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## REPORT

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

Committee on Industry, Research and Energy

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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 its resolution of 1 April 2004 on the International Conference for Renewable Energies (Bonn, June 2004) <sup>4</sup>, in which it stresses the need to increase support for R&D and innovation in renewable energies and to disseminate and promote the results to all sectors of society,
- having regard to the Commission's communications on women and science, on the role of universities in the Europe of knowledge, on a mobility strategy for the European Research Area and on the careers of European researchers, on basic research, on nanotechnology, on security research, and on the regional dimension of the European research area (COM(1999)0076, COM(2003)0058, COM(2001)0331, COM(2003)0436, COM(2004)0009, COM(2004)0338, COM(2004)0590, COM(2001)0549),
- 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 Mr

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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> Texts adopted, P5\_TA(2004)0276.

Federico Mayor<sup>1</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>2</sup>,
- having regard to the report on the Lisbon Strategy by the High-Level Group chaired by Mr Wim Kok<sup>3</sup>,
- having regard to the report on the five year assessment of research and technology development (RTD) in information society technologies, prepared by the panel chaired by Mr J.M. Gago<sup>4</sup>,
- having regard to the Commission’s communication on the challenges for the European information society beyond 2005 (COM(2004)0757),
- having regard to the environmental technologies action plan, which recognised that ‘investing in research, from both public and private sources, is vital for the EU economy, including eco-industries’ (COM(2004)0038),
- having regard to the Commission’s communication on the share of renewable energy in the EU, in which it accepts that it is ‘necessary to ... accelerate the pace of public support for research, technological development and demonstration in renewables ... in Europe’ (COM(2004)0366),
- 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>5</sup>,
- having regard to the preparatory work towards a new version of the Action Plan on Innovation, and to the ongoing consultations with a view to a framework programme for competitiveness and innovation,
- having regard to Rule 45 of its Rules of Procedure,
- having regard to the report of the Committee on Industry, Research and Energy (A6-0046/2005),

Whereas:

A. progress in the establishment of the European Research Area (ERA) is a first step in the

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<sup>1</sup> [http://www.ercexpertgroup.org/documents/ercexpertgroup\\_final\\_report.pdf](http://www.ercexpertgroup.org/documents/ercexpertgroup_final_report.pdf)

<sup>2</sup> [http://www.cordis.lu/fp6/instruments\\_review/](http://www.cordis.lu/fp6/instruments_review/)

<sup>3</sup> [http://europa.eu.int/comm/councils/bx20041105/kok\\_report\\_en.pdf](http://europa.eu.int/comm/councils/bx20041105/kok_report_en.pdf)

<sup>4</sup> [http://europa.eu.int/comm/dgs/information\\_society/evaluation/pdf/5\\_y\\_a/ist\\_5ya\\_final\\_140105.pdf](http://europa.eu.int/comm/dgs/information_society/evaluation/pdf/5_y_a/ist_5ya_final_140105.pdf)

<sup>5</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)

implementation of the Lisbon strategy, including both the FP6 and other RTD policy initiatives, which created a new dynamic for research and defined new instruments to establish the ERA,

- B. the Commission acted consistently by attributing primary importance to research and innovation in its proposals for the EU's new financial perspectives, as well as when it made the proposal to double the budget for the Seventh Framework Programme (FP7); and whereas some Member States which are net contributors have called for the Community budget to be cut to no more than 1% of the Union's GDP, and the 2007-2013 financial perspective has to be consistent with the Commission 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 and as being essential requirements for achieving the Lisbon goals, and has also identified the need to adopt a holistic approach in order to ensure the development and uptake of ICT,
- 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 corrective measures,
- E. the Court of Auditors' special report No 1/2004 on the management of indirect RTD actions under FP5 noted that the rules of participation in the European RTD framework programmes are too complex, and this has presented serious problems, especially for small organisations with less developed administrative structures,
- F. basic research is crucial for successful innovation and the long-term competitiveness of the European Union, and a lengthy 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 enjoying scientific autonomy,
- G. 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; and whereas the successful Marie Curie Programme has a particularly important role to play in supporting researchers,
- H. high-speed, high-capacity electronic communication networks and other ICT tools and infrastructures are changing the way researchers communicate, cooperate and innovate, and it is necessary to provide continuous and adequate Community support to research network infrastructures within the GEANT project,
- I. it is necessary to improve framework conditions for private research, since two thirds of the investment in research needed to reach the 3% target should come from the business sector,
- J. 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,
- K. 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, and between different business sectors is an essential element for the creation of new knowledge, innovation and sustainable development,

- L. low- and medium-technology small- and micro-scale enterprises, including traditional businesses, have a considerable reserve of hidden potential for innovation, technology transfer, and research and development that as yet has not been sufficiently tapped, but should be fostered in accordance with the spirit of, and the guidelines set out in, the European Charter for Small Enterprises,
- M. better connections between the world of research and industry, especially SMEs, should be pursued, in particular by supporting local networks linking the business community and academic institutions; whereas an intensive discussion is under way on the establishment of European technology initiatives, and implementation of the Community patent is a condition precedent to achieving a successful European research policy,
- N. an effort must be made towards supporting a more efficient research and innovation policy by giving consideration to flanking policies such as the completion of the internal market, and the establishment of an intellectual property regime which seeks a balance between protection and competition, gives better access for SMEs and promotes private and public sector investment in new technologies and content,
- O. the competitiveness problem of the European economy arises partly from the existence of a 'paradox' between the generation of scientific knowledge, (which is abundantly present in the EU) and the insufficient ability to convert this knowledge into innovation and in particular into production; whereas the involvement of industry in allocating the priorities for financial support may improve this situation, and therefore an effort needs to be made towards involving industry, and improving the position of SMEs in FP7,
- P. in order to stop the current marginalisation of SMEs, it would be advisable to explore the potential of new specifically tailored modes of supporting their role in innovation, including:
  - simplified funding and management rules, in particular for small 'fund once and evaluate at the end' actions,
  - support for thematic regional clusters and their European networking, paying attention to the need for the largest part of allocated funding actually to reach innovative SMEs (limits on the share allocated to clustering/networking organisations),
- Q. 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 Constitution for Europe, notably for achieving an ERA; calls upon the Commission to act consistently with this new legal framework;

2. Stresses that research and knowledge have high prestige in the EU, but that European research organisations and businesses are not having enough success in exploiting good ideas and insights and converting them into profitable initiatives which make a contribution to employment; this situation may be improved by adapting research agendas to take account of social issues and the need for technological innovation;
3. 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 allocated by the Union with a view to coordinating European, national, and regional research policies more closely as regards both their substance and their funding, and if this funding is additional to research policy in and between the Member States; expects the Commission and the Member States to follow through on the Kok report's highlighting of the role of research in achieving the Lisbon goals by providing the necessary political impetus and financial resources in FP7;
4. Calls for the same determination that was manifested in pursuit of the single market and monetary union to be applied by all Member States and EU institutions to building the ERA;
5. Firmly believes that making Europe more competitive requires greater financial means for research and innovation; 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 percentage represented by the FP budget in the EU Member States' GDP and urges Member States to regard this as a minimum not 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 and to defend the proposal for the EU budget to be set firmly above 1% of GDP;
6. Calls on those Member States which are eligible for Structural Funds to utilise a significant part of these resources to eliminate their disadvantages in the field of research;
7. Calls upon Member States to make all necessary efforts to meet their respective national targets for R&D investment, which they themselves set at the Barcelona European Council; considers that R&D investment in the EU should reach 3% of GDP by 2010, and in particular that national public R&D budgets should be raised to the levels required by that target; calls on the Commission to monitor compliance by Member States with their commitments, especially by those Member States which fall below the European average;
8. Underlines the need for the participation of the regions and regional authorities in order to increase investment in research and innovation, especially by implementing regional research and innovation strategies in the context of the 3% objective (Barcelona European Council of March 2002), and calls for consideration of the regional dimension of research when defining activities falling within FP7;
9. Underlines the importance of developing centres of excellence at European universities in various disciplines of science and research; takes the view that this can be achieved by increasing public funding from Member States and the EU and with additional EU funding following students studying at universities that attract citizens from other Member States;

10. Stresses that the Member States should take great care to ensure that EU research funding never becomes a substitute for national funding, but that both forms of funding together should lead to growth in overall funding; notes that there currently exist in the Member States several nationally important research projects which do not necessarily qualify for funding from EU resources;
11. Believes that FP7 could be used as a tool to address the 'European paradox' whereby the quality and quantity of European public research is by and large excellent, yet the translation of research results into commercially viable products and services lags behind the US and Japan;
12. Calls for the duration of FPs to be synchronised with the duration of financial perspectives, if and when the financial perspectives are agreed upon every five years concurrently with the Parliamentary term, for a better coordination of the Commission's planning activities; provision should be made for a rolling programme system, including a mid-term review, in order to allow a readjustment of objectives when and if needed, together with procedures to enable the European Parliament to deliver an opinion on such readjustments;
13. 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, including clear and better focused calls for tender, reducing the large number of different contract models and introducing a simplified cost system, and of the need to avoid any pre-determined critical mass; believes in particular that a two-step evaluation procedure should be widespread, in order to improve the efficiency and reduce the cost for participants, in particular for SMEs and local authorities;
14. Takes the view that international cooperation in the field of research must be strengthened, primarily, in the context of the European Neighbourhood Policy, with the EU's neighbours, such as the Mediterranean and Balkan countries, Russia and the Newly Independent States, and within accession negotiations;
15. Believes that FP7 requires an assessment of the scientific quality of the results;
16. Recalls that several of the EU's competitors give more generous public support to long-term research projects than does the EU; is concerned about the possibility that the EU's rules on State aid will prevent such long-term research from being carried out; fears that the EU may lose its competitiveness in the long term if long-term research and basic research are not adequately funded; calls on the Commission to review immediately the current rules governing State aid in cases where the potential economic benefits of research projects may be seen only in the long term;
17. Maintains that the regions must be involved in the investment effort if the 3% target is to be met as laid down at the Barcelona European Council in 2002; welcomes the fact that regional research and innovation strategies have been put in place to help achieve that goal and hopes that they will be encouraged; calls for the regional dimension of research to be taken into account when determining the activities to be pursued under FP7;

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



18. Calls for the swift establishment of the European Research Council (ERC), in accordance with the Commission's proposal and the suggestion included in the Mayor and Kok reports, but asks the Commission to evaluate that body together with existing bodies (Joint Research Centre, Research DG and others) in order to avoid overlapping;
19. Firmly believes that the ERC should support basic research at European level on the basis of scientific excellence, conferring a European added value through Europe-wide competition and promotion of creativity at the highest level;
20. Considers it essential that the ERC be adequately funded and independent in its scientific assessments, while financially accountable to its fund-providers but autonomous in its operations and selection of research projects; asks the Commission to provide a scheme of additional financial measures necessary to implement the ERC inside the FP7 budget with a clearly earmarked amount reserved for administration; considers that funding for national programmes should not be reduced as a result of European support; strongly recommends that the ERC should not increase red tape and slow down the evaluation of proposals;
21. Suggests that the ERC should be governed by a board and a scientific committee, made up of high-level European scientists; a worldwide 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; the selection criteria for both the board and the scientific committee must be based on excellence and expertise in order to maintain transparency and ensure that the ERC enjoys the widest possible respect; considers that the European Research Council, following a brief transitional period, should be established pursuant to Article 171 of the EC Treaty; considers that the participation rules of FP7 should take account of this guideline;

### ***Human resources***

22. 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, including by means of affirmative action; proposes the launching of European initiatives aimed at removing cultural stereotypes and barriers which discourage women from following a scientific education path;
23. Encourages Member States to reassess their education systems with a view to a greater take-up of science in schools and universities, and to support students intending to pursue careers in this area;
24. Firmly believes that the successful Marie Curie Programme, which has been welcomed by applicants, should be continued with the existing instruments and ought also to ensure that top-level international scientists, including those of the younger generation, will opt for European research work; recognises the success of the Marie Curie actions and recommends a substantial increase in funding for them;
25. Firmly believes that, both at Member State and EU level, conditions must be created for improving the mobility of researchers at all career levels, making mobility a 'mass phenomenon', both for the lower levels of non-tenure-track academic careers, as well as

the tenure-track levels, including two-way mobility between industry, universities and research centres and between different business sectors; considers harmonisation of researchers' careers, salaries and working conditions at EU level to be a key step forward in making mobility of researchers a pillar of the ERA; in this respect, a major improvement would be the setting of clear common standards at EU level for access to academic careers, and thus the awarding of a 'European qualification' that would allow researchers to be hired by the universities and research centres of the Member States;

26. Calls for the mutual recognition of Member States' doctoral diplomas in order to remove obstacles to the mobility of researchers and scientists and consolidate a single European research area in the EU;
27. Stresses that providing world-class research buildings, facilities and infrastructures is a vital prerequisite for making European science and research centres attractive to the world's best researchers and achieving world-class excellence in research output, and therefore supports the Commission's proposal to allocate funds for this purpose; calls for the European Strategy Forum for Research Infrastructures (ESFRI) to be given a stronger role in setting a European infrastructure policy;
28. Urges European universities, research establishments and research-orientated companies to loosen up their career structures and hierarchies so as to provide their young and most innovative scientists with incentives, including access to major financial rewards in the form of spin-offs and other forms of enhanced compensation, and considers that evidence of this sort of structure should be a prerequisite for qualifying for funding under FP7;

### ***Technology transfer***

29. Believes that technological innovation must be given particular attention in FP7; considers it essential that European research policy be coordinated with the corresponding enterprise and industrial policy;
30. Welcomes the proposal of European 'technology platforms' and Joint Technology Initiatives as tools to implement the strategic research and development agendas in specific technology areas; underlines the importance of technology platforms as a significant mechanism to bring together industry, research organisations, local institutions and other stakeholders, and stresses the need for measures to facilitate the participation of SMEs;
31. Believes that research should be connected to policy priorities in order to ensure coherence;
32. Strongly recommends that resources for instruments such as STREP and cooperative research (formerly CRAFT) and collective research expressly addressed to SMEs, as well as their accessibility, should be increased, the criteria for the admission of projects rendered more flexible, and projects given a greater and fairer chance of success; encourages Member States to adopt fiscal and other incentives for promoting industrial innovation, including links with EUREKA, especially with reference to SMEs; recommends the provision of subsidies to SMEs for obtaining patent licences; calls on the Commission to consider allocating a proportion of each thematic budget for fixed-sum grants to micro- and small enterprises as seedcorn risk investment subject to simplified

streamlined selection processes and minimal administration thereafter;

33. Calls on the Commission to support the development of technology platforms and ‘socially motivated research platforms’ to develop socially motivated research consortia around major challenges in the societal sphere in Europe, i.e. common demographic changes in Europe and challenges in the environmental field;
34. Supports the streamlining of bureaucracy in this programme, particularly in relation to SMEs;
35. Calls, in the interest of promoting innovation, for a pre-determined, substantial proportion of the funds for “collaborative research”, which makes up the most important part of FP7, to be reserved for cooperation between SMEs and research institutions;
36. Calls on the European institutions and Member States to promote, including with the involvement of regional authorities and institutions (banks, foundations etc.), the establishment of incubators to favour high-technology start-ups;
37. Calls on the Commission to pay particular attention to the situation of industrial research, because this research accounts for a large proportion of the total resources spent on research;
38. Calls on the Commission to come forward with provisions on establishing a quick scanning system for SMEs which would enable them to rapidly assess the probability of funding for research projects;
39. Strongly recommends that the FP should promote the formation of scientific clusters and regional networks, with the involvement of SMEs, and should support existing initiatives in the Member States;
40. Firmly believes that there should be made a more efficient and coordinated use of other funding mechanisms and support mechanisms (EIB, Structural Funds, national public and private funds and EUREKA) to support R&D and innovation; therefore recommends that Member States, in cooperation with the regions, create a link between national operational programmes for Objective 2 of the Structural Policy and projects applying for funds from the FP;
41. Encourages the Commission to develop horizontal State aid provision for R&D for which every Member State would be eligible;
42. Calls on the Commission to conclude agreements with industry so as to stimulate research in strategic areas;

### ***Thematic priorities***

43. Believes that the definition of thematic priorities, to be included in the forthcoming decision of the European Parliament and the Council on FP7, should reflect the strategic priorities of the Lisbon agenda; moreover it should be the result of an active debate among European, national and regional Institutions, the scientific community and the businesses sector;

- 44 Considers that FP7 should build on the scope of the research areas within FP6, so as to maintain continuity; however priority should be given to key areas of science and technology which play a crucial role in increasing European competitiveness, creating new jobs and improving the well-being of citizens. In this respect, while agreeing to the inclusion of space research and the relatively new area of security and defence research, believes that FP7 should adequately support research in the areas of:
- (a) life sciences (including biotechnology, neuroscience and preventive and public health),
  - (b) all existing and future non-CO2-emitting energy sources (including nuclear energy),
  - (c) ICT,
  - (d) nanotechnology, new materials and production processes,
  - (e) chemistry;
45. Considers that FP7 should also support R&D in highly innovative areas of slower-growing scientific disciplines and economic sectors;
46. Stresses the need for the European Union to take specific actions to bring science closer to the citizen, which should be reflected in European research policy and in the forthcoming FP;
47. Calls on the Commission to show a proper concern for animal protection firstly by supporting alternatives to animal testing and secondly by reducing to a minimum the number of animal tests in the projects it finances;
48. Considers that greater consideration should be given in the FP to inter-disciplinary research, in order to provide new impulses and lines of thought;
49. 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

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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)

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 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 founded, 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

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

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 ‘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.



## PROCEDURE

<b>Title</b>	Science and technology - Guidelines for future European Union policy to support research			
<b>Procedure number</b>	2004/2150(INI)			
<b>Basis in Rules of Procedure</b>	Rule 45			
<b>Committee responsible</b> Date authorisation announced in plenary	ITRE 28.10.2004			
<b>Committee(s) asked for opinion(s)</b> Date announced in plenary				
<b>Not delivering opinion(s)</b> Date of decision				
<b>Enhanced cooperation</b> Date announced in plenary				
<b>Motion(s) for resolution(s) included in report</b>				
<b>Rapporteur(s)</b> Date appointed	Pia Elda Locatelli 21.9.2004			
<b>Previous rapporteur(s)</b>				
<b>Discussed in committee</b>	7.10.2004	30.11.2004	25.1.2005	1.2.2005
<b>Date adopted</b>	21.2.2005			
<b>Result of final vote</b>	for: 41 against: 3 abstentions: 0			
<b>Members present for the final vote</b>	Šarūnas Birutis, Jan Březina, Renato Brunetta, Jerzy Buzek, Joan Calabuig Rull, Pilar del Castillo Vera, Jorgo Chatzimarkakis, Giles Chichester, Gianni De Michelis, Lena Ek, Nicole Fontaine, Adam Gierek, András Gyürk, Fiona Hall, David Hammerstein Mintz, Rebecca Harms, Ján Hudacký, Romana Jordan Cizelj, Werner Langen, Anne Laperrouze, Pia Elda Locatelli, Eluned Morgan, Angelika Niebler, Reino Paasilinna, Pier Antonio Panzeri, Herbert Reul, Teresa Riera Madurell, Paul Rübig, Britta Thomsen, Patrizia Toia, Catherine Trautmann, Nikolaos Vakalis, Alejo Vidal-Quadras Roca			
<b>Substitutes present for the final vote</b>	Zdzisław Kazimierz Chmielewski, Dorette Corbey, Neena Gill, Norbert Glante, Edit Herczog, Peter Liese, Lambert van Nistelrooij, John Purvis, Esko Seppänen, Alyn Smith, Hannes Swoboda			
<b>Substitutes under Rule 178(2) present for the final vote</b>				
<b>Date tabled – A6</b>	28.2.2005 A6-0046/2005			
<b>Comments</b>	...			