

Unite for science

If Europe wants to be at the forefront of scientific research it is essential for governments to find the means to improve collaboration and the distribution of innovation across Europe.

Governments around the world are heralding scientific research and development as key to economic recovery. However, how this is best developed into sustainable growth is under debate. Additional funding is not necessarily being provided but many governments are re-organizing how and where the money is spent.

In Europe one example of this is France; on 14 December 2009, President Sarkozy announced a €35 billion stimulus package for research¹; €11 billion has been allocated to universities and it is hoped that this will help to address the effects of a system that has long been neglected. As Alain Fuchs discusses in our interview², a principal goal of this is to create around 10 centres of excellence that facilitate interdisciplinary research and attract international researchers. The idea is in part based on a similar proposal for German universities that was rejected in 2004 (ref. 3). Nevertheless, it was agreed that between 2006 and 2011 an extra €1.9 billion of funding would be available, with most of this going to clusters of excellence — interdisciplinary groups working on related topics at a local level.

Spain is also re-organizing its resources. The head of Spain's Ministry of Science and Innovation, Cristina Garmendia, is at present working on reforms that should entice international researchers and make it easier for younger scientists to obtain permanent contracts. In the UK, the 2009 budget contained no extra money for research and no changes will take place until some time after the general election, which took place on 6 May 2010. Despite this, in March this year the government committed £270 million between 2010–2011 to a University Modernisation Fund partly aimed at generating an extra 20,000 university places in science, engineering and maths⁴. They also pledged £250 million to create a UK Centre for Medical Research and Innovation in the heart of London⁵ with the aim of securing the UK's position as a world leader in medical research. The project is a collaboration between the government, Cancer Research UK, the Wellcome Trust, University College London and the Medical Research Council.

As well as hard cash, most researchers would probably agree that two keys



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to producing the most interesting and fruitful science are interdisciplinary work and collaboration. European countries are in principle in a prime position to foster collaboration. The idea is not new; established in 1954, the European Organization for Nuclear Research (CERN) was one of the first European joint ventures. In practice however, each government tends to focus on its own national funding strategy rather than European programmes. It is crucial that the European Union (EU) plays an integral role in changing this attitude by providing the infrastructure and funding to do so.

At present there are various mechanisms in place to foster collaboration. The European Research Area (ERA) was created in 2000 to aid researcher mobility throughout Europe, making it easier for scientists to benefit from resources across the continent. It was hoped that this would allow coordination of research fields and collaboration ensuring Europe plays a significant role in tackling global issues such as climate change. However, because each member country has different laws, funding organizations and other institutions, the ERA has not yet become a reality. Earlier this year the European Competitive Council still felt that for economic growth it was essential that methods to promote mobility and improve working conditions for researchers must be derived and implemented at both national and European level⁶.

The European Framework Programmes for Research and Technological Development are the EU's main mechanism for funding research. They support projects within a number of subject themes set out by the Commission. At the moment funding is being regulated under Framework Programme 7 (FP7), which runs until 2013

providing just over €50 billion. Much of the money is distributed to cooperation programmes involving several principle investigators in various countries. The administration for the participants is however, extremely extensive. Recipients must produce detailed documents describing how the money has been spent and explaining why aspects of the proposal may have changed.

Under FP7 the European Research Council (ERC) was established. With a total budget of €7.5 billion, the aim of this is to fund 'frontier research' in areas deemed important by scientists themselves. It asks that scientists be bold in their proposals, which are awarded based on scientific excellence. The ERC is generally felt to be a success, and on stepping down from his position as its first chair Fotis Kafatos stated that he was proud of the organization. Nevertheless, he added that many of the rules and regulations imposed by the Commission are hampering progress. This echoes the first independent review of the ERC published last year⁷. Following that, the European Commission is at present recruiting a new director of its Executive Agency who should aim to break down the bureaucratic barriers that are believed to hinder the ERC's development.

Perhaps the newest mechanism to promote collaboration is the EU 2020 strategy. Launched in March 2010, the strategy aims for 3% of Europe's gross domestic product to be invested in research and innovation by 2020. However, alongside the creation of the ERA, this target was originally set in 2000 and is still far from reality. A person with a significant role in guaranteeing success this time round is Máire Geoghegan-Quinn, Europe's recently appointed Commissioner for Science, Innovation and Research. As talks begin on FP8, the new minister needs to secure funding, dispel the bureaucracy and ensure each nation commits to collaboration. Let's hope she's up to the job. □

References

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