PIANIST Workshop

"Programme Impact Assessment in National IST initiatives"

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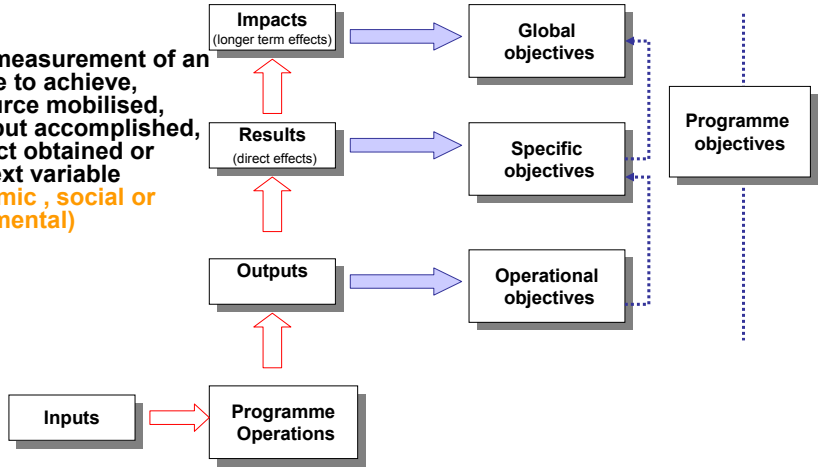
Unit C3 - Evaluation and monitoring

http://europa.eu.int/comm/dgs/information_society/evaluation/index_en.htm

Indicators for IST R&D Programme Intervention logic

Indicator:

Tool of measurement of an objective to achieve,
- a resource mobilised,
- an output accomplished,
- an effect obtained or
- a context variable
(economic , social or environmental)



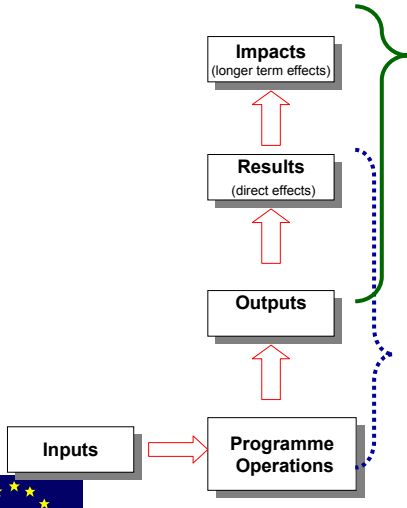
Indicators for IST R&D
Indicators in the EU funded IST R&D

- **A new set of indicators which includes output and outcome indicators together with the implementation ones.**

  Two studies (in 2004 and 2005) to support the development of a coherent set of output and outcome indicators and desrcibe causality links between the higher level outcome objectives and the project outputs.

- **Fully integrated into our Management System (AMP and AAR).**
- **Systematic collection of data**
  - **Impact Analysis Observatory**
  - **Regular and systematic collection of data (annual)**

Indicators for IST R&D
Types of indicators



Indicators to measure the effects

- **effects because of the programme**
- **context**
- **programme participants**
- **spillovers to non participants**

Indicators to monitor and assess the implementation

Indicators for IST R&D
Indicators in the EU funded IST R&D (2)

Implementation indicators

- Budget execution
- Time to contract
- Time to payment

Output indicators

- Number of patents, trademarks and registered designs
- Number of peer-reviewed publications authored by project participants

Outcome indicators

- World leadership improvement as a result of the project work
- Benefit to citizens

Indicators for IST R&D
Difficulties in measuring the effects

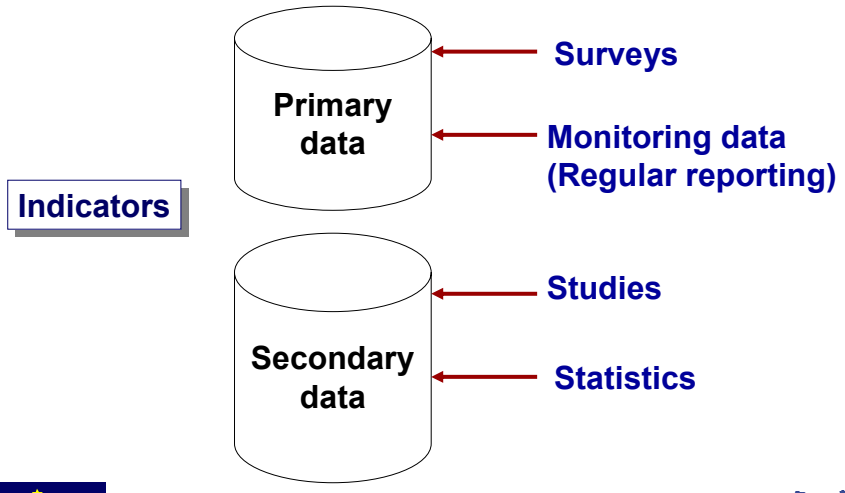
Why ?

- Most of the R&D evaluations are based on theories and academic hypotheses about potential economic and social outcomes that are asserted to be true, but may in fact turn out to be false.
- The economic and R&D contexts may easily change.
- The dynamics and high degree of complexity of the innovation systems in which impacts can be difficult to measure or attribute accurately especially as public R&D investment represent a modest proportion of the total one.
- The initially anticipated impacts can only be observed in the medium- to long-term often well beyond the end of the supported research activities.

Indicators that are:

- **difficult/expensive to quantify**
- **strongly influenced by the context and weakly influenced by the programme**

Indicators for IST R&D
Data collection



Indicators for IST R&D
Difficulties in collecting data

Why ?

- The lack of common agreed concepts and definitions of indicators results in different, inconsistent, fragmented and non co-ordinated information and databases

  → **Badly defined indicators**
  Inadequately presented and explained

- **Excessive number of complex indicators**
- **Excessive demands on suppliers of data**

Indicators for IST R&D

How can we set up an indicators system that works?

- What is the right number, level of sophistication and mix of indicators in an indicators system? (composite vs. simple indicators, effects vs. implementation indicators)
- Where should we place our emphasis so that the indicators are clearly understandable and without any ambiguity?
- When quantification is not possible, what other alternatives may be used?
- Is there a real need for adopting a common system of IST R&D performance indicators? (common to EU and MS)
- How can we minimize the costs and overheads associated with primary data collection?