

PRIME Indicators Platform – European Network of Indicators Designers

Strategic document and activity plan 2007-2008

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1 Introduction

This document outlines the main strategic lines to consolidate and further develop PRIME activities in the domain of indicators, proposes the establishment of a specific indicators platform – based on the experience of the ENIP and other PRIME projects in the domain of indicators – and finally specifies the action plan for the years 2007 and 2008 and indicates the budget requested for these activities. It is largely complementary to the document on a European Platform of Scientific and Technological Indicators (ESTIP) which provides the necessary conceptual and strategic background for the activities proposed here.

The document is organized in three main parts. In section 1, we summarize the indicators activities in PRIME and we draw the main lessons for the future development of this domain. In section 2, we discuss the main strategic choices we propose, while in section 3 we detail the proposed actions and the requested budget to PRIME.

2 Lessons from PRIME Indicators activities

S&T indicators were recognized as one of the major domains of activities of PRIME already in the original proposal and in the first work-program of the network. This document indicated basically two main objectives in this domain:

- Firstly, to build a permanent network of indicator producers inside PRIME, with at least one contact point in each participating country (European Network of Indicator Producers – ENIP project) and to support in this context a feasibility study on the building of a common information platform to share indicators at the European level.
- Secondly, to conceive new indicators in some critical domains of S&T and to develop pilots for their production and use at least in a small scale: the work-program explicitly indicated four domains, namely public funding of research, human resources, higher education indicators and indicators on new emerging sectors.

After the signature of the PRIME contract, all these activities passed through the normal selection procedure for PRIME project through open call for proposals; as a consequence, there have been some changes in the implementation depending on the projects proposed and on the evaluation of their quality; For instance, in human resources domains no project has been developed until now. The following table summarizes the main projects. It makes apparent that, besides the structural activity in ENIP, two main strands of activity have been developed, namely higher education indicators (at the level of individual higher education institutions) from one side, indicators concerning public funding of research to the other side

	Project	Coordinator
Network	European Network of Indicator Producers (ENIP)	OST, Paris
Methodology	European Platform of Science and Technology Indicators (ESTIP)	OST, Paris
Higher Education	Advanced Quantitative Methods AQUAMETH	University of Pisa
Higher education	Observatory of the European University	OST, Paris
New Emerging Sectors	New search regimes in nano S&T (Nanodistrict)	INRA
Funding indicators	Comparative Analysis of Public Project funding	University of Lugano
Funding indicators	Funding indicators for Eastern European countries (CEEC-funding)	OST, Paris and University of Lugano

2.1 The European Network of Indicators Project

The ENIP project was started in June 2004 with the participation of members from ten PRIME countries (Austria, France, Italy, Germany, Hungary, Israel, Norway, Portugal, Spain, Switzerland). It firstly promoted a mapping exercise of S&T indicators production in the participating countries, with a set of country reports providing comparable analysis of data and indicators availability and of the main indicators producers (the reports are available on www.enip-europe.org; for a summary see Esterle and Theves 2005). Further, after some informal meetings, it organized an indicators workshop in Lisbon in September 2005, where the results of most of the PRIME projects related to indicators have been presented; a number of these papers have subsequently been published in journals or books (Lepori 2006a; Bonaccorsi, Daraio and Lepori 2007).

Based on these experiences, ENIP has organized in November 2006 in Lugano the first PRIME indicators conference: this large scientific conference, with more than 30 papers and about 100 participants, is covering a wide range of policy-relevant indicators on subjects as public funding, higher education, human resources, private R&D and innovation; a special session is devoted to the historical development of STI indicators. The fact that it has been possible to organize this large conference alongside other existing conferences in the domain (Leuven, SPRU and Blu Sky in Ottawa, all in September 2006) is a clear sign that PRIME activities concerning indicators have their own space and are largely complementary to the existing ones.

Finally, ENIP is maintaining a specific website (www.enip-europe.org) which gives visibility to the different PRIME indicators activities and to their results.

2.2 The European Platform of Science and Technology Indicators (ESTIP)

Work in PRIME indicators projects, while successful in design of new indicator, displayed also the difficulties of these experimental projects in ensuring continuity and reproducibility of these indicators and thus the need of a more strategic reflection concerning the ways of institutionalization of the production process for new indicators.

Thus, in ENIP2 a specific activity has been launched to develop concepts and scenarios for the establishment of a European Science and Technology Platform for the so-called positioning indicators, i.e. indicators aiming to map the position and linkages of actors in the national and European innovation system.

This reflection has been based on a wide consultation in the PRIME community and with relevant stakeholders at the European Commission, IPTS, Eurostat and OECD in three steps: preliminary presentation at the ENIP Lisbon workshop, a more in-depth discussion at the PRIME annual conference 2006 in Paris and the presentation of the final document at the PRIME Indicators conference in Lugano (Barré 2006).

2.3 Public project funding indicators

This experimental project has been launched inside ENIP with the aim of producing indicators on the structure of public funding and, especially, project funding. Thus, it covers a domain where official R&D statistics hardly provides usable figures in a comparative perspective (Lepori 2006RE). It is covering in two phases six countries (Austria, France, Italy, Netherlands, Norway, Switzerland). The project has developed a new methodology for measuring public project funding, based on state budgets and reports of funding agencies (Lepori et al. 2006) and is then using the produced indicators to provide comparative analysis of public project funding systems in these countries. Preliminary results have been presented at the Lisbon workshop (Lepori et al. 2005; Potì and Reale 2005), while a dedicated session will be held at the PRIME indicators conference

in Lugano; selected papers will be published in a special issue of Science and Public Policy in summer 2007.

2.4 Higher education indicators

Higher Education Indicators have been a major area of development in PRIME, directly linked to specific research interests (for example comparative analysis of the efficiency of higher education institutions) and to policy needs (linked to the integration of European research and higher education). PRIME project undertook in this respect a major methodological choice focusing on individual higher education institutions rather than on the comparison between whole national systems; this is essential in order to explore the issue of positioning of these institutions in the European Research Area (Bonaccorsi and Daraio 2007).

Indicators development has taken two different directions. The first one has been to integrate a minimum set of indicators – taken either from statistical agencies, rectors conferences or individual institution where no other choice was possible – in a joint database to allow for all kind of comparative analysis; this was the case of the AQUAMETH project and of the parallel CHINC project, funded by a contract from IPTS. These two projects have produced a very detailed assessment of data availability and comparability problems in this field (Bonaccorsi, Daraio and Lepori 2006) and identified some major domains of concern as the measure of capital costs and most indicators concerning output. Despite these problems, these project provided valuable results concerning for example the analysis of specialization pattern on European universities (Bonaccorsi ad Daraio 2007) and the comparison of funding models across countries (Lepori et al 2007).

An alternative approach – tested in the Observatory of the European University – has been to take a bottom-up approach, based on self-reporting directly by the universities, with the main aim of support them in the strategic management by providing a methodology to develop benchmarking indicators in a number of fields. As the main result of the project, a methodological guide will be published shortly and presented at the PRIME Indicators conference.

3 Strategic directions for the future

The experience of these three years clearly indicates that there is a specific room for PRIME in the field of indicators and that these activities can contribute to the development of this field and to its integration in research and in policymaking. The inclusion of a specific indicators line in the social sciences and humanities work-program of the 7FP is a clear acknowledgement of this fact.

3.1 Main lessons to be learned

These projects lead to some important lessons for the future development of the indicators activities in PRIME.

1) Firstly, it appears that, already from the available financial means, PRIME cannot have the ambition of establishing its own indicators production activity. Moreover, at the European level, a number of initiatives are establishing long-term platforms for the production of what we would call as positioning indicators in a number of fields, including for example bibliometrics, technological indicators (for example in the Framework of DG research or of ERAWATCH). In this context, trying to establish in PRIME an European Platform directly concerned directly with the (large-scale) production of indicators would create tensions and competitions with existing activities and thus strongly limiting the scope of the possible actions and especially of those oriented to the networking and exchange of knowledge.

2) Secondly, the specificity of PRIME indicators activity, which has lead to its most interesting results (for example concerning higher education) lies in the capacity of *designing new indicators answering to specific policy needs*, which could then be implemented in a more systematic way in other frameworks; this on the basis of the conceptual work which has been undertaken in ESTIP around the concept of *positioning indicators* and its possible operationalization, taking stock also on the results of the pilot projects concerning public funding and higher education (Barré 2006). This experience shows that this is possible only through the collaboration between scholars in the concerned fields – for example higher education economics, research policy studies, studies of careers and human resources -, which provide the necessary theoretical background and people active in the production of indicators, which are able to operationalise these concepts taking into account the limitation of available data. Moreover, keeping a link to official indicator producers

and users like national statistical offices, OECD, IPTS and DG research has proved to be essential to ensure the policy relevance of the produced indicators and their coherency with the national and European statistical systems; actually, projects like AQUAMETH and ENIP-funding have been largely built on a careful exploitation of existing sources, mostly from statistical offices. This is essential in domains, like R&D statistics and higher education statistics, which are to a large extent already covered by official statistics. Remarkably, all these components are very well represented at the 1st PRIME indicators conference. Keeping these linkages and focusing on design rather than on implementation is thus a focus for the future.

3) Thirdly, to perform this task the openness of the network proves to be essential, since it allows the development of new ideas and the gathering of the needed competences case by case. In this context, we think that the closed project structure of the ENIP network, with a fixed partnership defined from the beginning, has to be replaced by a more flexible structure, where participation to each activity can be defined case by case and barriers to access are much lowered. As a consequence, there should be a much clearer separation between the function of networking, think tanks and nurturing new ideas from one side, and the launch of specific indicators projects with a more restricted partnership and funded through different channels.

4) Finally, specific activities in PRIME should clearly follow a niche strategy where, firstly, there is a clear need for new indicators, secondly, there are specific competences available, and, thirdly, the domain is not already occupied by a specific institution or well covered by other funding instruments. The cases of higher education indicators and of public funding indicators are excellent examples of this strategy; we indicate below some other domains which are susceptible to be developed in the future. Large-scale production of indicators should not be a primary task of PRIME indicators projects.

These reflections lead us to two main suggestions for PRIME activities:

- Firstly, creating an European Network of Indicators Designers which would take charge of the networking and nurturing tasks.
- Secondly, launching in 2007 a dedicated PRIME call for new experimental projects concerning design of indicators in specific areas.

3.2 Creating an European Network Indicators Designers (ENID)

The European Network Indicators Designers (ENID) will have the tasks of promoting the reflection on the needs and design of new S&T indicators and will realize to this aim a number of networking and thinking activities largely based on the concept of positioning indicators and on the framework designed in the ESTIP paper.

ENID will be an open network of institutions in different European countries, which can freely adhere to it. ENID will have a coordinator chosen among its members. For sake of continuity, OST would be ready to assume this role for the next two years (2007-2008).

ENID itself will have no juridical personality nor own means and participation to it will not imply any financial duties for the participating institutions. Thus, ENID activities will be financed *à la carte* either by the participating institutions directly, either through other funding sources (including PRIME). Members are encouraged to propose activities to be developed in ENID, provided they dispose of the needed funds; all activities must be accessible to the members of the network.

3.3 ENID activity plan 2007-2008

For the years 2007-2008 following activities are foreseen and will be submitted for funding through PRIME:

- Organizing in 2008 (probably in Oslo) the 2nd PRIME indicators conference with a similar format and aims as the first one. Core domains will probably be the development of indicators for Eastern European countries and, in general, less developed countries from one side, the development of indicators concerning human resources, careers and researchers mobility to the other side. This will characterize the PRIME conference as clearly complementary to the CWTS/Leuven conference which is largely focused on bibliometrics and on the measure of technological outputs.

- Organizing in 2007 and 2008 the Indicators workshops at the PRIME annual conference with the aims of presenting on-going PRIME indicators activities, discussing new themes and interacting with stakeholders.
- Organizing in spring 2007 two exploratory workshops to allow for the preparation of project proposals for the dedicated PRIME indicators call (see below). These workshops will be organized on the basis of a letter of intent submitted to PRIME.
- Maintaining a network website as a development of the existing ENIP website (www.enip-europe.org). This website will provide information on on-going Indicators activity in PRIME (for example project results and publications), information on the network and the available competences and, finally, on new activities in the field (for example conferences and calls for papers).
- Maintaining an internal mailing list with an alert system on funding opportunities in the indicators field, for example concerning EU FP7 calls and DG research tenders in this field.
- Continuing the conceptual work of ESTIP in particular using the PRIME annual conference and next Indicators conference as opportunity for a collective sharing of views on these aspects.

3.4 Launching in PRIME a dedicated call concerning indicators

The positive experiences of ENIP-funding and AQUAMETH show that there is a specific room for PRIME in launching project devoted to the conceptual development, design and small-scale testing of STI indicators. Hence it is proposed to launch a dedicated call for these projects in spring 2007 (closure date June 2007). These projects are supposed to contribute to the development of new indicators in fields of specific policy relevance, to develop and test methodologies for producing them and to test them to a scale already significant to draw some policy conclusions. Among the domains which have emerged in PRIME and are not until now adequately covered we identify the following:

- Indicators to measure the integration of the European Research Area (as a complement to the ERA Dynamics project).
- Indicators of academic production in social sciences and humanities.
- Indicators concerning human resources and careers.

However, the call will be open to projects in other domains if they show an innovative character. Projects should last between 12 and 15 months and have a budget in the range of 40 to 60 keuros. We expect rather small projects with 4 to 6 partners and with a good mix between academic competences in the concerned field and competences in development and production of indicators.

The call should be launched in January 2007, with closure date in June 2007 and first date of begin of the projects in September 2007. Potential proposers will have time until End of March 2007 to ask for support for the organization of a project preparation workshop by submitting a letter of intent to PRIME (on a first come – first serve basis). The projects will be evaluated through the normal PRIME procedures.

4 References

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5 List of founding institutions

(to be completed after the PRIME indicators conference)

Institution	Represented by
Observatoire des Sciences et Techniques	Ghislaine Filliatreau

Proposed ENID coordinator for the period 2007-2008

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