

The Seventh Framework Programme for research and technological development (FP7) is the European Union's main instrument for funding research in Europe. FP7, which applies to the years 2007-2013, is the natural successor to the Sixth Framework Programme (FP6), and is the result of years of consultation with the scientific community, research and policy making institutions, and other interested parties.

FP7 has some key differences to earlier EU research programmes, including:

- Increased budget the FP7 budget represents a 63% increase from FP6 at current prices, which means additional resources for European research. It is also a strong political message to the EU Member States, which have committed themselves to increase research spending from 2% of GDP currently to 3% in 2010.
- Focus on themes a strong focus on major research themes (e.g. health, ICTs, space, etc.) within the largest component of FP7 Cooperation makes the programme more flexible and responsive to the needs of industry.
- European Research Council (ERC) the first pan-European agency for funding research, the newly created European Research Council, aims to fund more high-risk yet potentially high-gain European research at the scientific frontiers.
- Regions of Knowledge FP7 is establishing new Regions of Knowledge that bring together the various research partners within a region. Universities, research centres, multinational firms, regional authorities and SMEs can all link up and strengthen their research

abilities and potential.

- Risk-sharing finance a new Risk-sharing finance facility is to enhance backing for private investors in research projects, improving access to loans from the EuropeanInvestment Bank (EIB) for large European research actions.
- Joint Technology Initiatives (JTIs) a user-driven follow-up to the European Technology Platforms (ETPs), the JTIs are a new concept that brings together different partners to take on objectives that cannot be reached via the 'Calls for Proposals' approach. JTIs specifically address those areas of research activity where enhanced collaboration and considerable investment are essential to long-term success. Single Helpdesk a single Helpdesk, the 'Research Enquiries service', acts as the first point of contact for potential participants, answering questions on all aspects of EU-funded research and assisting parties new to participation in the Framework research programmes.

FP7 still retains the important elements of earlier Framework research programmes. The same emphases remain on consortia of European partners, collaboration across borders, open coordination, flexibility and excellence of research.

The priorities in FP7 are contained within several specific programmes, as follows:

Cooperation programme – the core of FP7 The core of FP7 and its largest component by far, the Cooperation programme fosters collaborative research across Europe and other partner countries, according toseveral key thematic areas. These themes are: health; food, agriculture and fisheries, and biotechnology; information and communications technologies; nanosciences, nanotechnologies, materials and new production technologies; energy; environment (including climate change); transport (including aeronautics); socio-economic sciences and the humanities; space and security.

This programme also includes the new Joint Technology Initiatives, which are industrydriven, large-scale multi-financed actions, supported in certain cases by a mix of public and private funding. Other highlights of this programme include Coordination of non-community research programmes, which aims to bring European national and regional research programmes closer together (e.g. ERA-NET), and the Risk-sharing finance facility.

Special attention is also being paid to multi-disciplinary and cross-theme research, including joint calls for proposals between themes.

Ideas programme – and the European Research Council (ERC) The Ideas programme is the first time an EU Framework research programme has funded pure, investigative research at the frontiers of science and technology, independently of thematic priorities. As well as bringing such research closer to the conceptual source, this flagship FP7 programme is a recognition of the value of basic research to society's economic and social welfare.

The Ideas programme is uniquely flexible in its approach to EU research, in that proposed research projects are judged solely on the basis of their excellence, as judged by peer review. It is being implemented by the new European Research Council (ERC), which consists of a Scientific Council (to plan scientific strategy, establish the work programme, quality control and information activities) and an implementing agency (administration, support for applicants, proposal eligibility, grant management and practical organisation).

Research may be carried out in any area of science or technology, including engineering, socio-economic sciences and the humanities. Particular emphases are being placed on

emerging and fast-growing fields at the frontiers of knowledge, and on cross-disciplinary research. Unlike the Cooperation programme, there is no obligation for cross-border partnerships.

People programme – boosting European research careers The People programme provides significant support for research mobility and career development, both for researchers inside the European Union and externally. It is being implemented via a coherent set of Marie Curie actions, designed to help researchers build their skills and competences throughout their careers.

The programme includes activities such as initial researcher training, support for lifelong training and development via trans-national European fellowships and other actions, and industry/academia partnerships. An international dimension with partners outside the EU is to further develop the careers of EU researchers, by creating international outgoing and incoming fellowships to foster collaboration with research groups outside Europe.

Capacities programme – building the knowledge economy The Capacities programme is designed to help strengthen and optimise the knowledge capacities that Europe needs if it is to become a thriving knowledge-based economy. By strengthening research abilities, innovation capacity and European competitiveness, the programme is stimulating Europe's full research potential and knowledge resources.

The programme embraces six specific knowledge areas, including Research Infrastructures, Research for the benefit of SMEs, Regions of Knowledge, Research Potential, Science in Society and International Cooperation activities.

*Nuclear research* This specific programme comprises two parts – the first part focusing on nuclear fusion and the international ITER research facility which is to be constructed in Europe. The objectives are to develop the knowledge base on nuclear fusion, and to realise the experimental ITER fusion reactor. ITER is set to be the biggest research project on Earth.

The second part of the programme covers nuclear safety, waste management for nuclear fission facilities, and radiation protection. The Joint Research Centre's activities in this area include developing a European-level view on management and disposal of radioactive waste, maintaining safe operation of nuclear facilities, and supporting further research into nuclear power. For more information on these and more JRC activities.