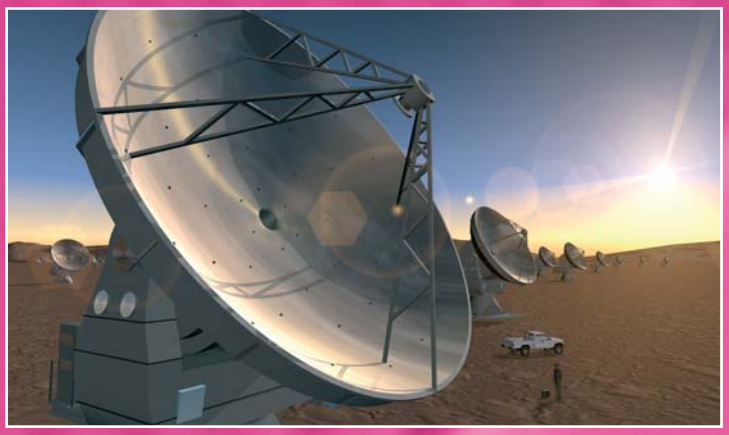

Top facilities for top scientists

Capacities
Budget: €4.2 billion

The "Capacities" programme aims to optimise the use and development of research infrastructures, while enhancing the innovative capacities of SMEs to benefit from research. The programme is designed to support regional research-driven clusters and at the same time unlock the research potential in the EU's convergence and outermost regions. Support is to be provided for horizontal actions and measures underlining international cooperation. Finally, European society and science should be brought closer under the initiatives of the "Capacities" programme.

"Capacities" will operate in seven broad areas:

- Research infrastructures;
- Research for the benefit of SMEs;
- Regions of knowledge and support for regional research-driven clusters;
- Research potential of Convergence Regions;
- Science in society;
- Support to the coherent development of research policies;
- International co-operation.

'Capacities' in FP7

www.ec.europa.eu/research

CAPACITIES

RESEARCH INFRASTRUCTURES

Budget: €1.8 billion (2007 - 2013)

Research infrastructures play an increasing role in the advancement of knowledge, technology and their exploitation. They need a broad range of expertise to be developed and should be used and exploited by a large community of scientists and industries on a European scale.

What's the benefit for citizens:

A few examples of research infrastructures include radiation sources, data banks in genomics and in social sciences, observatories for environmental sciences, systems of imaging, clean rooms for the development of new materials or nano-electronics, computing and communication based electronic infrastructures, and telescopes. These facilities, resources or services have the ability to bring together people and investment and to contribute to national, regional and European economic development. They are therefore important for research, education and innovation.

What's the benefit for researchers:

Cutting-edge research infrastructures need a broad range of expertise in order to develop. At the same time they have the ability to create rich research environments and attract researchers from different countries, regions and disciplines. Thousands of scientist and students from universities, research institutes or industries from Europe and abroad, benefit from research infrastructures.
Research infrastructures can be seen as strategic Centres of Excellence for research and training as well as facilitators of public-private partnerships in research. The benefit of cross-disciplinary and institutional collaboration lies in the personal interactions of researchers coming from different countries, disciplines and work places. Since activities in these facilities lie at the frontiers of science, they stimulate the interest of young people and motivate them to embrace scientific careers.

What's the benefit for industry and SMEs:

Industry uses research infrastructure facilities in collaboration with researchers. Their construction and maintenance create important supply and demand effects. Such innovation capacities can be seen through the public-private mobility of researchers and the new technologies applied in building world-level research installations or spin-off products and/or start-up companies. Research infrastructures clearly stimulate industrial impacts and play an outstanding role in building the interface between science and industry.

They also have socio-economic impacts, for example where pan-European research infrastructures have their site, often "technology clusters" of associated industry or so-called technology parks can be found. Such strategic centres for transfer of knowledge offer either better possibilities for interdisciplinary research contacts or greater attraction to high-tech firms. As a result, different regions often compete to attract new installations and this can be an opportunity to also increase the public-private interaction in the funding of research activities.

SMALL MEDIUM ENTERPRISES (SMEs)

Budget: €1.3 billion (2007 - 2013)

SMEs make up a large part of Europe's economy and industry. The EU's 23 million SMEs account for 99% of all businesses and contribute up to 80% of employment in some industrial sectors, such as textiles.

What's the benefit for citizens:

European SMEs are an essential source of growth, employment, entrepreneurial skills, innovation and economic and social cohesion. It is therefore essential to unlock the potential through research and technological innovation which will help them survive and prosper in the long run. Their closer working relationships with the research community will bring increased value to the European economy, higher growth and more job opportunities.
FP7 proposes actions to increase the participation of SMEs in research and offers them measures that will facilitate their access to research results. Other advantages for SMEs taking part in FP7 will include higher funding rates, a wider choice of funding schemes, the acquisition of new knowledge and increased potential for new products and services.

What's the benefit for researchers:

Under FP7, SMEs can strengthen their overall position through networking and relationship building with international partners, access to research centres of excellence, and development of research and innovation.

Actions will be encouraged across the entire field of science and technology, utilising a bottom-up approach. Two dedicated measures will be implemented:

(i) **Research for SMEs**: to support small groups of innovative SMEs in solving common or complementary technological problems.
(ii) **Research for SME associations**: to support SME associations and SME groupings in developing solutions to problems common to large numbers of SMEs in specific sectors.

These two measures primarily address the large community of SMEs with a capacity to innovate but with limited research capabilities. To increase the participation of and benefit for SMEs, the outsourcing character of the measures will be strengthened.

What's the benefit for industry and SMEs:

Throughout FP7, SMEs will actively be encouraged to participate in all research actions, especially those under the Themes of the Cooperation programme. The involvement of SMEs in Joint Technology Initiatives (JTIs) will be encouraged wherever such activity is considered appropriate.
A key feature of FP7 is the proposed simplification of rules and procedures. Envisaged measures will cover the entire funding cycle, including the various elements of funding schemes, administrative and financial rules, procedures, readability and user-friendliness of documents.

The proposed rules for Participation in FP7 specify a funding rate of 75% for research and development activities of SMEs, rather than the 50% currently applicable in FP6. This should make it more attractive for SMEs to participate in the Framework Programme by lowering their financial burden. Furthermore, the current principle of 'collective financial responsibility' is replaced in the proposal of FP7 with a guarantee fund, which would cover the financial risks of defaulting project participants.

REGIONS OF KNOWLEDGE

Budget: €126 million (2007 - 2013)

Regions are increasingly being recognised as important players in the EU's research and development landscape. Local resources are taking an active part in scientific endeavour and innovation in favour of society.

What's the benefit for citizens:

The actions undertaken in this area will enable European regions to strengthen their capacity for investing in and carrying out research activities. While this can be beneficial for regions locally, it is also a way to maximise their potential for a successful involvement in European research projects. A stronger research capacity can also result in the creation of more jobs in the regions.

Research policy and activities at regional level often rely on the development of "clusters" uniting public and private actors. The Pilot Action on "Regions of Knowledge" demonstrated the dynamics of this evolution and the necessity to support and encourage the development of such regional structures.

What's the benefit for researchers:

Encouraging transnational networks of regions and research-driven clusters will help maximise the region's potential, creating a dynamic environment that can attract or retain the best researchers. These clusters will bring together universities, research centres, enterprises and regional authorities, councils or development agencies.

What's the benefit for industry and SMEs:

Industry as a whole and SMEs in particular are essential partners in successful EU research projects. Assisting regions in increasing their capacity for investing in research and development will help improve competitiveness and knowledge absorption capacities.

Synergies will be sought with the Community's regional policy as well as with major national and regional programmes, in particular with regard to convergence and outermost regions.

The Regions of Knowledge activity will encourage cross-border regional co-operation in research, irrespective of whether the regions concerned fall under the convergence or the regional competitiveness objective.

RESEARCH POTENTIAL OF CONVERGENCE REGIONS

Budget: €370 million (2007 - 2013)

Europe needs to exploit its research potential, particularly in the less advanced regions that are remotely situated from the European core of research and industrial development. A strategy of inclusiveness can potentially benefit the social fabric as well as the research community and the industry, locally and at the level of the European Research Area.

What's the benefit for citizens:

Taking advantage of the knowledge and experience existing in other regions of Europe, this action seeks to upgrade research potential where needed by providing support in the form of investment, staff, networking or advice.

The effort is directed at researchers and institutions of these regions in the public or private sector.

What's the benefit for researchers:

The research community in the convergence and outermost regions will be supported as follows:

- Transnational two-way exchanges of research staff between selected organisations in the convergence regions, and one or more partner organisations; support to selected centres of existing or emerging excellence for the recruitment of incoming experienced researchers from other European countries.
- Acquisition and development of research equipment and the development of a material environment enabling the exploitation of the intellectual potential to be found in the selected centres of existing or emerging excellence in the convergence regions.
- Organisation of workshops and conferences to facilitate knowledge transfer; promotional activities as well as initiatives aiming at disseminating and transferring research results in other countries and international markets.
- "Evaluation facilities" through which any research centre in the convergence regions can obtain an international independent expert evaluation of the level of their overall research quality and infrastructures.

What's the benefit for industry and SMEs:

To fully realise the European Research Area in the enlarged Union, all regions must take part and must be supported if necessary. This strategy directly benefits SMEs and industrial organisations in the convergence regions.

Strong synergies will be sought with the Community regional policy. Actions under this heading will identify needs and opportunities for reinforcing the research capacities of emerging and existing centres of excellence in convergence regions which may be met by Structural and Cohesion funds.

Synergies will also be sought with the Competitiveness and Innovation programme in order to promote the regional commercialisation of research and development in collaboration with industry.

SCIENCE IN SOCIETY

Budget: €280 million (2007 - 2013)

'Science in Society' aims to bridge the gap between science professionals and those without a formal science education and to promote a taste for scientific culture in the public at large. Some of the initiatives, therefore, are aimed at triggering the curiosity of young people for science and at reinforcing science education at all levels.

What's the benefit for citizens:

While science and technology has an increasing influence on our daily lives, it may appear to be removed from the daily concerns of a large part of the public and of policy makers. Contentious issues relating to emerging technologies should be addressed by society on the basis of well-informed debate leading to sound choices and decisions. Therefore, another key issue is the encouragement of societal dialogue on research policy; stimulating civil society organisations to become more involved in research; debating and promoting shared values, equal opportunities and societal dialogue.

What's the benefit for researchers:

The initiative undertaken in the field of 'Science in Society' will provide support to issues such as strengthening and improving the European science system. This includes "self regulation" and the development of a policy on the role of universities. The role of research based in universities and their engagement in the challenges of globalisation will be strengthened.

The continuation and further expansion of gender research is foreseen, including the integration of the gender dimension in all areas of research.

Special attention will go to improving communication between the scientific world and the wider audience of policy-makers, the media and the general public. This would partly be achieved by helping scientists and media professionals to work closer together.

Further efforts will be made to set landmarks for an ethically sound research endeavour in the light of fundamental rights. Initiatives will be undertaken to improve governance of the European research and innovation system.

What's the benefit for industry and SMEs:

By stimulating young people to take on science studies, industry's personnel needs might be better supported in the longer term. The progress of women in scientific careers will be promoted, along with the better use of their professional and scientific talents.

Ethical frameworks for research activities together with an open-debate culture on research and its place in society, will be reinforced in order to enhance the trust of citizens in industrial research activities.

SUPPORT TO THE COHERENT DEVELOPMENT OF RESEARCH POLICIES

Budget: €70 million (2007-2013)

Europe needs to improve the coherence of research policies at the regional, national and European level and increase its potential in the production and use of knowledge in order to become more competitive and provide solutions to some of the challenges it faces today.

What's the benefit for citizens:

Public investment in research will become more cost effective through better monitoring and coordination of research policy across Europe. It is envisaged that better collaboration between policy makers across national, regional and European levels will lead to identification of good practices and better policy development. This would improve the conditions for conducting research and ultimately improve Europe's potential in creating jobs and growth. It will also provide a better assessment of the impact of public expenditure in research on leveraging private investment and on competitiveness.

What's the benefit for researchers:

Actions are mainly targeting policy makers but will ultimately improve conditions for conducting research. One specific action will further develop the European strategy for human resources and mobility in research through a number of regional, national and Community policy initiatives such as funding of programmes, legislation, recommendations and guidelines. The common objective of these initiatives is to stimulate researchers to stay in Europe and attract the best brains from all over the world.

The following activities will be supported during FP7:

- Monitoring, analysis and impact assessment of public research policies and industrial strategies. The development of indicators will provide information and evidence in the design, implementation and evaluation in the trans-national coordination of policies.
- Strengthening, on a voluntary basis, the coordination of research policies in a twofold manner: first, through actions supporting the implementation of the open method of co-ordination (OMC) and second, through bottom-up trans-national cooperation initiatives undertaken at national or regional level on issues of common interest.

What's the benefit for industry and SMEs:

Increasing investment in research and development to reach 3% of the GDP in the EU by 2010, out of which 2/3 should come from private sources and improving its effectiveness, is a top priority of the Lisbon strategy for growth and jobs.
Therefore, it is essential to strengthen public support for research and its leverage effect on investment by private actors. In addition the identification of the most suitable measures to encourage research and development investment in SMEs, particularly those with a high growth potential, will contribute towards a higher investment in research.

INTERNATIONAL COOPERATION

Budget: €185 million (2007 - 2013)

More than 100 countries from all over the world are involved in EU Research Programmes. These activities will continue within the "Cooperation" programme of FP7, which covers the international cooperation actions in the 10 thematic areas and across themes. They will be implemented in coordination with the "Cooperation", "People" and "Capacities" programmes of FP7.

What's the benefit for citizens:

International research and development will contribute to the production of global public goods and help to close the gap between different countries in the world. There is already a significant body of scientific knowledge in the world improving the lives of those who live in developing countries as well as those of European citizens. Where possible, the Framework Programme will also contribute to meeting the Millennium Development Goals by 2010.

What's the benefit for researchers:

The enhanced participation of researchers and research institutions from third world countries applying the appropriate restrictions for security issues in order to respect the confidentiality aspects within the thematic areas. They will be strongly encouraged to seize this opportunity - be it through collaborative research or through fellowships.

Specific cooperation actions in each thematic area dedicated to third world countries in cases of mutual interest; to cooperate on the particular topics selected based on their scientific and technological levels and needs. These actions are closely associated with either the bilateral cooperation agreements, or multilateral dialogues between the EU and these countries or groups of countries and will serve as privileged tools for implementing the cooperation between the EU and these countries. In particular, such actions are:

- Actions aiming to reinforce the research capacities of candidate countries and neighbourhood countries;
- Cooperative activities targeting developing and emerging countries focusing on their particular needs in various fields such as health, agriculture, fisheries and environment, and implemented in financial conditions adapted to their capacities.

What's the benefit for industry and SMEs:

International cooperation under FP7 will further integrate the EU into the worldwide community and thus help advance research and technology in those countries that are building their own knowledge capacity. These will, on one hand lead to enriching European research with the pool of knowledge generated around the world, while enhancing, on the other hand, the science and technology awareness and competence of societies and companies in developing countries.