



The Voice of Research on Europe

## A EUROSCIENCE POSITION PAPER



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EUROSCIENCE'S POSITION ON THE HORIZON 2020 -  
THE EU FRAMEWORK FOR RESEARCH AND INNOVATION



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## ON HORIZON 2020: THE CHALLENGE IS LIVING UP TO EXPECTATIONS

**Euroscience strongly welcomes Horizon 2020 and sees considerable promise along with improvements on past practices. We do, naturally, also have some substantive suggestions and some significant criticisms to offer as well.** Also, much will depend on the way it will be implemented. But the European Commission's proposal for the new 7-year and 88 billion € Framework Programme 2014-2020 for Research and Innovation, Horizon 2020, is a courageous attempt to shed some of the old ways that have increasingly troubled the successive Framework Programmes. Loaded with too many objectives, insufficiently sensitive of what really is best done at the European level, and implemented through ever-changing and increasingly complex mechanisms, the Framework Programmes had become examples of something European researchers needed because of national funding shortages, yet feared for their bureaucracy.

The Commission has now pulled together the Framework Programme for Research and Technological Development and the Competitiveness and Innovation Framework Programme in the proposed Horizon 2020 Programme. The new programme is, at least in theory, much more concentrated. Excellent Science is the first focus with the European Research Council, Future and Emerging Technologies, the Marie Curie actions and Research Infrastructures as four subthemes. Industrial Leadership is the second area with a focus on leadership in enabling and industrial technologies, access to Risk Finance, and Innovation in SMEs. Six Societal Challenges are the target of the third part, with Sustainable

Development as the (somewhat artificial) overarching objective: it is even stated that 60% of the total Horizon 2020 budget will be related to Sustainable Development. The European Institute for Innovation and Technology, EIT, will be fully integrated in the Horizon 2020 actions: it is specified which parts of the budgets for Societal Challenges and for Industrial Leadership are to be spent by the EIT. 'Cohesion' no longer is a goal of Horizon 2020; instead building up capacities (human resources, institutions, infrastructures) in regions which lag in economic development are to be squarely addressed by the Structural Funds which in the future should be much more transparent and focused. Simplifying access and management, long anticipated by researchers, universities, research institutes, companies and also advocated on several occasions by Euroscience, is being addressed with some concrete measures. A broad and seamless approach to innovation, a stronger participation of SMEs, international cooperation and completion of the European Research Area are other intentions expressed, some with specific proposals such as the 'SBIR'-like approach addressing the involvement of SMEs, while others are more general in nature.

All this could yield important improvements. Euroscience wishes to underscore and elaborate on some of them. But there are also areas where further thoughts are necessary or opportunities are missed.

Euroscience supports the considerable increase in the budget of the ERC. As this is one of the most crucial areas for funding at a European level, more could have been possible. One way of doing this would be to abandon the programme for Future and Emerging Technologies which sits uneasily between the ERC and the Enabling and Industrial Technologies and seems to be an instance of not being able to stop something that more reflected some internal interests than a programme really demarcated from others. The current similar programme on future and emerging ICT demonstrates the amount of duplication with the 'normal' ICT programmes and ERC projects in ICT. It will not be different for nanotechnology or biotechnology. Its budget could be shared between the ERC and the Enabling and Industrial Technologies. Euroscience wishes to underline as well, however, that the arguments of the Commission, the Member States and the ERC itself, to not establish the ERC as a genuinely independent organisation where the President and the Secretary-General would be, within the mandate given, fully responsible for all ERC matters and not just for the scientific programme and safeguarding quality. Keeping financial matters and procedures and accountability in a separate EU Executive Agency is very strange and unprecedented. It is a golden opportunity missed.

Euroscience applauds the concentration on six societal challenges, and the significant increase in their budgets to 4 to 9 billion € each. The real problem will be now to avoid fragmentation in their implementation and to find relatively simple ways of involving large research institutes in the Member States, next to researchers in universities and often companies. This would effectively bring more coordination with

national budgets. As we will mention later a bolder approach would be warranted.

As regards the involvement of SMEs, one may wonder what the impact of the small (0.7 billion €) programme for innovation in SMEs can be. The far more important thing is that parts of the budgets for Enabling and Industrial Technologies and for the Societal Challenges will be spent very much like the Small Business Innovation Research (SBIR) programme in the US. By allowing individual companies to submit projects for innovative developments to tackle societal challenges or contribute to enabling technologies, a major hurdle for SMEs may have been removed. Euroscience thinks that it is a good and realistic approach to concentrate participation of SMEs in the first place on this instrument. The Commission expects this to result in a 15% participation of SMEs.

Euroscience regrets that Horizon 2020 does not seem to provide significant co-funding for new European Research Infrastructures: the language is appropriately vague ("to ensure the implementation and operation of the ESFRI and other infrastructures") but the budget (2.8 billion € compared to 1.8 billion € in FP7) does not seem to leave open any other conclusion. Most, if not all of that money will be needed to continue with supporting access to existing facilities, coordination and some funding for design studies. If one takes into account that the Commission deliberately leaves out of the Horizon 2020 programme the European funding for two major initiatives, both representing key European strongholds, (the International Thermonuclear Energy Reactor ITER and the Global Monitoring for Environment and Security GMES), one seems to understand why the

Commission is so reluctant. For the argument is that these infrastructures will always suffer from budget and time overruns, and thus would threaten the funding of other research programmes when brought into the Framework Programme. As a consequence the Member States are requested to provide additional funding for ITER and GMES which will not only be difficult but also is a real risk for the genuine European approach that has been one of the critical success factors for nuclear fusion and for the monitoring satellites. If the Commission would do what Euroscience has proposed on many occasions and create a European pot for co-funding (large) research facilities, the simple requirements that any cost overruns and delays have to be dealt with within that European pot just means that a cost overrun implies that the next facility will be co-funded later. Nothing else will be affected.

In surprising contrast is the huge boost for the European Institute of Innovation and Technology. Its budget would be ten times its initial budget of 300 million €. Six more Knowledge and Innovation Communities are to be formed, but for Euroscience it is obvious that the KICs will have to change tack. So far not much real research and innovation has been carried out partly because companies and universities in the current KICs have been slow to provide the money. More EU money may be the trigger to achieve this but requires a partial re-think of the EIT and KIC concept. This is also needed in light of the critical evaluation from early 2011, before approving a steep budget hike. Half of the funding for the EIT is destined to come from the budgets for Societal Challenges and the Enabling and Industrial Technologies. That is fine: it shows that the EIT is just one

instrument, together with others for addressing such priorities.

Euroscience is less satisfied with the proposals on international collaboration. Horizon 2020 states that the Societal Challenges and the Enabling and Industrial Technologies will provide the context too for international collaboration and mentions examples such as the Human Frontier Research Programme or the International Panel on Climate Change IPCC. Euroscience supports this but having said that, the proposals and the budgets do not reflect any ambition or selectivity. It is hard to see which country (except for the Antarctic continent) is not covered by the three groupings proposed (industrialised and emerging, enlargement and neighbourhood, and developing countries). Euroscience would expect the Commission to develop a much more strategic approach to international cooperation, along the lines of science diplomacy and use the power of scientific cooperation to better position Europe on the world stage.

More work definitely is needed on the implementation of Horizon 2020. There are three different aspects to this.

- Simplification of procedures, including audits is on its way, and Horizon 2020 proposes to take further steps, which Euroscience applauds. But one specific target mentioned, a reduction of 100 days in the time to grant, addresses only one step in a long procedure from submitting a proposal to signing the contract. It is moreover not exceptionally ambitious as the current average is reported to be one year.
- Secondly, the Commission proposes to continue to use executive agencies. No details are given, except for the ERC. One other example is the Research Executive Agency which administers a rather haphazard set of programmes

and for many is in no way better than the previous situation where DG Research was responsible for the administration. Moreover, if Euroscience is correctly interpreting persistent rumours, for example that DGINFSO is considering setting up its own Executive Agency, we run the risk of a proliferation of this sort of agency. What is needed is a more systematic approach that does justice to the difference between running a SBIR-like programme, a risk finance programme or a programme for longer-term research. Also a closer look at how several national research funding agencies have found efficient ways to run their programmes is warranted.

- Thirdly, the brooms should sweep through the various organisations and consortia of research organisations and/or companies that have been formed over the years. The Commission seems to want to keep them all: Innovation Partnerships, Joint Technology Initiatives, Technology Platforms, KICs, Joint Programmes, the STEP organisation for strategic energy technologies, the EERA group of research organisations in that context, etc. There are not only too many of them; they mostly turn into totally unwieldy structures. However, the fact that the Commission adds after JTIs: “or more-fit-for-purpose structures”, provides perhaps some hope for simplification also in this respect.

**Finally, Euroscience wishes to underline the importance of ethical and research integrity issues. We understand that in a brief document not everything can be mentioned, but these are two vitally important aspects of the research and innovation enterprise, and key in the ongoing debates between science and society. They deserve to play a much more prominent role in the shaping of the Horizon 2020 programme. A simple and effective way of doing this is by having all institutional participants in the programme to certify that they have ethical and integrity policies.**

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This position paper was produced by the Governing Board of Euroscience, in consultation with its members, under the direction of Dr. Peter Tindemans.

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