
Spanish Observatory for Leveraging the Effects of Science (SOLES)

PROJECT LEADS

FECYT (Spanish Foundation for Science & Technology):

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OVERVIEW AND GOALS

The Spanish Foundation for Science and Technology (FECYT) is a public foundation under the Ministry of Economy and Competitiveness. The overarching goal of the SOLES project is to assess how to build, within Spain, a prototype Information System on Science Technology and Innovation (SICTI). The information system would be a feasible and flexible system which uses science to describe its investments and results. SOLES will focus on engaging the science funding community in developing a prototype data infrastructure that enables science funders to:

- Recognize the main strengths, weakness and evolution of the research system by the analysis of its investments.
- Recognize researchers, their groups and links by the description of the researcher activity.
- Improve management, credibility and communication to society regarding the Spanish State Science and Innovation Policy by identifying the results of public research.
- Visualize these descriptions so that they can be usable and transparent.

STRUCTURE OF PROJECT

SOLES is a collaboration between the Spanish Foundation for Science and Technology (FECYT), the American Institutes for Research (AIR), and the Spanish Secretary of State for R&D and Innovation. The pilot feasibility study will also count on the collaboration of three Universities and a public research organization (OPI).

The initial feasibility study consists of four activities:

1. Analysis of the potential of working with available grant data from key funding agencies to describe

- Spanish science, particularly by topic modeling the text data.
2. Evaluation of the potential of working with available information regarding financial and human resources at up to three research universities (that have currently adapted CVN - Curriculum Vitae Normalized standards and a public research organization, to capture information on the scientific workforce).
 3. Linkage of “research output” with researcher data. Output indicators will come from publicly available data and other data sources from the public research organization and the participant universities.
 4. Design interactive wireframes to guide the development of a science research portfolio visualization tool.

These activities will be accompanied by:

- Outreach to key universities, industry partners and professional associations across Spain to garner input and feedback.
- Engagement with the international community – notably the U.S., France, Norway, Australia and the European Union to ensure that what is being built is both consistent with and (to the extent possible) interoperable with the emerging international systems.

MAIN CHALLENGES

Two main challenges are expected:

- The first one is technical: how to link the researchers, their grants and their outcomes to provide a clear understanding of how the System of Science Technology and Innovation is working in Spain. The intuitive visualization of the information will help Spanish policy makers to identify strengths and weaknesses and of the system and develop approaches to improve it as a whole.
- The second one involves confidentiality and privacy concerns. In Spain, the Data Protection Law (LOPD, Ley Oficial de Protección de Datos) preserves the anonymity of the researcher’s name and other identifying disciplinary, employment and personal information issues. Although it is technically feasible to match researchers’ names and publicly available data on grants, patents and publications, it is not clear whether it goes beyond the limits of Spanish legislation.

NEXT STEPS

The SOLES project team is just getting started on the first project phase, in which they will work to assess what kind and quality of data is available within FECYT, the Ministry, and the collaborating research organizations.