

# Science without frontiers? a European Research Area

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Commissioner Busquin and his colleagues believe the concept, dubbed the 'European Research Area', will enable scientific resources to be shared across Europe, ultimately creating jobs and increasing Europe's competitiveness. The policy is hoped to give fresh impetus to European research and stimulate industry.

'The 21st century will be the century of science and technology', proclaims the communication, yet, it continues, the fact that Europe is not yet fully exploiting its potential in this area is grave cause for concern:

'Without concerted action, the current trend could lead to a loss of growth and competitiveness in an increasingly global economy. The leeway to be made up on the other technological powers in the world will grow still further. And Europe might not successfully achieve the transition to a knowledge-based economy...More than ever, investing in research and technology development offers the most promise for the future.'

'If we are not at the forefront of knowledge then we are in decline' said Commissioner Busquin recently. For the EU to become a 'world leader' in scientific and technological research, it is essential to develop a common European research policy, he says.

The communication underlines this point, saying: 'If technological progress creates the jobs of tomorrow, it is research, which creates the jobs of the day after tomorrow'.

But the average research effort in the EU is currently only 1.8% of Europe's GDP (compared with 2.8% in the USA and 2.9% in Japan) and European research looks fragmented and insufficiently coordinated, with the EU's Fifth RTD Framework Programme representing only 5.4% of research funding in Europe and national research programmes focusing inwards towards domestic priorities, according to the communication.

'National research policy and Union policy overlap without forming a coherent whole' says the communication, which warns that the situation will not improve with enlargement: 'It opens the prospect of a Europe of 25 or 30 countries which will not be able to operate with the methods used so far.'

'This fragmentation, isolation and compartmentalisation of national research efforts and systems and the disparity of regulatory and administrative systems only serve to compound the impact of lower global investment in knowledge.'

For this reason, the communication calls for special attention to be given to networking Europe's best scientific resources and developing a European approach to large research infrastructures and better coordination and mobility of researchers.

What Europe needs, Commissioner Busquin now urges, is a European research policy that is not restricted to the management of a Framework Programme and that is linked with employment policy and with the knowledge and learning society.

The communication therefore suggests the following avenues for progress:

- Networking of existing centres of excellence in Europe and the creation of virtual centres through the use of new interactive communication tools;
- A common approach to the needs and means of financing large research facilities in Europe;
- More coherent implementation of national and European research activities and closer relations between the various organisations involved in scientific and technological cooperation in Europe;
- Better use of instruments and resources to encourage investment in research and innovation; systems of indirect aid, patents, and risk capital;
- Establishment of a common system of scientific and technical reference for the implementation of policies;
- More abundant and more mobile human resources through:
  - Greater mobility of researchers and the introduction of a European dimension to scientific careers;
  - More prominence to the place and role of women in research;

- - Stimulating young people's research and careers in science;
- Greater European cohesion in research based on the best experiences of knowledge transfer at regional and local levels and on the role of the regions in European research efforts;
- Bringing together the scientific communities, companies and researchers of Western and Eastern Europe;
- Improving the attraction of Europe for researchers from the rest of the world;
- Promotion of common social and ethical values in scientific and technological matters.

Busquin sees the European Commission playing the coordinating role in the pursuit of his vision of the common Research Area and is urging the Member States to open up their national research programmes to non-nationals. He particularly wants to map out Europe's research tools and expertise, so that appropriate investments are made to meet different regions' RTD needs and to assist researchers in finding their most useful research partners. A framework for the issues associated with better coordination of research facilities in Europe could be put in place at the European Commission and European Science Foundation conference on the topic, scheduled to be held in Strasbourg in the second half of this year.

The communication also calls for closer relations between European organisations for scientific and technological cooperation (such as Eureka, ESF, ESA, CERN, COST and so on) suggesting this could be achieved by way of a council of senior officials meeting at regular intervals.

The European Commission's Joint Research Centre could also evolve further to play an important role in setting up a common scientific and technological reference system.

All this would be combined with measures to promote spin-offs from research such as action on patents and easier access to risk capital. A forthcoming Commission communication on action on patents will be crucial for achieving a Community patent offering protection of innovation, believes Commissioner Busquin.

'It is important for research in Europe for the European patent to be started up as soon as possible. It must be readily affordable and comparable in cost to a European patent covering a limited number of countries', reads the communication, continuing:

'To increase the impact of research efforts undertaken in Europe in terms of innovation, the relevance and consistency of the intellectual property arrangements used to implement public research programmes should also be improved.' Measures could also be taken to protect intellectual property by other means with information systems and systems for exchange of good practices in this field put in place by national and European support organisation for research and development.

Commissioner Busquin is also particularly concerned about European citizen's apparent apathy towards science. School leavers persistently shy away from careers in the sciences, for example, despite their high expectations that science and technology will shape the lives ahead of them and the fact that science and technology accounts for 25-50% of economic growth. Those that do follow careers in science often carry their expertise out of Europe, contributing to the 'brain drain' that creams off the EU's most promising scientific talent. For example, the number of degree level European students in the United States is twice as high as the number of American students at that level in Europe, according to statistics presented in the communication: '50% of Europeans studying for a doctorate in the United States stay there for long periods, sometimes for ever' it reveals.

Despite these barriers, a Eurobarometer opinion poll finds that 70% of Europeans expect Europe to play an active role in shaping future research. In this case, says the Commission, Member States will need to look beyond their borders to exploit their research potential fully.

'The situation is urgent', the communication warns. 'Without a coordinated impulse and a determined effort to increase and better organise the European research effort, Europe might compromise its chances of taking full advantage of the potential offered by the transition to a knowledge-based economy and society.'

Commissioner Busquin believes that the Framework Programme should remain the financial instrument for implementing the Union's research policy. The Sixth RTD Framework Programme will need to be completely rethought if the concept of the European Research Area is pursued. However, there must first be a broad based debate among the European institutions, the scientific community, industry and European citizens, says the communication. The results of the five-year assessment of the Framework Programme and the specific programmes, will also be available by mid-year and will be used as a basis for discussion of the Sixth Framework Programme and for the first discussions on the common Research Area.

Commissioner Busquin wants to open the debate on European research to as many people as possible, with discussions not only on how best to implement the policy, but also on controversial emotive issues in science. To assist the debate, the communication is available electronically from:

<http://europa.eu.int/comm/research/area.html> 

Comments are invited on its content during the first part of this year and, except where requests for confidentiality are made, these comments will be made public in an on-line debate.

The Commission now wants an examination and discussion of the communication by the European Parliament. It will be first examined by Research Ministers at an informal meeting in Lisbon on 6 March. Leading scientists will be able to discuss the communication the following day and it will be presented as part of the Commission's contribution to the European jobs summit in Lisbon later that month. If all goes according to plan, the Commission should be able to invite the Research Council in June to approve the beginning of work on each of the communication's themes.

'The idea is not novel, but the conditions required to start moving on it now seem to be in place', the communication suggests.

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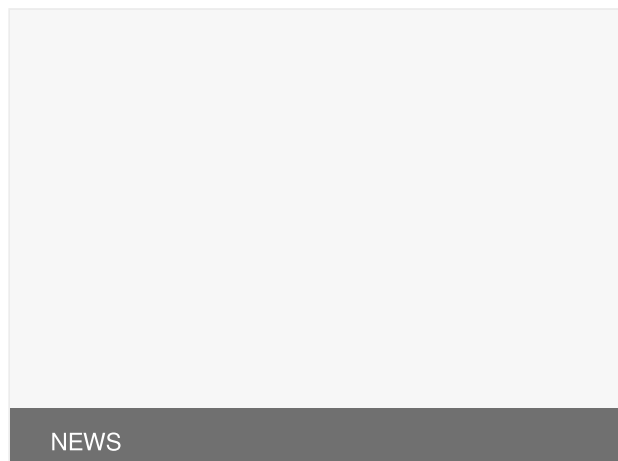


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