3rd LEARNING JOURNEY
Monitoring and indicators

Susanna Longo
Finpiemonte SpA
Susanna.longo@finpiemonte.it

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Outline

Design of monitoring system, gathering and data analysis

❖ Design of the monitoring system
  ▪ The logic process
  ▪ Indicators in Piedmont S3

❖ Data gathering and analysis
  ▪ IR2 – Industrialisation of research results
  ▪ Fabbrica Intelligente (Technology Platform)
  ▪ Poli d'innovazione (innovation clusters)
  ▪ ERANETS and MPMI
### Put the bases for a monitoring system

<table>
<thead>
<tr>
<th>Context</th>
<th>Have clear the profile of the Region and the context</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus</td>
<td>Set the focus on your area of interest (focus your strategy)</td>
</tr>
<tr>
<td>Change</td>
<td>Define the change that you aim to introduce (general, specific)</td>
</tr>
<tr>
<td>Variables</td>
<td>Identify the variables that will represent the change (indicators)</td>
</tr>
<tr>
<td>Analyse</td>
<td>Analyse progressively (and measure) the distance from the expected changes and what really happened</td>
</tr>
<tr>
<td>Revise</td>
<td>Indicate how the strategy should be revised. Indicate the elements that attribute the results to the regional context (endogenous/exogenous factors) or to the action effectiveness.</td>
</tr>
</tbody>
</table>
Example from Piedmont

**CONTEXT**
Context Analysis for S3 and lessons learnt from previous programming

**FOCUS**
R&D/Innovation (one of the 5 EU2020 Strategic Objectives)

**CHANGE**
- Stronger productive system and new entrepreneurship
- More attractive innovation ecosystem
- Wellbeing for citizens and facing demographic change

**VARIABLES**
Increase of investments in R&D/Innovation

**ANALYSE**
- ✓ STRATEGY indicators (3 out of 7 relevant for AM policy mix)
- ✓ SECTOR indicators
- ✓ RESULTS indicators + OUTPUT indicators
Quantitative/qualitative analysis (implementation, effectiveness)

**REVISE**
Process for the revision/updating of S3
### Strategy Indicators (applicable to AM)

<table>
<thead>
<tr>
<th>S3 Innovation Areas</th>
<th>Strategy Indicators</th>
<th>Definition and Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stronger Productive System and New Entrepreneurship</td>
<td>Researchers employed in enterprises on the total of employees</td>
<td>Number of researchers on total employee (%)&lt;br&gt;Source: Istat – National Statistics Institute</td>
</tr>
<tr>
<td></td>
<td>Capacity to export</td>
<td>Value of export on GNP (%)&lt;br&gt;Source: Istat – National Statistics Institute</td>
</tr>
<tr>
<td>More Attractive Innovation Ecosystem</td>
<td>Intensity in Patenting</td>
<td>Number of registered patents at EPO per million of inhabitants&lt;br&gt;Source: Istat – National Statistics Institute</td>
</tr>
</tbody>
</table>

**Baseline value**<br>From ISTAT

**Target value**

- Exogenous factors
- Endogenous factors
- IR2 – Industrialisation of research results
- Poli d’innovazione (innovation clusters)
- Fabbrica Intelligente (Technology Platform)
Sector Indicators (applicable to AM)

Aimed to classify the sectors of economic activity according to their capacity to generate industrial innovation.

They provide further evidence regarding the possible effects of the Strategy on regional economic dynamics and pave the way to possible modifications to the S3 areas:

**SECTOR INDICATORS**

- Number of employees
- Number of local units
- Specialization index (measuring the propensity to export)

Annual survey on the sectors currently qualified as innovative (**industrial innovator sectors**)

Deferred analysis (three years) on the whole of the regional productive structure

Comparison of performances among sectors, to suggest possible changes in the areas of specialization.
## Result and output indicators

<table>
<thead>
<tr>
<th>RESULT INDICATOR</th>
<th>POLICY MIX</th>
<th>OUTPUT INDICATOR</th>
<th>S3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Companies that have carried out R&amp;D activities in collaboration with external organisations, out of the total of companies that do R&amp;D (%)</td>
<td>IR2</td>
<td>N. companies that receive support</td>
<td>Increase in R&amp;D/Innovation investments</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N. of companies supported to introduce new products that are new to the market</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>N. beneficiaries supported to introduce products that are new to the company</td>
<td></td>
</tr>
<tr>
<td>Source: Istat</td>
<td>INNOVATION CLUSTERS</td>
<td>N. companies that receive support</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>N. of companies that cooperate with research institutes</td>
<td></td>
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<td></td>
<td></td>
<td>Private investments combined with public support for R &amp; D projects and innovation</td>
<td></td>
</tr>
<tr>
<td>Incidence of total R &amp; D expenditure on GDP (%)</td>
<td>TECHNOLOGY PLATFORMS</td>
<td>Employment growth in companies receiving support</td>
<td></td>
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### EX-POST Evaluation
- **Poli d'innovazione (innovation clusters)**
- **ERANET projects (MANUNET)**
- **Innovazione MPMI**

**Baseline value**
From ISTAT

**Target value**
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  ▪ ERANETS and MPMI
Data gathering and data analysis

Dare indicazioni su come vengono raccolti e analizzati gli indicatori di strategia, di Settore, di risultato e di output.

I dati del rapporto di innesco a quali indicatori si legano (strategia, risultato output…)?

Specificare per ogni misura la parte relativa al data analysis (come viene in concreto effettuata l’analisi indicata nella methodology)
Objective:
❖ Understanding which sectors is affected by the project and which type of companies are involved

When: in-itinere, while the funding measure is running

Data sources:
• Information and administrative documents collected through the measure managers (e.g. Finpiemonte)
• Data from official statistical databanks
• Information collected from beneficiaries through interviews

Methodology: Implementation analysis + Study of cases.
**Objective:**
- Verifying the successful completion of the project, its anchorage to the territory with the planned industrial investments and its impacts.

**When:** at the end of the funding measure (ex-post)

**Data sources:**
- Information and administrative documents collected through the measure managers (e.g. Finpiemonte)
- Data from official statistical databanks
- Information collected from beneficiaries through interviews (preferably web based) and ad-hoc surveys

**Methodology:** qualitative-quantitative techniques (possibly counterfactual methods, qualitative analysis)
**Objective:**

- Verifying the main aspects of the process and the results achieved (application presented/ admitted/ rejected, number of projects realized, typology of projects realized)

**When:** in-itinere, while the funding measure is running

**Data sources:**
- Information and administrative documents collected through the measure managers (e.g. Finpiemonte)
- Data from official statistical databanks
- Information collected from beneficiaries through interviews and ad-hoc surveys

**Methodology:** Process analysis, qualitative techniques and case studies
Objective:
❖ Verifying the effects (the difference between what is observed at the end of the funding measure and what would be observed in its absence

When: at the end of the funding measure (ex-post)

Data sources:
• Information and administrative documents collected through the measure managers (e.g. Finpiemonte)
• Data from official statistical databanks
• Information collected from beneficiaries through interviews and ad-hoc surveys

Methodology: Controfactual analysis + Beneficiary survey (due to the small number of large projects) + case studies
Objective:
❖ Verifying the measure working progress with particular attention to beneficiaries and projects presented

When: in-itinere, while the funding measure is running

Data sources:
• Information and administrative documents collected through the measure managers (Piemonte Region, Finpiemonte, Innovation clusters)
• Data from official internal and external (statistical) databanks

Methodology: implementation analysis
Poli d'innovazione (innovation clusters)
ERANET projects (MANUNET)
Innovazione MPMI

EX-POST Evaluation
(based on previous programming period 2007-2013)
Objective:
❖ Accountability: give back an information heritage on what has been done

Data sources:
• Data from official internal and external databanks
• Information collected from beneficiaries through interviews and ad-hoc surveys

Methodology: Case study analysis + Analysis of results without qualitative evaluation + Quantitative methodologies (study on the networks + counterfactual analysis and spatial descriptive statistics) + impact evaluation
Objective:
❖ Evaluation on effectiveness, impact and “administrative quality” of funding measures incentivising innovation in SMEs

Data sources:
On line platform with questionnaire including:
• A specific section dedicated to beneficiaries
• A section dedicated to both beneficiaries and SMEs from a reference sample

Methodology: Qualitative analysis + comparative analysis on performances and attitude to innovation
**Objective:**

- Evaluating *impact of funding measures on turnover, investments, labour productivity and occupation*

**Data sources:**

- Information and administrative documents collected through the measure managers (e.g. Finpiemonte)
- Data from official statistical databanks (Aida and Istat Asia)

**Methodology:** Quantitative counterfactual analysis on the results of the previous programming (2007-2013)

**Data Analysis**

The impact assessment requires to compare the turnover, investment, employment and labor productivity etc. in companies financed (beneficiaries) with the same variables that would have been produced in the same period in companies non financed (non beneficiaries).