Ministry for Education and Science Ministry of Industry

In Preparation of the Seventh Framework Programme for Research and Innovation – Swedish Preliminary Views

Research and Innovation and the Lisbon Goal

The qualitative and quantitative strengthening of European research and innovation is fundamentally important to the ambition to make Europe the world's most competitive and dynamic knowledge-based economy by 2010.

The European Commission has by its Communication "Science and Technology, the Key to Europe's future – Guidelines for Future European Union Policy to Support Research" set a number of strategic objectives on the agenda for debate and for action.

The Communication covers all the most relevant aspects for the development of European policies in this area and it makes a strong case for the further strengthening of the Framework Programme for Research and Innovation, the single most important tool for the creation of the European Research Area.

In this contribution to the European political debate, we will limit ourselves to those aspects with relevance to the preparation of the Seventh Framework Programme, which we consider most important at this stage of the process.

The basic structure for the next Framework programme is vital to the task of communicating to European stakeholders and to the public the European value added in the European Union activities in Research and Innovation.

We are inclined to share the belief argued by others, that this structure should very clearly reflect three main objectives of European policies – the support of basic research, of industrial research and of policy driven research. Each of these is characterized by its primary stakeholders, but must be developed and implemented with full regard to the mutual relevance and to the potentials for interaction. At the heart of European Union policies in this area there must also be strong support for dissemination of knowledge. Regardless of where, by whom or to what end research is being conducted, the question of how the new knowledge will be disseminated to the users must always be answered.

In any single research project, there are by definition a number of very privileged stakeholders with immediate access to all information. To the extent that this is motivated by legitimate concerns for industrial competitiveness or security, it must be respected. But in all other cases, strong measures must be taken to share the results of the common research efforts with all those who might benefit from them.

In this context, we would like to raise another issue concerning the role of the universities in the development of the European research area. Because of the dual role of the universities – as performers of research within the Framework Programmes and as vital organisations for education and dissemination, a case could be made to fund academic participation i EU projects at the full economic cost.

International cooperation is fundamental to the scientific enterprise and the international dimension in European research policies should be strengthened. Both research and industry in Europe will gain from co-operation with countries outside of Europe. The development and implementation of a comprehensive policy for international cooperation should therefore become an integral part of the Seventh Framework Programme.

Basic research

The European-level debate on basic research has developed very satisfactorily during recent years. Strong and capable action from the European Commission during the year 2004 together with an explicit support from a very large majority of Member States has brought this vital issue to a point of near fulfilment.

Among the many arguments made for a strong European-level support to basic research, we would like to underline two of them. Scientific excellence is a prerequisite for progress and prosperity in Europe. The science driven research, or basic research, has an unequalled role in promoting quality and opening new frontiers in research.

The funding system for basic research developed at the national level in most countries during the last fifty years has had a fundamental role in this. By providing funding on the basis of competition, with excellence as the sole criterion, and by letting the scientific society take full responsibility in the decision making through the peer review mechanisms, excellent science has been produced.

Europe has, however, one very important weakness. No single European state can provide a base for selection through competition by far as broad and as strong as the USA. Europe should take up this challenge. The second argument is basically a political one. The concept of the European Research Area can hardly be considered fully developed and implemented as long as basic research is effectively being left outside the political measures taken to realize it.

The creation of a strong mechanism for specific funding of basic research – the European Research Council – is now an unavoidable and very promising consequence of the political process. It signals to the scientific society as well as to industry that the European Union will do what it takes to create globally attractive environments for research.

We would like to make three observations regarding the ongoing work of making operational the political ambition that has been expressed during 2004 by the Competition Ministers Council as well as by the European Council.

The first two concern the creation of the European Research Council. Regardless of the legal form of this organization, we think it is vitally important that a Governing council, composed by eminent scientists with strong credibility in the scientific community, is given full responsibility for all E R C activities, within the framework of European legislation.

The second concerns the scope of the E R C. When the E R C is set up, it should be explicitly stated that its activities shall cover the whole field of science – natural sciences as well as humanities, technology as well as social sciences. In this context, the potential, and the need, for multidisciplinary research should also be stressed.

Finally, the financial resources for basic research are bound to attract much interest when the Seventh Framework Programme finally is settled. It is still too early to dwell to deeply on budgetary matters at this stage. One basic observation is, however, justified. Taking into consideration the task and the scope of the E R C, anything less than a funding capacity surpassing that of the biggest national research councils in Europe would be insufficient.

Technology initiatives

The 3 % goal for investment in research and innovation is important for Europe. In order to reach that goal and to increase the competitiveness of Europe, the European Union must support and stimulate industry to focus on research and innovation. Industry should be encouraged to cooperate with each other and with universities and institutes to a greater extent.

As the idea has been presented by the Commission, the Technology Initiatives or Technology Platforms are defined as very large scale, industry driven projects with a high potential for sustainability, for example benefits from renewal of forestry resources as well as projects in socially supported areas like transport and in areas which need standardisation, like telecom.

It is necessary, however, also to stress the need for initiatives and tools

on the same scale and of the same kind in areas where the European – and indeed the global – society faces major challenges. We are referring to the need for concerted actions in the fields of for example environment and climate change, migration, and the ageing population. These are challenges of considerable interest also to industry. Industry can be expected to participate but cannot be expected to be the driving force.

If Technology Initiatives are defined exclusively in the way they have up till now, an answer must be provided how these other challenges should be met.

Furthermore, a comprehensive description on the decision making process is still lacking. Recently, a large number of ideas have been presented. We wonder whether this list is exclusive or if there will be room for other ideas, which will be maturing at a later stage.

Finally, there must be a possibility to evaluate Technology Initiatives. A mechanism for change must be presented which makes it possible to step down from the activity when judged unsuccessful.

Small and Medium Sized Enterprises

The small and medium sized enterprises, particularly those with research capabilities, must be given ample opportunities to participate in the research programme. The SME:s plays an important role in the development of the European economy. A simple mechanism for cooperation is of great importance in order to give the SME:s an opportunity to participate in the different forms of cooperation within Europe's research and innovation tasks.

A support mechanism, like the one used in the United States (the SBIR programme), reformed to suit Europe, could be a way of solving the low participation of SME:s in the Framework Programme. Sweden would like to volunteer in a group discussing this issue. The experiences from the United States show that small companies with capacity to perform qualitative research are complementary to universities and research institutes to find new knowledge and new technologies.

Science and society

There is a risk that Research at the national as well as the European level becomes a matter primarily for academia, industry and the political decision makers.

A strong case can be made for further developing the activities within the theme Science in the Society in the Framework programs. The promotion of public understanding and sympathy for science set the conditions for finance as well as for recruitment to science.

Europe of 25

The recent, historical enlargement of the European Union holds great promise to the Union but also involves great challenges. In the area of Research and Innovation, an active engagement of the new Member States is fundamental to the accomplishment of the Lisbon objectives and the Barcelona targets.

For this reason, we would like to underline the importance of methodical and powerful measures in order to encourage industry as well as academia to speed up and streamline the integration of the new Member States in the European Research Area and the activities within the Framework Programme.

Infrastructure

Promoting infrastructure needs both cooperation among several partners and huge investments. It is important that we debate and act on the development of infrastructure for science and high technology at the European level.

Particularly through ESFRI there has been a sound development in this area during the last years. When policies develop further it is important to stress that the term infrastructure does not only involve the technical areas but is also important for the humanities and social sciences.