Monitoring, evaluation and impact assessment of innovation-enhancing procurement

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• **What**: to develop a strategic framework that assists in the measurement of innovation-enhancing procurement initiatives by the Member States and the EU.

• **Why**: despite the widely recognized potential of innovation-enhancing procurement, to date there is a lack of evidence to form a basis for policy-making (OECD, 2016).
  - We are far from having a common strategic framework for the measurement of innovation-enhancing procurement, both methodologically and empirically (European Union, 2016: 13).

• **How**: to deal with “Monitoring, evaluation and impact assessment”, measurement is an inevitable step in this direction (OECD, 2016).
  - To make measuring possible at all, there has to be a conceptual structure of different kinds of innovation-enhancing procurement.

Set a **common language** according to which the different concepts to be included in the **conceptual framework** for the monitoring, evaluation and impact assessment of innovation-enhancing procurement policies are defined.
• **Purpose of evaluation**: to provide learning for policy-making (i.e. policy intelligence) in such a way that it enables policy-makers to avoid making the same old mistakes in policy formulation processes (Rich, 1979; Batterbury, 2006).

• **Time frames of the evaluation process**:
  
  • **Ex-ante evaluation**: carried out in the policy design phase (i.e. before decisions have been made), and is associated with the **formulation** and execution of policies.
  
  • **Interim evaluation** (or **monitoring**): runs during the policy implementation phase, and provides intermediate information for decision-makers as a **management** tool.
  
  • **Ex-post evaluation**: carried out once the programme has been concluded, and aims at analysing the main **results** and **effects** that can be attributed to the intervention.
Defining the key concepts (II)

**Data required:**
- **Inputs:** defined as the resources provided by the intervention.
- **Outputs:** are the results that have been produced in the beneficiary as a direct result of the intervention (e.g. new products or services, patents, prototypes, etc.).
- **Outcomes (or effects):** are the changes produced in the beneficiary as a consequence of policy outputs (i.e. increase in sales, increase in productivity, etc.).
- **Impacts:** refer to the effect of the intervention in the wider economy (i.e. they are usually long-term and socioeconomic). Perceived at the level of beneficiaries, public demand, public sector performance, markets and society at large.

**Additionality:** government intervention can only be justified if that intervention causes a positive effect, which would not have taken place without the policy.
- **Input additionality:** measures the resources invested in order to obtain an output (co-funding).
- **Output additionality:** captures the effects of the policy intervention in the outputs of the innovation process in the beneficiary.
- **Outcome additionality:** refers to the effects of these outputs in the business performance. It becomes difficult to attribute.
- **Behavioural additionality:** refers to the policy impacts on organizational behaviour in the beneficiary, the government, and even consumers.
Key dimensions to consider

- **What is going to be evaluated?**
  - **Inputs** (for input additionality): which have been the inputs to the implemented policy?
  - **Process** (monitoring): which are the indicators that are going to allow following up the implementation process and determine if things are on track?
  - **Outputs** (for output additionality): which are the direct results the intervention aimed at?
  - **Outcomes or effects** (outcome additionality): which are the changes produced in the beneficiary as a consequence of the previous outputs?
  - **Impacts**: which are the wider results (direct and indirect) beyond the beneficiary?
  - **Behaviour** (behavioural additionality): which are the changes in actors' behaviour?

- **How is the evaluation going to be conducted?**
  - Which are the more suitable methods to be used?
  - Which are the indicators to be used?
  - How are data going to be gathered?
  - Who should be involved in the evaluation?
  - Who should be the "owner" of the evaluation?
  - How to embed the results emanating from the evaluation in the decision-making process?

These are **questions** that need to be considered if we are to formulate **indicators** that will “feed” the **framework** that may allow us to **measure** innovation-enhancing procurement.
## Purpose of the evaluation

Understand the impact of public authorities (i.e. their demand) in fostering innovation.

Understand the impact of public authorities in steering the development of new technological solutions.

Learn about/measure the impact of the procured solution/product.

Learn about/measure the impact of the developed R&D solution.

### Elements of the evaluation: input

Public/private resources for the entire process for the **winner bidder**.

Public/private resources throughout the entire process for **all beneficiaries**.

- Indicators related to the procurement phases.
- Functional specifications.
- Coordination efforts.

Indicators related to each phase in the PCP scheme (i.e. solution exploration, prototyping, testing)

### Elements of the evaluation: monitoring

- Innovation related indicators.
- Development of innovations that respond to societal needs/demands.

**Technology** related indicators.

### Elements of the evaluation: output

- Diffusion of innovations throughout the economy
- Increase in sales of the new product
- Growth rate of the beneficiary firm
- Increase in public productivity
- Increase in the efficiency of public service provision

- Dissemination of R&D results.
- Commercialization of R&D results
- Share of the developed R&D solutions that reach commercialization.
- Technology transfer (royalties)
- Exploitation of IPRs and R&D results
## A framework for innovation-enhancing procurement (II)

<table>
<thead>
<tr>
<th>Elements of the evaluation: <strong>impact</strong> (direct)</th>
<th>Innovation procurement (direct, catalytic, functional)</th>
<th>PCP</th>
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</table>
| - Impact on beneficiaries  
- Impact on public demand  
- Impact on public sector performance  
- Impact on markets  
- Impact on society. | - Innovation related indicators.  
- Development of innovations that respond to societal needs/demands.  
- R&D sophistication.  
- Knowledge and technology transfer. | |

| Elements of the evaluation: **impact** (indirect) | - **Industrial sophistication** (all those not selected).  
- Strengthen key suppliers, providing **new knowledge and capabilities** that will be useful to them in the future, potentially breaking path dependencies and avoiding lock-in situations.  
- Incentivize industry to invest in innovation, with potential substantial spillover effects (e.g. internationalization of local firms to inter-regional markets). | - Improvements in the quality and/or efficiency of the public services.  
- Increase in the efficiency of R&D expenditures.  
- Attracting financial investors to Europe |

| **Additionality** | - Input additionality.  
- Output additionality (innovation)  
- Outcome additionality  
- Behavioural additionality (beneficiary, government, consumers) | - Input additionality  
- Output additionality (R&D)  
- Outcome additionality (innovation)  
- Behavioural additionality (beneficiary, government, consumers) |

| Evaluation process: **methods** | Mixed methods – stronger emphasis on **qualitative approaches** (e.g. participative evaluation, focus groups, case studies) | Mixed methods – stronger emphasis on **quantitative approaches** (e.g. impact assessment, matching) |
A majority of countries support innovation-enhancing procurement, either by developing action plans, or as part of broader strategies (OECD, 2016: 13).

- Measuring the impact of public procurement for innovation activities appears to be an area that countries pay little attention to.
- Limited number of countries having in place systems to measure their innovation-enhancing procurement policies (e.g. Austria, Estonia, Germany, Netherlands).

**Questionnaire:** (5 responses – France, Estonia, Germany, Greece, Spain)

- Are innovation procurement policies evaluated regularly? (3+7+8+2+2)
- Do you have the required capabilities for in-house policy evaluation? (2+7+8+2+6)
- Does your organization use a panel of indicators? (0+9+8+0+5)
- Which are the main methods used? (case studies, interviews, surveys, data on tender documents, cost-benefit analysis, behavioral additionality, impact analysis)
- Which are the main benefits you are able to achieve as a result of monitoring and evaluation? (picture of progress, corrective/supportive actions, certification, effectiveness, good practices, innovation awareness, justify the interest in procurement)
One of the essential requirements to measure policies is the **need for indicators** (i.e. input, output, outcome, impact and process).

- ‘What' can be measured? And 'how'? 

**a) General discussion on possible approaches based on current state of play:**

- Which data is already available?
- What is required to gather the data needed to monitor and evaluate?
- How is it possible to operationalize the typology in thematic paper A (i.e. direct, catalytic, functional and PCP)? How to measure (indicators) each of these types?

**b) Monitoring and evaluation: barriers and set-ups:**

- What are the main barriers in defining and implementing monitoring and evaluation?
- What are the main capabilities needed for monitoring and evaluation?

**c) Towards a framework for evaluation of innovation procurement:**

- Identify possible indicators.
- Identify different ways (i.e. approaches, methods, profiles of evaluators) in which data for the previous indicators can be gathered.
Innovation procurement (direct)

Innovation procurement (catalytic)

Innovation procurement (functional)

PCP

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<td>Elements of the evaluation: <strong>output</strong> <em>(output additionality)</em></td>
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<td>Elements of the evaluation: <strong>outcome/effect</strong> <em>(outcome additionality)</em></td>
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| Elements of the evaluation: **impact** *(direct)*  
- Impact on beneficiaries  
- Impact on public demand  
- Impact on public sector performance  
- Impact on markets  
- Impact on society. | | | | |
| Elements of the evaluation: **impact** *(indirect)* | | | | |
| **Behavioural additionality** *(beneficiary, government, consumers)* | | | | |
THANK YOU

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