A Better Future for European Science?

Let's face it: The proposal for the sixth European R&D Framework Program by research Commissioner Philippe Busquin* could have been a lot worse. In fact, if it survives the scrutiny of the Council of Ministers and sails through the European Parliament without too much damage, it will offer substantial benefit for science policy in Europe.

These are big ifs, admittedly. For one thing, industry and the business sector do not seem overenthusiastic because they see too much emphasis on basic research. The constituency in the science and engineering community that has become dependent on previous framework programs may feel left out in the cold, and the traditional peddlers of national interest may feel deprived of power to guide the commission in the "right direction." If the history of the previous programs is any guide, all this may lead to substantial changes in the present proposal during the upcoming wrestling matches between special interest groups.

But as it stands, the proposal delivers on the promise of Busquin's vision of a European Research Area (ERA).† The existing science system in Europe is a collection of jealously guarded national systems, resulting in a lot of waste and undue fragmentation. Europe should spend more public money on science to compete, but it must also use the available financial resources and talent much more effectively than it does now. In formulating the ERA, Busquin demonstrated the urgency of the problem and presented an outline for a solution. The new framework proposal aims to bring this ERA closer to reality. For example, collaboration between national R&D organizations is to be strengthened to overcome the competitive disadvantages of the science system in Europe. The objectives of the Framework Program will thus be reoriented from promoting collaboration among individual scientists to promoting collaboration among research organizations. The ideas are still vague and lack operational specificity, but the opportunity to build on these modest beginnings should be taken up. Collaboration between research councils can take various forms. For example, the European Science Foundation has introduced the EUROCORES mechanism, directed at joint planning and execution of bottom-up research programs.‡ Such concepts should be expanded to include joint planning and investment in research infrastructure. The new plan offers European Union (EU) support for such activities. In doing so, it recognizes the limited ability of the EU's bureaucracy to micromanage programs. Such courageous recognition is a necessary condition for improvement.

The Framework Program proposal is a step in the right direction.

Industry and commerce should welcome the plan because it is directed at improving the European science system, which will lead to better science and better scientists and engineers. Europe's competitiveness depends on the effective transfer of ideas from generation to commercial application and exploitation in new and existing companies; this transfer in turn depends entirely on the quality of the people we educate and train in our higher education system. Especially in fast-moving areas of science, where the rate of discovery cannot be transmitted in the traditional education chain, it is vital that scientists and engineers have firsthand experience at these new frontiers. Creative and effective application of technology in new products and services must be supported by entrepreneurial skills in recognizing opportunities and marketing products. Science and technology policy, whether at the national or European level, should be directed at creating the conditions to achieve and sustain this dynamic. The present proposal shows that this has been recognized, as it emphasizes the need and promises to support collaboration between science and industry.

At the Lisbon summit in March 2000, the EU government leaders requested from the European Commission a proposal for a program that can assist and stimulate the emergence of a creative and entrepreneurial spirit in the European research and innovation system. To achieve that, issues of mobility, patenting, taxation, competition, and collaboration will have to be tackled. Most of these issues are outside the responsibilities of the Commissioner for Research, but the present Framework Program proposal is a step in the right direction. The fate of the proposal in the coming months will be an interesting test of the political commitment to a change in European R&D policy. Let us see what remains by the end of this year.

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Proposal for a Decision of the European Parliament and of the Council Concerning the Multiannual Framework Programme 2002–2006* (COM 94 Final, 2001); R. Koenig, *Science* **291, 1676 (2001). †*Towards a European Research Area. Communication from the Commission to the Council, the European Parliament, the Economic and Social Committee and the Committee of the Regions* (COM 6, 2000). ‡See www.esf.org/about/eurocores/htm.