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*Committee on Industry, Research and Energy*

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## **DRAFT REPORT**

on Science and technology- Guidelines for future European Union policy to support research  
(2004/2150(INI))

Committee on Industry, Research and Energy

Rapporteur: Pia Elda Locatelli

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## MOTION FOR A EUROPEAN PARLIAMENT RESOLUTION

### **on Science and technology - Guidelines for future European Union policy to support research (2004/2150(INI))**

*The European Parliament,*

- having regard to the Commission's Communication “Science and technology, the key to Europe's future - Guidelines for future European Union policy to support research”(COM(2004)0353),
- having regard to the Presidency's conclusions on future European policy to support research endorsed by a substantial majority of the delegations at the Competitiveness Council meeting of 25/26 November 2004<sup>1</sup>,
- having regard to Decision N° 1513/2002/EC of the European Parliament and the Council of 27 June 2002 concerning the Sixth Framework Programme (FP6) of the European Community for research, technological development and demonstration activities, contributing to the creation of the European Research Area and to innovation (2002 - 2006)<sup>2</sup>,
- having regard to the Commission's action plan aimed at increasing investment in research(COM(2003)0226),
- having regard to its resolution of 18 November 2003 on investing in research: an action plan for Europe<sup>3</sup>,
- having regard to the Commission's Communications on women and science, on the role of universities in the Europe of knowledge, on the careers of European researchers, on basic research, on nanotechnology and on security research(COM(1999)0076, COM(2003)0058, COM(2003)0436 , COM(2004)0009, COM(2004)0338, COM(2004)0590),
- having regard to the Commission's Communications on the Union's financial perspectives for the period 2007 – 2013(COM(2004)0101, COM(2004)0487),
- having regard to the report of the European Research Council Expert Group chaired by Federico Mayor<sup>4</sup>,
- having regard to the “Evaluation of the effectiveness of the New Instruments of Framework Programme VI”, Report of a High-Level Expert Panel chaired by Professor Ramon Marimon<sup>5</sup>,
- having regard to the report on the Lisbon Strategy by the High Level Group chaired by Wim Kok<sup>6</sup>,

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<sup>1</sup> Council of the European Union, 26/11/2004 (English) – 14687/04 (Press: 323).

<sup>2</sup> OJ L 232, 29.8.2002, p. 1.

<sup>3</sup> OJ C 87 E, 7.4.2004, p. 60.

<sup>4</sup> [http://www.ercexpertgroup.org/documents/ercexpertgroup\\_final\\_report.pdf](http://www.ercexpertgroup.org/documents/ercexpertgroup_final_report.pdf)

<sup>5</sup> [http://www.cordis.lu/fp6/instruments\\_review/](http://www.cordis.lu/fp6/instruments_review/)

<sup>6</sup> [http://europa.eu.int/comm/councils/bx20041105/kok\\_report\\_en.pdf](http://europa.eu.int/comm/councils/bx20041105/kok_report_en.pdf)

- having regard to the Commission's proposals for a Directive and two Recommendations on the admission of third-country nationals to carry out scientific research in the European Community (COM(2004)0178),
- having regard to the report compiled by a Commission Inter-Service Group on Technology Platforms<sup>1</sup>,
- having regard to Rule 45 of its Rules of Procedure,
- having regard to the report of the Committee on Industry, Research and Energy (A6-0000/2005),

Whereas:

- A. the implementation of the Lisbon Strategy began with FP6, which created a new dynamic for research and defined new instruments to establish a European Research Area (ERA),
- B. the Commission acted consistently by attributing primary importance to research in its proposals for the EU's new financial perspectives, as well as when it made the proposal to double the budget for FP7,
- C. the Kok report has identified “increasing Europe's attractiveness for researchers and scientists” and “making R&D a top priority” among the policy areas requiring urgent action,
- D. the Marimon report endorses the FP6 instruments and underlines the necessity of continuity in the planning of research programmes, but proposes a series of correcting measures,
- E. basic research is crucial for successful innovation and a long debate has been ongoing at European level during the past two years on the need for a structure (European Research Council) to support at European level basic research free from predetermined topics,
- F. it is estimated that the EU needs 700 000 new, adequately skilled researchers by 2010 if the target of 3% of GDP investment in R&D is to be reached,
- G. it is necessary to create new enthusiasm among young people for science and to promote scientific careers with special attention paid to fostering the participation of women,
- H. mobility of researchers within the EU, as well as two-way mobility between the EU and third countries, public and private research centres, universities and industry, is an essential element for the creation of new knowledge and innovation,
- I. better connections between the world of research and industry, especially SMEs, should be pursued,
- J. better coordination should be pursued between the research budget, Structural Funds and all others public and private funding sources at EU, national and regional level,

### ***Europe deserves better***

1. Underlines the new competences in the area of research (Art. III 248-255) conferred on the EU by the Constitutional Treaty, notably for achieving an ERA; calls upon the Commission to act consistently with this new legal framework;

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<sup>1</sup> [ftp://ftp.cordis.lu/pub/technology-platforms/docs/tp\\_report\\_defweb\\_en.pdf](ftp://ftp.cordis.lu/pub/technology-platforms/docs/tp_report_defweb_en.pdf)

2. Endorses the broad guidelines for future EU research policy presented in the Commission Communication; stresses that the ERA will be possible only if an increasing proportion of funding for research is managed at European level;
3. Firmly believes that making Europe more competitive requires more financial means for research; taking into account the new EU competences in the field of research and the enlargement to 25 and soon more Member States, calls for at least a doubling of the FP budget and strongly requests Member States to regard this as a minimum not to be questioned during the negotiations on the financial perspectives; asks the Commission to plan FP7 in line with its proposal for the financial perspectives for 2007-2013;
4. Calls for the synchronisation of the duration of FPs with the duration of financial perspectives for a better coordination of the Commission's planning activities; a rolling programme system should be foreseen in order to allow a readjustment of objectives when and if needed;
5. Is convinced of the need for continuity between FP6 and FP7 and at the same time welcomes the improvements suggested in the Marimon report, especially those regarding the need for simpler and clearer administrative procedures;

### ***Basic research and European Research Council***

6. Welcomes the Commission's proposal to establish a European Research Council (ERC), as a response to a demand expressed with increasing intensity by the European scientific community and in agreement with the suggestions included in the Mayor and Kok reports;
7. Firmly believes that the ERC should support at European level basic research free from predetermined topics, on the basis of scientific excellence, conferring a European added value through Europe-wide competition and promotion of creativity at the highest level;
8. Considers it essential that the ERC be adequately funded, independent and accountable to its funders but autonomous in its operations;
9. Suggests that the ERC should be governed by a board and a scientific committee, made up of high-level scientists from different scientific areas; a world-wide network of peer reviewers should be set up for the evaluation of proposals; the governing bodies and the network of reviewers should be gender balanced;

### ***Human resources***

10. Calls on the European Institutions and Member States to consider as a priority the promotion of women's access and career advancement in the field of research also by means of affirmative actions; proposes the launching of European initiatives aimed at removing cultural stereotypes and barriers which discourage women from following a scientific education path;
11. Encourages Member States to define education itineraries naturally leading to a research career and to provide incentives for industry to create interesting job opportunities for researchers;
12. Firmly believes that, both at Member State and EU level, conditions have to be created for improving the mobility of researchers at all career levels, making mobility a 'mass phenomenon'; considers harmonisation of researchers' careers and salaries at EU level to be key steps towards making mobility of researchers a pillar of the ERA;

13. Stresses that developing research infrastructures of European interest is a major driver for making science and research attractive to the young and Europe attractive to world's best researchers;

#### ***Technology transfer***

14. Welcomes the proposal of European 'technology initiatives' and stresses the need for measures to facilitate the participation of SMEs;
15. Strongly recommends that resources for instruments, such as CRAFTs, expressly addressed to SMEs should be increased; encourages Member States to adopt fiscal and other incentives for promoting industrial innovation, especially with reference to SMEs;
16. Calls on European Institutions and Member States to promote, also with the involvement of regional institutions (banks, foundations etc.), the establishment of incubators to favour high-technology start-ups;
17. Firmly believes that more efficient and coordinated use should be made of other funding mechanisms (EIB, Structural Funds, national public and private funds) to support R&D; in this context, suggests that a positive evaluation of proposals submitted under the FP, but not funded, act as a 'European excellence label' for other funding sources;

#### ***Thematic priorities***

18. Believes that the definition of FP7 thematic priorities should result from an active debate among the European Institutions;
19. While agreeing to include space research and the relatively new area of security research among the thematic priorities, believes that FP7 should equally support, among others, research in the areas of life sciences, energy and nanotechnology;

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20. Instructs its President to forward this resolution to the Council and the Commission, as well as to the Governments and Parliaments of the Member States and candidate countries.

## EXPLANATORY STATEMENT

**Europe deserves better: Stop with the ‘Lisbon lament’, let's develop strong and courageous European research policies.**

Being fully aware of the challenges confronting the European Union at the beginning of this century, and in particular of the widening gap with respect to its major competitors, the Heads of State and Government placed the research and development (R&D) policy of the Union at the centre of the Lisbon Strategy, as the main tool to promote Europe's growth and competitiveness.

The Lisbon Summit endorsed the creation of a **European Research Area** (ERA), while at the Barcelona European Council it was agreed that “overall spending on R&D in the Union should be increased with the aim of approaching **3% of GDP by 2010** [with] two-thirds of this new investment [coming] from the private sector”.

The implementation of this new approach began with the **6th RTD Framework Programme** (2002 – 2006; **FP6**)<sup>1</sup>. FP6 marked a break with past practice, by introducing **new instruments** aimed at integrating the European research effort and focusing on the creation of an ERA. The Prodi Commission has developed over the past five years a comprehensive research policy, mobilising for this purpose the full competences of the Institution (Information Society, energy, Space technology etc). As part of this strategy, the Commission proposed the ‘action plan’ aimed at **increasing investment in research**<sup>2</sup> and published Communications on the **role of universities** in the Europe of knowledge, on the **careers of European researchers** and on **basic research**<sup>3</sup>.

The Commission drew the natural long-term consequences of this strategy, when it attributed primary importance to research in its Communications on the Union's financial perspectives for the period 2007 – 2013<sup>4</sup>, as well as when it made the bold proposal to **double the Union's research budget** in the Communication being discussed here. The **Kok report**<sup>5</sup> on the **Lisbon Strategy** has also identified “increasing Europe's attractiveness for researchers and scientists” and “making R&D a top priority” among the policy areas requiring urgent action.

Having looked carefully into the Commission's Communication which is the subject of this report, the rapporteur can only agree on the broad guidelines presented therein. She would like however to make the following remarks:

1. **“Europe deserves better research”**. Making Europe more competitive requires appropriate financial means. The ERA will be possible if an increasing proportion of funding for research can be managed at European level. The FP6 budget represents only 5.4 % of the

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<sup>1</sup> OJ L 232, 29.8.2002, p. 1.

<sup>2</sup> COM(2003)0226.

<sup>3</sup> COM(2003)0058, COM(2003)0436, COM(2004)0009.

<sup>4</sup> COM(2004)0101 and COM(2004)0487.

<sup>5</sup> [http://europa.eu.int/comm/councils/bx20041105/kok\\_report\\_en.pdf](http://europa.eu.int/comm/councils/bx20041105/kok_report_en.pdf)

total public research spending in Europe. The same determination that was manifested in the pursuit of the Single Market and the European Monetary Union should now be applied to building the ERA.

Genuine competition at European level can be impaired by national financing when the latter comes to the rescue of low-quality projects that are not competitive enough to secure EU funding. There should be sufficient coupling at European and national level to ensure a uniform quality of funded projects.

2. **Continuity.** FP7 has to be seen as a continuation of FP6. The rapporteur believes the latter was in itself a qualitative leap forward from the past, in that it created a new dynamic for research, and above all defined a means of intervention consistent with the objective of establishing an ERA.

At the same time the rapporteur is mindful of the improvements suggested in the Marimon report. The report namely endorses the FP6 instruments and underlines the necessity of continuity in the planning of research programmes, but proposes a series of correcting measures, which should make the instruments more flexible and easier to use.

3. **Duration of the FPs.** If one recognises the necessity of continuity, it logically follows that FP programming should be lengthened. Suggestions have been made for programming FPs over longer periods of time (e.g. the same as those of the financial perspectives) coupled with periodic readjustments of objectives in the sense of a rolling programme. This is seen as a means of increasing dependability in the planning stages, keeping track of novel technological developments and making possible better coordination with other sources of funding.

4. **Financial Perspectives.** The absurdity of trying to plan for a new FP in total ignorance of the amount of funding available for it is evident to all. Making Europe more competitive clearly requires more financial means for research. Taking into account the new EU competences in the field of research and the enlargement to 25 and soon more Member States, the FP budget should be at least doubled. Member States should regard this as a minimum not be questioned during the negotiations on the financial perspectives.

5. **European Research Council.** Basic research is crucial for successful innovation. The rapporteur welcomes the Commission's proposal to establish a European Research Council (ERC). Independently of the precise name to be given to this entity (Council / Foundation / Agency), the proposal to create it responds to a demand expressed with increasing intensity by the European scientific community for the creation of a European mechanism to support basic research. A long discussion on this subject has been held at European level over the past two years, as highlighted by the Mayor and Kok reports.

*European added value.* The ERC would allow Europe-wide competition among the best researchers or research teams, **exclusively based on scientific excellence, free from predefined topics**, thus fostering creativity at the highest level, also in new fields – we cannot see today where the great discoveries of tomorrow will be made. At the same time the ERC would strengthen the ERA by giving a European profile to science.

*Management.* It is essential that **the ERC should be adequately funded, independent and accountable to its funders but autonomous in its operations**. The rapporteur believes that

the ERC should have active interfaces with other European research institutions and bodies. The ERC could have two governing bodies (an administrative board and a scientific committee, made of high-level scientists from different scientific areas) and a world-wide network of peer reviewers, in charge for the evaluations of the proposals. **The governing bodies and the network of reviewers should be gender balanced.** It is crucial that the total time for the evaluation of a proposal be short (not exceeding 60 days).

*Financing.* Funding for the ERC should come from the EU budget and possibly other sources. The ERC should not be financed at the expense of other instruments, such as IPs, NoEs or STREPs, which aim at the integration of research activities at European level and focus on thematic priorities. Also **funding for national programmes should not be reduced owing to the European support.** Attaining the crucial goal of a global increase of European R&D expenditure to 3% of GDP requires maintaining all possible contributions.

**6. Human resources.** More research means more researchers. If the target of 3% of GDP investment in R&D is to be reached, the EU needs 700 000 new researchers by 2010. Special attention should be paid to the role of women in science. Member States should consider as a priority the promotion of women's access and career advancement in the field of research also by means of affirmative actions. European initiatives should be envisaged to remove cultural stereotypes and barriers which discourage women from following a scientific education path.

*Making science attractive to young people.* Creating enthusiasm among young people for science and promoting scientific careers are two aspects of the same problem, which require specific actions to be taken both at Member State and at EU level. A closer connection between education systems and scientific careers should be established by creating education 'itineraries' naturally leading to a research career. At the same time it should also be possible to offer doctoral graduates interesting job opportunities other than a research career. Making research careers attractive means giving young people earlier and better opportunities: the better the conditions for young researchers, the higher their number.

*Making Europe attractive to the best researchers.* The EU must become more attractive also to the best researchers coming from third countries. The rapporteur stresses the need to adopt as soon as possible the recent initiatives proposed by the European Commission on this subject <sup>1</sup>.

*Mobility.* Mobility should become a 'mass phenomenon' among scientists, **at all levels of their career.** 'Entry-and-exit' mobility is an essential element for the creation of new knowledge. **'Marie Curie' actions should be strengthened and given a higher budget.** Moreover, the ERC should encourage and promote mobility, through spontaneous *ad hoc* arrangements. In this context Career Awards will also be important, providing support for the independence of young scientists. Both at Member State and at EU level conditions have to be created which favour mobility: the absence of these conditions will favour the migration of researchers towards more attractive places, with a resulting impoverishment of European scientific activity.

**7. Technology transfer, especially to SMEs.** A better connection between the world of research and industry should be pursued. The rapporteur welcomes the proposal of European

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<sup>1</sup> COM(2004)0178.

'technology initiatives'. At the same time she does not consider it evident that SMEs will have sufficient access to such initiatives. In any case, **the budget of instruments**, such as CRAFTs, **expressly addressed to SMEs should be increased**. The current relationship between universities/research centres and SMEs is poor, largely because the SMEs are not convinced that there is something in it for them. Member States should adopt fiscal and/or other measures oriented towards promoting industrial innovation, especially with reference to SMEs. On the other hand, the introduction of a Community patent would reduce time and cost of industrial application of research.

Europe needs a network of skilled brokers to turn the results of academic research into factors of production for industry. It needs the creation of a new class of entrepreneurs with doctoral degrees in research, through the itinerary: doctorate, spin-offs, financial incubators, industry. People with doctoral degrees would be more willing to go into business if they had been exposed to a business-friendly environment throughout their doctoral studies. The creation of spin-offs should be encouraged through financial incubators, involving regional institutions (banks, foundations, etc), with the participation also of the universities. Thus universities become entrepreneurs, able to interact between research and industry.

Better use should also be made of Structural Funds to support R&D at regional level. It should be possible for a positive evaluation of proposals submitted under the FP, but not funded, to act as a **'European excellence label'** with respect to other funding mechanisms (EIB, Structural Funds, national public and private funds).

8. **General issues.** The rapporteur believes that:

- It might be useful to map out the various national realities and compare them with the results achieved in the respective countries, to see if results depend on 'form'. The EU could then envisage incentives for those who switch to more 'productive' forms.
- Basic research should be understood as covering all fields, including the social sciences and humanities, putting special emphasis on interdisciplinarity.
- Identifying the thematic priorities for FP7 funding should be the subject of an active debate among the European Institutions. While agreeing to include space research and the relatively new area of security research among the thematic priorities, as proposed by the Commission, the rapporteur believes that FP7 should equally support, among others, research in the areas of life sciences, energy and nanotechnology.