



## FOREWORD

The European Advisory Board (EURAB) began its work of advising the European Commission on the design and implementation of EU RTD policy in November 2001. EURAB's main focus is to help shape, support and implement the European Research Area (ERA). It consists of forty five members of whom twenty come from academia and twenty from industry, with five having been proposed by the Commission. EURAB's Bureau consists of eight members, assisted by its Scientific Secretary and the secretariat provided by the European Commission.

There is unanimous consensus that the challenges posed by ERA can only be met through close co-operation between academia and industry, that the situation of the accession countries needs special attention, and that the social sciences and humanities have their place within ERA as well.

While insisting on its independence, EURAB is equally committed to working closely with the Commission services. The aim is to produce results as expediently and efficiently as possible in the form of useful, if sometimes provocative, recommendations. Towards this end Working Groups have been established to examine issues either raised by the Commission or by EURAB itself. After thorough discussion, which often includes consultation with the Commission services, each Working Group prepares a set of recommendations that are submitted to the Plenary where the final decision is taken. Subsequently, the recommendations are forwarded to the European Commissioner for Research.

This report covering the first year and a half of EURAB's existence<sup>1</sup>, presents the advice which has been produced so far, and makes the recommendations available to a wider public of interested colleagues, decision-makers, other advisory bodies and anyone who follows, with either scepticism or enthusiasm, the various strategies to turn ERA from vision into reality.

Any method of work is as good as the spirit in which it is carried out, the clarity of its stated objectives, the timeliness of the issue at stake and of the delivery of advice, and, last but not least, the quality of those whose collective knowledge, expertise and links to the relevant wider communities are being brought together. EURAB's members have exhibited an astonishing spirit of team-work: within the working groups themselves, between working groups, between the different temperaments and outlooks from academia and industry, and through the willingness to listen to the arguments and experience from the Commission services. The collective voice, through which EURAB makes itself heard, has evolved by drawing upon the respective strengths of its individual members, their commitment and extensive expertise. The pressure to work within the time limits set by the issues being tackled has been accepted cheerfully, as it is obviously a precondition for potential impact of the advice.

The unique feature of EURAB's experience has been the close collaborative patterns which emerged between members coming from academia and from industry, and the

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<sup>1</sup> The EURAB Plenary asked its Scientific Secretary, Dr. Ragnhild Sohlberg, to prepare this report.

Working Groups have always carefully attempted to achieve a good mixture of the relevant expertise and experience. Within the Plenary meetings, mutual respect has also characterised the discussions. Through a productive learning process, EURAB has consistently striven to come up with recommendations which are not only based on consensus, but which address what we see as one of the most urgent challenges for ERA: to promote closer co-operation between universities and industry.

Within the various national contexts, there has been growing interest in EURAB's work. EURAB members have been asked to present EURAB's views and recommendations in national fora, and we will endeavour to continue in our efforts to make EURAB visible throughout Europe.

EURAB continues to receive responses from the Commission concerning the uptake of its advice. In the future, EURAB will concentrate on consolidating its recommendations in a joint effort to turn ERA into a European success story. To this end, EURAB has started to elaborate a more long-term vision. The year 2003 will be crucial in this respect, and we plan to come up with concrete recommendations towards the end of this year.

Helga Nowotny, Chair of EURAB

### **EURAB BACKGROUND DOCUMENTS**

1. Commission Decision of 27 June 2001 on establishing the European Research Advisory Board (<http://europa.eu.int/comm/research/eurab/pdf/eurab.pdf>).
2. Commission Decision on the nomination of the members of the European Research Advisory Board, dated 1 August 2001 ([http://europa.eu.int/eur-lex/pri/en/oj/dat/2001/c\\_268/c\\_26820010922en00020004.pdf](http://europa.eu.int/eur-lex/pri/en/oj/dat/2001/c_268/c_26820010922en00020004.pdf)).
3. EURAB, Rules of Procedure  
:[http://europa.eu.int/comm/research/eurab/procedure\\_rules.html](http://europa.eu.int/comm/research/eurab/procedure_rules.html)

## A. SUMMARY OF RECOMMENDATIONS AS OF APRIL 2003<sup>2</sup>.

### 1. EUROPEAN RESEARCH AREA – THE FUTURE (Sept. 2002)<sup>3</sup>

**The European Research Area must maximise our potential through new discovery, innovation and education to provide Europe's citizens with worldwide scientific leadership**

EURAB strongly believes that if the ERA is to significantly contribute to the political objectives set out by the European Council in Lisbon (2000) and Barcelona (2002), and thereby achieve world leadership, European research has to base its activities on three pillars: discovery, innovation and education. This calls for radical reform. If these three elements are boosted, with new structures and adequate levels of investment, and interact properly, EURAB is convinced that Europe can meet the political objectives.

To develop such a leading role Europe needs a research system which acknowledges both science, driven by the intellectual independence of scientists to explore, question and challenge accepted views and concepts, and innovation, in pursuit of economical and social goals, and as a tool for the development of technologies that meet the needs of a knowledge based economy. Discovery and innovation are intimately related and strength in one is dependent on strength in the other. Both research and innovation are dependent on a robust education system which must underpin the European Research Area.

European and national research efforts need to secure synergetic effects wherever possible and avoid unnecessary duplication, and must develop ways to support scientific research at a level of quality and diversification that goes beyond what most national initiatives can achieve separately.

To make it effective Europe needs a system that is based on its strengths, such as diversity, and needs to reinforce its capacity for discovery and innovation through scientific challenges, competition, co-ordination of national efforts, promotion of joint ventures and partnerships, particularly between academia and industry. This should result in a system open and attractive to talent from everywhere in the world.

EURAB is conscious that the future of ERA, as we see it, will need new structures to cope with different mandates as compared with today's situation and that therefore a modification of the Treaty of Union will be needed.

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<sup>2</sup> For the complete set of advice with the background information, please refer to:  
[http://europa.eu.int/comm/research/eurab/index\\_en.html](http://europa.eu.int/comm/research/eurab/index_en.html)

<sup>3</sup> The date of submittal in parentheses.

## **2. SOME ISSUES AFFECTING THE FUTURE OF UNIVERSITY RESEARCH IN THE EU (Nov. 2002)**

### **Recommendations**

1. In an effort to understand the true cost of research, EURAB recommends that concerted efforts are made to stimulate the use of simple, transparent and comparable accounting systems in universities across Europe. As a first step, EURAB urges the European Commission to support benchmarking initiatives in this area via the setting up of a joint task force with a body such as the European Universities Association (EUA).
2. As a means of promoting research excellence, EURAB proposes that new mechanisms to stimulate competition are explored and evaluated by Member States across the EU. In particular, EURAB proposes that the feasibility of a competitive scheme co-financed by the European Commission and Member States in which research teams compete for additional funds is explored and evaluated via trial competitions in specific science and technology areas.
3. In order to improve the mobility of researchers within the EU, EURAB urges the European Commission to provide a prioritised list of potential barriers and problems which the Council should be then be asked to resolve as soon as possible.
4. EURAB is convinced that valuable lessons could be learned from a comparative study of Member States' attempts to improve the career prospects for researchers, including efforts at an early stage to attract young people into the world of science.
5. EURAB also considers that there is scope for experimentation with schemes similar to that already proposed for a European competition for additional research funds.

### **3. EVALUATION OF PROPOSALS (April 2002)**

#### **Recommendations**

##### **1. Call for expressions of interest**

- The proposal to refine the Work Programme for the new instruments through a call for expressions of interest was endorsed.
- The Specific Programmes should be followed by expert panels, similar to the Expert Advisory Groups in FP-5, who would have responsibility for assessing the response to the Calls for Expressions of Interest.

##### **2. Evaluation procedure**

- The principle of 2-step procedures for the evaluation of proposals was endorsed. This may apply both to stairways of excellence and to the new instruments and include the option of an oral presentation in the case of integrated projects or networks of excellence. The first step requirements must be very precisely described.
- The procedures for each instrument must be simple and clearly described.
- Anonymity of proposals should be dropped, since it is considered impossible to evaluate the feasibility of a proposal without taking into account the S&T record of the proposers.
- The procedure should be decentralised as much as possible with evaluators working at home. One principal evaluator should be nominated per proposal to prepare a draft summary. Only the consensus discussions would require that evaluators should meet in Brussels. Electronic distribution of proposals to evaluators should guarantee confidentiality.
- Especially for the new instruments, selected projects should be continuously monitored ex-post by a small group including at least one of those who evaluated the project.

##### **3. Evaluation Criteria**

- The criteria should be clearly and simply described.
- S&T excellence must be the top criterion for evaluation as long as the research topic is relevant for the objective of the programme.
- High risk proposals with potential for high gain should be encouraged.
- The difference between basic/exploratory and applied research proposals should be recognised by applying different weightings to the evaluation criteria in each case (particularly relevant for 'stairways of excellence'). Innovation should be included as an evaluation criterion in applied research proposals. Proposers should be able to indicate whether their proposal should be judged as basic/exploratory or applied.
- Policy objectives and the European dimension of the problem should be clearly spelled out in the Work Programme.
- European added value has always been very difficult for evaluators to comprehend and judge. Proposals should indicate why the project must be carried out at European level in order to succeed and indicate how the complementarity between partners, the innovation and the market need (as appropriate) will enable it to succeed.
- Dissemination of results is essential. Where proposals claim to have potential applications, clear indications must be given how the target audience will be reached. On the other hand, for research proposals generally, the intention to publish in a high-level journal – or to patent - should be a sine-qua-non condition (not an evaluation criterion).

- Outreach activities to bring science to the broader public should be required for the bigger projects.

#### **4. Evaluators**

- A new database of evaluators should be constructed based on names proposed by the following sources: national and European university, research and industrial organisations, the Commission services and those submitting research proposals. Individual applications could also be considered. In addition to information on the expert's qualifications, the database should indicate who proposed them, and the instrument which the person is most suitable to evaluate.
- Particular attention should be paid to the use of non-European evaluators in sectors where they are competitors to Europe: the consortia submitting the proposals should be asked to agree.
- Each evaluation panel should be chaired by a very experienced person, who should work with the Commission to identify the panel members. The panels should be balanced regarding industry, academia, country and gender.
- Anonymity of evaluators should be dropped, to ensure a sense of responsibility.
- Proposers should be able to indicate, with reasons, who they do not want to evaluate their proposal.
- Evaluators must sign a form guaranteeing absence of conflict of interest.
- Evaluation of European projects should be seen and promoted as a prestigious task.

#### **4. EUROPEAN RESEARCH COUNCIL (Nov. 2002)**

##### **Recommendations**

EURAB urges appropriate agencies and institutions within the EU, at both national and European level, to establish a European Research Council. This should be done after in depth debate (including with Europe's scientific research community) and careful planning, and as a significant new contribution to the development of the ERA. It should be adequately resourced, to promote and support excellence in fundamental scientific research through European-wide competition based on the following guiding principles:

- Coverage of fundamental research in all aspects of science, including engineering, the humanities and the social sciences
- Independent scientific decision-making based on rigorous and transparent peer review processes (no 'juste retour') and with ex-post evaluation of projects
- Openness to proposals from individuals and groups without constraint on size or composition
- Accountability to a representative governance structure

## **5. IMPROVING INNOVATION (Nov. 2002)**

### **Recommendations**

1. It is proposed that the Commission establish a Working Party from Industry and Academia, along with legal and patents expertise, charged with the creation of pragmatic models for intellectual property rights for industry/university relations in Europe. It is suggested that the European Industrial Research Management Association (EIRMA) and the European University Association (EUA) be the main participants.
2. Efforts should be increased to achieve the creation of a Community Patent.
3. It is proposed that existing national tax reduction schemes, for industries which place research contracts in universities and other research organisations, be extended to cover such contracts in other European countries.
4. It is proposed that a Small Business Innovation Research Programme (SBIR)-like mechanism, such as that employed in public funding in the USA be possible through Integrated Projects of FP6.
5. It is proposed that an SBIR-like mechanism be introduced into National Programmes. This may require a change of rules for state aid.
6. It is proposed that the Commission establish mechanisms to facilitate one-to-one collaborations between industry and universities or government research organisations. This is particularly important for SMEs. It is important that these one-to-one relationships have a strong European dimension.
7. It is recommended that more structural funds be made available on a regional basis for innovation activities.
8. It is recommended to extend the Networks of Excellence in FP6 to cover also "Leading Technology Institutes" (LTI's)

## **6. INCREASING THE ATTRACTIVENESS OF SCIENCE, ENGINEERING & TECHNOLOGY CAREERS (Nov. 2002)**

### **Recommendations**

#### **1. The Public Awareness of Science**

- All EU research proposals should contain a sum for appropriate dissemination of results.
- A coherent Framework Programme publications policy for the dissemination of the results of EU funded research projects to the public, Parliament and Council should be drawn up. An analysis of the possibilities of a "European Scientific Press Agency" should be undertaken. The Alphagalileo News Service should be strengthened and extended to all Member States.

#### **2. Primary and Secondary Schools**

- Innovative, hands-on science education should be introduced into all Europe's primary schools. Creative Science Teaching modules should be introduced into the formal training period of all primary school teachers.
- Concerted efforts should be made to mainstream science, engineering and technology curriculum and teaching innovation into secondary school systems.
- All organisations – universities, companies, research funders and government agencies - should strengthen their practical commitment to supporting the development of school science, engineering and technology education.
- A review of innovative career and pay systems for science, engineering and technology teachers should be undertaken, with a view to supporting Member States in developing a high-status and high-pay profession.
- DG Research should strengthen their work with DG Education and Culture to encourage recruitment to Scientific and Technical Studies. A Joint Action Plan, with clear milestones, should be published and progress reported in the DG Research Annual Report.

#### **3. The Training & Careers of Researchers**

- Examine current best practices in opening up of science, engineering and technology undergraduate courses to interdisciplinary influences, to research experience, to industrial interaction, and to a clearer indication of the variety of career paths open to such students. Support such change in universities.
- Examine the most progressive training structures for doctoral researchers and support their diffusion into the Member States.
- Examine progressive employment and human resource development practices in academic doctoral and postdoctoral labour markets and support their diffusion through EU and Member States' research funding policies.
- EU funding mechanisms should provide for a number of larger "Principal Investigator" contracts to support the move of the very best young researchers towards independence.
- Member State research training and employment positions should be opened up to competition at a global level.
- Examine the mechanisms of research mobility between industry and academia and diffuse the most effective mechanisms, using research funding within the Framework Programme.

- Expand research training to support the EU move to invest 3% of GDP in R&D by 2010.
- Highlight the entrepreneurial research careers and start-up companies which have developed from EU research.

#### **4. The Gender Dimension**

- Develop consistent gender-disaggregated information. Increase transparency in research recruitment and promotion processes. Gender-proof research employment and training policies and practices. Mainstream into all EU research activities and funding mechanisms.

#### **5. Reporting on Progress**

- DG Research should publish an Annual Report on the state of Europe's science, engineering and technology human resources and associated policy issues.
- Include a section on "Improving the Attractiveness of Science, Engineering and Technology Careers" in DG Research's Annual Report.

## **7. ENLARGEMENT AND ERA (Jan. 2003)**

### **Recommendations**

#### **1. National research policies and the ERA**

##### **1.1 Development and implementation of national R & D policies**

The European Commission should continue to use benchmarking, mapping, innovation scoreboards and other methods to monitor and evaluate national R & D policies in collaboration with R & D policy experts from the Member States and Candidate Countries to implement the best practices and to identify key development areas in the individual Candidate Countries.

##### **1.2 Funding for R & D - the 3 % target**

The Commission should insist that the Candidate Countries include R&D and innovation into their national development programmes and increase national spending on R & D and innovation so that a European average level of 3.0% of GDP can be reached by 2010.

##### **1.3 Institutional structures**

The Commission should encourage the governments in the Candidate Countries to form advisory and co-ordinating bodies in R&D from competent representatives of relevant actors in society, which would advise the government on the development and co-ordination of national science and technology policy. The Commission should also encourage the governments in the Candidate Countries to establish a research funding system which distributes funds on a competitive basis with the use of international peer review.

##### **1.4 Infrastructures and Resources for Research and Development**

The Commission should specifically encourage governments of Candidate Countries to use structural funds attributed to them to build research infrastructures, to strengthen creative innovation environments and to improve co-operation between industry, SMEs and research institutions.

##### **1.5 International co-operation**

The Commission should help governments of the Candidate Countries to develop R&D links towards broader and deeper forms of international collaboration between funding agencies, research institutes and industry. Facilities and skills of IT use should be improved to create electronic research networks.

#### **2. Human Resources**

##### **2.1 Professional Research Careers and Researcher Training**

The Commission should initiate and support a programme of international Ph.D. training with top-level research, for example, with existing centres and networks of excellence, as one form of strengthening the ERA.

Senior scientists in the Candidate Countries should be offered further scientific training by organising temporary (6-12 months) researcher positions in corresponding academic departments, laboratories, research institutions and business companies' R & D departments in current Member States.

## **2.2 Researcher mobility**

The Commission should further develop EU mobility schemes by offering incentives in order to increase researcher mobility from the Member States to the Candidate Countries.

## **2.3 Research administration and programme management**

The Commission and the governments of the Candidate Countries should identify the lack of qualified human resources in research administration and programme management as a priority and allocate funds to their education, training and twinning.

## **3. Participation and funding instruments in EU Framework Programmes**

The Commission should make every effort to ensure that the excellent research centres and all excellent research in the Candidate Countries are better known in the Member States, to facilitate their participation.

The Commission should identify an adequate number of qualified experts from the Candidate Countries who will take part in evaluation of applications submitted, the annual monitoring and the ex-post evaluation of programmes.

In order to be able to take corrective measures (if needed) on the participation of the Candidate Countries in FP 6 the Commission should set up a targeted data and indicators mechanism to enhance the impact of monitoring and an ex-post evaluation system.

## **4. Collaboration between research and industry**

The Commission should, in co-operation with national governments, develop measures to identify and to eliminate obstacles to the use of the CCs research competence by companies, with a special regard to SMEs, operating in the CCs as well as anywhere in Europe. Twinning could be one possibility for effective collaboration between academic and industrial units.

The Commission should encourage national governments to initiate and support science parks and use benchmarking for their international evaluation.

## **7. BOOSTING JOINT INVESTMENT IN RESEARCH: TOWARDS 3% OF GDP (Dec. 2002)**

### **Recommendations**

European Research Advisory Board position on “Boosting Joint Investment in R&D” is focused on developing three key areas:

- A Supportive Environment for Industrial R&D (Recommendation 1 & 2),
- A Coherent R&D Policy Approach across Europe (Recommendation 3 & 4) and
- A Strong and Vibrant Public Research Sector (Recommendation 5)

#### **1. A legislative and regulatory environment attractive for Private R&D investment.**

- The creation of a forward looking, but stable regulatory environment to encourage industrial research investment.
- The reduction of barriers to market development: inappropriate standards, regulations and legislative requirements, which slow or prevent access of newly developed products and services to markets across the EU.
- The Commission should invite Member States to an analysis of “The Legislative and Regulatory Environment - Barriers to R&D Investment”. An EU Action Plan for a stable and R&D friendly legislative and regulatory environment should then be drawn up and implemented.
- Financial Instruments for the Promotion of Private R&D Investment
- The Commission should engage Member States in an analysis of direct, indirect and background financial instruments for the promotion of R&D. Appropriate and effective measures to enhance investment should then be implemented with Commission support. A growth-oriented environment is needed.
- Where national tax credits are now given to companies to encourage R&D contracts in research institutes, such schemes could be extended to R&D undertaken by institutes in any EU Member State.

#### **2. The Co-ordination of Research Policies across the EU**

- Individual Member States should set realistic and viable R&D investment targets to support their own development ambitions.
- Member States, on a periodic basis, should submit their research programme priorities, financial instruments, budget distribution and R&D investment targets to The Competitiveness Council for discussion and advice.

#### **3. Coherence between Research and Related Policies**

- Reorient existing EC and Member State budget expenditures towards areas, such as education and research including all sectors – exploratory, applied research and demonstration activities - which will provide for future economic and employment growth, and away from traditional, status quo spending patterns of allocating major resources to areas such as agriculture or coal.
- Develop regional policy which similarly moves resources to areas of economic growth and supports associated R&D investment.
- As policies are generated in other areas (e.g. transport, health, energy, environment), an assessment of their implications for R&D policy should be made. The R&D implications of specific laws, regulations and directives – positive and negative - should be clearly signalled to the research community in

industry and academia. The Commission should initiate the development of such mechanisms in Member States as well as in the Commission itself.

#### **4. Supportive Actions for Public Research & Human Resources:**

- The Commission should initiate with Member States
- Within the overall 1% of GDP goal for EU public research investment, the setting of realistic and viable targets for individual Member States. Within this budget, increased investment in discovery-oriented research is needed, as the foundation stone of knowledge creation for innovation.
- Strengthening the education role of universities to overcome the potential bottlenecks in various disciplines needed for technological research and innovation and the opening up of EU research positions to non-EU researchers.
- Increasing levels and efficiency of university and public research institutes' cooperation with industry – including public-private partnerships.

## B. CONVENTION ON THE FUTURE OF EUROPE

EURAB has submitted the following contributions to the Convention on the Future of Europe:

1. EURAB Statement for the European Convention, 29 Nov. 2002
2. Letter to Members of the Convention, 6 March 2003.

### 1. EURAB Statement for the European Convention.

#### EURAB STATEMENT FOR THE EUROPEAN CONVENTION

It becomes ever clearer that the expansion and deepening of the knowledge base is a crucial key to wealth, health and an improved environment. Europe has an unmatched potential for excellence in research and innovation. Europe must therefore strive to provide its citizens with worldwide scientific and technological leadership.

EURAB welcomes the ambitious vision and the efforts undertaken towards a more integrated European research and innovation policy as marked by the decisions taken at the Lisbon European Council in March 2000 and at the European Council meeting in March 2002 in Barcelona. The revision of the Treaty offers a unique opportunity to build the vision of a knowledge-based society into a legal framework, thereby extending the horizon beyond 2010. Furthermore in its ambition to bring Europe closer to the citizens, it offers the possibility to stress the importance of the science-society dialogue.

With regard to the revision of the Treaty, EURAB therefore recommends:

1. An adequate recognition of the European Research Area and the instruments required to realise it

If the ERA is to contribute significantly to the political objectives of a knowledge-based society and provide Europe's citizens with global science and technology leadership, it must maximise Europe's potential for new discovery and innovation through a stronger and more coherent research effort.

European research must base its activities of knowledge production, utilisation and application on three pillars: scientific and technological discovery, innovation and a robust and sustainable education system, which must underpin new discovery and innovation.

ERA aims to create an internal market for research, in which scientific and technological knowledge, its results and researchers can freely move and interact. Much remains to be done to set up appropriate structures for an optimal and effective co-ordination of national research policies and activities at European level.

EURAB considers it essential to recognise explicitly the European Research Area in the Treaty. The realisation of a true European Research Area will require recourse to a broad range of instruments, including the open method of co-ordination and, whenever appropriate, legal instruments.

## 2. An adequate definition of research and its crucial role, which includes basic research and technological development

Research, including basic research, applied research and technological development, plays a crucial role in the knowledge society and should be acknowledged explicitly in the Treaty.

At present, article 163 defines the goals of research policy of the EU as “strengthening the scientific and technological bases of Community industry and encouraging it to become more competitive at international level, while promoting all the research activities deemed necessary by virtue of other Chapters of this Treaty”. This definition is only a partial reflection of the role that research plays in a knowledge production, where basic research plays a fundamental role. In order to cover the whole spectrum of knowledge production, this definition should be enlarged to cover all research, including basic research and technological development.

## 3. Strengthening the link between public sector research, private sector research and the university system

If R&D investment is to be boosted, relations between public and private research will have to be intensified. Equally important is the reinforcement of the European university system as a knowledge producer and as an element to bring science and society closer together. The revised Treaty should reflect these considerations in order to improve the links between knowledge production and innovation.

In addition, research funded by the Commission has to reflect the ambitious goals of ERA in a pragmatic way. Therefore the procedural steps for launching European activities need simplification.

## **2. LETTER TO MEMBERS OF THE CONVENTION.**

EURAB, the European Research Advisory Board, has been set up in 2001 as an independent body to advise the Commission in building and implementing the European Research Area. From its forty-five members, half come from academia and half from industry.

Already in November 2002 EURAB issued a statement for the European Convention, recommending an adequate recognition of the European Research Area and the instruments required to realise it, that research (which includes basic research, applied research and technological development) plays a crucial role in the knowledge society and should be adequately defined and acknowledged explicitly in the Treaty, and that the links between public sector research, private sector research and the university system should be strengthened.

Now that the Draft of Articles 1 to 16 of the Constitutional Treaty has been published on 6 February 2003, we submit to you our proposal for a re-wording of Articles 3, 1 and 2 and of Article 12, 5 as follows:

“Art. 3,1. The Union's aim is to promote peace, its values and the well-being of its people **in the frame of a knowledge-based society.**”

Art. 3,2. The Union shall work ... and social protection. **delete: and shall develop scientific and technological advance including the discovery of space.** It shall encourage solidarity between generations and between States, and equal opportunities for all. **To achieve these objectives will require the development of scientific and technological advance, including space, based on research and education.**

Art.12, 5. In the areas of research, technological development and space, the Union shall have competence **to define policy, create structures and implement programmes, with due regard to the quality and standards of science and technology.** However, the exercise of that competence may not result in Member States being prevented from exercising their competence.”

We want to underline the fact that the expansion and deepening of the knowledge base through research is crucial to wealth, health and an improved environment. Many of the Objectives of the Treaty can only be achieved and sustained if research provides the necessary, although not the sufficient basis.

Research should be carried out as a shared competence of the Union – without preventing Member States from exercising their competence – in order to overcome the existing fragmentation. This competence should allow the Union to define policy, create structures and implement programmes in the areas of research, technological development and space.

Successful examples, ranging from CERN to EMBL and setting up GSM standards and technology, demonstrate that Europe has been able to overcome fragmentation in the past. The Constitutional Treaty offers the legal frame to enable Europe to realise its potential for excellence in research and innovation, based on a robust and sustainable education system, while striving to provide its citizens with world-wide scientific and technological leadership.

### **C. EURAB: CRITERIA TO GUIDE FUTURE POLICY ACTIVITIES**

The following five points will serve to guide EURAB in its work for the coming months:

1. Priority setting: which criteria guide the setting of research and thematic priorities and how are the processes structured through which they are arrived at? How are niches created or encouraged when priorities are nearly identical?
2. The role of programme managers and of programme management in the process of 'translating' politically articulated or defined goals (including commercial ones) into meaningful and feasible research programmes
3. Which are the conditions under which diversity of funding is desirable and beneficial for research vs. the concentration of resources and sharp focusing? How do diversity and concentration of funding contribute to co-operation and/or competition?
4. How can a good balance between competition among the best researchers and the equally necessary co-operation within the research system be achieved? How can the inherent tension between the two be managed?
5. University-industry relationships: what are some of the historical, cultural, but also structural reasons for the observed differences between the US and Europe, including an outlook on the role of universities within ERA? What have been the positive and negative experiences in building and maintaining these relationships? What lessons can be drawn for Europe and for the US, including the experience with the Bayh-Dole Act?

**ANNEX****EURAB MEMBERS****BUREAU**

Prof. Enric BANDA  
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**Scientific Secretary**

Dr. Ragnhild SOHLBERG

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Dr. Mary KAVANAGH (until 1 March 2003)

Dr. Isidoros Karatzas (1 March – 1 June 2003), Dr. Marina Zanchi (from 1 June 2003)

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<b>Working Group</b>	<b>MEMBERS (<u>Chair</u>)</b>		
Role of universities in ERA	R. Arnon P. Blasi J.L. Bredas G. Byrne	G. Davies J. Grimson I. Halliday <u>J. Majo</u>	A. Schmidt H. Soboll L. Walloe
Enlargement and ERA	E. Banda G. Haemers M. Hatzopoulos	H. Illnerova D. Koradeka N. Kroo	E. Ottolini <u>R. Vihko</u>
Evaluation	C. Buys C. Cesarsky <u>E. Jaskulke</u> D. Koradeka	G. Oquist E. Ottolini A. Schmidt	G. Mégie E. Neher
ERA scope and vision	L. Amancio <u>E. Banda</u> J.L. Bredas Ch. Buys C. Campos-Morais C. Cesarsky G. Davies	M. Hatzopoulos M. Jepsen E. Jaskulké D. Koradecka N. Kroo G. Mégie	J. Mulet G. Oquist B. Serrault H. Soboll Y. Tzavaras L. Walloe
Improving innovation	G. Davies E. de Brabander J. Dekker E. Kuusi H. List	J. Majo J. Mulet E. Neher R. Neumann	<u>J. Rostrup-N.</u> G. Samuels F. Uggeri A. Wittlöv
Increasing the attractiveness of science/technology/engineering careers	R. Arnon C. Buys G. Byrne C. Cesarsky E. De Brabander	<u>M. Jepsen</u> G. Mirdal H. Rubsamen-W. G. Samuels R. Tarrach	
Boosting joint investment in R&D (3%)	E. Banda E. de Brabander G. Haemers E. Jaskulke M. Jepsen	J. Majo H. Nowotny E. Ottolini J. Rostrup-N. A. Schmidt	B. Serreault <u>H. Soboll</u> R. Vihko

**WORKING GROUPS ACTIVE AS OF APRIL 25/04/2003 (Chair)**

Role of universities in ERA	R. Arnon P. Blasi J.L. Bredas G. Byrne	G. Davies J. Grimson I. Halliday <u>J. Majó</u>	A. Schmidt H. Soboll L. Walløe G. Öquist
Evaluation	C. Buys C. Cesarsky <u>E. Jaskulke</u>	D. Koradeka G. Mégie E. Neher	G. Öquist E. Ottolini A. Schmidt
ERA scope and vision	L. Amancio <u>E. Banda</u> J.L. Bredas Ch. Buys C. Campos-Morais C. Cesarsky M. Hatzopoulos	H. Illnerova M. Jepsen E. Jaskulké D. Koradecka N. Kroó G. Mégie	J. Mulet G. Oquist B. Serrault H. Soboll Y. Tzavaras L. Walløe
Interdisciplinary Research	R. Arnon P. Blasi E. de Brabander	<u>J. Grimson</u> E. Jaskulke D. Koradecka	G. Mirdal L. Walløe
SME's and ERA	G. Byrne <u>J.A. Dekker</u>	N. Kroó R. Neumann	<u>E. Ottolini</u>
ERA and the Social Sciences & Humanities	L. Amancio P. Blasi  G. Davies J. Grimson	M. Hatzopoulos M. Jepsen  G. Mirdal <u>R. Sohlberg</u>	R. Tarrach F. Uggeri  R. Vihko L. Walløe

## MEETINGS IN 2001/2002

### 2001:

During 2001, EURAB held the following meetings:

26.09.01	1 <sup>st</sup> meeting of EURAB
26.10.01	1 <sup>st</sup> meeting of the Bureau
13.12.01	2 <sup>nd</sup> meeting of the Bureau
13.12.01	2 <sup>nd</sup> meeting of EURAB

During EURAB's 1<sup>st</sup> meeting, the following Bureau members were elected:

Chair:	Helga Nowotny
Vice-Chairs:	Ian Halliday Horst Soboll
Other members:	Enric Banda Catherine Cesarsky Graham Davies Elizabeth Jaskulke Jens Rostrup-Nielsen

During the same meeting, EURAB also decided to recruit the assistance of Ragnhild Sohlberg as Scientific Secretary.

During EURAB's 2<sup>nd</sup> meeting, 13 December 2001, the following Working Groups (WGs) were established:

WG 1:	The Role of Universities in ERA Chair: J. Majo
WG 2:	Enlargement and ERA Chair: R. Vihko
WG 3:	Evaluation (focusing on Evaluation of Proposals) Chair: E. Jaskulke
WG 4:	ERA Scope and Vision Chair: E. Banda
WG 5:	Improving Innovation Chair: J. Rostrup-Nielsen
WG 6:	Increasing the Attractiveness of Science/Technology/Engineering Careers Chair: M. Jepsen

### 2002:

During 2002 EURAB and its Bureau held the following meetings in Brussels:

19.03.02:	3 <sup>rd</sup> Meeting of the Bureau
20.03.02:	3 <sup>rd</sup> Meeting of EURAB
27.05.02:	4 <sup>th</sup> Meeting of the Bureau
28.05.02:	4 <sup>th</sup> Meeting of EURAB
23.09.02:	5 <sup>th</sup> Meeting of the Bureau
24.09.02:	5 <sup>th</sup> Meeting of EURAB
05.11.02:	6 <sup>th</sup> Meeting of the Bureau
06.11.02:	6 <sup>th</sup> Meeting of EURAB

At EURAB's 3<sup>rd</sup> meeting and after WG3, "Evaluation" submitted its draft recommendations "Evaluation of proposals" to the EURAB Plenary for discussion and approval, it was decided that the WG would continue in a 2<sup>nd</sup> phase focusing on "Implementation of FP6". E.Jaskulke will also Chair Phase 2.

As a consequence of the "3% goal" established during the meeting of the Council of Ministers in Barcelona in March, EURAB also decided to establish a WG7 on "Boosting Joint Investment in R&D" with H. Soboll as Chair.

At its 6<sup>th</sup> meeting, EURAB decided to establish a WG 8 on "Interdisciplinary Research" with J. Grimson as Chair.

During 2002, each Working Group appointed a rapporteur, and in addition to electronic communication, held the following meetings:

WG1:	7 February 19 March 29 May
WG2:	19 March 27 May 23 September
WG3:	22 January 19 February 16 December
WG4:	13 February 22 April 13 September 13 December
WG 5:	18 February 20 March 27 May 19 August 5 November
WG6:	30 January 21 March 28 May 5 July 26 July
WG7:	23 September

Prior to the Heysel Conference on FP6 held in November 2002, the recommendations from five WGs had been presented to the EURAB Plenary for discussion and approval.

The following WG ceased to exist after presenting their recommendations for approval:

WG 5: Improving Innovation

WG 6: Increasing the attractiveness of science/technology/science careers

WG 7: Boosting Joint Investment in R&D

The following WGs continue their work in 2003:

WG 2: Enlargement and ERA

WG 4: ERA Scope and Vision

WG 8: Interdisciplinary Research

The following WGs continue in a phase 2:<sup>4</sup>

WG 1: The Role of Universities in ERA

WG 3: Evaluation ("Implementation of FP6")

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<sup>4</sup> Working Groups 9 and 10 which were established in January-April 2003, are listed in the main text above.