EUROPEAN COMMISSION

Brussels, 30.11.2011
COM(2011) 808 final

COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

Horizon 2020 - The Framework Programme for Research and Innovation

(Text with EEA relevance)

{SEC(2011) 1427 final}
{SEC(2011) 1428 final}

1. A CHANGED CONTEXT

Since the launch of the Seventh Framework Programme (FP7), the economic context has changed dramatically. A recession triggered by the 2008 financial crisis led to the adoption of stimulus packages to kick-start the economy. While slowly recovering from the downturn, Europe is now faced with a public debt crisis and fears of a new recession. Public authorities across Europe need to act decisively to cope with this changed context. The key challenge is to stabilise the financial and economic system in the short term while also taking measures to create the economic opportunities of tomorrow.

Fiscal consolidation and structural reform are necessary but not sufficient to secure Europe's global competitiveness. Smart investment, notably in research and innovation, is vital in order to maintain high standards of living while dealing with pressing societal challenges such as climate change, an ageing population, or the move towards a more resource-efficient society.

Research and innovation help deliver jobs, prosperity, quality of life and global public goods. They generate the scientific and technological breakthroughs needed to tackle the urgent challenges society faces. Investment in this area also leads to businesses opportunities by creating innovative products and services. Although the Union is a global leader in many technologies, it faces increasing competition from traditional competitors and emerging economies alike and must therefore improve its innovation performance.

Research and innovation have therefore been placed at the centre of the Europe 2020 strategy[1] to promote smart, sustainable and inclusive growth. This includes the headline objective of increasing spending on R&D to 3% of GDP by 2020. The Innovation Union[2] flagship initiative provides a comprehensive set of actions for stepping up research and innovation performance. Within this policy context, the Commission's proposals for the post-2013 Union Budget[3] reflect its ambition to invest in Europe's future, ensuring that every euro provides maximum benefit to European citizens.

2. HORIZON 2020: A BREAK FROM THE PAST

The name of the Union's new funding programme for research and innovation – Horizon 2020 – reflects the ambition to deliver ideas, growth and jobs for the future. Horizon 2020 will be a key tool in implementing the Innovation Union flagship initiative, in delivering on the commitments made therein and in responding to the conclusions of the 4 February 2011 European Council and to the European Parliament's Resolution of 12 May 2011 on the Innovation Union[4].

Horizon 2020 brings together all existing Union research and innovation funding, including the Framework Programme for Research, the innovation related activities of the Competitiveness and Innovation Framework Programme and the European Institute of

1 COM(2010) 2020
2 COM(2010) 546
3 COM(2011) 500
4 P7 TA(2011)0236

Innovation and Technology (EIT)[5]. This approach is widely recognised by stakeholders as the way forward[6] and has also been supported by the European Parliament in its Resolution of 27 September 2011[7], the European Economic and Social Committee[8] and the European Research Area Committee[9].

The set of proposals for Horizon 2020 consists of:

- a proposal for Horizon 2020[10], laying down the general objectives, rationale and Union added value, the financial envelope and provisions on control, monitoring and evaluation;
- a proposal for a single specific programme to implement Horizon 2020[11], laying down the implementation modalities and the content in terms of the broad lines of activities;
- a proposal for a single set of Rules for Participation and Dissemination[12], laying down the modes of funding and reimbursement of costs, conditions for participation, selection and award criteria and the rules on ownership, exploitation and dissemination of results; and
- a separate proposal for the part of Horizon 2020 corresponding to the Euratom Treaty[13].

These proposals are accompanied by the necessary ex-ante impact assessments[14]. Complementary to this package, there is also a separate proposal for a revision of the EIT Regulation.

Key novelties:

Horizon 2020 has a number of new features that make it fit for purpose to promote growth and tackle societal challenges. These include:

- Major simplification through a simpler programme architecture, a single set of rules, less red tape through an easy to use cost reimbursement model, a single point of

---

5 Activities in the field of nuclear energy are an integral part of Horizon 2020, yet they are subject to a separate proposal under the Euratom Treaty. Funding for ITER will be outside the EU Budget and subject to a supplementary programme.

6 http://ec.europa.eu/research/horizon2020/pdf/consultation-conference/summary_analysis.pdf

7 P7 TA(2011)0401

8 CESE 1163/2011

9 ERAC 1210/11

10 Proposal for a Regulation of the European Parliament and of the Council on Horizon 2020 – The Framework Programme for Research and innovation (2014-2020), COM(2011) 809

11 Proposal for a Council Decision establishing the Specific Programme implementing Horizon 2020 – The Framework Programme for Research and Innovation (2014-2020), COM(2011) 811

12 Proposal for a Regulation of the European Parliament and of the Council laying down the rules for the participation and dissemination in 'Horizon 2020 – The Framework Programme for Research and Innovation (2014-2020)', COM(2011) 810

13 Proposal for a Council Regulation on the Research and Training Programme of the European Atomic Energy Community (2014-2018) complementing Horizon 2020 – The Framework Programme for Research and Innovation, COM(2011) 812

14 SEC(2011) 1427 and SEC(2011) 1428

access for participants, less paperwork in preparing proposals, fewer controls and audits, with the overall aim to reduce the average time to grant by 100 days;

- An inclusive approach open to new participants, including those with ideas outside of the mainstream, ensuring that excellent researchers and innovators from across Europe and beyond can and do participate;

- The integration of research and innovation by providing seamless and coherent funding from idea to market;

- More support for innovation and activities close to the market, leading to a direct economic stimulus;

- A strong focus on creating business opportunities out of our response to the major concerns common to people in Europe and beyond, i.e. 'societal challenges';

- More possibilities for new entrants and young, promising scientists to put forward their ideas and obtain funding.

3. FOCUSING RESOURCES ON KEY PRIORITIES

Horizon 2020 will focus resources on three distinct, yet mutually reinforcing, priorities, where there is clear Union added value. These priorities correspond to those of Europe 2020 and the Innovation Union.

(1) **Excellent Science**. This will raise the level of excellence in Europe's science base and ensure a steady stream of world-class research to secure Europe's long-term competitiveness. It will support the best ideas, develop talent within Europe, provide researchers with access to priority research infrastructure, and make Europe an attractive location for the world's best researchers.

This will:

- support the most talented and creative individuals and their teams to carry out frontier research of the highest quality by building on the success of the *European Research Council*;

- fund collaborative research to open up new and promising fields of research and innovation through support for *Future and Emerging Technologies* (FET);

- provide researchers with excellent training and career development opportunities through the *Marie Skłodowska-Curie actions*[15] *('Marie Curie actions')*;

- ensure Europe has world-class *research infrastructures* (including e-infrastructures) accessible to all researchers in Europe and beyond.

[15] Through this name, the Commission pays tribute to this outstanding Nobel prize winning scientist and the remarkable contribution she made to the advancement of the state of science in Europe.

(2) **Industrial Leadership**. This will aim at making Europe a more attractive location to invest in research and innovation (including eco-innovation), by promoting activities where businesses set the agenda. It will provide major investment in key industrial technologies, maximise the growth potential of European companies by providing them with adequate levels of finance and help innovative SMEs to grow into world-leading companies.

This will:

- build *leadership in enabling and industrial technologies*, with dedicated support for ICT, nanotechnologies, advanced materials, biotechnology, advanced manufacturing and processing, and space, while also providing support for cross-cutting actions to capture the accumulated benefits from combining several Key Enabling Technologies;

- facilitate *access to risk finance*;

- provide Union wide support for *innovation in SMEs*.

(3) **Societal Challenges**. This reflects the policy priorities of the Europe 2020 strategy and addresses major concerns shared by citizens in Europe and elsewhere. A challenge-based approach will bring together resources and knowledge across different fields, technologies and disciplines, including social sciences and the humanities. This will cover activities from research to market with a new focus on innovation-related activities, such as piloting, demonstration, test-beds, and support for public procurement and market uptake. It will include establishing links with the activities of the European Innovation Partnerships.

Funding will be focussed on the following challenges:

- *Health, demographic change and wellbeing;*

- *Food security, sustainable agriculture, marine and maritime research and the bio-economy;*

- *Secure, clean and efficient energy;*

- *Smart, green and integrated transport;*

- *Climate action, resource efficiency and raw materials;*

- *Inclusive, innovative and secure societies.*

Sustainable development will be an overarching objective of Horizon 2020. The dedicated funding for climate action and resource efficiency will be complemented through the other specific objectives of Horizon 2020 with the result that at least 60 % of the total Horizon 2020 budget will be related to sustainable development, the vast majority of this expenditure contributing to mutually reinforcing climate and environmental objectives. It is expected that around 35% of the Horizon 2020 budget will be climate related expenditure.

The EIT will play an important role by combining excellent research, education and innovation, thus integrating the knowledge triangle. The EIT will do so primarily through the Knowledge and Innovation Communities (KICs). In addition, it will ensure that experiences are shared beyond the KICs through targeted dissemination and knowledge sharing measures.

The Joint Research Centre's activities will be an integral part of Horizon 2020, providing robust, evidence-based support to Union policies. This will be driven by customer needs complemented by forward-looking activities.

Nuclear energy research and innovation, to be supported under the Euratom Treaty, will allow the Union to develop, in the interest of all its Member States, the most advanced technologies for nuclear safety, security, radiation protection and non-proliferation.

The way in which the Horizon 2020 budget is distributed over its strategic objectives equally reflects how it has been adapted to operate in a changed context. The budget distribution within Horizon 2020:

- is fully aligned with Europe 2020 by implementing Innovation Union, prioritising the Digital Agenda, inclusiveness, energy, resource efficiency, industrial technologies, climate action and contributing to the Union's external policies;

- prioritises spending with immediate impact on growth and jobs through major investment in risk finance, SMEs and large scale pilots and demonstrators for key technologies;

- continues to invest in Europe's future by providing a major boost to the European Research Council, strengthening research on Future and Emerging Technologies (FET), increasing the possibilities for training, mobility and career development for young talents and giving an important role to the EIT;

- leverages other public and private sources of funding to maximise its effect on progressing towards the 3% target.

Horizon 2020 will be a seven-year programme and there may be significant shifts in the broader economic and policy context as the programme progresses. Ensuring Horizon 2020's continued relevance will therefore also require to adjust priorities and resources, as and when necessary. As such, flexibility clauses have been included in the proposal in this respect.

The implementation of Horizon 2020 will also take a strategic approach to programming of research and innovation, using joint actions and modes of governance aligning closely with policy development yet cutting across the boundaries of traditional sectoral policies. This will be based on sound evidence, analysis and foresight, with progress measured against a robust set of indicators.

As regards the funding of research activities involving human embryonic stem cells, the Horizon 2020 legislative package is fully in line with the approach supported by the European Parliament and the Council upon their adoption of the FP7 legislation, as set out in the Commission's statement of 2006[16].

[16] OJ L412 of 30 December 2006

4. SIMPLIFYING ACCESS AND OPTIMISING MANAGEMENT

Horizon 2020 must attract the most excellent researchers and innovative enterprises. This requires further simplification of rules and procedures for participants. The FP7 interim evaluation report concluded that major steps towards further simplification were needed, through an approach based on an adequate balance between risk taking and trust in participants[17].

Horizon 2020 will build on the impetus given by the Communication on simplification[18] and the Commission Decision on three measures for simplifying the implementation of FP7[19] by introducing important new features, as also called for by the European Parliament in its Resolution of 11 November 2010[20].

Simplification in Horizon 2020 will target three overarching goals: to reduce the administrative costs of the participants; to accelerate all processes of proposal and grant management and to decrease the financial error rate.

Simplification will be achieved along several dimensions:

- Structural simplification is provided through:
  - a simpler programme architecture centred on three strategic objectives, making it easier for participants to identify where funding opportunities exist;
  - a single set of participation rules, on issues such as eligibility, evaluation or IPR, applying to all components of Horizon 2020, with deviations only possible when justified by specific needs.
- Simpler funding rules that take into account stakeholders' preference for a reimbursement of actual costs, will include:
  - a simpler reimbursement of direct costs, with a broader acceptance of beneficiaries' usual accounting practices;
  - the possibility of using unit personnel costs (average personnel costs), including for SME owners without a salary;
  - simplification of time-recording by providing a clear and simple set of minimum conditions; in particular abolition of time-recording obligations for staff working exclusively on a Horizon 2020 project;
  - indirect costs covered by a single flat-rate applied to the direct costs as a general rule – removing a major source of financial errors and complexity;

17 http://ec.europa.eu/research/evaluations/pdf/archive/other_reports_studies_and_documents/fp7_interim_evaluation_expert_group_report.pdf

18 COM(2010)0187

19 C(2011) 174 of 24 January 2011

20 P7 TA(2011)0401

  - one single reimbursement rate for all participants and activities in the same project;

  - lump sums, prizes, output based funding for specific areas where this has proved appropriate.

- A revised control strategy will achieve a new balance between trust and control and between risk taking and risk avoidance through:

  - an extension of the guarantee fund to all actions in Horizon 2020 and ex-ante financial capacity checks required only for coordinators;

  - a reduction of the number of certificates on financial statements by requiring only one such certificate per beneficiary at the end of the project;

  - a reduction of the audit burden on participants through an ex-post control strategy with emphasis on risk-based control and fraud detection, a single-audit concept and a reduction of the limitation period for ex-post audits from five to four years;

  - This revised approach should translate into a maximum of 7% of Horizon 2020 beneficiaries being subject to audit over the whole programming period.

In parallel, the Commission will continue to streamline, harmonise and accelerate procedures and processes linked to programme and project implementation. This will include a renewed approach to comitology, with a strong focus on involvement of programme committees in discussions on strategic planning and on ensuring links to nationally funded activities. Moreover the Commission will build on progress made in increasing the quality, efficiency and consistency of implementation via a single user-friendly IT platform providing a one-stop shop for participants (e-Horizon 2020) and through further steps towards externalising the Union's research and innovation funding. In this respect, the use of the existing executive agencies will be optimised, including through a possible redistribution of tasks to achieve greater specialisation.

Through all of these elements, the Commission deems it possible to reduce the average time to grant by 100 days for Horizon 2020 as compared to the current situation.

Partnership approaches on the basis of Articles 185 and 187 of the Treaty will also be continued. A more extensive use of financial instruments will also be an important part of the externalisation effort, building on the debt and equity platforms currently being set up. The EIT will, through a careful planning of its activities, align its work closely to the priorities of Horizon 2020. By expanding the number of KICs and taking up activities relating to dissemination and knowledge sharing, it will be able to manage a larger budget than it does today.

5. A BROAD AND SEAMLESS APPROACH TO INNOVATION

The Innovation Union flagship initiative highlights the need for Europe to develop a distinctive approach to innovation built on its unique set of values. Horizon 2020 takes a broad approach to innovation that is not limited to bringing new products to the market, but also covers processes, systems or other approaches, including by recognising European

strengths in design, creativity, services and the importance of social innovation. Funding for these activities will be meshed with the support for research and technological development.

Stronger support will be given to the market take-up of innovation, including by the public sector. This will include more proof-of-concept, piloting and demonstration. It will involve a better use of the potential of research infrastructures, as well as setting technical standards, pre-commercial procurement and strengthened loan and equity financing. New approaches such as inducement prizes, that reward the achievement of specific goals, will encourage the involvement of a wider range of innovators. The European Innovation Partnerships will be tasked with tackling technical, legal and operational barriers to innovation in Europe, hereby establishing solid links between supply and demand side measures.

Major innovations often come from unforeseen breakthroughs or the new application of existing or emerging technologies. Horizon 2020 will allow Europe's brightest and most creative minds to extend the frontiers of knowledge by strengthening bottom-up activities such as the ERC and FET, the Marie Curie actions and the dedicated SME instrument. Furthermore, for each of the societal challenges, topic descriptions in calls for proposals will, more than in the past, allow plenty of scope for applicants to propose innovative solutions of their own choice.

Horizon 2020 will promote exchange of ideas and perspectives by deploying a seamless approach across all of its constituent parts. The same rules will apply, allowing participants to move swiftly between different parts. Bridging actions will be put in place to bring projects and results from one part into contact with related projects in other parts.

Joint activities between the different parts of Horizon 2020 will be needed in particular to ensure a seamless connection between support for the enabling and industrial technologies and their applications to societal challenges. Specific provisions have been made to enable this approach and to incentivise cross-cutting actions, including the ability to combine budgets in an efficient manner.

Following on from recommendations made by the High Level Group on Key Enabling Technologies (KETs)[21], 'Leadership in enabling and industrial technologies' will allow treating KET's as a key priority of Horizon 2020, highlighting their importance for growth and jobs. This includes a dedicated budget of EUR 6663 million for the KETs of photonics, micro- and nanoelectronics, nanotechnologies, advanced materials, biotechnology and advanced manufacturing and processing. As part of this integrated approach to KETs, dedicated support will be provided for activities exploiting the accumulated benefits from combining a number of KETs, in particular through support for larger-scale pilot line and demonstrator projects.

6. STRENGTHENING THE PARTICIPATION OF SMES

The Innovation Union flagship initiative includes a commitment to ensure strong participation by SMEs in Horizon 2020. SMEs have significant innovation potential and they have the agility to bring revolutionary technological breakthroughs and service innovation to the market. Strengthening the approach to SMEs, including enhancing the participation of micro-

[21] http://ec.europa.eu/enterprise/sectors/ict/files/kets/hlg_report_final_en.pdf

enterprises, is vital if Horizon 2020 is to help the fast-growing companies of today to become the multinationals of tomorrow.

Horizon 2020 takes an integrated approach to SMEs. Through this approach, it is expected that around 15% of the total combined budget for all societal challenges and the enabling and industrial technologies will go to SMEs. A number of novelties under Horizon 2020 will encourage the participation of SMEs.

Simplification will be of particular benefit to SMEs, as they often lack the resources to cope with high administrative burdens. This will include setting up a single entry point for SMEs wishing to participate in Horizon 2020. Equally, the strengthened emphasis on innovation activities will increase SME participation as these activities are of direct relevance to them.

These horizontal measures will be supplemented with SME-specific actions, consolidating support that was previously dispersed over several programmes into a streamlined set of instruments.

First, a new SME instrument, building on the SBIR[22] model, the principles of which are described in 'Innovation in SMEs', will be used consistently across all societal challenges as well as for the enabling and industrial technologies. The instrument will allow SMEs to put forward their most innovative ideas for addressing Union-level challenges. The instrument will meet the needs of all SMEs providing innovative solutions to specific challenges, irrespective of whether these are high-tech and research-driven or social and service-driven innovations, through the following features:

– *Only SMEs will be allowed to apply for funding.* They can bring with them other partners but one of the major novelties of this instrument is that it allows for single participant projects;

– *Support will be provided in different phases.* A feasibility phase will allow an assessment of project potential. A main grant will allow the SME to undertake the project, maintain ownership of IPR and outsource tasks where needed. Follow-up support will be provided indirectly through services such as help in accessing venture capital, innovation support or public procurement.

Second, a dedicated activity for research-intensive SMEs is included in 'Innovation in SMEs'. This will support the next stage in the Eurostars[23] scheme implemented in partnership with Member States[24]. It will be accompanied by measures to build SME innovation capacity, such as networking and brokering, and also allow SMEs to ‘spin in’ technology by connecting to researchers and innovators across Europe.

Third, 'Access to risk finance' will have a strong SME focus, as called for by the European Council. For the Debt facility, the SME focus will be strengthened by working with financial intermediaries at national and regional levels. The Equity facility will focus on early-stage investments, while having the possibility to make expansion and growth-stage investments in conjunction with the equity facility under the Programme for the Competitiveness of Enterprises and SMEs.

---

22 Small Business Innovation Research, http://www.sbir.gov

23 http://www.eurostars-eureka.eu/

24 http://www.eurekanetwork.org/

The Equity facility and the SME-related component of the Debt facility will be implemented as part of two EU Financial Instruments that provide equity and debt to support SMEs' R&I and growth, in conjunction with the equity and debt facilities under the Programme for the Competitiveness of Enterprises and SMEs.

7. INTERNATIONAL COOPERATION

International cooperation with third countries is necessary to address effectively many specific objectives defined in Horizon 2020. This is the case in particular for all the societal challenges addressed by Horizon 2020, which need to be tackled at the global level. International cooperation is also essential for frontier and basic research in order to capture the benefits from emerging science and technology opportunities. Promoting the international mobility of researchers and innovation staff is crucial for enhancing this global cooperation. Activities at the international level are equally important to enhance the competitiveness of European industry by promoting the take-up and trade of novel technologies, for instance through the development of worldwide standards and guidelines, and by promoting the acceptance and deployment of European solutions outside Europe.

The aim of international cooperation in Horizon 2020 will be to strengthen the Union's excellence and attractiveness in research, to tackle global challenges jointly and to support the Union's external policies. The focus of international cooperation in Horizon 2020 will be on cooperation with three major country groupings:

(1) industrialised and emerging economies;

(2) enlargement and neighbourhood countries; and

(3) developing countries.

Where appropriate, Horizon 2020 will promote cooperation at regional or multilateral level. International cooperation in research and innovation is a key aspect of the Union’s global commitments and has an important role to play in the Union’s partnership with developing countries, which are often disproportionately affected by global challenges. This cooperation will promote inclusive growth and progressing towards the achievement of the Millennium Development Goals and other goals agreed in the framework of international sustainable development.

Horizon 2020 will continue with the principle of general openness, while encouraging reciprocal access to third country programmes. In addition, a range of targeted actions will be implemented taking a strategic approach to international cooperation on the basis of common interest and mutual benefit and promoting coordination and synergies with Member States activities. Dedicated support measures to assist the strategic approach and the process of priority setting are included in the 'Inclusive, innovative and secure societies' challenge.

8. SPREADING EXCELLENCE AND WIDENING PARTICIPATION

Horizon 2020 will continue to allocate funding on the basis of competitive calls for proposals and through independent and merit-based peer review, selecting only the best projects without any consideration of geographical distribution.

Such an approach does, however, need to be complemented with measures to ensure that Horizon 2020 is open to a wide range of participants, including new entrants, and that excellence prevails wherever it exists. Talent therefore needs to be nurtured and supported to grow into excellence, enabling researchers and innovators across Europe to benefit from Horizon 2020's instruments, networks and funding. This will include forging close links with activities in the higher education sector, notably the Erasmus For All programmes and the Knowledge Alliances.

Union funding has assisted in building up and spreading excellence across Europe both through FP7 and the Cohesion policy funds. The 'Regions of Knowledge' and 'Research Potential' activities of the FP7 Capacities specific programme have been met with great interest, but evidence suggests that it would be more efficient if similar actions were pursued under Cohesion policy[25].

Therefore the Commission proposes a clearer division of labour between Horizon 2020 and the Structural Funds, while strengthening interactions. Support for regions in building up their research and innovation capacity will be provided through Cohesion policy, which will take forward the concept of smart specialisation and include measures to allow researchers and innovators across Europe to grow into excellence.

Complementary measures under Horizon 2020 will aim at widening participation across the whole of the programme. This will include ensuring better coordination, cooperation and information exchange between the two Union funding programmes. Support will also be given in 'Inclusive, innovative and secure societies' to policy learning and advice with the aim to reform research and innovation policies. This will also involve networking and twinning schemes enhancing the connections between researchers and innovators in all Member States and regions. In this way, the drive for excellence that is a hallmark of Horizon 2020 combined with the capacity-building elements of the Structural Funds will allow pockets of excellence to emerge and grow in developing regions. These will raise the international attractiveness of the regions concerned and act as focal points for their further economic development. In this respect, the specific circumstances of the Outermost Regions should also be taken into account.

9. COMPLETING THE EUROPEAN RESEARCH AREA

Completion of the European Research Area (ERA) is urgently needed to avoid costly overlaps and unnecessary duplication of activities. It entails building a genuine single market for knowledge, research and innovation, enabling researchers, research institutions and businesses to circulate, compete and co-operate across borders. Remaining gaps will be addressed through the ERA framework, to be presented by the Commission in 2012.

Horizon 2020 will strengthen the support given to promoting researchers' careers and mobility (including through the Marie Curie actions) and to ensuring the networking and opening up of large-scale research infrastructures as well as achieving an 'online' ERA ('Research Infrastructures'). In order to contribute to the attractiveness of the research career, Horizon 2020 will pay adequate attention to the European Charter for Researchers and Code of Conduct for the Recruitment of Researchers, together with other relevant reference

[25] Expert Group on synergies between FP7, CIP and the Cohesion Policy Funds, ftp://ftp.cordis.europa.eu/pub/fp7/docs/seg-final_en.pdf

frameworks defined in the context of the ERA, while respecting their voluntary nature. Further steps will be taken towards Open Access, to ensure that research results are available to those who need them. It will also involve actions to remove barriers preventing women from pursuing successful scientific careers. The Commission is committed to reaching the target of 40% female participation in its advisory structures and it will ensure that gender differences are reflected in the content of calls for proposals, and in evaluation processes, where appropriate. Increased female participation will improve the quality of research and innovation while helping to address the existing deficit of highly qualified and experienced scientists necessary for enhanced European competitiveness and economic growth.

The 'Inclusive, innovative and secure societies' challenge will support policy coordination across Europe, providing a strong evidence base to help Member States in implementing adequate policy mixes. As a novel measure, the work programmes will contain information on how coordination with national research and innovation funding is ensured, making it an element of discussion in the programme committees.

Horizon 2020 will support approaches aimed at pooling and leveraging other sources of funding through a simplified ERA-NET scheme, providing support from coordination of national programmes up to the co-funding of joint calls for proposals. A clear set of criteria for joint programmes under Article 185 and joint undertakings under Article 187 will enable a stronger set of initiatives to go forward, taking account of the experience and evaluations under FP7 as well as the revisions to the Financial Regulations.

Joint Programming Initiatives (JPI) have been an important development in pooling resources to generate critical mass in addressing challenges shared by Member States. Horizon 2020 will aid JPIs in the development of their Strategic Research Agendas. Where the challenge addressed by a JPI is in line with the priorities of Horizon 2020, ERA-NET or co-funding may be used to provide further support. New Article 185 initiatives will only be considered provided there is a clear commitment from the Member States and when a JPI has demonstrated its capacity for significant collaboration and the scale and scope needed to support full integration of national programmes.

Building on the experience of the public private partnerships under the European economic recovery plan, there will be greater scope for establishing such partnerships without recourse to new legislative procedures. This will allow such initiatives to be implemented in a streamlined manner while ensuring greater clarity of roles and responsibilities.

10. MEETING OUR SHARED AMBITIONS

Europe's taxpayers have a right to know how their money is invested. Because research and innovation are vital to people's futures, it is important to bring the research and innovation activities funded through Horizon 2020 to the attention of the general public, showing in particular the added value of Union level action. This will generate better public understanding, engagement and debate. Information and communication measures will therefore be an integral part of Horizon 2020 implementation.

These measures will also focus on communicating the outcomes of research to policy makers, companies, innovators and other researchers, including by promoting Open Access.

Meeting our shared ambitions, which are central to Europe 2020 and the Innovation Union, requires ambitious policies. The Commission is convinced that its proposal for Horizon 2020 and the radical overhaul it entails will enable the Union Budget to play a key role in driving the step change in research and innovation performance that Europe needs. Horizon 2020 is designed to last until the end of this decade. Its projects will continue well into the next decade and the impact of its funding should be felt beyond that. It is therefore truly an investment for the future.