European Commission

Mutual Learning Exercise

MLE on Innovation-related Procurement

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Research and Innovation

Mutual Learning Exercise - MLE on Innovation-related Procurement

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Unit A4 Analysis and Monitoring of National Research and Innovation Policies

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EUROPEAN COMMISSION

Mutual Learning Exercise

MLE on Innovation-related Procurement

Prepared by an independent panel of experts:

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THE PSF MLE PANEL

Chair: Charles Edquist (Sweden)

Charles Edquist holds a chair in innovation research and is one of the founders and the first director (2004-2011) of the Centre for Innovation, Research and Competence in the Learning Economy (CIRCLE). He has published numerous books and articles on innovation processes, innovation systems and innovation policy. He is among the 50 (or so) most-cited innovation researchers (out of 6-7000) in the world. He is currently working mainly as a researcher and an advisor to governments, international organisations and firms on issues related to innovation policy and strategy in a wider sense. For example, since 2015, he has been a member of the Swedish National Innovation Council, which is chaired by the prime minister. Please see *http://charlesedquist.com*

Rapporteur: Jon Mikel Zabala-Iturriagagoitia (Spain)

Jon Mikel Zabala-Iturriagagoitia is a lecturer at the University of Deusto in San Sebastián (Spain). He was previously assistant professor at CIRCLE, Lund University (Sweden). His research and teaching interests are related to the fields of innovation policy and innovation management. As a researcher, he has contributed to the development of methodological approaches for the assessment of innovation potential, innovation policy instruments such as public procurement for innovation and pre-commercial procurement, and the development of novel approaches to innovation management. As a lecturer, he has been engaged in courses at the PhD, Master's degree and undergraduate levels at several European and Latin American universities.

Expert: Eva Buchinger (Austria)

Eva Buchinger is project manager and consultant at the Austrian Institute of Technology (AIT). Her research interests include social studies of technology and innovation and social systems theory. Since 2007, she has been working for the Austrian government in designing and implementing the 'Austrian Action Plan: Public Procurement Promoting Innovation (PPPI)', thereby closely cooperating with public procurers, funding agencies, statistical and legal bureaus. As a permanent advisory expert, she regularly reviews the achievements of Austrian innovation procurement activities (writing policy briefs, conducting assessments, and identifying good practice examples). At the European level, she served as a member of the ERAC Task Force formulating the 'ERAC Opinion on Public Procurement' in 2014/15. Furthermore, she has been involved in national

and European innovation procurement projects and provides guidance and training.

Expert: Gaynor Whyles (United Kingdom)

Gaynor Whyles has worked in the field of innovation procurement since 2005, engaging ministries, municipal authorities and the healthcare sector in the adoption of procurement approaches to stimulate supply-side innovation. She has extensive experience in the execution of innovation procurement projects, developed the Forward Commitment Procurement (FCP) model of innovation procurement, and has initiated and managed numerous successful FCP demonstration projects. As part of the coordination team for a number of European projects, she has facilitated numerous 'first-time' innovation procurement projects and has engaged in awareness-raising and capacity-building activities across Europe. She has published a number of papers on topics such as FCP, and has written several practical guides and reports on innovation procurement which reflect her practical approach to the topic.

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1 EXECUTIVE SUMMARY

This Mutual Learning Exercise (MLE) on Innovation-related Procurement was conducted under the Horizon 2020 Policy Support Facility run by the European Commission's Directorate-General for Research and Innovation. The 15 countries that participated were: Austria, Belgium - Brussels Region, Estonia, France, Germany, Greece, Latvia, Lithuania, Netherlands, Norway, Portugal, Slovenia, Spain, Sweden and Turkey. Two globally acting organisations, the Inter-American Development Bank (BID) and the Organisation for Economic Co-operation and Development (OECD), were partly involved.

The MLE was supported by a panel of experts: Charles Edquist (Chair), Jon Mikel Zabala-Iturriagagoitia (Rapporteur), Eva Buchinger and Gaynor Whyles, as well as Jari Romanainen (quality reviewer) and Viola Peter (coordinator). The MLE was overseen by Xavier Vanden Bosch and Marta Truco Calbet, from Unit A4 'Analysis and monitoring of national research and innovation policies', DG Research and Innovation, European Commission.

The work of the panel of experts was based on written and oral contributions from representatives of the participating states including country visits to some of them, as well as from a wider literature review and experiences from contributors relating to the design, implementation and evaluation of innovation-related procurement policies. As indicated above, this report has been prepared for the European Commission by an independent group of experts. The content represents only the authors' individual and collective views and not those of the European Commission.

This report summarises the lessons the team drew from the exercise and makes a number of recommendations to those considering improving their innovation-related procurement policies. Four topic-oriented reports[1] are published in parallel with this one, presenting the evidence and analysis underlying this report. They include detailed data, evidence, experiences and insights provided by the participating countries on the status of their respective innovation procurement-related approaches.

The most relevant policy recommendations that can enable countries to define specific action plans as regards innovation-related procurement are as follows:

Policymakers should:

- **Identify societal needs and problems**: these can more easily be recognised as a legitimate target for innovation-related public procurement.
- **Provide funding programmes** in order to broaden the uptake of innovation procurement. Design these programmes **to be multi-annual, possibly**

[1] All reports and documentation concerning the MLE are available at the European Commission's Policy Support Facility (PSF): https://rio.jrc.ec.europa.eu/en/policy-support-facility/mle-innovation-related-public-procurement

complementary and flexible to fit in with the real procurement needs of procuring organisations.

- **Develop and maintain competence (service) centres, innovation agencies and other support organisations**: supportive framework conditions start with a well-working innovation procurement infrastructure providing the required capabilities and capacities.

Procuring entities should:

- **Envisage broad and early market consultations**: these are fundamental to familiarise potential suppliers with the problem/need to be addressed, further contribute to its comprehensive definition, and to be prepared for the calls.
- Provide room for innovation considering the **use of functional specifications**.
- **Be strategic with respect to clients and other stakeholders** (internal or external) who can stimulate the rolling out of innovation-related procurement.

All stakeholders should:

- **Align** finance and capacity-building needs with respective complementing policies.
- **Take advantage of good practice examples** and envisage evaluation of your activities as a learning tool.

2 INTRODUCTION

This is the final report of the Mutual Learning Exercise (MLE) on 'Innovation-related Procurement', carried out between January 2017 and March 2018 as part of the Horizon 2020 Policy Support Facility. The MLE is one of three instruments available under the overarching Policy Support Facility (PSF), set up by the European Commission within Horizon 2020 (H2020). The aim of the PSF is to give EU Member States (and countries associated to H2020) practical support to design, implement and evaluate reforms that enhance the quality of their research and innovation investments, policies and systems.

Innovation-related procurement is a broad area. The *process* may be defined as: innovative ways to carry out procurement procedures. Furthermore, since innovative suppliers are encouraged to bid, better results are achieved *through* procurement procedures. The third approach concerns the use of public procurement as an *instrument* to support innovative ideas, products and services. This is the perspective taken by this MLE.

The European Research Area Committee referred to 'innovation procurement' as "*any kind of public procurement practice (pre-commercial or commercial) that may help the market uptake of innovative products and services*". Innovation-related procurement is acknowledged as a relevant policy instrument to support innovation as it provides a means to find solutions to current and future (societal or agency-related) problems. Besides creating new markets to fulfil (agency) missions and/or needs, innovation-related procurement has other rationales such as improving the effectiveness and efficiency of public services, signalling the demand for certain technologies/products, promoting and diffusing innovations to existing private agents, adopting/using cost-saving innovations, strengthening key suppliers (i.e. providing new knowledge and capabilities that will be useful to them in the future, potentially breaking path dependencies and avoiding lock-in situations), and incentivising industry to invest in innovation, among others.

Within this broad area, the MLE explored four topics:

- **Topic A**: **Developing a strategic framework**: to contribute to creating strategic frameworks for the different kinds of innovation-related procurement, together with national strategies and action plans to promote it. The frameworks should address definitions, goals and indicators, tools and activities as well as roles and responsibilities of those actors involved.

- **Topic B**: **Capacity building**: to analyse the need for capacity building, raising awareness of innovation-related procurement and offering support to contracting authorities.

- **Topic C**: **Financial mechanisms**: to investigate the financial mechanisms contracting authorities require to undertake innovation-related procurement.

- **Topic D**: **Monitoring, evaluation and impact assessment**: to develop a monitoring, evaluation, and impact assessment system of innovation-related procurement in the Member States and the EU.

These four topics are highlighted and developed in greater detail by the European Commission in its notice 'Guidance on innovation procurement', which was

presented to heads of state in the context of the launch of the EU's renewed Agenda for Research and Innovation on 16 May 2018.[2]

Given that innovation-related procurement is at the crossroads between innovation policy and procurement, the potential readership of this final report may be wide. Many different actors can be identified, such as politicians, administrators, procurement competence centres, innovation agencies, procurement departments in public and private entities, contracting authorities, etc. Obviously, a short single document will not be able to address the needs of all potential readers/recipients. Hence, instead, this report provides a snapshot of the main key lessons learnt from the MLE, from the perspective of both the participants and the expert and coordination teams. It also reflects participants' individual views, and suggests some good practice examples and policy recommendations, with the aim of inspiring further thinking and actions beyond the realm of the participants.

The main lessons learned from exchanges at the several workshops had and from evidence on existing practice are revealed in section 3. The main policy recommendations drawn from exchanges during the previous workshops and from evidence on existing practice are defined in section 4. Finally, section 5 concludes with the background to this MLE (methodology, country seminars and participating countries).

[2] See: https://ec.europa.eu/docsroom/documents/29261

3 LESSONS LEARNED

The MLE focused on the following four topics: developing strategic frameworks; capacity building; financial mechanisms; and monitoring, evaluation and impact assessment.

This section provides short syntheses of the main lessons learned in relation to these four areas, including some good practices and personal quotes from the MLE participants. A report on each specific topic is also published in parallel with this one.[3]

3.1 Developing a strategic framework

The EU2020 Strategy recommends using public procurement to drive innovation and to ensure high-quality public services in Europe. In the EU, almost 14 % of GDP (i.e. EUR 2 trillion)[4] are spent annually on public procurement. However, the way in which most public procurement is pursued is more of an obstacle to innovation rather than a stimulus. Although systematic statistical data on innovation-enhancing procurement is not available, it is estimated that only a small proportion of all public procurement in the EU can be said to enhance innovation. Nevertheless, there are many examples that evidence the positive impact such policy interventions have on the economy and on society at large. Hence, it is important to consider active measures to increase the proportion of public procurement that drives innovation, as this policy instrument can become an important element in national and regional innovation policies.

- *"Innovation-related procurement should be high on the policy agenda, not as a procurement policy instrument, but rather as an innovation policy instrument." MLE participant*

To drive innovation procurement – or better still, innovation-enhancing procurement – a strategic framework is important. So, what constitutes such a framework? Basically, it is defined by its constituents, such as organisations, which drive the policy, and institutions (i.e. institutional settings), which serve as rules of the game, units that provide capacities in terms of knowledge provision and training, strategic plans or other policy instruments. The strategic framework thus encompasses all aspects of a stylised innovation-enhancing procurement system.

The chosen kind(s) of procurement, such as regular, direct or catalytic innovation procurement, functional regular procurement or pre-commercial procurement, have different characteristics, different goals and are partly governed by different legal requirements. The strategic frameworks' constituents will therefore have to be different for each kind of innovation-enhancing procurement, and the strategy

[3] All reports and documentation concerning the MLE are available at the Policy Support Facility (PSF) of the European Commission, see: https://rio.jrc.ec.europa.eu/en/policy-support-facility/mle-innovation-related-public-procurement

[4] See: http://ec.europa.eu/growth/single-market/public-procurement_en https://ec.europa.eu/docsroom/documents/20679

must be designed and implemented in very different ways to become effective policies.[5]

The following highlights three main aspects of a strategic framework, namely national strategies for innovation procurement, organisational aspects, and finally, advantages and the importance of functional specifications.

A dedicated national strategy endorsed at the highest political level is crucial to ensure a long-term commitment to enabling changes in procurement processes to ensure they enhance innovation.

The content of such a strategy must include a choice of which procurement categories should be used to enhance innovation.

If innovation-enhancing public procurement is to be used to a large extent, this constitutes a major change and requires strong political support at the highest possible political level in almost all EU Member States. Support from a high administrative level is also important, as can be seen in the Austrian Action Plan, for example.

Highlight 1: Austrian strategy for innovation procurement

*The **Austrian Public Procurement Promoting Innovation (PPPI) Action Plan** specifies the Austrian strategy for innovation procurement (2012). Its mission is to introduce innovation procurement as an element in the articulation of the policy mix, with the following goals:*

- *Increase the share of public procurement volume (~ EUR 43bn/per year) used for innovation promotion*
- *Support the modernisation of the public sector and infrastructure by procuring/using innovations*
- *Other operative goals include: political commitment, coordinating innovation procurement at the federal level, raising awareness, fostering dialogue between demand and supply, and setting up a monitoring and benchmarking system.*

Functional specifications are needed for all kinds of innovation-enhancing procurement.

The thematic report on topic A, produced in this MLE, shows in detail that functional specifications are needed for all kinds of innovation-enhancing public

[5] The different kind(s) of procurement and their differences were dealt with in detail in the thematic report on Topic A, entitled 'Developing strategic frameworks for innovation related public procurement', available at: https://rio.jrc.ec.europa.eu/en/library/mle-innovation-related-public-procurement-report-developing-strategic-frameworks-innovation

procurement. Innovations are new or improved products (i.e. goods and services) or processes. The procurer may choose to provide a precise product specification or a functional specification. The former will lead to the delivery of a pre-defined product, which may or may not have all the latest technical or environmental features. While product specifications provide the procurer with what he or she wanted, they tend to hamper innovative solutions that the procurer may not or cannot have envisaged – but which potential suppliers would be able to provide or develop. If a product is described in the tender specification, the process will end up with the procurement of that product, even if it is obsolete (i.e. namely, a better alternative to the requirement could have been achieved). Therefore, product specifications often constitute obstacles to innovation.

- *"To pursue functional procurement is a good initiative and an important conclusion." MLE participant*

Functional specifications open up for innovations and can be included in any type of legal procurement procedure. In fact, the use of functional specifications is not new. It was already possible to define functional requirements within the former EU Procurement Directive, and functional specifications were used in previous calls for tender (e.g. in FP7 PCP calls). Thus, it is of strategic importance that functional specifications are used if innovations are to be achieved by means of public procurement. To achieve innovation through public procurement it is, seemingly paradoxical, more important to emphasise functional specifications than to pursue innovation procurement.[6]

However, functional specifications can be written in such a way that they include both the traditional product and unknown products that respond to the identified need/problem to be solved by the procurement. In other words, functional specifications open up for both solutions which are already available (i.e. the old product can still be procured), and for the development and delivery of more advanced solutions (i.e. new products, innovations). This means that the risk of failure may be larger if innovations (more advanced products) are a requirement than if functional specifications are used. Favouring competition and innovation are the main reasons why the 2014 EU Procurement Directives explicitly state that 'Functional and performance-related requirements… should be used as widely as possible'.

Highlight 2: Functional procurement as a central element in the Swedish National Procurement Strategy

*To date, **Sweden** is the only EU country where the government has developed a detailed national strategy for public procurement in which functional procurement is an important element. The Swedish government collectively took a decision to adopt the National Procurement Strategy on 30 June 2016. One of the strategy's seven parts is entitled 'Public procurement that enhances innovations and alternative solutions'. The following quotes come from this part:*

- *"The public sector can also enhance innovation in suppliers by, in procurement, demand functions rather than ready solutions."*

[6] The last sentence has led to discussions between the Commission and the Chair. The Chair has written this sentence, along with all of section 3.1. The Chair alone is responsible for it and it does not represent the views of the group.

- *"By requiring functions instead of having specific requirements with regard to goods and services, the creativity and ability to innovate of the potential suppliers are enhanced."*
- *"To demand functions can increase competition in the procurement, since a larger number of firms and organisations can respond to the tenders, which is beneficial particularly for small and medium-sized firms."*
- *"… your agency formulates functional requirements and emphasises the result that shall be achieved instead of specific requirements with regard to the goods and services."*
- *"… your agency uses assistance from the initiatives and means of support that The National Agency for Public Procurement has developed to formulate functional requirements in procurement."*

In some Member States, there is a central ministry or state agency that actually carries out procurement on behalf of all other, more specialised, (user) agencies for specific products (e.g. framework contracts for computers). Such solutions may result in lower prices by exploiting economies of scale, but this also means that the 'distance' between organisations (the procuring agency and the final user of the product) is large. Such a significant distance may be problematic for formulating the tender specifications, since specific knowledge about the problems to be solved in the procurement might be less well-known at a distance.

The degree of centralisation of the organisation of procurement should secure access to the knowledge and competence that exists in society about the problems to be solved by the procurement.

Such distance can also be fairly significant within large organisations that are both handling the procurement process and actually using the resulting products. For example, a large public health-care organisation normally has a procurement sub-unit within its organisation. Individuals in that unit may not have profound knowledge about, for example, the different types of X-ray investigations which doctors need to pursue. Thus, close collaboration and interactive learning between medical personnel and procurement administrators is crucial in procurement. This is the case for the large procurer of 'Region Skåne' in southern Sweden.[7]

Relations between different levels – local, regional, national – also differ between countries. In some countries, the central government can heavily influence the procurement of local and regional authorities. In others, the lower levels are independent and have the right to pursue procurement in their own way.

Any strategic framework for innovation-enhancing public procurement must relate to this degree of centralisation and adapt it to the conditions and laws in the country.

[7] For another example see Askfors and Fornstedt (2018) where they illustrate the procurement of a medical device innovation in Swedish healthcare. Available at: https://www.sciencedirect.com/science/article/pii/S0956522116303025

If a decentralised organisation of public procurement is chosen, it is important to give the procuring units the relevant knowledge.

If procurement procedures are to be carried out in new ways (e.g. if public procurement is going to enhance innovation) then there is a need for new knowledge about how to achieve this. This knowledge must be made available to all organisations pursuing innovation-enhancing public procurement – or, more specifically, to the country's procurement administrators. Some of the participating countries in the MLE (e.g. Austria and Sweden – see section 3.2 on capacity building), have a public agency tasked with supporting all units pursuing public procurement with relevant knowledge. The need for such knowledge and advice is particularly large with regard to developing functional specifications (e.g. translating societal needs into functional specifications). Such qualified administrative support is important in addition to the political support emphasised initially – to secure the implementation of the strategy and to reduce the risk of abrupt changes in the strategy due to changes at the political level.

To achieve innovations in public procurement, it is important that the functional specifications are not accompanied by other requirements that may restrict access to the process for small and innovative firms.

It is important that restrictive conditions potentially preventing small or innovative firms from submitting bids are not included in the tender specifications. Restrictive clauses might concern requiring references, size of the company, size of the tender, restrictive intellectual property right conditions, disproportionate financial and technical guaranties from tenderers, etc.

Properly pursued, functional procurement may lead to greater creativity, more innovation, increased competition and better public services.

Both the speed and direction of innovation processes are influenced by innovation-enhancing procurement, which means that it allows global challenges to be addressed (e.g. in the area of the environment). The speed of innovation may also be increased by the use of functional specifications. The direction of innovation is influenced by the way the functions demanded are described and the award criteria used (e.g. award criteria that favour more environmentally friendly solutions).

- *"Environmental demands… must be a matter of functional specifications." MLE participant*

Functional procurement for innovation is a matter of innovation policy pursued from the demand side and contributes to the development of a holistic innovation policy, replacing the partial and linear policies currently pursued.

There are many examples of procurement deals using functional specifications. This kind of procurement may develop into the most important innovation policy instrument, based on the sheer economic significance of public procurement. Hence, a stronger emphasis on functional specifications is likely to improve Member States' innovation policies.

- *"Functional procurement will be the future in helping the public sector to become innovative." MLE participant*

3.2 Capacity building

Innovation-related procurement requires **organisational capacities and individual skills** beyond the typical professional qualifications of public procurers. Consequently, capacity building is an important factor to strengthen public procurers' readiness and ability to initiate and execute innovation-related procurement. This includes the capacities and capabilities needed, recipients of capacity-building activities, and capacity-building enablers and supporters[8].

Capacity building is helpful and even necessary to achieve a broader mobilisation of public entities for conducting innovation-related procurement.

- *"Many contracting authorities don't know how to roll out innovation-related procurement, due to them not having previous experience; hence, they need to develop certain capacities beforehand for such a purpose". MLE participant*

Capacity-building services are required since the innovation stimulating the purchasing power of public entities remains 'somewhat untapped'. Generally, it can be said that this is caused by a certain lack of motivation for and experience with innovation-related procurement – the nature of public procurement is inherently conservative and risk-averse (safety standards, bureaucracy, avoidance of law-suits, etc.). Procurement and innovation are therefore often seen as antagonists. Capacity-building services are an issue in almost all Member States participating in this MLE.

- *"Good to see that other countries struggle too and that all proceed in incremental steps. There really is a need for capacity building." MLE participant*

Capacity-building initiatives require a strong and enduring political commitment beyond political election cycles.

Although political expectations are generally high in the participating Member States, the need to achieve political support was emphasised in the discussions. Due to political changes (elections) and the 'slowness' of the progress in

[8] For full details of the relevance of capacity building in innovation-related procurement and the initiatives undertaken in the participating Member States, see: https://rio.jrc.ec.europa.eu/en/library/mle-innovation-related-public-procurement-report-capacity-building-innovation-related

innovation-related procurement, it may be a big challenge to re-achieve and/or maintain political momentum and commitment. Until now, for some countries it has been difficult to achieve 'active political backing'. There has been a consensus that means of capacity building are needed for political leaders. This enables them to understand the specific benefits of innovation-related procurement as a way of improving the efficiency and quality of public services, as well as its wider economic, environmental and societal benefits and in relation to major societal challenges.

- *"We need to get politicians on board." MLE participant*

Capacity building must be recipient-targeted since different stakeholder groups and stakeholder roles require different capacities.

Public entities, in their role as **need owners,** require capacities for (i) the participative clarification of unmet needs (internal/external end-users). In their role as **procurement authorities**, they require capacities at the organisational level for (ii) developing innovation-related procurement strategies to coordinate the distributed innovation-related procurement responsibilities (top management, procurement department, use department) and thereby achieve internal commissioning; (iii) receiving external/political backing; and (iv) dealing with innovation-related risks (e.g. need-clarification failure, untimely stop). In their role as **procurement operators**, they require capacities at the department level for (v) executing market analysis (is there a need for innovation, and 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 and awarding failures). Enterprises and especially SMEs in their role as **suppliers** require capacities for better understanding the public entities' needs (e.g. how to engage, used procurement procedures and approaches). Politicians in their roles as **regulators** and **financiers** require capacities for understanding specific as well as the wider benefits of innovation-related procurement (see above). Furthermore, stakeholders, such as procurement agencies, legal/technical advisors, lobbies, etc., require capacities in their role as **professional supporters**. All together, they require capacities in effectively communicating with each other to better deal with risks and eventually achieve optimal innovation procurement results.

- *"Maybe we should rethink our approach. Financial incentives and capacity building must go together." MLE participant*

Capacity-building service provision must be well embedded in the national/regional context. Therefore, it is important to include the various stakeholders in the establishment and/or further development of services to fully address their specific requirements.

In all countries, at least some services are offered by public institutions, which are accompanied by services from the private sector. 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).[9] To date, there is no evidence that one form is superior to the other. Instead, service providers must be well embedded in the specific national/regional context. Countries which have established (or will establish) a specific centre for innovation-related procurement are Austria, Estonia, Germany, Greece, Latvia, Netherlands, Finland, Ireland, Belgium and Sweden. The inclusion of services for innovation-related procurement in the portfolio of general innovation and technology ministries or agencies seems to be adequate in France, Lithuania, Norway, Portugal and Spain. Often, both approaches are combined (i.e. in Austria, Estonia, Netherlands and Sweden).[10]

A broad range of services is offered, the most frequent being those with a low-threshold, such as networking, information provision and awareness raising which target public procurers as well as suppliers and other stakeholders. Less frequent are those with a higher threshold, such as specific training, well developed guides and toolboxes and individual consulting, which primarily target public procurers. Nations/regions which start to promote innovation-related procurement mainly use networking, information provision and awareness raising. More experienced nations/regions go further and offer specified and detailed services while continuing to offer low-threshold services.

Since many service provisions have only recently been established, the provision of adequately tailored services is 'work in progress' and benefits from the ongoing co-learning of service providers and all the various stakeholders as service-recipients. The MLE revealed evidence that public capacity-building initiatives currently focus on procedural support and try to engage in strategic support, with the latter apparently somewhat challenging (although nevertheless targeted). The complementary legal and technical support is mainly offered by specialised private service providers, which is generally considered to be satisfactory.

Highlight 3: Examples of good practice in capacity-building initiatives

In the ***Netherlands,*** public service and support is executed by PIANOo, with the Innovation Procurement expert programme. There is no institutionalised network on service and support and advisory centres but, in addition to PIANOo, 'Europa Decentraal' provides information on the Procurement Directives and the state aid framework. Their activities are primarily focused on local governments. Beside these organisations, there is a broad range of services in the Netherlands – also addressing innovation procurement – offered

[9] Several countries have established competence centres for innovation-related procurement. These centres offer a broad range of services: training, networking, information and awareness, guides, methodology, consulting and online services. Besides competence centres, these services may also be provided by (innovation) agencies. This may depend on national/regional requirements, institutional settings and infrastructures.

[10] The European Commission has set up a European network of national competence centres on innovation procurement:
https://www.innovation-procurement.org/projects/procure2innovate/

by private firms (such as law firms, consulting firms and industry training). The decentralised nature of this network approach, whereby not all activities are initiated by one organisation individually but jointly with other organisations that agree on the importance of innovation procurement, adequately reflects the Dutch requirements and infrastructures at the national and regional level. For example, central departments, local and regional governments and other (semi)public organisations in the Netherlands have a fairly high level of autonomy in the execution of their responsibilities. The online toolbox (www.innovatiekoffer.nl) providing all practical information on innovation procurement is another Dutch highlight.

In ***Austria***, the approach is somewhat different by maintaining a comprehensive innovation-procurement service network which is institutionalised (i.e. network agreement and council). It is built around the Innovation Procurement (IÖB) Service Centre as an overall support facility (at the Federal Procurement Agency BBG), with complementary service partners, each specialised either in: (i) different parts of the innovation cycle (pre-commercial at the Austrian Research Promotion Agency FFG, commercial at the Austrian Federal Promotional Bank AWS); (ii) sectoral (mobility at the Austrian Association for Transport GSV, energy at the Austrian Energy Agency AEA, buildings at the Austrian Federal Real Estate Company BIG); or (iii) functional (exchanges via the Procurement Expert Conference of the Provinces and City of Vienna, and via the Austrian Economic Chamber WKO and Federation of Austrian Industries IV). The service network follows the empowerment principle, the specific Austrian approach. Online brokerage (www.innovationspartnerschaft.at) whereby public authorities present their specific needs and problems (challenges) and firms post their innovative solutions, making them visible for all (open innovation) is another Austrian highlight.

3.3 Financial mechanisms

There is a clear rationale for financing innovation-related procurement in the context of the overall policy framework, be it at a national or EU level. Financing should support both financing measures for procurement and enabling activities, such as capacity building and assistance with implementation. It should also support both the demand and supply-side of the process, ideally in an integrated manner.[11]

Financing is necessary to support the implementation of the overall policy framework for innovation-related procurement. It is a means to an end, not an end in itself.

[11] For the full details on the central role played by financial mechanisms in innovation-related procurement and the initiatives undertaken in the participating Member States, see: https://rio.jrc.ec.europa.eu/en/library/mle-innovation-procurement-financial-mechanisms-support-innovation-enhancing-procurement-and

Financial support mechanisms are an important tool to overcome the inherent failure of the public-sector market to pull its weight in terms of driving and supporting innovation.

Financing will continue to be necessary, both to overcome first-mover disadvantages and redress the risk-reward ratio for the public procurer and to address the capacity gap on the part of public customers and suppliers. Finance should therefore encompass both co-financing and enabling aspects and work jointly to fulfil the ultimate aim of innovation-related procurement, namely securing the best possible public services and driving an innovative growing economy. Co-financing for the procurement of goods and services is a cornerstone of financing for innovation-related procurement, being a good mechanism to both incentivise and mitigate risk.

- *"Financing is needed to enable public procurement to fulfil its potential to drive innovation in public services and in the wider economy." MLE participant*

This means that some public procurement spend needs to be specifically directed to stimulate and support demand-led innovation, and that some of the R&D budget is directed to respond to unmet public customer (and indeed societal) needs.

Getting the right financing mechanisms in place will be essential if the potential of innovation-related procurement is to be realised; thus, finance is an important part of the policy framework.

Financing mechanisms are needed to offset risks for both customers and suppliers. They should also be integrated, cover the full innovation and tendering spectrum, and incorporate competence support.

Implementation of the financing mechanisms should be designed to recognise the different levels of risk in different sectors and to ensure that the provision of finance does not inadvertently increase the risks for the beneficiary.

- *"There is a first-mover disadvantage which needs to be addressed directly. Co-financing mechanisms are a way to overcome this, particularly where the perceived risk outweighs the perceived benefits." MLE participant*

A 'top-to-toe' (i.e. comprehensive, from head to foot) approach to financing, from the identification of unmet needs, through development and testing, and on to successful commercialisation and purchasing, and achieving synergy and continuity in financing mechanisms can bring real added value. A financial mechanism supporting the entire innovation process, incorporating support for both suppliers and customers, and including competence support, would allow financing to be channelled accurately and, potentially, more cost effectively.

This would address a potential issue identified for the PCP type of financing – namely, the difficulty in following through to commercialisation, and ultimately, to purchasing a solution. Similarly, one limitation identified in enabling actions concerned the difficulty of maintaining momentum and continuity, without a

means to follow on from skills development through to co-financing and competence support.

Taking ideas through to commercialisation involves both suppliers and customers. This type of mechanism has the potential to create the necessary conditions for such a scheme to take place.

The policy framework needs to enable financing mechanisms to continue to evolve, to take into account learning and practical experience.

Flexible and open-in-scope multi-year financing programmes would enable procurement cycles to be aligned with financing.

Multi-year programmes for European and national financing are important for building common purpose and commitment. They provide a welcome roadmap to enable contracting authorities and innovators to select those programmes that are aligned with their own budgets, resourcing and priorities. Multi-year programmes go some way to addressing the lack of policy continuity that damages long-term joint activities such as innovation.

- *"Multi-year programmes are important for building common purpose and commitment and would provide a welcome roadmap to enable contracting authorities and innovators to align financing with their own budgets, resourcing and priorities." MLE participant*

The way in which financing mechanisms are designed and structured must be carefully considered and allowed to evolve based on practical experience.

The programmes should be broadly based and proposals evaluated against their impact on societal challenges. Programmes should avoid over-defining the processes to be followed, technologies to be adopted, and unmet needs to be addressed.

- *"It is not all about the level of financing; flexibility and a low administrative burden are important." MLE participant*

Financing mechanisms must be designed with the needs of the beneficiaries in mind. To this end, they should be flexible to allow procurers to establish new approaches to deliver their innovation requirements, and open in scope to enable procurers to align their needs with opportunities for financing, and to distinguish financing mechanisms from innovation-related procurement methodologies.

Providing financing is, on its own, not enough; as well as building capacity, the policy and supporting framework has to create a market for the uptake of financing.

Innovation has to be necessary for public customers, and finance has to be aligned with policy; consequently, public organisations must have in place policies and procedures that are not only open to innovation, but ambitions that actively *require* innovation, if financing is to be useful. Financing must be aligned with ambitious public policy objectives.

- *"Without the incentive and the need, the will to innovate does not exist." MLE participant*

Raising awareness of innovation-related procurement and inciting action is necessary to encourage the adoption of innovation-related procurement and create a market for financing. Some countries are putting in place specific measures. For example, the Netherlands has set a target of 2.5 % to be spent on innovation-related procurement, while in France, SMEs are expected to reach 2 % of innovation-related procurement by 2020. In turn, in Spain, funding for innovation-related procurement comes from the national budget as well as from the Structural Funds (e.g. European Regional Development Fund – ERDF, or European Structural and Investment Funds – ESIF).

Public organisations must have in place policies and procedures that are not only open to innovation, but ambitions that actively require innovation. More could be done to encourage the use of European Structural and Investment Funds to stimulate and co-finance innovation procurements.

Arguably the largest source of 'finance' for innovation-related procurement is the public procurement budget itself: as mentioned earlier, public procurement accounts for 15 % to 20 % of GDP in many EU Member States and for more than EUR 2 trillion annually across the EU as a whole. In effect, all financing mechanisms exist in one way or other to mobilise this spend for innovation.

However, money will not persuade procurers to act contrary to the policy framework or organisational directives in which they operate; nor should it. Finance has to be aligned with policy; consequently, public organisations must have in place policies and procedures that are not only open to innovation, but ambitions that actively require innovation, in order for direct financing to mobilise the procurement budget for innovation.

Moreover, the implementation of multi-annual programmes co-financed by the European Structural and Investment Funds (ESI Funds)[12] for the 2014-2020 programming period will lead to more than EUR 450 billion in investment during this period, again with considerable scope for stimulating and supporting innovation. The practice of mobilising the ESIF for innovation procurement, as is being done in Spain, Lithuania and Estonia, for example, could be more widely adopted.

[12] The European Structural and Investment Funds or ESI Funds is the common designation for five European funds: the European Regional Development Fund (ERDF), the European Social Fund (ESF), the Cohesion Fund (CF), the European Agricultural Fund for Rural Development (EAFRD) and the European Maritime and Fisheries Fund (EMFF), which operate under a common framework (i.e. the CPR) as well as under fund-specific regulations.

Case study:

Mobilisation of European Structural and Investment Funds for innovation procurement in Spain

In **Spain**, the main success factor for implementing and developing Spanish policies fostering EIP and PCP has been the allocation of the Structural Funds via the Technological Fund of the ERDF-ESIF. This funding is further supplemented by national sources such as CDTI (Centre for the Development of Industrial Technology) and the Ministry of Economy, Industry and Competitiveness (MEIC).

For example, the Spanish Programme INNOCOMPRA-FID will provide direct financing of EUR 300 million for the EIP and PPI programmes over the period 2014-2020 via the ESIF's ERDF Technological Fund. One such programme is 'FID SALUD' which aims to systematically improve the public health services portfolio and operates annual calls for EIP/PPI proposals.

The aim is for a national programme, INNODEMANDA, to offer support to the supply side, to operate in synergy with INNOCOMPRA-FID to provide a complete financing package for demand and supply sides.

More information:

http://www.idi.mineco.gob.es/portal/site/MICINN/menuitem.8ce192e94ba842bea3bc811001432ea0/?vgnextoid=fa85b7fe276cd510VgnVCM1000001d04140aRCRD

3.4 Monitoring, evaluation and impact assessment

Two levels must be distinguished here which arise from different needs:

- What is the share of innovation-related procurement within all procurement?
- Are public support measures effective and efficient?

The first need is a rather practical one – basically, systematic information at regional, national and EU level about innovation-related procurement procedures is non-existent, but would be needed to provide evidence to policymakers and politicians in order to design better policies. Thus, the **need** to have monitoring **data** concerning procurement procedures, the value of the tenders, etc. has been formulated.

The second need concerns the fact that public programmes enhancing innovation procurement, should be evaluated. The first reason for so doing concerns public accounting principles – public finances should be used efficiently. The second reason for having an evaluation is learning and the idea to design better policies. These policies can include, for example, setting up specific competence centres designated to provide capacity-building and training activities for relevant procurement stakeholders, but also funding programmes which finance individual innovation-procurement projects. At this level, once again we can distinguish **monitoring** and **evaluation**. For instance, monitoring at this project level

concerns descriptive statistics about participants or the value of the project, while an ex-post evaluation would analyse the expenditure and outcomes, for example.

Evaluation provides policymakers with a basis for evidence-based, sound policies and programme managers to adapt to existing measures to achieve its goals effectively. Evaluation is much more than simply justifying an intervention. It **is about learning.**[13] As an *ex-ante* impact assessment, an accompanying process evaluation (i.e. monitoring) or an *ex-post* evaluation, the evaluation cycle can provide different insights. In the case of innovation-related procurement measures, MLE participants considered that monitoring is a much more pragmatic and sensible way to policy learning than *ex-post* and *ex-ante* evaluations. However, some participating countries also indicated they find it difficult to tackle this monitoring.

- *"If we are to evaluate innovation-related procurement, we need to focus more on the procurement process itself, and not only on its outcome." MLE participant*

In spite of the new reporting obligations for Member States under the procurement regulations adopted in 2014 (Articles 83 and 85 in the 2014/24/EU Directive), measuring the impact of innovation-related procurement still appears to be an area that countries pay little attention to.

- *"Evaluation implies more work, more cost and the conclusions of an evaluation (should) lead to change – usually, the public administration is very change-averse." MLE participant*

Most countries have not undertaken any initiatives in relation to the evaluation of innovation-related procurement. At this stage, monitoring can be a more pragmatic and sensible means to policy learning than ex-post and ex-ante evaluations.

One of the main reasons why countries do not evaluate innovation-related procurement is that, by and large, innovation procurement initiatives are not initiated as a programme but rather as individual projects. In turn, the lack of a shared understanding of what can and what cannot be regarded as an innovation procurement practice also explains this lack of evaluation.

As to the latter, there is an example from Estonia whereby procurers are asked four questions during the tendering process via the dominating e-procurement platform, in order to monitor procurement projects. This was highlighted as a helpful and inspiring example to identify those procurement cases that can be regarded as 'potentially innovative', and thus to separate/filter them from regular

[13] For a full discussion on the relevance of policy evaluation and the details of the framework for the monitoring, evaluation and impact assessment of innovation-related procurement, see: https://rio.jrc.ec.europa.eu/en/library/mle-innovation-procurement-monitoring-evaluation-and-impact-assessment-innovation-related

procurement. It was clarified that this information was collected when the tender was launched, so it measured intent rather than outputs.

Highlight 4: Identification of innovation-related procurement cases in Estonia

In Estonia, innovation-related procurement projects are identified via four questions in the e-procurement platform:

- Did you acquire research and development activity in the scope of this procurement?
- Was the object of the procurement novel for the contracting authority as well as for the whole market in general?
- Was the solution procured in the scope of this procurement novel for the contracting authority?
- Did the procured solution make the work processes at the facilities of the contracting authority more effective?

As stated earlier (see section 3.1), only a very small proportion of all public procurement in the EU can be said to enhance innovations, even though there are currently no official statistics on this. So far, the only measure being used by most MLE participating countries to measure their innovation-related procurement engagement is the share of innovation-related procurement in total public procurement spending. At the European Commission level, work is under way on introducing relevant CPV codes (common procurement vocabulary) for procurement procedures. In conjunction with other available data (e.g. from the Tenders Electronic Daily - TED), this may facilitate the generation of statistics on innovation-related procurement, such as volume, type or country.

However, if we are to evaluate the results and impacts achieved through innovation-related procurement projects, the procurement cases identified must also be characterised in terms of the process followed in their implementation, difficulties and barriers met, results and impacts achieved, etc. The qualitative analysis of the implementation is likely to provide instructive learning.

❖ *"When there is an absence of systematic (and comparable) data, case studies can provide a very effective means to identify the data required. When a sufficient number of case studies have been conducted, then a preliminary framework for defining indicators can be defined." MLE participant*

Among the participating Member States, only Germany, Austria and Sweden indicated that the innovation-related procurement initiatives undertaken by their respective procurement agencies and/or ministries are followed up and evaluated, quantitatively in some cases and qualitatively in others. Approaches used include surveys, external independent reviews, combined interim and *ex-post* evaluations, or one-off project-related evaluations. Accordingly, other countries could learn from their experiences.

Participants considered that in order to move forward, Member States should focus on the project level as a preliminary stage, defining key indicators that

could help monitor this implementation level. This is the level at which more information can be obtained in the short run. Then, at different stages, different levels (e.g. programme, policy) may be added, once participants have observed through experience what has and what has not worked in the monitoring of their innovation-related projects.

- *"If we cannot assess the results and impacts of innovation-related procurement, how can we 'sell' it? You convince others of the potential of a certain policy through cases and examples." MLE participant*

Specific capabilities and resources are required for the evaluation of innovation-related procurement, including:

- Having a clear political mandate to conduct evaluations on a systematic basis
- Specific training on innovation-related procurement
- Availability of staff (i.e. experts) fully devoted to policy-evaluation activities
- Availability of information systems (e.g. e-procurement platform) with all project records
- Large-scale data handling and analytics: acquisition, validation, management, use and analysis of data on a systematic basis.

4 POLICY RECOMMENDATIONS

If innovation-related procurement is to be rolled out more extensively in the Member States, then **how to** pursue this must also be discussed. Drawing on the lessons learned, the good practices identified and the discussions held during the MLE, this section provides a set of key messages to be considered by those countries willing to improve the **design, implementation and evaluation of policies for innovation-related procurement**.

The main areas which have been identified and which call for necessary policy action are:

- **Ensure the necessary political will and support.**

One of the most important policy implications of the MLE is that the political dimension is essential for innovation-related procurement to be rolled out to a greater extent. Strong political leadership and backing is required to push innovation-related procurement, which goes beyond political election cycles. In addition, politicians and policymakers need to safeguard lower administrative levels engaged in innovation-related procurement. They may fear a professional risk which may be leading to a risk-averse culture in public administration.[14]

❖ *"To increase the political will and the commitment for the adoption of innovation-related procurement, find your core players and allies, bring them on-board, and define consensus strategies, programmes and goals." MLE participant*

- **Formulate a long-term strategy on innovation-related public procurement that guides future action. This strategy needs to be formulated in partnership with the relevant stakeholders.**

Innovation-related procurement in the public sector requires a long-term strategic policy framework that values innovation, both for its contribution to improving the quality, efficiency and cost effectiveness of public services, and for the impact it may have on the wider economy. Capacity for the development of an innovation-related procurement strategy/plan is thus crucial for coordinating the distributed innovation-related procurement responsibilities, and providing a convincing pro-innovation-procurement argumentation based on calculations. Considering approaches such as life cycle cost (LCC), total cost of ownership (TCO) and a focus by procurers on the 'best price-quality ratio' rather than the 'lowest price', may allow somewhat for more risk-taking.

[14] 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) or 'soft law' (monitoring and reporting requirements); and (iv) the mandatory inclusion of innovation-related procurement within public entities' overall strategy or the mandatory drafting of a strategy at the organisational level.

- *"A strategic framework and the political backing is important. But it is also needed to have a network including cluster associations, chambers of commerce, and other societal stakeholders, to bring innovation-related procurement forward in various other related strategies (e.g. sectoral strategies, environmental protection). A high degree of coordination is needed, not only among public organisations engaged in innovation-related procurement, but also with other stakeholders in the system." MLE participant*

With regard to defining a long-term strategy for enhancing innovation-related procurement, the dialogue between elected politicians, policymakers, top management (administrators) of procuring agencies, accountants and administrators who are actually carrying out the procurements, and potential suppliers and other interest groups should be fostered and supported.

- *"It is important to follow a systemic (holistic) approach to strategy formulation: from the high political level up to the municipality level. Service and support centres can have a central role in providing these linkages." MLE participant*

Politicians may have a will to boost innovation, but the risk of implementation (loose effectiveness) is highly due to the fact that it falls under the responsibility of the administrative layer, which may be more concerned with following rules than boosting innovation. Hence, it is important that actors from all levels are concerned and well-informed about the characteristics of innovation-related procurement.

- **Alleviate the risks associated with innovation-related procurement.**

Risk and risk-aversion associated with innovation-related procurement is an important obstacle that should be managed. The greater risks associated with innovation-related procurement include leadership/political risks, legal risks, financial risks and management (process) risk, and affect procuring organisations as well as employees, reducing their propensity to carry out innovation-related procurement. As a result, procuring organisations often prefer to copy and paste from the previous calls for tender to avoid running into unknown risks.

- *"It is important to pull demand in different ways, finding and defining joint needs, carrying out early market dialogues, and also considering municipalities and lower sub-national territorial levels, creating buyer groups, etc." MLE participant*

In order to alleviate these risks, public organisations may create buyers' groups which support the procurement of the (common) needs of a group of customers. These groups facilitate the joint statements of demand and the creation of procurement agreements, which bring customers together around a common need that is communicated to the market, as well as introducing other interested parties to market-engagement dialogues.

- *"It is important to run the market consultation as soon as possible so as to give room to the potential suppliers to prepare their proposals and give them room to get in touch with the corresponding agency/ministry, so they can*

adapt as much as possible to the conditions of the call, and get familiar with the problem." MLE participant

It might also be the case that one contracting authority takes an innovation-related procurement initiative with a particular purpose (e.g. environmental protection in a city). If the project subsequently gives positive results – namely, if the externalities of the former initiative are positive – then other contracting authorities from the same country (e.g. other cities) can benefit from the results achieved in the former initiative. In this sense, coordination among contracting authorities should be fostered in order to split up the initiatives each is going to tackle. In this way, everyone assumes certain risks, although the results are disseminated among the group so that everyone benefits from these outputs. In all cases, the development of early market consultations helps to define the call, communication of the needs to be satisfied to potential suppliers, and the subsequent implementation of the solution developed.

- **Review the different types of financing (and co-financing) mechanisms and assess their potential to bring added value to the procurement process.**

Financing should be provided to support innovation-related procurement to re-balance the risk-reward ratio for public procurers and their suppliers back to that enjoyed by the private sector. This recognises that public procurers and their suppliers have the same risks with innovation as the private sector but fewer rewards for undertaking such risks. Implementation of the financing mechanisms must be designed to recognise the different levels of risk in different sectors and to ensure that the provision of finance does not inadvertently increase the risks in the procurement.

Targets and inducement measures for procuring organisations may help to reorient the EUR 2 trillion spent annually at the EU level on regular spending on innovation. Another potential way to enhance innovation-related procurement is the governance system related to the internal allocation of public funds. This addresses the conditions of budgets allocated from national/regional/local budgets to public organisations and how they carry out their mission.

The different types of financing (and co-financing) mechanisms available need to be reviewed to determine how they can act in synergy across the innovation spectrum from suppliers to customers, and to bring real added value to the procurement process. Achieving this integration and synergy may include enabling and supporting finance for suppliers and customers as well as direct finance for R&D, demonstrations and the procurement of first batches and pilots. Also, mechanisms that support those procurers who procure together should be developed and supported, especially where the value of the procurements is partly in common public goods such as the environment or societal benefits.

The financing programmes should be multi-year and more flexible in their operation to fit in with the real procurement needs of procuring organisations and to enable innovation to play a part in such procurements. Long-term (multi-year) programmes to achieve the strategy must be well aligned with the policy in respect of budgets, resources and priorities.

- **Use public procurement as a mission-oriented innovation policy instrument.**

The ultimate goal of innovation-related procurement is not primarily to support or stimulate the development of innovations per se, but rather to solve problems (i.e. satisfy needs), both present and future, using public procurement as a mission-oriented innovation policy instrument to solve global challenges (see the United Nations Sustainable Development Goals). Identifying the needs/problems is crucial for innovation-related procurement; they must be the point of departure for every procurement initiative. In many cases, this is the most difficult aspect. Hence, a procurement initiative must never be started by specifying the product to be purchased.

❖ *"If we are to raise awareness to procurers, it is better not to use the word innovation or they will run away. It is more effective to talk about new products, new solutions to their problems, etc." MLE participant*

Need identification is one of the main difficulties for the deployment of innovation-related procurement. In this regard, service and competence centres for innovation procurement can be of great help in developing competence-building activities and methodologies for this particular issue.

❖ *"The service centres are crucial when providing assistance to identify the needs and define the requirements in the call." MLE participant*

- **Use functional specifications to define needs and problems.**

A potential solution for defining the needs/problems in a wider manner is provided by functional requirements. Functional specifications are a means to make innovation-related procurement work. The most important task in preparing functional specifications is to identify the problems to be solved and the needs to be satisfied by the procurement. It is a question of specifying the goals (problems and needs) and their translation and transformation into functional requirements. Within Horizon 2020 and FP7, the use of functional specifications has already been identified, for example in PCP calls for tender.

❖ *"Procurers do not know how to write specifications, in terms of functional needs, so that acts as a barrier for the translation from regular procurement to innovation-related procurement. Procurers need to know what they want and this takes time and cooperation between departments. External stakeholders should be asked for ideas on how to translate needs into requirements." MLE participant*

The definition of functional requirements is a demanding task which requires practice and training. It also demands the participation of other stakeholders beyond procuring units (i.e. help from service and competence centres, legal departments). Thinking in terms of what is needed (performance and functions to be met) rather than providing for how such a need can be met (product characteristics) requires a change in mindset when the calls are being specified. Another way to mitigate the problem of a lack of internal expertise is through early market consultations.

- **Continuously provide capacity-building support, not only for internal users but also for end-users.**

The public sector, including competence (service) centres, innovation agencies and other public entities, in their role as 'need owners' require capacities for the participative clarification of unmet needs. This demand for capacities includes both internal users as well as end-users outside the public entity, such as citizens groups, who should also be part of the need identification, and should be engaged in early market dialogues, together with other stakeholders.

To contribute to this competence building, it is important that public stakeholders cooperate with other external actors (public or private), such as the International Council for Local Environmental Initiatives (ICLEI), for example, which may have knowledge on how to develop these required competences. In this respect, thanks to their experience as facilitators in the process, service centres may prove very effective.

❖ *"It is much easier to demand innovations when the procurement process is deployed in an innovative way (e.g. through e-procurement platforms). However, in most cases this is not the case, and hence, efforts should be oriented to remove the barriers to participation in procurement calls (mainly administrative) so as to avoid putting more burden to those that are already intrinsic to procurement regulations." MLE participant*

The ability to undertake procurements in an innovative way, so as not to put burden on suppliers and procurers beyond those intrinsic to the procurement regulations, is an important aspect of this capacity-building support.

- **Consider evaluation and monitoring as a tool to stimulate policy learning.**

To date, measuring innovation-related procurement in the EU is almost completely lacking. Measurement requires the development of a conceptual structure that identifies different kinds of innovation-related public procurement – as well as being an important issue, this is also a difficult one.

Given the current early stage of monitoring and evaluation culture in innovation-related procurement in the EU, and due to the lack of (comparable and systematic) indicators on innovation-related procurement, it seems sensible to move forward with the collection and analysis of case studies at the project level.

❖ *"We still need more evidence. It would be important to create a central catalogue of cases/projects/products that have been produced as a result of an innovation-related procurement intervention, and with the contracting authorities involved in them. A supranational organisation could take the lead to provide a catalogue of case studies that stakeholders interested in implementing innovation-related procurement can look at and learn from." MLE participant*

There is potential to add value to the procurement policy by monitoring its execution. This continuous evaluation enables it to stay on track while making the inevitable adjustments in response to learning what innovation implies.

- *"Is there a need for a European Procurement Agency as in Canada, South Korea or the United States to commercialise the innovative solutions, results from Horizon 2020 or the next research and innovation programme in Europe?" MLE participant*

Reasons why innovation-related procurement policies are not being measured include: (i) a definition problem as to what is considered and what is not considered as innovation-related procurement; (ii) there is no actual 'policy' to measure because innovation-related initiatives were merely conducted in one-off projects; (iii) it is novel as a policy instrument and countries lack prior experience to measure it in a meaningful way; (iv) difficulties associated with the acquisition of data of sufficient quality; (v) the financial costs of an evaluation, as well as the amount of work required to carry out one is relatively high; and (vi) a significant lack of awareness among procurers as to the need for evaluation.

Overcoming many of these barriers is challenging as they relate either to structural or to cultural aspects. For example, it is strongly recommended to have a clear political mandate to monitor innovation procurement on a systematic basis. In this respect, countries could consider introducing certain questions in the research and development or innovation surveys they are already committed to. Countries could also undertake capacity-building activities as regards training on the measurement of innovation-related procurement through the acquisition, validation, management, use and analysis of large-scale data on a systematic basis. Here, the availability of centralised or coordinated e-procurement platforms could be very useful.

- *"We don't have to reinvent anything, but just learn from our peers. We are stronger together!" MLE participant*

Online platforms enable public procurers to advertise their needs and the associated calls, and to engage in early dialogue between companies and procurers, which are helpful in defining the final terms of the tender. Countries could also create networks of experts to continue mutual learning and improving the domestic evaluation exercises and policies thereof.

- *"We just started to 'scratch' this topic, and there are still different levels and layers that need to be incorporated in the discussion (e.g. innovation supply chains, how to write specifications, study of types of contracts, political level, daily life operations). There might be different processes and ideas being implemented, each with their own benefits and drawbacks, which are to be explored." MLE participant*

Finally, participants in this MLE on innovation-related procurement strongly encourage the European Commission to consider a second round on these MLE and other matters for 2019 as there is great potential for continuous improvement and learning.

5 BACKGROUND TO THIS MLE

The ultimate purpose of this MLE on innovation-related procurement was to set up an EU knowledge-sharing service, encouraging mutual learning, identifying good practices and providing advice in the field concerning this demand-side policy instrument.

This report summarises the main observations drawn from the exercise and makes a number of policy recommendations, offering policy advice and guidance through the compilation of lessons learned during the MLE. It builds on four other reports produced in the course of the MLE and published in parallel. These four reports present the evidence and analysis underlying this one and focus on the topics presented in section 3. [15]

Report A: Developing a strategic framework for innovation-enhancing procurement (IEP) and pre-commercial procurement (PCP)

The strategic framework discussed the four kinds of procurement considered in this MLE: (1) direct innovation procurement; (2) catalytic innovation procurement; (3) functional regular procurement; and (4) pre-commercial procurement. It also detailed the characteristics of each, the main obstacles to their implementation, and possible ways of overcoming them. In particular, emphasis was placed on the potential of using functional procurement as a way to enhance innovation.

Report B: Capacity building for IEP and PCP

This topic considered why there is a lack of motivation and capacity when implementing innovation-related procurement initiatives, detailed the capacities needed for successful innovation-related procurement, and provided evidence of some of the most relevant capacity-building initiatives currently being implemented in the participating Member States.

Report C: Financial mechanisms in support of IEP and PCP

This thematic paper covered the context for financing IEP and PCP, the different types of financing available at the European and national levels, and the rationale for financing IEP and PCP on both the demand and supply side. It discussed the key financing issues such as its features and synergy with other provisions. It also distinguished the different actors involved and their roles, providing evidence of the types of action being financed in the form of national reports.

Report D: Monitoring, evaluation and impact assessment of IEP and PCP

This provided a conceptual framework for measuring and evaluating IEP and PCP, defining the key concepts and dimensions that must be considered by an evaluation framework. The report also specified the indicators which, according to the experience of participating Member States, could best help to measure the key dimensions considered in the previous framework.

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[15] All reports are available at: https://rio.jrc.ec.europa.eu/en/policy-support-facility/mle-innovation-related-public-procurement

5.1 Participating countries

The involvement and commitment of Member States has been crucial in the MLE as the process has been driven by the Member States themselves and the results (i.e. learning) and exchange of practices have also been oriented towards the practice of innovation-related procurement in the participating countries. The MLE attracted strong interest and 15 countries (Austria, Belgium - Brussels Region, Estonia, France, Germany, Greece, Latvia, Lithuania, Netherlands, Norway, Portugal, Slovenia, Spain, Sweden and Turkey). Two globally acting organisations, the BID and OECD, were also partially involved.

5.2 Methodology

The overall methodology was defined in the modus operandi which acknowledges that an MLE is a Member-State-driven and policy-challenge-based activity to promote mutual learning between the participating countries. Implicit within this is the fact that the methodology should remain flexible from milestone to milestone to maximise added value and policy learning. The distribution of work involved the following parties:

- The participating countries, which were required to appoint at least one participant with adequate experience in the policy challenge to contribute effectively to the MLE;

- A group of four independent experts who played a facilitating and supporting role;

- Representatives from the European Commission's Directorate-General for Research and Innovation, Unit A4 (Analysis and monitoring of national research and innovation policies);

- The Policy Support Facility contractor, who provided operational and logistics support for the exercise.

The MLE adopted a hands-on approach following a learning-by-doing rationale. Corresponding thematic reports were produced for each of the four topics discussed above. In each case, the independent experts prepared a background/challenge paper as the main input for discussion. This was circulated to the participating Member States before the country seminars on each topic, so that comments and feedback could be provided. Besides facilitating discussion and exchange of opinions, these country seminars also enabled the expert team to gather data and information about each of the four topics. Subsequently, final thematic papers on each topic were delivered by the expert team presenting the experience and lessons identified for each topic.

5.3 Country seminars

The MLE was implemented through an iterative series of country seminars:

- Kick-off meeting: presentation of the general overview of the MLE process and its structure (Brussels, 19 January 2017).
- Country seminar on topic A: strategic framework for innovation-related procurement (The Hague, 23 March 2017).
- Country seminar on topic B: capacity building for innovation-related procurement (Frankfurt, 31 May and 1 June 2017).
- Country seminar on topic C: financial mechanisms for innovation-related procurement (Madrid, 28 and 29 November 2017).
- Country seminar on topic D: monitoring and evaluation of innovation-related procurement (Vienna, 20 and 21 September 2017).
- Final MLE meeting: presentation of the main results and conclusions of the MLE (Brussels, 13 February 2018).

These thematic meetings were held over one to two days. All thematic reports for the MLE as well as other MLE material (presentations, challenge papers, agendas) are available on the PSF portal.[16]

[16] All reports and documentation used in each of the country seminars are available at: https://rio.jrc.ec.europa.eu/en/policy-support-facility/mle-innovation-related-public-procurement

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This is the final report of the Mutual Learning Exercise (MLE) on 'Innovation Procurement' which was carried out from January 2017 to May 2018 by 13 EU Member States and two associate countries.

Through public procurement, the public sector is a dominant first-buyer of products and services. Several EU Member States thus use public procurement procedures to accelerate innovation. Yet, for many procuring entities, this aim is not a core priority and thus despite its potential, innovation-related procurement is not yet fully used.

The MLE on Innovation Procurement explored several topics that matter for the further uptake and wider promotion of innovation-related procurement. This concerns the need for a strategic framework at a high political level which not only provides the political backing but also enables the establishment of facilitating entities. The crucial function of capacity building in procuring organisations was highlighted, and experiences from the participating countries exchanged. Several examples were discussed on how innovation-related procurement can be accelerated through available funding opportunities. Finally, a gap between monitoring and evaluation needs on the one hand and the absence of good monitoring practices on the other hand signaled the need for actions to improve the situation.

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