



COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 21.9.2005
COM(2005) 443 final

2005/0188 (CNS)

Proposal for a

COUNCIL DECISION

on the Specific Programme: "Capacities" implementing the 7th Framework Programme (2007-2013) of the European Community for research, technological development and demonstration activities

(presented by the Commission)

EXPLANATORY MEMORANDUM

1. CONTEXT OF THE PROPOSALS

The proposals for five specific programmes follow the Commission's proposal for a 7th Framework Programme (2007-2013) adopted on 6 April 2005¹. A structure was presented in terms of four main specific programmes - "Cooperation", "Ideas", "People" and "Capacities" - each corresponding to a major objective of European research policy; a further specific programme is for the direct actions of the Joint Research Centre. The Commission will be presenting proposals for the "Rules for Participation and Dissemination" that apply to the 7th Framework Programme.

The policy context and objectives are those set out in the Communication "Building the ERA of knowledge for growth"². To meet these objectives and implement in full the specific programmes will require a doubling of the budget as proposed by the Commission.

Research, technology, education and innovation are a significant way of creating jobs in a long term and sustainable manner. They are also the key to economic growth, competitiveness, health, quality of life and the environment. The research Framework Programme, alongside Community programmes in the areas of education and innovation, is aimed to progress towards the knowledge economy and society. The specific programmes of the 7th Framework Programme are designed to address, in combination with the necessary national and private efforts, major weaknesses in the level, quality and impact of European research. The dissemination and transfer of knowledge is a key added value of European research actions, and measures will be taken to increase the use of results by industry, policy makers and society.

Europe must invest more in research and a new emphasis is needed if the European Union is to progress towards the objective of investing 3% of its GDP in research by 2010. The 7th Framework Programme will contribute to this, both through direct financing but also by leveraging additional public and private investments in research.

Europe needs more researchers in order to increase and improve its research efforts. Alongside other actions, such as the European Charter for Researchers and national policy measures, the 7th Framework Programme is designed to stimulate more people to embark upon and pursue research careers, and once again attract leading research talent to Europe.

Financial support at a European level offers opportunities to increase the excellence and effectiveness of research which cannot be achieved at national level. The specific programmes of the 7th Framework Programme represent further consolidation of the European Research Area, achieving critical mass and structures in new areas of research and by new means, and further supporting the free movement of ideas, knowledge and researchers.

Throughout the implementation of the specific programmes the potential for European level actions to strengthen excellence in research will be exploited to the maximum, notably through EU wide competitions backed with rigorous and independent evaluation of proposals.

¹ COM(2005)119.

² COM(2005) 118.

This implies identifying and supporting existing excellence wherever it exists across the European Union as well as creating capacities for future research excellence.

The impact of the specific programmes will be enhanced through complementarities with other Community policies and programmes, and in particular the Structural Funds, the education programmes, and the Competitiveness and Innovation Programme.

2. PRIOR CONSULTATION

The preparation of the specific programme proposals has taken account of the views expressed by the EU Institutions, in particular the European Parliament and European Council, as well as other stakeholders including researchers and users of research. This includes the ongoing discussions and inputs in relation to the proposal for the 7th Framework Programme decisions, the extensive consultations and inputs collected during the preparation of that proposal, and further work in identifying future research priorities such as that being undertaken by European Technology Platforms.

The Specific Programme proposal draws from the in-depth impact assessment undertaken for the 7th Framework Programme proposal³ which demonstrated the strong and specific added value of each of the specific programme proposed. In addition, the proposals take account of the outcome of the five year assessment of the Framework Programme⁴.

3. LEGAL ASPECTS

The proposal for the specific programmes is based on Title XVIII of the Treaty, Articles 163 to 173, and in particular Article 166(3) concerning implementation of the Framework Programme through specific programmes.

4. BUDGETARY IMPLEMENTATION

The legislative financial statements attached to each proposed Decision set out the budgetary implications and the human and administrative resources.

The Commission intends to set up an executive agency which will be entrusted with certain tasks required to implement the “Cooperation”, “People” and “Capacities” Specific Programmes. This approach will also be taken for the implementation of the “Ideas” programme (see Section 7.2 below).

5. A COHERENT AND FLEXIBLE IMPLEMENTATION

5.1. Adapting to new needs and opportunities.

It is vital that the implementation of the specific programmes is sufficiently flexible to remain at the forefront of scientific and technological developments and respond to emerging scientific, industrial, policy or societal needs. Those actions which allow researchers

³ SEC(2005) 430.

⁴ COM(2005) 387.

themselves to identify topics will be particularly important in this respect. For other actions, this will be achieved primarily through the work programmes which will be updated on an annual basis. This will be undertaken with the assistance of the committees of Member State representatives where it is envisaged that the committees' clear focus will be on the work programmes. Revisions may be made more rapidly in case of new priorities requiring an urgent response, in particular arising from unforeseen policy needs.

This multi-annual programming will benefit from a wide range of inputs to ensure that the activities supported maintain direct relevance to the evolving research needs of industry and EU policies. External advice will be sought, including for each of the themes within the Cooperation specific programme, with effective multi-disciplinary coverage and a balance of academic and industrial views.

For the Ideas programme, an entirely new approach will be taken whereby the preparation of an annual work programme will be entrusted to an independent scientific council as part of the establishment of an autonomous European Research Council (see Section 7.2 below).

Additional external inputs, in particular for the Cooperation programme, will be facilitated in particular from the **European Technology Platforms** established in various fields which should play a strong and dynamic role to ensure the industrial relevance. The research priorities identified in the Strategic Research Agendas defined by the platforms are well reflected in the specific programme proposals, and will provide an important input in the multiannual programming.

Other fora and groups may provide the Commission with timely advice on new priorities in particular areas, such as European Strategy Forum on Research Infrastructures (ESFRI) and platforms established to consider strategic research agendas relevant to social or environmental policy areas.

An important new opportunity that will be provided by the Framework Programme is an innovative financing mechanism, the **Risk-Sharing Finance Facility**, aimed at fostering private sector expenditure in RTD by improving access to European Investment Bank (EIB) loans for large European actions which need to combine several sources of financing, including loans. These large European actions are "Joint Technology Initiatives" and large collaborative projects funded directly by the Framework Programme within the Cooperation programme, and new research infrastructure projects under the Capacities programme. Other large European collaborative projects such as Eureka ones could also be considered, in accordance to eligibility criteria. The contribution envisaged from the specific programmes to the EIB will significantly improve the access to debt finance and thereby exercising a significant leverage effect on private investments in RTD.

5.2. Cross cutting issues

Overall coherence in the implementation of the 7th Framework Programme will be ensured by the Commission, taking full account of the guaranteed autonomy and independence of the European Research Council in the Ideas programme.

The work programmes across the other specific programmes will be revised in a coordinated way to allow cross cutting issues to be fully taken into account. The committees of Member State representatives also have an important responsibility in assisting the Commission in the effective coherence and coordination of implementation across and within these specific

programmes. This implies a strong level of coordination within Member States and between representatives of different committee configurations.

Where actions to be supported have a strong relevance to different parts of the Cooperation, People and Capacities specific programmes, joint calls will be used building on the experience gained in the 6th Framework Programme. This will be particularly important for research topics that cut across the themes in the Cooperation programme, and such calls will be clearly identified in the work programme.

The following issues that cut across the Cooperation, People and Capacities specific programmes are of particular importance, and particular arrangements for a coordinated approach are foreseen:

- *International cooperation*: all of these specific programmes are open to international cooperation, and have dedicated actions in this respect. A strategic approach will be taken across the Framework Programme to promote European research excellence and competitiveness and to address specific global or regional issues where there is a mutual interest and benefit. A coherent approach across the specific programmes in line with this strategy will be ensured and the Capacities programme will have a major role in this respect.
- *Research infrastructures*: the main support to research infrastructures will be implemented in the Capacities programme, and this programme will ensure a coordinated approach with relevant research activities in the other programmes, notably the Cooperation programme.
- *Cross cutting policy research*: Arrangements for effective coordination within the Commission services will be put in place, in particular to ensure that activities continue to meet the needs of developments in EU policies. For this purpose, the multi-annual programming may draw on the help of user groups of different Commission services associated with the policies concerned, and in this context an internal structure will be created to ensure the coordination of marine science and technologies across the relevant thematic areas.
- *SME participation*: the participation of SMEs will be optimised across the specific programmes. In addition to the strengthened SME specific actions in the Capacities programme: SME research interests are included throughout the Cooperation programme and topics of particular interest to SMEs will be further identified in the work programmes and calls for proposals; the activities in the People programme have a special emphasis on the involvement of SMEs; and SMEs will also be able to participate in the Ideas programme. The simplification measures envisaged and the increased flexibility in choosing the appropriate funding scheme will benefit in particular SME participation.
- *Dissemination and knowledge transfer*: the need to foster the uptake of research results is a strong feature across the specific programmes, with a particular emphasis on transferring knowledge between countries, across disciplines and from academia to industry, including through the mobility of researchers. The involvement of potential users in helping to define priorities (in particular through the European Technology Platforms) is important in this aspect. The complementary actions under the Competitiveness and Innovation Programme will also reinforce the use of research results by addressing the barriers to innovation and strengthening innovation capabilities.

- *Science in society*: this activity in the Capacities programme will also play a role to ensure that society aspects are properly taken into account in all specific programmes, and that interactions between scientists and the wider public are deepened.

6. SIMPLIFICATION AND MANAGEMENT METHODS

A significant simplification will be achieved in the implementation of the 7th Framework Programme, following the ideas presented in the Commission Working Document of 6 April 2005 and extensive dialogue with Member States and stakeholders on the basis of this document. Many of the proposed measures are to be presented in the Rules for Participation and Dissemination, notably to reduce “red tape” significantly and simplify the funding schemes and reporting requirements.

Within the specific programmes, proposed improvements include:

- Improved efficiency and consistency of implementation through the externalisation of administrative tasks to an executive agency.
- Rationalising funding schemes whereby implementation of each Specific Programme will make use of the instruments necessary to realise the objectives of the Programme.
- A clearer presentation of evaluation criteria: to be included in the Work Programmes following the principles set out in each Specific Programme.
- Clearly presented work programmes such that potential participants are well informed about the opportunities available which meet their particular needs and interests. For example, work programmes and calls will, where appropriate, highlight those topics of particular interest to SMEs or where cooperation with third countries is beneficial.
- Simplifications in other aspects, such as streamlining the approval of projects, the new funding and support schemes, and further use of databases and information tools to provide better communication.

7. CONTENT OF THE SPECIFIC PROGRAMMES

7.1. Cooperation

The Cooperation specific programme is designed to gain leadership in key scientific and technological areas by supporting cooperation between universities, industry, research centres and public authorities across the European Union as well as the rest of the world. Previous framework programmes demonstrate the impact of such actions in restructuring research in Europe and pooling and leveraging resources. The 7th Framework Programme will distribute these impacts more widely and the nine themes proposed correspond to the major fields of progress in knowledge and technology where excellent research must be strengthened to address European social, economic, public health, environmental and industrial challenges.

The programme represents strong elements of continuity with previous framework programmes building on the demonstrated added value of European support of this type. There are, in addition, important novelties in this specific programme which require specific consideration for the implementation:

- Responding to the need for ambitious pan-European public private partnerships to accelerate the development of major technologies, through the launch of **Joint Technology Initiatives**⁵. A first set of initiatives have been identified with clear objectives and deliverables in the areas of innovative medicines, nanoelectronics, embedded computing systems, hydrogen and fuel cells, aeronautics and air traffic management and global monitoring for environment and security. These will be the subject of separate proposals (eg, under Article 171 of the Treaty). Further Joint Technology Initiatives, such as in the areas of zero emission power generation and renewable energy, may be identified during the implementation of the 7th Framework Programme.
- A strengthened approach to the coordinating national research programmes. The successful **ERA-NET** scheme will be continued and implemented within the themes. Existing ERA-NETs from the 6th Framework Programme will be allowed to submit follow up proposals to deepen their cooperation or broaden the consortia to new participants, and new ERA-NETs to address new topics will be supported. The scheme will also be open to public bodies planning a research programme but which is not yet in operation. In addition, an ERA-NET PLUS scheme will be introduced to provide an incentive for joint calls for transnational research projects organised between a number of countries.
- Following the experience of the European and Developing Countries Clinical Trials Partnership (EDCTP) Article 169 initiative, a further four **Article 169 initiatives** have been identified with the close cooperation of Member States. Such initiatives in the fields of ambient assisted living, Baltic Sea research and metrology are listed in the Cooperation programme and an Article 169 initiative to bring together national research performing SME-related programmes is mentioned in the Capacities programme. Further initiatives may be identified during the implementation of the 7th Framework Programme.
- A more targeted approach to **international cooperation** within each theme and across themes is foreseen with specific cooperation actions to be identified in the work programmes in line with the strategic approach for international cooperation foreseen and through policy dialogues and networks with different regions of partner countries.
- A component on to allow a flexible response to **emerging needs** and **unforeseen policy needs** will be supported under each of the themes and the implementation will build on the experience of the Scientific Support for Policy and New and Emerging Science and Technology schemes introduced in the 6th Framework Programme, as well as the Future and Emerging Technology scheme in the ICT area.

7.2. Ideas

Europe does not perform well in terms of truly outstanding research or mastering new fast-growing areas of science. The Ideas programme will provide such a pan-European mechanism to support the truly creative scientists, engineers and scholars, whose curiosity and thirst for knowledge are most likely to make the unpredictable and spectacular discoveries that can change the course of human understanding and open up new vistas for technological progress and solving enduring social and environmental problems. Driving up the quality of basic

⁵ As set out in the Commission Staff Working Document, *Report on European Technology Platforms and Joint Technology Initiatives: Fostering Public-Private R&D Partnerships to Boost Europe's Industrial Competitiveness* - SEC(2005) 800, 10.6.2005.

research through European wide competitions will generate significant social and economic benefits⁶.

The “Ideas” programme adopts the term “*frontier research*” which reflects a new understanding of basic research. At the forefront of creating new knowledge, “frontier research” is an intrinsically risky endeavour that involves the pursuit of fundamental advances in science, technology and engineering, without regard for established disciplinary boundaries or national borders.

The programme will follow an “investigator driven” approach, allowing researchers the scope to propose their own topics. Grants will be provided for individual teams, leaving the flexibility for a team to consist of any grouping of researchers appropriate for the conduct of the projects, from one single institution or several institutions, in one country or across national borders. In all cases, scientific excellence and not administrative requirements should drive the formation of the teams. The programme will ensure differentiation from national funding actions in basic research by its strategic objectives and European scope.

The creation of a **European Research Council** (ERC) for implementing the Ideas programme represents a new departure. Two key structural components of the ERC will be established—an independent Scientific Council and a dedicated implementation structure – operating according to the principles of trust, credibility and transparency, it should provide adequate financial means and work with high efficiency, and it should guarantee a high degree of autonomy and integrity, while being consistent with the requirements for accountability.

The **Scientific Council** will consist of representatives of the European scientific community, at the highest level, acting in their personal capacity, independently of political or any other interests. Its members will be appointed by the Commission, following an independent process for their identification.

The mandate of the Scientific Council will include:

- (1) *Scientific strategy*: Establishment of the overall scientific strategy for the programme, in the light of scientific opportunities and European scientific needs. On a permanent basis, in accordance with the scientific strategy, the establishment of the work programme and necessary modifications, including calls for proposals and criteria on the basis of which proposals are to be funded, and, as may be required, the definition of specific topics or target groups (e.g. young/emerging teams).
- (2) *Monitoring and quality control*: As appropriate, from a scientific perspective, establishment of positions on implementation and management of calls for proposals, evaluation criteria, peer review processes including the selection of experts and the methods for peer review and proposal evaluation, on the basis of which the proposal to be funded will be determined; as well as any other matter affecting the achievements and impact of the Specific Programme, and the quality of the research carried out. Monitoring quality of operations and evaluation of programme implementation and achievements and recommendations for corrective or future actions.

⁶ *Frontier Research: the European Challenge*. High Level Expert Group Report, European Commission, May 2005.

- (3) *Communication and dissemination:* Communication with the scientific community and key stakeholders on the activities and achievements of the programme and the deliberations of the ERC. Regularly report to the Commission on its activities.

The **dedicated implementation structure** will be responsible for programme execution, as provided for in the annual work programme. It will, in particular, implement the evaluation procedures, peer review and selection process according to the principles established by the Scientific Council and will ensure the financial and scientific management of the grants. In this regard, in the first instance, the Commission intends to establish an Executive Agency to which it will delegate the execution tasks. The implementation structure will maintain continual close liaison with the Scientific Council on all aspects of programme execution. In future and subject to an independent evaluation of the efficiency of the ERC's structures and mechanisms, an alternative structure, for example under the provisions of Article 171 of the Treaty, may be established.

The European Commission will act as the guarantor of the ERC's full autonomy and integrity. This means that the Commission's responsibility for the implementation of the programme will be effected by ensuring that the ERC's implementation structure are put into place, and that the programme is executed by the ERC in line with the objectives that have been set, following the scientific orientations and the requirements of scientific excellence, as they are determined by the Scientific Council, acting independently.

The Commission will be responsible for formally adopting the work programme for the "Ideas" programme. It will exercise this responsibility in line with the approach set out above. As a general rule, the Commission will adopt the work programme as proposed by the Scientific Council. If the Commission is unable to adopt the work programme as proposed, for example because the latter does not correspond to the objectives of the programme, or does not conform to Community legislation, the Commission will be required to state its reasons publicly. This procedure is designed to ensure that the operation of the ERC according to the principles of autonomy and integrity, are fully and transparently respected.

7.3. People

The People specific programme forms part of a broad and integrated strategy to strengthen, qualitatively and quantitatively, human resources in R&D in Europe. The programme will stimulate people to embark on and pursue research careers, encourage researchers to stay in Europe, and attract the best brains to Europe. There is a unique added value of European actions through harmonised instruments, stronger structuring effects and greater efficiency than bilateral arrangements between Member States.

The activities build on the long and successful experience of the Marie Curie actions in responding to researchers needs for training, mobility, and career development. While offering considerable continuity, a stronger focus is given to the following aspects:

- An **increased structuring effect**, for example through the introduction of co-funding of regional, national and international programmes in the action line "Life-long training and career development". The "co-funding"-mode would not replace the mode where individual post-doc fellowships are applied for and awarded at European level, as is currently exclusively the practice in the 6th Framework Programme. However, the individual fellowships have reached a stage of maturity in Europe. At the same time the national offers in this area remain fragmented in terms of objectives, evaluation methods

and working conditions, and are still often restricted as regards their international or European dimension. It is therefore proposed to co-fund, on the basis of open calls for proposals, a selection of those programmes corresponding to the Framework Programme objectives. Evaluation and selection will be on merit without limitations regarding the origin of the selected fellows, and applying acceptable employment and working conditions (in terms of e.g. salary, social security, mentoring, professional development).

- **Participation of industry:** while the bottom-up character of the Marie Curie actions will be preserved, a stronger orientation will be placed on training and career development for and in different sectors, in particular in the private sector. This will be achieved by an emphasis on the development of complementary skills and competences, crucial for a better understanding of research in enterprise and for the quality of their research. This will be enhanced by stimulating intersectoral experiences through active participation of industry, in all the actions and by putting in place the dedicated scheme for knowledge sharing in partnerships between the public and private sector, including in particular SMEs.
- The **international dimension** will be reinforced. Besides outgoing fellowships with a mandatory return, aimed at contributing to the life long training and career development of EU-researchers, the international co-operation through researchers from third countries is further expanded. In addition, new dimensions are introduced for collaboration with EU neighbouring and EU S&T Agreement countries. Furthermore support of “scientific diasporas” of European researchers abroad and foreign researchers within Europe will be provided.

7.4. Capacities

The Capacities specific programme will enhance research and innovation capacity throughout Europe. The programme is a combination of continuation and reinforcement of actions in previous framework programmes and in addition important novelties.

A major new element is the foreseen strategic approach to supporting the construction of new research infrastructure which will complement the continued support for optimal use of existing research infrastructure. The support for construction of new infrastructure will be implemented through a two-stage approach: preparatory phase and a construction phase. Building on the work by ESFRI (The European Strategy Forum on Research Infrastructure) on the development of a European roadmap for new research infrastructure, the Commission will identify priority projects to which a possible EC support could be given under the 7th Framework Programme. For those projects, the Commission will act as a facilitator, in particular in facilitating financial engineering mechanisms for the construction phase, including facilitating access to EIB loans through the Risk Sharing Finance Facility. Annex 1 presents the ESFRI “list of opportunities”, which consists of concrete examples of new, large-scale research infrastructures, which the scientific community in Europe will need in the coming decade.

The two schemes to support research for the benefit of SMEs and SME associations will be pursued with an increased budget to respond to the growing need of SMEs to outsource research.

Regions of Knowledge actions build on the successful pilot action. The aim is to enable transnational networks of regions to make full use of their research strengths, enable them to

absorb new knowledge arising from research and to facilitate the emergence of “research-driven clusters” associating universities, research centres, enterprises and regional authorities.

An important new element is the action to unlocking the full Research Potential in the EU’s “convergence” and outermost regions. The realisation of the knowledge-based economy and society relies on strengthening the excellence of European research, but also on better using “untapped” high research potential which exists all over the EU. Actions will allow for the recruitment of researchers from other EU countries, the secondment of research and management staff, the organisation of evaluation facilities and the acquisition and development of research equipment. Such actions will complement the needs and opportunities for reinforcing the research capacities of existing and emerging centres of excellence in these regions which can be met by Structural Funds.

Science in Society represents a significant expansion of work in previous Framework Programme. It will foster better sciences, lead to better EU policies and a more engaged and informed public.

An important aim of the 7th Framework Programme is to build a strong and coherent international science and technology policy and activities in the Capacities programme will support this approach, in particular by helping to identify priorities for cooperation.

The coherent development of policies will put a greater emphasis on the co-ordination of national and regional research policies through a specific support scheme for trans-national policy cooperation initiatives by Member States and regions. This will reinforce the implementation of the open method of co-ordination to research policies and foster concerted or joint initiatives between groups of countries and regions in areas involving a strong trans-national dimension.

7.5. Joint Research Centre actions

While continuing to provide scientific and technical support to the EU policy making the JRC will further reinforce its customer-driven orientation and its strong networking with the scientific community. It will develop its activities in the specific context of growth, sustainable development and security.

The JRC actions will also respond to the call for ‘better regulation’ of the new Lisbon agenda. New challenges associated with the growing need to respond to the crises, emergencies and pressing political imperatives will be met by building up capacities and facilities in selected areas in view of providing adequate support in an EU context. An integrated approach to the provision of scientific and technical support to policies will also be a key feature of this specific programme.

8. BUILDING THE ERA OF KNOWLEDGE FOR GROWTH

Achieving the necessary rapid progress towards a knowledge economy and society requires a new ambition and effectiveness in European research. All actors across the European Union – national governments, research establishments, industry – have their role to play in this endeavour.

The specific programmes to implement the 7th Framework Programme are designed to maximise the leverage and impact of European level research spending within the available

budget. Key features are the focus on four objectives in the corresponding specific programmes, with activities and means of implementation designed to meet these objectives; a strong element of continuity together with major new approaches; a consistent focus on supporting existing excellence and creating the capacity for tomorrow's research excellence; a streamlined and simplified management to ensure a user-friendliness and cost effectiveness; and an inbuilt flexibility such that the Framework Programme can respond to new needs and opportunities.

ESFRI “LIST OF OPPORTUNITIES”⁷

- Facility for Antiproton and Ion Research (FAIR)
- Facility for intense secondary beams of unstable isotopes (SPIRAL II)
- European deep-sea neutrino telescope (KM3NeT)
- Extremely Large Telescope (ELT) – for optical astronomy
- Pan-European Research Infrastructure for Nano-Structures (PRINS)
- European Spallation Source (ESS) – neutron source
- European XFEL – for hard X rays
- IRUVX FELs Network – from infrared to soft X rays
- ESRF upgrade – synchrotron
- High Performance Computer for Europe (HPCEUR)
- Marine vessel for coastal research – essentially Baltic Sea
- Research Icebreaker Aurora Borealis
- European Multidisciplinary Seafloor Observatory (EMSO)
- European infrastructure for research in, and protection of, biodiversity
- Advanced infrastructure for brain and whole body imaging
- Bio-informatics infrastructure for Europe
- European network of advanced clinical research centres
- European network of bio-banks and genomic resources
- High security laboratories for emerging diseases and threats to public health
- Infrastructure for functional analysis of a whole mammalian genome
- Model testing facilities for biomedical research
- European Research Observatory for the Humanities and Social Sciences (EROHS)

⁷ *Towards New Research Infrastructures for Europe: the ESFRI “List of Opportunities”, March 2005, www.cordis.lu/esfri/.*

- European Social Survey (ESS)

“Global projects”

- ITER
- International Space Station (ISS)
- International Linear Collider (ILC)
- Square Kilometer Array (SKA) – radio telescope
- International Fusion Materials Irradiation Facility (IFMIF)

Proposal for a

COUNCIL DECISION

on the Specific Programme: "Capacities" implementing the 7th Framework Programme (2007-2013) of the European Community for research, technological development and demonstration activities

(Text with EEA relevance)

THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty establishing the European Community, and in particular Article 166 thereof,

Having regard to the proposal from the Commission⁸,

Having regard to the opinion of the European Parliament⁹,

Having regard to the opinion of the European Economic and Social Committee¹⁰,

Whereas:

- (1) In accordance with Article 166(3) of the Treaty, Decision No /EC of the European Parliament and the Council concerning the 7th Framework Programme of the European Community for research, technological development and demonstration activities, (2007-2013) (hereinafter referred to as 'the Framework Programme') is to be implemented through Specific Programmes that define detailed rules for their implementation, fix their duration and provide for the means deemed necessary.
- (2) The Framework Programme is structured in four types of activities: trans-national cooperation on policy-defined themes ("Cooperation"), investigator-driven research based on the initiative of the research community ("Ideas"), support of training and career development of researchers ("People"), and support of research capacities ("Capacities"). Activities under "Capacities" as regards indirect actions should be implemented by this Specific Programme.
- (3) The rules for the participation of undertakings, research centres and universities and for the dissemination of research results, for the Framework Programme (hereinafter referred to as 'the rules for participation and dissemination') should apply to this programme.

⁸ OJ C , , p. .

⁹ OJ C , , p. .

¹⁰ OJ C , , p. .

- (4) The Framework Programme should complement the activities carried out in the Member States as well as other Community actions that are necessary for the overall strategic effort for the implementation of the Lisbon objectives, alongside in particular with those on structural funds, agriculture, education, training, competitiveness and innovation, industry, health, consumer protection, employment, energy, transport and environment.
- (5) Innovation and SME-related activities supported under this Framework Programme should be complementary to those undertaken under the Framework Programme for Competitiveness and Innovation.
- (6) Implementation of the Framework Programme may give rise to supplementary programmes involving the participation of certain Member States only, the participation of the Community in programmes undertaken by several Member States, or the setting up of joint undertakings or other arrangements within the meaning of Articles 168, 169 and 171 of the Treaty.
- (7) This Specific Programme should contribute to the grant to the European Investment Bank for the constitution of a “Risk-Sharing Finance Facility” in order to improve access to EIB loans.
- (8) As provided for under Article 170 of the Treaty, the Community has concluded a number of international agreements in the field of research and efforts should be made to strengthen international research cooperation with a view to further integrating the Community into the world-wide research community. Therefore, this Specific Programme should be open to the participation of countries having concluded agreements to this effect and should be also open on the project level, and on the basis of mutual benefit, to the participation of entities from third countries and of international organisations for scientific cooperation.
- (9) Research activities carried out within this programme should respect fundamental ethical principles, including those which are reflected in the Charter of Fundamental Rights of the European Union,
- (10) The Framework Programme should contribute towards promoting sustainable development.
- (11) Sound financial management of the Framework Programme and its implementation should be ensured in the most effective and user-friendly manner possible, as well as ease of access for all participants, in compliance with Council Regulation (EC, Euratom) No 1605/2002 of 25 June 2002 on the Financial Regulation applicable to the general budget of the European Communities; Commission Regulation (EC, Euratom) No 2342/2002 of 23 December 2002, laying down detailed rules for implementation of the Financial Regulation and any future amendments.
- (12) Appropriate measures should also be taken to prevent irregularities and fraud and the necessary steps should be taken to recover funds lost, wrongly paid or incorrectly used in accordance with Council Regulations (EC, Euratom) No 1605/2002 of 25 June 2002 on the Financial Regulation applicable to the general budget of the European Communities, Commission Regulation (EC, Euratom) No 2342/2002 of 23 December 2002 laying down detailed rules for the implementation of the Financial Regulation

and any future amendments, Council Regulations (EC, Euratom) 2988/95 of 18 December 1995 on the protection of the European Communities financial interests¹¹, (Euratom, EC) No 2185/96 of 11 November 1996 concerning on-the-spot checks and inspections carried out by the Commission in order to protect the European Communities' financial interests against fraud and other irregularities¹² and Regulation (EC) No 1074/1999 of the European Parliament and of the Council concerning investigations conducted by the European Anti-Fraud Office (OLAF)¹³.

- (13) The measures necessary for the implementation of this Decision should be adopted in accordance with Council Decision 1999/468/EC of 28 June 1999 laying down the procedures for the exercise of implementing powers conferred on the Commission¹⁴.
- (14) The “Capacities” Specific Programme should have its own budget line in the General Budget of the European Communities.
- (15) In the implementation of this programme adequate attention needs to be paid to gender mainstreaming, as well as to, inter alia, the working conditions, transparency of recruitment processes, and career development as regards the researchers recruited on projects and programmes funded under the actions of this programme, for which the Commission Recommendation of 11 March 2005 on the European Charter for Researchers and on a Code of Conduct for the Recruitment of Researchers¹⁵ offers a reference framework,

HAS ADOPTED THIS DECISION:

Article 1

The Specific Programme “Capacities” for Community activities in the area of research and technological development, including demonstration activities, hereinafter the “Specific Programme” is hereby adopted for the period from 1 January 2007 to 31 December 2013.

Article 2

The Specific Programme shall support the activities for “Capacities”, supporting key aspects of European research and innovation capacities:

- (a) research infrastructures;
- (b) research for the benefit of small and medium sized enterprises (SMEs)
- (c) regions of knowledge
- (d) research potential

¹¹ OJ L 312, 23.12.1995, p. 1.

¹² OJ L 292, 15.11.1996, p. 2.

¹³ OJ L 136, 31.5.1999, p. 1.

¹⁴ OJ L 184, 17.7.1999, p. 23

¹⁵ C(2005) 576.

- (e) science in society
- (f) horizontal activities of international cooperation

as well as the coherent development of research policies.

Implementation of this Specific Programme may give rise to supplementary programmes involving the participation of certain Member States only, the participation of the Community in programmes undertaken by several Member States, or the setting up of joint undertakings or other arrangements within the meaning of Articles 168, 169 and 171 of the Treaty.

The objectives and the broad lines of those activities are set out in Annex I.

Article 3

In accordance with Annex II of the Framework Programme, the amount deemed necessary for the execution of the Specific Programme shall be EUR 7 486 million, of which less than 6% shall be for the Commission's administrative expenditure. An indicative breakdown of this amount is given in Annex II.

Article 4

1. All research activities carried out under the Specific Programme shall be carried out in compliance with fundamental ethical principles.
2. The following fields of research shall not be financed under this programme:
 - research activity aiming at human cloning for reproductive purposes,
 - research activity intended to modify the genetic heritage of human beings which could make such changes heritable¹⁶,
 - research activities intended to create human embryos solely for the purpose of research or for the purpose of stem cell procurement, including by means of somatic cell nuclear transfer.
3. The following research shall not be financed under this programme:
 - research activities that are prohibited in all the Member States
 - research activities to be carried out in a Member State where such research is prohibited.

Article 5

1. The Specific Programme shall be implemented by means of the funding schemes established in Annex III to the 7th Framework Programme.

¹⁶ Research relating to cancer treatment of the gonads can be financed.

2. Annex III to this Specific Programme sets out the arrangements for a grant to the European Investment Bank for the establishment of a Risk Sharing Finance Facility.
3. Annex IV to this Specific Programme sets out an initiative for the joint implementation of national research programmes that would be the subject of a separate decision on the basis of article 169 of the Treaty.
4. The rules for participation and dissemination shall apply to this Specific Programme.

Article 6

1. The Commission shall draw up a Work Programme for the implementation of the Specific Programme, setting out in greater detail the objectives and scientific and technological priorities set out in Annex I, the funding scheme to be used for the topic which proposals are invited, and the timetable for implementation.
2. The Work Programme shall take account of relevant research activities carried out by the Member States, associated countries and European and international organisations. It shall be updated where appropriate.
3. The Work Programme will specify the criteria on which proposals for indirect actions under the funding schemes shall be evaluated and projects selected. The criteria will be those of excellence, impact and implementation and within this framework additional requirements, weightings and thresholds may be further specified or complemented in the Work Programme.
4. The Work Programme may identify:
 - (a) organisations that receive subscriptions in the form of a membership fee
 - (b) support actions for the activities of specific legal entities.

Article 7

1. The Commission shall be responsible for the implementation of the Specific Programme.
2. The procedure laid down in Article 8(2) shall apply for the adoption of:
 - (a) the Work Programme referred to in Article 6(1)
 - (b) any adjustment to the indicative breakdown of the amount as set out in Annex II.
3. The procedure laid down in Article 8(3) shall apply for the adoption of RTD actions involving the use of human embryos and human embryonic stem cells.

Article 8

1. The Commission shall be assisted by a Committee.

2. Where reference is made to this paragraph, the management procedure laid down in Article 4 of Decision 1999/468/EC shall apply, in compliance with Article 7(3) thereof.
3. Where reference is made to this paragraph, Articles 5 and 7 of Decision 1999/468/EC shall apply.
4. The period provided for in Articles 4(3) and 5(6) of Decision 1999/468/EC shall be two months.
5. The Commission shall regularly inform the Committee of the overall progress of the implementation of the Specific Programme, and shall provide it with information about all RTD actions funded under this programme.

This Decision is addressed to the Member States.

Done at Brussels,

*For the Council
The President*

ANNEX I

SCIENTIFIC AND TECHNOLOGICAL OBJECTIVES, BROAD LINES OF THE THEMES AND ACTIVITIES

INTRODUCTION

This Specific Programme will enhance research and innovation capacities throughout Europe and ensure their optimal use. This aim will be achieved through:

- Optimising the use and development of research infrastructures
- Strengthening innovative capacities of SMEs and their ability to benefit from research
- Supporting the development of regional research-driven clusters
- Unlocking the research potential in the EU's convergence and outermost regions
- Bringing science and society closer together for the harmonious integration of science and technology in European society; and
- Horizontal actions and measures in support of international cooperation.

This Specific Programme will also support the coherent development of research policies.

The principle of sustainable development and gender equality will be duly taken into account. Furthermore, considerations of the ethical, social, legal and wider cultural aspects of the research to be undertaken and its potential applications, as well as socio-economic impacts of scientific and technological development and foresight, will where relevant form a part of the activities under this Specific Programme.

Actions for the coordination of non-Community programmes may be undertaken in this Specific Programme making use of the ERA-NET scheme and the participation of the Community in jointly implemented national research programmes (Treaty Article 169) as described in the Cooperation Specific Programme.

Synergies and complementarity will be sought with other community policies and programmes such as EU's regional and cohesion policy, the Structural Funds, the Competitiveness and Innovation programme and relevant Education and Training Programmes.

Coherent development of research policies

The activities undertaken in this part will support the coherent development of research policies, complementing the coordination activities under the Cooperation programme, and contributing to Community policies and initiatives (e.g. legislation, recommendations and guidelines) that aim to improve the coherence and impact of Member States policies.

These activities will contribute to the implementation of the Lisbon strategy, in particular to the 3% investment in research objective, by assisting Member States and the Union in

developing more effective research and development policies. The aim is to improve public research and its links with industry, foster private investment in research, in particular by creating appropriate framework conditions by strengthening public support and its leverage effect on private investment.

Activities will include¹⁷:

- **Monitoring and analysis of research-related public policies and industrial strategies**

The objective is to provide information and analyses in support of the design, implementation, evaluation and trans-national co-ordination of public policies. This will include:

- An information and intelligence service (ERAWATCH) to support evidence-based research policy making and to contribute to the realisation of the European Research Area (ERA) by providing a better understanding of the nature, constituent elements and evolution of national and regional research policies, initiatives and systems. This will include regular analyses, from a European perspective, of issues relevant to research policy making, notably: factors driving the evolution of research systems and their implications for policies and governance structures; emerging issues/challenges and policy options; and a review at the European level of Member States' progress towards ERA and the 3% objective.
- An industrial research investment monitoring activity to provide a self-consistent and complementary source of information to help steer public policy and to allow firms to benchmark their R&D investment strategies. This will include periodic scoreboards of firm-and sector-level R&D investment, surveys of private R&D investment trends, analysis of factors affecting R&D investment decisions and practices of firms, analysis of economic impacts, and assessment of policy implications.
- Development and analysis of indicators on research activity and its impact on the economy. This will include the preparation and publication of national and regional science and technology key figures and scoreboards using official statistical indicators wherever appropriate; the assessment of the strengths and weaknesses of Member States' R&D systems; and the analysis of EU's position and performance in scientific and technological research.

These activities will be carried out in collaboration with the Joint Research Centre as well as through studies and expert groups.

- **Coordination of research policies, including trans-national cooperation initiatives undertaken at national or regional level on issues of common interest.**

The aim is to strengthen the coordination of research policies via actions to support (i) the implementation of the open method of co-ordination (OMC) and (ii) bottom-up initiatives undertaken by several countries and regions, involving where appropriate other stakeholders (including industry, European organisations and civil society organisations).

¹⁷ The activities related to strengthening and improving the European science system, such as questions of scientific advice and expertise and contributing to "better regulation", are addressed by the Science in Society part of this Specific Programme.

These activities will address issues of common interest related to research and other relevant policies that should be mobilised for the realisation of the ERA and the attaining of the EU 3% research investment goal. They will: contribute to the development of more effective national and regional policies through mutual learning and peer-review; encourage concerted or joint initiatives between groups of countries and regions interested in areas involving a strong trans-national dimension or spill-over; and where appropriate, identify issues requiring complementary and mutually reinforcing action at Community and Member States level.

Initiatives undertaken by several countries and regions may cover activities such as peer-review of national and regional policies, exchange of experience and personnel, joint evaluations and impact assessments, and the development and implementation of joint initiatives.

Ethical aspects

During the implementation of this Specific Programme and in the research activities arising from it, fundamental ethical principles are to be respected. These include, *inter alia*, the principles reflected in the Charter of fundamental Rights of the EU, including the following: protection of human dignity and human life, protection of personal data and privacy, as well as animals and the environment in accordance with Community law and the latest versions of relevant international conventions, guidelines and codes of conduct, e.g. the Helsinki Declaration, the Convention of the Council of Europe on Human Rights and Biomedicine signed in Oviedo on 4 April 1997 and its Additional Protocols, the UN Convention on the Rights of the Child, the Universal Declaration on the human genome and human rights adopted by UNESCO, UN Biological and Toxin Weapons Convention (BTWC), International Treaty on Plant Genetic Resources for Food and Agriculture, and the relevant World Health Organisation (WHO) resolutions.

Account will also be taken of the Opinions of the European Group of Advisers on the Ethical Implications of Biotechnology (1991-1997) and the Opinions of the European Group on Ethics in Science and New Technologies (as from 1998).

In compliance with the principle of subsidiarity and the diversity of approaches existing in Europe, participants in research projects must conform to current legislation, regulations and ethical rules in the countries where the research will be carried out. In any case, national provisions apply and no research forbidden in any given Member State or other country will be supported by Community funding to be carried out in that Member State or country.

Where appropriate, those carrying out research projects must seek the approval of the relevant national or local ethics committees prior to the start of the RTD activities. An ethical review will also be implemented systematically by the Commission for proposals dealing with ethically sensitive issues or where ethical aspects have not been adequately addressed. In specific cases an ethical review may take place during the implementation of a project.

In accordance with Article 4(3) of this Decision no funding will be granted for research activities that are prohibited in all the Member States.

The Protocol on protection and welfare of animals annexed to the Treaty requires that the Community pays full regard to the welfare requirements of animals in formulating and implementing Community policies including research. Council Directive 86/609/EEC on the protection of animals used for experimental and other scientific purposes requires that all

experiments be designed to avoid distress and unnecessary pain and suffering to the experimental animals; use the minimum number of animals; involve animals with the lowest degree of neurophysiological sensitivity; and cause the least pain, suffering, distress or lasting harm. Altering the genetic heritage of animals and cloning of animals may be considered only if the aims are ethically justified and the conditions are such that the animals' welfare is guaranteed and the principles of biodiversity are respected.

During the implementation of this programme, scientific advances and national and international provisions will be regularly monitored by the Commission so as to take account of any developments.

Research on ethics related to scientific and technological developments will be carried out in the "Science in Society" part in this programme.

1. RESEARCH INFRASTRUCTURES

Objective

Optimising the use and development of the best research infrastructures existing in Europe, and helping to create in all fields of science and technology new research infrastructures of pan-European interest (or major upgrades to existing ones) needed by the European scientific community to remain at the forefront of the advancement of research, and able to help industry to strengthen its base of knowledge and its technological know how.

Approach

For Europe to become the most competitive and dynamic knowledge based economy in the world, modern and effective research infrastructures are critical in achieving science and technology leadership. Research infrastructures play a key role in the creation of knowledge, in the diffusion of knowledge and its application and exploitation, thus fostering innovation. Access to them is more and more indispensable in all fields of science and technology. Many Research Infrastructures have evolved from large facilities dedicated almost exclusively to a specific discipline, into service facilities for a broad variety of scientific communities. Enabled by information and communication technology, recent concepts of infrastructure are also expanding to include distributed systems of hardware, software and contents with an enormous cumulative value as repositories of knowledge in many diverse disciplines.

The proposed action will in particular contribute to the development, exploitation and preservation of knowledge, through its support to research infrastructures based both on a bottom-up, excellence-driven approach and a targeted approach. The strategic upgrade of information and communication based e-Infrastructures is also seen as a driver in changing the way science is conducted.

The term "Research infrastructures" in the context of the Community Framework Programme for Research and Technological Development refers to facilities, resources or services that are needed by the research community to conduct research in all scientific and technological fields. This definition covers, including the associated human resources:

- Major equipment or set of instruments used for research purposes;

- Knowledge-based resources such as collections, archives, structured information or systems related to data management, used in scientific research;
- Enabling Information and Communication Technology-based infrastructures such as Grid, computing, software and communications;
- Any other entity of a unique nature that is used for scientific research.

Only research infrastructures or networks of research infrastructures with clear interest for the European scientific community (academic, public and industrial), in terms of performance and access, can be considered for support. They must contribute significantly to the development of European research capacities.

Regarding thematic research infrastructures in the “Cooperation” Specific Programme, overall coordination will be ensured by this programme.

Activities

The activities will cover the following lines of action:

- optimising the utilisation of existing research infrastructures and improving their performance;
- foster the development of new research infrastructures (or major upgrades to existing ones) of pan-European interest, based on the work of ESFRI (European Strategy Forum on Research Infrastructures);
- support measures including support to emerging needs.

1.1. Existing research infrastructures

The research infrastructure actions will aim at strengthening European capacities and performance of specific research infrastructures, and increasing user communities’ involvement in opportunities offered by research infrastructures and their commitment towards investment in top-level research. The activities will consist of the support to the effective use of facilities, resources and services in all fields of science and technology through “Transnational Access” to infrastructures and of the support to an optimisation of the European Research Infrastructures through “Integration” of capacities and efforts.

1.1.1. Transnational Access

World-class research infrastructures need huge and long-term investments in resources (human and financial). They should be used and exploited by an as large as possible community of scientist and customer industries on a European scale. The EU should contribute to this objective through the promotion of *Transnational Access*. This is intended to open new opportunities for research teams to obtain access to the best research infrastructures, including research teams, from peripheral and outermost regions. This access may be made available to external users, either in person (“hands-on”) or by suitable electronic communications. It may also take the form of provision of remote scientific services. This will be implemented through “bottom-up” calls for proposals open to all fields of science and technology without any preference for one field over another.

1.1.2. Integrating Activities

The optimisation and reinforcement of the Research Infrastructures capacities and performance at EU level need to be continuously promoted and improved to respond to emerging and growing scientific needs. This can be better achieved through the stimulation of their use and development, including upgrades, in a coordinated way.

Integrating activities for existing research infrastructures will be implemented through:

- “bottom-up” calls to catalyse the mutual co-ordination and the pooling of resources among infrastructures operators with the aim of fostering a culture of cooperation between them. Such activities should also aim at structuring better, on a European scale, the way research infrastructures operate, at fostering their joint development in terms of capacity and performance, and at promoting their coherent and cross-disciplinary use;
- “targeted calls” when such focused actions will be clearly beneficial to support potentially important research infrastructures in the long term, and speeding up their emergence at EU level. They will be implemented in close cooperation with the activities taking place in the thematic areas to ensure that all the actions undertaken at European level in the EU framework respond to the needs for research infrastructures in their respective area. Domains can already be identified¹⁸ for better use and strengthening of existing European infrastructures, fulfilling long-term strategic needs of academic, public and industrial research stakeholders and the society at large, such as for life sciences and its applications, information and communication technologies, the development of industrial research including metrology, support for sustainable development and in particular in the area of environment, and for social sciences and humanities.

1.1.3. ICT based e-Infrastructures

The deployment of *e-Infrastructures* provides persistent services to the research communities based upon complex processes designed to bring the power of distributed ICT based resources (computing, connectivity, instrumentation) to virtual communities. The reinforcement of a European approach and of related European activities in this domain can make a significant contribution to boosting European research potential and its exploitation, consolidating *e-Infrastructures* as a cornerstone of the European Research Area, a “forerunner” of cross discipline innovation and a driver in changing the way science is conducted. It may also contribute to integrate research teams from peripheral and outermost regions.

The activities proposed for *e-Infrastructure*, based on targeted calls for proposals, will aim at fostering the further development and evolution of high-capacity and high-performance communication (GÉANT) and grid empowered infrastructures as well as of European high-end computing capabilities stressing the need to support the reinforcement of world class distributed supercomputing facilities, data storage and advanced visualisation facilities. The activities will also aim at fostering the adoption by user communities, enhancing their global relevance and increasing the level of trust and confidence, building on the achievements of GÉANT and Grid infrastructures.

¹⁸ Also identified by ESFRI.

It will be necessary to support in a coordinated way digital libraries, archives, data storage, data curation and the necessary pooling of resources, at European level, to organise the data repositories for the scientific community and future generations of scientists. The aspects of enhanced trust and confidence of *e-Infrastructures* will be addressed. The activities proposed will also aim at anticipating and integrating new requirements and solutions to facilitate the emergence of large scale test-beds designed to experiment with new disruptive technologies and to address new user requirements, including e-learning. The eIRG (e-Infrastructure Reflection Group) will assist on a regular basis with strategic recommendations.

1.2. New research infrastructures

This Specific Programme will help to promote the creation of new research infrastructures (or major upgrade of existing ones) focusing on “unique” infrastructures with a crucial and pan-European impact for the development of relevant scientific fields in Europe.

1.2.1. Design Studies for new research infrastructures

To promote the creation of new research infrastructures, through a bottom-up approach of calls for proposals, by funding exploratory awards and feasibility studies for new infrastructures.

1.2.2. Support to construction of New Infrastructures

To promote the creation of new research infrastructures based on the work conducted by ESFRI on the development of a European roadmap for new research infrastructures. The Commission will identify priority projects to which a possible EC support could be given under the Framework Programme.

The activity related to the construction of new infrastructures will be implemented in a two-stage approach:

- *Stage 1: Supporting the preparatory phase*

This first stage will involve calls restricted to the priority projects identified by the Commission. The preparatory phase would involve the finalisation of the detailed construction plans, of the legal organisation, of the management and multi-annual planning of the forecasted research infrastructure and the final agreement between stakeholders. During this preparatory phase the European Commission will act as a “facilitator”, in particular, in facilitating financial engineering mechanisms for the construction phase.

- *Stage 2: Supporting the construction phase*

In the second stage, building on the achieved technical, legal, administrative and financial agreements, using notably the complementarity between national and Community instruments (such as the Structural funds or the European Investment bank), the construction plans would be implemented. The Framework Programme financial support for the construction phase may be provided to those priority projects for which there is a critical need for such support. In these cases, decisions will be taken through a mechanism that will depend on the nature and the level of funding required (e.g., direct grant; European Investment Bank loans, the access to which may be facilitated through the Risk Sharing Finance Facility (Annex III); Article 171).

1.3. Support Measures, including support to emerging needs

Strong coordination within the EU in formulating and adopting a European policy on Research Infrastructures is key to the success of this activity. Throughout the whole programme there will therefore be measures to support such coordination, including supporting the development of international cooperation.

These activities would be carried out mainly following a continuously and ‘bottom-up’ open call. They would be aimed at supporting analysis of emerging needs, at supporting the work of ESFRI and eIRG, at the effective implementation of the programme (e.g. supporting conferences, expert contracts, impact studies, etc.) as well as at supporting the international dimension of the activities carried out under this Specific Programme and spreading of European excellence at international level. In the context of international cooperation, the activities carried out under this specific part of the capacity programme will also allow to identify the needs of specific third countries and mutual interests on which specific cooperation actions could be based and, on the basis of targeted calls, to develop cross-links between key research infrastructures in third countries and those within the European Research Area.

2. RESEARCH FOR THE BENEFIT OF SMEs

Objectives

Strengthening the innovation capacity of European SMEs and their contribution to the development of new technology based products and markets by helping them outsource research, increase their research efforts, extend their networks, better exploit research results and acquire technological know how.

Approach

SMEs are at the core of European industry. They should be a key component of the innovation system and in the chain of transformation of knowledge into new products, processes and services. Faced with an increasing competition in the internal market and globally, European SMEs need to increase their knowledge and research intensity, expand geographically their business activities and internationalize their knowledge networks. All Member States have actions relevant to SMEs, but often they do not encourage and support trans-national research cooperation and technology transfer. Actions at EU level are necessary to complement and enhance the impact of actions undertaken at national and regional level.

Specific actions will be implemented to support SMEs or SME associations in need of outsourcing research to universities and research centres (“RTD performers”). These actions will be carried out in the entire field of science and technology. The evaluation of the project proposals will take due account of the expected economic impact for the SMEs. Financial means will be allocated through two schemes: *Research for SMEs* and *Research for SME associations*. The first targets mainly low to medium technology SMEs with little or no research capability, but also research intensive SMEs who need to outsource research to complement their core research capability. The second targets SME associations which are normally best placed to know or identify the common technical problems of their members, to act on their behalf, and to promote the effective dissemination and take-up of the results.

In addition to these specific actions, the participation of SMEs across the Framework Programme will be encouraged and facilitated. The research needs and potential of SMEs are duly taken into account in developing the content of the thematic areas of the “co-operation” programme, which will be implemented through projects of different sizes and scope depending on the field and topic.

During the implementation of the Community RTD Framework Programme, complementarity and synergy will be ensured with the actions of the Competitiveness and Innovation Framework Programme to encourage and facilitate the participation of SMEs in the Community RTD Framework Programme.

Activities

The following two SME specific schemes will be implemented:

- ***Research for SMEs***

This scheme supports small groups of innovative SMEs to solve common or complementary technological problems. Projects, which are relatively short term, must be centred on the innovation needs of the SMEs which outsource research to RTD performers and must demonstrate a clear exploitation potential for the SMEs concerned.

- ***Research for SME associations***

This scheme supports SME associations to develop technical solutions to problems common to a large number of SMEs in specific industrial sectors or segments of the value chain through research needed, for example, to develop or conform to European norms and standards, and to meet regulatory requirements in areas such as health, safety and environmental protection. Projects, which can have a duration of several years, must be driven by the SME associations which outsource research to RTD performers for the benefit of their members and must involve a number of individual SMEs.

Common features of the schemes

- Other enterprises and end-users can participate in the schemes if it is in the interest of the SMEs or the SME associations.
- In addition to research, the projects should include activities to promote the take-up and effective exploitation of the research results, such as, testing, demonstration, training, technology transfer, knowledge management and IPR protection. For *Research for SME associations*, projects should also include activities to disseminate effectively the research results to the members of the SME associations, and if appropriate, more widely.
- Special rules will apply for ownership and access rights for the two schemes.

3. REGIONS OF KNOWLEDGE

Objectives

Strengthening the research potential of European regions, in particular by encouraging and supporting the development, across Europe, of regional “research-driven clusters” associating regional authorities, universities, research centres, enterprises and other relevant stakeholders.

Approach

Regions are increasingly recognised as important players in the EU's research and development landscape. At the same time evidence indicates that investment in R&D improves regional attractiveness while increasing competitiveness of local businesses. R&D intensive clusters rang among the best drivers of such investment activity resulting in direct gains in local competitive advantage with beneficial effects in terms of growth and jobs. The 2003 Pilot Action Regions of Knowledge¹⁹ confirmed the importance of such clusters and the interest to support and encourage their development.

This action will enable European regions to strengthen their capacity for investing in RTD, while maximising their potential for a successful involvement of their stakeholders in European research projects. Increased and more focused use of Structural Funds for R&D investment and activities will be also pursued by improving synergies between Regional and Research Policies primarily by producing regional research strategies which regional authorities can integrate into their economic development strategy.

“Regions of Knowledge” aims at supporting the definition and implementation of optimal policies and strategies for the development of R&D driven clusters. In particular it will improve the relevance and effectiveness of regional research agendas through mutual learning; promote and strengthen cooperation between clusters; and contribute to strengthening the sustainable development of existing R&D driven clusters as well as foster the creation of new ones. Support will be provided in particular for demand-driven and problem-oriented projects addressing specific technological areas or sectors²⁰.

This action will apply to all regions, including Convergence²¹ ones.

Activities

Projects would normally involve regional authorities, regional development agencies, universities, research centres, and industry as well as where appropriate technology transfer, financial or civil society organisations. *Regions of Knowledge* projects will cover the following activities:

¹⁹ A pilot action on “Regions of Knowledge” was introduced into the 2003 Community budget at the initiative of the European Parliament. This was followed by another Call for proposals under the 6th Community FP for RTD (2004) under the “Coherent development of policies” programme.

²⁰ This does not exclude the combination of different technological areas where relevant.

²¹ Convergence regions are those set out in Article 5 of the proposal for a Council Regulation laying down general provisions on the European Regional Development Fund, the European Social Fund and the Cohesion Fund - COM(2004) 492. This includes “convergence” objective regions, regions eligible for funding from the Cohesion fund, and outermost regions.

- **Analysis, development and implementation of research agendas** of regional clusters and cooperation between them. These will include analysis as well as an implementation plan focusing on R&D capacity and priorities. Projects shall use foresight, benchmarking or other methods, demonstrating expected benefits, such as strengthened links between clusters involved, optimised involvement in European research projects and higher impacts on regional development.
- **“Mentoring”** of regions with a less developed research profile by highly developed ones based on R&D focused cluster building. Transnational regional consortia will mobilise and associate research actors in academia, industry and government to deliver “guidance” solutions with and for technologically less developed regions.
- **Initiatives to improve integration** of research actors and institutions in regional economies, through their interactions at cluster level. These will include transnational activities to improve links between research stakeholders and the local business communities as well as relevant activities between clusters.

Support will also be provided to activities to promote systematic mutual information exchange as well as interactions between similar projects and where appropriate, with actions of other relevant Community programmes (e.g. analysis and synthesis workshops, round-tables, publications).

4. RESEARCH POTENTIAL

Objective

Stimulating the realisation of the full research potential of the enlarged Union by unlocking and developing the research potential in the EU’s convergence regions and outermost regions, and helping to strengthen the capacities of their researchers to successfully participate in research activities at EU level.

Approach

In order to support the realisation of the full research potential of the enlarged Union, a dedicated action will seek to unlock the potential of research groups, in particular in the convergence regions and outermost regions of the European Union, that are currently not using their possibilities to the full or that are in need of new knowledge and support to realise their potential. The actions will very much build on past and existing measures such as the European Centres of Excellence in the then Acceding and Candidate Countries in the 5th FP and Marie Curie Host fellowships for Transfer of Knowledge. They will also complement efforts to be undertaken by the European Social Fund under the new Cohesion Policy (2007-2013) focusing on developing human potential for research at national level in the eligible areas.

By focussing on the strengthening and expansion of the collaborations of such research groups with research centres in other EU countries an important contribution will be given to unlocking their potential and with that to their long term sustained development. Through optimising their international exposure and recognition, leadership potential and quality of their scientists, the visibility of these research groups will be increased and their participation in the European Research Area facilitated.

Activities

The action will favour in particular strategic partnerships, including twinning, between research groups both from public and private sector, in the convergence regions or outermost regions of the EU, selected on the basis of quality and high potential, with well established research groups elsewhere in Europe. Particular emphasis will be put on the expected longer-term effects of the partnership both at EU and regional level. With a view to realising their full potential (i.e. to strengthen their knowledge, to develop additional competence including in research management, or to gain visibility), the action will comprise support to the selected research groups in the qualifying regions in the frame of the research programmes developed within the strategic partnerships for:

- Exchange know-how and experience through trans-national two-way secondments of research staff between the selected centres in the qualifying regions and one or more partner organisations in another EU State, with in-built obligatory return mechanisms for seconded staff originating from the selected centres in the qualifying regions;
- The recruitment by the selected centres of incoming experienced researchers for involvement in transfer of knowledge and/or in the training of researchers, including as a means to particularly encourage the return of nationals having left the country;
- The acquisition and development of certain research equipment for the selected centres;
- The organisation of workshops and conferences to facilitate knowledge transfer at national and international level involving both the selected centres' own research staff and invited researchers, from other countries in the frame of the development of the selected centres' international training capacity and reputation; participation of the research staff of the centres selected under the scheme at international conferences or short term training events, for knowledge sharing, network building and to expose them to a more international environment;
- Dissemination and promotional activities to ensure increased visibility of the selected centres and their activities.

In addition, and independently of this support measures, the action will provide evaluation facilities through which any research centre in the qualifying regions, whether or not applying for funding, can obtain an international independent expert evaluation of the level of their overall research quality and infrastructures. This evaluation would be carried out by high-level, independent international experts nominated by the Commission.

5. SCIENCE IN SOCIETY

Objective

With a view to building an effective and democratic European Knowledge society, the aim is to stimulate the harmonious integration of scientific and technological endeavour and associated research policies in the European social web.

Approach

“Science *in* society” represents a significant expansion and extension of the pilot work undertaken in the Sixth Framework Programme, commensurate with the raised ambition of the European research policy.

The development of European societies largely depends on their capacity to create, exploit and disseminate knowledge and, from there, to continuously innovate. Scientific research plays a major role in this regard, and should continue being one of the driving forces in promoting growth, welfare and sustainable development.

To achieve this aim, it is imperative that a social and cultural environment conducive to successful and exploitable research is created. This means that legitimate societal concerns and needs are taken on board, entailing an enhanced democratic debate with a more engaged and informed public, and better conditions for collective choices on scientific issues. It should also establish a climate favourable to scientific vocations, a new surge of research investments and the subsequent dissemination of knowledge upon which the Lisbon strategy is built.

This section of the Capacities programme will then focus on the development of a set of conditions by which such a conducive environment becomes the norm rather than the exception in Europe.

The risk of a scientific divide within our societies needs to be addressed in the first place. It separates those who do not have access to relevant knowledge from the few who do; those who do not have the capacity to influence policy-making in research from those who do have this capacity. This leads to the ambiguous feelings expressed by citizens regarding the potential benefits from science and technology, and their effective subordination to public scrutiny. On the one hand, they readily invite more research to address the outstanding problems of the present time (diseases, pollution, epidemics, unemployment, etc) and to better anticipate their possible impacts in the future. On the other hand, they cannot help showing distrust for certain uses of science and possible interferences of vested interests in decision-making processes.

Among the causes for an often less than satisfactory integration of science in society are the following:

- insufficient public participation in priority-setting and in establishing science policy directions, which would allow a wider debate on possible associated risks and consequences,
- growing reservations with regard to certain scientific developments, the feeling of lack of control, and open questions concerning the respect of fundamental values,
- the perceived isolation of the world of science from the everyday realities of economic and social life,
- questioning the objectivity of scientific evidence made available to public policy-making.

The chosen approach aims to:

- render more inclusive and transparent the mechanisms for access to, and validation of the expertise necessary to underpin more robust policies,
- set landmarks for an ethically sound research endeavour in the light of fundamental rights,
- allow Europe to play a more active role on the world stage, in the debate and promotion of shared values, equal opportunities and societal dialogue,
- bridge the gap between those who have a scientific education and those who do not, promote a taste for scientific culture in the direct neighbourhood of all citizens (calling upon cities, regions, foundations, science centres, etc.),
- encourage a societal dialogue on research policy, and stimulate civil society organisations to become more involved in research activities,
- provide an image of science and researchers which is meaningful to all, especially to young people,
- help women to continue to progress in scientific careers and better use their scientific talents for the benefit of all,
- renew science communication, favouring modern means to achieve higher impact, helping scientists to work closely with media professionals.

‘Science in Society’ will be implemented through:

- Policy-related actions and research supported directly from this theme;
- Cooperation between Member States, identifying common goals, and reinforcing national practices, in the spirit of the open method of co-ordination;
- Promoting, supporting and monitoring the uptake and impact of ‘Science in Society’ issues in other parts of the Framework Programme²². The overall coordination of issues related to Science in Society both across the Framework Programme and within other relevant Community activities (e.g. relating to education and culture) will be ensured by this theme.

Three action lines will be pursued.

First action line: *A more dynamic governance of the science and society relationship*

- **Strengthening and improving the European science system**

There is such an expectation placed upon the European science system to sustain our innovation potential that society must gain a deeper insight into its constituents, its own economy, its regulations and its habits. Three aspects of broad significance, focusing on the actors and dynamics of the European Research Area, will be tackled.

²² Include the running of the ethical review procedures for proposals addressing sensitive issues under the ‘Cooperation’ specific programme.

- improving the use, and monitoring the impact, of scientific advice and expertise for policy-making in Europe, and developing practical tools and schemes (e.g. electronic networks)
- promoting trust and self-regulation in the scientific community
- encouraging the debate on information dissemination, including access to scientific results and the future of scientific publications.

- **Broader engagement to anticipate and clarify political, societal and ethical issues**

Society's aspirations and concerns, and fundamental ethical principles, need to be better integrated throughout the research process, creating a more secure and constructive environment for researchers and for society as a whole. Two aspects come into play:

- Broader engagement on science-related questions
- Conditions for an informed debate on ethics and science

- **Better understanding of the place of science and technology in society**

In order to address the relationship between science and society through sound policies, the knowledge accumulated in the history, sociology and philosophy of sciences needs to be expanded, consolidated and spread at European level. To this end, scholars from these disciplines should form networks to structure research and debates capable of revealing the real participation of science in building a European society and identity, stressing in particular:

- Relationships between science, democracy and law
- Research on ethics in science and technology
- The reciprocal influence of science and culture
- The role and the image of scientists

- **The evolving role of universities**

Work will aim at supporting the appropriate reforms enabling universities to fully play their role in the creation, dissemination and sharing of knowledge, together with industry and society at large (in line with Community initiatives on university-based research). The emphasis will be on:

- Defining better framework conditions for more efficient university research
- Promoting the establishment of structured partnerships with the business sector, having regard to universities' research management capacities
- Reinforcing the knowledge sharing between universities and society at large

Second action line: *Strengthening potential, broadening horizons*

• Gender and research

Based on policy orientations contained in the Commission staff working paper and Council conclusions²³ and other relevant EU policy orientations, a framework for positive actions will be implemented to reinforce the role of women in scientific research, and to enhance the gender dimension of research. This framework will provide the context for policy debate, monitoring, co-ordination and underpinning research. It will comprise:

- Strengthening the role of women in scientific research
- Gender dimension of research
- Mainstreaming gender in EU research policy and programmes

• Young people and science

Activities will be designed to attract more people into scientific careers, foster links across generations, and raise the level of scientific literacy generally. European exchanges and cooperation will concentrate on science teaching methods adapted to young audiences, the support to science teachers (concepts, materials), developing the linkages between schools and professional life. In addition, events with a broad European scope may be supported which bring together distinguished scientists – as “role models” – and aspiring young scientists. Underpinning research will be addressed, taking into account social contexts and cultural values. Three aspects have been retained:

- Supporting formal and informal science education in schools
- Reinforcing links between science education and science careers
- Research and coordination actions on new methods in science education

Third action line: *Science and society communicate*

Activities will promote effective two-way communication channels that enable the public to engage with science, and scientists to engage with the public. The approach will favour closer cooperation and exchange of best practice between scientists and media professionals, but also a greater involvement of target groups, namely young people, researchers going to the public, and the specialised press. The effort will focus on:

- Provision of reliable and timely information to the scientific press, including support to the development of a European scientific press resource facility
- Training actions to bridge the gap between the media and the scientific community
- Encouraging a European dimension at science events targeting the public

²³ ‘Women and science: excellence and innovation- gender equality in science’ - SEC(2005) 370; Council conclusions of 18 April 2005.

- Promotion of science by audio-visual means via European co-productions and the circulation of science programmes
- Promotion of excellent trans-national research and science communication by the means of popular Prizes
- Research aimed at enhancing science communication in its methods and its products.

6. ACTIVITIES OF INTERNATIONAL COOPERATION

Objective

To become competitive and play a leading role at world level, the European Community needs a strong and coherent international science and technology policy.

This international policy has two interdependent objectives:

- To support European competitiveness through strategic partnerships with third countries in selected fields of science and by engaging the best third country scientists to work in and with Europe
- To address specific problems that third countries face or that have a global character, on the basis of mutual interest and mutual benefit.

Approach

In order to identify and establish the priority areas of research of mutual interest and mutual benefit with targeted third countries (International Cooperation Partner Countries²⁴) for the specific international cooperation actions of the Cooperation Specific Programme, ongoing policy dialogues and partnership networks will be enhanced with the different regions in these third countries to provide input to help implement these actions. Coherence of national activities on international scientific cooperation will be enhanced by supporting the co-ordination of national programmes (Member States, Candidate and associated countries) through multilateral co-ordination of national RTD policies and activities. Cooperation with third countries in the Framework Programme will be targeted in particular at the following groups of countries²⁵:

- Candidate countries²⁶
- Mediterranean partner countries (MPC), Western Balkans countries (WBC) as well as the Eastern European, Caucasus and Central Asian countries²⁷ (EECCA)
- Developing countries

²⁴ See Rules for participation

²⁵ This includes third countries neighbouring the outermost regions.

²⁶ For fully associated Candidate Countries actions will be limited to specific actions to facilitate and promote their integration in the framework programme.

²⁷ Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyz Republic, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine and Uzbekistan.

- Emerging economies.

The theme-oriented international cooperation research actions are carried out under the Cooperation Specific Programme. The international actions in the area of human potential are carried out under the People Specific Programme. The horizontal support activities of international cooperation are described in this programme. The overall coordination of the international cooperation actions under the different programmes will be ensured.

Activities

The main activities to develop jointly agreed international scientific cooperation policies are:

- **Regional priority setting and definition of S&T Cooperation policies**

EU S&T cooperation for priority setting will be based on a comprehensive policy dialogue with partner countries and regions in recognition of their socio-cultural conditions and research capacities. This dialogue for S&T cooperation is carried out at multiple levels, such as through international fora (the various UN conventions), institutionalised bi-regional dialogues²⁸ including: Asia-Europe Meetings (ASEM); Latin America, Caribbean and EU (ALCUE); the Mediterranean and Western Balkan Partnerships; the EU-ACP (African, Caribbean and Pacific) States and Eastern Europe, Caucasus & Central Asia²⁹, and bilateral and multilateral agreements as well as through informal trans-regional meetings of scientists and other societal partners.

The highest priority will be given to the strengthening of bi-regional/bilateral dialogues to guide and set the framework for international S&T cooperation and joint identification of research areas for mutual interest and benefit. Such dialogue and partnership in S&T constitutes the most effective way of achieving globally and mutually agreed objectives, with respect to regional and country level specific needs. Consequently, international S&T cooperation in the Framework Programme will be governed in a coherent way through integrated research policy formulation resulting from these dialogues and from S&T agreements³⁰.

These initiatives will be implemented through specific international cooperation activities that will develop the bi-regional dialogue in close consultation with Member States, Associated Countries and International Cooperation Partner Countries.

This priority setting and the definition of S&T Cooperation policies will have direct and measurable impacts on the other activities foreseen for International S&T Cooperation under the Capacities Specific Programme, namely: enhancement and development of S&T Agreements, S&T Cooperation Partnerships and a positive synergistic effect on the coordination of national policies and activities on international S&T cooperation.

²⁸ Bi-regional dialogue means in this context the dialogue between the Member States, the EC and the third countries concerned

²⁹ Which also could involve the International Science and Technology Centre (ISTC) and the Science and Technology Centre (STCU).

³⁰ Considering the Community's interests, agreements have been concluded with all major industrialised or emerging economy partners, and with almost all countries included in the European Neighbourhood Policy.

Within the framework of S&T Agreements, in accordance with the defined priorities, the identification of new, emerging elements deserving actions and endorsement at political level to be implemented by the themes will be given priority.

In addition, the participation of scientists in national research programmes of third countries will allow the full exploitation of the possibilities of the S&T Agreements and will allow the scientists to acquire knowledge of third country research systems and their cultures in a reciprocal way. For this, the Framework Programme will cover the cost of research participation of scientists from Member States and associated countries in the national research programmes of the third countries where there is mutual interest and benefit. Such collaboration will take place on a competitive basis.

The joint projects developed within above dialogues and S&T cooperation Agreements will be needs-driven and will have significant size in terms of partnerships, competences and financing as well as having an important socio-economic impact. The projects will be targeted specifically on the priorities identified through the policy dialogue of S&T cooperation within the regional fora, and there will be specific calls per region or groups of International Cooperation Partner Countries. The output of these dialogues will contribute to the determination of the priorities and needs for the specific international cooperation actions in the different themes in the Cooperation Specific Programme.

- **Enhancement and development of S&T Cooperation Partnerships including structural activities and networks**

The realisation of identified priorities will be further elaborated and turned into actions by setting up equitable S&T Cooperation Partnerships regrouping multiple stakeholders (partners from research, industry, government and civil society) for research capacity building and research actions. These have proven to be the most suitable mechanism to mobilise the strengths of these partners synergistically. These Partnerships will require pluridisciplinary approaches to tackle diverse needs on a global, regional and/or country level.

The development of S&T Partnerships will be based on bi-regional leadership and coordination of political initiatives in defined priority areas. These will be operated by steering groups composed by a limited number of representatives from each region, open to all partners in the regions concerned, taking into account their interests and research capacities. These partnerships will promote joint research activities and permanent policy dialogue on the efficiency and effectiveness of the cooperation implemented as well as on identification of future needs.

- **Supporting coordination of national policies and activities on international S&T cooperation**

In order to promote/encourage an effective and efficient international scientific EU cooperation strategy at EU level, a continuous coordination of national policies is essential to realise commitments undertaken through the S&T bi-regional and bilateral dialogues.

This coordination will reinforce the efficiency and impact of the ongoing bilateral S&T cooperation initiatives between Member States and International Cooperation Partner Countries and enhance the positive synergies between them. It will also enhance complementarities between Community and Member States S&T cooperation activities.

Furthermore it will support the implementation of a “shared vision” by facilitating innovative programmatic approaches and working more closely among and with Member States in developing and implementing a coherent cooperation in EU science and technology.

ANNEX II

INDICATIVE BREAKDOWN OF THE AMOUNT

The indicative breakdown among programmes is as follows (in EUR million):

Capacities

Research Infrastructures*	3 961
Research for the benefit of SMEs**	1 901
Regions of Knowledge	158
Research Potential	554
Science in Society***	554
Activities of International Cooperation	358

TOTAL	7 486
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* Including a contribution to the grant to the European Investment Bank, as referred to in Annex III. Interest income on this contribution shall be added to the grant to the European Investment Bank.

** Including an amount for Article 169 initiative in the field of Research Performing SMEs.

*** Including an amount for Support to coherent development of policies.

ANNEX III

Risk-Sharing Finance Facility

In accordance with Annex II, the Community will provide a grant (Coordination and support action) to the European Investment Bank (EIB). This grant will contribute to the Community's objective to foster private sector investment in research by increasing the capacity of the Bank to manage risk, thus allowing for (i) a larger volume of EIB lending for a certain level of risk, and (ii) the financing of riskier European RTD actions than would be possible without such Community support.

The EIB will lend funds raised from international financial markets in accordance with its standard rules, regulations and procedures. It will then use this grant, together with its own funds, as provisions and capital allocation within the bank to cover part of the risks associated with these loans to eligible large European RTD actions.

Based on its financial evaluation, the EIB will assess the level of financial risks and decide the value of the provision or capital allocation. The risk assessment and grading, and the resulting decisions on provisioning and capital allocation, are standard procedures of the Bank, approved and monitored by its shareholders, and will not be altered as a result of the Community contribution. There will be no contingent liability for the Community.

This grant will be disbursed on a yearly basis. The annual amount will be established in the work programmes, taking into consideration the activity report and forecasts that the EIB will present to the Community.

The grant agreement to be concluded with the EIB will establish terms and conditions under which the Community funds can be used as provisions and capital allocations. It will include, *inter alia*, the following terms and conditions:

- The eligible themes and activities. In order to maintain the balance between the contributing specific programmes and their themes and activities, the Community may contractually adapt the eligibility conditions related to any theme or activity, without prejudice for possible modification in accordance with Article 7(2).
- The eligibility of large European RTD actions. By default, the development of research infrastructures funded by the Community under this Specific Programme shall be automatically eligible. Other research infrastructures could also be considered. In accordance with the regulation adopted pursuant to Article 167 of the Treaty, the grant agreement will also establish procedural modalities and will guarantee to the Community the possibility to veto under certain circumstances the use of the grant for provisioning a loan proposed by the EIB.
- The rules for defining the share of the financial risk that will be covered by the Community grant and the risk threshold beyond which the EIB can use the Community grant.
- The arrangements by which the Community will monitor the EIB lending operations related to the grant.

ANNEX IV

Co-ordination of non-Community research programmes

One initiative for the joint implementation of national research programmes is identified below and will be the subject of a separate decision on the basis of Article 169 of the Treaty. Further initiatives may be identified and proposed during the implementation of the 7th Framework Programme.

In the case of this decision, a dedicated implementation structure will be set up, together with the organisational structure and appropriate governance bodies necessary for the implementation of the action. In accordance with annexII, the Community will provide financial support to the initiative up to the amount set out in Annex II and will participate actively in the implementation by the means which are most appropriate for the action.

- **Article 169 initiative in the field of Research Performing SMEs**

The aim will be to launch and implement a joint R&D programme for the benefit of research performing SMEs with the objective to boost their research and innovation capability. Building on EUREKA, it will stimulate and support transnational R&D projects led by such SMEs. This initiative complements other SME-targeted actions carried out in the context of the 7th Framework Programme.

The Community will provide financial support to the initiative and will participate in the implementation by the means which are most appropriate for the action.

LEGISLATIVE FINANCIAL STATEMENT

1. NAME OF THE PROPOSAL:

Proposal for a COUNCIL DECISION adopting a specific programme for research, technological development and demonstration activities: “Capacities” (2007 to 2013)

2. ABM / ABB FRAMEWORK

RESEARCH...

3. BUDGET LINES

3.1. Budget lines (operational lines and related technical and administrative assistance lines) including headings:

02 02 06 Pilot project: regions of knowledge; 02 02 02 01 Research and innovation; 08 08 01 02 Horizontal research activities involving SMEs; 08 08 01 03 Specific measures in support of international cooperation; 08 10 01 01 Research and innovation; 08 10 01 03 Research infrastructures; 08 10 01 04 Science and society; 09 04 03 Research infrastructures

(final budgetary nomenclature for FP7 will be established in due course)

3.2. Duration of the action and of the financial impact:

2007-2013 subject to the approval of new financial perspectives framework

3.3. Budgetary characteristics:

Budget line	Type of expenditure		New	EFTA contribution	Contributions from applicant countries	Heading in financial perspective
02, 06, 08, 09, and 11	Non-comp	Diff ^{31/}	YES	YES	YES	No [1a]
XX.01	Non-comp	Non-diff ³²	YES	NO	NO	No [1a...]
XX.01.05	Non-comp	Non-diff	YES	YES	YES	No [1a...]

³¹ Differentiated appropriations.

³² Non-differentiated appropriations here after referred to as NDA.

4. SUMMARY OF RESOURCES

4.1. Financial Resources

4.1.1. Summary of commitment appropriations (CA) and payment appropriations (PA)³³

EUR million (to 3 decimal places)

Expenditure type	Section no.		2007	2008	2009	2010	2011	2012	2013	Total
Operational expenditure³⁴										
Commitment Appropriations (CA)	8.1	a	4.955,289	6.450,321	7.929,201	9.553,215	11.203,503	12.811,940	14.568,946	67.472,416
Payment Appropriations (PA)		b	1.982,116	4.066,715	6.097,835	7.985,639	9.578,238	11.189,390	26.572,482 ³⁵	67.472,416
Administrative expenditure within reference amount³⁶										
Technical & administrative assistance (NDA)	8.2.4	C	706,648	720,781	735,196	749,900	764,898	780,196	795,800	5.253,418
TOTAL REFERENCE AMOUNT										
Commitment Appropriations		a + c	5.661,937	7.171,102	8.664,398	10.303,115	11.968,401	13.592,136	15.364,746	72.725,834
Payment Appropriations		b + c	2.688,764	4.787,496	6.833,031	8.735,539	10.343,136	11.969,586	27.368,282 ³⁷	72.725,834
Administrative expenditure <u>not</u> included in reference amount³⁸										
Human resources and associated expenditure (NDA)	8.2.5 d		11,633	11,866	12,103	12,345	12,592	12,844	13,101	86,483
Administrative costs, other than human resources and associated costs, not included in reference amount (NDA)	8.2.6 e		0,807	0,824	0,840	0,857	0,874	0,891	0,909	6,002

³³ These figures refer to the expenditure for the entire EC Framework Programme - see COM(2005) 119.

³⁴ Expenditure that does not fall under Chapter xx 01 of the Title xx concerned.

³⁵ Payment appropriations refers to 2013 and following years.

³⁶ Expenditure within article xx 01 05 of Title xx.

³⁷ Payment appropriations refers to 2013 and following years.

³⁸ Expenditure within chapter xx 01 other than articles xx 01 05.

Total indicative financial cost of intervention

TOTAL CA including cost of Human Resources	a+c +d +e	5.674,377	7.183,791	8.677,340	10.316,316	11.981,867	13.605,871	15.378,756	72.818,319
TOTAL PA including cost of Human Resources	b+c +d +e	2.701,204	4.800,186	6.845,974	8.748,741	10.356,602	11.983,321	27.382,292	72.818,319

Co-financing details

If the proposal involves co-financing by Member States, or other bodies (please specify which), an estimate of the level of this co-financing should be indicated in the table below (additional lines may be added if different bodies are foreseen for the provision of the co-financing):

EUR million (to 3 decimal places)

Co-financing body		Year n	n + 1	n + 2	n + 3	n + 4	n + 5 and later	Total
.....	f							
TOTAL CA including co-financing	a+c +d+ e+f							

4.1.2. Compatibility with Financial Programming

- ☒ Proposal is compatible with next financial programming (Commission's February 2004 Communication on the financial perspectives 2007-2013 COM (2004) 101).
- ☐ Proposal will entail reprogramming of the relevant heading in the financial perspective.
- ☐ Proposal may require application of the provisions of the Interinstitutional Agreement³⁹ (i.e. flexibility instrument or revision of the financial perspective).

4.1.3. Financial impact on Revenue

- ☐ Proposal has no financial implications on revenue
- ☒ Proposal has financial impact – the effect on revenue is as follows:

Certain Associated States may contribute to the funding of the framework programmes.

³⁹ See points 19 and 24 of the Interinstitutional agreement.

In accordance with Article 161 of the Financial Regulation, the Joint Research Centre may benefit from revenue from various types of competitive activities and from other services provided for outside bodies.

In accordance with Article 18 of the Financial Regulation, certain revenue may be used to finance specific items.

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EUR million (to one decimal place)

Budget line	Revenue	Prior to action [Year n-1]	Situation following action					
			[Year n]	[n+1]	[n+2]	[n+3]	[n+4]	[n+5]
	<i>a) Revenue in absolute terms</i>							
	<i>b) Change in revenue</i>	Δ						

4.2. Human Resources FTE (including officials, temporary and external staff) – see detail under point 8.2.1.

Annual requirements	2007	2008	2009	2010	2011	2012	2013
Total number of human resources ⁴⁰	1.848	1.848	1.848	1.848	1.848	1.848	1.848

5. CHARACTERISTICS AND OBJECTIVES

5.1. Need to be met in the short or long term

This Specific Programme addresses the need to enhance the excellence of research and innovation capacities throughout Europe. These needs will be met by supporting modern and effective research infrastructure, strengthening the innovation capacity of SMEs, strengthening the research potential of European regions, realisation of the full research potential of the enlarge Union, building an effective and democratic European knowledge society and to play a leading role at world level.

⁴⁰

Figures indicated in the table refer only to the staff financed by the establishment plan for all indirect actions under the responsibility of DGs RTD, INFSO, TREN, ENTR and FISH. Therefore these figures do not comprise the posts of the establishment plan from the operating budget and the posts from the JRC's establishment plan - see documents COM(2005) 439 & 445.

5.2. Value-added of Community involvement and coherence of the proposal with other financial instruments and possible synergy

This Specific Programme is designed to maximise the leverage and impact of European level research spending within the available budget with a strong element of continuity and with major new approaches creating capacity for tomorrow's research excellence. Whenever appropriate synergies and complementarity will be sought with other community policies and programmes.

5.3. Objectives, expected results and related indicators of the proposal in the context of the ABM framework

This specific programme will enhance research and innovation capacities throughout Europe and ensure their optimal use. The objectives will be achieved through initiatives in six areas listed below and for which objectives are further detailed in annex I.

- Optimising the use and development of research infrastructures;
- Strengthening innovative capacities of SMEs and their ability to benefit from research;
- Supporting the development of regional research-driven clusters;
- Unlocking the research potential in the EU's convergence and outermost regions;
- Bringing science and society closer together for the harmonious integration of science and technology in European society; and
- Horizontal actions and measures in support of international co-operation.

This specific programme will also support the coherent development of research policies.

Performance indicators will be developed at three levels. Quantitative and qualitative indicators to show the path or direction of scientific and technical progress, such as new standards and tools, scientific techniques, patent applications and licence agreements, new products, processes and services.

Management indicators to monitor performance internally and support senior management decision making. These could include level of budget execution, time to contract and time to payment.

Outcome (impact) indicators to assess the overall effectiveness of the research against high level objectives. These could include assessment at the aggregate Framework Programme level (e.g. impact on the achievement of the Lisbon, Gothenburg, Barcelona and other objectives) and assessment at the SP level (e.g. contribution made to the EU S&T and economic performance).

5.4. Method of Implementation (indicative)

Show below the method(s) chosen for the implementation of the action.

☒ Centralised Management

- ☒ Directly by the Commission
- ☒ Indirectly by delegation to:
 - ☒ Executive Agencies
 - ☒ Bodies set up by the Communities as referred to in art. 185 of the Financial Regulation
 - ☒ National public-sector bodies/bodies with public-service mission

☐ *Shared or decentralised management*

- ☐ With Member states
- ☐ With Third countries

☐ *Joint management with international organisations (please specify)*

Relevant comments:

The Commission proposes a centralised management of this programme, both directly by the Commission and indirectly by delegation to an Executive Agency or to structures created through Article 169 or 171 of the Treaty.

For actions deriving from Article 169 or Article 171 of the Treaty – notably concerning multi-financed large-scale initiatives and including the development of new infrastructures of European interest - the management structures will be decided on a case-by-case basis according to the specific characteristics of the action concerned, will be created by the decisions establishing the actions and will involve management outside the Commission services.

The SME specific schemes (Research for SMEs and Research for SME associations) are characterised by activities which generate a large number of small operations but where the link between the detailed follow-up of the actual projects funded and the development of S&T policy is not direct or does not exist. Management of these activities will be entrusted to an Executive Agency which will manage the calls and the reception of proposals, adopt the instruments of budget implementation, award contracts and grants, deal with individual project-level management and payments and gather, analyse and transmit to the Commission all the information needed to guide the implementation of the programme. The Commission will handle the policy oversight and preparation of procedures and work programmes. The feedback into the work programme, future programmes and other policy initiatives will be ensured by the Commission through monitoring and review at the project portfolio or sub-programme level.

For other parts of the programme, where the link between the detailed follow-up of the actual projects funded and the development of S&T policy is clear, an executive agency will be entrusted with the administration of calls and evaluations

and will perform such tasks as the reception and administrative management of proposals submitted, inviting and paying expert evaluators (chosen by the Commission), providing logistical support to proposal evaluation and possible further tasks, such as financial viability checking and provision of statistics. The continued possibility to sub-contract specific tasks to private companies (e.g. for the development, operation and support of IT tools) will not be ruled out. The evaluation, contracting and project management of the projects will be carried out by the Commission services, in order to maintain the close link between such activities and policy formulation.

6. MONITORING AND EVALUATION

Monitoring and evaluation aspects are set out in the Legislative Financial Statement of the proposal of the 7th framework programme, COM(2005) 119 final.

7. ANTI-FRAUD MEASURES

Appropriate measures should also be taken to prevent irregularities and fraud and the necessary steps should be taken to recover funds lost, wrongly paid or incorrectly used in accordance with Council Regulation (EC, Euratom) No 1605/2002 of 25 June 2002 on the Financial Regulation applicable to the general budget of the European Communities⁴¹, Commission Regulation (EC, Euratom) No 2342/2002 of 23 December 2002 laying down detailed rules for the implementation of Council Regulation 1605/2002⁴², Council Regulations (EC, Euratom) No 2988/95 of 18 December 1995 on the protection of the European Communities financial interests⁴³, (EC, Euratom) No 2185/96 of 11 November 1996 concerning on-the-spot checks and inspections carried out by the Commission in order to protect the European Communities' financial interests against fraud and other irregularities⁴⁴ and Regulation (EC) No 1073/1999 of the European Parliament and of the Council concerning investigations conducted by the European Anti-Fraud Office (OLAF)⁴⁵.

⁴¹ OJ L 248, 16.9.2002, p. 1.

⁴² OJ L 357, 31.12.2002, p. 1.

⁴³ OJ L 312, 23.12.1995, p. 1.

⁴⁴ OJ L 292, 15.11.1996, p. 2.

⁴⁵ OJ L 136, 31.5.1999, p. 1.

8. DETAILS OF RESOURCES

8.1. Objectives of the proposal in terms of their financial cost

Commitment appropriations in EUR million (to 3 decimal places)

(Headings of Objectives, actions and outputs should be provided)	Year 2007		Year 2008		Year 2009		Year 2010		Year 2011		Year 2012		Year 2013		TOTAL	
	No. outputs	Total cost	No. outputs	Total cost	No. outputs	Total cost	No. outputs	Total cost	No. outputs	Total cost	No. outputs	Total cost	No. outputs	Total cost	No. outputs	Total cost
OPERATIONAL OBJECTIVE No.1 ⁴⁶ RESEARCH INFRASTRUCTURE		302,987		386,889		469,886		560,992		653,570		743,812		842,365		3.960,500
OPERATIONAL OBJECTIVE No.2 ¹ RESEARCH FOR AND BY SMEs		145,434		185,707		225,545		269,276		313,714		357,030		404,275		1.900,980
OPERATIONAL OBJECTIVE No.3 ¹ REGIONS OF KNOWLEDGE		12,119		15,476		18,795		22,440		26,143		29,752		33,690		158,415
OPERATIONAL OBJECTIVE No.4 ¹		42,418		54,164		65,784		78,539		91,500		104,134		117,851		554,390

⁴⁶ As described under Section 5.3.

RESEARCH POTENTIAL																
OPERATIONAL OBJECTIVE No5 ¹ SCIENCE AND SOCIETY	42,41854,16465,78478,53991,500104,134117,851															554,390
OPERATIONAL OBJECTIVE No6 ¹ INTERNATIONA L COOPERATION	27,56034,96642,41050,60558,95767,08976,003															357,590
TOTAL COST		572,937		731,365		888,205		1,060,391		1,235,383		1,405,950		1,592,035		7,486,265

8.2. Administrative Expenditure

8.2.1. Number and type of human resources

Types of post		Staff to be assigned to management of the action using existing and/or additional resources (number of posts/FTEs)						
		Year 2007	Year 2008	Year 2009	Year 2010	Year 2011	Year 2012	Year 2013
Officials or temporary staff ⁴⁷ (XX 01 01)	A*/AD							
	B*, C*/AST							
Staff financed ⁴⁸ by art. XX 01 02								
Other staff ⁴⁹ financed by art. XX 01 05	A*/AD							
	B*, C*/AST							
TOTAL ⁵⁰		1.848	1.848	1.848	1.848	1.848	1.848	1.848

8.2.2. Description of tasks deriving from the action

Implementation of the Framework Programme

8.2.3. Sources of human resources (statutory)

(When more than one source is stated, please indicate the number of posts originating from each of the sources)

☒ Posts currently allocated to the management of the programme to be replaced or extended

☒ Posts pre-allocated within the APS/PDB exercise for year 2006

⁴⁷ Cost of which is NOT covered by the reference amount.

⁴⁸ Cost of which is NOT covered by the reference amount.

⁴⁹ Cost of which is included within the reference amount.

⁵⁰ Figures indicated in the table refer only to the staff financed by the establishment plan for all indirect actions under the responsibility of DGs RTD, INFSO, TREN, ENTR and FISH. Therefore these figures do not comprise the posts of the establishment plan from the operating budget and the posts from the JRC's establishment plan - see documents COM(2005) 439 & 445.

- ☐ Posts to be requested in the next APS/PDB procedure
- ☒ Posts to be redeployed using existing resources within the managing service (internal redeployment)
- ☐ Posts required for year n although not foreseen in the APS/PDB exercise of the year in question

8.2.4. *Other Administrative expenditure included in reference amount (XX 01 05 – Expenditure on administrative management)*⁵¹

EUR million (to 3 decimal places)

Budget line (number and heading)	Year 2007	Year 2008	Year 2009	Year 2010	Year 2011	Year 2012	Year 2013	TOTAL
Statutory staff								
xx.01 05 01	304,222	310,306	316,513	322,843	329,300	335,886	342,603	2.261,673
External staff								
xx.01 05 02	205,478	209,587	213,779	218,055	222,415	226,863	231,401	1.527,577
Other administrative expenses								
xx.01 05 03	196,948	200,888	204,904	209,002	213,183	217,447	221,796	1.464,167
Total Technical and administrative assistance	706,648	720,781	735,196	749,900	764,898	780,196	795,800	5.253,418

8.2.5. *Financial cost of human resources and associated costs not included in the reference amount*

EUR million (to 3 decimal places)

Type of human resources	Year 2007	Year 2008	Year 2009	Year 2010	Year 2011	Year 2012	Year 2013	TOTAL
Officials and temporary staff (08 0101 and)	11,633	11,866	12,103	12,345	12,592	12,844	13,101	86,483
Staff financed by Art XX 01 02 (auxiliary, END, contract staff, etc.)								
Total cost of Human Resources and associated costs (NOT in reference amount)	11,633	11,866	12,103	12,345	12,592	12,844	13,101	86,483

Calculation– *Administrative expenditures*

⁵¹ These figures refer to the expenditure for the entire EC Framework Programme - see COM(2005) 119.

Have been calculated taking into account the following hypothesis:

- *the number of official staff on the ex part A of the budget remains at 2006 level*
- *expenditures increased by the 2% each year according to the inflation foreseen such as indicated in Fiche 1 REV (working document of commission services related to the financial perspectives),*
- *the assumption of 108 000 € for each official staff, and 70.000 € for the external staff (2004 prices)*

Calculation– **Staff financed under art. XX 01 02**

Reference should be made to Point 8.2.1, if applicable

8.2.6 Other administrative expenditure not included in reference amount⁵²

EUR million (to 3 decimal places)

	Year 2007	Year 2008	Year 2009	Year 2010	Year 2011	Year 2012 and 2013	TOTAL
XX 01 02 11 01 – Missions	0,320	0,326	0,333	0,339	0,346	0,713	2,376
XX 01 02 11 02 – Meetings & Conferences	0,010	0,010	0,011	0,011	0,011	0,023	0,076
XX 01 02 11 03 – Committees ⁵³	0,478	0,487	0,497	0,507	0,517	1,065	3,550
XX 01 02 11 04 – Studies & consultations							
XX 01 02 11 05 - Information systems							
2 Total Other Management Expenditure (XX 01 02 11)							
3 Other expenditure of an administrative nature (specify including reference to budget line)							

⁵² These figures refer to the expenditure for the entire EC Framework Programme - see COM(2005) 119.

⁵³ EURAB committee.

Total Administrative expenditure, other than human resources and associated costs (NOT included in reference amount)	0,807	0,824	0,840	0,857	0,874	1,801	6,002
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Calculation - ***Other administrative expenditure not included in reference amount***

These figures are estimated on the basis of the 2006 DG RTD requests increased of the 2% for the yearly foreseen inflation. (Fiche 1 REV)

The needs for human and administrative resources shall be covered within the allocation granted to the managing DG in the framework of the annual allocation procedure. The allocation of posts should take into account an eventual reallocation of posts between departments on the basis of the new financial perspectives.