«The Strategic Use of Innovation Procurement in the Digital Economy»

Giovanna Galasso
Director in PwC, Government and Public sector

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07/09/2017
Study on the strategic use of innovation procurement in digital economy

Goals, Timeline and expected Results

Measurement Framework (morning session)

The Policy Framework and the Measurement Methodology

Measurement Framework (afternoon session)

Approach, Methodology and Indicators, Data source and Keywords
**Objectives & Scope**

- To develop a **systematic measuring and monitoring approach** of the progress across 30+ EU countries in the implementation of measures to mainstream innovation procurement

- To gather qualitative and quantitative evidence across MS on the **implementation progress**, good practice cases and remaining barriers to innovation

- To identify disparities, commonalities and trends from the data gathered

- To propose a methodology and guidelines for decision makers to systematically collect national data and integrate results into the relevant European statistics, scoreboards and benchmarking exercises
**The Study Overview**

**Task 1**
- Definition of a shared methodology
  - deliverable
  - First External Workshop
  - Inception Report

**Task 2**
- Data gathering & validation from Member States
  - deliverable
  - Interim Study Report
  - 2nd Interim Study Report

**Task 3**
- Analysis and reporting of findings
  - deliverable
  - Data Analysis Synthesis

**Task 4**
- Guidelines to policymakers to collect/use information
  - deliverables
  - Final Report
  - Final workshop

**Year 1 (May 2017 – May 2018)**
- Stakeholders continuous engagement
- Consolidation and Validation
- Refinement and results

**Year 2 (May 2018 – May 2019)**
Analysis of existing methodologies and of MS innovation procurement policy framework and definition of a shared methodological approach for measuring and monitoring the implementation progress of policy measures to mainstream innovation procurement.

Data gathering across 30 countries and validation of country data-sets of all countries through key stakeholders interviews.

Consolidation of countries data sets and reports; identification and analysis of commonalities and key disparities among the countries analysed.

Methodology and guidelines for decision-makers to systematically collect and integrate in the future data on innovation procurement. Study’s Final Report and linked publishable article.
The definition of a shared methodology – Task 1

**WHAT**

Analysis of existing methodologies and of **innovation procurement policy framework**

**HOW**

- Desk Research
  - Interviews to key stakeholders for validation

**Definition of a **shared methodological approach** for measuring and monitoring the implementation progress of policy measures to mainstream innovation procurement**

**EVENTS**

- First External Workshop
- Interim Study Report

**Your Contribution is important!**

1. To learn on national measurement frameworks
2. To enrich and fine tune the study methodology with your feedback
**Data gathering & validation from Member States – Task 2**

**WHAT**
- Qualitative and quantitative data gathering across 30 countries and validation of country data-sets
  - Analysis of tendering databases (public and private);
  - Data mining and data analytics through automated system;
  - Validation through stakeholders interviews/survey;

**HOW**
- Preliminary evaluations based on validated countries data-sets
- Presentation of preliminary findings
- Interim Reports

**Your Contribution is important!**

1. Facilitate access to national data-sets and tendering portals
2. Share information on your country
3. Participate to the validation process of country data-sets
Analysis and reporting of findings – Task 3

WHAT

Identification of key disparities, commonalities and trends in countries considered

HOW

- Consolidation of data
- Trend analysis arising from data
- Language check through PwC national branches

DELIVERABLES

30 Country profile reports and Data Analysis Synthesis Report

Your Contribution is important!

1. Support in the refinement of the analysis
Guidelines to policymakers to use information – Task 4

Develop guidelines for policymakers to collect and use data in a systematic way

- Online and offline engagement of key stakeholders for validation;
- Refinement of integration oriented guidelines for policymakers

- Presentation of final results: Final Report
  - Methodology and guidelines for policymakers
  - Integration of indicators into existing scoreboard and benchmarking exercises

Final External Workshop

Your Contribution is important!

1. Take part to the online and offline engagement for final validation of information and results
Study on the strategic use of innovation procurement in digital economy

Goals, Timeline and expected Results

Measurement Framework (morning session)

The Policy Framework and the Measurement Methodology

Measurement Framework (Afternoon session)

Approach, Methodology and Indicators, Data source and Keywords
**Preliminary Measurement Framework for discussion**

**PURPOSE**

Monitoring the progress of 30 EU countries on the implementation of policy mix measures to mainstream innovation procurement across sectors of public interest and strategic expenditure categories

**HOW**

Measuring both the quantitative (economic) and the qualitative (policy) dimensions of innovation procurement through specific indicators

If needed, we can cluster countries into **three categories**, according to the countries overall index score:

- **High performers**
- **Moderate performers**
- **Low performers**

By analysing the score of each index’s sub dimension we can **assess the areas** where the country performance could be **eventually improved** and **measure its progress** over time.
Innovation procurement Index

1. Economic dimension

Economic performance
(High/Medium/Low spending)

2. Policy framework

Set objectives for Innovation procurement

3. Support measures

To what extent is Innovation procurement supported?

4. Framework conditions

To what extent the framework is favourable to Innovation procurement?
### Measurement methodology

#### Policy Dimension

<table>
<thead>
<tr>
<th>Policy framework</th>
<th>Support measures</th>
<th>Framework conditions</th>
</tr>
</thead>
</table>
| • Is there a definition of IP?  
• Is IP mentioned in strategic documents?  
• Is IP mentioned in action plans at sectorial level?  
• Are there good practices recognised by the EC?  
• Legal framework  
• Spending target | • Website with good practice example cases  
• Handbook/guidelines  
• Trainings/workshops  
• Personal/case specific assistance  
• Financial incentives  
• National prize  
• Competence centre | • Level of competition  
• Transparency  
• Publication rate  
• Award criteria  
• Speed of procurement process  
• International procurement |

#### Economic dimension

- Amount of PPI spending in % of GDP
- Amount of PPI spending in % of total PP Spending
- Amount of PPI procurements of ICT based solutions in % of PPI Spending

### Data gathering approach

#### Policy dim.
- Desk research, face to face/phone interviews, online survey

#### Economic dim.
- TED, national datasets, procurers websites, private databases
## Policy Dimension

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Classif.</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Is there an official definition of Innovation Procurement?</td>
<td>No</td>
<td>There is no official definition</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>1) There is an official definition</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2) The official definition is in line with the EC one</td>
</tr>
<tr>
<td>2) Is Innovation Procurement mentioned in strategic documents?</td>
<td>No</td>
<td>Not mentioned in strategic documents</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>Mentioned in strategic documents</td>
</tr>
<tr>
<td>3) Is Innovation Procurement mentioned in action plans at sectorial level?</td>
<td>No</td>
<td>No existing action plan</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>Presence of an action plan for following sectors: Procurement strategy, IT, Telecomms, Pharmaceuticals, Automotive, Biotechnology, others</td>
</tr>
<tr>
<td>4) Does the country have good practices recognised by the EC?</td>
<td>No</td>
<td>Lack of good practices in the EC database</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>One or more good practices in the EC database</td>
</tr>
<tr>
<td>5) Is Innovation Procurement defined in the Legal Framework?</td>
<td>No</td>
<td>Absence in the legal framework</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>Defined in the legal framework</td>
</tr>
<tr>
<td>6) Spending target</td>
<td>No</td>
<td>Lack of specific targets</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>Spending targets are set</td>
</tr>
<tr>
<td></td>
<td>Basic</td>
<td>&lt;=2 yes for indicators from 1 to 6</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>2&lt;=yes&lt;=5 for indicators from 1 to 6</td>
</tr>
<tr>
<td></td>
<td>Advanced</td>
<td>All yes for indicators from 1 to 6</td>
</tr>
<tr>
<td>7) Set objectives for innovation procurement</td>
<td>Basic</td>
<td>&lt;=2 yes for indicators from 1 to 6</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>2&lt;=yes&lt;=5 for indicators from 1 to 6</td>
</tr>
<tr>
<td></td>
<td>Advanced</td>
<td>All yes for indicators from 1 to 6</td>
</tr>
</tbody>
</table>

*Data Source: National reports and National experts*
## Support measures

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Classif.</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>8) Website with good practice example cases</td>
<td>No</td>
<td>Absence of good practices examples</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>Good practice example cases to procurers</td>
</tr>
<tr>
<td>9) Implementation handbook/guidelines</td>
<td>No</td>
<td>Absence of handbook/guidelines</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>Provides them to procurers</td>
</tr>
<tr>
<td>10) Training/workshops</td>
<td>No</td>
<td>Absence of training/Ws</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>Trainings/workshops to procurers</td>
</tr>
<tr>
<td>11) Personal/case specific assistance</td>
<td>No</td>
<td>No case specific assistance to procurers</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>Provides case specific assistance to procurers</td>
</tr>
<tr>
<td>12) Financial incentives</td>
<td>No</td>
<td>No financial incentives to procurers</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>Provides financial incentives to procurers</td>
</tr>
<tr>
<td>13) Coordinating the implementation of innovation procurements nationally/regionally</td>
<td>No</td>
<td>No implementation of innovation procurements</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>Coordinates the implementation of innovation procurements</td>
</tr>
<tr>
<td>14) National prize</td>
<td>No</td>
<td>No national prize to procurers</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>Provide national prize to procurers</td>
</tr>
<tr>
<td>15) Facilitating experience sharing and networking with other procurers in other regions/countries</td>
<td>No</td>
<td>No facilitation of exp. sharing and networking</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>Facilitates experience sharing and networking</td>
</tr>
<tr>
<td>16) Stimulating synergies between national and EU support for innovation procurement</td>
<td>No</td>
<td>Do not stimulate synergies</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>Stimulates synergies</td>
</tr>
<tr>
<td>17) Competence center</td>
<td>No</td>
<td>Presence of a competence center</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>Absence of a competence center</td>
</tr>
</tbody>
</table>

To what extent is Innovation Procurement supported?

- Basic
- Average
- Advanced
- Top Notch

*Data Source: National reports and National experts*
<table>
<thead>
<tr>
<th>Indicator</th>
<th>Classif.</th>
<th>Definition</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>18) Level of competition</td>
<td>Below</td>
<td>Level of competition below the European average</td>
<td>Single market Scoreboard (SMS)</td>
</tr>
<tr>
<td></td>
<td>Above</td>
<td>Level of competition above the EU average</td>
<td></td>
</tr>
<tr>
<td>19) Transparency</td>
<td>Below</td>
<td>Transparency below the EU average</td>
<td>SMS</td>
</tr>
<tr>
<td></td>
<td>Above</td>
<td>Transparency above the EU average</td>
<td></td>
</tr>
<tr>
<td>20) Publication rate</td>
<td>Below</td>
<td>Publication rate below the EU average</td>
<td>SMS</td>
</tr>
<tr>
<td></td>
<td>Above</td>
<td>Publication rate above the EU average</td>
<td></td>
</tr>
<tr>
<td>21) Award criteria</td>
<td>Below</td>
<td>Award criteria below the EU average</td>
<td>SMS</td>
</tr>
<tr>
<td></td>
<td>Above</td>
<td>Award criteria above the EU average</td>
<td></td>
</tr>
<tr>
<td>22) Speed of procurement process</td>
<td>Below</td>
<td>Procurement process’ speed below the EU average</td>
<td>SMS</td>
</tr>
<tr>
<td></td>
<td>Above</td>
<td>Procurement process’ speed above the EU average</td>
<td></td>
</tr>
<tr>
<td>23) International procurement</td>
<td>Below</td>
<td>Openness to procurement from other countries below average</td>
<td>Measurement of cross-border impact of penetration in public procurement</td>
</tr>
<tr>
<td></td>
<td>Above</td>
<td>Openness to procurement from other countries above average</td>
<td></td>
</tr>
<tr>
<td>To what extent the framework is favourable to Innovation Procurement?</td>
<td>Basic</td>
<td>&lt;=2 indicators above average from 19 to 24</td>
<td>SMS</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>2&lt;yes&lt;=5 indicators above average from 19 to 24</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Advanced</td>
<td>All the indicators from 19 to 24 are above average</td>
<td></td>
</tr>
</tbody>
</table>
## Economic dimension

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Classif.</th>
<th>Definition</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPI spending</td>
<td>High spending</td>
<td>PPI spending in % of GDP</td>
<td>TED and other National sources</td>
</tr>
<tr>
<td></td>
<td>Medium spending</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Low spending</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PPI/PP spending</td>
<td>High spending</td>
<td>PPI spending in % of total PP Spending</td>
<td>TED and other national sources</td>
</tr>
<tr>
<td></td>
<td>Medium spending</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Low spending</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spending in ICT based solutions</td>
<td>High spending</td>
<td>Amount of PPI procurements of ICT based solutions</td>
<td>TED and other national sources</td>
</tr>
<tr>
<td></td>
<td>Medium spending</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Low spending</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economic performance</td>
<td>High spending</td>
<td>Following a min-max standardisation we will cluster</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Medium spending</td>
<td>countries in three groups</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Low spending</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Sara Bedin
Innovation Procurement Expert
Study on the strategic use of innovation procurement in digital economy

Measurement Framework (morning session)

Measurement Framework (noon session)
Public procurement of Innovative Solutions definition (1/3)

EU DIRECTIVE 2014/24 (art 1.22)

Innovation

Implementation of new or significantly improved product, service or process, including but not limited to production, building or construction processes, new marketing or organisational method in business practices, *inter alia with the purpose of helping to solve societal challenges or to support the Europe 2020 strategy for smart, sustainable and inclusive growth.*
Public procurement of Innovative Solutions (PPI)

PPI means procurement where contracting authorities act as a launch customer of innovative goods or services which are not yet available on a large-scale commercial basis and may include conformance testing (before deployment).

Horizon 2020, Work Programme 2014–2015

- **Launch customer** also called early adopters, refers to the first approx. 20% customers on the EU Internal Market in the market segment of the procurers that are deploying innovative solutions to tackle the challenge addressed by the PPI procurement.

- **Innovative Solutions** are innovative goods or services with better than best available performance levels which suppliers are called to meet through production innovation. This includes solutions that typically have already been (partially) technically demonstrated with success on a small scale, and may be nearly or already in small quantity on the market, but which owing to residual risk of market uncertainty have not been produced at large enough scale yet to meet mass market price/quality requirements and have therefore not widely penetrated the market segment of the procurers yet. This also includes solutions based on existing technologies that are to be utilised in a new and innovative way.
Public procurement of Innovative Solutions (PPI)

*PPI* means procurement where contracting authorities act as a **launch customer** of **innovative** goods or services which are **not yet available** on a large-scale commercial basis and may include conformance testing (before deployment).

*Horizon 2020, Work Programme 2014-2015*

- PPI can thus be used when there is no need for procurement of new R&D to bring solutions to the market, but a **clear signal from a sizeable amount of early adopters/launch customers** that they are willing to purchase/deploy the innovative solutions if those can be delivered with the desired quality and price **by a specific moment in time**.

- PPI must result in the **first application/commercialisation of innovative solutions**, meaning that the solutions have to be **new to the procurers' market segment or new to the EU Internal Market and relevant to procurers in other Member States and/or Associated Countries**.
**PPI Legal framework**

Here below some of the fundamentals characterising the PPI legal framework:

2014 EU Procurement Directives are applicable (Directives 2014/24/EU, 2014/25/EU and 2014/23/EU)

Any type of procurement procedures other than innovation partnership and PCP

Aggregation of demand through joint procurements (art. 38,39 Dir. 2014/24/EU and art. 56/57 Dir. 2014/25/EU)

Open market consultations help the communication of the need/call for tenders (art.40 Dir. 2014/24/EU, art.58 Dir. 2014/25/EU)
## Check-list for the identification of PPI tenders

### PPI characteristics: check-list

<table>
<thead>
<tr>
<th>• Tender object: Product, service, work</th>
<th>• Award criterion aimed to achieve better value for money along the life-cycle (no “lowest price” criterion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Type of contract: procurement contract in accordance with EU Public Procurement Directives all procedures could be used:</td>
<td>• Tenders could include references to interoperability requirements</td>
</tr>
<tr>
<td>• <strong>Obligation of bidders:</strong> (large scale) deployment</td>
<td>• Variants not (strictly) excluded</td>
</tr>
<tr>
<td>• <strong>Obligation of contracting authorities:</strong> payment of the agreed price</td>
<td>• Classification different from a “recurrent” procurement</td>
</tr>
<tr>
<td>• Required solutions not technically prescribed (functional requirements, rather than technical or specific requirements)</td>
<td>• Possible indicators of PPI (keywords that could spot a PPI tender)</td>
</tr>
<tr>
<td>• Avoidance of reference to proprietary production methods, packages, specific software or brand and vendors</td>
<td></td>
</tr>
<tr>
<td>• Possible indicators of non-PPI tenders (Validated/Certificated protocol/solution)</td>
<td></td>
</tr>
</tbody>
</table>

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[Validated/Certificated protocol/solution]
Measuring Public Expenditures

Through a scouting exercise we have reached a list of innovative procurements tendered in past years and extracted key concepts and keywords, also in relation to the specific sectors.
**Procedural steps (1/2)**

Cascading process between various data sources

**STEP 1**

a) **Importing and indexing phase:** extract tenders contents and their related metadata, mainly from the TED; exclusion criteria to restrict the sample of the analysis

b) **Parallel key PPI concepts definition:** in depth analysis of the documentation of a selected samples of PPIs initiatives

**STEP 2**

**Queries refinement phase**

Once obtained the results list from a query, the data will be analysed and used for further queries in order to refine our ability to select only public procurements that generate innovation

**STEP 3**

**Analyse results from queries**

Transforming the best responses (most acceptable queries results) into a digital format easy to work with, as to be used for human analysis

**STEP 4**

**Reports presentation**

Computed data from the previous step will be used to produce Country reports and trend analysis
**STEP 5**

**National public tender databases**
Step 1, Step 2, Step 3 and Step 4 apply also to national databases. Tender notices in one/many languages and not-common digital formats. So, an effort will be made to develop all the standardization, normalization, and cleaning routines.

**STEP 6**

**Web content and other databases**
HPE idol Connectors platform will also allow us to collect contents from web, elaborating them in order to be indexed to HPE Idol and search engine. In order to perform the activity it will be used an instrument called "WebConnector+CFS"
Economic data gathering: sources

01. Tenders Electronic Daily
   - National database
   - Private database
   - Web

02. Most reliable dataset on PP; basic and most important source
    - To complement analysis on TED; used for procedures below the EU threshold

03. Additional information useful for further analyses
    - Countries where national db are not available or incomplete
How you can contribute to the Study

- Tell us about national existing methodology and give us feedback on the presented methodology for the study

- Share data on innovation procurement with us

- Remain engaged with us throughout the study

- Need for support by national contact points in charge of promoting the setup of national initiatives in Member States
Study Contacts

- EC Project Officer – Lieve Bos:
  Lieve.bos@ec.europa.eu

- PwC - Project Manager - Giovanna Galasso:
  giovanna.galasso@it.pwc.com

- Expert – Sara Bedin:
  sara.bedin@appaltoprecommerciale.it

- Expert - David Osimo:
  dosimo@open-evidence.com