts to this aim.

Services tailored to target groups

As results of the aforementioned Spanish Strategies and its correspondent Action Plans and Working Groups, the following services were stablished since 2011 and currently, they have been updated and offered to target groups of public procurers and their bidders in Spain :

- An Innovation Procurement Guide that contain main definitions, applicable regulatory environment, recommended Innovation Procurement (IP) contracting clauses and some good practices
- Establishment of a helpdesk to support public procurers and suppliers.
- Implementation of two financial support programs: INNOCOMPRA – FID Line for public procurers and INNODEMANDA for entrepreneurial and institutional bidders
- Collaboration for the coming new Spanish Contract Law[29], yet not issued, that implements new 2014 EU Contracting Directives, with the definition of legal terms and regulatory clauses of the next concepts: Market Consulting, Pre-comercial Public Procurement and Partnership for Innovation.

The so-called FID Line (Promotion of Innovation from the Demand), uses ERDF-ESIF funds. Spanish financial facilities are provided with MEIC funds to pre –finance ERDF projects proposals, these MEIC funds are managed under the formula of *set-aside budget allocation for innovation related procurement*, that implies a target devoted allocation management altogether with a close implementation monitoring.

Financial support is directed at public procurers who provide a non-market public service and have no-solved needs. To access financing, public procurers must identify no-solved needs, define performance indicators and make an estimated budget. The Ministry of Economy, Industry and Competitiveness submits proposals to evaluation of compliance with predetermined criteria to decide if they can be financed. Once the financing is received, the public procurer must use innovation procurement mechanisms (it is required to use functional specifications and PCP, as well as pre-bid market consultations) to contract the solutions to their needs.

---

[28] http://www.idi.mineco.gob.es/stfls/MICINN/Investigacion/FICHEROS/Estrategia_espanola_ciencia_tecnologia_Innovacion.pdf

[29] http://www.congreso.es/portal/page/portal/Congreso/PopUpCGI?CMD=VERLST&BASE=pu12&FMT=PUWTXDTS.fmt&DOCS=1-1&DOCORDER=LIFO&QUERY=%28BOCG-12-A-2-1.CODI.%29#(Página1)

In 2017, continuous updating has driven to the current situation depicted among others, by the following aspects:

- Renewed Innovation Procurement Guide, 2.0 version
- Networks of public information services in IP, later described
- Specific team for the promotion of innovation procurement in the Ministry of Economy, Industry and Competitiveness
- The operations finally financed might be characterized as it follows:

– Greater awareness of public procurers and implementation of IP as a form of recruitment in a large number of public procurers

– During the EU programming period 2007-2013, 21 operations were carried out with a total amount mobilized of 290 M € (197 M € ERDF).

– In the new programming period 2014-2020 an additional 300 M€ ERDF are available for this line. During this period, four operations have already been started and there are other seven in the portfolio for a total amount of 100 M€.

– Budgets of the two periods mentioned, were supported by pre financial MEIC facilities under the formula of set-aside budget allocation for innovation related procurement

- New services as:

– Around 50-60 workshops/courses per year since 2012.

– Issuing of a handbook on innovation related to procurement

Role of central purchasing bodies as knowledge accumulators and knowledge distributors (enablers)

A good practice for performing as knowledge accumulator and knowledge distributors (enablers) is the platform ITEMAS[30] for innovation in medical and health technologies. Linked with the health contracting authorities of 18 regions of Spain, it offers a services portfolio to foster collaboration between organizations to ease research activity throughout the whole national territory. These services are technology transfer, offer of Hospital and Centers of ITEMAS of R&D capacities and management and consultancy services.

Services offered by publicly financed organizations

Implementation of the Spanish Action Plans for IP has got to stablish a network of helpdesks (Regional, Local and Central) for IP to support public procurers and suppliers (Regional Health Services, Ministry of Health, Regional Innovation Agencies, Universities …). Also, awareness created for public bodies has driven to some local and regional authorities to set specialized actions to know the markets and firms offer of innovation services able to be applied to offer solutions to public problems (for instance, Madrid City Hall – projects casting in "La N@ve"[31]) There is also a continuously increasing offer of services by private consulting firms acting as catalysts to launch new proposals of IP projects

Existence of a service & support & advisory centres

[30] http://www.itemas.org/

[31] http://www.madrid.es/portales/munimadrid/es/Inicio/Actualidad/Noticias/Audiciones-en-La-N-ve-de-proyectos-de-innovacion-para-pymes-y-startups?vgnextfmt=default&vgnextoid=ae8919ec15f87510VgnVCM2000001f4a900aRCRD&vgnextchannel=a12149fa40ec9410VgnVCM100000171f5a0aRCRD

Implementation of the Spanish Action Plans for IP has got to stablish a network of helpdesks (Regional, Local and Central) for IP to support public procurers and suppliers (Regional Health Services, Ministry of Health, Regional Innovation Agencies, Universities …).

For municipalities, there exists a network called Red INNPULSO[32] that currently integrates 68 cities in Spain of which 23 are with a population greater than 100.000 inhabitants. This network offers, among other services, consultancy for the city or town halls interested in launching new calls of procurement related with innovation

Experiences concerning tacit knowledge (i.e. experience knowledge) in innovation procurement

Tacit knowledge in innovation procurement is showed in each one of the public initiatives that has been financed through MEIC and ERDF funds. Public procurers have taken profit of its past experiences using the knowledge accumulated by past R&D and innovation projects and experience in managing their public services, coming to define its own maps of early demand as a previous stage to the definition of processes involving innovation related procurement. Complementing the tacit knowledge accumulated by public procurers, these processes have been reinforced in several cases demanding the state–of-the-art knowledge in markets thanks to public calls for consultation in markets and for aggregating public demands (some examples in NieblA8[33] or in the Plan for the Advancement of Language Technology[34])

Country's most important good practice in capacity building for innovation related procurement: Concerted Centers

In terms of capacity building, Spanish best practice is the creation of a structure of concerted centers specialized in fostering innovation related procurement (IP) , forming a network piloted by the Secretariat General of Science and Innovation – Ministry of Economy, Industry and Competitiveness (MEIC) for all the innovation fields, with a specialized Deputy Directorate General for fostering Innovation and the public entity CDTI (Center for Development of Industrial Technology), and supported by two national specialized nodes , which are:

Node for health fields of IP: the Ministry for Health, Social Security and Equality

Node for dual technologies fields of IP: the INTA – National Institute for Aerospace Technologies, depending on Ministry of Defense.

[32] http://redinnpulso.es/

[33] https://www.fomento.gob.es/NR/rdonlyres/82E58F48-A4DD-495C-87C9-BA4D63FD85A4/131555/DPresentaci%C3%B3nDGC_Innovacarreteras1dejuliode2015.pdf

[34] http://www.agendadigital.gob.es/tecnologias-lenguaje/compra-publica-innovacion/Paginas/compra-publica.aspx

Sources & References National

Internet references, publications.

MEIC:http://www.idi.mineco.gob.es/portal/site/MICINN/menuitem.29451c2ac1391f1febebed1001432ea0/?vgnextoid=7acb12c94d364410VgnVCM1000001d04140aRCRD

CDTI: https://www.cdti.es/index.asp?MP=7&MS=581&MN=3

Innovation Guide:

http://www.idi.mineco.gob.es/stfls/MICINN/Innovacion/FICHEROS/Guia_2_0_CPI_V5_Borrador_web.pdf

Innovation handbook: "Compra Pública Innovadora. Fundamentos e instrumentación" Luis Cueto, Juan Manuel Garrido. Serie INNAP INNOVA. Instituto Nacional de Administración Pública. 2013. www.netbiblo.com

Internet references and summary of some of the most important or meaningful projects endorsed within the former EU budgetary period 2007-2013 and proposals for the new period 2014-2020

Projects Hospital 2050 and INNOVASAUDE: http://www.sergas.es/Hospital-2050--Innova-Saude?idioma=es. Hospital 2050 is addressed to health innovation for smart general management and patients management systems, traceability, robotization, hospital buildings sustainability, clinical information security and so on.

Civil UAVs (Unmanned Aerial Vehicles) Initiative: http://gain.xunta.es/artigos/466/civil+uavs+initiative. To develop a new offer of public services for forests protection, land management, civil protection against catastrophes, coasts surveillance and so on. Also, it creates a technological and industrial park for UAVs.

RECUPERA 2020: http://www.recupera2020.csic.es/en R&D and Innovation for the rural environment. It is a collaborative project between the Spanish National Scientific Research Council, other public research centers and companies.

SMART Coruña:

http://www.coruna.gal/servlet/Satellite?c=Page&d=&cid=1377134531332&pagename=Smart/Page/Generico-Page-Generica Implementing innovations for smart cities

ALCALA+i: http://www.laprocesadora.com/ Entrepreneurship centers

7.12 Capacity Building Country Profile: Sweden

Political expectations and political commitment for establishing and/or maintaining capacity building activities

Political expectations and political backing of innovation procurement capacity building in Sweden are high. In June 2016, the Swedish government collectively took a decision to adopt a National Public Procurement Strategy. It is mostly directed to governmental agencies since regional and local levels of government are independent in Sweden. The strategy does however give guidance on a wide variety of innovation procurement aspects to national, regional and local levels of government as well as suppliers.

Other elements supporting innovation procurement have been included in other policy documents, such as smart industry the strategy for new industrialisation, where promotion of innovation procurement is included in the action plan. Some regions, county councils and larger municipalities include innovation procurement in their strategies for innovation and public procurement.

Services tailored to target groups

In September 2015, the National Agency for Public Procurement (Upphandlingsmyndigheten) was established. The Agency provides services for all types of stakeholders. Our main tasks are

- Contribute to procurements being used strategically and reinvent public procurement as a powerful and effective policy tool
- Develop new methods and tools making the procurement process more effective
- Develop methods for management, monitoring, evaluation and follow-up of contracts
- Contribute to increased impact and importance of environmental and social considerations and sustainability, e.g. through developing and administering criteria in these areas
- Promote innovation in procurement
- Contribute to the procurement process being digitalized and participate in the standardization thereof
- Make it easier for small and medium-sized companies and non-profit organizations to participate in public procurements

Regarding the task to promote innovation in procurement Upphandlingsmyndigheten is conducting the following tasks

- (a) Knowledge and experience sharing services such as

  – training for procurers,
  – collect and disseminate knowledge in form of guidelines, examples and experiences from innovation procurement projects,
  – networking opportunities for suppliers & procurers, and
  – information & awareness events for all stakeholders (users/procurers/management, suppliers, policy makers, professional procurement agencies etc.).

- (b) This is complemented by methodological support to specific innovation procurement projects. The support focus mostly on the phase before innovation

procurement: identifying and analysing needs as well as early dialogue with the market.

- c) Upphandlingsmyndigheten was also tasked (via an appropriation directions) to enhance innovation procurement by giving support to "pre-procurement purchasing groups" to be formed by contracting authorities at national, regional and local level that have similar needs for innovative solutions (i.e. bundling of demand). Pre-procurement purchasing groups have a history back to early 1990 in Sweden.

The Swedish Energy Agency have been financing and facilitating "pre-procurement purchasing groups" with common needs within specific areas with a focus to achieve energy efficiency. There is evidence to suggest that the initiative constitutes best practice, as good effects have been demonstrated on many of the more than 60 procurements that has been carried out. Upphandlingsmyndigheten now has the task to support be a driver in the creation of more groups, without necessarily facilitate them.

For those contracting authorities that are interested in more advanced forms of innovation procurement, it has been possible to apply for financial support at Vinnova, the Swedish innovation agency. Among the financed projects are PCPs, PPIs and basic financial support for purchasing groups.

Role of central purchasing bodies as knowledge accumulators and knowledge distributors (enablers)

There are many central purchasing bodies in Sweden. One of them is run by Kammarkollegiet and they have the role to carry out framework agreements used by all the governmental agencies in Sweden. (Governmental authorities accounts for about 1/5 of all announced procurements in Sweden). With that role they can be an enabler and spread knowledge to agencies in correspondence with the National Public Procurement Strategy.

Services offered by publicly financed organizations

The above-mentioned services (i.e. tailored to target groups) are all publicly financed. Beside them, there exist some services – addressing innovation procurement among others – offered by private firms (such as law firms, consulting firms, firms specialized on industry related trainings etc.).

Existence of a service & support & advisory centres

Upphandlingsmyndigheten have the responsibility for providing support in public procurement. The agency provides support, guidance and information on all aspects of innovation procurement under its general procurement support activities. The agency provides guidelines, collects and disseminates examples and provides methodological support to specific innovation procurement projects. The agency also reaches out to other authorities/organisations in Sweden as well as internationally.

Upphandlingsmyndigheten cooperates closely with Vinnova, e.g. regarding methods for needs definition and transferring innovation procurement learnings from financed projects etc. This feeds into the centralized procurement support.

The Swedish Competition Authority has the responsibility of supervise how the contracting authorities apply to the legislation.

Experiences concerning tacit knowledge (i.e. experience knowledge) in innovation procurement

The cumulative and tacit nature of innovation procurement knowledge is a basic issue in the approach by the support and services carried out by Upphandlingsmyndigheten.

Overall it can said that the main focus is on empowering and mobilizing public procurers by co-operatively accumulating and subsequently sharing innovation procurement related experiences.

Country's most important good practice in capacity building for innovation related procurement

Sweden´s good practice is above all the 'empowerment approach' and its institutional backing. That is, the design of various interlinked measures for innovation procurement capacity building and their establishment in already existing innovation supporting institutions.

8 Annex C: Agenda "Country seminar on Topic B - Capacity building"

MLE Innovation Procurement

Country seminar on Topic B:
Capacity building for commercial innovation procurement and PCP: Challenges & experiences

NOVOTEL
Frankfurt City
Lise-Meitner-Strasse 2
60486 Frankfurt am Main | Germany

May 31st 2017 16:00-18:00 & June 1st 2017 9:00-15:10

DRAFT Agenda

May 31st		
16:00-16:10	**Welcome from the chairs and the "capacity building" expert**	Welcome note by Charles Edquist Welcome note by Xavier van den Bosch Eva Buchinger will explain the structure and issues of the two days
16:10-16:20	**Welcome note from the host**	Welcome note by Marlene Grauer and provision of basic on-site-information
16:20-16:50	**A policy perspective on innovation procurement capacity building**	Wolfgang Crasemann, Head of Unit, Technology and Innovation Policy, Federal Ministry for Economic Affairs and Energy from the BMWi (Germany) Presentation and discussion
16:50-17:20	**A procurement association perspective on innovation procurement capacity building**	Representative from BME Association for Supply Chain Management, Procurement and Logistics (Germany) Presentation and discussion
17:20-17:50	**A competence centre perspective on innovation procurement capacity building**	Representative from KOINNO Competence Centre for Innovative Procurement (Germany) Presentation and discussion
19:00	Dinner	Restaurant „Dauth-Schneider" Neuer Wall 5-7 / Klappergasse 39 D-60594 Frankfurt am Main http://www.dauth-schneider.de/

June 1st		
09:00-9:20	**Background Paper: Capacity building for commercial innovation procurement and PCP - challenges & experiences**	Presentation by MLE-Expert Eva Buchinger Outline of experiences and practices already existing in MS and identifying the main challenges concerning capacity building for innovation procurement
09:20-10:00	**Plenary: Tour de table** Each national participant is invited to indicate the two main challenges her/his country is facing concerning capacity building (3-5 minutes per country).	
10:00-10:20	Coffee break	
10:20-10:40	**Case 1: The role of Upphandlingsmyndigheten as capacity-builder**	Niklas Tideklev Innovation procurement strategist at Upphandlingsmyndigheten - The National Agency for Public Procurement in Sweden
10:40-11:20	Breakout session A: Capacity building actors & activities & addressees	The plenary will be split in groups discussing # Pros/Cons of establishing a service & support & advisory centre # Range of services & supports & etc. provided: e.g. for the use of non-standard procurement approaches and procedures (such as functional/ outcome based specifications, competitive/ technical dialogue, PCP, innovation partnership) # Existence of services tailored to target groups? information/awareness, guidelines, trainings

		(methods, contents), consulting etc. Which target groups? # Type of procurement needing especially capacity building in each MS? I.e. direct, catalytic, functional, pre-commercial procurement or other types?
	Get together again	
11:30-11:50	**Plenary:** **Recap of breakout sessions**	Issues to be discussed: # Importance of acquired tacit knowledge, i.e. cumulative nature of experience knowledge in innovation procurement # Role of central purchasing bodies as knowledge accumulators on the one hand and as knowledge distributors (enablers) on the other
11:50-12:30	**Plenary Discussion:** **Tacit knowledge and intermediary & catalytic innovation procurement**	Issues to be discussed: # Importance of acquired tacit knowledge, i.e. cumulative nature of experience knowledge in innovation procurement # Role of central purchasing bodies as knowledge accumulators on the one hand and as knowledge distributors (enablers) on the other
12:30-13:30	Lunch Break	
13:30-13:50	**Case 2:** **Capacity building experiences on project basis**	DLR Project Management Agency (Germany) tbc Presentation
13:50-14:30	**Breakout session B:** **Capacity building and political back-up**	The plenary will be split in groups discussing # Political expectations and policy commitment for establishing and/or maintaining capacity building activities # Political expectations & experiences in "using" private actors driving capacity building in innovation procurement
	Get together again	
14:40-15:00	**Plenary:** **Recap of breakout sessions**	Rapporteurs provide a snapshot per theme. Comments and questions by participants.
15:00-15:10	**Conclusions & Next steps**	Eva will summarize Charles will brief on next steps

Getting in touch with the EU

IN PERSON
All over the European Union there are hundreds of Europe Direct Information Centres.
You can find the address of the centre nearest you at: http://europa.eu/contact

ON THE PHONE OR BY E-MAIL
Europe Direct is a service that answers your questions about the European Union.
You can contact this service
– by freephone: 00 800 6 7 8 9 10 11 (certain operators may charge for these calls),
– at the following standard number: +32 22999696 or
– by electronic mail via: http://europa.eu/contact

Finding information about the EU

ONLINE
Information about the European Union in all the official languages of the EU is available on the Europa website at: http://europa.eu

EU PUBLICATIONS
You can download or order free and priced EU publications from EU Bookshop at: http://bookshop.europa.eu. Multiple copies of free publications may be obtained by contacting Europe Direct or your local information centre (see http://europa.eu/contact)

EU LAW AND RELATED DOCUMENTS
For access to legal information from the EU, including all EU law since 1951 in all the official language versions, go to EUR-Lex at: http://eur-lex.europa.eu

OPEN DATA FROM THE EU
The EU Open Data Portal (http://data.europa.eu/euodp/en/data) provides access to datasets from the EU. Data can be downloaded and reused for free, both for commercial and non-commercial purposes.