

Interview with Enric Banda, head of the department of Science and Environment in “la Caixa” Banking Foundation



Please describe briefly the selected private research foundation, including its position in the overall national landscape for research and innovation funding, as a background for the following questions.

In terms of assets, “la Caixa” Banking Foundation (from now on, Obra Social “la Caixa” or OSLC) is the third largest foundation in the world, after the Bill & Melinda Gates Foundation and the Wellcome Trust.

OSLC is mainly dedicated to social and cultural programmes, science and the environment, and education and research. This Catalan foundation, with headquarters in Barcelona, has 14 centres, 9 of which are located in Catalonia and the rest in other autonomous communities: Madrid, the Balearic Islands, Aragon and Murcia. In 2014, the foundation’s budget stood at EUR 500 million. Of this amount, 13% (EUR 66 million) was allocated to environmental and science programmes and 7% (EUR 35 million) to education and research.

The foundation has always stood out due to its interest in fostering scientific research and the communication and dissemination of science. CosmoCaixa, in Barcelona, one of the most popular centres of the foundation, is a science museum and planetarium of international renown, dedicated mainly to the dissemination of scientific and technological knowledge. In addition to the CosmoCaixa in Barcelona, the other OSLC centres also help to carry out actions aimed at raising awareness of science in society.

As well as raising awareness of science, OSLC funds research projects through public tenders or in line with its own strategic research programmes, in collaboration with other institutions. The research funded and promoted by OSLC is basically centred on two lines of research: biomedicine and social sciences, although the entity is also interested in research in environmental issues.

As part of the task of compiling this present MoRRI (Res-AGorA) report, we interviewed Enric Banda, director of the Area of Science and the Environment of OSLC at the time of the

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interview. In addition to his role within the foundation, Banda has considerable professional experience in research, scientific policy and scientific communication. His recent role as president of Euroscience (from 2006 to 2012) is of particular note. Prior to this, he held different political positions within the Catalan Government, the Spanish Government, and the European Science Foundation, among others.

Among its different objectives, OSLC aims to strengthen the link between research and companies, i.e. to promote the transfer of knowledge from research. 'The companies have other entities who concentrate on this', Banda points out.

'We try to address what is known as the *Valley of Death*, which refers to the step between research and innovation (which is the company), where many difficulties can be found'.

From 2007 to 2014, OSLC invested EUR110 million in research programmes. According to Banda, in 2014 alone it invested EUR20 million. In some research lines, it is the entity itself that chooses the research area, while in others a public tender is opened on more general lines and researchers are free to present their own proposals.

For example, in biomedicine, it is essentially the foundation itself that determines the strategic research lines they wish to develop. One of its particularly strong lines is the study of infectious diseases. This clear commitment to advances in the study of certain pathologies can be seen, for example, in IrsiCaixa, the Institute for Aids Research created 20 years ago. Ever since then, the entity has continued to invest in this centre and the result is that today, two decades later, 'it is an institute that is recognised as one of the best in the world', in the words of Banda himself.

RecerCaixa is a funding programme that essentially promotes research in the field of social sciences (including some lines related to health). The entities eligible to apply for grants must be based in Catalonia, since this is a joint initiative promoted by the Catalan Association of Public Universities (ACUP). The ACUP is responsible for managing public tenders, organising the independent assessment of the projects, the monitoring of research projects, etc. The selection of projects is carried out through independent and external evaluation. While OSLC does not play any part in the selection of projects, it does have a say, alongside ACUP, in the definition of the main research lines for each edition.

From all the different actions carried out by OSLC in the Area of Science and the Environment, Enric Banda was particularly proud of the grants that the entity awards to researchers. These are grants given to individuals divided into two types: doctoral and postdoctoral.

The interviewee also wished to emphasise another set of actions that he considers to be very relevant; those that fall under the term 'science in society' or, as he himself corrected, 'that we should now refer to as science with and for society'. As well as the excellent platform which is CosmoCaixa, the oldest science museum in Barcelona (and an international benchmark in terms of size and number of visitors, types of activities, influence on other museum projects, etc.), the foundation also has a wide programme of activities that are developed by the foundation itself, or in collaboration with other entities, such as travelling exhibitions, scientific dissemination activities carried out in the foundation's centres in other cities that are not exclusively related to science, etc. This enables the foundation to reach an enormous amount of people.

In summary, and as Enric Banda explains, OSLC addresses scientific and technological issues along six different lines of action: biomedical research, research into social science, the transfer of knowledge, the environment, grants, and science in society.

Other sources (complementary to the interview):

- Annual Report 2013 <http://bit.ly/1zZzbkc>

Does the foundation explicitly target RRI in any of its funding instruments or strategies? If so, please describe the RRI issues that are addressed and the scale and organization of specific initiatives and mechanisms employed.

Enric Banda showed himself to be very familiar with and highly sensitive to the concept of RRI and its different dimensions. On his account, the concept of RRI is explicitly mentioned in different key documents of OSLC, such as, for example, in the annual tender of the RecerCaixa programme, under which grants are awarded for research in specific strategic lines.

Specifically, the preamble of the last RecerCaixa tender states that:

‘The European Commission has incorporated the concept of Responsible Research and Investigation (RRI) in an explicit way in its research policies, which refer to science, research and innovation in society. RecerCaixa is also committed to including this new democratising paradigm into research and innovation processes.’

The preamble also includes the following definition of RRI:

‘Investigation and Responsible Innovation also means that the different agents of society work together during the research and innovation process in order to align the process and the results with the values, needs and expectations of society.’

In this tender, RRI is not just included as a declaration of principles, but is, instead, a requirement when deciding whom grants should be awarded to. Given this, candidates are asked to explain how their research relates to RRI. As part of the external evaluation, OSLC asks the RRI dimensions of the proposals to be taken into account.

‘Details on how the project takes into account the dimensions of participation and involvement of the public, ethics, gender equality, scientific education and open access, and how the activities needed to address these dimensions will be developed, if applicable’.

According to the interviewee, the result of this measure has been positive given that most projects in the last tender included details on how they would address RRI in most of its dimensions.

On the other hand, Enric Banda explained that, recently, the Area of Science and the Environment of OSCL has embraced RRI as a beacon to follow:

‘RRI guides the foundation and helps us to know where to focus our efforts. I believe that this is a good ideological compass’.

While he recognises that no explicit agreement on RRI has been signed up to now for the grant programme for biomedicine projects, the Area of Science and the Environment does, however, emphasise that this will be achieved in the near future.

‘The groups with whom we have contractual relations are already tired of hearing me going on about RRI!’, Banda explained. ‘We believe that RRI is the future and will lead to the socialisation of science’.

As indicated above, Banda showed a great awareness of RRI issues. In his opinion, this is now an important need and researchers can no longer deny their social involvement, whether at a personal level, or through the centres in which they work, be they private or public:

‘In the public sector, it is difficult to forget that they are working for society, since their work is paid by citizens. And in the private sector, it comes down to a question of ethics’.

It is important to highlight the way in which OSCL is driving forward RRI by leading *RRI tools*, a project of the European Union’s 7th Framework Programme, which has been allocated EUR 7 million of funding and whose objective is to develop a set of digital resources to advocate, assemble, disseminate and implement RRI within the framework of the Horizon 2020 programme. The foundation knew from the word go that a philanthropic organisation like OSCL, with its highly established social character and its constant investment in research, would have to play a key role in RRI, both in terms of applying the concept within its own actions, as well as helping to build awareness of the concept internationally and to facilitate its integration in all policies and projects. As Banda explained, OSCL went to great efforts to create a strong and diverse consortium to cover all these possibilities.

‘Unfortunately, the scientific community is still unaware of this concept. At times, the stakeholders are more aware of what RRI is than the researchers themselves. But I think this is going to change very soon, because of the insistence of the term all over Europe, where it is being included in all tenders, for example. And that is what matters’.

Sources:

- <http://www.recercaixa.cat/ca/ConvocatoriaDAjutsALaRecerca/BasesDeLaConvocatoria2014/index.html>
- <http://www.rri-tools.eu/>

Does the foundation implicitly address RRI in its funding instruments 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 1st round)?**
- **Which initiatives and mechanisms are used to enhance RRI (including, but not limited to, the policy instruments that we identified in 1st round)?**
- **Are RRI considerations related to specific techno-scientific areas, and if so, which?**

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As well as mentioning RRI explicitly in some documents and instruments, OSLC makes implicit reference to the six dimensions of RRI in its calls for project funding and in its lines of action.

Public Engagement

Raising awareness of science in society has always been one of OSLC's main missions. CosmoCaixa in Barcelona is the foundation's main centre for the dissemination of scientific knowledge. The centre has permanent exhibitions, a planetarium and various auditoriums. It also hosts regular travelling exhibitions, talks and conferences, activities for different groups, with particular attention given to families, school activities, academic and specialised events, and so on.

From all the different activities on offer, Enric Banda wished to emphasise one of the exhibitions that has been incorporated recently. This is 'Top Science', a fixed space in the museum dedicated to exhibiting key research projects in order to raise awareness of them in society and to reflect the importance that science has for society. The space exhibits two research projects that will be replaced later in the year. Banda was keen to point out that:

In this space 'the researchers are the ones who explain to society what they are doing, how they are doing it, and what results they are obtaining. Moreover, visitors will also be faced with a series of questions since the exhibition involves citizens directly'.

Within the dimension of public engagement, it is also important to highlight OSLC's recent commitment to citizen science projects. On these lines, the foundation funds some projects of other entities and research institutes.

One of these is, for example, the *Saca la Lengua (stick your tongue out)* project; an initiative coordinated by the Centre for Genomic Regulation (CRG) with the collaboration of the Centre for Research in Environmental Epidemiology (CREAL), both belonging to the Barcelona Biomedical Research Park (PRBB), which aims to determine the different varieties of bacteria and fungi present in the oral microbiome and to discover if these are related to any specific environmental features or lifestyles. In order to achieve this objective, the study needed a significant sample size. It was thus decided to disseminate the research among secondary schools across the whole of Spain. After this dissemination period, *Saca la Lengua* now counts on the participation of 2000 students from all over the country.

Another example of citizen science activities is the *Atrapa el Tigre (catch the tiger)* project coordinated by the Movement Ecology Laboratory of the Blanes Centre for Advanced Studies-Spanish National Research Council (CEAB-CSIC), with the collaboration of different entities, including OSLC through its RecerCaixa programme. The project invites citizens to gather data on the presence of the tiger mosquito in Spain through the use of a mobile application. The objective of *Atrapa el Tigre* is to monitor the expansion of this invasive species across the country.

It is clear that this kind of project addresses other dimensions of RRI in an implicit way. In addition to the significant disseminating nature of the project (by aiming to foster the participation of citizens, which means raising awareness and understanding of the concepts, targets, methods, objectives and relevance of the research in question), there is also a clear intention here to awaken scientific vocations, for example. The project is also subject to

ethical questions, such as personal data protection in view of the information provided by the participants.

Scientific education

Enric Banda pointed out that OSLC has had a strong dimension of scientific education and a clear intention to awaken vocations among young people for many years now and well before the concept of RRI began to be discussed explicitly. For example, the exhibition 'Top Science' is defined as 'a space aimed at fostering scientific vocations' and the area managed by Banda is constantly involved in organising activities that counts on the participation of school groups of all ages.

Furthermore, OSLC also has a portal of free educational resources for all school levels (preschool, primary, secondary, high school). This is part of the EduCaixa project which includes a wide range of resources on science and technology as well as other cultural issues.

Open access

The publication of results in open access is mentioned in RecerCaixa tenders. Banda pointed out that everything which is funded by the foundation must be published in open access and he was particularly emphatic about this:

'If something is not Open Access, we are not interested in it'.

This is how it is referred to in the next tender:

'Publish the results in open access, preferably in the institutional digital repositories of Catalan universities or in the Catalan research repository Recercat, for scientists, potential users, or for the general public.'

Gender, ethics and governance

Although these three dimensions are included within the definition of RRI in the Recercaixa tender, the terms are not discussed in more detail in the rest of the document. Ethics and governance are also cited in the description of RRI which is available on the IrsiCaixa website. In fact, this centre has a Unit for the Dissemination of Biomedical Research which focuses on promoting compliance with the four dimensions of RRI: education, public engagement, ethics and governance. With regard to the last two, the following is specified:

'Ethics, in terms of involving citizens in the dialogue about the ethical, legal and social aspects of biomedical research and new technologies.'

'Governance, to create a framework that stimulates research and responsible innovation.'

However, in relation to governance, Enric Banda sees this dimension as one of the most difficult to achieve. In this sense, the interviewee recognises the need to promote RRI among policy makers and other stakeholders.

Sources:

- <http://agenda.obrasocial.lacaixa.es/es/-/top-ciencia?centros=cosmocaixa-barcelona>

- <http://www.sacalalengua.org/>
- <http://atrapaeltigre.com/web/>
- <http://www.irsicaixa.es/es/home>

What are considered the structural hindrances (including inertial) to stimulating RRI in funding decisions in the foundation?

According to Enric Banda, the main impediments that OSLC faces in the way of implementing RRI emerge from a certain degree of reticence of some key players, particularly due to their lack of knowledge or awareness of the term. In relation to the different responses to RRI:

‘When you talk about RRI in scientific circles you come across all kinds of responses, from incredulity (“what is that?”) to enthusiasm (“it was about time”).’

According to Banda, the scientific community is quite fairly divided on this matter and there still prevails some scepticism towards RRI issues. This is particularly evident in the older generations which grew up in a period in which science was still perceived as something on the margins of the rest of society.

‘Although I’m not at all sceptic, my generation tends to lean more on the sceptic side. Younger generations, by contrast, understand the different dimensions of RRI more easily.’

Having said that, the younger generations still ignore many aspects and it cannot be said that they conduct their research with a full awareness of their social responsibility. As a result of this, Banda considers it vital to raise awareness of the importance of RRI at all levels.

‘For those of us in Europe who are trying to popularise and disseminate the concept of RRI, we still have a long way to go.’

‘Right now, in a general sense, RRI is still an unknown concept in the academic world. And if there is little awareness of it there, then just imagine outside academia.’

The challenge is, thus, to raise awareness of RRI and to promote its implementation. For Enric Banda, this is not a completely unrealizable goal since there are success cases that support it, as is the case of some Nordic countries.

It is also important to highlight a degree of reticence in the business sector, even though some progress is being made. The interviewee recognised that during the process of innovation, in which new products are scrutinised, businesses do contemplate different aspects of RRI and, in this sense, business people do value these aspects. But aside from this, he believes that there is still a lot of work to be done.

In the academic field, the dissemination of RRI is easier. The field offers a more conducive environment for explaining the term and for ensuring that researchers understand it and adopt it. But even so, for Banda, what is important is that the adoption of RRI is included in the tenders of the Horizon 2020 programme, since a certain degree of scepticism still exists, as discussed above:

‘Many researchers believe that “this has nothing to do with me”, and think that what they research is not applicable to anything in particular, but is, rather, aimed at advancing the state of knowledge further.’

Despite this conception, held by some members of basic research centres which are not aimed initially at applicable purposes, the institutes in question still have their own policies in relation to equality, the dissemination of results, etc. Some of these policies are imposed by law and others by the statutes of the organisation to which the centre belongs. In any event, however basic the research is, the scientists involved are to some extent indebted to society and the centre where they carry out their research is conscious of this.

The expansion of RRI is, for Banda, a cultural transformation that requires understanding and time:

‘We are at the beginning of the beginning. We are talking about something that represents a cultural and generational shift. We need to give it time.’

For this reason, the director of the Area of Science and the Environment of OSLC highlighted that the most important aspect of RRI is public engagement.

‘It is really important that researchers know that we are not going to do anything behind society’s back. What we want to do is go beyond the barriers of knowledge that we have at the moment and we want to do away with all of that. And if we are talking about a case of innovation, RRI should help us to anticipate the negative results of a product or study.’

According to Banda, the transition towards RRI thus depends on making a greater effort in relation to public engagement with science:

‘The negative results of not making this effort will be the further widening of the gap between researchers and citizens. And if there is a gap, then we are on the wrong track. We need to break with this idea that we are in some sort of ivory tower.’