

## Interview with Carmen Vela, Secretary of State for Research, Development and Innovation (SEIDI)



**Please, describe briefly the SEIDI in relation to its responsibility for public funding research.**

The main public body for research funding in Spain is the Ministry of Economy and Competitiveness, which counts on 2989 employees and is responsible for R&D&I, as well as the economy and trade. The Ministry is structured into three Secretariats of State, including the Secretariat of State for Research, Development and Innovation (SEIDI). The SEIDI's R&D&I responsibilities include coordinating Public Research Bodies (Organismos Públicos de Investigación - OPIs) and drafting calls for applications for research projects. Since December 2011, the person in charge of the SEIDI has been Carmen Vela Olmo. Nowadays, SEIDI has 361 employees.

In previous legislatures, responsibilities for R&D&I were covered in various ways, sometimes with a specific ministry solely for the field of science, at other times as part of the ministry for education, which sometimes also included universities and similar bodies. Currently, universities are coordinated by a ministry other than the one responsible for R&D&I coordination. Specifically, universities and primary and secondary schools are governed by the Ministry of Education, Culture and Sport.

The R&D&I investment budgeted in Spain for 2013 was EUR 13.052 billion, representing 1.24% of GDP. The difference compared to the European average (2%) is mainly due to private investment, which is barely 50% of the European average, the difference in public investment being smaller. The poor private investment in R&D&I is not a new problem in Spain, but the complex economic situation our country had been going through in recent years has affected companies and exacerbated the problem. The R&D&I investment budgeted in Spain for 2013 was EUR 13.052 billion, representing 1.24% of GDP. The difference compared to the European average (2%) is mainly due to private investment, which is barely 50% of the European average, the difference in public investment being smaller. The poor private investment in R&D&I is not a new problem in Spain, but the complex economic situation our country had been going through in recent years has affected companies and exacerbated the problem.

The Spanish Strategy for Science, Technology and Innovation 2013-2020 (hereafter, Strategy 2013-2020), a document defining the major objectives and areas of action of the government in R&D&I up to 2020, sets an investment target of 2% of GDP for the year 2020.

**Does the SEIDI, as the main body responsible for public R&D&I funding in Spain, specifically mention RRI in any of its programmes or strategies? If so, please describe the RRI issues that are addressed and the scale and organization of specific initiatives and mechanisms employed. If certain councils are opposed to recognizing RRI aspects in their funding decisions, please find out why this is the case.**

The term RRI does not explicitly appear in any of the main documents that regulate public R&D&I in Spain (2011 Science Act, Strategy 2013-2020 and State Plan 2013-2016). According to Carmen Vela, the reason for this is simple: when the Strategy and State Plan were drawn up in 2012, RRI was a largely underdeveloped term in Spain and its use by the EU was incipient.

However, the six concepts the EU considers key to RRI are well covered in these documents. In Vela's words:

'The fundamental concept of RRI, i.e., working for and on behalf of society, is at the core of our Strategy 2013-2020. This is its central pillar. When we outlined the draft, we saw society as its centre and thought about what R&D&I could do for it.'

Throughout Strategy 2013-2020, the State Plan 2013-2016 and in the Horizon 2020 programme, every effort has been made to have society as the central pillar, surrounded by science, innovation and research.

In addition, the Secretary of State expressed her intention to add a section on RRI, explicitly, in the next call for public funding applications for research projects. This section will require funding applicants to explain their approach to the six key concepts of RRI during the project development.

**Does the SEIDI, as the main body responsible for public funding R&D&I in Spain, implicitly mention RRI in any of its programmes or strategies? If so, please consider the following:**

- **Which are the implicit dimensions of RRI that can be identified (including, but not limited to, the RRI aspects that we identified in 1<sup>st</sup> round)?**
- **Which initiatives and mechanisms are used to enhance RRI (including, but not limited to, the policy instruments that we identified in 1<sup>st</sup> round specific mechanisms could include RRI related funding criteria, evaluation procedures, training activities etc.)?**

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- **Are RRI considerations related to specific techno-scientific areas, and if so, which?**

The 2011 Science Act, Strategy 2013-2020 and State Plan 2013-2016, the main R&D&I regulatory documents in Spain, implicitly contain key aspects of RRI.

As already mentioned in the previous question, society plays a central role in these documents as the principal beneficiary of scientific and technological research. In this context, the strategic lines of the Spanish R&D&I system and public funding are clearly geared towards solving the main challenges facing society. An example of this emphasis is the budget for research projects. Two thirds of the budget go to the so-called challenges programme: both research and company partnership challenges. Thus, since the 2011 Science Act was passed, more public resources have been assigned to solving society's problems through science and technology.

Although still not explicitly under the heading of RRI, research issues regarding ethics, gender and dissemination, among others, are considered. Answering these questions is an obligation for the researchers heading the projects.

For example, in the case of **gender**, quantitative information, such as the number of men and women involved in the project, is requested. Information of a more qualitative nature is also required, specifically, whether gender has an impact on the contents and results of the research.

Indeed, the SEIDI has a Women and Science Unit (UMyC), responsible for proposing and fostering the gender perspective in science, technology and innovation policies that affect gender equality. In particular, the UMyC is responsible for promoting proper implementation of the principle of gender mainstreaming in the fields of science, technology and innovation.

The SEIDI also encourages researcher training to raise their awareness and capacity in gender issues. So far, this training is being provided in OPIs. Thus, in 2014, the SEIDI initiated a programme for OPIs to simultaneously develop equality plans and committees or groups to promote gender equality in each of them. The Spanish National Research Council (CSIC) already has a Women and Science Committee, although this is related solely to research. For the CSIC equality plan another specific committee has been set up representing personnel involved in research in a wider sense, to include technical and administrative staff. At the same time, the SEIDI is working with the equality committees in the other OPIs. Supporting these committees to implement the equality measures agreed on with the respective OPIs is a goal for 2015.

In addition, the different **state equality plans** consider measures targeting R&D&I: the *Strategic Plan for Equal Opportunities 2014-2016* (PEIO) and the *Action Plan for Equality between Women and Men in the Information Society 2014-2017*. For example, some of the PEIO measures being implemented, among others, are:

- Overseeing the introduction of the gender perspective, as an aspect affecting all areas, in research, technology development and innovation.
- Creation of a joint working group with the Institute of Women, the Spanish National Evaluation and Prospection Agency (ANEP) and the Women and Science Unit of the Ministry for Economy and Competitiveness to develop an assessment body for gender projects.
- The Information System on Science, Technology and Innovation will collect, process and publicise the data, broken down by sex, and will include presence and productivity indicators.

In Europe, in the context of the GENDERNET project *Promoting gender equality in research institutions and the integration of the gender dimension in research contents*, the first gender ERA-NET in the 7PM, UMyC is an active member of the consortium that brings together national ministries, institutional representatives and other researcher-promoting agents from at least 11 countries to achieve the following goals:

- Meeting common challenges in research institutions in achieving gender equality in research and innovation.
- Contributing to the work of universities and research institutions throughout Europe promoting gender equality in research institutions and the gender dimension in research contents.
- Providing support for monitoring and coherent dissemination of progress with joint indicators to assess achievements and results.

Another key element of RRI reflected in the Spanish R&D&I documents which Carmen Vela wished to stress was **ethics**. The 2011 Science Act considers the creation of an independent Spanish Research Ethics Committee with advisory powers, whose function is to oversee professional ethics in scientific and technical research. The Secretary of State expressed her intention to implement it in the coming months. In any case, almost all the OPIs have their own ethics committees.

Vela highlighted other elements of the 2011 Science Act and Strategy 2013-2020, such as **open access** and scientific communication. In the framework of public **participation** and following an initial approach in the previous legislature through the creation of the Citizen's Agenda of Science and Innovation, the SEIDI is looking to involve society to the full in terms of both knowledge and participation.

With respect to the so-called **scientific education** in the European RRI strategy, a number of actions are being carried out to promote more **interest in science** through the Spanish Foundation for Science and Technology in conjunction with other private foundations. For example, the BBVA Foundation runs a programme based in the CSIC for 3-4-year-old children. And with "la Caixa" Foundation there is a programme for academically bright youths to spend summers at universities and public centres to undertake a two or three-week research project.

## What are the limitation and hurdles to stimulating RRI in the decisions public research funding bodies need to make? Which of these hurdles are structural and which are political, ideological or strategic?

According to the Secretary of State, one of the main hurdles facing the SEIDI in stimulating RRI in the research community, including fostering it through public research grants, is that drastic changes to the conditions for grants cannot be made from one year to the next. Indeed, there is a degree of inertia in applications, as research personnel do not always read terms and conditions in detail. Although the conditions for grants that detail key aspects of RRI, such as gender or the communication and dissemination of results, which research personnel must take into account when carrying out the project, **the changes introduced in the conditions for public grants have to be gradual.** According to Carmen Vela, in the context of the complex financial situation in Spain since 2008, the major change already achieved by the SEIDI and Ministry has only been possible through small steps. This is the case in making RRI explicit. **The idea is to include a general and explicit section with all RRI requirements in the conditions for grants,** and then make gradual changes to this section.

Another aspect requiring action is the lack of understanding among part of the Spanish scientific community that public communication and dissemination of results are an integral part of their work. In the case of communicating and disseminating research contents and results, for example, the SEIDI is going to great lengths to make this aspect effective, but this means making researchers aware of the task and its importance. The success of this key aspect of RRI, among others, lies in providing **good training in communication for the research community.**

‘If each researcher truly assumes responsibility for communication, we will have gone a long way.’

In addition, better education of the general public is also one of the SEIDI’s proposals in the context of **participation and promotion of science culture.** Although one-off actions have been attempted to encourage public involvement in R&D&I decision-making, such as the Citizens’ Agenda of Science and Innovation (which offered the public the opportunity to choose the main challenges Europe should meet with a view towards 2020), according to Carmen Vela, efforts should first focus on educating the general public to provide tools to give a critical, reasoned opinion when consulted on science and technology.

‘If you ask someone who doesn’t know, it’s all very nice on paper but it’s a waste of time; you won’t be able to follow their recommendations.’

‘We have a long way to go before committing this society to active participation.’

Thus, participation also involves making the public aware of their central role in the whole process. In the Strategy 2013-2020, science and technology should work towards the advancement of knowledge and to solve social problems and challenges.

‘The science and technology that we do not do for the citizenship is failed science.’

As the Secretary of State clarifies, doing science for the public does not mean favouring applied over basic research, as both are done for society:

‘Of course you have to generate knowledge, knowledge is also for the public. Whether applied or not, the aim is constant improvement. Knowledge to improve people’s lives.’

Another challenge to ensure RRI is fully developed is that it requires a **specific effort to ensure that different ministries or political structures work together** and this makes it more complex and time-consuming. For example, public research in Spain is mainly conducted by universities, but these are not coordinated by the Ministry of Economy and Competitiveness (which the SEIDI is a part of), but by the Ministry of Education, Culture and Sport. This means that RRI actions that impact on the career of researchers working at universities have to be conducted jointly by both ministries. Such action could include establishing **formal recognition of dissemination activities in researchers’ careers**, as specified in the Science Act, or ensuring that scientists and engineers receive **adequate RRI training**, among other measures. The same is also true for measures to promote **scientific interest**, for example, which require interaction with the ministry responsible for coordinating primary and secondary education.

Finally, Carmen Vela mentioned another obstacle, in this case related to publishing results in **open access (OA)** media. OA is included in the 2011 Science Act and is obligatory in state research projects. The scientific community has had no difficulty in presenting results in this kind of publication. Yet there is a certain problem because **currently various OA platforms are being generated, some headed by major international infrastructures**, such as CERN, which can attract some research sectors, creating imbalance between different countries, even within the EU. For this reason, Vela highlighted the sector-based nature that the open access field is acquiring.

### **What evidence is there that lessons have been learnt from other countries with respect to RRI, in the public decision-making on public funding for R&D&I in Spain? What is the influence of the EU’s promotion of RRI and the emphasis in orientation towards the H2020 challenges?**

The Strategy 2013-2020 shows close parallels to the European Union Horizon 2020 programme in matters of RRI. Indeed, the SEIDI has been highly involved in Horizon 2020 since 2012 and the Spanish strategy follows the same line. For example, the whole core for and on behalf of society was inspired by Horizon 2020.

Carmen Vela stressed that, from the beginning, being associated with Horizon 2020 was an opportunity that the SEIDI could not miss, for two main reasons: because Spain is in Europe and because it has never succeeded in obtaining a refund of its contribution to Europe.

‘Spain contributes about 9% and the most we have managed to get back on average in the 7<sup>th</sup> Framework Programme was 8.6%. And this was very good, because in the 6<sup>th</sup> Framework Programme it was 6.5%.’

‘In the current economic climate, we considered this was a task we had to prioritise.’

Spain has set the pace compared to some EU countries in certain measures. The most notable one is the Women and Science Unit mentioned above, existing since 2006, whose initial creation also involved Carmen Vela, although not through the SEIDI at that time. Most European countries still do not have such a body.

The end goal of these measures is to get the researchers themselves to incorporate the principles of RRI into their projects; making the key figures in R&D&I aware that they have a responsibility to work for society.

“Society is at the centre of science and technology development policies, but it is the responsibility of research personnel to seek out this commitment with society. The government should help the research community to feel committed and know how to make this commitment effective.”