

## **THE FUTURE OF SCIENCE AND TECHNOLOGY IN EUROPE - Council conclusions**

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The Council adopted the following conclusions:

"THE COUNCIL OF THE EUROPEAN UNION,

RECALLING

- (1) Its Resolutions of 15 June 2000 on "Establishing a European Area of Research and Innovation"; of 16 November 2000 on "Making a reality of the European Area of Research and Innovation"; of 22 September 2003 on "Investing in Research for European Growth and Competitiveness"; of 4 December 2006 on "A broad-based innovation strategy: strategic priorities for action at EU level"; and the decision No 1982/2006/EC of the European Parliament and of the Council of 18 December 2006 concerning the Seventh Framework Programme of the European Community for research, technological development and demonstration activities (2007-2013);
- (2) Its conclusions<sup>1</sup> of 18 April 2005 on reinforcing human resources in science and technology in the European Research Area which, inter alia, "welcomed (as voluntary instruments) the Commission Recommendation of 11 March 2005 on the European Charter for Researchers and on a Code of Conduct for the Recruitment of Researchers."
- (3) The informal European Council meeting at Hampton Court on 27 October 2005 that "identified the need for a new impetus in a number of areas that are important to successfully meet the challenges of globalisation and demography", namely "research and development and universities"; and recognised that "greater business and industrial investment in R&D is required to give Europe the role it needs."
- (4) The recognition by the Aho Report (January 2006) that, amongst others, "measures are needed to increase resources for excellent science, industrial R&D and the science-industry nexus", calling for an increase in R&D resources but also for a new paradigm for the best use of those resources.
- (5) The 18-19 October 2007 Lisbon Informal European Council's emphasis on the "external dimension of the Lisbon Strategy", "needed as a full response to globalisation".

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<sup>1</sup> Doc. 8194/05.

1. RECOGNIZES the critical role played by science and technology in the development of knowledge-based economies and the increasingly difficult competition for highly qualified scientists, engineers and post-graduate students the EU is facing at world level; and WELCOMES the initiatives by Member States in this respect to confer high priority to public investments in science and research, to stimulate higher levels of private investment in R&D and to encourage reforms and the internationalisation of higher education and public research systems.
2. WELCOMES the fact that several major S&T stakeholders in Europe have publicly expressed support and engagement to the furthering of European Research and stresses the role that National Research Agencies and Research Performing Organisations, International Research Laboratories, Universities, European Science Societies, Academies, and European Industry play to contribute to such collective action;
3. WELCOMES the launch of the Seventh Framework Programme - the main Community instrument in R&D - which retains a focus on transnational collaborative research and researchers' mobility while enabling enterprise-focused and other activities, notably the action of the newly created European Research Council to reward excellence in frontier research and reaffirms its support to the independence of the ERC as a condition for its effectiveness and further development.
4. WELCOMES the progress made in the co-decision process by the European Parliament and the Council in the examination of the Commission proposal for the setting up of the European Institute of Technology.
5. WELCOMES the Commission Green Paper "The European Research Area: New Perspectives" and the debate that it has stimulated as timely inputs for the next cycle of the Lisbon strategy (2008-2010).
6. ACKNOWLEDGES that, although substantial advances have been achieved since the Lisbon European Council of March 2000 set the objective to make Europe the most advanced knowledge-based society, faster progress has been achieved by other major regions.
7. CONSIDERS that faster progress is more than ever necessary in order to respond to:
  - the increased international competition, including for qualified human resources for R&D, and new opportunities brought by the globalisation of economic and knowledge flows;
  - the increasing complexity and scale of the economic, social and environmental challenges affecting society;
  - the need of business to operate in an environment of 'open innovation' where connections with each other and with public research institutions are at the core of value creation;

- the growing importance of the freedom of knowledge and of knowledge circulation, notably knowledge-sharing between public research and industry as well as public at large.

8. STRESSES that future progress towards the achievement of European objectives, namely the fulfilment of the Lisbon and Barcelona goals, depends critically on national science and technology policies in Member States and on the increased priority Science and technology should be granted in national reform policies and, hence, INVITES the Commission and Member States to strengthen the science and technology priority in the next cycle of the Lisbon strategy and INVITES Member States also to keep under review, through reinforcing the use of the Open Method of Coordination, their national science and technology policies and other policies and priorities impacting on these in view of taking stronger action and maximizing progress towards this common European goal.
9. RECOGNIZES that world competition for qualified human resources for S&T is a critical strategic issue requiring the adoption of consistent and comprehensive national and EU actions on the increase of the attractiveness of S&T for the new generations as well as on the capacity of Europe's R&D public and private institutions to make Europe attractive to the best talent from the rest of the world;
10. CONSIDERS that it is important that the Commission and Member States work at European, regional and national level in the area of S&T policies with the aim of making full use of the S&T potential across Europe.
11. RECOGNISES the need to develop an evidence base upon which more effective policies can be based and WELCOMES the initiatives that some Member States and the Commission are taking to establish the impact of the Framework Programmes on national and European RTD systems as well as the linkage with the EU's broad-based innovation strategy, taking into account the principles of subsidiarity and European added value.
12. CONSIDERS that specific action is now needed in certain key areas, and therefore:

**A. To ensure sufficient human resources for R&D**

- i) INVITES the Member States and the Commission to work together in the context of the open method of coordination to improve researchers' careers and promote balanced circulation of researchers with the rest of the world both quantitatively and qualitatively. To this effect, SUGGESTS the development of objectives for the EU as a whole for the next decade in the following areas: 1) balanced brain circulation between the EU and the US; 2) maintain a positive growth rate of new graduates and PhD in S&T and the appropriate flow to the private sector commensurate with the Lisbon and Barcelona objectives and increase the share of women among new researchers; 3) an appropriate balance of R&D personnel inflow to the EU from the rest of the world for mutual benefit;
- ii) INVITES the Commission and Member States to work together to support national, international and community actions for increasing human resources for science and technology in Europe and promoting the appropriate flow to the private sector commensurate with the Lisbon and Barcelona objectives, as well as for boosting the

attraction to Europe of highly qualified scientists, namely in stimulating attractive careers and in promoting the development of European networks and centres of excellence for higher education and research of world class, able to compete for the best human resources at a global scale;

- iii) INVITES the Commission to consolidate its activities for monitoring the developments in human resources in S&T and to develop a comprehensive set of measurable indicators for the growth, attraction and retention of human resources in science and technology in Europe, in cooperation with Member States and relevant international organisations such as OECD, with a view to fulfilling an observatory function;
- iv) INVITES the Commission to provide an assessment of still existing key barriers to mobility of researchers within the EU and suggest an overall plan to remove those barriers and to work with Member States to remove those barriers, taking into account the needs of highly mobile researchers and engineers, including those in the areas of employment and social policy.

**B. To reinforce competitive incentives and market conditions for business research and innovation**

- i) INVITES Member States to further develop strategies and policies to combine the three pillars of the knowledge triangle (education, research, innovation).
- ii) INVITES the Commission and Member States to further increase their efforts to stimulate industry to make full use of the Community funding available for R&D and innovation.
- iii) INVITES the Member States and the Commission to enhance data and knowledge sharing, in particular the use of data and results from publicly funded research results across Europe, building upon the existing Communication on knowledge transfer and the Commission's intention to propose a voluntary European Intellectual Property Code of Practice, as requested by Council in June 2007.
- iv) INVITES the Commission together with the Member States and in collaboration with the European Investment Bank (EIB) and other potential financial partners to continue to study ways to improve conditions for R&D funding, notably building upon the experience, as part of the mid-term evaluation of FP7 from the Risk-Sharing Financing Facility (RSFF), to foster additional investment in European research and development, taking in consideration emerging developments in the size, integration, and technologies available in global capital markets.

**C. To optimise the use of public resources for R&D programmes, R&D infrastructures and international cooperation**

- i) INVITES Member States to encourage Research Councils and National Funding Agencies in Member States, as well as intergovernmental European Research Organisations, to expand their collaboration and to devise innovative forms of pooling together their expertise and resources on a mutual voluntary basis for joint objectives. These might include R&D

infrastructures, collaboration in the creation and strengthening of pools of excellence of critical mass, the full internationalisation and/or shared approaches to research evaluation across Europe and to the encouragement of broader competition for research funding at national level. It asks the Commission to catalyse progress whenever appropriate.

- ii) INVITES Member States to encourage public and private research institutions to make full use of the emerging distributed forms of research activity (namely eScience) based upon international research networks made possible by the availability and world-class unique quality of distributed European network infrastructures like GEANT and GRID.
- iii) INVITES the Member States, with support from the Commission where appropriate, to develop and strengthen their national roadmaps and strategies on research infrastructures taking into account a long-term vision of European science and the work undertaken by the European Strategy Forum on Research Infrastructures (ESFRI) and considering, when appropriate, an efficient use of the structural funds to this objective.
- iv) INVITES the Commission and Member States to continue to exchanges of information, and mutual learning where appropriate on national science and technology policies in Member States aimed at contributing to the Lisbon goals, including notably on the reforms of Universities and higher education systems as well as other public research institutions, and the level of networking across institutions.
- v) INVITES the Member States and the Commission to work more closely together in the area of international cooperation in S&T in order to increase the effectiveness of the existing activities and to increase Europe's contribution to tackling global challenges and NOTES the Commission's intention to propose a policy framework for S&T international cooperation in order to facilitate such joint and complementary actions at national and European level.
- vi) INVITES Member States and the Commission to deepen their dialogue with regard to the modernisation of European Universities.<sup>1</sup>

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The Council CALLS on the European Council to consider the above mentioned objectives in its long term vision for the development of the EU as a world-class competitive knowledge economy and society.