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NOTE

from:	General Secretariat of the Council
to :	Delegations
No. prev. doc.:	10663/12 RECH 207 COMPET 364 IND 102 MI 398 EDUC 152 TELECOM 118 ENER 233 ENV 446 REGIO 75 AGRI 362 TRANS 187 SAN 134 CODEC 1511
No. Cion prop.:	17933/11 RECH 410 COMPET 578 IND 162 MI 631 EDUC 283 TELECOM 197 ENER 389 ENV 919 REGIO 143 AGRI 826 TRANS 342 SAN 260 CODEC 2273
Subject:	Proposal for a Regulation of the European Parliament and the Council establishing Horizon 2020 - The Framework Programme for Research and Innovation (2014-2020) <i>- 4-column document</i>

Following the vote in Parliament's ITRE committee on 28 November, delegations will find attached a 4-column document on the proposal on the Horizon 2020 Framework Programme for Research and Innovation.

Please note that the section on Articles (pages 51-127) is identical in content to doc. 18048/12, issued on 21 December 2012.

In the column related to the position of the ITRE Committee, the changes to the Commission proposal are indicated in ***bold italics*** for additions and in ~~strikeout~~ for deletions.

In the column related to the position of the Council (partial general approach PGA doc.10663/12), the changes to the Commission proposal are indicated in **bold** for additions and in ~~strikeout~~ for deletions.

When the original text was already in bold (titles and headings of specific objectives), the changes in relation to the Commission proposal are indicated in underlined for additions.

RECITALS

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)¹	COUNCIL (PGA ADOPTED ON 31.05.12)²	COMPROMISE TEXT
Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL establishing Horizon 2020 - The Framework Programme for Research and Innovation (2014-2020)		Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL Regulation of the European Parliament and the Council establishing Horizon 2020 - The Framework Programme for Research and Innovation (2014-2020)	
(Text with EEA relevance)		(text with EEA relevance)	

¹ The text in this column comes from the ITRE Committee vote on 28 November 2012 (doc. A7-0427/2012).

² The text in this column comes from the Partial General Approach agreed by the Council at its meeting on 31 May 2012 (doc. 10663/12).

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,			
Having regard to the Treaty on the Functioning of the European Union (TFEU), and in particular Articles 173(3) and 182(1) thereof,			
Having regard to the proposal from the European Commission,			
After transmission of the draft legislative act to the national Parliaments,			
Having regard to the opinion of the European Economic and Social Committee ² , _____			
² OJ C , , p. .			
Having regard to the opinion of the Committee of the Regions ³ , _____			
³ OJ C , , p. .			

Acting in accordance with the ordinary legislative procedure,			
Whereas:			
(1) The Union has the objective of strengthening its scientific and technological bases by achieving a European Research Area ("ERA") in which researchers, scientific knowledge and technology circulate freely, and encouraging the Union to become more competitive, including in its industry. To pursue those objectives the Union should carry out activities to implement research, technological development and demonstration, promote international cooperation, disseminate and optimise results and stimulate training and mobility.	<u>AMD 1</u> (1) The Union has the objective of strengthening its scientific and technological bases by achieving a European Research Area ("ERA") in which researchers, scientific knowledge and technology circulate freely, and encouraging the Union to become more <i>a knowledge society and a world leading sustainable, competitive and resilient economy</i> including in its industry. To pursue those objectives the Union should carry out activities to implement research <i>and innovation</i> , technological development and demonstration, promote international cooperation, disseminate and optimise results and stimulate training and mobility.		
(2) The Union also has an objective to ensure that the conditions necessary for the competitiveness of the Union's industry exist. For this purpose, action should be aimed at fostering the better exploitation of the industrial potential of policies of innovation, research and technological development.	<i>[no change]</i>		

<p>(3) The Union is committed to achieving the Europe 2020 strategy⁴ which has set the objectives of smart, sustainable and inclusive growth, highlighting the role of research and innovation as key drivers of social and economic prosperity and of environmental sustainability and setting itself the goal to increase spending on Research and Development to reach 3 % of gross domestic product (GDP) by 2020 while developing an innovation intensity indicator. In this context, the Innovation Union flagship initiative sets out a strategic and integrated approach to research and innovation, setting the framework and objectives to which future Union research and innovation funding should contribute.</p> <p>⁴ COM(2010) 2020</p>	<p>AMD 2</p> <p>(3) The Union is committed to achieving the Europe 2020 strategy, which has set the objectives of smart, sustainable and inclusive growth, highlighting the role of research and innovation as key drivers of social and economic prosperity and of environmental sustainability and setting itself the goal to increase <i>public</i> spending on Research and Development to reach <i>in order to attract private investment of up to two thirds of total investments, thereby reaching an accumulative total of</i> 3 % of gross domestic product (GDP) by 2020 while developing an innovation intensity indicator. <i>The Union budget should mirror this ambitious goal by making a radical shift towards funding future-oriented investments, such as R&D and innovation (R&D&I), and this should be clearly visible in a considerable increase in funding for Union R&D&I compared to the funding level of 2013.</i> In this context, the Innovation Union flagship initiative sets out a strategic and integrated approach to research and innovation, setting the framework and objectives to which future Union research and innovation funding should contribute.</p>		
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Research and innovation are also key factors for other Europe 2020 flagship initiatives, notably on resource efficient Europe, an industrial policy for the globalisation era, and a digital agenda for Europe. Moreover, for achieving the Europe 2020 objectives relating to research and innovation, Cohesion policy has a key role to play through building capacity and providing a stairway to excellence.	Research and innovation are also key factors for other Europe 2020 flagship initiatives <i>and policy objectives</i> , notably on resource efficient Europe, an industrial policy for the globalisation era, <i>climate and energy policy</i> , and a digital agenda for Europe. Moreover, for achieving the Europe 2020 objectives relating to research and innovation, Cohesion policy has a key role to play through building capacity and providing a stairway to excellence.		
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<p>(4) At its meeting of 4 February 2011, the European Council supported the concept of the Common Strategic Framework for Union Research and Innovation funding to improve the efficiency of research and innovation funding at national and Union levels and called on the Union to rapidly address remaining obstacles to attracting talent and investment in order to complete the ERA by 2014 and achieve a genuine single market for knowledge, research and innovation</p>	<p><u>AMD 3</u></p> <p>(4) At its meeting of 4 February 2011, the European Council supported the concept of the Common Strategic Framework for Union Research and Innovation funding to improve the efficiency of research and innovation funding at national and Union levels and called on the Union to rapidly address remaining obstacles to attracting talent and investment in order to complete the ERA by 2014 and achieve a genuine single market for knowledge, research and innovation. <i>This requires increasing significantly the budget for the next seven-year period to reinforce the innovation capacity of the Union while attracting significant private sector funds for the Union's activities.</i></p>		
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<p>(5) The European Parliament has called for a radical simplification of Union research and innovation funding in its Resolution of 11 November 2010⁵, has highlighted the importance of the Innovation Union to transform Europe for post-crisis world, in its resolution of 12 May 2011⁶, has drawn attention to important lessons to be learned following the interim evaluation of the Seventh Framework Programme in its resolution of 8 June 2011⁷ and has supported the concept of a common strategic framework for research and innovation funding in its resolution of 27 September 2011⁸.</p> <hr/> <p>⁵ P7 TA(2011)0401</p> <p>⁶ P7 TA(2011)0236</p> <p>⁷ P7 TA(2011)0256</p> <p>⁸ P7 TA(2011)0401</p>	<p><u>AMD 4</u></p> <p>5) The European Parliament has called for a radical simplification of Union research and innovation funding in its Resolution of 11 November 2010, has highlighted the importance of the Innovation Union to transform Europe for post-crisis world, in its resolution of 12 May 2011, has drawn attention to important lessons to be learned following the interim evaluation of the Seventh Framework Programme in its resolution of 8 June 2011 and has supported the concept of a common strategic framework for research and innovation funding, <i>while calling for the EU research and innovation programmes' budget for the next financial period to be doubled as of 2014</i> in its resolution of 27 September 2011.</p>		
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<p>(6) The Council of the European Union called on 26 November 2010 for future Union funding programmes to focus more on Europe 2020 priorities, address societal challenges and key technologies, facilitate collaborative and industry-driven research, streamline the instruments, radically simplify access, reduce time to market and further strengthen excellence</p>	<p><i>[no change]</i></p>		
<p>(7) The importance of a coherent strategic approach was also underlined in opinions delivered by the European Research Area Committee on 3 June 2011⁹, the Committee of Regions on 30 June 2011¹⁰, and the European Economic and Social Committee on 13 July 2011¹¹.</p> <hr/> <p>⁹ ERAC 1210/11</p> <p>¹⁰ CdR 67/2011</p> <p>¹¹ CESE 1163/2011</p>	<p><i>[no change]</i></p>		

<p>(8) The Union Budget Review adopted by the Commission on 19 October 2010 put forward key principles which should underpin the future Union budget, namely focussing on instruments with proven Union added value, becoming more results-driven and leveraging other public and private sources of funding and it proposed to bring the full range of Union instruments for research and innovation together in a Common Strategic Framework.</p>	<p><i>[no change]</i></p>		
<p>(9) The Commission Green Paper 'From Challenges to Opportunities: Towards a Common Strategic Framework for EU Research and Innovation funding'¹² identified key questions on how to achieve those ambitious objectives and launched a broad consultation, in the course of which stakeholders and Union institutions largely agreed with the ideas presented therein.</p> <p>_____</p> <p>¹² COM(2011) 48</p>	<p><i>[no change]</i></p>		

<p>(10) In the Communication 'A Budget for Europe 2020'¹³ the Commission proposed to address with a single Common Strategic Framework for Research and Innovation the areas covered in the period 2007-2013 under the Seventh Framework Programme for Research and the innovation part of the Competitiveness and Innovation Framework Programme, as well as the European Institute of Innovation and Technology (EIT) in order to serve the Europe 2020 Strategy target of raising spending on Research and Development to 3 % of GDP by 2020. In that Communication, the Commission also committed to mainstream climate change into Union spending programmes and to direct at least 20 % of the Union budget to climate-related objectives. Climate action and resource efficiency are mutually reinforcing objectives for achieving sustainable development. The specific objectives relating to both should be complemented through the other specific objectives of Horizon 2020.</p> <hr/> <p>¹³ COM(2011) 500</p>	<p><u>AMD 5</u></p> <p>(10) In the Communication 'A Budget for Europe 2020', the Commission proposed to address with a single Common Strategic Framework for Research and Innovation the areas covered in the period 2007-2013 under the Seventh Framework Programme for Research and the innovation part of the Competitiveness and Innovation Framework Programme, as well as the European Institute of Innovation and Technology (EIT) in order to serve the Europe 2020 Strategy target of raising spending on Research and Development to 3 % of GDP by 2020. In that Communication, the Commission also committed to mainstream climate change into Union spending programmes and to direct at least 20 % of the Union budget to climate-related objectives. Climate action and resource efficiency are mutually reinforcing objectives for achieving sustainable development. The specific objectives relating to both should be complemented through the other specific objectives of Horizon 2020.</p>		
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As a result it is expected that at least 60% of the overall Horizon 2020 budget should be related to sustainable development. It is also expected that climate-related expenditure should exceed 35% of the budget, including mutually compatible measures improving resource efficiency. The Commission should provide information on the scale and results of support to climate change objectives. Climate-related expenditure under Horizon 2020 should be tracked in accordance with the methodology stated in that Communication.	As a result it is expected that at least 60% of the overall Horizon 2020 budget should be related to sustainable development. It is also expected that climate-related expenditure should exceed 35% of the budget, including mutually compatible measures improving resource efficiency. The Commission should provide information on the scale and results of support to climate change objectives. Climate-related expenditure under Horizon 2020 should be tracked in accordance with the methodology stated in that Communication.		
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	<p><u>AMD6</u> <i>(10a) In its White Paper entitled ‘Roadmap to a Single European Transport Area - Towards a competitive and resource-efficient transport system’¹, the Commission takes the view that research and innovation policy in the field of transport should provide growing and consistent support for the development of key technologies with a view to transforming the European transport system into a modern, efficient, sustainable and accessible service. The White Paper establishes the objective of achieving by 2050 a 60% reduction in the 1990 level of greenhouse gas emissions.</i></p> <p>¹ COM(2011)0144</p>		
<p>(11) Horizon 2020 - the Framework Programme for Research and Innovation in the European Union (hereinafter 'Horizon 2020'), focuses on three priorities, namely generating excellent science in order to strengthen the Union's world-class excellence in science, fostering industrial leadership to support business, including small and medium-sized enterprises (SME) and innovation and tackling societal challenges, in order to respond directly to the challenges identified in the Europe 2020 strategy by supporting activities covering the entire spectrum from research to market.</p>	<p><u>AMD 7</u> (11) Horizon 2020 - the Framework Programme for Research and Innovation in the European Union (hereinafter 'Horizon 2020'), focuses on three priorities, namely generating excellent science in order to strengthen the Union's world-class excellence in science, fostering industrial leadership to support business, including small and medium-sized enterprises (SME) and innovation and tackling societal challenges, in order to respond directly to the challenges identified in the Europe 2020 strategy by supporting activities covering the entire spectrum from research to market.</p>		

	<p><i>While the Union added value lies mainly in funding pre-competitive, transnational, collaborative research, which should attain in Horizon 2020 at least the levels of the Seven Framework Programme, it is also necessary to place special emphasis on funding innovation within Horizon 2020. Horizon 2020 also aims to satisfy the research needs of a broad spectrum of Union policies by placing emphasis on the widest possible use and dissemination of knowledge generated by the supported activities up to its commercial exploitation.</i></p>		
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<p>Horizon 2020 should support all stages in the innovation chain, especially activities closer to the market including innovative financial instruments, as well as non-technological and social innovation, and aims to satisfy the research needs of a broad spectrum of Union policies by placing emphasis on the widest possible use and dissemination of knowledge generated by the supported activities up to its commercial exploitation. The priorities of Horizon 2020 should also be supported through a programme under the Euratom Treaty on nuclear research and training.</p>	<p>support ensure all stages in the research and innovation chain, especially activities closer to the market including innovative financial instruments, as well as non-technological and social innovation, and aims to satisfy the research needs of a broad spectrum of Union policies by placing emphasis on the widest possible use and dissemination of knowledge generated by the supported activities up to its commercial exploitation including frontier and applied research, knowledge transfer and closer to the market activities, innovative financial instruments, as well as non-technological and social innovation. Horizon 2020 should apply a differentiated scale, whereby the closer to the market the supported activity comes, the smaller the part should be that will be funded by Horizon 2020, and the bigger the part that should attract funding from other sources, such as the Structural Funds, national/regional funding or the private sector. The priorities of Horizon 2020 should also be supported through a programme under the Euratom Treaty on nuclear research and training.</p>		
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(12) The Joint Research Centre (JRC) should provide customer-driven scientific and technical support to Union policies while flexibly responding to new policy demands	<i>[no change]</i>		
	<u>AMD 8</u> <i>(12a) It is important to emphasise that all Horizon 2020 activities should be open to new participants with a view to ensuring there is extensive cooperation with partners throughout the Union and establishing an integrated ERA.</i>		

<p>(13) In the context of the knowledge triangle of research, education and innovation, the Knowledge and Innovation Communities under the European Institute of Innovation and Technology should strongly contribute to addressing the objectives of Horizon 2020, including the societal challenges, notably by integrating research, education and innovation. In order to ensure complementarities across Horizon 2020 and the adequate absorption of funds, the financial contribution to the European Institute of Innovation and Technology should be made in two allocations, with the second subject to a review.</p>	<p><u>AMD 9</u></p> <p>(13) In the context of the knowledge triangle of research, education and innovation, the Knowledge and Innovation Communities (<i>KICs</i>) under the European Institute of Innovation <i>EIT</i> should strongly contribute to addressing the objectives of Horizon 2020, including the societal challenges, notably by integrating research, education and innovation. In order to ensure complementarities across Horizon 2020 and the adequate absorption of funds, the financial contribution to the European Institute of Innovation and Technology should be made in two allocations, with the second subject to a review. <i>The EIT is the main instrument within the Horizon 2020 framework to have a strong emphasis on the educational dimension of the knowledge triangle, and aims at tackling the 'European paradox through entrepreneurial education that will lead to the creation of innovative knowledge-based start-ups and spin-offs.</i></p>		
<p>(14) Horizon 2020 should contribute to the aims of the European Innovation Partnerships in line with the flagship initiative Innovation Union, bringing together all relevant actors across the whole research and innovation chain in view of streamlining, simplifying and better coordinating instruments and initiatives.</p>	<p>[no change]</p>		

<p>(15) Simplification is a central aim of Horizon 2020 which should be fully reflected in its design, rules, financial management and implementation. Horizon 2020 should aim to attract the strong participation of universities, research centres, industry and specifically SMEs and be open to new participants, as it brings together the full range of research and innovation support in one common strategic framework, including a streamlined set of forms of support and uses rules for participation with principles applicable to all actions under the programme. Simpler funding rules should reduce the administrative costs for participation and will contribute to a reduction of financial errors.</p>	<p>AMD 10</p> <p>(15) Simplification is a central aim of Horizon 2020 which should be fully reflected in its design, rules, financial management and implementation. Horizon 2020 should aim to attract the strong participation of universities, research centres, industry and specifically SMEs – <i>too few of which are involved in research programmes, despite the measures already in place</i> – and <i>should</i> be open to new participants, as it <i>notably from civil society. Horizon 2020</i> brings together the full range of research and innovation support in one common strategic framework, including a streamlined set of forms of support and uses rules for participation with principles applicable to all actions under the programme. Simpler funding rules should reduce the administrative costs for participation and will contribute to a <i>the prevention and the</i> reduction of financial errors.</p>		
	<p><i>If steps towards a further externalisation of the Union's research and innovation funding were to be taken (such as Joint Technology Initiatives, Public-Private Partnerships or Research Executive Agencies), the method and the extent of externalisation should be determined according to the results of an independent impact assessment.</i></p>		

	<p><u>AMD 11</u> <i>(15a) In order to achieve appropriate balance between consensus-based and more disruptive R&D&I, the use of open calls - following a bottom-up logic - with accelerated procedures should be fostered to ensure fast realisation of innovative projects. Furthermore, the right balance should be struck within the societal challenges and the enabling and industrial technologies between smaller and bigger projects, taking into account the specific sector structure, type of activity, technology and research landscape.</i></p>		
<p>(16) In accordance with Article 182(1) TFEU, the framework programme fixes the maximum overall amount and the detailed rules for Union financial participation in the framework programme and the respective shares in each of the activities provided for.</p>	<p><u>AMD 12</u> <i>(16) In accordance with Article 182(1) of the Treaty on the Functioning of the European Union (TFEU), the framework programme fixes the maximum overall amount and the detailed rules for Union financial participation in the framework programme and the respective shares in each of the activities provided for in Article 180 TFEU.</i></p>		

<p>(17) This Regulation should lay down, for the entire duration of Horizon 2020, a financial envelope constituting the prime reference, within the meaning of point [] of the Interinstitutional Agreement of XX/201Z between the European Parliament, the Council and the Commission on cooperation in budgetary matters and on sound financial management, for the budgetary authority during the annual budgetary procedure.</p>	<p><i>[no change]</i></p>		
	<p><u>AMD 13</u> <i>(17a) In order for the European Parliament to be able to exercise its function of political control and to ensure transparency and accountability, as stipulated in the Treaties, the Commission should duly and regularly inform the European Parliament of all relevant aspects of the implementation of Horizon 2020, including the preparation and drawing-up of the work programmes, the execution and possible need for adjustment of the budgetary breakdown, and the development of the performance indicators in terms of objectives pursued and expected results.</i></p>		

<p>(18) It is appropriate to ensure a correct closure of Horizon 2020 and its predecessor programmes, in particular regarding the continuation of multi-annual arrangements for their management, such as the financing of technical and administrative assistance.</p>	<p>AMD 14 (18) It is appropriate to ensure a correct closure of Horizon 2020 and its predecessor programmes, in particular regarding the continuation of multi-annual arrangements for their management, such as the financing of <i>strictly necessary</i> technical and administrative assistance.</p>		
<p>(19) The implementation of Horizon 2020 may give rise to supplementary programmes involving the participation of certain Member States only, the participation of the Union in programmes undertaken by several Member States, or the setting up of joint undertakings or other arrangements within the meaning of Articles 184, 185 and 187 TFEU.</p>	<p>AMD 15 (19) The implementation of Horizon 2020 may give rise - <i>under specific and transparent conditions and on a case-by-case basis</i> - to supplementary programmes involving the participation of certain Member States only, the participation of the Union in programmes undertaken by several Member States, or the setting up of joint undertakings or other arrangements within the meaning of Articles 184, 185 and 187 TFEU. <i>These supplementary programmes or arrangements should have a clear Union added value, be based on genuine partnerships, complement other activities under Horizon 2020, have demonstrated that no other type of financing mechanisms can deliver the same objectives, and be as inclusive as possible in terms of participation.</i></p>		

<p>(20) With the aim of deepening the relationship between science and society and reinforcing public confidence in science, Horizon 2020 should favour an informed engagement of citizens and civil society on research and innovation matters by promoting science education, by making scientific knowledge more accessible, by developing responsible research and innovation agendas that meet citizens' and civil society's concerns and expectations and by facilitating their participation in Horizon 2020 activities.</p>	<p>AMD 16</p> <p>(20) With the aim of deepening the relationship between science and society and reinforcing public confidence in science, Horizon 2020 should:</p> <ul style="list-style-type: none"> - favour an <i>promote active participation and</i> informed engagement of citizens and civil society on <i>in the</i> research and innovation matters process; - <i>ensure due consideration of the gender dimension;</i> - <i>promote excellent science education;</i> - <i>increase the accessibility and re-use of the results of publicly funded research, in particular scientific publications and data, namely through the creation of a repository for research results;</i> - <i>close the digital, research and innovation divide;</i> - by promoting science education, by making scientific knowledge more accessible, by developing <i>develop</i> responsible research and innovation <i>and governance framework</i> agendas that meet citizens' and civil society's concerns and expectations and by facilitating <i>reinforce</i> their participation <i>in the setting of research priorities of</i> Horizon 2020 activities. <i>The engagement of citizens and civil society should be coupled by public outreach activities to generate and sustain public support to the programme.</i> 		
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	<p><u>AMD 17</u> <i>(20a) Any documents issued by the Commission in relation to Horizon 2020 shall be provided upon request in accessible formats , including large print, Braille, easy-to-read text, audio, video, and electronic format.</i></p>		
	<p><u>AMD 18</u> <i>(20b) Horizon 2020 should be used to promote, in addition to research diversity, linguistic diversity in academic and scientific publishing, including as part of cooperation with third countries, as well as to ensure that the principles of independent research and peer validation of publications are adhered to.</i></p>		

<p>(21) The implementation of Horizon 2020 should respond to the evolving opportunities and needs from science and technology, industry, policies and society. As such, the agendas should be set in close liaison with stakeholders from all sectors concerned, and sufficient flexibility should be allowed for new developments. External advice should be sought on a continuous basis during Horizon 2020, also making use of relevant structures such as European Technology Platforms, Joint Programming Initiatives and the European Innovation Partnerships.</p>	<p><u>AMD 19</u></p> <p>(21) The implementation of Horizon 2020 should respond to the evolving opportunities and needs from science and technology, industry, policies and society. As such, the agendas should be set in close liaison with stakeholders from all sectors concerned, and sufficient flexibility should be allowed for new developments. <i>Therefore balanced external advice should be sought on a continuous basis during Horizon 2020, also making use. In particular, the cross- and transdisciplinary nature of the societal challenges, as well as the need for cross-cutting linkages and interfaces within Horizon 2020, requires the setting up of dedicated strategic scientific panels. The input of relevant structures such as European Technology Platforms, Joint Programming Initiatives and the European Innovation Partnerships should be taken into account where possible in the process of identifying the research needs.</i></p>		
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	<p><u>AMD 20</u></p> <p><i>(21a) In order to ensure a transparent and efficient implementation process, multiannual indicative roadmaps should be set at the beginning of the programming for each specific objective and cross-cutting theme and a short and transparent drafting process of the annual work programmes should be strived at. The Commission, when preparing and drawing-up the roadmaps and work programmes should involve and inform the European Parliament and the Council in a timely and appropriate manner. External advice should be sought on a continuous basis during Horizon 2020, also making use of relevant structures such as sectoral advisory boards, the newly established Steering Boards, European Technology Platforms, Joint Programming Initiatives and the European Innovation Partnerships.</i></p>		
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	<p><u>AMD 21</u></p> <p><i>(21b) In order to be able to compete globally, to effectively address the grand societal challenges, and to attain the goals of the Union 2020 Strategy, the Union should make full use of its human resources. Horizon 2020 should be a catalyser and a powerful stimulus for completing the ERA by supporting across the line activities that attract, retain, train and develop research and innovation talent. To reach this aim and to enhance the knowledge transfer and the quantity and quality of researchers human capital building activities, including those focused specifically at young people and women, should be a standard element in all research and innovation activities funded by the Union.</i></p>		
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	<p><u>AMD 22</u></p> <p><i>(21c) In order to allow for sufficient flexibility over the life-time of Horizon 2020 to address new needs and developments and to take stock and possibly adjust the interaction and cross-cutting between and within the different priorities, the power to adopt acts in accordance with Article 290 TFEU should be delegated to the Commission in respect of reviewing the amounts for the specific objectives and priorities and transferring appropriations between them on the basis of the mid-term review of Horizon 2020. . It is of particular importance that the Commission carry out appropriate consultations during its preparatory work, including at expert level. The Commission, when preparing and drawing-up delegated acts, should ensure a simultaneous, timely and appropriate transmission of relevant documents to the European Parliament and to the Council.</i></p>		
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<p>(22) Horizon 2020 should contribute to the attractiveness of the research profession in the Union. Adequate attention should be paid to the European Charter for Researchers and Code of Conduct for the Recruitment of Researchers¹⁴, together with other relevant reference frameworks defined in the context of the European Research Area, while respecting their voluntary nature.</p> <p>_____</p> <p>¹⁴ C(2005) 576 final, 11.3.2005</p>	<p><u>AMD 23</u></p> <p>(22) Horizon 2020 should contribute to the attractiveness of the research profession in the Union, <i>promoting adequate working conditions for researchers. Full Adequate</i> attention should be paid to the European Charter for Researchers and Code of Conduct for the Recruitment of Researchers, together with other relevant reference frameworks defined in the context of the European Research Area, while respecting their voluntary nature <i>in order to tackle the continuing phenomenon of brain drain and convert it into a brain gain.</i></p>		
	<p><u>AMD 24</u></p> <p><i>(22a) Horizon 2020 should contribute to achieving the ERA, help European researchers to remain in Europe, attract researchers from the whole world and make Europe a more attractive destination for the best researchers. The compatibility of grants as a funding instrument for mobile researchers should be guaranteed in the interests of mobility within Europe. Tax-related issues should be resolved and adequate social protection of European scientists be promoted.</i></p>		

	<p><u>AMD 25</u></p> <p><i>(22b) A glass ceiling still exists for women who wish to pursue a career in science and research, women are significantly underrepresented in some disciplines, such as engineering and technologies, and there is no decreasing trend in the gender pay gap. Horizon 2020 should therefore correct the imbalances in the participation of female scientists at all stages of research careers and in various fields of research.</i></p>		
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<p>(23) The activities developed under Horizon 2020 should aim at promoting equality between men and women in research and innovation, by addressing in particular the underlying causes of gender imbalance, by exploiting the full potential of both female and male researchers, and by integrating the gender dimension into the content of projects in order to improve the quality of research and stimulate innovation. Activities should also aim at the implementation of the principles relating to the equality between women and men as laid down in Articles 2 and 3 of the Treaty on European Union and Article 8 TFEU.</p>	<p>AMD 26</p> <p>(23) The activities developed under Horizon 2020 should aim at promoting <i>promote</i> equality between men and women in research and innovation, by addressing in particular the underlying <i>identifying and eliminating the principal</i> causes of gender imbalance, by exploiting <i>so as to exploit</i> the full potential <i>and qualifications</i> of both female and male researchers, and by integrating. <i>Furthermore Horizon 2020 should ensure that</i> the gender dimension into <i>is integrated in</i> the content of projects <i>research and innovation activities at all stages of the process</i> in order to improve the quality of research and stimulate innovation. Activities should also aim at the implementation of the principles relating to the equality between women and men as laid down in Articles 2 and 3 of the Treaty on European Union and Article 8 TFEU, <i>as well as in Article 23 of the EU Charter of Fundamental Rights.</i></p>		
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	<p><u>AMD 27</u> <i>(23a) Horizon 2020 should encourage women's participation in all European research, projects and scientific disciplines, not only for advisory groups and among evaluators but also for all structures related to Horizon 2020 (EIT, European Research Council (ERC), JRC, Steering Groups, High-Level Groups, Expert Groups, etc.) as well as in universities and research institutions.</i></p>		
	<p><u>AMD 28</u> <i>(23b) Research and innovation build on the capacity of scientists, research institutions, businesses and citizens to access, share and use scientific information. To increase the circulation and exploitation of knowledge, open access to scientific publications should be mandatory if a decision to publish is taken for scientific publications which receive public funding from Horizon 2020. Furthermore, Horizon 2020 should promote open access to scientific data resulting from publicly funded research under Horizon 2020, taking into account constraints pertaining to privacy, national security or intellectual property rights.</i></p>		

	<p><u>AMD 29</u> <i>(23c) Horizon 2020 will encourage and support activities towards exploiting Europe's leadership in the race to develop new processes and technologies promoting sustainable development, in a broad sense, and combating climate change. Such horizontal approach, fully integrated in all Horizon 2020 priorities, will help the Union to prosper in a low-carbon, resource constrained world while building a resource efficient, sustainable and competitive economy.</i></p>		
	<p><u>AMD 30</u> <i>(23d) Each participant that has received Union funding should make its best efforts to exploit the results it owns in further research or commercially, or to have them exploited by another legal entity for these purposes, in particular through transfer and licensing of results in accordance with Article 41 of Regulation (EU) No xxxx/2012 [Rules for Participation]</i></p>		

<p>(24) Research and innovation activities supported by Horizon 2020 should respect fundamental ethical principles. The opinions of the European Group on Ethics in Science and New Technologies should be taken into account. Research activities should also take into account Article 13 TFEU and reduce the use of animals in research and testing, with a view ultimately to replacing animal use. All activities should be carried out ensuring a high level of human health protection in accordance with Article 168 TFEU.</p>	<p><u>AMD 31</u></p> <p>(24) Research and innovation activities supported by Horizon 2020 should respect fundamental ethical principles <i>and human rights</i>. The <i>reasoned and updated</i> opinions of the European Group on Ethics (<i>EGE</i>) in Science and New Technologies should be taken into account <i>as well as the opinion of the EU Agency for Fundamental Rights and the EU Data Protection Supervisor where relevant</i>. <i>Horizon 2020 funding should respect the legislative and administrative provisions of the Member States</i>. Research activities should also take into account <i>be carried out in accordance with</i> Article 13 TFEU and <i>respect the obligation to replace or</i> reduce the use of animals in research and testing, with a view ultimately to replacing animal use <i>for scientific purposes or improve the conditions under which this takes place</i>. All activities should be carried out ensuring a high level of human health protection in accordance with Article 168 TFEU.</p>		
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<p>(25) The European Commission does not explicitly solicit the use of human embryonic stem cells. The use of human stem cells, be they adult or embryonic, if any, depends on the judgement of the scientists in view of the objectives they want to achieve and is subject to stringent Ethics Review. No project involving the use of human embryonic stem cells should be funded that does not obtain the necessary approvals from the Member States. No activity should be funded that is forbidden in all Member States. No activity should be funded in a Member State where such activity is forbidden.</p>	<p><u>AMD 32</u></p> <p>(25) The European Commission does not explicitly solicit the use of human embryonic stem cells. The use of human stem cells, be they adult or embryonic, if any, depends on the judgement of the scientists in view of the objectives they want to achieve and is subject to stringent Ethics Review. No project involving the use of human embryonic stem cells should be funded that does not obtain the necessary approvals from <i>under the law of the</i> Member States <i>concerned</i>. No activity should be funded that is forbidden in all Member States. No activity should be funded in a Member State where such activity is forbidden.</p>		
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<p>(26) To achieve maximum impact, Horizon 2020 should develop close synergies with other Union programmes in areas such as education, space, environment, competitiveness and SMEs, the internal security, culture and media and with the Cohesion Policy funds and Rural Development Policy, which can specifically help to strengthen national and regional research and innovation capabilities in the context of smart specialisation strategies.</p>	<p><u>AMD 33</u></p> <p>(26) To achieve maximum impact, Horizon 2020 should develop close synergies with other Union programmes in areas such as education, space, environment, <i>energy, agriculture and fisheries</i>, competitiveness and SMEs, the internal security, culture and media and with the Cohesion Policy funds and Rural Development Policy, which can specifically help to strengthen national and regional research and innovation capabilities in the context of smart specialisation strategies.</p>		
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	<p><u>AMD 34</u></p> <p><i>(26a) Both Horizon 2020 and the cohesion policy seek a more comprehensive alignment with the Europe 2020 objectives of smart, sustainable and inclusive growth through their respective Common Strategic Frameworks (CSF). This new strategic direction calls for an increased and systematised cooperation of both CSF in order to fully mobilise the research and innovation potential at regional, national and European level. Therefore, an appropriate articulation of Horizon 2020 with the cohesion policy will help reduce the research and innovation gap in the Union, by fostering the "stairway to excellence" taking into account of the specific characteristics of the regions referred to in Articles 274, 349 and 355 TFEU. Moreover, Structural funds should be deployed to their full extent to support capacity and R&D infrastructure building in the regions; support actions such as ERC, Marie Curie or collaborative actions that have been positively evaluated, but for which no Horizon 2020 funding is available.</i></p>		
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	<p><u>AMD 35</u> <i>(26b) European local and regional authorities have an important role to play in implementing the ERA and in ensuring an efficient coordination of the Union financial instruments, in particular in fostering linkages between Horizon 2020 and the Structural Funds, within the framework of regional innovation strategies based on smart specialisation. Regions also have a role in the dissemination and implementation of Horizon 2020 results and in offering complementary funding instruments, including public procurement.</i></p>		
	<p><u>AMD 36</u> <i>(26c) Horizon 2020 should aim at spreading and promoting excellent research throughout all the European regions as a precondition for a geographically balanced growth and innovation strategy of the Union. It should also aim at fostering the mobility of researchers as a means for preventing forms of brain-drain among the Member States.</i></p>		

<p>(27) SMEs constitute a significant source of innovation and growth in Europe. Therefore a strong participation of SMEs, as defined in Commission Recommendation 2003/361/EC of 6 May 2003¹⁵, is needed in Horizon 2020. This should support the aims of the Small Business Act¹⁶.</p> <p>_____</p> <p>¹⁵ OJ L 124, 30.05.2003 p.36</p> <p>¹⁶ COM(2008) 394</p>	<p><u>AMD 37</u></p> <p>(27) SMEs constitute a significant a significant <i>an essential</i> source of innovation, and <i>and jobs</i> in Europe. Therefore a strong participation of SMEs, as defined in Commission Recommendation 2003/361/EC of 6 May 2003, is needed in Horizon 2020. This should support the aims of the Small Business Act. <i>Constituting more than 95% of all enterprises in the Union, there are, however, significant differences between SMEs and a flexible approach is required. Therefore, Horizon 2020 should provide for a tool-box of different instruments to support the research and innovation activities and capacities of SMEs along the different stages of the innovation cycle. Horizon 2020 should allocate at least 20% of priority 2.1 and 3 for SMEs. In particular, at least 4,0% of the Horizon 2020 budget should be delivered through a dedicated SME instrument which should be managed and implemented by a single dedicated administrative structure.</i></p>		
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	<p><u>AMD 38</u></p> <p><i>(27a) The economic significance of public procurement in the Union, which the Commission puts at 19.4% of GDP in its working document 'Public procurement indicators 2009', makes the public procurement market a strategic instrument in the economic and social policy of which it forms part. Moreover, the immediate aim of public procurement is to equip administrations with solutions that will enable them to provide better services to citizens, and there is no doubt that innovation is one means of improving and expanding the provision of conventional products, works and services, and that it makes management processes more efficient. Nevertheless, only a very small part of the total amount involved in public contracts in the Union goes to innovative products and services, and this represents a serious lost opportunity.</i></p>		
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	<p><u>AMD 39</u> <i>(27b) In order to maximize the impact of Horizon 2020 special consideration should be given to multidisciplinary and interdisciplinary approaches as necessary elements for major scientific progress. Breakthroughs in science take often place at the boundaries or intersections of disciplines. Furthermore, the complexity of the problems and challenges that Europe is facing requires solutions that can only be tackled from several disciplines working together.</i></p>		
	<p><u>AMD 40</u> <i>(27c) The implementation of Horizon 2020 should fully recognise the fundamental role that Universities play within the scientific and technological base of the Union as basic institutions of excellence, both in training and research, having an essential role of linking the implementation of the European Higher Education Area to the ERA. Research and technology organisations bring together different players across the whole innovation chain, from fundamental to technological research, from product and process development to prototyping and demonstration, and on to full-scale implementation in the public and private sectors.</i></p>		

<p>(28) With the aim to achieve the greatest possible impact of Union funding, Horizon 2020 is to develop closer synergies, which may also take the form of public-public partnerships, with national and regional programmes that support research and innovation.</p>	<p><u>AMD 41</u> (28) With the aim to achieve the greatest possible impact of Union funding, Horizon 2020 is to develop closer synergies, which may also take the form of public-public partnerships, with <i>international</i>, national and regional programmes that support research and innovation. <i>The coordination and monitoring carried out as part of Horizon 2020 should guarantee the optimum use of resources and avoid unnecessary duplications of expenditure, regardless of what sources of funding are involved.</i></p>		
	<p><u>AMD 42</u> (28a) <i>The Commission should encourage regional stakeholders to formulate regional strategies reflecting the specific needs of the regions so as to combine existing forms of public or private funding at Union level. The activities under Horizon 2020 should be adapted to these strategies, since closer involvement of regional and local authorities in the design and implementation of the funds and research and innovation programmes is of crucial importance in view of the impossibility of applying the same development strategies in all regions.</i></p>		

<p>(29) A greater impact should also be achieved by combining Horizon 2020 and private sector funds within public-private partnerships in key areas where research and innovation could contribute to Europe's wider competitiveness goals and help tackle societal challenges. The public-private partnerships in the form of Joint Technology Initiatives launched under Decision No 1982/2006/EC of the European Parliament and of the Council of 18 December 2006 concerning the Seventh Framework programme of the European Community for research, technological development and demonstration activities (2007-13)¹⁷ may be continued using more fit-for-purpose structures.</p> <p>¹⁷ OJ L 412, 30.12.2006, p.1</p>	<p><u>AMD 43</u></p> <p>(29) A greater impact should also be achieved by combining Horizon 2020 and private sector funds within public-private partnerships in key areas where research and innovation could contribute to Europe's wider competitiveness goals, <i>unlock private funds</i> and help tackle societal challenges. <i>These partnerships should be based on a real partnership, including in terms of commitments and contributions from the private sector, be accountable to concrete targets to be reached, and be aligned with the rest of the Horizon 2020 in terms of its Rules of Participation and the Union's R&D&I strategic agenda. Their governance and functioning should ensure open, transparent, effective and efficient functioning and give the opportunity to a wide range of stakeholder active in their specific areas to participate.</i> The existing public-private partnerships in the form of Joint Technology Initiatives launched under Decision No 1982/2006/EC of the European Parliament and of the Council of 18 December 2006 concerning the Seventh Framework programme of the European Community for research, technological development and demonstration activities (2007-13) may be continued using more fit-for-purpose structures <i>and respecting the above mentioned principles.</i></p>		
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<p>(30) Horizon 2020 should promote cooperation with third countries based on common interest and mutual benefit. International cooperation in science, technology and innovation should be targeted to contribute to achieving the Europe 2020 objectives to strengthen competitiveness, contribute to tackling societal challenges and support Union external and development policies, including by developing synergies with external programmes and contributing to the Union's international commitments such as the achievement of Millennium Development Goals.</p>	<p>AMD 44</p> <p>(30) Horizon 2020 should promote cooperation with third countries based on common interest, and mutual benefit <i>and reciprocity, where appropriate, in coherence with Union foreign and development policies.</i> International cooperation in science, technology and innovation should be targeted to contribute to achieving the Europe 2020 objectives to strengthen competitiveness, contribute to tackling societal challenges and support Union external and development <i>collaborative international research networks and</i> policies, including by developing synergies with external programmes and contributing to the Union's international commitments such as the achievement of Millennium Development Goals <i>and the RIO+20 targets. Account should be taken, in international cooperation, of the capabilities and potential role of the outermost regions of the Union and the overseas countries and territories associated with the Union within their respective areas of the world.</i></p>		
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	<p><u>AMD 45</u> <i>(30a) It should be contemplated to encourage the participation of research teams in different projects in order to reinforce the research and innovation (R&I) quality and to increase the possibility of international co-operation.</i></p>		
<p>(31) In order to maintain a level playing field for all undertakings active in the internal market, funding provided by Horizon 2020 should be designed in accordance with state aid rules so as to ensure the effectiveness of public spending and prevent market distortions such as crowding-out of private funding, creating ineffective market structures or preserving inefficient firms.</p>	<p><u>AMD 46</u> (31) In order to maintain a level playing field for all undertakings active in the internal market, funding provided by Horizon 2020 should be designed in accordance with state aid rules, <i>including the Community framework for state aid for research and development and innovation¹ and taking into account its current review</i>, so as to ensure the effectiveness of public spending and prevent market distortions such as crowding-out of private funding, creating ineffective market structures or preserving inefficient firms.</p> <p>¹ <i>OJ C 323, 30.12.2006 p. 1</i></p>		

	<p><u>AMD 47</u></p> <p><i>(31a) The spending of Union and Member States' funds on research and innovation should be better coordinated in order to assure complementarity, better efficiency and visibility, as well as to achieve better synergies. In the context of the evaluation process foreseen in this Regulation, the Commission should provide concrete evidence, if available of the complementarity and synergies achieved between the Union budget and the Members States budgets in achieving the Europe 2020 R&D target as well as the Europe 2020 innovation headline indicator.</i></p>		
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<p>(32) The need for a new approach to control and risk management in Union research funding was recognised by the European Council of 4 February 2011, asking for a new balance between trust and control and between risk-taking and risk avoidance. The European Parliament, in its Resolution of 11 November 2010 on simplifying the implementation of the Research Framework Programmes, called for a pragmatic shift towards administrative and financial simplification and states that the management of European research funding should be more trust-based and risk-tolerant towards participants. The interim evaluation report of the Seventh Framework Programme for Research (2007-2013) concludes that a more radical approach is needed to attain a quantum leap in simplification, and that the risk-trust balance needs to be redressed.</p>	<p>AMD 48</p> <p>(32) The need for a new approach to control and <i>develop an evidence-based</i> risk management in Union <i>strategy as part of the Union's</i> research funding <i>strategy</i> was recognised by the European Council of 4 February 2011; asking <i>At that time the Council asked</i> for a new balance between trust and control and between risk-taking and risk avoidance. The European Parliament, in its Resolution of 11 November 2010 on simplifying the implementation of the Research Framework Programmes, called for a pragmatic shift towards administrative and financial simplification and states that the management of European research funding should be more trust-based and risk-tolerant towards participants <i>researchers</i>. The interim evaluation report of the Seventh Framework Programme for Research (2007-2013) concludes that a more radical approach is needed to attain a quantum leap in simplification, and that the risk-trust balance needs to be redressed <i>toward simplified procedures that demonstrate the Union's trust in researchers and encourage them to take the risks needed for accelerated progress in science and technology.</i></p>		
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	<u>AMD 49</u> <i>(32a) Horizon 2020 should ensure utmost transparency, accountability and democratic scrutiny of innovative financial instruments and mechanisms that involve the Union budget, especially as regards their contribution, both expected and achieved, to reaching Union objectives.</i>		
(33) The financial interests of the Union should be protected through proportionate measures throughout the expenditure cycle, including the prevention, detection and investigation of irregularities, the recovery of funds lost, wrongly paid or incorrectly used and, where appropriate, penalties. A revised control strategy, shifting focus from minimisation of error rates towards risk-based control and fraud detection, should reduce the control burden for participants.	<i>[no change]</i>		
(34) It is important to ensure sound financial management of Horizon 2020 and its implementation in the most effective and user-friendly manner possible, while also ensuring legal certainty and the accessibility of the programme to all participants. It is necessary to ensure compliance with Regulation (EU) No XXXX/2012 [new financial regulation] and with the requirements of simplification and better regulation.	<i>[no change]</i>		

<p>(35) Effective performance management, including evaluation and monitoring, requires development of specific performance indicators which can be measured over time; are both realistic and reflect the logic of the intervention; and relevant to the appropriate hierarchy of objectives and activities. Appropriate coordination mechanisms should be put in place between the implementation and monitoring of Horizon 2020, and the monitoring of progress, achievements and functioning of the ERA.</p>	<p><u>AMD 50</u> (35) Effective performance management, including evaluation and monitoring, requires development of specific <i>common European</i> performance indicators which can be measured over time; are both realistic and reflect the logic of the intervention; and relevant to the appropriate hierarchy of objectives and activities. Appropriate coordination mechanisms should be put in place between the implementation and monitoring of Horizon 2020, and the monitoring of progress, achievements and functioning of the ERA.</p>		
	<p><u>AMD 51</u> <i>(35a) By 2017, the Commission should undertake a comprehensive assessment and review of the different types of public-private partnerships established under its research and innovation programmes (including KICs, JTIs and PPPs), with a view to rationalising and simplifying the landscape in the future framework programme, and to identifying the most effective, open and transparent governance that will enable the widest participation of stakeholders while avoiding conflict of interests.</i></p>		

(36) Since the objectives of Horizon 2020 cannot be sufficiently achieved by Member States in strengthening the overall research and innovation framework and coordinating efforts across the Union, and can therefore, by reason of avoiding duplication, retaining critical mass in key areas and ensuring public financing is used in an optimal way, be better achieved at Union level, the Union may adopt measures, in accordance with the principle of subsidiarity as set out in Article 5 of the Treaty on European Union. In accordance with the principle of proportionality, as set out in that Article, Horizon 2020 does not go beyond what is necessary in order to achieve those objectives.	<i>[no change]</i>		
(37) For reasons of legal certainty and clarity, Decision No 1982/2006/EC should be repealed,	<i>[no change]</i>		
HAVE ADOPTED THIS REGULATION:			

TITLE 1: ESTABLISHMENT

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
Article 1 <i>Subject Matter</i>	Article 1 <i>Subject Matter</i>	Article 1 <i>Subject Matter</i>	
This Regulation establishes Horizon 2020 - the Framework Programme for Research and Innovation (2014-2020) ("Horizon 2020") and determines the framework governing Union support to research and innovation activities and fostering better exploitation of the industrial potential of policies of innovation, research and technological development.	AMD 52 This Regulation establishes Horizon 2020 - the Framework Programme for Research and Innovation (2014-2020) ("Horizon 2020") and determines the framework governing Union support to research and innovation activities, <i>strengthening the European scientific and technological base</i> and fostering better exploitation of the <i>societal, economic and</i> industrial potential of policies of innovation, research and technological development.	This Regulation establishes Horizon 2020 - the Framework Programme for Research and Innovation (2014-2020) ("Horizon 2020") and determines the framework governing Union support to research and innovation activities, strengthening European scientific and technological base and fostering benefits for society as well as better exploitation of the industrial potential of policies of innovation, research and technological development.	

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
Article 2 Definitions	Article 2 Definitions	Article 2 Definitions	
For the purposes of this Regulation the following definitions apply:	[no change]	[no change]	
(a) ' <i>research and innovation activities</i> ' means the whole spectrum of activities of research, technological development, demonstration and innovation, including the promotion of cooperation with third countries and international organisations, dissemination and optimisation of results and stimulation of the training and mobility of researchers in the Union;	AMD 53 (a) 'research and innovation activities' means the whole spectrum of activities of research, technological development, demonstration and innovation, including the promotion of cooperation with third countries and international organisations, dissemination and optimisation of results and stimulation of the high quality, targeted training and mobility of researchers in the Union;	[no change]	
(b). ' <i>direct actions</i> ' mean research and innovation activities undertaken by the Commission through its Joint Research Centre;	[no change]	[no change]	
(c). ' <i>indirect actions</i> ' mean research and innovation activities to which the Union provides financial support and which are undertaken by participants;	[no change]	[no change]	

(d). ' <i>public-private partnership</i> ' means a partnership where private sector partners, the Union and, where appropriate, other partners, commit to jointly support the development and implementation of a research and innovation programme or activities ;	(d) 'public-private partnership' means a partnership where between private sector partners and public sectors partners such as universities, research organisations and other public institutions including the Union where appropriate, supported jointly by the Union and, where appropriate, other its partners, commit to jointly support the development and implementation of a research and innovation programme or activities;	(d) ' <i>public-private partnership</i> ' means a partnership where private sector partners, the Union and, where appropriate, other partners, such as public sector bodies , commit to jointly support the development and implementation of a research and innovation programme or activities;	
(e). ' <i>public-public partnership</i> ' means a partnership where public sector bodies or bodies with a public service mission at regional, national or international level commit with the Union to jointly support the development and implementation of a research and innovation programme or activities.	(e) 'public-public partnership' means a partnership where public sector bodies or bodies with a public service mission at local , regional, national or international level commit with the Union to jointly support the development and implementation of a research and innovation programme or activities.	[no change]	

	<p><i>(ea) 'research infrastructures' (RI) means facilities, resources, organisational systems and services that are used by the research communities to conduct research and innovation in their fields. Where relevant, they may be used beyond research, e.g. for education or public services. RI includes: major scientific equipment (or sets of instruments); knowledge-based resources such as collections, archives or scientific data; e-infrastructures, such as data, computing and software systems, communication networks and systems to promote openness and digital trust; any other infrastructure of a unique nature essential to achieve excellence in research and innovation;</i></p>		
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	<i>(eb) 'smart specialisation' means the concept underpinning for the development of the Union's R&D&I policy, the objective of which is to promote efficient and effective use of public investment using synergies among countries and regions and strengthening their innovation capacity.</i>		
	<i>(ec) "smart specialisation strategy" means a strategy comprised of a multi-annual strategy programme whose goal is to develop a functional national or regional research innovation system.</i>		

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
Article 3 <i>Establishment of Horizon 2020</i>	Article 3 <i>Establishment of Horizon 2020</i>	Article 3 <i>Establishment of Horizon 2020</i>	
Horizon 2020 is hereby established for the period from 1 January 2014 to 31 December 2020.	[no change]	[no change]	
Article 4 <i>Union added value</i>	Article 4 <i>Union added value</i>	Article 4 <i>Union added value</i>	
Horizon 2020 shall play a central role in the delivery of the Europe 2020 strategy for smart, sustainable and inclusive growth by providing a common strategic framework for the Union's research and innovation funding, thus acting as a vehicle for leveraging private investment, creating new job opportunities and ensuring Europe's long-term sustainable growth and competitiveness.	<u>AMD 54</u> Horizon 2020 shall play a central role in the delivery of the Europe 2020 strategy for smart, sustainable and inclusive growth by providing a common strategic framework for the Union's <i>funding excellent</i> research and innovation funding <i>in the Union</i> , thus acting as a vehicle for leveraging <i>public and</i> private investment, creating new job opportunities and ensuring Europe's long-term <i>sustainability, economic development, social inclusion and industrial</i> sustainable growth and competitiveness. <i>Support under Horizon 2020 shall be targeted towards activities where intervention at Union level brings added value compared to intervention at national or regional level.</i>	Horizon 2020 shall play a central role in the delivery of the Europe 2020 strategy for smart, sustainable and inclusive growth by providing a common strategic framework for the Union's research and innovation funding, thus acting as a vehicle for leveraging private and public investment, creating new job opportunities and ensuring Europe's long-term sustainable growth and competitiveness- as well as addressing societal challenges across the Union.	

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
Article 5 <i>General objective, priorities and specific objectives</i>	Article 5 <i>General objective, priorities and specific objectives</i>	Article 5 <i>General objective, priorities and specific objectives</i>	
1. Horizon 2020 shall contribute to building an economy based on knowledge and innovation across the whole Union by leveraging sufficient additional research, development and innovation funding. Thereby, it shall support the implementation of the Europe 2020 strategy and other Union policies, as well as the achievement and functioning of the European Research Area (ERA). The relevant performance indicators are set out in the introduction of Annex I.	<u>AMD 55</u> 1. Horizon 2020 shall contribute to building an economy based on a knowledge and innovation based economy across the whole Union by leveraging sufficient additional research, development and innovation funding and thus shall contribute to attaining the target of 3% of GDP funding for research and development across the Union by 2020. Thereby, it shall support the implementation of the Europe 2020 strategy and other Union policies, as well as the achievement and functioning of the European Research Area (ERA)- The relevant performance indicators are set out in the introduction of Annex I. through specific and exemplary actions fostering structural changes in European research and innovation systems.	1. Horizon 2020 shall contribute to building a society and an economy based on knowledge and innovation across the whole Union by leveraging sufficient additional research, development and innovation funding. Thereby, it shall support the implementation of the Europe 2020 strategy and other Union policies, as well as the achievement and functioning of the European Research Area (ERA). The first set of relevant performance indicators are set out in the introduction of Annex I.	

2. This general objective shall be pursued through three mutually reinforcing priorities dedicated to:	[no change]	[no change]	
(a) excellent science;	[no change]	[no change]	
(b) industrial leadership;	[no change]	[no change]	
(c) societal challenges.	[no change]	[no change]	
The specific objectives corresponding to each of those three priorities are set out in Parts I to III of Annex I, together with the broad lines of the activities.	[no change]	[no change]	
3. The Joint Research Centre shall contribute to the general objective and priorities set out in paragraphs 1 and 2 by providing scientific and technical support to Union policies. The broad lines of the activities are set out in Part IV of Annex I.	3. The Joint Research Centre shall contribute to the general objective and priorities set out in paragraphs 1 and 2 by providing scientific and technical support to Union policies. The broad lines of the activities are set out in Part IV of Annex I. <i>In addition, the Joint Research Centre shall provide support to national and regional authorities in the development of their smart specialisation strategies.</i>	3. The Joint Research Centre shall contribute to the general objective and priorities set out in paragraphs 1 and 2 by providing scientific and technical support to Union policies: in collaboration with relevant national and regional research stakeholders, where appropriate. The broad lines of the activities are set out in Part IV of Annex I.	

<p>4. The European Institute of Innovation and Technology (EIT) set up by Regulation (EU) No 294/2008 of the European Parliament and of the Council¹⁸ shall contribute to the general objective and priorities set out in paragraphs 1 and 2 with the specific objective of integrating the knowledge triangle of research, innovation and education. The relevant performance indicators for the European Institute of Innovation and Technology are set out in the introduction of Annex I and the broad lines of that specific objective and the activities are set out in Part V of Annex I.</p> <p>_____</p> <p>¹⁸ OJ L 97, 9.4.2008, p. 1.</p>	<p><i>[no change]</i></p>	<p>4. The European Institute of Innovation and Technology (EIT) set up by Regulation (EU) No 294/2008 of the European Parliament and of the Council¹⁸¹ shall contribute to the general objective and priorities set out in paragraphs 1 and 2 with the specific objective of integrating the knowledge triangle of research, innovation and higher education. The relevant performance indicators for the European Institute of Innovation and Technology EIT are set out in the introduction of Annex I and the broad lines of that specific objective and the activities are set out in Part V of Annex I.</p> <p>_____</p> <p>¹⁸¹ OJ L 97, 9.4.2008, p. 1.</p>	
<p>5. Within the priorities and broad lines referred to in paragraph 2, account may be taken of new and unforeseen needs that arise during the period of implementation of Horizon 2020. This may include responses to emerging opportunities, crises and threats, to needs relating to the development of new Union policies, and to the piloting of actions foreseen for support under future programmes.</p>	<p>5. Within the priorities and broad lines referred to in paragraph 2, account may be taken of new and unforeseen needs that arise during the period of implementation of Horizon 2020. This may include responses to emerging opportunities, crises and threats, to needs relating to the development of new Union policies, and to the piloting of actions foreseen for support under future programmes.</p>	<p>5. Within the priorities and broad lines referred to in paragraph 2, account may be taken of new and unforeseen needs that arise during the period of implementation of Horizon 2020. This may, if duly justified, include responses to emerging opportunities, crises and threats, to needs relating to the development of new Union policies, and to the piloting of actions foreseen for support under future programmes.</p>	

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
Article 6 <i>Budget</i>	Article 6 <i>Budget</i>	Article 6 <i>Budget</i>	
1. The financial envelope for the implementation of Horizon 2020 shall be EUR 87740 million, of which a maximum of EUR 86198 million shall be allocated to activities under Title XIX of the Treaty on the Functioning of the European Union (TFEU).	AMD 56 1. The financial envelope for the implementation of Horizon 2020 shall be EUR 87740 xxx million, of which a maximum of EUR 86198 million 98,2% shall be allocated to activities under Title XIX of the Treaty on the Functioning of the European Union (TFEU).	<i>[nota bene: the Council has not discussed Article 6 (1) and (2), pending the discussions on the MFF]</i>	
2. The amount for activities under Title XIX TFEU shall be distributed among the priorities set out in Article 5(2) as follows:	<i>[no change]</i>		
(a) Excellent science, EUR 27818 million;	(a) Excellent science, EUR 27818 million 32,6% of the total budget;		
(b) Industrial leadership, EUR 20280 million;	(b) Industrial leadership, EUR 20280 million 24,3% of the total budget;		
(c) Societal challenges, EUR 35888 million.	(c) Societal challenges, EUR 35888 million 37,5% of the total budget;		

The maximum overall amount for the Union financial contribution from Horizon 2020 to the non-nuclear direct actions of the Joint Research Centre shall be EUR 2212 million.	The maximum overall amount for the Union financial contribution from Horizon 2020 to the non-nuclear direct actions of the Joint Research Centre shall be EUR 2212 million 2,4% of the total Horizon 2020 budget.		
The indicative breakdown for the specific objectives within the priorities and the maximum overall amount of the contribution to the non-nuclear direct actions of the Joint Research Centre are set out in Annex II.	The indicative breakdown for the specific objectives within the priorities and the maximum overall amount of the contribution to the non-nuclear direct actions of the Joint Research Centre are set out in Annex II.		
	<i>The Commission shall set aside an appropriate amount of money to allocate to calls which receive more bids evaluated to be of a high standard of excellence than anticipated in order to fund more than one project where appropriate.</i>		

<p>3. The European Institute of Innovation and Technology shall be financed through a maximum contribution from Horizon 2020 of EUR 3194 million as set out in Annex II. A first allocation of EUR 1542 million shall be provided to the European Institute of Innovation and Technology for activities under Title XVII of the Treaty on the Functioning of the European Union. A second allocation of up to EUR 1652 million shall be provided, subject to the review set out in Article 26 (1). This additional amount shall be provided on a pro-rata basis, as indicated in Annex II, from the amount for the specific objective "Leadership in enabling and industrial technologies" within the priority on industrial leadership set out in paragraph 2(b) and from the amount for the priority on societal challenges set out in 2(c).</p>	<p>3. The European Institute of Innovation and Technology shall be financed through a maximum contribution from Horizon 2020 of EUR 3194 million 3,3% of the <i>total budget as</i> set out in Annex II. A first allocation of EUR 1542 million shall be provided to the European Institute of Innovation and Technology for activities under Title XVII of the Treaty on the Functioning of the European Union. A second allocation of up to EUR 1652 million shall be provided, subject to the review set out in Article 26 (1). This additional amount shall be provided on a pro-rata basis, as indicated in Annex II, from the amount for the specific objective 'Leadership in enabling and industrial technologies' within the priority on industrial leadership set out in paragraph 2(b) and from the amount for the priority on societal challenges set out in 2(c).</p>	<p>3. The European Institute of Innovation and Technology EIT shall be financed through a maximum contribution from Horizon 2020 of [EUR 3194 million] as set out in Annex II. A first allocation of [EUR 1542 million] shall be provided to the European Institute of Innovation and Technology EIT for activities under Title XVII of the Treaty on the Functioning of the European Union. TFEU. A second allocation of up to [EUR 1652 million] shall may be provided, subject to a positive result of the review set out in Article 26 (1). This additional amount shall may be provided on a pro-rata basis, as indicated in Annex II, from the amount for the specific objective "Leadership in enabling and industrial technologies" within the priority on industrial leadership set out in paragraph 2(b) and from the amount for the priority on societal challenges set out in paragraph 2(c).</p>	
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This funding in two multiannual allocations shall cover:	This funding in two multiannual allocations shall cover:	This funding in two multiannual allocations shall cover be as follows:	
(a) in the first allocation, the ongoing developments of the current Knowledge and Innovation Communities (hereinafter KICs) and seed money for the launch of the second wave of three new KICs	(a) in the first allocation, the ongoing developments of the current Knowledge and Innovation Communities (hereinafter KICs) and seed money for the launch of the second wave of three new KICs	(a) in the first allocation, shall cover the ongoing developments of the current Knowledge and Innovation Communities (hereinafter KICs) and seed money for the launch of the second wave of three new KICs;	
(b) in the second allocation, the ongoing developments of the KICs already launched and the seed money for the launch of the third wave of three new KICs	(b) in the second allocation, the ongoing developments of the KICs already launched and the seed money for the launch of the third wave of three new KICs	(b) in the second allocation, may cover the ongoing developments of the KICs already launched and the seed money for the launch of the third wave of three new KICs.	
The second allocation shall be made available following the review set out in Article 26(1) taking into account in particular:	The second allocation shall be made available following the review set out in Article 26(1) taking into account in particular:	The second allocation shall may be made available following subject to the positive result of the review set out in Article 26(1) taking into account in particular:	
(a) the agreed timing of the creation of the third wave of KICs;	(a) the agreed timing of the creation of the third wave of KICs;	(a) the agreed timing of the creation of the third wave of new KICs;	
(b) the programmed financial needs of the existing ones according to their specific development;	(b) the programmed financial needs of the existing ones according to their specific development;	<i>[no change]</i>	
(c) the contribution of the European Institute of Innovation and Technology and its KICs to the Horizon 2020 objectives.	(c) the contribution of the European Institute of Innovation and Technology and its KICs to the Horizon 2020 objectives.	(c) the contribution of the European Institute of Innovation and Technology and its KICs to the Horizon 2020 objectives.	

4. The financial envelope of Horizon 2020 may cover expenses pertaining to preparatory, monitoring, control, audit and evaluation activities which are required for the management of Horizon 2020 and the achievement of its objectives, in particular studies and meetings of experts, as far as they are related to the objectives of Horizon 2020, expenses linked to information technology networks focusing on information processing and exchange, together with all other technical and administrative assistance expenses incurred by the Commission for the management of Horizon 2020.	4. The financial envelope of Horizon 2020 may cover expenses pertaining to preparatory, monitoring, control, audit and evaluation activities which are required for the management of Horizon 2020 and the achievement of its objectives, in particular studies and meetings of experts, as far as they are related to the objectives of Horizon 2020, expenses linked to information technology networks focusing on information processing and exchange, together with all other technical and administrative assistance expenses incurred by the Commission for the management of Horizon 2020.	[no change]	
Where necessary, appropriations may be entered in the budget beyond 2020 to cover technical and administrative assistance expenses, in order to enable the management of actions not yet completed by 31 December 2020.	Where necessary, appropriations may be entered in the budget beyond 2020 to cover technical and administrative assistance expenses, in order to enable the management of actions not yet completed by 31 December 2020 <i>This Regulation shall not fund the Commission's administrative assistance expenses, in order to enable the management of actions not yet completed by 31 December 2020 expenditure to execute Horizon 2020, nor the construction nor the operation of large European infrastructural projects, such as Galileo, GMES or ITER.</i>	Where necessary and duly justified , appropriations may be entered in the budget beyond 2020 to cover technical and administrative assistance expenses, in order to enable the management of actions not yet completed by 31 December 2020.	

<p>5. In order to respond to unforeseen situations or new developments and needs, and to take into account the provisions of paragraph 3 of this article, the Commission may, following the interim evaluation of Horizon 2020 as referred to in Article 26(1)(a) of this Regulation, within the annual budgetary procedure review the amounts set out for the priorities in paragraph 2 and the indicative breakdown by specific objectives within these priorities set out in Annex II and transfer appropriations between the priorities and specific objectives up to 10 % of the total initial allocation of each priority and up to 10 % of the initial indicative breakdown of each specific objective. This does not concern the amount set out for the direct actions of the Joint Research Centre in paragraph 2 or the contribution to the European Institute of Innovation and Technology set out in paragraph 3.</p>	<p>5. In order to respond to unforeseen situations or new developments and needs, and to take into account the provisions of paragraph 3 of this article, <i>the evolving nature of science, technology and innovation</i> and to <i>adapt Horizon 2020 to new developments and needs as necessary</i>, the Commission may, <i>without prejudice to the annual budgetary procedure</i>, following the interim evaluation of Horizon 2020 as referred to <i>in Article 26(1) (b), (a) of this Regulation, within the annual budgetary procedure review the amounts set out for the priorities in paragraph 2 and the indicative adopt delegated acts in accordance with Articles 26a to modify the</i> breakdown by specific objectives within these priorities set out in Annex II and transfer appropriations between the priorities and specific objectives <i>by</i> up to 10 15 % of the total initial allocation of <i>for</i> each priority and up to 10 % of the initial indicative breakdown of each <i>specific objective and, where relevant, the specific objective</i>. This does not concern the amount set out for the direct actions of the Joint Research Centre in paragraph 2 or the contribution to the European Institute of Innovation and Technology set out in paragraph 3. <i>in Annex I.</i></p>	<p>5. In order to respond to unforeseen situations or new developments and needs, and to take into account the provisions of paragraph 3 of this Article, the Commission may, following the interim evaluation of Horizon 2020 as referred to in Article 26(1)(a) of this Regulation, within the annual budgetary procedure review the amounts set out for the priorities in paragraph 2 and the indicative breakdown by specific objectives within these priorities set out in Annex II and transfer appropriations between the priorities and specific objectives up to 10 a maximum of 7.5 % of the total initial allocation of each priority and up to 10 a maximum of 7.5 % of the initial indicative breakdown of each specific objective. This does not concern the amount set out for the direct actions of the Joint Research Centre in paragraph 2 or the contribution to the European Institute of Innovation and Technology EIT set out in paragraph 3.</p>	
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	<i>In modifying Annexes I and II, the Commission shall in particular take into account:</i>		
	<i>(a) the contribution of the different parts of Horizon 2020 to its objectives;</i>		
	<i>(b) the development of the key indicators for assessing results and impacts of the different parts of Horizon 2020 as specified in Annex II of the specific programme referred to in Article 8 of this Regulation;</i>		
	<i>(c) the envisaged future financial needs of the different parts and instruments of Horizon 2020.</i>		

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
Article 7 <i>Association of third countries</i>	Article 7 <i>Association of third countries</i>	Article 7 <i>Association of third countries</i>	
1. Horizon 2020 shall be open to the association of:	[no change]	[no change]	
(a). acceding countries, candidate countries and potential candidates, in accordance with the general principles and general terms and conditions for the participation of those countries in Union programmes established in the respective framework agreements and decisions of association councils or similar agreements;	[no change]	[no change]	
(b) selected third countries that fulfil all of the following criteria:	<u>AMD 57</u> (b) selected third countries that fulfil all of the following criteria:	[no change]	
(i) have a good capacity in science, technology and innovation;	[no change]	[no change]	
(ii) have a good track record of participation in Union research and innovation programmes;	[no change]	[no change]	

(iii) have close economic and geographical links to the Union;	(iii) have close economic and geographical links to the Union <i>or maintain special historical and cultural ties with Member States;</i>	[no change]	
(iv) are European Free Trade Association (EFTA) members or countries or territories listed in the Annex to Regulation (EU) No XX/2012 of the European Parliament and the Council establishing a European Neighbourhood Instrument ¹⁹ . ¹⁹ OJ L [], [], p. []	(iv) are European Free Trade Association (EFTA) members or countries or territories listed in the Annex to Regulation (EU) No XX/2012 of the European Parliament and the Council establishing a European Neighbourhood Instrument. <i>The terms and conditions regarding the participation of the EFTA States that are party to the EEA Agreement shall be in accordance with the provisions of that Agreement.</i>	[no change]	
	<i>Horizon 2020 shall be open to participation by the overseas countries and territories referred to in Council Decision 2001/822/EC of 27 November 2001 on the association of the overseas countries and territories with the European Community ('Overseas Association Decision')¹ subject to the specific conditions laid down therein.</i> ¹ OJ L 314, 30.11.2001, p. 1.		

		(v) have fair and equitable treatment of Intellectual Property Rights.	
		(c) countries or territories associated to the Seventh Framework Programme.	
2. Specific terms and conditions regarding the participation of associated countries in Horizon 2020, including the financial contribution, based on the gross domestic product of the associated country shall be determined by international agreements between the Union and the associated countries.	<i>[no change]</i>	2. Specific terms and conditions regarding the participation of associated countries in Horizon 2020, including the financial contribution, based on the gross domestic product of the associated country shall be determined by international agreements between the Union and the associated countries.	

TITLE II: IMPLEMENTATION

CHAPTER I: IMPLEMENTATION, MANAGEMENT AND FORMS OF SUPPORT

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
Article 8 <i>Implementation by means of a specific programme and the contribution to the European Institute of Innovation and Technology</i>	Article 8 <i>Implementation by means of a specific programme and the contribution to the European Institute of Innovation and Technology</i>	Article 8 <i>Implementation by means of a specific programme and the contribution to the European Institute of Innovation and Technology</i>	
Horizon 2020 shall be implemented through a consolidated specific programme and a financial contribution to the European Institute of Innovation and Technology.	[no change]	Horizon 2020 shall be implemented through a consolidated specific programme and a financial contribution to the European Institute of Innovation and Technology. This programme shall specify the objectives and the detailed rules for implementation. Horizon 2020 shall also be implemented through a financial contribution to the EIT.	
The specific programme shall set out one Part for each of the three priorities set out in Article 5(2) and one Part for the non-nuclear direct actions of the Joint Research Centre.	[no change]	[no change]	

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
	AMD 58 <i>Effective coordination between the three main pillars of Horizon 2020 shall be ensured.</i>	Effective coordination between the three main priorities of Horizon 2020 shall be required.	
Article 9 Management	Article 9 Management	Article 9 Management	
1. Horizon 2020 shall be implemented by the Commission in accordance with Regulation (EU) No XXXX/2012 [New Financial Regulation].	[no change]	[no change]	
2. The Commission may also entrust part of the implementation of Horizon 2020 to the funding bodies referred to in Article [55(1)(b)] of Regulation (EU) No XXXX/2012 [New Financial Regulation].	[no change]	[no change]	

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
Article 10 <i>Forms of Union support</i>	Article 10 <i>Forms of Union support</i>	Article 10 <i>Forms of Union support</i>	
1. Horizon 2020 shall support indirect actions through one or several of the forms of funding provided for by Regulation (EU) No XX/2012 [New Financial Regulation] in particular grants, prizes, procurement and financial instruments.	AMD 59 1. Horizon 2020 shall support indirect actions through one or several of the forms of funding provided for by Regulation (EU, Euratom) No 966/2012 in particular grants, prizes, procurement and financial instruments. <i>The latter shall be the predominant form of funding for activities close to market, supported under Horizon 2020.</i>	1. Horizon 2020 shall support indirect actions through one or several of the forms of funding provided for by Regulation (EU) No XX/2012 [New Financial Regulation], in particular grants, prizes, procurement and financial instruments.	
2. Horizon 2020 shall also support direct actions undertaken by the Joint Research Centre.	[no change]	[no change]	
3. Where the Joint Research Centre direct actions contribute to initiatives established under Article 185 or Article 187 TFEU, this contribution shall not be considered as part of the financial contribution allocated to these initiatives.	[no change]	3. Where the Joint Research Centre direct actions undertaken by the Joint Research Centre contribute to initiatives established under Article 185 or Article 187 TFEU, this contribution shall not be considered as part of the financial contribution allocated to these initiatives.	

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
Article 11 <i>Rules for participation and dissemination of results</i>	Article 11 <i>Rules for participation and dissemination of results</i>	Article 11 <i>Rules for participation and dissemination of results</i>	
The rules for participation and dissemination of results laid down in Regulation (EU) No XX/2012 [Rules for participation and dissemination] shall apply to indirect actions.	[no change]	[no change]	
	<u>AMD 60</u> <i>Article 11a (new)</i> <i>Strategic Advice and Coordination</i>		
	<i>Strategic advice and coordination of research and innovation aiming at common objectives and requiring synergies across Horizon 2020 shall be pursued.</i>		

CHAPTER II: PROGRAMMING

SECTION I: GENERAL PRINCIPLES

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
Article 12 <i>External advice and societal engagement</i>	Article 12 <i>External advice and societal engagement</i>	Article 12 <i>External advice and societal engagement</i>	
1. For the implementation of Horizon 2020, account shall be taken of advice and inputs provided by: advisory groups of independent, high level experts set up by the Commission; dialogue structures created under international science and technology agreements; forward looking activities; targeted public consultations; and transparent and interactive processes that ensure responsible research and innovation is supported.	AMD 61 1. For the implementation of Horizon 2020, account shall be taken of advice and inputs provided by: advisory groups of independent, high level experts set up by the Commission, <i>from a wide variety of sectors, disciplines and backgrounds, and in which input from civil society organisations is included</i> ; dialogue structures created under international science and technology agreements; forward looking activities; targeted public consultations; and transparent and interactive processes that ensure responsible research and innovation is supported <i>through a streamlined set of measures that avoids duplication and overlapping of funding structures.</i>	1. For the implementation of Horizon 2020, account shall be taken of advice and inputs provided by: advisory groups of independent, high level experts set up by the Commission; dialogue structures created under international science and technology agreements; forward looking activities; targeted public consultations <i>(including, where appropriate, national and regional authorities or stakeholders)</i> ; and transparent and interactive processes that ensure responsible research and innovation is supported.	

		Advice on the identification and design of strategic priorities by the European Research Area Committee (ERAC), other ERA-related Groups and the Enterprise Policy Group (EPG) shall, where appropriate, also be taken into consideration.	
	<i>1a. In drawing up the work programmes stipulated in Article 5 of Council Decision No XX/XX/EU of... [Specific Programme H2020], the Commission shall take account of the widest advice and input provided by the stakeholders, the Member States, the European Parliament and the Council. The Committee responsible in the European Parliament may invite representatives of the Commission to present to the Committee the draft work programmes.</i>		
2. Full account shall also be taken of relevant aspects of the research and innovation agendas established by European Technology Platforms, Joint Programming Initiatives and European Innovation Partnerships.	<u>AMD 62</u> 2. Full account shall also be taken of relevant aspects of the research and innovation agendas established by <i>the EIT and the KICs</i> , European Technology Platforms, Joint Programming Initiatives and , European Innovation Partnerships, <i>and European international research organisations, provided those agendas have been drafted in consultation with a wide range of experts and stakeholders.</i>	2. Full account shall also be taken of relevant aspects of the research and innovation agendas established by, inter alia , European Technology Platforms; Joint Programming Initiatives and European Innovation Partnerships.	

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
		Article 12a <u>Synergies with national programmes and joint programming</u>	
		1. For the implementation of Horizon 2020, account shall be taken of the need to build appropriate synergies and complementarities between national and European research and innovation programmes, in particular in areas where coordination efforts are made through the Joint Programming Initiatives.	
		2. Union support to Joint Programming Initiatives may be considered through the instruments referred to in Article 20, subject to the conditions and criteria laid down for such instruments.	

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
Article 13 <i>Cross-cutting actions</i>	Article 13 <i>Cross-cutting actions</i>	Article 13 <i>Cross-cutting actions issues</i>	
1. Linkages and interfaces shall be implemented across and within the priorities of Horizon 2020. Particular attention shall be paid in this respect to the development and application of key enabling and industrial technologies, to bridging from discovery to market application, to cross-disciplinary research and innovation, to social and economic sciences and humanities, to fostering the functioning and achievement of the ERA,	AMD 63 1. Linkages and interfaces shall be implemented across and within the priorities of Horizon 2020. Particular attention shall be paid in this respect to the development and application of key enabling and industrial technologies, to bridging from discovery to market application, to cross-disciplinary to multi-, cross-, trans- and inter-disciplinary research and innovation, to social and economic sciences and humanities, to climate change and sustainable development , to fostering the functioning and achievement of the ERA,	1. Linkages and interfaces shall be implemented across and within the priorities of Horizon 2020. Particular attention shall be paid in this respect to the development and application of key enabling and industrial technologies areas relating to bridging from discovery to market application, to cross-disciplinary research and innovation; to social and economic sciences and humanities; to climate change and sustainable development; to fostering the functioning and achievement of the ERA;	

to cooperation with third countries, to responsible research and innovation including gender, and to enhancing the attractiveness of the research profession and to facilitating cross-border and cross-sector mobility of researchers.	<i>to widening participation across the Union and closing the research and innovation divide in Europe, to broader private sector participation, to involving SMEs, to cooperation with third countries, to responsible research and innovation, including the gender perspective in projects, to a more inclusive governance of research, and to enhancing the attractiveness of the research profession and to facilitating cross-border and cross-sector mobility of researchers.</i>	and of the Innovation Union; to framework conditions in support of the Innovation Union; to contributing to the Digital Agenda; to widening participation across the EU in research and innovation; to international networks for excellent researchers and innovators such as COST; to cooperation with third countries; to responsible research and innovation including gender, and; to SME involvement in research and innovation and the broader private sector participation; to enhancing the attractiveness of the research profession and to facilitating cross-border and cross-sector mobility of researchers.	
		Particular attention shall also be paid to the cross-sectoral dimension of some research and innovation areas of Horizon 2020, such as the development and application of key enabling and industrial technologies as well as future and emerging technologies.	
2. Where an indirect action is supported which is of high relevance to several of the priorities set out in Article 5(2) or to several specific objectives within those priorities, the financial amount for that action may be combined from the amounts allocated to respectively each priority or specific objective concerned.	<i>[no change]</i>	<i>[no change]</i>	

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
Article 14 <i>Evolving nature of science, technology, innovation, markets and society</i>	Article 14 <i>Evolving nature of science, technology, innovation, markets and society</i>	Article 14 <i>Evolving nature of science, technology, innovation, markets <u>economies</u> and society</i>	
Horizon 2020 shall be implemented in a manner ensuring that the priorities and actions supported are relevant to changing needs and take account of the evolving nature of science, technology, innovation, markets and society, where innovation includes business, organisational and social aspects.	AMD 64 Horizon 2020 shall be implemented in a manner ensuring that the priorities and actions supported are relevant to changing needs and take account of the evolving nature of science, technology, innovation, markets economies and society in a globalised world , where innovation includes business, organisational and , technological , social and environmental aspects as well as transfer of science results to all levels of education and training .	Horizon 2020 shall be implemented in a manner ensuring that the priorities and actions supported are relevant to changing needs and take account of the evolving nature of science, technology, innovation, markets economies and society, where innovation includes business, organisational and social societal aspects. Proposal for changes to the priorities and actions under Horizon 2020 will take into account the external advice from groups referred to in Article 12 as well as the recommendations from the interim evaluation referred to in Article 26.	

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
Article 15 <i>Gender equality</i>	Article 15 <i>Gender equality</i>	Article 15 <i>Gender equality</i>	
Horizon 2020 shall ensure the effective promotion of gender equality and the gender dimension in research and innovation content.	AMD 65 Horizon 2020 shall ensure the effective promotion of gender equality and the gender dimension in research and innovation content. <i>Particular attention shall be paid to ensuring gender balance in bodies such as selection boards, advisory groups, committees and expert groups.</i>	[no change]	
	AMD 66 <i>Horizon 2020 shall ensure that the gender dimension is properly considered in research and innovation content at all stages of the process, from priority setting, to definition of calls and proposals, to evaluation and monitoring of programs and projects, to negotiations and agreements.</i>		
	AMD 67 <i>In order to promote gender equality, specific measures shall be implemented to assist those who take a career break to return to work.</i>		

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
	<i>Article 15b Researchers' careers</i>	<i>Article 15a <u>Researchers' careers</u></i>	
	AMD 69 <i>Fostering human resources for science, technology and innovation across Europe shall be a priority in Horizon 2020. Horizon 2020 shall be implemented in accordance with Regulation (EU) No xx/2013 [Rules for Participation], which shall contribute to the reinforcement of a single market for researchers and attractiveness of researchers' careers across the Union in the context of the ERA, by taking into account the transnational character of the actions supported under it.</i>	Horizon 2020 shall be implemented in accordance with the Regulation (EU) No xx/2013 [Rules for Participation], which shall contribute to the reinforcement of a single market for researchers and attractiveness of researchers' careers across the Union in the context of the European Research Area, by taking into account the transnational character of the majority of the actions supported under it.	
	<i>Article 15a Non-discrimination</i>		
	AMD 68 <i>Horizon 2020 shall ensure the effective promotion of equal treatment and non-discrimination and properly consider that aspect in research and innovation content at all stages of the process.</i>		

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
	<u>AMD 70</u> <i>Article 15c</i> <i>Open Access</i>		
	<i>1. Where a decision to publish is taken, open access to scientific publications resulting from publicly funded research under Horizon 2020 shall be mandatory.</i>		
	<i>2. Open access to scientific data resulting from publicly funded research under Horizon 2020 shall be promoted, taking into account constraints pertaining to privacy, national security and intellectual property rights.</i>		
	<i>3. The Commission shall evaluate, before the end of the financing period of Horizon 2020, the impact of the practice of open access to data on the circulation of scientific knowledge and the acceleration of innovation. This shall be done with a view to defining the further policy on open access and its implementation in the next Union research framework programme.</i>		

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
Article 16 <i>Ethical principles</i>	Article 16 <i>Ethical principles</i>	Article 16 <i>Ethical principles</i>	
1. All the research and innovation activities carried out under Horizon 2020 shall comply with ethical principles and relevant national, Union and international legislation, including the Charter of Fundamental Rights of the European Union and the European Convention on Human Rights and its Supplementary Protocols.	AMD 71 1. All the research and innovation activities carried out under Horizon 2020 shall comply with ethical principles and relevant national, Union and international legislation, including the Charter of Fundamental Rights of the European Union and the European Convention on Human Rights and its Supplementary Protocols. <i>The opinions of the European Group on Ethics in Science and New Technologies shall be taken into account.</i>	[no change]	
Particular attention shall be paid to the principle of proportionality, the right to privacy, the right to the protection of personal data, the right to the physical and mental integrity of a person, the right to non-discrimination and the need to ensure high levels of human health protection.	[no change]	[no change]	

2. Research and innovation activities carried out under Horizon 2020 shall have an exclusive focus on civil applications.	<i>[no change]</i>	<i>[no change]</i>	
3. The following fields of research shall not be financed:	<i>[no change]</i>	<i>[no change]</i>	
(a) research activity aiming at human cloning for reproductive purposes;	<i>[no change]</i>	<i>[no change]</i>	
(b) research activity intended to modify the genetic heritage of human beings which could make such changes heritable;	<i>[no change]</i>	<p>(b) research activity intended to modify the genetic heritage of human beings which could make such changes heritable³</p> <hr/> <p>³ Research relating to cancer treatment of the gonads can be financed.</p>	
(c) 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.	<p><u>AMD 72</u></p> <p>(c) 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.</p>	<i>[no change]</i>	
4. Research on human stem cells, both adult and embryonic, may be financed, depending both on the contents of the scientific proposal and the legal framework of the Member States involved. No funding shall be granted for research activities that are prohibited in all the Member States. No activity shall be funded in a Member State where such activity is forbidden.	<i>[no change]</i>	<i>[no change]</i>	

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
5. The fields of research set out in paragraph 3 may be reviewed within the context of the interim evaluation set out in Article 26(1) in the light of scientific advances.	[no change]	[no change]	
Article 17 <i>Complementarity with other Union programmes</i>	Article 17 <i>Complementarity with other Union programmes</i>	Article 17 <i>Complementarity with other Union programmes</i>	
Horizon 2020 shall be implemented in a way which is complementary to other Union funding programmes, including the Structural Funds.	<u>AMD 73</u> Horizon 2020 shall be implemented in a way which is complementary to other Union funding programmes, including the Structural Funds.	Horizon 2020 shall be implemented in a way which is complementary to other Union funding programmes and policies , including the Structural Funds, the Common Agricultural Policy, the Programme for the Competitiveness of Enterprises and SMEs (COSME), Erasmus for all and Life+.	

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
	<u>AMD 74</u> <i>Article 17a</i> <i>Synergies with the Structural Funds</i>		
	<i>Horizon 2020 shall contribute to the closing of the research and innovation divide within the Union by enabling synergies with the Structural Funds in support of research and innovation through the implementation of complementary measures in a coordinated way. Where possible, the interoperability between Horizon 2020 and the Structural Funds shall be promoted and cumulative or combined funding shall be encouraged.</i>		

SECTION II: SPECIFIC FIELDS OF ACTIONS

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
Article 18 <i>Small and medium-sized enterprises</i>	Article 18 <i>Small and medium-sized enterprises</i>	Article 18 <i>Small and medium-sized enterprises</i>	
1. Particular attention shall be paid to ensuring the adequate participation of, and innovation impact on, small and medium-sized enterprises (SME) in Horizon 2020. Quantitative and qualitative assessments of SME participation shall be undertaken as part of the evaluation and monitoring arrangements.	AMD 75 1. Particular attention shall be paid to ensuring the adequate increased participation of, and research and innovation impact on, small and medium-sized enterprises (SME) in throughout the implementation of Horizon 2020. Quantitative and qualitative assessments of SME participation shall be undertaken as part of the evaluation and monitoring arrangements.	1. Particular attention shall be paid to ensuring the adequate participation of, and innovation impact on, small and medium-sized enterprises (SME)s) as well as private sector in general in Horizon 2020. Quantitative and qualitative assessments of SME participation shall be undertaken as part of the evaluation and monitoring arrangements.	

<p>2. Specific actions shall be undertaken within the specific objective "Leadership in enabling and industrial technologies" set out in Point 1 of Part II of Annex I and each of the specific objectives under the priority "Societal challenges" set out in Points 1 to 6 of Part III of Annex I. These specific actions shall take the form of a dedicated SME instrument that is targeted at all types of SMEs with an innovation potential and shall be implemented in a consistent manner and tailored to the needs of SMEs as set out under the specific objective "Innovation in SMEs" in Point 3.3.(a) of Part II of Annex I.</p>	<p>AMD 76</p> <p>2. Specific actions <i>for SMEs</i> shall be undertaken within <i>to ensure that SMEs are integrated within the whole value chain and get access to all opportunities in Horizon 2020. Such actions include those set out under point 3.3 of part II of Annex I.</i> These specific actions shall take the form of a dedicated SME instrument that is targeted at all types of SMEs with an innovation potential and shall be implemented in a consistent manner and tailored to the needs of SMEs as set out under the specific objective "Innovation in SMEs" in Point 3.3.(a) of Part II of Annex I.</p> <p><i>A dedicated SME instrument targeted at all types of SMEs with an innovation potential shall be created under a single management body and shall be implemented primarily in a bottom-up manner as set out under the specific objective "Innovation in SMEs" in Point 3.3.(a) of part II of Annex I. This instrument shall thematically relate to the specific objective "Leadership in enabling and industrial technologies" set out in Point 1 of Part II of Annex I and each of the specific objectives under the priority "Societal challenges" set out in Points 1 to 6 7 of Part III of Annex I.</i></p>	<p>2. Specific Further to the establishment of better conditions for SMEs to participate in Horizon 2020, specific actions shall be undertaken within the specific objective "Leadership in enabling and industrial technologies" set out in Point 1 of Part II of Annex I and each of the specific objectives under the priority "Societal challenges" set out in Points 1 to 67 of Part III of Annex I. These specific actions shall take the form of a dedicated SME instrument that is targeted at all types of SMEs with an innovation potential, in a broad sense, and shall be implemented in a consistent manner and tailored to the needs of SMEs as set out under the specific objective "Innovation in SMEs" in Point 3.3.(a) of Part II of Annex I.</p>	
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3. The integrated approach set out in paragraphs 1 and 2 is expected to lead to around 15% of the total combined budget for the specific objective on "Leadership in enabling and industrial technologies" and the priority "Societal challenges" going to SMEs.	<u>AMD 77</u> 3. The integrated approach set out in paragraphs 1 and 2 is expected to lead to around 15 and the simplification of the application procedures should reach at least 20% of the total combined budget for the specific objective on "Leadership in enabling and industrial technologies" and the priority "Societal challenges" going to SMEs.	3. The integrated approach set out in paragraphs 1 and 2 is expected to lead to around 15 should lead to around 15 a minimum of 20% of the total combined budget for the specific objective on "Leadership in enabling and industrial technologies" and the priority "Societal challenges" going to SMEs.	
	<i>3a. In accordance with paragraphs 1 and 3, the Commission shall carry out evaluations and record the rate of participation by SMEs in the research programmes. Should the target rate of 20% not be achieved, the Commission shall examine the reasons for this situation and shall propose, without delay, new measures for achieving the target.</i>		
	<i>3b. Particular attention shall also be paid to the adequate participation and representation of SMEs in the governing structures of the ERA and in particular of public-private partnerships.</i>		

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
		Article 18a <u>Collaborative projects and partnership programmes</u>	
		Horizon 2020 should be implemented primarily through transnational collaborative projects, delivered through calls for proposals in the Horizon 2020 Annual Work Programmes. These projects will be complemented by public-private and public-public partnerships. The partnerships will be designed with the involvement of Member States and shall develop principles for their internal management.	
	<u>AMD 78</u> <i>Article 18a</i> <i>Fast Track to Innovation</i>		
	<i>1. To accelerate the commercialisation and diffusion of innovation, a significant amount of the Union funding within the specific objective 'Leadership in enabling and industrial technologies' and in each of the 'Societal challenges' in Part III of Annex I shall be set aside for the 'Fast Track to Innovation'.</i>		

	<p><i>2. The 'Fast track to innovation' is an instrument following a bottom-up-driven logic that will speed up time from idea to market significantly and is expected to increase industry participation in Horizon 2020 as well as the participation of SMEs and first-time applicants from the public and non-profit research sector. Thereby it shall stimulate private sector R&D&I investment, promote research and innovation with a focus on value creation and accelerate the maturing of new technologies into innovative products being in demand, which will underpin future businesses and economic growth and employment.</i></p>		
	<p><i>3. Activities shall cover the whole innovation cycle, but shall focus on innovation-related activities, experimental and pre-commercial development, comprising the development stages from technology demonstration up to market uptake, including piloting, demonstration, test-beds, pre-normative research and standard setting, and market uptake of innovations.</i></p>		

	<i>4. The 'Fast track to innovation' shall be implemented as a visible funding instrument presenting a simple and fast entry into applied collaborative research, following a special selection process as set out in Regulation (EU) No xxxx/2012 [Rules for Participation and Dissemination].</i>		
	<i>5. While synergies between the 'Fast Track to Innovation' and the dedicated SME instrument shall be taking into account, the two instruments shall be implemented in parallel as two separate procedures, taking due account of the respective targeted participant groups, and without affecting the budget that has been ringfenced for the SME instrument.</i>		

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
Article 19 <i>Public-private partnerships</i>	Article 19 <i>Public-private partnerships</i>	Article 19 <i>Public-private partnerships</i>	
1. Horizon 2020 may be implemented through public-private partnerships where all the partners concerned commit to support the development and implementation of research and innovation activities of strategic importance to the Union's competitiveness and industrial leadership or to address specific societal challenges.	AMD 79 1. Horizon 2020 may be implemented through public-private partnerships where all the partners concerned commit to support the development and implementation of <i>pre-competitive</i> research and innovation activities of strategic importance to the Union's competitiveness and industrial leadership or to address specific societal challenges. <i>Excellence shall be key in selecting the participants.</i>	1. Horizon 2020 may be implemented through public-private partnerships where all the partners concerned commit to support the development and implementation of research and innovation activities of strategic importance to the Union's competitiveness and industrial leadership or to address specific societal challenges. Public-private partnerships shall be implemented in such a way that they do not impede the full participation of the best European players.	
2. Involvement of the Union in those partnerships may take one of the following forms:	[no change]	2. Involvement of the Union in those partnerships shall make use of the pre-existing and lean governance structures and may take one of the following forms:	

<p>(a) financial contributions from the Union to joint undertakings established on the basis of Article 187 TFEU under the Seventh Framework Programme, subject to the amendment of their basic acts; to new public-private partnerships set up on the basis of Article 187 TFEU; and to other funding bodies referred to in Article [55(1)(b)(v) or (vii)] of Regulation (EU) No XX/2012 [New Financial Regulation]. This form of partnerships shall only be implemented where the scope of the objectives pursued and the scale of the resources required justify it;</p>	<p>(a) financial contributions from the Union to joint undertakings established on the basis of Article 187 TFEU under the Seventh Framework Programme, subject to the amendment of their basic acts <i>taking full account of the results of the cost benefit analysis to be conducted under the foreseen impact assessment of this instrument</i>; to new public-private partnerships set up on the basis of Article 187 TFEU; and to other funding bodies referred to in Article [55(1)(b)(v) or (vii)] of Regulation (EU, Euratom) No 966/2012. This form of partnerships shall only be implemented where the scope of the objectives pursued, <i>the consistency with existing Union policy objectives</i> and the scale of the resources required justify it <i>and where other forms of partnerships will not fulfil the objectives or will not generate the necessary leverage</i>;</p>	<p>(a) financial contributions from the Union to joint undertakings established on the basis of <i>pursuant to</i> Article 187 TFEU under the Seventh Framework Programme, subject to the amendment of their basic acts; to new public-private partnerships set up on the basis of <i>established pursuant to</i> Article 187 TFEU; and to other funding bodies referred to in Article [55(1)(b)(v) or (vii)] of Regulation (EU) No XX/2012 [New Financial Regulation]. This form of partnerships shall only be implemented where the scope of the objectives pursued and the scale of the resources required justify it;</p>	
<p>(b) entering a contractual agreement between the partners referred to in paragraph 1, which specifies the objectives of the partnership, respective commitments of the partners, key performance indicators, and outputs to be delivered including the identification of research and innovation activities that require support from Horizon 2020.</p>	<p>[no change]</p>	<p>[no change]</p>	

		The public-private partnerships shall make public funds accessible through transparent processes and mainly through competitive calls, with rules for participation in compliance with those of Horizon 2020. Exceptions to the use of competitive calls should be duly justified.	
3. Public-private partnerships shall be identified in an open and transparent way based on all of the following criteria:	3. Public-private partnerships shall be identified in an open and transparent way based on all of the following criteria: and implemented on the criteria of openness, transparency, effectiveness and efficiency as well as the fulfilment of the criterion set out in Article X of Regulation (EU) No xxxx/2012 [Rules for participation].	<i>[no change]</i>	
(a) the added value of action at Union level;	(a) the added value of action at Union level;	<i>[no change]</i>	
(b) the scale of impact on industrial competitiveness, sustainable growth and socio-economic issues;	(b) the scale of impact on industrial competitiveness, sustainable growth and socio-economic issues;	(b) the scale of impact on industrial competitiveness, job creation , sustainable growth and socio-economic issues; including societal challenges ;	
(c) the long-term commitment from all partners based on a shared vision and clearly defined objectives;	(c) the long-term commitment from all partners based on a shared vision and clearly defined objectives;	<i>[no change]</i>	
(d) the scale of the resources involved and the ability to leverage additional investments in research and innovation;	(d) the scale of the resources involved and the ability to leverage additional investments in research and innovation;	<i>[no change]</i>	

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
(e) a clear definition of roles for each of the partners and agreed key performance indicators over the period chosen.	(e) a clear definition of roles for each of the partners and agreed key performance indicators over the period chosen.	[no change]	
		Where appropriate, complementarity to priorities, activities and involvement of Member States shall be ensured in public-private partnerships.	
	<i>3a. The research priorities covered by public-private partnerships shall also be funded through the work programmes in regular calls for proposal.</i>		
Article 20 <i>Public-public partnerships</i>	Article 20 <i>Public-public partnerships</i>	Article 20 <i>Public-public partnerships</i>	
1. Horizon 2020 shall contribute to the strengthening of public-public partnerships where actions at regional, national or international level are jointly implemented within the Union.	[no change]	1. Horizon 2020 shall contribute to the strengthening of public-public partnerships, as and when appropriate , where actions at regional, national or international level are jointly implemented within the Union.	

Particular attention shall be paid to joint programming initiatives between Member States.	<u>AMD 80</u> Particular attention shall be paid to joint programming initiatives between Member States, <i>and such initiatives may include regions and cities where relevant. The financial contribution of the Union shall be of a limited nature and shall always be conditional on the demonstration of transparency, large participation of Member States, the existence of a Union added value and the additionality of the resources. Top-up funding will be restricted to initiatives permanently open to participation from all Member States.</i>	[no change]	
2. Public-public partnerships may be supported either within, or across, the priorities set out in Article 5(2), in particular through:	[no change]	[no change]	
(a) an ERA-NET instrument using grants to support public-public partnerships in their preparation, establishment of networking structures, design, implementation and coordination of joint activities as well as topping up of individual joint calls and of actions of a transnational nature;	[no change]	(a) an ERA-NET instrument using grants to support public-public partnerships in their preparation, establishment of networking structures, design, implementation and coordination of joint activities as well as Union topping up of individual no more than one joint call a year and of actions of a transnational nature;	

(b) Union participation in programmes undertaken by several Member States in accordance with Article 185 TFEU	(b) Union participation in programmes undertaken by several Member States in accordance with Article 185 TFEU, <i>with participation of regional authorities where relevant.</i>	(b) Union participation in programmes undertaken by several Member States in accordance with Article 185 TFEU where it is justified by the scope of objectives pursued and the scale of resources required.	
For the purposes of point (a), top-up funding shall be conditional on a significant level of prior financial commitments of the participating entities to the joint calls and actions. The ERA-NET instrument may include an objective to harmonise rules and implementation modalities of the joint calls and actions. It may also be used in order to prepare for an initiative pursuant to Article 185 TFEU.	For the purposes of point (a), top-up funding shall be conditional on a significant level of prior financial commitments of the participating entities to the joint calls and actions. The ERA-NET instrument may include an objective to harmonise rules and implementation modalities of the joint calls and actions. It may also be used in order to prepare for an initiative pursuant to Article 185 TFEU.	For the purposes of point (a), top-up funding shall be conditional on a significant level of prior indicative financial commitments in cash or in kind of the participating entities to the joint calls and actions. The ERA-NET instrument may include, where possible , an objective to harmonise rules and implementation modalities of the joint calls and actions. It may also be used in order to prepare for an initiative pursuant to Article 185 TFEU.	

For the purposes of point (b) such initiatives shall only be proposed in cases where there is a need for a dedicated implementation structure and where there is a high level of commitment of the participating countries to integration at scientific, management and financial levels. In addition, proposals for initiatives referred to in point (b) shall be identified on the basis of all of the following criteria:	For the purposes of point (b) such initiatives shall only be proposed in cases where there is a need for a dedicated implementation structure and where there is a high level of commitment of the participating countries to integration at scientific, management and financial levels. In addition, proposals for initiatives referred to in point (b) shall be identified on the basis of all of the following criteria:	<i>[no change]</i>	
(a) a clear definition of the objective to be pursued and its relevance to the objectives of Horizon 2020 and broader Union policy objectives;	(a) a clear definition of the objective to be pursued and its relevance to the objectives of Horizon 2020 and broader Union policy objectives;	<i>[no change]</i>	
(b) clear financial commitments of the participating countries, including prior commitments to pool national and/or regional investments for transnational research and innovation;	(b) clear financial commitments of the participating countries, including prior commitments to pool national and/or regional investments for transnational research and innovation;	(b) clear indicative financial commitments of the participating countries, in cash or in kind including prior commitments to pool align national and/or regional investments for transnational research and innovation; and, where appropriate, to pool resources;	

(c) the added value of action at Union level;	(c) the added value of action at Union level;	<i>[no change]</i>	
(d) the critical mass, with regard to the size and the number of programmes involved, the similarity of activities and the share of relevant research they cover;	(d) the critical mass, with regard to the size and the number of programmes involved, the similarity of activities and the share of relevant research they cover;	(d) the critical mass, with regard to the size and the number of programmes involved, the similarity or complementarities of activities and the share of relevant research they cover;	
(e) the efficiency of Article 185 TFEU as the most appropriate means for achieving the objectives	(e) the efficiency of Article 185 TFEU as the most appropriate means for achieving the objectives	<i>[no change]</i>	

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
Article 21 <i>International cooperation with third countries and international organisations</i>	Article 21 <i>International cooperation with third countries and international organisations</i>	Article 21 <i>International cooperation with third countries and international organisations</i>	
1. Entities established in third countries and international organisations shall be eligible to participate in indirect actions of Horizon 2020 under the conditions set out in Regulation (EU) XX/XX [Rules for Participation]. International cooperation with third countries and international organisations shall be promoted across and within Horizon 2020 to achieve, in particular, the following objectives:	AMD 81 1. Entities established in third countries and international organisations shall be eligible to participate in indirect actions of Horizon 2020 under the conditions set out in Regulation (EU) XX/XX [Rules for Participation]. International cooperation with third countries and international organisations shall be promoted across and within integrated in Horizon 2020 to achieve, in particular, the following objectives:	[no change]	
(a) strengthening the Union's excellence and attractiveness in research and innovation as well as its economic and industrial competitiveness;	[no change]	[no change]	
(b) tackling effectively global societal challenges;	[no change]	(b) tackling effectively global common societal challenges;	

(c) supporting the Union's external and development policy objectives, complementing external and development programmes.	<u>AMD 82</u> (c) supporting the Union's external and development policy objectives, complementing external and development programmes <i>and international commitments such as the achievement of the Millennium Development Goals;</i>	(c) supporting the Union's external and development policy objectives, complementing external and development programmes. Synergies with other Union policies will be sought.	
	<u>AMD 83</u> <i>(ca) supporting the creation of globally competitive centres of excellence making the Union a global hub for world-leading cutting-edge research and innovation.</i>		
2. Targeted actions with the objective of promoting cooperation with specific third countries or groups of third countries shall be implemented on the basis of common interest and mutual benefit, taking into account their scientific and technological capabilities and market opportunities, and the expected impact.	<u>AMD 84</u> 2. Targeted actions with the objective of promoting cooperation with specific third countries or groups of third countries, <i>in particular with the strategic partners of the Union,</i> shall be implemented on the basis of common interest and mutual benefit; taking into account their scientific and technological capabilities and market opportunities, and the expected impact. <i>Those actions shall include, in particular, research capacity building in developing countries and cooperation projects focusing on those countries' specific needs.. Account shall be taken, in those cooperative activities, of the scientific and technological capabilities of the outermost regions of the Union and the overseas countries and territories associated with the Union.</i>	2. Targeted actions with the objective of promoting cooperation with specific third countries or groups of third countries shall be implemented on the basis of a strategic approach as well as common interest, priorities , and mutual benefit, taking into account their scientific and technological capabilities and market opportunities, and the expected impact.	

Reciprocal access to third country programmes should be encouraged. In order to maximise impact, coordination and synergies with initiatives of Member States and associated countries shall be promoted.	<u>AMD 85</u> Reciprocal access to third country programmes should be encouraged <i>and periodically monitored</i> . In order to maximise impact, coordination and synergies with initiatives of Member States and associated countries shall be promoted.	Reciprocal access to third country programmes should be encouraged. In order to maximise impact, coordination and synergies with initiatives of Member States and associated countries shall be promoted. The nature of the cooperation may vary according to the specific partner countries.	
Cooperation priorities shall take into account developments in Union policy and opportunities for cooperation with third countries, as well as possible deficiencies in third country intellectual property systems.	<u>AMD 86</u> Cooperation priorities shall take into account developments in Union policy and opportunities for cooperation with third countries, as well as possible deficiencies in third country intellectual property systems. including external and development policies.	Cooperation priorities shall take into account developments in Union policy and , opportunities for cooperation with third countries, as well as possible deficiencies in third country and fair and equitable treatment of intellectual property systems. rights.	
	<u>AMD 87</u> <i>Due coordination shall be established with migration, asylum and development policies, in order to avoid a "brain drain" from developing countries.</i>		
3. In addition, horizontal and cross-cutting activities to promote the strategic development of international cooperation shall be implemented under Horizon 2020 under the specific objective "Inclusive, innovative and secure societies" set out in Point 6.3.2(d) of Part III of Annex I.	<u>AMD 88</u> 3. In addition, horizontal and cross-cutting activities to promote the strategic development of international cooperation shall be implemented under Horizon 2020 under the specific objective ' <i>Understanding Europe in a changing world</i> - inclusive, innovative and secure reflective societies' set out in Point 6.3.2(d) of Part III of Annex I.	3. In addition, horizontal and cross-cutting activities to promote the strategic development of international cooperation shall be implemented under Horizon 2020 under the specific objective "Inclusive, innovative and secure societies" set out in Point 6.3.2(d) of Part III of Annex I.	

	<p><u>AMD 89</u> <i>3a. In order to reduce the administrative burden for participants, national accounting practices of the beneficiaries shall be accepted by the Commission.</i></p>		
	<p><u>AMD 90</u> <i>3b. Beneficiaries who have executed their audits in a satisfactory manner for three consecutive years shall be subject to a lighter audit procedure, in order to foster an enhanced trust-based approach.</i></p>		

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
Article 22 <i>Information, communication and dissemination</i>	Article 22 <i>Information, communication and dissemination</i>	Article 22 <i>Information, communication, <u>exploitation</u> and dissemination</i>	
The European Commission shall implement information and communication actions concerning Horizon 2020, including communication measures concerning supported projects and results.	<u>AMD 91</u> The European Commission shall implement information and communication actions concerning Horizon 2020, including communication measures concerning supported projects and results.	The European Commission shall implement information and communication actions concerning Horizon 2020, including communication measures concerning supported projects and results. In particular, it shall provide timely and thorough information to Member States.	
Budget allocated to communication under Horizon 2020 shall also contribute to covering the corporate communication of the Union's political priorities as far as they are related to the general objective of this Regulation.	Budget allocated to communication under Horizon 2020 shall also contribute to covering the corporate communication of the Union's political priorities as far as they are related to the general objective of this Regulation. <i>In particular, the Commission shall provide timely and thorough information to Member States.</i>	[no change]	

Activities to disseminate information and carry out communication activities shall be an integral task under all of the actions supported by Horizon 2020.	<u>AMD 92</u> Activities to disseminate information and carry out communication activities shall be an integral task under all of the actions supported by Horizon 2020. <i>All information and communication activities concerning Horizon 2020, including communication measures concerning supported projects, shall be made available and accessible to all citizens, and made public in digital form.</i>	[no change]	
	<u>AMD 93</u> <i>In order to simplify access to information and to develop an instrument with all the information requested by the research community and, having regard the need for a transparency, Cordis, as a digital instrument shall be revised and reformed in a clearer and more flexible way. The New Cordis shall be finalised by 31 May 2013.</i>		

In addition, the following specific actions shall be supported:	<i>[no change]</i>	<i>[no change]</i>	
(a) initiatives aimed at widening awareness and facilitating access to funding under Horizon 2020, in particular for those regions or types of participant that are underrepresented;	AMD 94 (a) initiatives aimed at widening awareness and facilitating access to funding under Horizon 2020, in particular for those regions, <i>overseas countries and territories associated with the Union</i> or types of participant that are underrepresented, <i>including researchers and participants with disabilities</i> ;	(a) initiatives aimed at widening awareness and facilitating access to funding under Horizon 2020, in particular for those regions or types of participant that are underrepresented ; have a relatively low participation ;	
(b) targeted assistance to projects and consortia to provide them with access to the necessary skills to optimise the communication and dissemination of results;	AMD 95 (b) targeted assistance to projects and consortia to provide them with <i>adequate</i> access to the necessary skills to optimise the communication and dissemination of results;	(b) targeted assistance to projects and consortia to provide them with access to the necessary skills to optimise the communication, exploitation and dissemination of results;	
(c) actions which bring together results from a range of projects, including those that may be funded from other sources, to provide user-friendly databases and reports that summarise key findings;	AMD 96 (c) actions which bring together <i>and evaluate</i> results from a range of projects, including those that may be funded from other sources, to provide user-friendly <i>and accessible digital</i> databases and <i>to draw up</i> reports that summarise key findings, <i>and where relevant communication and dissemination to the scientific community, industry and the general public</i> ;	<i>[no change]</i>	

(d) dissemination to policy makers, including standardisation bodies, to promote the use of policy relevant results by the appropriate bodies at international, Union, national and regional level;	<i>[no change]</i>	<i>[no change]</i>	
(e) initiatives to foster dialogue and debate on scientific, technological and innovation related issues with the public, and to take advantage of social media and other innovative technologies and methodologies;	<u>AMD 97</u> (e) initiatives to foster dialogue and debate on scientific, technological and innovation related issues with the public <i>through involvement of the academic community</i> , and to take advantage of social media and other innovative technologies and methodologies, <i>especially in order to help raise public awareness of the benefits of research and innovation in meeting society's challenges</i> ;	(e) initiatives to foster dialogue and debate on scientific, technological and innovation related issues with the public, and to take advantage of social media and other innovative technologies and methodologies;	
	<u>AMD 98</u> (ea) <i>initiatives to include and promote the participation of civil society, and its organisations or institutions, in issues relating to the research and innovation process and to foster open, science-based debates on major societal issues.</i>		

CHAPTER III: CONTROL

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
Article 23 <i>Control and audit</i>	Article 23 <i>Control and audit</i>	Article 23 <i>Control and audit</i>	
1. The control system set up for the implementation of this Regulation shall be designed so as to provide reasonable assurance of achieving adequate management of the risks relating to the effectiveness and efficiency of the operations as well as the legality and regularity of the underlying transactions, taking into account the multi-annual character of programmes as well as the nature of the payments concerned.	AMD 99 1. The control system set up for the implementation of this Regulation shall be designed so as to provide reasonable assurance of achieving sufficient reduction and adequate management of the risks relating to the effectiveness and efficiency of the operations as well as the legality and regularity of the underlying transactions, taking into account the multi-annual character of programmes as well as the nature of the payments concerned.	[no change]	
2. The control system shall ensure an appropriate balance between trust and control, taking into account administrative and other costs of controls at all levels, so that the objectives of Horizon 2020 can be achieved and the most excellent researchers and the most innovative enterprises can be attracted to it.	AMD 100 2. The control system shall ensure an appropriate balance between trust and control, taking into account administrative and other costs of controls at all levels, including at the level of beneficiaries , so that the objectives of Horizon 2020 can be achieved and the most excellent researchers and the most innovative enterprises can be attracted to it.	2. The control system shall ensure an appropriate balance between trust and control, taking into account administrative and other costs of controls at all levels, especially for participants , so that the objectives of Horizon 2020 can be achieved and the most excellent researchers and the most innovative enterprises can be attracted to it.	

3. As part of the control system, the audit strategy for expenditure on indirect actions under Horizon 2020 shall be based on the financial audit of a representative sample of expenditure across the whole framework programme. This representative sample shall be complemented by a selection based on an assessment of the risks related to expenditure.	<i>[no change]</i>	<i>[no change]</i>	
Audits of expenditure on indirect actions under Horizon 2020 shall be carried out in a coherent manner in accordance with the principles of economy, efficiency and effectiveness in order to minimize the audit burden of the participants	<i>[no change]</i>	<i>[no change]</i>	

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
Article 24 <i>Protection of the financial interests of the Union</i>	Article 24 <i>Protection of the financial interests of the Union</i>	[Article 24 <i>Protection of the financial interests of the Union</i>	
1. The Commission shall take appropriate measures ensuring that, when actions financed under this Regulation are implemented, the financial interests of the Union are protected by the application of preventive measures against fraud, corruption and any other illegal activities, by effective checks and, if irregularities are detected, by the recovery of the amounts wrongly paid and, where appropriate, by effective, proportionate and deterrent penalties.		[nota bene: the Council has not discussed Article 24, pending discussions on the financial regulation]	
	AMD 101 <i>1a. An ad hoc mediator shall be appointed, with responsibility for ensuring uniform interpretation of the rules. In the event of conflict about the interpretation of the rules or procedures, based for example on an independent re-audit produced by any interested party, the Commission may resolve the conflict through a compromise on the advice of the ad hoc mediator.</i>		

2. The Commission or its representatives and the Court of Auditors shall have the power of audit, on the basis of documents and on-the-spot checks and inspections, over all grant beneficiaries, contractors, subcontractors and other third parties who have received Union funds under Horizon 2020.	<i>[no change]</i>	<i>[no change]</i>	
Without prejudice to paragraph 3, audits by the Commission may be carried out up to four years after the final payment.	AMD 102 Without prejudice to paragraph 3, audits by the Commission may be carried out up to four two years after the final payment completion of a project .	<i>[no change]</i>	
3. The European Anti-Fraud Office (OLAF) may carry out on-the-spot checks and inspections on economic operators concerned directly or indirectly by such funding in accordance with the procedures laid down in Council Regulation (Euratom, EC) No 2185/96 ²⁰ with a view to establishing whether there has been fraud, corruption or any other illegal activity affecting the financial interests of the Union in connection with a grant agreement or grant decision or a contract concerning Union funding. ²⁰ OJ L 292, 15.11.1996, p. 2	<i>[no change]</i>	3. The European Anti-Fraud Office (OLAF) may carry out on-the-spot checks and inspections on economic operators concerned directly or indirectly by such funding in accordance with the procedures laid down in Council Regulation (Euratom, EC) No 2185/96 ²⁰⁴ with a view to establishing whether there has been fraud, corruption or any other illegal activity affecting the financial interests of the Union in connection with a grant agreement or grant decision or a contract concerning Union funding. ²⁰⁴ OJ L 292, 15.11.1996, p. 2	

4. Without prejudice to paragraphs 1, 2 and 3, cooperation agreements with third countries and international organisations and grant agreements and grant decisions and contracts resulting from the implementation of this Regulation shall expressly empower the Commission, the Court of Auditors and the OLAF to conduct such audits, on-the-spot checks and inspections.	<i>[no change]</i>	4. Without prejudice to paragraphs 1, 2 and 3, cooperation agreements with third countries and international organisations and grant agreements and grant decisions and contracts resulting from the implementation of this Regulation shall expressly empower the Commission, the Court of Auditors and the OLAF to conduct such audits, on-the-spot checks and inspections.]	
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CHAPTER IV: MONITORING AND EVALUATION

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
Article 25 <i>Monitoring</i>	Article 25 <i>Monitoring</i>	Article 25 <i>Monitoring</i>	
1. The Commission shall annually monitor the implementation of Horizon 2020, its specific programme and the activities of the European Institute of Innovation and Technology. This shall include information on cross-cutting topics such as sustainability and climate change, including information on the amount of climate related expenditure.	AMD 103 1. The Commission shall annually monitor the implementation of Horizon 2020, its specific programme and , the activities of the <i>EIT and the implementation and funding of public-private and public-public partnerships</i> . This shall include information <i>and indicators</i> on cross-cutting topics such as <i>gender equality, responsible research and innovation</i> , sustainability and climate change, including information on the amount of climate related expenditure, <i>private sector and SME participation in particular and the real impact of measures to widen the participation</i> .	1. The Commission shall annually monitor the implementation of Horizon 2020, its specific programme and the activities of the European Institute of Innovation and Technology EIT . This shall include information on cross-cutting topics such as social and economic sciences and humanities , sustainability and climate change, including information on the amount of climate related expenditure-, SME participation, private sector participation, gender equality, widening participation and progress against performance indicators . The monitoring shall also include information on the extent of funding for public-private and public-public partnerships, including Joint Programming Initiatives. The monitoring on funding for public-private partnerships shall, where appropriate, be undertaken in close consultation with the participants.	

	<p><u>AMD 104</u></p> <p><i>1a. In order to deliver a future Union environment that offers a real increase in prosperity and in quality of life, the balance between economic, social and environmental aspects will need to be regularly and effectively monitored during the implementation of Horizon 2020. To this end, the Commission shall set up in advance a clear and transparent mechanism for such monitoring.</i></p>		
<p>2. The Commission shall report and disseminate the results of that monitoring.</p>	<p><u>AMD 105</u></p> <p>2. The Commission shall report and disseminate the results of that <i>the monitoring referred to in paragraphs 1 and 1a, using, where appropriate, a set of common key indicators, comparable across the various instruments. In particular, they shall be transmitted to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions.</i></p>	<p>2. The Commission shall report and disseminate make publicly available the results of that monitoring.</p>	

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
Article 26 <i>Evaluation</i>	<u>AMD 106</u> Article 26 <i>Evaluation Mid-term review</i>	Article 26 <i>Evaluation</i>	
1. Evaluations shall be carried out in a sufficiently timely manner to feed into the decision-making process.	<u>AMD 107</u> 1. Evaluations Reviews and evaluations shall be carried out in a sufficiently timely manner to feed into the decision-making process.	[no change]	
(a) Not later than end 2017, the Commission shall carry out, with the assistance of independent experts, a review of the European Institute of Innovation and Technology. The second allocation of funds to the European Institute of Innovation and Technology as set out in Article 6(3) shall be made available following this review. The review shall assess the progress of the European Institute of Innovation and Technology against all of the following:	<u>AMD 108</u> (a) Not later than end 2017, the Commission shall carry out, with the assistance of independent experts, a review of the European Institute of Innovation and Technology. The second allocation of funds to the European Institute of Innovation and Technology as set out in Article 6(3) shall be made available following this review. The review shall assess the progress of the European Institute of Innovation and Technology against all of the following:	(a) Not later than end 2017, the Commission shall carry out, with the assistance of independent experts selected on the basis of a transparent process , a review of the European Institute of Innovation and Technology EIT, taking into account the evaluation provided for in Article 16 of the Regulation XX/2012 [revised EIT Regulation] . The second allocation of funds to the European Institute of Innovation and Technology EIT as set out in Article 6(3) shall may be made available following subject to a positive result of this review. The review shall assess the progress of the European Institute of Innovation and Technology EIT against all of the following:	

(i) the level of consumption of the first allocation of funds set out in Article 6(3), differentiating between the amount of money used for the development of the first wave of KICs and the effect of the seed money for the second phase, and the ability of the European Institute of Innovation and Technology to attract funds from the partners in the Knowledge and Innovation Communities and from the private sector, as set out in Regulation XX/2012 [revised EIT Regulation];	(i) the level of consumption of the first allocation of funds set out in Article 6(3), differentiating between the amount of money used for the development of the first wave of KICs and the effect of the seed money for the second phase, and the ability of the European Institute of Innovation and Technology to attract funds from the partners in the Knowledge and Innovation Communities and from the private sector, as set out in Regulation XX/2012 [revised EIT Regulation];	(i) the level of consumption and the efficiency in the use of the first allocation of funds set out in Article 6(3), differentiating between the amount of money used for the development of the first wave of KICs and the effect of the seed money for the second phase, and the ability of the European Institute of Innovation and Technology EIT to attract funds from the partners in the Knowledge and Innovation Communities and KICs and especially from the private sector, as set out in Regulation XX/2012 [revised EIT Regulation];	
(ii) the agreed timing for the creation of the third wave of Knowledge and Innovation Communities and the programmed financial needs of existing ones according to their specific development; and	(ii) the agreed timing for the creation of the third wave of Knowledge and Innovation Communities and the programmed financial needs of existing ones according to their specific development; and	(ii) the agreed timing for the creation of contribution of the EIT and the third wave of Knowledge and Innovation Communities and the programmed financial needs of existing ones according to their specific development; and	

(iii) the contribution of the European Institute of Innovation and Technologies and the Knowledge and Innovation Communities to the priority on societal challenges and the specific objective on "leadership in enabling and industrial technologies" of the programme Horizon 2020.	(iii) the contribution of the European Institute of Innovation and Technologies and the Knowledge and Innovation Communities to the priority on societal challenges and the specific objective on "leadership in enabling and industrial technologies" of the programme Horizon 2020.	(iii) the contribution of the European Institute of Innovation and Technologies and the Knowledge and Innovation Communities KICs to the priority on societal challenges and the specific objective on "leadership in enabling and industrial technologies" of the programme Horizon 2020: and the performance assessed on the basis of the indicators defined in Annex I.	
		(iii) the contribution of the EIT and the KICs to the integration of higher education, research, innovation;	
		(iv) the ability of the KICs to integrate relevant new partners where they can provide added value.	
(b) Not later than end 2017, and taking into account the ex-post evaluation of the Seventh Framework Programme to be completed by the end of 2015 and the review of the European Institute of Innovation and Technology, the Commission shall carry out, with the assistance of independent experts, an interim evaluation of Horizon 2020, its specific programme, including the European Research Council, and the activities of the European Institute of Innovation and Technology, <i>[nota bene: the rest of the paragraph is compared below]</i>	<u>AMD 109</u> (b) Not later than end 2017, and taking into account the ex-post evaluation of the Seventh Framework Programme to be completed by the end of 2015 and the review of the European Institute of Innovation and Technology , the Commission shall carry out, with the assistance of independent experts, an interim evaluation a mid-term review of Horizon 2020, its specific programme, including the European Research Council, and the activities of the <i>EIT</i> .	(b) Not later than end 2017, and taking into account the ex-post evaluation of the Seventh Framework Programme to be completed by the end of 2015 and the review of the European Institute of Innovation and Technology EIT , the Commission shall carry out, with the assistance of independent experts, selected on the basis of a transparent process , an interim evaluation of Horizon 2020, its specific programme, including the European Research Council, and the activities of the European Institute of Innovation and Technology EIT , <i>[nota bene: the rest of the paragraph is compared below]</i>	

	<i>As part of the mid-term review, both existing and new public-private partnerships, including the JTIs, shall be subject to an in-depth assessment in order to analyse their European added value and the Commission shall submit proposals if necessary to improve their governance and functioning, in view of ensuring more effective and efficient impact, open and transparent functioning and avoiding conflicts of interests. The Commission shall present the result of this assessment to the European Parliament and the Council.</i>		
	<i>If the in-depth assessment reveals that the criterion of European added value is not satisfactorily met, the European Parliament and the Council may decide to no longer provide funding to these public-private partnerships.</i>		
	<i>The mid-term review shall take into consideration aspects relating to the dissemination and exploitation of research results. The mid-term review shall assess the progress of the different parts of Horizon 2020 against all of the following:</i>		

<p>on the achievements (at the level of results and progress towards impacts) of the objectives of Horizon 2020 and continued relevance of all the measures, the efficiency and use of resources, the scope for further simplification, and Union added value. That evaluation shall also take into consideration aspects relating to access to funding opportunities for participants in all regions, for SMEs and for promoting gender balance. That evaluation shall additionally take into account the contribution of the measures to the Union priorities of smart, sustainable and inclusive growth and results on the long-term impact of the predecessor measures.</p>	<p>(i) on the achievements (at the level of results and progress towards impacts, <i>based on the indicators outlined in Annex II of the Specific Programme</i>) of the objectives of Horizon 2020 and continued relevance of all the measures; <i>(ii) the efficiency and use of resources, the scope for further simplification, and, with particular attention paid to cross-cutting actions and other elements referred to in Article 13(1); and</i> <i>(iii) the Union added value.</i> That evaluation <i>The mid-term review</i> shall also take into consideration <i>the scope for further simplification and</i> aspects relating to access to funding opportunities for participants in all regions, for SMEs and for promoting gender balance. That evaluation <i>It</i> shall additionally take into account the contribution of the measures to the Union priorities of smart, sustainable and inclusive growth and results on the long-term impact of the predecessor measures. <i>It shall be carried out in association with the Member States so as to ensure that research and innovation policies implemented in the Member States and by local authorities are complementary and offer Union added value.</i></p>	<p>on the achievements (at the level of results and progress towards impacts) of the objectives of Horizon 2020 and continued relevance of all the measures, the efficiency and use of resources, the scope for further simplification, and Union added value. That evaluation shall also take into consideration aspects relating to access to funding opportunities for participants in all regions, for the private sector, notably SMEs and for promoting gender balance. That evaluation shall additionally take into account the contribution of the measures to the Union priorities of smart, sustainable and inclusive growth and, results on the long-term impact of the predecessor measures-, and the degree of synergy and interaction with other Union funding programmes, including the Structural Funds.</p>	
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(c) Not later than end 2023, the Commission shall carry out, with the assistance of independent experts, an ex-post evaluation of Horizon 2020, its specific programme and the activities of the European Institute of Innovation and Technology. This shall cover the rationale, implementation and achievements, as well as the longer-term impacts and sustainability of the measures, to feed into a decision on a possible renewal, modification or suspension of a subsequent measure.	[no change]	(c) Not later than end 2023, the Commission shall carry out, with the assistance of independent experts, selected on the basis of a transparent process , an ex-post evaluation of Horizon 2020, its specific programme and the activities of the European Institute of Innovation and Technology EIT . This shall cover the rationale, implementation and achievements, as well as the longer-term impacts and sustainability of the measures, to feed into a decision on a possible renewal, modification or suspension of a subsequent measure.	
	<u>AMD 110</u> <i>1a (new). As part of the mid-term review referred to in point (b) of paragraph 1, the Commission shall provide concrete evidence, if available, of the complementarity and synergies achieved between the Union budget and the Members States' budgets in achieving the Europe 2020 R& D target as well as the Europe 2020 innovation headline indicator.</i>		

	<p><u>AMD 111</u> <i>1b (new). Not later than 2016, and every two years thereafter, the Commission shall conduct a review of Union organisations' and third-country organisations' reciprocal access to research programmes. The review shall be conducted country by country and shall include a comparison between the funding received by third-country organisations from Horizon 2020 and that received by Union organisations from third countries' research programmes.</i></p>		
2. The performance indicators for the general objectives and for the European Institute of Innovation and Technology, as set out in the introduction of Annex I to this Regulation, and for the specific objectives as established in the specific programme, including relevant baselines, shall provide the minimum basis for assessing the extent to which the objectives of Horizon 2020 have been achieved.	[no change]	2. The performance indicators for the general objectives and for the European Institute of Innovation and Technology EIT , as set out in the introduction of Annex I to this Regulation, and for the specific objectives as established in the specific programme, including relevant baselines, shall provide the minimum basis for assessing the extent to which the objectives of Horizon 2020 have been achieved.	

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
3. Member States shall provide the Commission with data and information necessary to permit the monitoring and evaluation of the measures concerned.	<i>[no change]</i>	3. Where appropriate and available, Member States shall provide the Commission with data and information necessary to permit the monitoring and evaluation of the measures concerned.	
4. The Commission shall communicate the conclusions of those evaluations of Horizon 2020, accompanied by its observations, to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions.	<i>[no change]</i>	<i>[no change]</i>	
	<u>AMD 112</u> <i>Article 26 a</i> <i>Exercise of delegation</i>		
	<i>1. The power to adopt the delegated acts is conferred on the Commission subject to the conditions laid down in this Article.</i>		

	<p><i>2. The power to adopt delegated acts referred to in Article 6 shall be conferred on the Commission for a period of five years from [XX]. The Commission shall draw up a report in respect of the delegated power not later than six months before the end of the five-year period. The delegation of power shall be tacitly extended for periods of an identical duration, unless the European Parliament or the Council opposes such extension not later than three months before the end of each period.</i></p>		
	<p><i>3. The delegation of powers referred to in Article 6 may be revoked at any time by the European Parliament or by the Council. A decision to revoke shall put an end to the delegation of power specified in that decision. It shall take effect the day following the publication of the decision in the Official Journal of the European Union or at a later date specified therein. It shall not affect the validity of any delegated acts already in force.</i></p>		

	<i>4. As soon as it adopts a delegated act, the Commission shall notify it simultaneously to the European Parliament and to the Council.</i>		
	<i>5. A delegated act adopted pursuant to Article 6 shall enter into force only if no objection has been expressed either by the European Parliament or the Council within a period of two months of notification of that act to the European Parliament and the Council or if, before the expiry of that period, the European Parliament and the Council have both informed the Commission that they will not object. That period shall be extended by two months at the initiative of the European Parliament or of the Council.</i>		

TITLE III

FINAL PROVISIONS

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
Article 27 <i>Repeal and transitional provisions</i>	Article 27 <i>Repeal and transitional provisions</i>	Article 27 <i>Repeal and transitional provisions</i>	
1. Decision No 1982/2006/EC is repealed with effect from 1 January 2014.	<i>[no change]</i>	<i>[no change]</i>	
2 However, actions initiated under Decision No 1982/2006/EC and financial obligations related to those actions shall continue to be governed by that Decision until their completion.	<i>[no change]</i>	<i>[no change]</i>	
3. The financial allocation referred to in Article 6 may also cover the technical and administrative assistance expenses necessary to ensure the transition between this programme and the measures adopted under Decision No 1982/2006/EC.	<i>[no change]</i>	<i>[no change]</i>	

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
Article 28	Article 28	Article 28	
This Regulation shall enter into force on the third day following that of its publication in the <i>Official Journal of the European Union</i> .	<i>[no change]</i>	<i>[no change]</i>	
This Regulation shall be binding in its entirety and directly applicable in all Member States.	<i>[no change]</i>	<i>[no change]</i>	

Done at Brussels,

*For the European Parliament
The President*

*For the Council
The President*

ANNEX I: Broad lines of the specific objectives and activities

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
Horizon 2020 has the general objective to build an economy based on knowledge and innovation across the whole Union, while contributing to sustainable development. It will support the Europe 2020 strategy and other Union policies as well as the achievement and functioning of the European Research Area.	AMD 113 Horizon 2020 has the general objective to build an a world-leading economy and a society based on knowledge and innovation across the whole Union, while contributing to sustainable development. It will support the Europe 2020 strategy and other Union policies as well as the achievement and functioning of the European Research Area.	Horizon 2020 has the general objective to build a society and an economy based on knowledge and innovation across the whole Union, while contributing to sustainable development. It will support the Europe 2020 strategy and other Union policies as well as the achievement and functioning of the European Research Area.	
The performance indicators for assessing progress against this general objective are:	<i>[no change]</i>	<i>[no change]</i>	
- the Europe 2020 R&D target (3 % of GDP);	<i>[no change]</i>	<i>[no change]</i>	
- the Europe 2020 innovation headline indicator.	<i>[no change]</i>	- [the Europe 2020 innovation headline indicator-].	

	<i>- the following human resources indicators: change in the fraction of researchers (FTE) in the active population; change in the proportion of women in the total number of researchers; changes in the attraction of researchers from abroad and in the brain drain of researchers.</i>		
	<i>All performance indicators shall be used in order to highlight change, to make visible progress in the Union's research participation imbalances and to allow for comparison at international level.</i>		
This general objective shall be pursued through three distinct, yet mutually reinforcing, priorities, each containing a set of specific objectives. They will be implemented in a seamless manner in order to foster interactions between the different specific objectives, avoid any duplication of effort and reinforce their combined impact.	<i>[no change]</i>	<i>[no change]</i>	

	<p><i>All three priorities shall include an international dimension.</i></p> <p><i>International scientific and technological cooperation is a critical issue for the Union and is in particular essential for frontier and basic research in order to capture the benefits from emerging science and technology opportunities. As a consequence, the share for the international cooperation activities described in Article 21(2) and (3) shall be at least maintained at the level of the previous Framework programme. In particular, Horizon 2020 will support three main dimensions of international cooperation:</i></p>		
	<p><i>-promoting scientific and technological (S&T) cooperation with the most advanced centres of knowledge in the world, in order to achieve and share the most advanced standards of excellence, and to pursue competition at the highest levels;</i></p>		
	<p><i>-promoting international S&T cooperation for capacity building, helping institutions in the Union, from the very start, to contribute to and to share the benefits of the fast expansion of R&D capabilities and human resources world-wide;</i></p>		

	<i>-promoting S&T cooperation for peace and stability world-wide, recognising the fundamental role that human and societal values of science and research can bring to the consolidation of fragile societies and to the appeasement of international conflicts.</i>		
The Joint Research Centre shall contribute to the general objective and priorities of Horizon 2020 with the specific objective of providing customer-driven scientific and technical support to Union policies.	The Joint Research Centre shall contribute to the general objective and priorities of Horizon 2020 with the specific objective of providing customer-driven scientific and technical support to Union policies. <i>The Union added value of the Joint Research Centre shall be assessed, inter alia, against the following indicators:</i>		
	<i>-number of occurrences of tangible specific impacts on Union policies resulting from technical and scientific policy support provided by the Joint Research Centre;</i>		
	<i>-number of peer reviewed publications.</i>		

The European Institute of Innovation and Technology (EIT) shall contribute to the general objective and priorities of Horizon 2020 with the specific objective of integrating the knowledge triangle of research, innovation and education. The indicators for assessing the performance of the EIT are:	The European Institute of Innovation and Technology (EIT) shall contribute to the general objective and priorities of Horizon 2020 with the specific objective of integrating the knowledge triangle of research, innovation and higher education. The indicators for assessing the performance of the EIT are:	The European Institute of Innovation and Technology (EIT) shall contribute to the general objective and priorities of Horizon 2020 with the specific objective of integrating the knowledge triangle of research, innovation and higher education. The indicators for assessing the performance of the EIT are:	
- organisations from universities, business and research integrated in the Knowledge and Innovation Communities;	<i>[no change]</i>	<i>[no change]</i>	
- collaboration inside the knowledge triangle leading to the development of innovative products and processes.	-collaboration inside the knowledge triangle leading to the development of innovative products, services and processes.	<i>[no change]</i>	
This Annex sets out the broad lines of those specific objectives and activities referred to in Article 5(2), (3) and (4).	<i>[no change]</i>	<i>[no change]</i>	

	<i>In order to achieve appropriate balance between consensus-based and more disruptive R&D&I, the use of open calls following a bottom-up logic - with accelerated procedures shall be fostered to ensure fast realisation of innovative projects. Furthermore, the right balance shall be struck within the societal challenges and the enabling and industrial technologies between smaller and bigger projects, taking into account the specific sector structure, type of activity, technology and research landscape.</i>		
	<i>In order to help close the research and innovation divide across areas, regions and Member States in Europe, complementarity and close synergies will be developed with the Structural Funds both upstream (capacity-building in the Member States to better prepare their participation in Horizon 2020) and downstream (exploit and diffuse research and innovation results stemming from Horizon 2020). Where possible, the interoperability between the two instruments will be promoted. Cumulative or combined funding will be encouraged. Synergies will in particular be sought in the activities set out in the "Widening excellence and widening participation" objective, the regional partner facilities of research infrastructure of European interest, and the activities performed via the EIT and its KICs.</i>		

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
		Cross-cutting issues and support measures in Horizon 2020	
		Cross-cutting issues, an indicative list of which is found in Article 13 of the Horizon 2020 Framework Regulation, will be promoted between specific objectives of the three priorities as necessary to develop new knowledge, key competences and major technological breakthroughs as well as translating knowledge into economic and societal value. Furthermore, in many cases, interdisciplinary solutions will have to be developed which cut across multiple specific objectives of Horizon 2020. Horizon 2020 will provide incentives for such cross-cutting actions, including by an efficient bundling of budgets.	

		<i>Social sciences and humanities</i>	
		<p>Social sciences and humanities research will be fully integrated into each of the pillars of Horizon 2020 and each of the specific objectives. In relation to the societal challenges, social sciences and humanities are mainstreamed as an essential element of the activities needed to tackle each of the societal challenges to enhance their impact. The specific objective of the societal challenge 'Europe in a changing world: Inclusive, innovative and reflective societies' will support social sciences and humanities research by focusing on inclusive, innovative and reflective societies.</p>	
		<i>Science and society</i>	
		<p>The relationship between science and society as well as the promotion of Responsible Research and Innovation and science education and culture shall be deepened and public confidence in science reinforced by activities of Horizon 2020 favouring an informed engagement of citizens and civil society in research and innovation matters.</p>	

		<i>Gender</i>	
		Promoting gender equality in science and innovation is a commitment of the EU. In Horizon 2020, gender will be addressed as a cross-cutting issue in order to rectify imbalances between women and men, and to integrate a gender dimension in research and innovation programming and content.	
		<i>Small and medium-sized enterprises (SMEs)</i>	
		Horizon 2020 will encourage and support the participation of SMEs in an integrated way across all specific objectives. In accordance with Article 18 of Horizon 2020 Framework Regulation, measures as set out in the specific objective 'Innovation in SMEs' (dedicated SME instrument) shall be applied in the specific objective 'Leadership in enabling and industrial technologies' and Part III 'Societal challenges'.	

		<i>Widening the participation</i>	
		<p>The research and innovation potential of the Member States, despite some recent convergence, remain very different, with large gaps between “innovation leaders” and “modest innovators”. Activities shall help close the research and innovation divide in Europe and specific measures shall be taken to unlock excellence in low performing RDI regions, thereby widening participation in Horizon 2020 and contributing to the realisation of the European Research Area.</p>	

		<i>International Cooperation</i>	
		<p>International cooperation with third countries and international, regional or global organisations is necessary to effectively address many specific objectives defined in Horizon 2020. International cooperation is essential for frontier and basic research in order to capture the benefits from emerging science and technology opportunities. Cooperation is necessary for addressing the societal challenges and enhancing the competitiveness of European industry. Promoting researchers and innovation staff mobility at an international level is also crucial to enhance this global cooperation. International cooperation in research and innovation is a key aspect of the Union's global commitments. International cooperation will, therefore, be promoted in each of the three priorities of Horizon 2020. In addition, dedicated horizontal activities will be supported in order to ensure the coherent and effective development of international cooperation across Horizon 2020.</p>	

		<i>Sustainable development and climate change</i>	
		Horizon 2020 will encourage and support activities towards exploiting Europe's leadership in the race to develop new processes and technologies promoting sustainable development, in a broad sense, and combating climate change. Such horizontal approach, fully integrated in all Horizon 2020 priorities, will help the EU to prosper in a low-carbon, resource constrained world while building a resource efficient, sustainable and competitive economy.	
		<i>Bridging from discovery to market application</i>	
		Bridging actions throughout Horizon 2020 are aimed at bringing discovery to market application, leading to exploitation and commercialisation of ideas whenever appropriate. The actions should be based on a broad innovation concept and stimulate cross-sectoral innovation.	

		<i>Digital Agenda</i>	
		<p>Successful delivery of the Digital Agenda flagship initiative will spur innovation, economic growth and improvements in daily life for both citizens and business. Wider and more effective use of digital agenda technologies will thus enable Europe to address its key challenges.</p>	

		<i>Cross-cutting support measures</i>	
		<p>The cross-cutting issues will be supported by a number of transversal support measures, including support to: enhancing the attractiveness of the research profession, including the general principles of the European Charter for researchers; strengthening the evidence base and the development of and support for ERA (including the five ERA initiatives) and the Innovation Union; improving framework conditions in support of the Innovation Union, including the principles of the Commission Recommendation on the management of intellectual property⁵ and exploring the possibility of setting up an European Intellectual Property Rights valorisation instrument; administration and coordination of international networks for excellent researchers and innovators (such as COST).</p> <hr/> <p>⁵ Commission Recommendation on the management of intellectual property in knowledge transfer activities and Code of Practice for universities and other public research organisations (C(2008) 1329, of 10.4.2008).</p>	

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
Part I <i>Priority 'Excellent science'</i>	<u>AMD 114</u> Part I <i>Priority 'Excellent science'</i>	Part I <i>Priority 'Excellent science'</i>	
This Part aims to reinforce and extend the excellence of the Union's science base and to consolidate the European Research Area in order to make the Union's research and innovation system more competitive on a global scale. It consists of four specific objectives:	This Part aims to reinforce and extend the excellence of the Union's science base and to consolidate the European Research Area in order to make the Union's research and innovation system more competitive on a global scale. It consists of four five specific objectives:	[no change]	
(a) <i>The European Research Council (ERC)</i> shall provide attractive and flexible funding to enable talented and creative individual researchers and their teams to pursue the most promising avenues at the frontier of science, on the basis of Union-wide competition.	[no change]	[no change]	
(b) <i>Future and emerging technologies</i> shall support collaborative research in order to extend Europe's capacity for advanced and paradigm-changing innovation. It shall foster scientific collaboration across disciplines on radically new, high-risk ideas and accelerate development of the most promising emerging areas of science and technology as well as the Union wide structuring of the corresponding scientific communities.	(b) Future and emerging sciences and technologies shall support collaborative research in order to extend Europe's capacity for advanced and paradigm-changing innovation. It shall foster scientific collaboration across disciplines on radically new, high-risk ideas and accelerate development of the most promising emerging areas of science and technology as well as the Union wide structuring of the corresponding scientific communities.	[no change]	

(c) <i>Marie Curie actions</i> shall provide excellent and innovative research training as well as attractive career and knowledge-exchange opportunities through cross-border and cross-sector mobility of researchers to best prepare them to face current and future societal challenges.	(c) Marie <i>Skłodowska</i> -Curie actions shall provide excellent and innovative research training as well as attractive career and knowledge-exchange opportunities through cross-border and cross-sector mobility of researchers <i>from universities, research organisations and enterprises, including SMEs,</i> to best prepare them to face current and future societal challenges.	(c) Marie <i>Skłodowska</i> -Curie actions shall provide excellent and innovative research training as well as attractive career and knowledge-exchange opportunities through cross-border and cross-sector mobility of researchers to best prepare them to face current and future societal challenges.	
(d) <i>Research infrastructure</i> shall develop European research infrastructure for 2020 and beyond, foster their innovation potential and human capital, and complement this with the related Union policy and international cooperation.	(d) Research <i>infrastructures</i> shall develop <i>and support excellent existing and new</i> European research infrastructures for 2020 and beyond, foster <i>assist them to operate for the ERA by fostering</i> their innovation potential and, <i>attracting world level researchers, training</i> human capital, and complementing this with the related <i>international cooperation</i> Union policy and international cooperation.	[no change]	
	<i>(da) Spreading excellence and widening participation shall unlock the potential of Europe's talent pool by giving support to policy learning, networking and training opportunities;</i>		

Each of these has been proven to have high Union added value. Together, they form a powerful and balanced set of activities which, in concert with activities at national and regional levels, span the breadth of Europe's needs regarding advanced science and technology. Bringing them together in a single programme will enable them to operate with greater coherence, in a rationalised, simplified and more focused way, while maintaining the continuity which is vital to sustain their effectiveness.	Each of these has been proven to have high Union added value. Together, they form a powerful and balanced set of activities which, in concert with activities at national and , regional and local levels, span the breadth of Europe's needs regarding advanced science and technology. Bringing them together in a single programme will enable them to operate with greater coherence, in a rationalised, simplified and more focused way, while maintaining the continuity which is vital to sustain their effectiveness.	<i>[no change]</i>	
The activities are inherently forward-looking, building skills in the long term, focusing on the next generation of science, technology, researchers and innovations and providing support for emerging talent from across the whole of the Union and associated countries, as well as worldwide. In view of their science-driven nature and largely 'bottom-up', investigator-driven funding arrangements, the European scientific community will play a strong role in determining the avenues of research followed under the programme.	<i>[no change]</i>	<i>[no change]</i>	

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
Part II <i>Priority 'Industrial leadership'</i>	<u>AMD 115</u> Part II <i>Priority 'Industrial leadership'</i>	Part II <i>Priority 'Industrial leadership'</i>	
This Part aims to speed up development of the technologies and innovations that will underpin tomorrow's businesses and help innovative European SMEs to grow into world-leading companies. It consists of three specific objectives:	This Part aims to speed up development of the technologies and innovations that will underpin tomorrow's businesses and help innovative European SMEs to grow into world-leading companies <i>as well as harvest the potential of establishing fertile ground for novel SMEs. Special attention shall be paid to promoting "innovation consumption", that is knowledge and technology transfer from public research centres to companies as well as between companies.</i> This part consists of three specific objectives:	[no change]	
(a) Leadership in enabling and industrial technologies shall provide dedicated support for research, development and demonstration on ICT, nanotechnology, advanced materials, biotechnology, advanced manufacturing and processing and space. Emphasis will be placed on interactions and convergence across and between the different technologies	(a) Leadership in enabling and industrial technologies shall provide dedicated support for research, <i>standardisation, certification, key-enabling technologies, such as</i> ICT, nanotechnology, advanced materials, biotechnology, advanced manufacturing and processing and , space. Emphasis will be placed on interactions and convergence across and between the different technologies <i>and their relations to societal challenges. Proper consideration of user needs shall be taken into account in all these fields.</i>	[no change]	

(b) Access to risk finance shall aim to overcome deficits in the availability of debt and equity finance for R&D and innovation-driven companies and projects at all stages of development. Together with the equity instrument of the Programme for the Competitiveness of Enterprises and SMEs, it shall support the development of Union-level venture capital.	(b) Access to risk finance shall aim to overcome deficits in the availability of debt and equity finance for R&D and innovation-driven companies and projects at all stages of development. Together with the equity instrument of the Programme for the Competitiveness of Enterprises and SMEs, it shall support the development of Union-level early stage funding and venture capital.	[no change]	
(c) Innovation in SMEs shall stimulate all forms of innovation in SMEs, targeting those with the potential to grow and internationalise across the single market and beyond.	(c) "Innovation in SMEs" shall stimulate provide SME-tailored support to all forms of those with the potential to grow and internationalise across the single market and beyond. innovation in SMEs, targeting through a toolbox of specialised and customised programmes and instruments including: access to seed funding, grants, access to equity and debt finance, mentoring and coaching services, access to R&D networks and clusters.	[no change]	

<p>The activities shall follow a business-driven agenda. The budgets for the specific objectives ‘Access to risk finance’ and ‘Innovation in SMEs’ will follow a demand-driven, bottom-up logic, without predetermined priorities. These shall be complemented by the use of financial instruments and a dedicated SME instrument following a policy driven logic within the Part on 'Societal challenges' and the specific objective ‘Leadership in enabling and industrial technologies’.</p>	<p>The activities shall follow a business-driven agenda. The the specific objectives implementation of the budgets for ‘Access to risk finance’ and ‘Innovation in SMEs’ will follow primarily a demand-driven, bottom-up logic without predetermined priorities. The SME instrument shall be implemented within the thematic priority areas established under the "Societal challenges" and "Leadership in enabling and industrial technology". These shall be complemented by the possible top-down use of financial instruments and a dedicated the SME instrument following a policy driven logic within the Part on 'Societal challenges' and the specific objective ‘Leadership in enabling and industrial technologies’ instrument as part of pre-commercial procurement or innovative procurement activities, where the pooling at Union level of public procurers needs in the Member States can be demonstrated.</p>	<p>[no change]</p>	
<p>Horizon 2020 will take an integrated approach to the participation of SMEs, which could lead to around 15 % of the total combined budgets for all specific objectives on societal challenges and the specific objective 'Leadership in enabling and industrial technologies' being devoted to SMEs.</p>	<p>Horizon 2020 will take an integrated approach to the participation of SMEs, which could taking into account their knowledge and technology transfer needs. Support should lead to around 15 over 20 % of the total combined budgets for all specific objectives on societal challenges and the specific objective ‘Leadership in enabling and industrial technologies’ being devoted to SMEs.</p>	<p>Horizon 2020 will take an integrated approach to the participation of SMEs, which could should lead to around 15 a minimum of 20% of the total combined budgets for all specific objectives on societal challenges and the specific objective 'Leadership in enabling and industrial technologies' being devoted to SMEs.</p>	

<p>The specific objective ‘Leadership in enabling and industrial technologies’ shall follow a technology-driven approach to develop enabling technologies that can be used in multiple areas, industries and services. Applications of these technologies to meet societal challenges shall be supported together with the Societal challenges.</p>	<p><i>[no change]</i></p>	<p><i>[no change]</i></p>	
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COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
Part III <i>Priority 'Societal challenges'</i>	<u>AMD 116</u> Part III <i>Priority 'Societal challenges'</i>	Part III <i>Priority 'Societal challenges'</i>	
This Part responds directly to the policy priorities and societal challenges identified in the Europe 2020 strategy and aiming to stimulate the critical mass of research and innovation efforts needed to achieve Union's policy goals. Funding shall be focused on the following specific objectives:	[no change]	[no change]	
(a) Health, demographic change and well-being;	[no change]	[no change]	
(b) Food security, sustainable agriculture, marine and maritime research, and the bio-economy;	(b) Food <i>quality, safety and</i> security, sustainable agriculture <i>and forestry</i> , marine and maritime research and the bio-economy <i>bio-based industries</i> ;	(b) European Bioeconomy Challenges: Food security, sustainable agriculture and forestry , marine and maritime and inland water research, and the bio-economy ;	
(c) Secure, clean and efficient energy;	[no change]	[no change]	
(d) Smart, green and integrated transport;	(d) Smart, green and integrated transport <i>and mobility</i> ;	[no change]	
(e) Climate action, resource efficiency and raw materials;	(e) Climate action, <i>environment</i> , resource efficiency and <i>sustainable use of</i> raw materials;	[no change]	

(f) Inclusive, innovative and secure societies.	(f) <i>Understanding Europe in a changing world</i> - inclusive, innovative and secure societies reflective society ;	(f) Europe in a changing world - Inclusive, innovative and secure reflective societies;	
	(fa) <i>Secure societies - Protecting freedom and security of Europe and its citizens.</i>	(g) Secure societies - Protecting freedom and security of Europe and its citizens.	
	<i>Funding shall also be provided to a cross-cutting challenge: Science with and for society.</i>		

<p>All the activities shall take a challenge-based approach, focusing on policy priorities without predetermining the precise choice of technologies or solutions that should be developed. The emphasis shall be on bringing together a critical mass of resources and knowledge across different fields, technologies and scientific disciplines in order to address the challenges. The activities shall cover the full cycle from research to market, with a new focus on innovation-related activities, such as piloting, demonstration, test-beds, support for public procurement, design, end-user driven innovation, social innovation and market take-up of innovations.</p>	<p>All the activities shall take a challenge-based approach, <i>in which basic science, applied research, knowledge transfer and innovation are equally important and interlinked components</i>, focusing on policy priorities without predetermining the precise choice of technologies or solutions that should be developed. <i>Non-technological, organisational, systems innovation and public sector innovation will be given attention in addition to technology driven solutions.</i> The emphasis shall be on bringing together a critical mass of resources and knowledge across different fields, technologies and scientific disciplines <i>and research infrastructures</i> in order to address the challenges. The activities shall cover the full cycle from <i>fundamental</i> research to market, with a new focus <i>including</i> innovation-related activities, such as piloting, demonstration, test-beds, support for public procurement, design, end-user driven innovation, social innovation and market take-up of <i>knowledge transfer and</i> innovations <i>including standardisation at all stages. In order to achieve the objectives of Horizon 2020, it will be necessary to engage a wide variety of stakeholders in the collaborative projects, from research institutions and enterprises to users from public and private sectors.</i></p>	<p>All the activities shall take a challenge-based approach, focusing on policy priorities without predetermining the precise choice of technologies or solutions that should be developed. The emphasis shall be on bringing together a critical mass of resources and knowledge across different fields, technologies and scientific disciplines in order to address the challenges. The activities shall cover the full cycle from research to market, with a new focus on innovation-related activities, such as piloting, demonstration <i>activities</i>, test-beds, support for public procurement, design, end-user driven innovation, social innovation and market take-up of innovations.</p>	
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	<i>In order to take the challenge-based approach, a coordinated strategic planning of research and innovation activities is needed. Coordination can address fragmentation and improve the use of technological and infrastructural resources by the entire research community related to each challenge.</i>		
	<i>Strategic actions and scientific steering can ensure expert input on policy from the outset, advance innovation and competitiveness by understanding the complexity of the innovation cycle, and encourage participation from more researchers across borders.</i>		
	<i>Based on need and demand strategic research and innovation coordination on each challenge can be established through Strategic Scientific panels of independent high-level experts from academia, industry, end-users and civil society, selected through an open and transparent process, which will contribute to defining research and innovation programmes based on the best leadership and will provide the impetus and instruments needed to promote interaction and synergies on a larger scale. The role of these panels would be to provide on-going strategic advice on the actions being undertaken and planned in under Horizon 2020 and the related Union policy areas.</i>		

<p>Social sciences and humanities shall be an integral part of the activities to address all the challenges. In addition, the underpinning development of these disciplines shall be supported under the specific objective ‘Inclusive, innovative and secure societies’.</p> <p>Support will also focus on providing a strong evidence base for policy making at international, Union, national and regional levels. Given the global nature of many of the challenges, strategic cooperation with third countries shall be an integral part of each challenge. In addition, cross-cutting support for international cooperation shall be provided under the specific objective ‘Inclusive, innovative and secure societies’.</p>	<p>Social sciences and humanities shall be <i>a horizontal dimension and</i> an integral part of the activities to address all the challenges. <i>They are to be represented in programme committees and experts’ groups in charge of project and programme evaluation in all topics and through development of social sciences oriented calls.</i> In addition, the underpinning development of these disciplines shall be supported under the specific objective ‘<i>Understanding Europe in a changing world - inclusive, innovative and secure societies reflective society</i>’.</p> <p>Support will also focus on providing a strong evidence base for policy making at international, Union, national, regional <i>and local</i> levels. Given the global nature of many of the challenges, strategic cooperation with third countries shall be an integral part of each challenge. In addition, cross-cutting support for international cooperation shall be provided under the specific objective ‘Inclusive, innovative and secure societies’ <i>paying special attention to supporting global efforts that require a critical mass for Europe to participate and where Europe could take the lead.</i></p>	<p>Social sciences and humanities shall be an integral part of the activities to address all the challenges. In addition, the underpinning development of these disciplines shall be supported under the specific objective ‘Inclusive, innovative and secure societies’.</p> <p>Support will also focus on providing a strong evidence base for policy making at international, Union, national and regional levels. Given the global nature of many of the challenges, strategic cooperation with third countries shall be an integral part of each challenge. In addition, cross-cutting support for international cooperation shall be provided under the specific objective ‘Inclusive, innovative and secure societies’.</p>	
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The specific objective ‘Inclusive, innovative and secure societies’ also includes an activity to close the research and innovation divide with specific measures to unlock excellence in less developed regions of the Union.	The specific objective ‘Inclusive, innovative and secure societies’ also includes an activity to close the research and innovation divide with specific measures to unlock excellence in less developed regions of the Union.	The specific objective ‘Inclusive, innovative and secure societies’ also includes an activity to close the research and innovation divide with specific measures to unlock excellence in less developed regions of the Union.	
The Joint Research Centre’s activities shall be an integral part of Horizon 2020, in order to provide robust, evidence-based support for Union policies. This shall be driven by customer needs, complemented by forward-looking activities.	<i>[no change]</i>	<i>[no change]</i>	
The EIT shall play a major role by bringing together excellent research, education and innovation thus integrating the knowledge triangle. The EIT shall do so primarily through the Knowledge and Innovation Communities (KICs). In addition it shall ensure that experiences are shared beyond the KICs through targeted dissemination and knowledge sharing measures, thereby promoting a faster uptake of innovation models across the Union.	The EIT shall play a major role by bringing together excellent research, education and innovation thus integrating the knowledge triangle. The EIT shall do so primarily through the Knowledge and Innovation Communities (KICs). In addition it shall ensure that experiences are shared between and beyond the KICs through targeted dissemination and knowledge sharing measures, thereby promoting a faster uptake of innovation models across the Union.	The EIT shall play a major role by bringing together excellent research, higher education and innovation thus integrating the knowledge triangle. The EIT shall do so primarily through the Knowledge and Innovation Communities (KICs). In addition it shall ensure that experiences are shared beyond the KICs through targeted dissemination and knowledge sharing measures, thereby promoting a faster uptake of innovation models across the Union.	

PART I: EXCELLENT SCIENCE

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
1. European Research Council (ERC)	<u>AMD 117</u> 1. European Research Council (ERC)	1. European Research Council (ERC)	
1.1 Specific objective	1.1 Specific objective	1.1 Specific objective	
The specific objective is to reinforce the excellence, dynamism and creativity of European research.	<i>[no change]</i>	<i>[no change]</i>	
Europe has set out its ambition to move to a new economic model based on smart, sustainable and inclusive growth. This type of transformation will need more than incremental improvements to current technologies. It will require much higher capacity for science-based innovation fuelled by radical new knowledge, allowing Europe to take a leading role in creating the technological paradigm shifts which will be the key drivers of productivity growth, competitiveness, wealth and social progress in the future. Such paradigm shifts have historically tended to originate from the public-sector science base before going on to lay the foundations for whole new industries and sectors.	Europe has set out its ambition to move to a new economic model based on smart, sustainable and inclusive growth. This type of transformation will need more than incremental improvements to current technologies and knowledge . It will require much higher capacity for basic science and science-based innovation fuelled by radical new knowledge, allowing Europe to take a leading role in creating the scientific and technological paradigm shifts which will be the key drivers of productivity growth, competitiveness, wealth and social progress in the future. Such paradigm shifts have historically tended to originate from the public-sector science base before going on to lay the foundations for whole new industries and sectors.	Europe has set out its ambition to move to a new economic model based on smart, sustainable and inclusive growth. This type of transformation will need more than incremental improvements to current technologies and knowledge . It will require much higher capacity for science-based innovation fuelled by radical new knowledge, allowing Europe to take a leading role in creating the scientific and technological paradigm shifts which will be the key drivers of productivity growth, competitiveness, wealth, sustainable development and social progress in the future. Such paradigm shifts have historically tended to originate from the public-sector science base curiosity-driven basic research before going on to lay the foundations for whole new	

		industries and sectors.	
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World-leading innovation is closely associated with excellent science. Once the undisputed leader, Europe has fallen behind in the race to produce the very best cutting-edge science and has played a secondary role to the United States of America in the major post-war technological advances. Although the Union remains the largest producer of scientific publications in the world, the United States of America produces twice as many of the most influential papers (the top 1 % by citation count). Similarly, international university rankings show that US universities dominate the top places. And 70 % of the world's Nobel Prize winners are based in the USA.	<i>[no change]</i>	<i>[no change]</i>	
One part of the challenge is that, while Europe and the United States of America invest similar amounts in their public-sector science bases, the Union has nearly three times as many public-sector researchers, resulting in significantly lower investment per researcher. Moreover, US funding is more selective about allocating resources to the leading researchers. This helps to explain why the Union's public-sector researchers are, on average, less productive and, altogether, make less combined scientific impact than their far less numerous US counterparts.	<i>[no change]</i>	<i>[no change]</i>	

<p>Another major part of the challenge is that in many European countries the public sector still does not offer sufficiently attractive conditions for the best researchers. It can take many years before talented young researchers are able to become independent scientists in their own right. This leads to a dramatic waste of Europe's research potential by delaying the emergence of the next generation of researchers, who bring new ideas and energy, and by enticing excellent researchers starting their career to seek advancement elsewhere.</p>	<p>Another major part of the challenge is that in many European countries the public and private sector still does not offer sufficiently attractive conditions for the best researchers. It can take many years before talented young researchers are able to become independent scientists in their own right. This leads to a dramatic waste of Europe's research potential by delaying the emergence of the next generation of researchers, who bring new ideas and energy, and by enticing excellent researchers starting their career to seek advancement elsewhere. <i>Particular attention should be paid to women scientists, who represent only 18% of grade A researchers, as compared to 27% in the USA, while 60% of European university graduates are women.</i></p>	<p>Another major part of the challenge is that in many European countries the public sector still does not offer sufficiently attractive conditions for the best researchers. It can take many years before talented young researchers are able to become independent scientists in their own right. This leads to a dramatic waste of Europe's research potential by delaying and in some cases even inhibiting the emergence of the next generation of researchers, who bring new ideas and energy, and by enticing excellent researchers starting their career to seek advancement elsewhere.</p>	
<p>Furthermore, these factors compound Europe's relative unattractiveness in the global competition for scientific talent. The ability of the US system to offer more resources per researcher and better career prospects explains how it continues to attract the best researchers from across the world, including tens of thousands from the Union.</p>	<p>Furthermore, these factors compound Europe's relative unattractiveness in the global competition for scientific talent. The ability of the US system to offer more resources per researcher, <i>better cross-sectoral mobility and connections with the private sector</i> and better career prospects explains how it continues to attract the best researchers from across the world, including tens of thousands from the Union.</p>	<p>[no change]</p>	

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
1.2 Rationale and Union added value	1.2 Rationale and Union added value	1.2 Rationale and Union added value	
The ERC was created to provide Europe's best researchers, both women and men, with the resources they need to allow them to compete better at global level, by funding individual teams on the basis of pan-European competition. It operates autonomously: an independent Scientific Council made up of scientists, engineers and scholars of the highest repute and expertise establishes the overall scientific strategy and has full authority over decisions on the type of research to be funded. These are essential features of the ERC, guaranteeing the effectiveness of its scientific programme, the quality of its operations and peer-review process and its credibility in the scientific community.	The ERC was created to provide Europe's best researchers, both women and men, with the resources they need to allow them to compete better at global level, by funding individual teams on the basis of pan-European competition. It operates autonomously: an independent Scientific Council made up of scientists, engineers and scholars of the highest repute and expertise, <i>of both women and men in different age groups</i> , establishes the overall scientific strategy and has full authority over decisions on the type of research to be funded. These are essential features of the ERC, guaranteeing the effectiveness of its scientific programme, the quality of its operations and peer-review process and its credibility in the scientific community.	<i>[no change]</i>	

Operating across Europe on a competitive basis, the ERC is able to draw on a wider pool of talents and ideas than would be possible for any national scheme. The best researchers and the best ideas compete against each other. Applicants know they have to perform at the highest level, the reward being flexible funding on a level playing field, irrespective of local bottlenecks or the availability of national funding.	[no change]	[no change]	
Frontier research funded by the ERC is thereby expected to have a substantial direct impact in the form of advances at the frontiers of knowledge, opening the way to new and often unexpected scientific and technological results and new areas for research which, ultimately, can generate the radically new ideas which will drive innovation and business inventiveness and tackle societal challenges. This combination of excellent individual scientists with innovative ideas underpins every stage of the innovation chain.	Frontier research funded by the ERC is thereby expected to have a substantial direct impact in the form of advances at the frontiers of knowledge, opening the way to new and often unexpected scientific and technological results and new areas for research which, ultimately, can generate the radically new ideas which will drive innovation and business inventiveness and tackle societal challenges. <i>The main emphasis when awarding ERC grants is on breakthrough ideas.</i> This combination of excellent individual scientists with innovative ideas underpins every stage of the innovation chain.	[no change]	

<p>Beyond this, the ERC has a significant structural impact by generating a powerful stimulus for driving up the quality of the European research system as a whole, over and above the researchers and projects which the ERC funds directly. ERC-funded projects and researchers set a clear and inspirational target for frontier research in Europe, raise its profile and make it more attractive for the best researchers at global level. The prestige of hosting ERC grant-holders and the accompanying ‘stamp of excellence’ are intensifying competition between Europe’s universities and other research organisations to offer the most attractive conditions for top researchers. And the ability of national systems and individual research institutions to attract and host ERC grant-winners sets a benchmark allowing them to assess their relative strengths and weaknesses and reform their policies and practices accordingly. ERC funding is therefore in addition to ongoing efforts at Union, national and regional levels to reform, build capacity and unlock the full potential and attractiveness of the European research system.</p>	<p><i>[no change]</i></p>	<p>Beyond this, the ERC has a significant structural impact by generating a powerful stimulus for driving up the quality of the European research system as a whole, over and above the researchers and projects which the ERC funds directly. ERC-funded projects and researchers set a clear and inspirational target for frontier research in Europe, raise its profile and make it more attractive for the best researchers at global level. The prestige of hosting ERC grant-holders and the accompanying ‘stamp of excellence’ are intensifying competition between Europe’s universities and other research organisations to offer the most attractive conditions for top researchers. And the ability of national systems and individual research institutions to attract and host ERC grant-winners sets a benchmark allowing them to assess their relative strengths and weaknesses and reform their policies and practices accordingly. ERC funding is therefore in addition to ongoing efforts at Union, national and regional levels to reform, build capacity and unlock the full potential and attractiveness of the European research system.</p>	
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COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
1.3 Broad lines of the activities	1.3 Broad lines of the activities	1.3 Broad lines of the activities	
The fundamental activity of the ERC shall be to provide attractive long-term funding to support excellent investigators and their research teams to pursue ground-breaking, high-gain/high-risk research.	<i>[no change]</i>	<i>[no change]</i>	
ERC funding shall be awarded in accordance with the following well-established principles. Scientific excellence shall be the sole criterion on which ERC grants are awarded. The ERC shall operate on a ‘bottom-up’ basis without predetermined priorities. The ERC grants shall be open to individual teams of researchers of any age and from any country in the world, working in Europe. And the ERC shall aim to foster healthy competition across Europe.	ERC funding shall be awarded in accordance with the following well-established principles. Scientific excellence shall be the sole criterion on which ERC grants are awarded. The ERC shall operate on a ‘bottom-up’ basis without predetermined priorities. The ERC grants shall be open to individual teams of researchers of any age and from any country in the world, working in Europe. And The ERC shall aim to foster healthy competition across Europe <i>and will seek to tackle unconscious gender bias properly in evaluation procedures.</i>	ERC funding shall be awarded in accordance with the following well-established principles. Scientific excellence shall be the sole criterion on which ERC grants are awarded. The ERC shall operate on a ‘bottom-up’ basis without predetermined priorities. The ERC grants shall be open to individual teams of researchers of any age, gender , and from any country in the world, working in Europe. And the ERC shall aim to foster healthy competition across Europe.	

<p>The ERC shall give particular priority to assisting excellent starting researchers to make the transition to independence by providing adequate support at the critical stage when they are setting up or consolidating their own research team or programme.</p>	<p>The ERC shall give particular priority to assisting excellent starting researchers to make the transition to independence by providing adequate support at the critical stage when they are setting up or consolidating their own research team or programme.</p> <p><i>Return and reintegration of researchers after the end of an ERC funding period may also be supported, particularly in combination with the 'ERA chair' scheme.</i></p>	<p>The ERC shall give particular priority to assisting excellent the best starting researchers with excellent ideas to make the transition to independence by providing adequate support at the critical stage when they are setting up or consolidating their own research team or programme. The ERC will also continue to provide appropriate levels of support for established researchers.</p>	
<p>The ERC shall also give support, as necessary, to emerging new ways of working in the scientific world with the potential to create breakthrough results and facilitates exploration of the commercial and social innovation potential of the research which it funds.</p>	<p>The ERC shall also give support, as necessary, to emerging new ways of working in the scientific world with the potential to create breakthrough results and facilitates exploration of the commercial and social innovation potential of the research which it funds.</p>	<p>[no change]</p>	

<p>By 2020, the ERC therefore shall aim to demonstrate: that the best researchers are participating in the ERC's competitions, that ERC funding has led directly to scientific publications of the highest quality and to the commercialisation and application of innovative technologies and ideas and that the ERC has contributed significantly to making Europe a more attractive environment for the world's best scientists. In particular, the ERC shall target a measurable improvement in the Union's share of the world's top 1 % most highly cited publications. In addition it shall aim at a substantial increase in the number of excellent researchers from outside Europe whom it funds and specific improvements in institutional practices and national policies to support top researchers.</p>	<p>By 2020, the ERC therefore shall aim to demonstrate: that the best researchers are participating in the ERC's competitions, that ERC funding has led directly to scientific publications of the highest quality and to research results with a high societal and economic impact, and to the commercialisation and application of innovative technologies and ideas and that the ERC has contributed significantly to making Europe a more attractive environment for the world's best scientists. In particular, the ERC shall target a measurable improvement in the Union's share of the world's top 1 % most highly cited publications. In addition it shall aim at a substantial an increase in the number of excellent researchers from outside Europe whom it funds, including an increase of excellent female researchers, and specific improvements in institutional practices and national policies to support top researchers. The ERC shall share experience and best practices with regional and national research funding agencies in order to promote the support of excellent researchers. Moreover, the ERC shall further raise the visibility of its programmes in order to attract excellent researchers.</p>	<p>By 2020, the ERC therefore shall aim to demonstrate: that the best researchers are participating in the ERC's competitions, that ERC funding has led directly to scientific publications of the highest quality, and to the commercialisation research results with high societal and application of innovative technologies and ideas economic potential impact and that the ERC has contributed significantly to making Europe a more attractive environment for the world's best scientists. In particular, the ERC shall target a measurable improvement in the Union's share of the world's top 1 % most highly cited publications. In addition it shall aim at a substantial increase in the number of excellent researchers from outside Europe whom it funds. The ERC shall share experience and specific improvements in institutional and best practices with regional and national policies research funding agencies in order to promote the support of excellent researchers. In addition, the ERC shall further raise the visibility of its programmes outside Europe.</p>	
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<p>The ERC's Scientific Council shall continuously monitor the ERC's operations and consider how best to achieve its objectives by means of grant schemes that emphasise clarity, stability and simplicity, both for applicants and in their implementation and management, and, as necessary, to respond to emerging needs. It shall endeavour to sustain and further refine the ERC's world-class peer-review system which is based on transparent, fair and impartial treatment of proposals so that it can identify ground-breaking scientific excellence and talent regardless of a researcher's gender, nationality or age. Finally, the ERC shall continue conducting its own strategic studies to prepare for and support its activities, maintain close contacts with the scientific community and other stakeholders and look to make its activities complement research conducted at other levels.</p>	<p>The ERC's Scientific Council shall continuously monitor the ERC's operations and <i>evaluation procedures</i> and consider how best to achieve its objectives by means of grant schemes that emphasise <i>effectiveness</i>, clarity, stability and simplicity, both for applicants and in their implementation and management, and, as necessary, to respond to emerging needs. It shall endeavour to sustain and further refine the ERC's world-class peer-review system which is based on <i>ensuring</i> transparent, fair and impartial treatment of proposals so that it can identify ground-breaking scientific excellence, <i>breakthrough ideas</i> and talent regardless of a researcher's gender, nationality, <i>origin institution</i> or age. Finally, The ERC shall continue conducting its own strategic studies to prepare for and support its activities, maintain close contacts with the scientific community and other stakeholders and look to make its activities complement research conducted at other levels <i>avoiding overlap with other research activities.</i></p>	<p>The ERC's Scientific Council shall continuously monitor the ERC's operations and consider how best to achieve its objectives by means of grant schemes that emphasise <i>effectiveness</i>, clarity, stability and simplicity, both for applicants and in their implementation and management, and, as necessary, to respond to emerging needs. It shall endeavour to sustain and further refine the ERC's world-class peer-review system which is based on <i>fully</i> transparent, fair and impartial treatment of proposals so that it can identify ground-breaking scientific excellence and talent regardless of a researcher's gender, nationality or age. Finally, the ERC shall continue conducting its own strategic studies to prepare for and support its activities, maintain close contacts with the scientific community, <i>the regional and national funding agencies</i> and other stakeholders and look to make its activities complement research conducted at other levels.</p>	
	<p><i>The ERC will ensure transparency in communication about its activities and results to the scientific community and the general public and maintain updated data from funded projects.</i></p>		

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
2. Future and Emerging Technologies (FET)	<u>AMD 118</u> 2. Future and Emerging <i>Sciences and Technologies (FET) (FEST)</i>	2. Future and Emerging Technologies (FET)	
2.1. Specific objective	2.1. Specific objective	2.1. Specific objective	
The specific objective is to foster radically new technologies by exploring novel and high-risk ideas building on scientific foundations. By providing flexible support to goal-oriented and interdisciplinary collaborative research on various scales and by adopting innovative research practices, the aim is to identify and seize opportunities of long-term benefit for citizens, the economy and society.	The specific objective is to foster <u>frontier research, including</u> radically new technologies by exploring novel and high risk ideas building on scientific foundations <u>with the potential to open new fields for European science and technology.</u> By providing flexible support to goal-oriented and interdisciplinary collaborative research on various scales and by adopting innovative research practices, the aim is to identify and seize opportunities of long-term benefit for citizens, the economy and society. <u>Smart specialisation platforms have a key role to play in this respect, particularly in terms of creation and networking, the exchange of information, twinning schemes and support for research and innovation policies.</u>	The specific objective is to foster radically new technologies by exploring novel and high-risk ideas building on scientific foundations <u>and contribute to the European next generation industries.</u> By providing flexible support to goal-oriented and interdisciplinary collaborative research on various scales and by adopting innovative research practices, the aim is to identify and seize opportunities of long-term benefit for citizens, the economy and society.	

	<p><u><i>FEST will promote excellence through collaborative projects focused on frontier research in future and emerging science and technology opportunities. Spanning the full field of collaborative frontier research from basic frontier science to technological frontier developments, and fostering collaboration across borders from the very early stages of research and onwards, FEST will bring Union added value to the frontier of modern research and will help to build collaborative critical mass in excellent research across Europe.</i></u></p>		
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<p>FET shall promote research beyond what is known, accepted or widely adopted and shall foster novel and visionary thinking to open promising paths towards powerful new technologies, some of which could develop into leading technological and intellectual paradigms for the decades ahead. FET shall foster efforts to pursue small-scale research opportunities across all areas, including emerging themes and grand scientific and technological (S&T) challenges that require federation and collaboration between programmes across Europe and beyond. This approach shall be driven by excellence and extends to exploring pre-competitive ideas for shaping the future of technology, enabling society to benefit from multi-disciplinary research collaboration that needs to be engaged at European level by making the link between research driven by science and research driven by societal challenges or by industrial competitiveness.</p>	<p>FET FEST shall promote research beyond what is known, accepted or widely adopted and shall foster novel and visionary thinking to open promising paths towards powerful new technologies, some of which could develop into leading technological and intellectual paradigms for the decades ahead. FET FEST shall foster efforts to pursue small-scale research opportunities across all areas, including emerging themes and grand scientific and technological (S&T) challenges that require federation and collaboration between programmes across Europe and beyond. This approach shall be driven by excellence and extends to exploring pre-competitive ideas for shaping the future of technology, enabling society to benefit from multi-disciplinary research collaboration that needs to be engaged at European level by making the link between research driven by science and research driven by societal goals and challenges or by industrial competitiveness.</p>	<p>FET shall promote research and technology beyond what is known, accepted or widely adopted and shall foster novel and visionary thinking to open promising paths towards powerful new technologies, some of which could develop into leading technological and intellectual paradigms for the decades ahead. FET shall foster efforts to pursue small-scale research opportunities across all areas, including emerging themes and grand scientific and technological (S&T) challenges that require federation and close collaboration between programmes across Europe and beyond. This approach shall be driven by excellence and extends to exploring pre-competitive ideas for shaping the future of technology, enabling society and industry to benefit from multi-disciplinary research collaboration that needs to be engaged at European level by making the link between research driven by science and research driven by societal challenges or by industrial competitiveness.</p>	
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COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
		The activities within the FET programme should be complementary to the activities within the priorities of the other parts of Horizon 2020 and, where possible, synergies will be sought.	
2.2. Rationale and Union Added Value	<u>AMD 119</u> 2.2. Rationale and Union Added Value	2.2. Rationale and Union Added Value	
Radical breakthroughs with a transformative impact increasingly rely on intense collaboration across disciplines in science and technology (for instance, information and communication, biology, chemistry, earth system sciences, material sciences, neuro- and cognitive sciences, social sciences or economics) and with the arts and humanities. This requires not only excellence in science and technology but also new attitudes and novel interactions between a broad range of players in research.	Radical breakthroughs with a transformative impact increasingly rely on intense collaboration across disciplines in science and technology (for instance, information and communication, biology, bioengineering and robotics, chemistry, physics, mathematics, medicine modelling , earth system sciences, material sciences, neuro- and cognitive sciences, social sciences or economics) and with the arts and humanities. This requires not only excellence in science and technology but also new attitudes and novel interactions between a broad range of players in research.	Radical breakthroughs with a transformative impact increasingly rely on intense collaboration across disciplines in science and technology (for instance, information and communication, biology, chemistry, earth system sciences, material sciences, neuro- and cognitive sciences, social sciences or economics) and with the arts, behavioral sciences and humanities. This requires may require not only excellence in science and technology but also new attitudes and novel interactions between a broad range of players in research.	

<p>While some ideas can be developed on a small scale, others may be so challenging that they require a large federated effort over a substantial period of time. Major economies worldwide have recognised this, and there is growing global competition to identify and pursue emerging technological opportunities at the frontier of science which can generate a considerable impact on innovation and benefits for society. To be effective, these types of activity need to be built up quickly to a large scale, by federating across programmes at European, national and regional levels around common goals to build critical mass, foster synergies and obtain optimum leveraging effects.</p>	<p>While some ideas can be developed on a small scale, others may be so challenging that they require a large federated effort over a substantial period of time. Major economies worldwide have recognised this, and there is growing global competition to identify and pursue emerging technological opportunities at the frontier of science which can generate a considerable impact on innovation and benefits for society. To be effective, these types of activity need to be <i>managed expertly and</i> built up quickly to a large scale, by federating across programmes at European, national and regional levels around common goals to build critical mass, foster synergies and obtain optimum leveraging effects.</p>	<p>While some ideas can be developed on a small scale, others may be so challenging that they require a large federated collaborative effort over a substantial period of time. Major economies worldwide have recognised this, and there is growing global competition to identify and pursue emerging technological opportunities at the frontier of science which can generate a considerable impact on innovation and benefits for society. To be effective, these types of activity activities may need to be built up quickly to a large scale, by federating across programmes at a common effort around common goals to build critical mass, foster synergies and obtain optimum leveraging effects.</p>	
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<p>The FET programme shall address the entire spectrum of science-driven innovation: from bottom-up, small-scale early explorations of embryonic and fragile ideas to building new research and innovation communities around transformative emerging research areas and large and federated research initiatives built around a research agenda aiming to achieve ambitious and visionary goals. These three levels of engagement each have their own specific value, while being complementary and synergistic. For example, small-scale explorations can reveal needs for developing new themes that can lead to large-scale action based on roadmaps. They involve a wide range of research players, including young researchers and research-intensive SMEs, and stakeholder communities (civil society, policymakers, industry and public researchers), clustered around research agendas as they take shape, mature and diversify.</p>	<p>The FET FEST programme shall address the entire spectrum of science-driven innovation: from bottom-up, small-scale early explorations of embryonic and fragile ideas to building new research and innovation communities around transformative emerging research areas and large and federated research initiatives built around a research agenda aiming to achieve ambitious and visionary goals. These three levels of engagement each have their own specific value, while being complementary and synergistic. For example, small-scale explorations can reveal needs for developing new themes that can lead to large-scale action based on roadmaps. They involve a wide range of research players, including young researchers and research-intensive SMEs, and stakeholder communities (civil society, policymakers, industry and public researchers), clustered around evolving research agendas as they take shape, mature and diversify.</p>	<p>The FET programme shall address the entire spectrum of science-driven innovation: from bottom-up, small-scale early explorations of embryonic and fragile ideas to building new research and innovation communities around transformative emerging research areas and large and federated collaborative research initiatives built around a research agenda aiming to achieve ambitious and visionary goals. These three levels of engagement each have their own specific value, while being complementary and synergistic. For example, small-scale explorations can reveal needs for developing new themes that can lead to large-scale action based on appropriate roadmaps. They may involve a wide range of research players, including young researchers and research-intensive SMEs, and stakeholder communities (civil society, policymakers, industry and public researchers), clustered around research agendas as they take shape, mature and diversify.</p>	
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COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
2.3. Broad lines of activities	<u>AMD 120</u> 2.3. Broad lines of activities	2.3. Broad lines of activities	
While the FET programme aims to be visionary, transformative and unconventional, its activities shall follow different logics, from completely open to varying degrees of structuring of topics, communities and funding.	While the FET FEST programme aims to be visionary, transformative and unconventional, its activities shall follow different logics, from completely open to varying degrees of structuring of topics, communities and funding.	[no change]	
The activities shall give firmer shape to different logics for action, on the appropriate scale, identifying and seizing opportunities of long-term benefit for citizens, the economy and society:	[no change]	[no change]	
(a) <i>By fostering novel ideas ('FET Open')</i> , FET shall support embryonic science and technology research exploring new foundations for radically new future technologies by challenging current paradigms and venturing into unknown areas. A bottom-up selection process widely open to any research ideas shall build up a diverse portfolio of targeted projects. Early detection of promising new areas, developments and trends, along with attracting new and high-potential research and innovation players, will be key.	(a) <i>By fostering novel ideas ('FET FEST Open')</i> , FET shall support embryonic science and technology research exploring new foundations for radically new future technologies by challenging current paradigms and venturing into unknown areas. A bottom-up selection process widely open to any research ideas shall build up a diverse portfolio of targeted projects. Early detection of promising new areas, developments and trends, along with attracting new and high-potential research and innovation players, will be key.	(a) <i>By fostering novel ideas ('FET Open')</i> , FET shall support embryonic early stage science and technology research exploring new foundations for radically new future technologies by challenging current paradigms and venturing into unknown areas. A bottom-up selection process widely open to any research ideas shall build up a diverse portfolio of targeted projects. Early detection of promising new areas, developments and trends, along with attracting new and high-potential research and innovation players, will be key.	

<p>(b) <i>By nurturing emerging themes and communities ('FET Proactive'), FET shall address a number of promising exploratory research themes with the potential to generate a critical mass of inter-related projects that, together, make up a broad and multi-faceted exploration of the themes and build a European pool of knowledge.</i></p>	<p>b) <i>By nurturing emerging themes and communities ('FET FEST Proactive') in close association with societal challenges and industrial technological themes, FET FEST shall address a number of promising exploratory research themes with the potential to generate a critical mass of inter-related projects that, together, make up a broad and multi-faceted exploration of the themes and build a European pool of knowledge.</i></p>	<p>(b) <i>By nurturing emerging themes and communities ('FET Proactive'), FET shall, in close association with the societal challenges and industrial leadership themes, address a number of promising exploratory research themes with the potential to generate a critical mass of inter-related projects that, together, make up a broad and multi-faceted exploration of the themes and build a European pool of knowledge.</i></p>	
<p>(c) <i>By pursuing grand interdisciplinary S&T challenges ('FET Flagships'), FET shall support ambitious large-scale, science-driven research aiming to achieve a scientific breakthrough. Such activities will benefit from the alignment of European and national agendas. The scientific advance should provide a strong and broad basis for future technological innovation and economic application in a variety of areas, plus novel benefits for society.</i></p>	<p>(c) <i>By pursuing grand interdisciplinary S&T challenges ('FET FEST Flagships'), FET shall support ambitious large-scale, science-driven research aiming to achieve a scientific and technological breakthrough. Such activities will benefit from the alignment of European and national and regional agendas. The scientific advance should provide a strong and broad basis for future technological innovation and economic application in a variety of areas, plus novel benefits for society.</i></p>	<p>(c) <i>By pursuing grand interdisciplinary S&T challenges ('FET Flagships'), FET shall, taking into full account the outcome of FET preparatory projects, support ambitious large-scale, science and technology driven research aiming to achieve a scientific and technological breakthrough: in areas identified as relevant in an open and transparent manner involving the Member States and relevant stakeholders. Such activities will could benefit from the alignment of coordination between European and national agendas. The scientific advance should provide a strong and broad basis for future technological innovation and economic application in a variety of areas, plus novel benefits for society. These activities shall be realised using the existing funding instruments.</i></p>	

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
The right mix of openness and varying degrees of structuring of topics, communities and funding shall be defined for each activity in order to address optimally the objectives pursued.	The right mix of openness and varying degrees of structuring of topics, communities and funding shall be defined for each activity in order to address optimally the objectives pursued.	The right mix of openness and varying degrees of structuring of topics, communities and funding shall be defined for each activity in order to address optimally the objectives pursued.	
	<i>More than half of FEST resources will be devoted to bottom-up collaborative frontier research in all fields.</i>		
	<i>Evaluation of all FEST projects will follow exclusively strict criteria of scientific and technological excellence.</i>		
3. Marie Curie Actions	3. Marie <u>Sklódowska</u>-Curie Actions	3. Marie Skłodowska-Curie Actions	
3.1. Specific objective	3.1. Specific objective	3.1. Specific objective	
The specific objective is to ensure optimum development and dynamic use of Europe's intellectual capital in order to generate new skills and innovation and, thus, to realise its full potential across all sectors and regions.	The specific objective is to ensure optimum development and dynamic use of Europe's intellectual capital <i>human resources in research and innovation</i> in order to generate <i>develop and transfer</i> new skills and <i>generate new knowledge and</i> innovation and, thus, to realise its full potential across all sectors and regions.	The specific objective is to ensure optimum development and dynamic use of Europe's intellectual capital in order to generate and transfer new skills and innovation and, thus, to realise its full potential across all sectors and regions.	
Well-trained, dynamic and creative researchers are the vital raw material for the best science and the most productive research-based innovation.	[no change]	Well-trained, motivated , dynamic and creative researchers are the vital raw material essential element for the best science and the most productive research-based innovation.	

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<p>Although Europe hosts a large and diversified pool of skilled human resources for research and innovation, this needs to be constantly replenished, improved and adapted to the rapidly evolving needs of the labour market. Today only 46 % of this pool works in the business sector, which is much lower than in Europe's main economic competitors, e.g. 69 % in China, 73 % in Japan and 80 % in the United States. In addition, demographic factors mean that a disproportionate number of researchers will reach retirement age in the next few years. This, combined with the need for many more high-quality research jobs as the research intensity of the European economy increases, will be one of the main challenges facing European education, research and innovation systems in the years ahead</p>	<p><i>[no change]</i></p>	<p><i>[no change]</i></p>	
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<p>The necessary reform must start at the first stages of the researchers' careers, during their doctoral studies or comparable post-graduate training. Europe must develop state-of-the-art, innovative training schemes, consistent with the highly competitive and increasingly inter-disciplinary requirements of research and innovation. Strong involvement of businesses, including SMEs and other socio-economic actors, will be needed to equip researchers with the innovation skills demanded by the jobs of tomorrow. It will also be important to enhance the mobility of these researchers, as it currently remains at too modest a level: in 2008, only 7% of European doctoral candidates were trained in another Member State, whereas the target is 20% by 2030.</p>	<p>The necessary reform must start at the first stages of the researchers' careers, during their doctoral studies or comparable post-graduate training. <i>Special attention has to be paid to mentoring schemes which stimulate transfer of knowledge, experience and networks.</i> Europe must develop state-of-the-art, innovative training schemes, consistent with the highly competitive and increasingly inter-disciplinary requirements of research and innovation. Strong involvement of businesses, including SMEs and other socio-economic actors, will be needed to equip researchers with the <i>cross-cutting</i> innovation <i>and entrepreneurial</i> skills demanded by the jobs of tomorrow <i>and encourage them to consider their careers in industry or in the most innovative companies.</i> It will also be important to enhance the mobility of these researchers, as it currently remains at too modest a level: in 2008, only 7% of European doctoral candidates were trained in another Member State, whereas the target is 20% by 2030.</p>	<p>The necessary reform must start at the first stages of the researchers' careers, during their doctoral studies or comparable post-graduate training. Europe must develop state-of-the-art, innovative training schemes, consistent with the highly competitive and increasingly inter-disciplinary requirements of research and innovation. Strong Significant involvement of businesses, including SMEs and other socio-economic actors, will be needed to equip researchers with the innovation skills demanded by the jobs of tomorrow. It will also be important to enhance the mobility of these researchers, as it currently remains at too modest a level: in 2008, only 7% of European doctoral candidates were trained in another Member State, whereas the target is 20% by 2030.</p>	
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	<i>Increasing mobility of researchers and strengthening the resources of those institutions which attract researchers from other Member States will encourage centres of excellence across the Union.</i>		
<p>This reform must continue through every stage of researchers' careers. It is vital to increase the mobility of researchers at all levels, including mid-career mobility, not only between countries but also between the public and private sectors. This creates a strong stimulus for learning and developing new skills. It is also a key factor in cooperation between academics, research centres and industry across countries. The human factor is the backbone of sustainable cooperation which is the key driver for an innovative and creative Europe able to face challenges to society, and key to overcoming fragmentation of national policies. Collaborating and sharing knowledge, via individual mobility at all stages of a career and via exchanges of highly skilled research and innovation staff, are essential for Europe to re-take the path to sustainable growth and to tackle societal challenges.</p>	<p>This reform must continue through every stage of researchers' careers. It is vital to increase the mobility of researchers at all levels, including mid-career mobility, not only between countries but also between the public and private sectors. This creates a strong stimulus for learning and developing new skills. It is also a key factor in cooperation between academics, research centres and industry across countries. The human factor is the backbone of sustainable cooperation which is the key driver for an innovative and creative Europe able to face challenges to society, and key to overcoming fragmentation of national policies. <i>Access to research results and</i> collaborating and sharing knowledge, via individual mobility at all stages of a career and via exchanges of highly skilled research and innovation staff, are essential for Europe <i>to smooth out internal differences in research and innovation capacities</i>, to re-take the path to sustainable growth and to tackle societal challenges.</p>	[no change]	

	<i>In this context Horizon 2020 should also encourage collaboration between European researchers by introducing a research voucher scheme with money for research following researchers that move to universities in all Member States, contributing to centres of excellence, independent universities and increased mobility among researchers.</i>		
	<i>Mobility programmes will ensure effective equal opportunities between men and women and include specific measures to remove obstacles to the mobility of female researchers.</i>		
If Europe is to match its competitors in research and innovation, it must entice more young women and men to embark on research careers and provide highly attractive opportunities and environments for research and innovation. The most talented individuals, from Europe and elsewhere, should see Europe as a pre-eminent place to work. Gender equality, high-quality and reliable employment and working conditions plus recognition are crucial aspects that must be secured in a consistent way across the whole of Europe	[no change]	[no change]	

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
3.2. Rationale and Union added value	<u>AMD 122</u> 3.2. Rationale and Union added value	3.2. Rationale and Union added value	
Neither Union funding alone nor Member States individually will be able to address this challenge. Although Member States have introduced reforms to improve their tertiary education institutions and modernise their training systems, progress is still uneven across Europe, with big differences between countries. Overall, scientific and technological cooperation between the public and private sectors generally remains weak in Europe. The same applies to gender equality and to the efforts to attract students and researchers from outside the ERA. Currently around 20 % of the doctoral candidates in the Union are citizens of third countries, whereas about 35 % in the United States of America come from abroad. To speed up this change, a strategic approach that goes beyond national borders is required at Union level. Union funding is crucial to create incentives for and encourage the indispensable structural reforms.	<i>[no change]</i>	<i>[no change]</i>	

<p>The European Marie Curie actions have made remarkable progress to promote mobility, both transnational and intersectoral, and to open research careers at European and international levels, with excellent employment and working conditions following the European Researchers Charter and Code. There is no equivalent in Member States as far as their scale and scope, funding, international character, generation and transfer of knowledge are concerned. They have strengthened the resources of those institutions able to attract researchers internationally and thereby encouraged the spread of centres of excellence around the Union. They have served as a role model with a pronounced structuring effect by spreading their best practices at national level. The bottom-up approach taken by Marie Curie actions has also allowed a large majority of those institutions to train and upgrade the skills of a new generation of researchers able to tackle societal challenges.</p>	<p>The European Marie <i>Sklodowska</i>-Curie actions have made remarkable progress to promote mobility, both transnational and intersectoral, and to open research careers at European and international levels, with excellent employment and working conditions following the European Researchers Charter and Code. There is no equivalent in Member States as far as their scale and scope, funding, international character, generation and transfer of knowledge are concerned. They have strengthened the resources of those institutions able to attract researchers internationally and thereby encouraged the spread of centres of excellence around the Union. They have served as a role model with a pronounced structuring effect by spreading their best practices at national level. The bottom-up approach taken by Marie <i>Sklodowska</i>-Curie actions has also allowed a large majority of those institutions to train and upgrade the skills of a new generation of researchers able to tackle societal challenges.</p>	<p>The European Marie Sklodowska-Curie actions have made remarkable progress to promote mobility, both transnational and intersectoral, and to open research careers at European and international levels, with excellent employment and working conditions following the principles of the European Researchers Charter and Code. There is no equivalent in Member States as far as their scale and scope, funding, international character, generation and transfer of knowledge are concerned. They have strengthened the resources of those institutions able to attract researchers internationally and thereby encouraged the spread of centres of excellence around the Union. They have served as a role model with a pronounced structuring effect by spreading their best practices at national level. The bottom-up approach taken by Marie Sklodowska-Curie actions has also allowed a large majority of those institutions to train and upgrade the skills of a new generation of researchers able to tackle societal challenges.</p>	
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Further development of the Marie Curie actions will make a significant contribution to development of the European Research Area. With their Europe-wide competitive funding structure, Marie Curie actions will encourage new, creative and innovative types of training such as industrial doctorates, involving education, research and innovation players who will have to compete globally for a reputation of excellence. By providing Union funding for the best research and training programmes following the Principles for Innovative Doctoral Training in Europe, they will also promote wider dissemination and take-up, moving towards more structured doctoral training.	Further development of the Marie Skłodowska -Curie actions will make a significant contribution to development of the European Research Area. With their Europe-wide competitive funding structure, Marie Skłodowska -Curie actions will encourage new, creative and innovative types of training such as joint or multiple doctoral degrees , industrial doctorates doctoral degrees , involving education, research and innovation players who will have to compete globally for a reputation of excellence. By providing Union funding for the best research and training programmes following the Principles for Innovative Doctoral Training in Europe, they will also promote wider dissemination and take-up, moving towards more structured doctoral training.	Further development of the Marie Skłodowska -Curie actions will make a significant contribution to development of the European Research Area. With their Europe-wide competitive funding structure, Marie Skłodowska -Curie actions will encourage new, creative and innovative types of training such as industrial doctorates, involving education, research and innovation players who will have to compete globally for a reputation of excellence. By providing Union funding for the best research and training programmes following the Principles for Innovative Doctoral Training in Europe, they will also promote wider dissemination and take-up, moving towards more structured doctoral training.	
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<p>Marie Curie grants will also be extended to the temporary mobility of experienced researchers and engineers from public institutions to the private sector or vice versa, thereby encouraging and supporting universities, research centres and businesses to cooperate with one another on a European and international scale. With the aid of their well-established, transparent and fair evaluation system, Marie Curie actions will identify excellent talents in research and innovation in an international competition which gives prestige and therefore motivation for researchers to advance their career in Europe.</p>	<p>Marie <i>Sklodowska</i>-Curie grants will also be extended to the temporary mobility of <i>early stage and</i> experienced researchers and, <i>as well as</i> engineers from public institutions to the private sector or vice versa, thereby encouraging and supporting universities, research centres and businesses to cooperate with one another on a European and international scale. With the aid of their well-established, transparent and fair evaluation system, Marie <i>Sklodowska</i>-Curie actions will identify excellent talents in research and innovation in an international competition which gives prestige and therefore motivation for researchers to advance their career in Europe.</p>	<p>Marie Sklodowska-Curie grants will also be extended to the temporary mobility of experienced researchers and, engineers from public institutions to the private sector or vice versa, thereby encouraging and supporting universities, research centres and businesses, other socio-economic actors to cooperate with one another on a European and international scale. With the aid of their well-established, transparent and fair evaluation system, Marie Sklodowska-Curie actions will identify excellent talents in research and innovation in an international competition which gives prestige and therefore motivation for researchers to advance their career in Europe.</p>	
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<p>The societal challenges to be addressed by highly skilled researchers and innovation staff are not just Europe's problem. These are international challenges of colossal complexity and magnitude. The best researchers in Europe and the world need to work together across countries, sectors and disciplines. Marie Curie actions will play a key role in this respect by supporting staff exchanges that will foster collaborative thinking via the international and intersectoral knowledge-sharing that is so crucial for open innovation.</p>	<p>The societal challenges to be addressed by highly skilled researchers and innovation staff are not just Europe's problem. These are international challenges of colossal complexity and magnitude. The best researchers in Europe and the world need to work together across countries, sectors and disciplines. Marie <i>Skłodowska</i>-Curie actions will play a key role in this respect by supporting staff exchanges that will foster collaborative thinking via the international and intersectoral knowledge-sharing that is so crucial for open innovation.</p>	<p>The societal challenges to be addressed by highly skilled researchers and innovation staff are not just Europe's problem. These are international challenges of colossal complexity and magnitude. The best researchers in Europe and the world need to work together across countries, sectors and disciplines. Marie Skłodowska-Curie actions will play a key role in this respect by supporting staff exchanges that will foster collaborative thinking via the international and intersectoral knowledge-sharing that is so crucial for open innovation.</p>	
<p>Extension of the co-funding mechanism of the Marie Curie actions will be crucial to expand Europe's pool of talents. The numerical and structural impact of Union action will be increased by leveraging regional, national, international and private funding to create new programmes and to open existing ones to international and intersectoral training, mobility and career development. Such a mechanism will forge stronger links between research and education efforts at national and Union levels.</p>	<p>Extension of the co-funding mechanism of the Marie <i>Skłodowska</i>-Curie actions will be crucial to expand Europe's pool of talents. The numerical and structural impact of Union action will be increased by leveraging regional, national, international and <i>public and</i> private funding to create new programmes <i>with similar and complementary goals</i>, and to open existing ones to international and intersectoral training, mobility and career development. Such a mechanism will forge stronger links between research and education efforts at national and Union levels.</p>	<p>Extension of the The co-funding mechanism of the Marie Skłodowska-Curie actions will be crucial to expand Europe's pool of talents. The numerical and structural impact of Union action will be increased by leveraging regional, national, and international and private funding, both public and private, to create new programmes and to open adapt existing ones to international and intersectoral training, mobility and career development. Such a mechanism will forge stronger links between research and education efforts at national and Union levels.</p>	

<p>All the activities under this challenge will contribute to creating a whole new mindset in Europe that is crucial for creativity and innovation. Marie Curie funding measures will strengthen pooling of resources in Europe and thereby lead to improvements in coordination and governance of researchers' training, mobility and career development. They will contribute to the policy goals outlined in the Innovation Union, Youth on the Move and the Agenda for New Skills and Jobs and will be vital to turn the European Research Area into reality.</p>	<p>All the activities under this challenge will contribute to creating a whole new mindset in Europe that is crucial for creativity and innovation. Marie Sklódowska-Curie funding measures will strengthen pooling of resources in Europe and thereby lead to improvements in coordination and governance of researchers' training, mobility and career development. They will contribute to the policy goals outlined in the Innovation Union, Youth on the Move and the Agenda for New Skills and Jobs and will be vital to turn the European Research Area into reality</p>	<p>All the activities under this challenge will contribute to creating a whole new mindset in Europe that is crucial for creativity and innovation. Marie Sklódowska-Curie funding measures will strengthen pooling of resources in Europe and thereby lead to improvements in coordination and governance of researchers' training, mobility and career development. They will contribute to the policy goals outlined in the Innovation Union, Youth on the Move and the Agenda for New Skills and Jobs and will be vital to turn the European Research Area into reality. The Marie Skłodowska-Curie actions will therefore be developed in close synergy with other programmes supporting these policy objectives, including the Erasmus for All programme and the Knowledge and Innovation Communities of the EIT.</p>	
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COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
3.3. Broad lines of the activities	<u>AMD 123</u> 3.3. Broad lines of the activities	3.3. Broad lines of the activities	
(a) Fostering new skills by means of excellent initial training of researchers	<i>[no change]</i>	<i>[no change]</i>	
The goal is to train a new generation of creative and innovative researchers, able to convert knowledge and ideas into products and services for economic and social benefit in the Union.	<i>[no change]</i>	<i>[no change]</i>	
Key activities shall be to provide excellent and innovative training to early-stage researchers at post-graduate level via interdisciplinary projects or doctoral programmes involving universities, research institutions, businesses, SMEs and other socio-economic groups from different countries. This will improve career prospects for young post-graduate researchers in both the public and private sectors.	Key activities shall be to provide excellent and innovative training to early-stage researchers at post-graduate level via interdisciplinary projects, <i>mentoring schemes to transfer knowledge and experience between researchers</i> or doctoral programmes <i>allowing researchers to develop their research curriculum and</i> involving universities; research institutions, businesses, SMEs and other socio-economic groups from different countries. This will <i>develop and</i> improve career prospects for young post-graduate researchers in both the public and private sectors.	Key activities shall be to provide excellent and innovative training to early-stage researchers at post-graduate level via interdisciplinary projects or doctoral programmes involving universities, research institutions, research infrastructures , businesses, SMEs and , other socio-economic groups from different countries, Member States, associated countries and/or third countries . This will improve career prospects for young post-graduate researchers in both the public and private sectors.	

(b) Nurturing excellence by means of cross-border and cross-sector mobility	<i>[no change]</i>	<i>[no change]</i>	
The goal is to enhance the creative and innovative potential of experienced researchers at all career levels by creating opportunities for cross-border and cross-sector mobility.	<i>[no change]</i>	<i>[no change]</i>	
Key activities shall be to encourage experienced researchers to broaden or deepen their skills by means of mobility by opening attractive career opportunities in universities, research institutions, businesses, SMEs and other socio-economic groups all over Europe and beyond. Opportunities to restart a research career after a break shall also be supported.	Key activities shall be to encourage experienced researchers to broaden or deepen their skills by means of mobility by opening attractive career opportunities in universities, research institutions, businesses, SMEs and other socio-economic groups all over Europe and beyond, <i>offering researchers the opportunity to be trained and to acquire new knowledge in a third-country high-level research institution, and welcome them back to Europe should they choose to return.</i> Opportunities to restart a research career after a break shall also be supported. <i>In order to enhance the innovativeness in private sector, attention shall also be given to cross-sector mobility</i>	Key activities shall be to encourage experienced researchers to broaden or deepen their skills by means of mobility by opening attractive career opportunities in universities, research institutions, research infrastructures , businesses, SMEs and other socio-economic groups all over Europe and beyond. This should enhance the innovativeness of the private sector and promote cross-sector mobility. Opportunities to restart a research career after a break and to (re-)integrate researchers into a longer term research position in Europe, including in their country of origin, after a trans-national/international mobility experience, shall also be supported.	

(c) Stimulating innovation by means of cross-fertilisation of knowledge	<i>[no change]</i>	<i>[no change]</i>	
The goal is to reinforce international cross-border and cross-sector collaboration in research and innovation by means of exchanges of research and innovation personnel in order to be able to face global challenges better.	<i>[no change]</i>	<i>[no change]</i>	
Key activities shall be to support short-term exchanges of research and innovation staff among a partnership of universities, research institutions, businesses, SMEs and other socio-economic groups, both within Europe and worldwide. This will include fostering cooperation with third countries.	Key activities shall be to support short-term exchanges of research and innovation staff among a partnership of universities, research institutions, businesses, SMEs and other socio-economic groups, both within Europe and worldwide. This will include fostering cooperation with third countries.	Key activities shall be to support short-term exchanges of research and innovation staff among a partnership of universities, research institutions, research infrastructures , businesses, SMEs and other socio-economic groups, both within Europe and worldwide. This will include fostering cooperation with third countries.	
(d) Increasing the structural impact by co-funding the activities	<i>[no change]</i>	<i>[no change]</i>	
The goal is, by leveraging additional funds, to increase the numerical and structural impact of Marie Curie actions and to foster excellence at national level in researchers' training, mobility and career development.	The goal is, by leveraging additional funds, to increase the numerical and structural impact of Marie Skłodowska -Curie actions and to foster excellence at national level in researchers' training, mobility and career development.	The goal is, by leveraging additional funds, to increase the numerical and structural impact of Marie Skłodowska -Curie actions and to foster excellence at national level in researchers' training, mobility and career development.	

<p>Key activities shall be, with the aid of a co-funding mechanism, to encourage regional, national and international organisations to create new programmes and to open existing ones to international and intersectoral training, mobility and career development. This will increase the quality of research training in Europe at all career stages, including at doctoral level, will foster free circulation of researchers and scientific knowledge in Europe, will promote attractive research careers by offering open recruitment and attractive working conditions and will support research and innovation cooperation between universities, research institutions and enterprises and cooperation with third countries and international organisations.</p>	<p>Key activities shall be, with the aid of a co-funding mechanism, to encourage regional, national and international organisations to create new programmes and to open adapt existing ones to international and intersectoral training, mobility and career development. This will increase the quality of research training in Europe at all career stages, including at doctoral level, will foster free circulation of researchers and scientific knowledge in Europe, will promote attractive research careers by offering open recruitment and attractive working conditions and will support research and innovation cooperation between universities, research institutions and enterprises and cooperation with third countries and international organisations. <i>Attention should be given to excellence and equality.</i></p>	<p>Key activities shall be, with the aid of a co-funding mechanism, to encourage regional, national and international organisations, both public and private, to create new programmes and to open adapt existing ones to international and intersectoral training, mobility and career development. This will increase the quality of research training in Europe at all career stages, including at doctoral level, will foster free circulation of researchers and scientific knowledge in Europe, will promote attractive research careers by offering open recruitment and attractive working conditions and will support research and innovation cooperation between universities, research institutions and enterprises and cooperation with third countries and international organisations.</p>	
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(e) Specific support and policy action	<i>[no change]</i>	<i>[no change]</i>	
<p>The goals are to monitor progress, identify gaps in the Marie Curie Actions and to increase their impact. In this context, indicators shall be developed and data related to researchers' mobility, skills and careers analysed, seeking synergies and close coordination with the policy support actions on researchers, their employers and funders carried out under the specific objective 'Inclusive, innovative and secure societies'. The activity shall further aim at raising awareness of the importance and attractiveness of a research career and at disseminating research and innovation results emanating from work supported by Marie Curie actions.</p>	<p>The goals are to monitor progress, identifying gaps and barriers in the Marie <i>Sklodowska</i>-Curie actions and to increase their impact. In this context, indicators shall be developed and data related to researchers' mobility, skills and, careers and gender equality analysed, seeking synergies and close coordination with the policy support actions on researchers, their employers and funders carried out under the specific objective 'Inclusive, innovative and secure societies' cross cutting challenge 'Science with and for society'. The activity shall further aim at raising awareness of the importance and attractiveness of a research career and at disseminating research and innovation results emanating from work supported by Marie <i>Sklodowska</i>-Curie actions. <i>It shall also include specific measures targeted to remove barriers to career development, including for those who have taken a career break.</i></p>	<p>The goals are to monitor progress, identify gaps in the Marie <i>Sklodowska</i>-Curie Actions and to increase their impact. In this context, indicators shall be developed and data related to researchers' mobility, skills and careers analysed, seeking synergies and close coordination with the policy support actions on researchers, their employers and funders carried out under the specific objective 'Europe in a changing world - Inclusive, innovative and secure reflective societies'. The activity shall further aim at raising awareness of the importance and attractiveness of a research career and at disseminating research and innovation results emanating from work supported by Marie <i>Sklodowska</i>-Curie actions.</p>	

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
4. Research Infrastructures	<u>AMD 124</u> 4. Research Infrastructures	4. Research Infrastructures	
4.1 Specific objective	4.1 Specific objective	4.1 Specific objective	
The specific objective is to endow Europe with world-class research infrastructures which are accessible to all researchers in Europe and beyond and fully exploit their potential for scientific advance and innovation.	<i>[no change]</i>	<i>[no change]</i>	

<p>Research infrastructures are key determinants of Europe's competitiveness across the full breadth of scientific domains and essential to science-based innovation. In many fields research is impossible without access to supercomputers, radiation sources for new materials, clean rooms for nanotechnologies, databases for genomics and social sciences, observatories for Earth sciences, broadband networks for transferring data, etc. Research infrastructures are necessary to carry out the research needed to address grand societal challenges — energy, climate change, bio-economy and lifelong health and wellbeing for all. They propel collaboration across borders and disciplines and create a seamless and open European space for online research. They promote mobility of people and ideas, bring together the best scientists from across Europe and the world and enhance scientific education. They drive excellence within the European research and innovation communities and can be outstanding showcases of science for society at large.</p>	<p>Research infrastructures are key determinants of Europe's competitiveness across the full breadth of scientific domains and essential to science-based innovation. In many fields research is impossible without access to supercomputers, <i>analytical facilities</i>, radiation sources for new materials, clean rooms <i>and advanced metrology</i> for nanotechnologies, <i>specially equipped labs for biological and medical research</i>, databases for genomics and social sciences, observatories <i>and sensors</i> for <i>the Earth sciences and the environment</i>, <i>high-speed</i> broadband networks for transferring data, etc. Research infrastructures are necessary to carry out the research needed to address grand societal challenges — energy, climate change, bio-economy and lifelong health and wellbeing for all, <i>among others</i>. They propel collaboration across borders and disciplines and create a seamless and open European space for online research. They promote mobility of people and ideas, bring together the best scientists from across Europe and the world and enhance scientific education. <i>Their construction challenges researchers and innovative companies to develop state of the art technology. By this way, they strengthen Europe's high tech innovative industry.</i> They drive excellence within the European research and innovation communities</p>	<p>Research infrastructures are key determinants of Europe's competitiveness across the full breadth of scientific domains and essential to science-based innovation. In many fields research is impossible without access to supercomputers, radiation sources for new materials, clean rooms for nanotechnologies, databases for genomics and social sciences, observatories for Earth sciences, broadband networks for transferring data, etc. Research infrastructures are necessary to carry out the research needed to address grand societal challenges—energy, climate change, bio-economy and lifelong health and wellbeing for all. They propel collaboration across borders and disciplines and create a seamless and open European space for online research. They promote mobility of people and ideas, bring together the best scientists from across Europe and the world and enhance scientific education. Their construction and continued operation challenges researchers and innovative companies to develop state of the art technology. In this way, they strengthen Europe's high tech innovative industry. They drive excellence within the European research and innovation communities and can be outstanding showcases of science for society at large.</p>	
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	and can be outstanding showcases of science for society at large.		
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Europe must establish an adequate, stable base for building, maintaining and operating research infrastructures if its research is to remain world-class. This requires substantial and effective cooperation between Union, national and regional funders for which strong links with the cohesion policy will be pursued to ensure synergies and a coherent approach.	Europe must establish an adequate, stable base for building, maintaining and operating research infrastructures, and select and prioritize them on the basis of EU added value, quality and relevance criteria if its research is to remain world-class. This requires substantial and effective cooperation between Union, national and regional funders for which strong links with the cohesion policy will be pursued to ensure synergies and a coherent approach.	[no change]	
This specific objective addresses a core commitment of the <i>Innovation Union</i> flagship initiative, which highlights the crucial role played by world-class research infrastructures in making ground-breaking research and innovation possible. The initiative stresses the need to pool resources across Europe, and in some cases globally, in order to build and operate research infrastructures. Equally, the <i>Digital Agenda for Europe</i> flagship initiative emphasises the need to reinforce Europe's e-infrastructures and the importance of developing innovation clusters to build Europe's innovative advantage.	This specific objective addresses a core commitment of the Innovation Union flagship initiative, which highlights the crucial role played by world-class research infrastructures in making ground-breaking research and innovation possible. The initiative stresses the need to pool resources across Europe, and in some cases globally, in order to build and operate these research infrastructures. Equally, the Digital Agenda for Europe flagship initiative emphasises the need to reinforce Europe's e-infrastructures and the importance of developing innovation clusters to build Europe's innovative advantage.	[no change]	

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
4.2. Rationale and Union added value	4.2. Rationale and Union added value	4.2. Rationale and Union added value	
<p>State-of-the-art research infrastructures are becoming increasingly complex and costly, often requiring integration of different equipment, services and data sources and extensive transnational collaboration. No single country has enough resources to support all the research infrastructures it needs. The European approach to research infrastructures has made remarkable progress in recent years with implementing the ESFRI roadmap for infrastructures²¹, integrating and opening national research facilities and developing e-infrastructures underpinning a digital European Research Area. The networks of research infrastructures across Europe strengthen its human capital base by providing world-class training for a new generation of researchers and engineers and promoting interdisciplinary collaboration.</p> <hr/> <p>²¹ ESFRI Strategy Report on Research Infrastructure — Roadmap 2010.</p>	<p>State-of-the-art research infrastructures are becoming increasingly complex and costly, often requiring integration of different equipment, services and data sources and extensive transnational collaboration. No single country has enough resources to support all the research infrastructures it needs. The European approach to research infrastructures has made remarkable progress in recent years with implementing the ESFRI roadmap for infrastructures, integrating and opening national research facilities and developing e-infrastructures underpinning <i>an open, digitally connected</i> European Research Area. The networks of research infrastructures across Europe strengthen its human capital base by providing world-class training for a new generation of researchers and engineers and promoting interdisciplinary collaboration.</p>	<p>State-of-the-art research infrastructures are becoming increasingly complex and costly, often requiring integration of different equipment, services and data sources and extensive transnational collaboration. No single country has enough resources to support all the research infrastructures it needs. The European approach to research infrastructures has made remarkable progress in recent years with continuously developing and implementing the ESFRI roadmap for infrastructures⁹, integrating and opening national research facilities and developing e-infrastructures underpinning a digital European Research Area. The networks of research infrastructures across Europe strengthen its human capital resource base by providing world-class training for a new generation of researchers and engineers and promoting interdisciplinary collaboration.</p> <p>Synergies with Marie Skłodowska-Curie actions will be encouraged.</p> <hr/> <p>⁹ ESFRI Strategy Report on Research Infrastructure — Roadmap 2010.</p>	

Further development and wider use of research infrastructures at Union level will make a significant contribution to development of the European Research Area. While the role of Member States remains central in developing and financing research infrastructures, the Union plays an important part in supporting infrastructure at Union level, fostering the emergence of new facilities, opening up broad access to national and European infrastructures, and making sure that regional, national, European and international policies are consistent and effective. It is not only necessary to avoid duplication of effort and to coordinate and rationalise use of the facilities, but also to pool resources so that the Union can also acquire and operate research infrastructures at world level.	Further development and wider use of <i>the best</i> research infrastructures at Union European level will make a significant contribution to development of the European Research Area. While the role of Member States remains central in developing and financing research infrastructures, the Union plays an important part in supporting infrastructure at Union European level, <i>such as encouraging co-ordination of distributed European research infrastructures,</i> fostering the emergence of new <i>and integrated</i> facilities, opening up <i>and supporting</i> broad access to national and European infrastructures, and making sure that regional, national, European and international policies are consistent and effective. It is not only necessary to avoid duplication effort and to coordinate and rationalise <i>and fragmentation of efforts, to foster coordinated and effective</i> use of the facilities , but also <i>and where appropriate</i> to pool resources so that the Union can also acquire and operate research infrastructures at world level.	Further development and wider use of research infrastructures at Union European level will make a significant contribution to development of the European Research Area. While the role of Member States remains central in developing and financing research infrastructures, the Union plays an important part in supporting infrastructure at Union European level, by fostering the emergence of new facilities, opening up and supporting broad access to national and European infrastructures, and making sure that regional, national, European and international policies are consistent and effective. It is not only necessary to avoid duplication of efforts and, to coordinate and rationalise foster coordinated and effective use of the facilities, but also and where appropriate to pool resources so that the Union Europe can also acquire and operate research infrastructures at world-class level.	
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	<i>ICT has been transforming science by enabling remote collaboration, massive data processing, in silico experimentation and access to distant resources. Research therefore becomes increasingly transnational and interdisciplinary, requiring the use of ICT infrastructures that are supranational as science itself. It is therefore appropriate for a significant proportion of the budget under this specific objective to go towards research and innovation in e-infrastructures.</i>		
The efficiencies of scale and scope achieved by a European approach to construction, use and management of research infrastructures, including e-infrastructures, will make a significant contribution to boosting Europe's research and innovation potential	The efficiencies of scale and scope achieved by a European approach to construction, use and management of research infrastructures, including e-infrastructures, will make a significant contribution to boosting Europe's research and innovation potential <i>and make the Union more competitive at international level.</i>	[no change]	

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
4.3. Broad lines of the activities	4.3. Broad lines of the activities	4.3. Broad lines of the activities	
The activities shall aim at developing the European research infrastructures for 2020 and beyond, fostering their innovation potential and human capital and reinforcing European research infrastructure policy.	The activities shall aim at developing the European research infrastructures for 2020 and beyond, fostering their innovation potential and human capital resources and reinforcing European research infrastructure policy.	The activities shall aim at developing the European research infrastructures for 2020 and beyond, fostering their innovation potential and human capital resources and reinforcing European research infrastructure policy.	
(a) Developing the European research infrastructures for 2020 and beyond	<i>[no change]</i>	<i>[no change]</i>	
The aims shall be to ensure the implementation and operation of the ESFRI and other world-class research infrastructures, including the development of regional partner facilities; integration of and access to national research infrastructures; and the development, deployment and operation of e-infrastructures.	The aims shall be to ensure the implementation and operation of, and ensuring transnational access to the ESFRI and other world-class research infrastructures, including the development of excellent regional partner facilities of European interest, as well as transnational access to world-class European research infrastructures ; integration of and transnational access to national research infrastructures and the development, deployment and operation of e-infrastructures to ensure a world-leading capability in networking, computing and scientific data.	The aims shall be to ensure facilitate and support: (1) the preparation, implementation and operation of the ESFRI and other world-class research infrastructures, including the development of regional partner facilities, when there exists a strong added value for Union intervention; (2) the integration of and access to national research infrastructures; and of pan-European and regional interest, so that European scientists can use them, irrespective of their location, to conduct top-level research; (3) the development, deployment and operation of e-infrastructures.	

(b) Fostering the innovation potential of research infrastructures and their human capital	<i>[no change]</i>	(b) Fostering the innovation potential of research infrastructures and their human capital resources	
The aims shall be to encourage research infrastructures to act as early adopters of technology, to promote R&D partnerships with industry, to facilitate industrial use of research infrastructures and to stimulate the creation of innovation clusters. This activity shall also support training and/or exchanges of staff managing and operating research infrastructures.	The aims shall be to encourage research infrastructures to act as early adopters or developers of cutting-edge technology, to promote R&D partnerships with industry, to facilitate industrial use of research infrastructures and to stimulate the creation of innovation clusters. This activity shall also support education and training and/or exchanges of staff using , managing and operating research infrastructures including a secondment scheme for senior staff and project managers .	<i>[no change]</i>	
(c) Reinforcing European research infrastructure policy and international cooperation	<i>[no change]</i>	<i>[no change]</i>	
The aim shall be to support partnerships between relevant policymakers and funding bodies, mapping and monitoring tools for decision-making and also international cooperation activities.	The aim shall be to support partnerships between relevant policymakers and funding bodies, mapping and monitoring tools for decision-making and also international cooperation activities. European research infrastructures shall be supported in their international relations activities and consulted in the process of shaping the European strategy for international cooperation in research.	<i>[no change]</i>	

The second and third activities shall be pursued by their own specific action and, whenever appropriate, as part of the first activity.	<i>[no change]</i>	The second and third activities shall be pursued by their own specific action and, whenever appropriate, as part of the first activity.	
		The objectives set under lines (b) and (c) shall be pursued by dedicated actions, as well as within the actions developed under line (a) whenever appropriate.	
	<u>AMD 125</u> <i>4a. SPREADING EXCELLENCE AND WIDENING PARTICIPATION</i>		
	<i>4a.1. Specific objective</i>		
	<i>The specific objective is to fully exploit the potential of Europe's talent pool and to ensure that the benefits of an innovation-led economy are both maximised and fairly distributed across the Union in accordance with the principle of excellence.</i>		
	<i>When referring to the objectives of the Union's research and technological development policy Article 179(2) TFEU clearly states that "the Union shall, throughout the Union, encourage undertakings, including small and medium-sized undertakings, research centres and universities in their research and technological development activities of high quality".</i>		

	<p><i>And indeed, ensuring that research and innovation-related activities are spread widely has long been an important Union policy goal. However, despite a recent tendency for the innovation performances of individual countries to converge, sharp differences among EU27 countries still remain, as it has been stated in the Innovation Union Scoreboard 2011. Furthermore, by putting national budgets under constrain, the current financial crisis is threatening to widen the gap between 'innovation leaders' and 'modest innovators'.</i></p>		
	<p>4a.2. Rationale and Union added value</p>		
	<p><i>In order to progress towards a sustainable, inclusive and smart society, Europe needs to make the best use of the intelligence that is available in the Union and to unlock untapped R&I potential. This is a real European challenge, decisive for our international competitiveness, and it cannot be solved by the Member States alone.</i></p>		
	<p><i>By nurturing and connecting pools of excellence, the activities proposed will contribute to strengthening the European Research Area.</i></p>		

	<i>4a.3. Broad lines of the activities</i>		
	<i>To assure efficiency of the research and innovation funding, Horizon 2020 needs to be open to a wide range of participants, including new entrants, and make sure that excellence prevails wherever it exists enabling researchers and innovators across Europe to benefit from Horizon 2020's instruments, networks and funding, including the activities of the EIT and its KICs.</i>		
	<i>In this context, measures will aim at fully exploiting the potential of Europe's talent pool and thereby optimising the economic and social impact of research and innovation and will be distinct yet complementary with regard to policies and actions of the Cohesion policy Funds.</i>		
	<i>These measures include:</i>		
	<i>Twinning and networking measures</i>		
	<i>(a) linking emerging centres of excellence in less innovation performing Member States and regions to international leading counterparts elsewhere in Europe;</i>		

	<i>(b) launching a competition for the foundation of internationally competitive research centres in less innovation performing regions based on the priorities identified in their regional smart specialisation strategies: the candidates for the competition should be teams each comprising an innovative but still less innovation performing region and an internationally recognised centre of excellence elsewhere in Europe;</i>		
	<i>(c) establishing 'ERA Chairs' to attract outstanding academics to institutions with a clear potential for research excellence, in order to help these institutions to fully unlock this potential and thereby create a level playing field for research and innovation in the European Research Area;</i>		
	<i>(d) attributing "Return Grants" to excellent researchers currently working outside of Europe and who wish to work in Europe or to researchers already working in Europe who wish to move to a less performing region;</i>		

	<i>(e) support complementary agreements signed among organisations beneficiaries of the collaborative research projects with other entities and organisations established mainly in countries others than those directly involved in the project with the specific objective to facilitate training oportunities (namely doctoral and post-doctoral positions);</i>		
	<i>(f) strengthening successful networks aiming at establishing high quality institutional networking in research and innovation. Particular attention will be paid to COST in order to promote activities to identify and connect "pockets of excellence" (high-quality scientific communities and young investigators) throughout Europe;</i>		
	<i>(g) developing specific training mechanisms on how to participate in Horizon 2020, taking full advantage of existing networks such as the National Contact Points;</i>		
	<i>(h) setting up an online marketplace where intellectual property can be advertised in order to bring together the owners and users of IPR.</i>		

	<i>Building synergies with Structural Funds</i>		
	<i>(a) conferring a "seal of excellence" on positively evaluated ERC, Marie Skłodowska-Curie or collaborative project proposals that have not been able to achieve funding because of budgetary limitations, and also to completed projects in order to facilitate funding of the follow up by national, regional or private sources;</i>		
	<i>(b) supporting the development and monitoring of smart specialisation strategies. A policy support facility will be developed and policy learning at regional level will be facilitated through international evaluation by peers and best practice sharing.</i>		

PART II: INDUSTRIAL LEADERSHIP

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
1. Leadership in enabling and industrial technologies	<u>AMD 126</u> 1. Leadership in enabling and industrial technologies	1. Leadership in enabling and industrial technologies	
The specific objective is to maintain and build global leadership in enabling technologies and space research and innovation, which underpin competitiveness across a range of existing and emerging industries and sectors.	The specific objective is to maintain and build global leadership <i>through research and innovation</i> in enabling technologies and space research and innovation , which underpin competitiveness across a range of existing and emerging industries and sectors.	<i>[no change]</i>	
The global business environment is changing rapidly and the Europe 2020 goals for smart, sustainable and inclusive growth present challenges and opportunities to European industry. Europe needs to accelerate innovation, transforming the knowledge generated to underpin and enhance existing products, services and markets; and to create new ones. Innovation should be exploited in the widest sense, going beyond technology to include business, organisational and social aspects.	The global business environment is changing rapidly and the Europe 2020 goals for smart, sustainable and inclusive growth present challenges and opportunities to European industry. Europe needs to accelerate innovation, transforming the knowledge generated to underpin and enhance <i>quality and sustainability of</i> existing products, services and markets; and to create new ones. Innovation should be exploited in the widest sense, going beyond technology to include business, organisational, and social <i>and security</i> aspects.	The global business environment is changing rapidly and the Europe 2020 goals for smart, sustainable and inclusive growth present challenges and opportunities to European industry. Europe needs to accelerate innovation, transforming the knowledge generated to underpin and enhance existing products, services and markets; and to create new ones while maintaining focus on sustainability . Innovation should be exploited in the widest sense, going beyond technology to include business, organisational and social aspects.	

<p>To stay at the forefront of global competition with a strong technological base and industrial capabilities, increased strategic investments in research, development, validation and piloting are required in Information and Communication Technologies (ICT); Nanotechnologies; Advanced Materials; Biotechnology; Advanced Manufacturing and Processing; and Space.</p>	<p><i>[no change]</i></p>	<p><i>[no change]</i></p>	
<p>The successful mastering and deployment of enabling technologies by European industry is a key factor in strengthening Europe's productivity and innovation capacity and ensuring Europe has an advanced, sustainable and competitive economy, global leadership in hi-tech application sectors and the ability to develop effective solutions for societal challenges. The pervasive nature of such activities can spur further progress through complementary inventions and applications, ensuring a higher return on investment in these technologies than in any other field.</p>	<p>The successful mastering and deployment of enabling technologies by European industry is a key factor in strengthening Europe's productivity and innovation capacity and ensuring Europe has an advanced, sustainable and competitive economy, global leadership in hi-tech application sectors and the ability to develop effective and sustainable solutions for societal challenges. The pervasive nature of such activities can spur further progress through complementary inventions and applications, ensuring a higher return on investment in these technologies than in any other field. <i>The development of spin-offs from research projects shall be supported through flexible instruments such as open calls.</i></p>	<p>The successful mastering, integration and deployment of enabling technologies by European industry is a key factor in strengthening Europe's productivity and innovation capacity and ensuring Europe has an advanced, sustainable and competitive economy, global leadership in hi-tech application sectors and the ability to develop effective solutions for societal challenges. The pervasive nature of such activities can spur further progress through complementary inventions and, applications and services, ensuring a higher return on investment in these technologies than in any other field.</p>	

These activities will contribute to the objectives of the Europe 2020 Flagship initiatives on Innovation Union, Resource Efficient Europe, An industrial policy for the globalisation era, and A Digital Agenda for Europe as well as Union space policy objectives.	These activities will contribute to the objectives of the Europe 2020 Flagship initiatives on Innovation Union, Resource Efficient Europe, An industrial policy for the globalisation era, and A Digital Agenda for Europe as well as <i>the Union's Internal Security Strategy and the</i> Union space policy objectives.	[no change]	
Complementarities with other activities in Horizon 2020	[no change]	[no change]	
The activities under 'Leadership in Enabling and Industrial Technologies' will be primarily based on research and innovation agendas defined by industry and business, together with the research community and have a strong focus on leveraging private sector investment.	The activities under 'Leadership in Enabling and Industrial Technologies' will be primarily based on research and innovation agendas defined by industry, and business, <i>and SMEs</i> , together with the research community. <i>Activities will aim not only at addressing common needs and concerns in the specific sector but also at supporting implementation of policy objectives in those specific sectors. Activities will</i> have a strong focus on leveraging private sector investment <i>and innovation.</i>	The activities under 'Leadership in Enabling and Industrial Technologies' will be primarily based on research and innovation agendas mainly defined by industry and business; (including SMEs) together with the research community and Member States in an open and transparent manner and have a strong focus on leveraging private sector investment.	

<p>The integration of enabling technologies in solutions for the societal challenges shall be supported together with the relevant challenges. Applications of enabling technologies that do not fall under the societal challenges, but are important for reinforcing the competitiveness of European industry, shall be supported under 'Leadership in Enabling and Industrial Technologies'.</p>	<p><i>[no change]</i></p>	<p>The integration of enabling technologies in solutions for the societal challenges shall be supported together with the relevant challenges. Applications of enabling technologies that do not fall under the societal challenges, but are important for reinforcing the competitiveness of European industry, shall be supported under 'Leadership in Enabling and Industrial Technologies'. Appropriate coordination should be sought with the Excellent Science and Societal Challenges pillars.</p>	
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<i>A common approach</i>	<i>[no change]</i>	<i>[no change]</i>	
<p>The approach shall include both agenda-driven activities and more open areas to promote innovative projects and breakthrough solutions. Emphasis shall be on R&D, large-scale pilots and demonstration activities, test beds and living labs, prototyping and product validation in pilot lines. Activities shall be designed to boost industrial competitiveness by stimulating industry, and in particular SMEs, to make more research and innovation investment.</p>	<p>The approach shall include both agenda-driven activities and more open areas to promote innovative projects and breakthrough solutions. Emphasis shall be on R&D, large-scale pilots and <i>innovation activities in the pre-commercial and pre-competitive stages, including</i> demonstration activities, test beds and living labs, prototyping and product validation in pilot lines. Activities shall be designed to boost industrial competitiveness by stimulating industry <i>to increase its research and innovation investments. Activities shall</i> in particular <i>support</i> SMEs to make <i>invest in and have more access to</i> research and innovation investment <i>activities. Focus will be given to small and medium scale projects. Direct follow-on activities for projects such as piloting, demonstration and take –up shall be supported through flexible instruments such as open calls.</i></p>	<p>The approach shall include both agenda-driven activities and more open areas to promote innovative projects and breakthrough solutions. Emphasis shall be on <i>covering the whole value chain, including</i> R&D, large-scale pilots and demonstration activities, test beds and living labs, prototyping and product validation in pilot lines. Activities shall be designed to boost industrial competitiveness by stimulating industry, and in particular SMEs, to make more research and innovation investment. <i>Adequate focus will be given to small and medium scale projects.</i></p>	

An integrated approach to Key Enabling Technologies	[no change]	[no change]	
<p>A major component of 'Leadership in Enabling and Industrial Technologies' are <i>Key Enabling Technologies</i> (KETs), defined as micro- and nanoelectronics, photonics, nanotechnology, biotechnology, advanced materials and advanced manufacturing systems²². These multi-disciplinary, knowledge and capital-intensive technologies cut across many diverse sectors providing the basis for significant competitive advantage for European industry. An integrated approach, promoting the combination, convergence and cross-fertilisation effect of KETs in different innovation cycles and value chains can deliver promising research results and open the way to new industrial technologies, products, services and novel applications (e.g. in space, transport, environment, health etc.).</p> <hr/> <p>²² COM(2009)512.</p>	<p>A major component of 'Leadership in Enabling and Industrial Technologies' are Key Enabling Technologies (KETs), defined as micro- and nanoelectronics, photonics, nanotechnology, biotechnology, advanced materials and advanced manufacturing systems . These multi-disciplinary, knowledge and capital-intensive technologies cut across many diverse sectors providing the basis for significant competitive advantage for European industry and for creating new jobs. An integrated approach, promoting the combination, convergence and cross-fertilisation effect of KETs in different innovation cycles and value chains can deliver promising research results and open the way to new industrial technologies, products, services and as well as novel applications and sustainable approaches (e.g. in space, transport, environment, health, agriculture etc.).</p>	<p>A major component of 'Leadership in Enabling and Industrial Technologies' are <i>Key Enabling Technologies</i> (KETs), defined as micro- and nanoelectronics, photonics, nanotechnology, biotechnology, advanced materials and advanced manufacturing systems²²⁶. These multi-disciplinary, knowledge and capital-intensive technologies cut across many diverse sectors providing the basis for significant competitive advantage for European industry-, for stimulating growth and for creating new jobs. An integrated approach, promoting the combination, convergence and cross-fertilisation effect of KETs in different innovation cycles and value chains can deliver promising research results and open the way to new industrial technologies, products, services and novel applications (e.g. in space, transport, agriculture, fisheries, forestry, environment, food, health, energy etc.).</p> <hr/> <p>²²⁶ COM(2009)512.</p>	

<p>The numerous interactions of KETs and enabling technologies will therefore be exploited in a flexible manner, as an important source of innovation. This will complement support for research and innovation in KETs that may be provided by national or regional authorities under the Cohesion Policy Funds within the framework of smart specialisation strategies</p>	<p><i>[no change]</i></p>	<p>The numerous interactions of KETs and other industrial enabling technologies will therefore be exploited in a flexible manner, as an important source of innovation. This will complement support for research and innovation in KETs that may be provided by national or regional authorities under the Cohesion Policy Funds within the framework of smart specialisation strategies.</p>	
		<p>Innovation requires enhanced cross-technology research efforts. Therefore, multidisciplinary and multi-KET projects should be an integral part of the Industrial Leadership pillar. The Horizon 2020 implementation structure supporting KETs and cross-cutting KET activities (multi KETs) should ensure synergies and effective coordination, among others, with societal challenges. In addition, synergies will be sought, where appropriate, between KET activities and the activities under the Cohesion Policy framework, as well as with the European Institute of Innovation and Technology (EIT).</p>	

For all the enabling and industrial technologies, including the KETs, a major aim will be to foster interactions between the technologies, and with the applications under the societal challenges. This shall be fully taken into account in developing and implementing the agendas and priorities. It requires that stakeholders representing the different perspectives are fully involved in priority setting and implementation. In certain cases, it will also require actions that are jointly funded by the enabling and industrial technologies, and by the relevant societal challenges. This will include joint funding for public-private partnerships that aim to develop technologies and apply them to address societal challenges.	For all the enabling and industrial technologies, including the KETs, a major aim will be to foster interactions between the technologies, and with the applications under the societal challenges. This shall be fully taken into account in developing and implementing the agendas and priorities. It requires that <i>all</i> stakeholders representing the different perspectives are fully involved in priority setting and implementation. In certain cases, it will also require actions that are jointly funded by the enabling and industrial technologies, and by the relevant societal challenges. This will include joint funding for public-private partnerships that aim to develop technologies <i>and innovation,</i> and apply them to address societal challenges.	For all the enabling and industrial technologies, including the KETs, a major aim will be to foster interactions between the technologies, and with the applications under the societal challenges. This shall be fully taken into account in developing and implementing the agendas and priorities. It requires that stakeholders representing the different perspectives are fully involved in priority setting and implementation. In certain cases, it will also require actions that are jointly funded by the enabling and industrial technologies, and by the relevant societal challenges. This will could include joint funding for public-private partnerships that aim to develop technologies and apply them to address societal challenges.	
ICT plays an important role as it embraces some of the KETs and provides the key basic infrastructures, technologies and systems for vital economic and social processes and new private and public products and services. European industry needs to remain at the cutting edge of technological developments in ICT, where many technologies are entering a new disruptive phase, opening up new opportunities.	<i>[no change]</i>	ICT plays an important role as it embraces some of the KETs and provides the key basic infrastructures, technologies and systems for vital economic and social processes and new private and public products and services. European industry needs to remain at the cutting edge of technological developments in ICT, where many technologies are entering a new disruptive phase, opening up new opportunities.	

<p>Space is a rapidly growing sector which delivers information vital to many areas of modern society, meeting its fundamental demands, addresses universal scientific questions, and serves to secure the Union's position as a major player on the international stage. Space research underpins all activities undertaken in space, but is currently fragmented in national programmes run by a subset of Union member states. Union level coordination and investment in space research are required (cf. Article 189 TFEU) to maintain the competitive edge, to safeguard Union space infrastructure such as Galileo and to sustain a future role for the Union in space. In addition, innovative downstream services and applications using space derived information represent an important source of growth and job creation.</p>	<p>Space is a rapidly growing sector which delivers information vital to many areas of modern society, meeting its fundamental demands, addresses universal scientific questions, and serves to secure the Union's position as a major player on the international stage. Space research underpins all activities undertaken in space, but is currently fragmented in national programmes run by a subset of Union member states. Union level coordination and investment in space research are required (cf. Article 189 TFEU) to maintain the competitive edge, to safeguard Union space infrastructure such as Galileo and to sustain a future role for the Union in space. <i>This shall be achieved in close cooperation between the European Space Agency and national space agencies.</i> In addition, innovative downstream services and applications using space derived information represent an important source of growth and job creation <i>and their development represents an important opportunity for the Union.</i></p>	<p>Space is a rapidly growing sector which delivers information vital to many areas of modern society, meeting its fundamental demands, addresses universal scientific questions, and serves to secure the Union's position as a major player on the international stage. Space research underpins all activities undertaken in space, but is currently fragmented addressed in national programmes run by a subset of Union member states., the European Space Agency (ESA) or in the context of the Seventh Framework Programme. Union level coordination and investment in space research are required will continue (cf. Article 189 TFEU) in order to maintain the competitive edge, to safeguard Union space infrastructures and programmes such as GMES and Galileo and to sustain a future role for the Union Europe in space. In addition, innovative downstream services and user-friendly applications using space derived information represent an important source of growth and job creation.</p>	
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<i>Partnering and added value</i>	<i>[no change]</i>	<i>[no change]</i>	
Europe can achieve critical mass through partnering, clusters and networks, standardisation, promoting cooperation between different scientific and technological disciplines and sectors with similar research and development needs, leading to breakthroughs, new technologies and innovative solutions.	<i>[no change]</i>	Europe can achieve critical mass through partnering, clusters and networks, standardisation, promoting cooperation between different scientific and technological disciplines and sectors with similar research and development needs, leading to breakthroughs, new technologies and innovative product, service and process solutions.	
The development and implementation of research and innovation agendas through public–private partnerships, the building of effective industry-academia links, the leveraging of additional investments, the access to risk finance, standardisation and the support to pre-commercial procurement and the procurement of innovative products and services are all aspects that are essential in addressing competitiveness.	The development and implementation of research and innovation agendas through European Technology Platforms or public–private partnerships, the building of effective industry-academia links, the leveraging of additional investments, the access to risk finance, standardisation and the support to pre-commercial procurement and the procurement of innovative products and services are all aspects that are essential in addressing competitiveness.	The development and implementation of research and innovation agendas including through public–private partnerships, but also by the building of effective industry-academia links, the leveraging of additional investments, the access to risk finance, standardisation and the support to pre-commercial procurement and the procurement of innovative products and services are all aspects that are essential in addressing competitiveness.	

In this regard, strong links with the EIT are also needed to breed entrepreneurial top talents and to speed up innovation by bringing together people from different countries, disciplines and organisations.	<i>[no change]</i>	In this regard, strong links with the EIT are also needed to breed produce and promote entrepreneurial top talents and to speed up innovation by bringing together people from different countries, disciplines and organisations.	
Union level collaboration can also support trade opportunities through the development of European or international standards for new emerging products and services and technologies. Activities in support of standardisation and interoperability, safety and pre-regulatory activities will be promoted.	Union level collaboration can shall also support trade opportunities through the development of European or international standards for new emerging products and services and technologies. <i>Development of such standards following consultation of relevant stakeholders, from science and industry could have a positive impact.</i> Activities in support of standardisation and interoperability, safety and pre-regulatory activities will be promoted.	<i>[no change]</i>	

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
1.1. Information and Communication Technologies (ICT)	<u>AMD 127</u> 1.1. Information and Communication Technologies (ICT)	1.1. Information and Communication Technologies (ICT)	
<i>1.1.1. Specific objective for ICT</i>	<i>1.1.1. Specific objective for ICT</i>	<i>1.1.1. Specific objective for ICT</i>	
<p>In line with the Digital Agenda for Europe²³, the specific objective of ICT research and innovation (R&I) is to enable Europe to develop and exploit the opportunities brought by ICT progress for the benefits of its citizens, businesses and scientific communities.</p> <p>_____</p> <p>²³COM(2010) 245</p>	<p>In line with the Digital Agenda for Europe, the specific objective of ICT research and innovation (R&I) is to enable Europe to develop and exploit the opportunities brought by ICT progress for the benefits of its citizens, businesses and scientific communities. <u>"ICT" encompasses all ICT-domains, including amongst others fixed, wireless, optical fibre networks and satellite networks, networked electronic media, computer based smart systems and embedded software as well as the broad fields of Photonics, Molecular Electronics, Magnetoelectronics, Robotics, Nanoelectronics and Bioelectronics.</u></p>	<p>In line with the Digital Agenda for Europe⁷, the specific objective of ICT research and innovation (R&I) is to enable Europe to <u>support</u>, develop and exploit the opportunities brought by ICT progress for the benefits of its citizens, businesses and scientific communities.</p> <p>_____</p> <p>²³⁷COM(2010) 245</p>	
<p>As the world's largest economy and representing the largest share of the world's ICT market, today at more than EUR 2600 billion, Europe can have legitimate ambitions for its businesses, governments, research and development centres and universities to lead developments in ICT, to grow new business, and to invest more in ICT innovations.</p>	<p><i>[no change]</i></p>	<p>As the world's largest economy and representing the largest share of the world's ICT market, today at more than EUR 2600 billion, Europe can should have legitimate ambitions for its businesses, governments, research and development centres and universities to lead European and global developments in ICT, to grow new business, and to invest more in ICT innovations.</p>	

By 2020, Europe's ICT sector should supply at least the equivalent of its share of the global ICT market, today at about one third. Europe should also grow innovative businesses in ICT so that one third of all business expenditure in ICT R&D, today at more than EUR 35 billion per year, is invested by companies created within the last two decades. This would require a considerable increase in public investments in ICT R&D in ways that leverage private spending, towards the goal of doubling investments in the next decade, and significantly more European poles of world-class excellence in ICT.	<i>[no change]</i>	By 2020, Europe's ICT sector should supply at least the equivalent of its share of the global ICT market, today at about one third. Europe should also grow innovative businesses in ICT so that one third of all business expenditure investment in ICT R&D in the EU , today at more than EUR 35 billion per year, is invested made by companies created within the last two decades. This would require an considerable increase in public investments in ICT R&D in ways that leverage private spending, towards the goal of doubling amplifying investments in the next decade, and significantly more European poles and clusters of world-class excellence in ICT.	
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<p>To master increasingly complex and multidisciplinary technology and business chains in ICT, partnering, risk-sharing and mobilisation of critical mass across the Union are needed. Union level action helps industry address a single market perspective and achieve economies of scale and scope. Collaboration around common, open technology platforms with spill-over and leverage effects allow a wide range of stakeholders to benefit from new developments and apply further innovations. Federating and partnering at Union level also enables consensus building, establishes a visible focal point for international partners, and leads to the development of Union- and world-wide standards and interoperable solutions.</p>	<p><i>[no change]</i></p>	<p>To master increasingly complex and multidisciplinary technology and business chains in ICT, partnering, risk-sharing and mobilisation of critical mass across the Union are needed. Union level action helps should help industry address a single market perspective and achieve economies of scale and scope. Collaboration around common, open technology platforms with spill-over and leverage effects will allow a wide range of stakeholders to benefit from new developments and apply create further innovations. Federating and partnering Partnering at Union level also enables consensus building, establishes a visible focal point for international partners, and leads to will support the development of Union- and world-wide standards and interoperable solutions.</p>	
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<i>1.1.2. Rationale and Union added value</i>	<i>1.1.2. Rationale and Union added value</i>	<i>1.1.2. Rationale and Union added value</i>	
ICT underpins innovation and competitiveness across a broad range of private and public markets and sectors, and enables scientific progress in all disciplines. Over the next decade, the transformative impact of digital technologies, ICT components, infrastructures and services will be increasingly visible in all areas of life. Unlimited computing, communication and data storage resources will be available to every citizen on the globe. Vast amounts of information and data will be generated by sensors, machines and information-enhanced products, making action at a distance a commonplace, enabling global deployment of business processes and sustainable production sites and bringing a wide range of services and applications.	ICT underpins innovation and competitiveness across a broad range of private and public markets and sectors, and enables scientific progress in all disciplines. Over the next decade, the transformative impact of digital technologies, ICT components, infrastructures and services will be increasingly visible in all areas of life. Unlimited Computing, communication and data storage resources will be be available <i>continue</i> to every citizen on spread during the globe coming years . Vast amounts of <i>real-time</i> information and data will be generated by sensors, machines and information-enhanced products, making action at a distance a commonplace, enabling global deployment of business processes and sustainable production sites and bringing a wide range of services and applications.	ICT underpins innovation and competitiveness across a broad range of private and public markets and sectors, and enables scientific progress in all disciplines. Over the next decade, the transformative impact of digital technologies, ICT components, infrastructures and services will be increasingly visible in all areas of life. Practically unlimited computing, communication and data storage resources will be available to every citizen on in the globe EU. Vast amounts of information and data will be generated by sensors, machines and information-enhanced products, making action at a distance a commonplace, enabling global deployment of business processes and sustainable production sites and bringing allowing the creation of a wide range of services and applications.	

<p>Many critical commercial and public services and all key processes of knowledge production in science, learning, business and the public sector will be provided through ICT. ICT will provide the critical infrastructure for production and business processes, communication and transactions. ICT will also be indispensable in contributing to key societal challenges , as well as societal processes such as community formation, consumer behaviour, and public governance, for example by means of social media.</p>	<p>Many critical commercial and public services and all key processes of knowledge production in science, learning, business and the public sector will be provided, <i>and thus made more accessible</i>, through ICT. ICT will provide the critical infrastructure for production and business processes, communication and transactions. ICT will also be indispensable in contributing to key societal challenges , as well as societal processes such as community formation, consumer behaviour, <i>political participation</i> and public governance, for example by means of social media <i>and collective awareness platforms and tools. It is crucial to support and integrate research on a user centred perspective on standards, technologies and systems in order to develop competitive solutions.</i></p>	<p>Many critical commercial and public services and all key processes of knowledge production in science, learning, business and the culture and creative sector as well as the public sector will be provided through ICT. ICT will provide the critical infrastructure for production and business processes, communication and transactions. ICT will also be indispensable in contributing to key societal challenges , as well as societal processes such as community formation, consumer behaviour, and public governance, for example by means of social media.</p>	
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<p>The Union support to ICT research and innovation is a significant component to prepare the next generation technologies and applications as it makes up a large part of total spending on collaborative, mid-to-high risk R&I in Europe. Public investment in ICT research and innovation at Union level has been and remains essential to mobilise the critical mass leading to breakthroughs and to a wider uptake and better use of innovative solutions, products and services. It continues to play a central role in developing open platforms and technologies applicable across the Union, in testing and piloting innovations in real pan-European settings and in optimising resources when addressing Union competitiveness and tackling common societal challenges. Union support to ICT research and innovation is also enabling high-tech SMEs to grow and capitalise on the size of Union-wide markets. It is strengthening collaboration and excellence amongst Union scientists and engineers, reinforcing synergies with and between national budgets, and acting as a focal point for collaboration with partners outside Europe.</p>	<p><i>[no change]</i></p>	<p>The Union support to ICT research and innovation is makes a significant component contribution to prepare the development of the next generation technologies and applications as it makes up a large part of total spending on collaborative, mid-to-high risk R&I in Europe. Public investment in ICT research and innovation at Union level has been and remains essential to mobilise the critical mass leading to breakthroughs and to a wider uptake and better use of innovative solutions, products and services. It continues to play a central role in developing open platforms and technologies applicable across the Union, in testing and piloting innovations in real pan-European settings and in optimising resources when addressing Union competitiveness and tackling common societal challenges. Union support to ICT research and innovation is also enabling high-tech SMEs to grow and capitalise on the size of Union-wide markets. It is strengthening collaboration and excellence amongst Union scientists and engineers, reinforcing synergies with and between national budgets, and acting as a focal point for collaboration with partners outside Europe.</p>	
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<p>Successive evaluations of ICT activities in the Union's Framework Programme for research and innovation have shown that focused ICT research and innovation investment undertaken at Union level has been instrumental in building industrial leadership in areas like mobile communications, safety-critical ICT systems, and to address challenges like energy-efficiency or demographic change. Union investments in ICT research infrastructures have provided European researchers with the world's best research networking and computing facilities.</p>	<p>Successive evaluations of ICT activities in the Union's Framework Programme for research and innovation have shown that focused ICT research and innovation investment undertaken at Union level has been instrumental in building industrial leadership in areas like mobile communications, safety-critical ICT systems, and to address challenges like energy-efficiency or demographic change <i>and better health systems delivery</i>. Union investments in ICT research infrastructures have provided European researchers with the world's best research networking and computing facilities.</p>	<p>Successive evaluations of ICT activities in the Union's Framework Programme for research and innovation have shown that focused ICT research and innovation investment undertaken at Union level has been instrumental in building industrial leadership in areas like mobile communications, safety-critical ICT systems, and to address challenges like energy-efficiency, health, food security, transport or demographic change. Union investments in ICT research infrastructures have provided European researchers with the world's best research networking and computing facilities.</p>	
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<i>1.1.3. Broad lines of the activities</i>	<i>1.1.3. Broad lines of the activities</i>	<i>1.1.3. Broad lines of the activities</i>	
A number of activity lines shall target ICT industrial and technological leadership challenges and cover generic ICT research and innovation agendas, including notably:	<i>[no change]</i>	<i>[no change]</i>	
(a) <i>A new generation of components and systems</i> : Engineering of advanced and smart embedded components and systems;	(a) <i>A new generation of components and systems</i> : Engineering of advanced, secure and smart embedded components and systems components ;	(a) <i>A new generation of components and systems</i> : Engineering of advanced and smart , embedded and energy and resource efficient components and systems;	
(b) <i>Next generation computing</i> : Advanced computing systems and technologies;	(b) <i>Next generation computing</i> : Advanced and secure computing systems and technologies;	(b) <i>Next generation computing</i> : Advanced computing systems and technologies, including cloud computing ;	
(c) <i>Future Internet</i> : Infrastructures, technologies and services;	(c) <i>Future Internet</i> : software, hardware , infrastructures, technologies and services;	<i>[no change]</i>	
(d) <i>Content technologies and information management</i> : ICT for digital content and creativity;	(d) <i>Content technologies and information management</i> : ICT for digital content, cultural industries and creativity;	<i>[no change]</i>	
(e) <i>Advanced interfaces and robots</i> : Robotics and smart spaces;	<i>[no change]</i>	<i>[no change]</i>	
(f) <i>Micro- and nanoelectronics and photonics</i> : Key enabling technologies related to micro- and nanoelectronics and to photonics.	(f) <i>Micro- and nanoelectronics and photonics</i> : Key enabling technologies related to micro- and nanoelectronics and to photonics.	<i>[no change]</i>	

	<i>(fa) Quantum technologies: next generation of ICT devices through the combination of quantum physics and information science;</i>		
These six major activity lines are expected to cover the full range of needs. These would include industrial leadership in generic ICT-based solutions, products and services needed to tackle major societal challenges as well as application-driven ICT research and innovation agendas which will be supported together with the relevant societal challenge.	These six seven major activity lines are expected to cover the full range of needs. These would include industrial leadership in generic ICT-based solutions, products and services needed to tackle major societal challenges as well as application-driven ICT research and innovation agendas which will be supported together with the relevant societal challenge. <i>Special attention shall be given to ensuring that state-of-the-art ICT solutions are selected for projects funded under the Societal Challenges priority. Enhanced support will be provided to research and development of open systems and distributive systems. In order to fully seize the ICT potential, the diversity of research areas and cycles characteristic to ICT research shall be guaranteed through the rules for participation, allowing for long-term cost-intensive large-scale research projects as well as fast opportunity seizing activities identified by the market.</i>	These six major activity lines are expected to cover the full range of needs, taking into account the competitiveness of European industry on a global scale. These would include industrial leadership in generic ICT-based solutions, products and services needed to tackle major societal challenges as well as application-driven ICT research and innovation agendas which will be supported together with the relevant societal challenge. In view of the ever increasing advancement of technology in all areas of life, the interaction between humans and technology will be important in this respect, and part of the application-driven ICT research mentioned above.	

These six activity lines shall also include ICT specific research infrastructures such as living labs for large-scale experimentation, and infrastructures for underlying key enabling technologies and their integration in advanced products and innovative smart systems, including equipment, tools, support services, clean rooms and access to foundries for prototyping.	These six seven activity lines shall also include ICT specific research infrastructures such as living labs for large-scale experimentation, and infrastructures for underlying key enabling technologies and their integration in advanced products and innovative smart systems, including equipment, tools, support services, clean rooms and access to foundries for prototyping. <i>Union funding will benefit shared facilities and infrastructure open to multiple actors including in particular small and medium-sized enterprises.</i>	These six activity lines shall also include ICT specific research infrastructures such as living labs for large-scale experimentation, and infrastructures for underlying key enabling technologies and their integration in advanced products and innovative smart systems, including equipment, tools, support services, clean rooms and access to foundries for prototyping.	
	<i>The fundamental rights and freedoms of natural persons and in particular their right to privacy is key in the Union. Horizon 2020 shall support research and development of systems that can give Europe's citizens full control of their communications.</i>		

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
1.2. Nanotechnologies	<u>AMD 128</u> 1.2. Nanotechnologies	1.2. Nanotechnologies	
<i>1.2.1. Specific objective for nanotechnologies</i>	<i>1.2.1. Specific objective for nanotechnologies</i>	<i>1.2.1. Specific objective for nanotechnologies</i>	
The specific objective of nanotechnologies research and innovation is to secure Union leadership in this high growth global market, by stimulating investment in nanotechnologies and their uptake in high added-value, competitive products and services across a range of applications and sectors.	[no change]	The specific objective of nanotechnologies research and innovation is to secure Union leadership in this high growth global market, by stimulating <u>scientific and technological advancements and</u> investment in nanotechnologies and their uptake in high added-value, competitive products and services across a range of applications and sectors.	
By 2020, nanotechnologies will be mainstreamed, that is seamlessly integrated with most technologies and applications, driven by consumer benefits, quality of life, sustainable development and the strong industrial potential for achieving previously unavailable solutions for productivity and resource efficiency.	By 2020, nanotechnologies will be mainstreamed, that is seamlessly integrated with most technologies and applications, driven by consumer benefits, quality of life, sustainable development and the strong industrial potential for achieving previously unavailable solutions for productivity and resource efficiency. <i>By 2015, the Commission will review all relevant legislation to ensure safety for all applications of nanomaterials in products with potential health, environmental or safety impacts over their life cycle.</i>	By 2020, nanotechnologies will be mainstreamed, that is seamlessly integrated with most technologies and applications, driven by consumer benefits, quality of life, health care , sustainable development and the strong industrial potential for achieving previously unavailable solutions for productivity and resource efficiency.	

Europe must also set the global benchmark on safe and responsible nanotechnology deployment and governance ensuring both high societal and industrial returns.	<i>[no change]</i>	Europe must also set the global benchmark on safe and responsible nanotechnology deployment and governance ensuring both high societal and industrial returns- and societal impact combined with high standards of safety and sustainability.	
Products using nanotechnologies represent a world market which Europe cannot afford to ignore. Market estimates of the value of products incorporating nanotechnology as the key component reach EUR 700 billion by 2015 and EUR 2 trillion by 2020, with a corresponding 2 and 6 million jobs respectively. Europe's nanotechnology companies should exploit this double digit market growth and be capable of capturing a market share at least equal to Europe's share of global research funding (i.e. a quarter) by 2020.	<i>[no change]</i>	<i>[no change]</i>	

<i>1.2.2. Rationale and Union added value</i>	<i>1.2.2. Rationale and Union added value</i>	<i>1.2.2. Rationale and Union added value</i>	
Nanotechnologies are a spectrum of evolving technologies with proven potential, having revolutionary impact in for example materials, ICT, life sciences and healthcare and consumer goods once the research is translated into breakthrough products and production processes.	Nanotechnologies are a spectrum of evolving technologies with proven potential, having revolutionary impact in for example materials, ICT, manufacturing , life sciences and healthcare and consumer goods once the research is translated into breakthrough, sustainable and competitive products and production processes.	Nanotechnologies are a spectrum of evolving technologies with proven potential, having revolutionary impact in for example materials, ICT, transport mobility , life sciences and , healthcare, treatment and consumer goods once the research is translated into breakthrough products and production processes.	
Nanotechnologies have a critical role to play in addressing the challenges identified by the Europe 2020 strategy for smart, sustainable and inclusive growth. The successful deployment of these key enabling technologies will contribute to the competitiveness of Union industry by enabling novel and improved products or more efficient processes and provide responses to future challenges.	<i>[no change]</i>	Nanotechnologies have a critical role to play in addressing the challenges identified by the Europe 2020 strategy for smart, sustainable and inclusive growth. The successful deployment of these key enabling technologies will contribute to the competitiveness of Union industry by enabling novel and improved products or more efficient processes and provide responses to today's and future societal challenges.	

<p>The global research funding for nanotechnologies has doubled from around EUR 6.5 billion in 2004 to around EUR 12.5 billion in 2008, with the Union accounting for about a quarter of this total. The Union has recognised research leadership in nanosciences and nanotechnologies with a projection of some 4000 companies in the Union by 2015.</p>	<p><i>[no change]</i></p>	<p>The global research funding for nanotechnologies has doubled from around EUR 6.5 billion in 2004 to around EUR 12.5 billion in 2008, with the Union accounting for about a quarter of this total. The Union has recognised research leadership in nanosciences and nanotechnologies with a projection of some 4000 companies in the Union by 2015. This research leadership must be maintained and amplified and further translated into practical use and commercialisation.</p>	
<p>Europe now needs to secure and build on its position in the global market by promoting wide scale cooperation in and across many different value chains and between different industrial sectors to realise the process scale-up of these technologies into viable commercial products. The issues of risk assessment and management as well as responsible governance are emerging as determining factors of future impact of nanotechnologies on society and the economy.</p>	<p>Europe now needs to secure and build on its position in the global market by promoting wide scale cooperation in and across many different value chains and between different industrial sectors to realise the process scale-up of these technologies into safe, sustainable and viable commercial products. The issues of risk assessment and management as well as responsible governance are emerging as determining factors of future impact of nanotechnologies on society and the economy.</p>	<p>Europe now needs to secure and build on its position in the global market by promoting wide scale cooperation in and across many different value chains and between different industrial sectors to realise the process scale-up of these technologies into viable commercial products. The issues of risk assessment and management as well as responsible governance are emerging as determining factors of future impact of nanotechnologies on society, the environment and the economy.</p>	

Thus, the focus of activities shall be on the widespread and responsible application of nanotechnologies into the economy, to enable benefits with high societal and industrial impact. To ensure the potential opportunities, including setting-up new companies and generating new jobs, research should provide the necessary tools to allow for standardisation and regulation to be correctly implemented.	Thus, the focus of activities shall be on the widespread and responsible and sustainable application of nanotechnologies into the economy, to enable benefits with high societal and industrial impact. To ensure the potential opportunities, including setting-up new companies and generating new jobs, research should provide the necessary tools to allow for standardisation and regulation to be correctly implemented.	[no change]	
<i>1.2.3. Broad lines of the activities</i>	<i>1.2.3. Broad lines of the activities</i>	<i>1.2.3. Broad lines of the activities</i>	
(a) Developing next generation nanomaterials, nanodivices and nanosystems	a) Developing next generation nanomaterials, nanodivices-and nanosystems	[no change]	
Aiming at fundamentally new products enabling sustainable solutions in a wide range of sectors.	Aiming at fundamentally new products enabling sustainable solutions in a wide range of sectors, taking into account the precautionary principle.	[no change]	
(b) Ensuring the safe development and application of nanotechnologies	(b) Ensuring the safe and secure development and application of nanotechnologies	(b) Ensuring the safe and sustainable development and application of nanotechnologies	

Advancing scientific knowledge of the potential impact of nanotechnologies and nanosystems on health or on the environment, and providing tools for risk assessment and management along the entire life cycle.	Advancing scientific knowledge of the potential impact of nanotechnologies and nanosystems on health or on the environment, and providing tools for risk assessment and management along the entire life cycle.	Advancing scientific knowledge of the potential impact of nanotechnologies and nanosystems on health or on the environment, and providing tools for risk assessment and management along the entire life cycle, including standardisation issues.	
	<i>(ba) Developing new tools for designing, simulation, characterization and manipulations of nanomaterials, components and systems.</i>		
	<i>Aiming at studying, imaging and controlling the new nanomaterials and systems at the nanoscale.</i>		
(c) Developing the societal dimension of nanotechnology	<i>[no change]</i>	<i>[no change]</i>	
Focusing on governance of nanotechnology for societal benefit.	Focusing on governance of nanotechnology for societal benefit, and assessing the social acceptability and relevance of specific applications.	Focusing on governance of nanotechnology for societal and environmental benefit: including communication strategies to ensure social engagement.	

(d) Efficient synthesis and manufacturing of nanomaterials, components and systems	<i>[no change]</i>	(d) Efficient and sustainable synthesis and manufacturing of nanomaterials, components and systems	
Focusing on new operations, smart integration of new and existing processes, as well as up-scaling to achieve mass production of products and multi-purpose plants that ensures the efficient transfer of knowledge into industrial innovation.	Focusing on new operations, smart integration of new and existing processes, as well as up-scaling to achieve mass production of products and multi-purpose flexible plants that ensures the efficient transfer of knowledge into industrial innovation.	Focusing on new operations, smart integration of new and existing processes, including technology convergence such as nanobiotechnology as well as up-scaling to achieve mass high precision large scale production of products and multi-purpose plants that ensures the efficient transfer of knowledge into industrial innovation.	
(e) Developing capacity-enhancing techniques, measuring methods and equipment	<i>[no change]</i>	(e) Developing and standardisation of capacity-enhancing techniques, measuring methods and equipment	
Focusing on the underpinning technologies supporting the development and market introduction of complex nanomaterials and nanosystems.	<i>[no change]</i>	Focusing on the underpinning technologies supporting the development and market introduction of safe complex nanomaterials and nanosystems	

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
1.3. Advanced materials	<u>AMD 129</u> 1.3. Advanced materials	1.3. Advanced materials	
<i>1.3.1. Specific objective for advanced materials</i>	<i>1.3.1. Specific objective for advanced materials</i>	<i>1.3.1. Specific objective for advanced materials</i>	
The specific objective of advanced materials research and innovation is to develop materials with new functionalities and improved in-service performance, for more competitive products that minimise the impact on the environment and the consumption of resources.	The specific objective of advanced materials research and innovation is to develop materials with new functionalities and improved in-service performance, for more competitive products that <u>are more accessible to consumers and</u> minimise the impact on the environment and the consumption of resources <u>and improve safety and security.</u>	[no change]	
Materials are at the core of industrial innovation and are key enablers. Advanced materials with higher knowledge content, new functionalities and improved performance are indispensable for industrial competitiveness and sustainable development across a range of applications and sectors	[no change]	Materials are at the core of industrial innovation and are key enablers. Advanced materials with higher knowledge content, new functionalities and improved performance are indispensable for industrial competitiveness and sustainable development across a broad range of applications and sectors	

<i>1.3.2. Rationale and Union added value</i>	<i>1.3.2. Rationale and Union added value</i>	<i>1.3.2. Rationale and Union added value</i>	
New advanced materials are needed in developing better performing and sustainable products and processes. Such materials are a part of the solution to our industrial and societal challenges, offering better performance in their use, lower resource and energy requirements, and sustainability at the end-of-life of the products	New advanced materials are needed in developing better performing and sustainable products and processes and for substituting scarce resources . Such materials are a part of the solution to our industrial and societal challenges, offering better performance in their use, lower resource and energy requirements, and sustainability at the end-of-life of the products.	New advanced materials are needed in developing better performing and sustainable products and processes. Such materials are a part of the solution to our industrial and societal challenges, offering better performance in their use, lower resource and energy requirements, and sustainability at during the end-of-entire life-cycle of the products.	
Application-driven development often involves the design of totally new materials, with the ability to deliver planned in-service performances. Such materials are an important element in the supply chain of high value manufacturing. They are also the basis for progress in cross-cutting technology areas (for example biosciences, electronics and photonics), and in virtually all market sectors. The materials themselves represent a key step in increasing the value of products and their performance. The estimated value and impact of advanced materials is significant, with an annual growth rate of about 6 % and expected market size of the order of EUR 100 billion by 2015.	[no change]	Application-driven development often involves the design of totally new materials, with the ability to deliver planned in-service performances. Such materials are an important element in the supply chain of high value manufacturing. They are also the basis for progress in cross-cutting technology areas (for example health care technologies , biosciences, electronics and photonics), and in virtually all market sectors. The materials themselves represent a key step in increasing the value of products and their performance. The estimated value and impact of advanced materials is significant, with an annual growth rate of about 6 % and expected market size of the order of EUR 100 billion by 2015.	

Materials shall be conceived according to a full life-cycle approach, from the supply of available materials to end of life (cradle to cradle), with innovative approaches to minimise the resources required for their transformation. Continuous use, recycling or secondary end-of-life utilisation of the materials shall also be covered as well as related societal innovation.	[no change]	Materials shall be conceived according to a full life-cycle approach, from the supply of available materials to end of life (cradle to cradle), with innovative approaches to minimise the resources (including energy) required for their transformation or to minimise negative impacts for humans and the environment . Continuous use, recycling or secondary end-of-life utilisation of the materials shall also be covered as well as related societal innovation-, such as changes in consumer behaviour and new business models .	
To accelerate progress, a multidisciplinary and convergent approach shall be fostered, involving chemistry, physics, engineering sciences, theoretical and computational modelling, biological sciences and increasingly creative industrial design.	To accelerate progress, a multidisciplinary and convergent approach benefitting from world leading European research infrastructure shall be fostered, involving chemistry, physics, engineering sciences, theoretical and computational modelling, biological sciences and increasingly creative industrial design.	[no change]	
Novel green innovation alliances and industrial symbiosis shall be fostered allowing industries to diversify, expand their business models, re-using their waste as a basis for new productions, e.g. CO ₂ as carbon base for fine chemicals and alternative fuels.	Novel green innovation alliances and industrial symbiosis shall be fostered allowing industries to diversify, expand their business models, re-using their waste as a basis for new productions, e.g. CO₂ as carbon base for fine chemicals and alternative fuels .	[no change]	

<i>1.3.3. Broad lines of the activities</i>	<i>1.3.3. Broad lines of the activities</i>	<i>1.3.3. Broad lines of the activities</i>	
(a) Cross-cutting and enabling materials technologies	<i>[no change]</i>	<i>[no change]</i>	
Research on functional materials, multifunctional materials and structural materials, for innovation in all industrial sectors.	<i>[no change]</i>	Research on materials by design , functional materials, multifunctional materials with higher knowledge content, new functionalities and improved performance , and structural materials, for innovation in all industrial sectors, including the creative industries .	
(b) Materials development and transformation	<i>[no change]</i>	<i>[no change]</i>	
Research and development to ensure efficient and sustainable scale up to enable industrial manufacturing of future products	Research and development to ensure efficient and sustainable scale up to enable industrial manufacturing of smart future products	Research and development to ensure efficient, safe and sustainable development and scale up to enable industrial manufacturing of future design based products towards a "no-waste" management of materials in Europe .	
(c) Management of materials components	<i>[no change]</i>	<i>[no change]</i>	
Research and development for new and innovative techniques and systems.	Research and development for new and innovative production techniques for materials, components and systems.	<i>[no change]</i>	

(d) Materials for a sustainable and low-carbon industry	<i>[no change]</i>	(d) Materials for a sustainable, resource-efficient and low-carbon emission industry	
Developing new products and applications, and consumer behaviour that reduce energy demand, and facilitate low-carbon production.	Developing new materials, components, business models and responsible consumer behaviour , products and applications, and consumer behaviour that reduce energy demand and facilitate low-carbon production.	Developing new products and applications, business models and responsible consumer behaviour that reduce energy demand, and facilitate low-carbon production.	
	<i>(da) New raw materials for the chemical industry and carbon usage</i>		
	<i>Activities shall focus on the development of an alternative feedstock basis for the chemical industry to environmentally friendly substitute petroleum as carbon source in the medium and long term, as well as CCU systems and technologies to convert CO2 into products.</i>		
(e) Materials for creative industries	<i>[no change]</i>	(e) Materials for creative industries Preserving and making the best use of European heritage	
Applying design and the development of converging technologies to create new business opportunities, including the preservation of materials with historical or cultural value.	Applying design and the development of converging technologies to create new business opportunities, including the preservation and restoration of materials with historical or cultural value, as well as novel materials .	<i>[no change]</i>	

(f) Metrology, characterisation, standardisation and quality control	(f) Metrology, characterisation, standardisation, certification and quality control	<i>[no change]</i>	
Promoting technologies such as characterisation, non-destructive evaluation and predictive modelling of performance for progress in materials science and engineering.	Promoting technologies such as characterisation, non-destructive evaluation, continuous assessing and monitoring and predictive modelling of performance for progress in materials science and engineering.	Promoting technologies such as characterisation, non-destructive evaluation and predictive modelling of performance for progress and impact in materials science and engineering.	
(g) Optimisation of the use of materials	<i>[no change]</i>	<i>[no change]</i>	
Research and development to investigate alternatives to the use of materials and innovative business model approaches.	Research and development to investigate substitution and alternatives to the use of materials and innovative business model approaches and identification of critical resources .	Research and development to investigate alternatives to the use of materials, including contributing to solving the challenge of raw materials , and innovative business model approaches.	

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
1.4. Biotechnology	AMD 130 1.4. Biotechnology	1.4. Biotechnology	
<i>1.4.1. Specific objective for biotechnology</i>	<i>1.4.1. Specific objective for biotechnology</i>	<i>1.4.1. Specific objective for biotechnology</i>	
The specific objective of biotechnology research and innovation is to develop competitive, sustainable and innovative industrial products and processes and contribute as an innovation driver in a number of European sectors like agriculture, food, chemical and health.	The specific objective of biotechnology research and innovation is to develop competitive, sustainable, <u>safe</u> and <u>secure</u> , <u>and</u> innovative industrial products and processes and contribute as an innovation driver in a number of European sectors like <u>health</u> , <u>chemical</u> , <u>energy</u> , agriculture, <u>forestry and</u> food, chemical and <u>health</u> .	The specific objective of biotechnology research and innovation is to develop competitive, sustainable and innovative industrial products and processes and contribute as an innovation driver in a number of European sectors, like agriculture, <u>forestry</u> , food, chemical and health <u>as well as the knowledge-based bio-economy</u> .	
A strong scientific, technological and innovation base in biotechnology, will support European industries securing leadership in this key enabling technology. This position will be further strengthened by integrating the safety assessment and management aspects of the overall risks in the deployment of biotechnology.	A strong scientific, technological and innovation base in biotechnology, will support European industries securing leadership in this key enabling technology. This position will be further strengthened by integrating the <u>health and</u> safety assessment, <u>the economic and environmental impact of use of the technology and the</u> management aspects of the overall <u>and specific</u> risks in the deployment of biotechnology.	[no change]	

<i>1.4.2. Rationale and Union added value</i>	<i>1.4.2. Rationale and Union added value</i>	<i>1.4.2. Rationale and Union added value</i>	
Powered by the expansion of the knowledge of living systems, biotechnology is set to deliver a stream of new applications and to strengthen the Union's industrial base and its innovation capacity. Examples of the rising importance of biotechnology are in industrial applications including bio-chemicals, of which the market share is estimated to increase by up to 12 %-20 % of chemical production by 2015. A number of the so-called twelve rules of <i>Green Chemistry</i> are also addressed by biotechnology, due to the selectivity and efficiency of bio-systems. The possible economic burdens for Union enterprises can be reduced by harnessing the potential of biotechnology processes and bio-based products to reduce CO ₂ emissions, estimated to range from between 1 to 2.5 billion tons CO ₂ equivalent per year by 2030.	Powered by the expansion of the knowledge of living systems, biotechnology is set to deliver a stream of new applications and to strengthen the Union's industrial base and its innovation capacity. Examples of the rising importance of biotechnology are in industrial and agricultural biopharmaceuticals, food and feed production , bio-chemicals, of which the market share is estimated to increase by up to 12 %-20 % of chemical production by 2015. A number of the so-called twelve rules of <i>Green Chemistry</i> are also addressed by biotechnology, due to the selectivity and efficiency of bio-systems. The possible economic burdens for Union enterprises can be reduced by harnessing the potential of biotechnology processes and bio-based products to reduce CO ₂ emissions, estimated to range from between 1 to 2.5 billion tons CO ₂ equivalent per year by 2030.	Powered by the expansion of the knowledge of living systems, biotechnology is set to deliver a stream of new applications and to strengthen the Union's industrial base and its innovation capacity. Examples of the rising importance of biotechnology are in industrial applications including biopharmaceuticals and bio-chemicals , of which the market share of the latter is estimated to increase by up to 12 %-20 % of chemical production by 2015. A number of the so-called twelve rules of <i>Green Chemistry</i> are also addressed by biotechnology, due to the selectivity and efficiency of bio-systems. The possible economic burdens for Union enterprises can be reduced by harnessing the potential of biotechnology processes and bio-based products to reduce CO ₂ emissions, estimated to range from between 1 to 2.5 billion tons CO ₂ equivalent per year by 2030.	

<p>In Europe's biopharmaceutical sector, already some 20 % of the current medicines are derived from biotechnology, with up to 50 % of new medicines. Biotechnology also opens new avenues for exploiting the huge potential of marine resources for producing innovative industrial, health and environmental applications. The emerging sector of marine (blue) biotechnology has been predicted to grow by 10 % a year.</p>	<p>In Europe's biopharmaceutical sector, already some 20 % of the current medicines are derived from biotechnology, with up to 50 % of new medicines. Biotechnology also opens new avenues for exploiting the huge potential of marine resources for producing innovative industrial, health, energy, chemical and environmental applications. The emerging sector of marine (blue) biotechnology has been predicted to grow by 10 % a year.</p>	<p>In Europe's biopharmaceutical sector, already some 20 % of the current medicines are derived from biotechnology, with up to 50 % of new medicines. Biotechnology will play a major role in the transition towards a bio-based economy by developing new industrial processes. Cutting edge technologies such as synthetic biology hold promise for sustainable and carbon neutral fuels, production of fine chemicals including pharmaceuticals, environment-friendly production methods, new health applications and bionanomaterials. Biotechnology also opens new avenues for the development of a sustainable agriculture, aquaculture and forestry and for exploiting the huge potential of marine resources for producing innovative industrial, health and environmental applications. The emerging sector of marine (blue) biotechnology has been predicted to grow by 10 % a year.</p>	
<p>Other key sources of innovation are at the interface between biotechnology and other enabling and converging technologies, in particular nanotechnologies and ICT, with applications such as sensing and diagnosing.</p>	<p><i>[no change]</i></p>	<p><i>[no change]</i></p>	

<i>1.4.3. Broad lines of the activities</i>	<i>1.4.3. Broad lines of the activities</i>	<i>1.4.3. Broad lines of the activities</i>	
(a) Boosting cutting-edge biotechnologies as a future innovation driver	(a) Boosting sustainable cutting-edge biotechnologies as a future innovation driver	[no change]	
Development of emerging technology areas such as synthetic biology, bioinformatics and systems biology, which hold great promise for completely novel applications.	Development of emerging technology areas such as synthetic systems , bioinformatics and synthetic biology and systems biology, which hold great promise for completely novel products , applications and technologies, taking into account the precautionary principle.	[no change]	
(b) Biotechnology-based industrial processes	(b) Biotechnology-based industrial products and processes	[no change]	
Developing industrial biotechnology for competitive industrial products and processes (e.g. chemical, health, mining, energy, pulp and paper, textile, starch, food processing) and its environmental dimension.	Developing industrial biotechnology for competitive industrial, materials , products and sustainable processes (e.g.chemicals, health, mining, energy, pulp and paper, fiber based products and wood textile, starch, food processing) and its environmental and health related dimension.	Developing industrial biotechnology and industrial scale bio-process design for competitive industrial products and processes (e.g. chemical, health, mining, energy, pulp and paper, fiber-based products and wood , textile, starch, food processing) and its environmental dimension, including clean up operations.	
(c) Innovative and competitive platform technologies	[no change]	[no change]	

Development of platform technologies (e.g. genomics, meta-genomics, proteomics, molecular tools) to enhance leadership and competitive advantage in a wide number of economic sectors.	Development of platform technologies (e.g. systems biology genomics, meta-genomics, proteomics, phenomics , molecular tools and cell-based platforms) to enhance leadership and competitive advantage in a wide number of economic sectors having economic impact. This approach can further advance the potential of novel SMEs significantly.	Development of platform technologies (e.g. genomics, meta-genomics, proteomics, metabolomics , molecular tools, expression systems, phenotyping platforms) to enhance leadership and competitive advantage in a wide number of economic sectors.	
	<i>(ca) Environmental, societal and ethical concerns</i>		
	<i>Development of assessment processes including broad consultation of stakeholders to take account of environmental, societal and ethical concerns with regard to certain types of technologies.</i>		

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
1.5. Advanced manufacturing and processing	AMD 131 1.5. Advanced manufacturing and processing	1.5. Advanced manufacturing and processing	
<i>1.5.1. Specific objective</i>	<i>1.5.1. Specific objective</i>	<i>1.5.1. Specific objective</i>	
The specific objective of advanced manufacturing and processing research and innovation is to transform today's industrial forms of production towards more knowledge intensive, sustainable, trans-sectoral manufacturing and processing technologies, resulting in more innovative products, processes and services.	The specific objective of advanced manufacturing and processing research and innovation is to transform today's industrial forms of production towards <u>manufacturing enterprises, systems and processes by leveraging key enabling technologies in order to achieve</u> more knowledge intensive, sustainable, <u>resource and energy efficient</u> trans-sectoral manufacturing and processing technologies, resulting in more innovative <u>safe and secure</u> products, processes and services.	The specific objective of advanced manufacturing and processing research and innovation is to transform today's industrial forms of production towards more knowledge intensive, sustainable, trans-sectoral manufacturing and processing technologies, resulting in more innovative products, processes and services. <u>By enabling new, sustainable products, processes and services and their competitive deployment, advanced manufacturing and processing are also essential for achieving the objectives of the societal challenges.</u>	

<i>1.5.2. Rationale and Union added value</i>	<i>1.5.2 Rationale and Union added value</i>	<i>1.5.2. Rationale and Union added value</i>	
The manufacturing sector is of high importance to the European economy, contributing to around 17 % of GDP and accounting for some 22 million jobs in the Union in 2007. With the lowering of economic barriers to trade and the enabling effect of communications technology, manufacturing is subject to strong competition and has been gravitating to countries of lowest overall cost. Due to high wages, the European approach to manufacturing therefore has to change radically to remain globally competitive and Horizon 2020 can help bring together all the relevant stakeholders to achieve this.	The manufacturing sector is of high importance to the European economy, contributing to around 17 % of GDP and accounting for some 22 million jobs in the Union in 2007. With the lowering of economic barriers to trade and the enabling effect of communications technology, manufacturing is subject to strong competition and has been gravitating to countries of lowest overall cost. Due to high wages, The European approach to manufacturing therefore has to change radically to remain globally competitive and Horizon 2020 can help bring together all the relevant stakeholders to achieve this.	<i>[no change]</i>	

<p>Europe needs to continue to invest at an Union level to maintain European leadership and competence in manufacturing technologies and make the transition to high-value, knowledge-intensive goods, creating the conditions and assets for sustainable, production and provision of lifetime service around a manufactured product. Resource intensive manufacturing and process industries need to further mobilise resources and knowledge at Union level and continue to invest in research, development and innovation to enable further progress towards a competitive low carbon economy and to comply with the agreed Union wide reductions in greenhouse gas emissions by 2050 for industrial sectors²⁴.</p> <hr/> <p>²⁴ COM(2011) 112 final.</p>	<p>Europe needs to continue to invest at an Union level to maintain European leadership and competence in manufacturing technologies and make the transition to high-value, knowledge-intensive goods, creating the conditions and assets for sustainable, production and provision of lifetime service around a manufactured product. Resource intensive manufacturing and process industries need to further mobilise resources and knowledge at Union level and continue to invest in research, development and innovation to enable further progress towards a competitive low carbon <i>and resource efficient</i> economy and to comply with the agreed Union wide reductions in greenhouse gas emissions by 2050 for industrial sectors.</p>	<p>Europe needs to continue to invest increase the investment at an Union level to maintain European leadership and competence in manufacturing technologies and make the transition to high-value, knowledge-intensive goods, creating the conditions and assets for sustainable, production and provision of lifetime service around a manufactured product. Resource intensive manufacturing and process industries need to further mobilise resources and knowledge at Union level and continue to invest increase the investment in research, development and innovation to enable further progress towards a competitive low carbon, resource-efficient and sustainable economy and to comply with the agreed Union wide reductions in greenhouse gas emissions by 2050 for industrial sectors²⁴⁸.</p> <hr/> <p>²⁴⁸ COM(2011) 112 final.</p>	
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With strong Union policies, Europe would grow its existing industries and nurture the emerging industries of the future. The estimated value and impact of the sector of advanced manufacturing systems is significant, with an expected market size around EUR 150 billion by 2015 and compound annual growth rate of about 5 %.	<i>[no change]</i>	<i>[no change]</i>	
It is crucial to retain knowledge and competence in order to keep manufacturing and processing capacity in Europe. The emphasis of the research and innovation activities shall be on sustainable manufacturing and processing, introducing the necessary technical innovation and customer-orientation to produce high knowledge content products and services with low material and energy consumption. Europe also needs to transfer these enabling technologies and knowledge to other productive sectors, such as construction, which is a major source of greenhouse gases (GHG) with building activities accounting for around 40 % of all energy consumption in Europe, giving rise to 36 % of the CO ₂ emissions. The construction sector, generating 10 % of GDP and providing some 16 million jobs in Europe in 3 million enterprises, of which 95 % are SMEs, needs to adopt innovative materials and manufacturing approaches to mitigate its environmental impact.	<i>[no change]</i>	It is crucial to retain knowledge and competence in order to keep manufacturing and processing capacity in Europe. The emphasis of the research and innovation activities shall be on sustainable and safe manufacturing and processing, introducing the necessary technical innovation and customer-orientation to produce high knowledge content products and services with low material and energy consumption. Europe also needs to transfer these enabling technologies and knowledge to other productive sectors, such as construction, which is a major source of greenhouse gases (GHG) with building activities accounting for around 40 % of all energy consumption in Europe, giving rise to 36 % of the CO ₂ emissions. The construction sector, generating 10 % of GDP and providing some 16 million jobs in Europe in 3 million enterprises, of which 95 % are SMEs, needs to adopt innovative materials and manufacturing approaches to mitigate	

		its environmental impact.	
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<i>1.5.3. Broad lines of the activities</i>	<i>1.5.3. Broad lines of the activities</i>	<i>1.5.3. Broad lines of the activities</i>	
(a) Technologies for Factories of the Future	<i>[no change]</i>	<i>[no change]</i>	
Promoting sustainable industrial growth by facilitating a strategic shift in Europe from cost-based manufacturing to an approach based on the creation of high added value.	Promoting sustainable industrial growth by facilitating a strategic shift in Europe from cost-based manufacturing to an approach based on the creation of high added value and resource efficiency .	Promoting sustainable industrial growth by facilitating a strategic shift in Europe from cost-based manufacturing to an approach based on the creation of high added value- products and ICT-enabled intelligent and high performance manufacturing in an integrated system.	
(b) Technologies enabling Energy-efficient buildings	(b) Technologies enabling Energy-efficient, low environmental impact buildings	(b) Technologies enabling Energy-efficient buildings and systems	
Reducing energy consumption and CO ₂ emissions by the development and deployment of sustainable construction technologies.	Reducing energy consumption and CO ₂ emissions by the research, development and deployment of sustainable construction, addressing the whole value chain, automation and control technologies as well as reducing the overall environmental impact of buildings.	Reducing energy consumption and CO ₂ emissions by the development and deployment of sustainable construction technologies and systems.	
(c) Sustainable and low-carbon technologies in energy-intensive process industries	(c) Sustainable, low-environmental-impact and low-carbon technologies in energy-intensive and resource-intensive process industries	(c) Sustainable, resource-efficient and low-carbon technologies in energy-intensive process industries	

Increasing the competitiveness of process industries, by drastically improving resource and energy efficiencies and reducing the environmental impact of such industrial activities through the whole value chain, promoting the adoption of low-carbon technologies.	Increasing the competitiveness of process industries, by drastically improving resource and energy efficiencies and reducing the environmental impact of such industrial activities through the whole value chain, promoting the adoption of low-carbon technologies, <i>including the integration of renewable energy sources and smart, advanced control systems technologies and the uptake of alternative, more sustainable industrial processes.</i>	[no change]	
(d) New sustainable business models	[no change]	[no change]	
Deriving concepts and methodologies for adaptive, 'knowledge-based' business models in customised approaches.	Deriving concepts and methodologies for adaptive, 'knowledge-based' business models in customised approaches. <i>Support to development of novel eco-innovation business models and alternative resource-productive approaches.</i>	[no change]	

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
1.6. Space	AMD 132 1.6. Space	1.6. Space	
<i>1.6.1. Specific objective for space</i>	<i>1.6.1. Specific objective for space</i>	<i>1.6.1. Specific objective for space</i>	
The specific objective of space research and innovation is to foster a competitive and innovative space industry and research community to develop and exploit space infrastructure to meet future Union policy and societal needs.	The specific objective of space research and innovation is to foster a competitive and innovative space industry and research community to develop and exploit space infrastructure, <i>applications and services</i> to meet future Union policy and societal needs.	The specific objective of space research and innovation is to foster a <u>cost-effective</u> competitive and innovative space industry <u>(including SMEs)</u> and research community to develop and exploit space infrastructure to meet future Union policy and societal needs.	
Strengthening the European space sector by boosting space research and innovation is vital to maintain and safeguard Europe's capability of access to and operations in space in support of Union policies, international strategic interests and competitiveness amongst established and emerging space faring nations	Strengthening the European <i>public and private</i> , space sector by boosting space research and innovation, <i>earth observation, navigation, science and exploration</i> is vital to maintain and safeguard Europe's capability of access to and operations in space in support of Union policies, international strategic interests and competitiveness amongst established and emerging space faring nations <i>and companies. Activities shall be developed and implemented in a complementary way between the Union, European Space Agency (ESA) and the Member States.</i>	Strengthening the European space sector by boosting space research and innovation is vital to maintain and safeguard Europe's capability of access to and operations in use space in support of Union policies, international strategic interests and competitiveness amongst established and emerging space faring nations.	

<i>1.6.2. Rationale and Union added value</i>	<i>1.6.2. Rationale and Union added value</i>	<i>1.6.2. Rationale and Union added value</i>	
Space is an important, but frequently invisible enabler of diverse services and products crucial to modern day society, such as navigation, communication, weather forecasts, and geographic information. Policy formulation and implementation at European, national and regional levels increasingly depend on space-derived information. The global space sector is rapidly growing and expanding into new regions (e.g. China, South America). European industry is at present a considerable exporter of first class satellites for commercial and scientific purposes. Increasing global competition is challenging Europe's position in this area.	Space is an important, but frequently invisible enabler of diverse services and products crucial to modern day society, such as navigation and communication, as well as weather forecasts, and geographic information derived from Earth Observation by satellites . Policy formulation and implementation at European, national and regional levels increasingly depend on space-derived information. The global space sector is rapidly growing and expanding into new regions (e.g. China, South America and Africa). European industry is at present a considerable exporter of first class satellites for commercial and scientific purposes. Increasing global competition is challenging Europe's position in this area.	Space is an important, but frequently invisible enabler of diverse services and products crucial to modern day society, such as navigation; and communication, as well as weather forecasts; and geographic information- derived from Earth Observation by satellites . Policy formulation and implementation at European, national and regional levels increasingly depend on space-derived information. The global space sector is rapidly growing and expanding into new regions (e.g. China, South America). European industry is at present a considerable exporter of first class satellites for commercial and scientific purposes. Increasing global competition is challenging Europe's position in this area.	

Thus Europe has an interest in ensuring that its industry continues to thrive in this fiercely competitive market In addition, data from European science satellites have resulted in some of the most significant scientific breakthroughs in the last decades in Earth sciences and astronomy. With this unique capacity, the European space sector has a critical role to play in addressing the challenges identified by Europe 2020.	Thus Europe has an interest in ensuring that its industry continues to thrive in this fiercely competitive market In addition, data from European science satellites have resulted in some of the most significant scientific breakthroughs in the last decades in Earth sciences, <i>fundamental physics</i> and astronomy. With this unique capacity, the European space sector has a critical role to play in addressing the challenges identified by Europe 2020.	Thus Europe has an interest in ensuring that its industry continues to thrive in this fiercely competitive market In addition, data from European science satellites and probes have resulted in some of the most significant scientific breakthroughs in the last decades in Earth sciences and, fundamental physics, astronomy and planetology. In addition, innovative space technologies, e.g. robotics have contributed to the progress of knowledge and technology in Europe. With this unique capacity, the European space sector has a critical role to play in addressing the challenges identified by Europe 2020.	
Research, technology development and innovation underpin capacities in space which are vital to European society. While the United States of America spends around 25 % of their space budget on R&D, the Union spends less than 10 %. Moreover, space research in the Union is fragmented in the national programmes of a few Member States.	Research, technology development and innovation underpin capacities in space which are vital to European society. While the United States of America spends around 25 % of their space budget on R&D, the Union spends less than 10 %. Moreover, space research in the Union is fragmented addressed in the national programmes of a few the Member States and the ESA programmes.	Research, technology development and innovation underpin capacities in space which are vital to European society. While the United States of America spends around 25 % of their space budget on R&D, the Union spends less than 10 %. Moreover, space research in the Union is fragmented addressed in the national programmes of a few Member States, ESA programmes and the EU Seventh Framework Programme.	

<p>To maintain the technological and competitive edge Union level action is needed to coordinate space research, to promote the participation of researchers from all Member States, and to lower the barriers for collaborative space research projects across national borders. This needs to be done in coordination with the European Space Agency, which has successfully managed industrial satellite development and deep space missions on an intergovernmental basis with a subset of the Member States since 1975.</p>	<p><i>[no change]</i></p>	<p>To maintain the Europe's technological and competitive edge and to capitalise on investments, Union level action is needed to coordinate space research, to promote the participation of researchers from all Member States, and to lower the barriers for collaborative space research projects across national borders. This needs to be done in coordination conjunction with the European Space Agency space research activities of the Member States and ESA, which has successfully managed industrial satellite development and deep space missions on an intergovernmental basis with a subset of for the ESA Member States since 1975. Union level action is also needed to promote the participation of the best researchers from all Member States, and to lower the barriers for collaborative space research projects across national borders.</p>	
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<p>In addition, the information provided by European satellites will offer an increasing potential for further development of innovative satellite-based downstream services. This is a typical activity sector for SMEs and should be supported by research and innovation measures in order to reap the full benefits of this opportunity, and especially of the considerable investments made on the two Union flagships Galileo and GMES.</p>	<p>In addition, the information provided by European satellites will offer an increasing potential for further development of innovative satellite-based downstream services. This is a typical activity sector for SMEs and should be supported by research and innovation measures in order to reap the full benefits of this opportunity, and especially of the considerable investments made on the two Union flagships Galileo and GMES <i>but also in the electronic communications sector which shall contribute to achieving the targets of the Union's Digital Agenda.</i></p>	<p>[no change]</p>	
<p>Space naturally transcends terrestrial boundaries, providing a unique vantage point of global dimension, thus giving rise to large scale projects which (e.g. International Space Station, Space Situational Awareness) are carried out in international co-operation. To play a significant role in such international space activities in the next decades, both a common European space policy and European level space research and innovation activities are indispensable.</p>	<p>[no change]</p>	<p>Space naturally transcends terrestrial boundaries, providing a unique vantage point of global dimension, thus giving rise to large scale projects which (e.g. International Space Station, Space Situational Awareness) are carried out in international co-operation. To play a significant role in such international space activities in the next decades, both a common European space policy and European level space research and innovation activities are indispensable.</p>	

<p>Space research and innovation under Horizon 2020 aligns with the Union space policy priorities as they continue to be defined by the Union Space Councils and the European Commission²⁵.</p> <hr/> <p>²⁵ COM(2011) 152.</p>	<p>Space research and innovation under Horizon 2020 aligns with the Union space policy priorities <i>and the needs of the European operational programmes</i> as they continue to be defined by the Union Space Councils and the European Commission.</p>	<p>Space research and innovation under Horizon 2020 aligns with the Union space policy priorities and the needs of the European operational programmes as they continue to be defined by the Union Space Councils and the European Commission²⁵⁹.</p> <hr/> <p>²⁵⁹ COM(2011) 152.</p>	
		<p>The application of space technologies shall be supported through the respective Societal Challenges, where appropriate.</p>	

<i>1.6.3. Broad lines of the activities</i>	<i>1.6.3. Broad lines of the activities</i>	<i>1.6.3. Broad lines of the activities</i>	
(a) Enabling European competitiveness, non-dependence and innovation of the European space sector	<i>[no change]</i>	<i>[no change]</i>	
This entails safeguarding and developing a competitive and entrepreneurial space industry in combination with a world-class space research community to maintain European leadership and non-dependence in space technology, to foster innovation in the space sector, and to enable space-based terrestrial innovation, for example by using remote sensing and navigation data.	This entails safeguarding and further developing a competitive, sustainable and entrepreneurial space industry in combination with a world-class space research community to maintain and strengthen European leadership by ensuring the availability of needed technologies - with appropriate maturity, the required level of non-dependence, and at competitive conditions - and to maintain and strengthen non-dependence in strategic subsectors such as access to space technology or critical technologies including clean solutions , to foster innovation in the space sector, and to enable space-based terrestrial innovation, for example by using remote sensing and navigation data.	This entails safeguarding and further developing a competitive and entrepreneurial space industry in combination with a world-class space research community to maintain and strengthen European leadership and non-dependence in space technology , systems to foster innovation in the space sector, and to enable space-based terrestrial innovation, for example by using remote sensing and navigation data.	

(b) Enabling advances in space technologies	<i>[no change]</i>	<i>[no change]</i>	
This aims at developing advanced space technologies and operational concepts from idea to demonstration in space, including navigation and remote sensing, as well as the protection of space assets from threats such as debris and solar flares. To develop and apply advanced space technologies requires the continuous education and training of highly skilled engineers and scientists.	This aims at developing advanced and enabling space technologies and operational concepts from idea to demonstration in space, including navigation and remote sensing, as well as. This includes technologies for the protection of space assets from threats such as debris and solar flares as well as for satellite telecommunications, navigation, electronic communication and remote sensing missions. To develop and apply advanced space technologies requires the continuous education and training of highly skilled engineers and scientists as well as strong links between those and users of space applications.	This aims at developing advanced and enabling space technologies and operational concepts from idea to demonstration in space, including navigation and remote sensing, as well as. This includes technologies supporting access to space, technologies for the protection of space assets from threats such as debris and solar flares, as well as satellite telecommunication, navigation and remote sensing. To develop and apply advanced space technologies requires the continuous education and training of highly skilled engineers and scientists- as well as strong links between them and users of space applications.	

(c) Enabling exploitation of space data	<i>[no change]</i>	<i>[no change]</i>	
<p>A considerably increased exploitation of data from European satellites can be achieved if a concerted effort is made to coordinate and organise the processing, validation and standardisation of space data. Innovations in data handling and dissemination can also ensure a higher return on investment of space infrastructure, and contribute to tackling societal challenges, in particular if coordinated in a global effort such as through Global Earth Observation System of Systems, the European satellite navigation programme Galileo or IPCC for climate change issues.</p>	<p>A considerably increased exploitation of data from European satellites can be achieved if a concerted effort is made to coordinate and organise the processing, validation and standardisation and sustainable availability of space data as well as to support the development of new information products and services resulting from those data. Innovations in data handling and, dissemination and interoperability, in particular promotion of access to and exchange of Earth science data and metadata can also ensure a higher return on investment of space infrastructure, and contribute to tackling societal challenges, in particular if coordinated in a global effort such as through Global Earth Observation System of Systems (GEOSS), namely by fully exploiting the GMES programme as its main European contribution, the European satellite navigation programme Galileo or IPCC for climate change and ocean monitoring issues. A fast introduction of these innovations into the relevant application will be supported. This includes as well the exploitation of data for further scientific investigation. This includes as well the exploitation of data for further scientific investigation.</p>	<p>A considerably increased exploitation of data from European satellites (scientific, public or commercial) can be achieved if a concerted further effort is made to coordinate and organise for the processing, archiving, validation and, standardisation and sustainable availability of space data- as well as to support the development of new information products and services resulting from those data. Innovations in data handling and dissemination can also ensure a higher return on investment of space infrastructure, and contribute to tackling societal challenges, in particular if coordinated in a global effort such as through Global Earth Observation System of Systems (GEOSS), namely by fully exploiting the GMES programme as its main European contribution, the European satellite navigation programme Galileo or IPCC for climate change issues. A fast introduction of these innovations into the relevant application and decision-making processes will be supported. This includes as well the exploitation of data for further scientific investigation.</p>	

(d) Enabling European research in support of international space partnerships	<i>[no change]</i>	<i>[no change]</i>	
Space undertakings have a fundamentally global character. This is particularly clear for activities such as Space Situational Awareness (SSA), and many space science and exploration projects. The development of cutting edge space technology is increasingly taking place within such international partnerships. Ensuring access to these constitutes an important success factor for European researchers and industry.	<i>[no change]</i>	Space undertakings have a fundamentally global character. This is particularly clear for activities such as Space Situational Awareness (SSA), and many space science and exploration projects. The development of cutting edge space technology is increasingly taking place within such international partnerships. Ensuring access to these constitutes an important success factor for European researchers and industry. The definition and implementation of long-term roadmaps and the coordination with international partners are key to this objective.	
	<i>(da) Securing return on investment on Galileo and EGNOS and European leadership in downstream applications</i>		
	<i>European satellite navigation systems, EGNOS and Galileo, are strategic investment of Europe and development of innovative downstream applications is necessary to obtain their socio-economic benefits. Professional applications such as precision agriculture, geodesy, timing and synchronization need to leverage EGNOS and Galileo, in synergy with Earth observation services, to secure European industry</i>		

	<i>leadership.</i>		
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COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
2.ACCESS TO RISK FINANCE	<u>AMD 133</u> 2.ACCESS TO RISK FINANCE	2.ACCESS TO RISK FINANCE	
2.1. SPECIFIC OBJECTIVE	2.1. SPECIFIC OBJECTIVE	2.1. SPECIFIC OBJECTIVE	
The specific objective is to help remedy market deficiencies in accessing risk finance for research and innovation.	<i>no change]</i>	The specific objective is to help remedy address market deficiencies in accessing risk finance for research and innovation.	
The investment situation in the research and innovation (R&I) domain is dire, particularly for innovative SMEs and mid-caps with a high potential for growth. There are several major market gaps in the provision of finance, as the innovations required to achieve policy goals are proving too risky, typically, for the market to bear.	<i>[no change]</i>	The investment situation in the research and innovation (R&I) domain is dire, particularly for innovative SMEs and mid-caps with a high potential for growth. There are several major market gaps in the provision of finance, as the innovations required to achieve policy goals are proving too risky, typically, for the market to bear and therefore the wider benefits to society are not fully captured.	

<p>A facility for debt ('Debt facility') and a facility for equity ('Equity facility') will help overcome such problems by improving the financing and risk profiles of the R&I activities concerned. This, in turn, will ease access by firms and other beneficiaries to loans, guarantees and other forms of risk finance; promote early-stage investment and the development of new venture capital funds; improve knowledge transfer and the market in intellectual property; attract funds to the venture capital market; and, overall, help catalyse the passage from the conception, development and demonstration of new products and services to their commercialisation.</p>	<p><i>[no change]</i></p>	<p>A facility for debt ('Debt facility') and a facility for equity ('Equity facility') will help overcome such problems by improving the financing and risk profiles of the R&I activities concerned. This, in turn, will ease access by firms and other beneficiaries to loans, guarantees and other forms of risk finance; promote early-stage investment and the development of existing and new venture capital funds; improve knowledge transfer and the market in intellectual property; attract funds to the venture capital market; and, overall, help catalyse the passage from the conception, development and demonstration of new products and services to their commercialisation.</p>	
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<p>The overall effect will be to increase the willingness of the private sector to invest in R&I and hence contribute to reaching a key Europe 2020 target: 3 % of Union GDP invested in R&D by the end of the decade. The use of financial instruments will also help achieve the R&I objectives of all sectors and policy areas crucial for tackling societal challenges (such as climate change, energy and resource efficiency, global food security, healthcare provision and an ageing population), for enhancing competitiveness, and for supporting sustainable, inclusive growth and the provision of environmental and other public goods.</p>	<p><i>[no change]</i></p>	<p>The overall effect will be to increase the willingness of the private sector to invest in R&I and hence contribute to reaching a key Europe 2020 target: 3 % of Union GDP invested in R&D by the end of the decade with two-thirds contributed by the private sector. The use of financial instruments will also help achieve the R&I objectives of all sectors and policy areas crucial for tackling the societal challenges (such as climate change, energy and resource efficiency, global food security, healthcare provision and an ageing population), for enhancing competitiveness, and for supporting sustainable, inclusive growth and the provision of environmental and other public goods.</p>	
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COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
2.2. Rationale and Union added value	2.2. Rationale and Union added value	2.2. Rationale and Union added value	
A Union-level Debt facility for R&I is needed to increase the likelihood that loans and guarantees are made and R&I policy objectives achieved. The current gap in the market between the demand for and supply of loans and guarantees for risky R&I investments, addressed by the current Risk-Sharing Finance Facility (RSFF), is likely to persist, with commercial banks remaining largely absent from higher-risk lending. Demand for RSFF loan finance has been high since the launch of the facility in mid-2007: in its first phase (2007-2010), its take-up exceeded initial expectations by more than 50 % in terms of active loan approvals (EUR 7.6 billion versus a forecast EUR 5 billion).	<i>[no change]</i>	<i>[no change]</i>	

Furthermore, banks typically lack the ability to value knowledge assets, such as intellectual property, and therefore are often unwilling to invest in knowledge-based companies. The consequence is that many established innovative companies — both large and small — cannot obtain loans for higher-risk R&I activities.	Furthermore, banks typically lack the ability to value knowledge assets, such as intellectual property, and therefore are often unwilling to invest in knowledge-based companies. The consequence is that many established innovative companies both large and small cannot obtain loans for higher-risk R&I activities. <i>The European Investment Bank, managing the Debt facility on behalf of the Commission, will have the mandate to lend to projects carrying a high technological risk and not merely to offer below-market-rate loans to projects with a low technological risk. This mandate, however, will be subject to portfolio and project risk management criteria and appropriate risk return criteria and oversight adapted to the objectives pursued.</i>	[no change]	
	<i>Finance in the form of unsecured loans will be available.</i>		
These market gaps stem, at root, from uncertainties, information asymmetries and the high costs of attempting to address these issues: recently established firms have too short a track record to satisfy potential lenders, even established firms often cannot provide enough information, and at the start of an R&I investment, it is not at all certain whether the efforts undertaken will actually result in a successful innovation.	[no change]	[no change]	

	<i>This problem also particularly affects the processes for transferring knowledge and technology between the sphere of public research, carried out in universities and research centres, and business, where validation is required, in the form of the corresponding proof of concept, to demonstrate the innovatory potential that the knowledge and technology to be transferred will bring to the market.</i>		
Additionally, enterprises at the concept development stage or working in emerging areas typically lack sufficient collateral. Another disincentive is that even if R&I activities give rise to a commercial product or process, it is not at all certain that the company that has made the effort will be able to exclusively appropriate the benefits deriving from it.	[no change]	[no change]	

<p>In terms of Union added value, the Debt facility will help remedy market deficiencies that prevent the private sector from investing in R&I at an optimum level. Its implementation will enable the pooling of a critical mass of resources from the Union budget and, on a risk-sharing basis, from the financial institution(s) entrusted with its implementation. It will stimulate firms to invest more of their own money in R&I than they would otherwise have done. In addition, the Debt facility will help organisations, both public and private, to reduce the risks of undertaking the pre-commercial procurement or procurement of innovative products and services.</p>	<p><i>[no change]</i></p>	<p><i>[no change]</i></p>	
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<p>A Union-level Equity facility for R&I is needed to help improve the availability of equity finance for early and growth-stage investments and to boost the development of the Union venture capital market. During the technology transfer and start-up phase, new companies face a 'valley of death' where public research grants stop and it is not possible to attract private finance. Public support aiming to leverage private seed and start-up funds to fill this gap is currently too fragmented and intermittent, or its management lacks the necessary expertise. Furthermore, most venture capital funds in Europe are too small to support the continued growth of innovative companies and do not have the critical mass to specialise and operate transnationally.</p>	<p><i>[no change]</i></p>	<p><i>[no change]</i></p>	
<p>The consequences are serious. Before the financial crisis, the amount invested in SMEs by European venture capital funds was about EUR 7 billion a year, while figures for 2009 and 2010 were within the EUR 3-4 billion range. Reduced funding for venture capital has affected the number of start-ups targeted by venture capital funds: in 2007, some 3 000 SMEs received venture capital funding, compared to only around 2 500 in 2010.</p>	<p><i>[no change]</i></p>	<p><i>[no change]</i></p>	

In terms of Union added value, the Equity facility for R&I will complement national schemes that cannot cater for cross-border investments in R&I. The early-stage deals will also have a demonstration effect that can benefit public and private investors across Europe. For the growth phase, only at European level is it possible to achieve the necessary scale and the strong participation of private investors that are essential to the functioning of a self-sustaining venture capital market.	<i>[no change]</i>	In terms of Union added value, the Equity facility for R&I will complement national and regional schemes that cannot cater for cross-border investments in R&I. The early-stage deals will also have a demonstration effect that can benefit public and private investors across Europe. For the growth phase, only at European level is it possible to achieve the necessary scale and the strong participation of private investors that are essential to the functioning of a self-sustaining venture capital market.	
The Debt and Equity facilities, supported by a set of accompanying measures, will support the achievement of Horizon 2020's policy objectives. To this end, they will be dedicated to consolidating and raising the quality of Europe's science base; promoting research and innovation with a business-driven agenda; and addressing societal challenges, with a focus on activities such as piloting, demonstration, test-beds and market uptake.	The Debt and Equity facilities, supported by a set of accompanying measures, will support the achievement of Horizon 2020's policy objectives. To this end, they will be dedicated to consolidating and raising the quality of Europe's science base; promoting research and innovation with a business-driven agenda; and addressing societal challenges, with a focus on activities such as piloting, demonstration, test-beds and market uptake. <i>Specific support actions such as information and coaching activities for SMEs should be provided. Regional authorities, SMEs associations, chambers of commerce and financial intermediaries should be involved in the programming and implementation of these activities.</i>	<i>[no change]</i>	

<p>In addition, they will help tackle the R&I objectives of other programmes and policy areas, such as the Common Agricultural Policy, climate action (transition to a low-carbon economy and adaptation to climate change), and the Common Fisheries Policy. Complementarities with national and regional financial instruments will be developed in the context of the Common Strategic Framework for Cohesion Policy, where an increased role for financial instruments is foreseen.</p>	<p><i>[no change]</i></p>	<p><i>[no change]</i></p>	
<p>Their design takes account of the need to address the specific market deficiencies, characteristics (such as degree of dynamism and rate of company creation) and financing requirements of these and other areas. Budgetary allocations between the instruments may be adapted during the course of Horizon 2020 in response to changing economic conditions.</p>	<p><i>[no change]</i></p>	<p>Their design takes account of the need to address the specific market deficiencies, characteristics (such as degree of dynamism and rate of company creation) and financing requirements of these and other areas without creating market distortions. The use of financial instruments must have a clear European added-value and should provide leverage and function as a complement to national instruments. Budgetary allocations between the instruments may be adapted during the course of Horizon 2020 in response to changing economic conditions.</p>	

<p>The Equity facility and the SME window 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.</p>	<p><i>[no change]</i></p>	<p>The Equity facility and the SME window 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- (COSME). Complementarity between the Horizon 2020 and the COSME Programmes will be ensured.</p>	
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COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
2.3. Broad lines of the activities	2.3. Broad lines of the activities	2.3. Broad lines of the activities	
(a) The Debt facility providing debt finance for R&I: 'Union loan & guarantee service for research and innovation'	<i>[no change]</i>	<i>[no change]</i>	
The goal is to improve access to debt financing — loans, guarantees, counter-guarantees and other forms of debt and risk finance — for public and private entities and public-private partnerships engaged in research and innovation activities requiring risky investments in order to come to fruition. The focus shall be on supporting research and innovation with a high potential for excellence.	The goal is to improve access to debt financing loans, guarantees, counter-guarantees and other forms of debt and risk finance for public and private entities and public-private partnerships engaged in research and innovation activities requiring risky investments in order to come to fruition. The focus shall be on supporting research and innovation with a high risk, but also a high potential for excellence. <i>Focus shall be more on the risk related to the project than on the risk related to the company especially for SMEs. In the interests of ensuring critical mass and a whole-innovation-chain approach, they will preferentially target activities resulting from other actions funded under Horizon 2020, including support to Phase 3 of the new dedicated SME instrument.</i>	<i>[no change]</i>	

	<p><i>Given that one of the objectives of Horizon 2020 is to contribute to narrowing the gap between R&D and innovation, helping to bring new or improved products and services to the market, and taking into account the critical role that the proof-of-concept stage plays in the knowledge transfer process, mechanisms will be introduced enabling financing for the proof-of-concept stages that are necessary in order to validate the importance, relevance and future innovatory impact of the research results or invention involved in the transfer.</i></p>		
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The target final beneficiaries shall potentially be legal entities of all sizes that can borrow and repay money and, in particular, SMEs with the potential to carry out innovation and grow rapidly; mid-caps and large firms; universities and research institutes; research infrastructures and innovation infrastructures; public-private partnerships; and special-purpose vehicles or projects.	<i>[no change]</i>	<i>[no change]</i>	
The funding of the Debt facility shall have two main components:	<i>[no change]</i>	<i>[no change]</i>	
(1) Demand-driven, providing loans and guarantees on a first-come, first-served basis, with specific support for beneficiaries such as SMEs and mid-caps. This component shall respond to the steady and continuing growth seen in the volume of RSFF lending, which is demand-led. Under the SME window, activities shall be supported that aim to improve access to finance for SMEs and other entities that are R&D- and/or innovation-driven.	(1) Demand-driven, providing loans and guarantees on a first-come, first-served basis, with specific support for beneficiaries such as SMEs and mid-caps. This component shall respond to the steady and continuing growth seen in the volume of RSFF lending, which is demand-led. Under the SME window, activities shall be supported that aim to improve access to finance for SMEs and other entities that are R&D- and/or innovation-driven, <i>such as IP-backed finance or the use of intangible assets as collateral.</i>	<i>[no change]</i>	

(2) Targeted, focusing on policies and key sectors crucial for tackling societal challenges, enhancing competitiveness, supporting sustainable, low-carbon, inclusive growth, and providing environmental and other public goods. This component shall help the Union address research and innovation aspects of sectoral policy objectives.	<i>[no change]</i>	(2) Targeted, focusing on policies and key sectors crucial for tackling societal challenges, enhancing industrial leadership and competitiveness, supporting sustainable, low-carbon, inclusive growth, and providing environmental and other public goods. This component shall help the Union address research and innovation aspects of sectoral policy objectives.	
(b) The Equity facility providing equity finance for R&I: 'Union Equity Instruments for research and innovation'	<i>[no change]</i>	<i>[no change]</i>	
The goal is to contribute to overcoming the deficiencies of the European venture capital market and provide equity and quasi-equity to cover the development and financing needs of innovating enterprises from the seed stage through to growth and expansion. The focus shall be on supporting the objectives of Horizon 2020 and related policies.	<i>[no change]</i>	<i>[no change]</i>	
The target final beneficiaries shall be potentially enterprises of all sizes undertaking or embarking on innovation activities, with a particular focus on innovative SMEs and mid-caps.	<i>[no change]</i>	<i>[no change]</i>	

<p>The Equity facility will focus on early-stage venture capital funds providing venture capital and quasi-equity (including mezzanine capital) to individual portfolio enterprises. The facility will also have the possibility to make expansion and growth-stage investments in conjunction with the Equity Facility for Growth under the Programme for the Competitiveness of Enterprises and SMEs, to ensure a continuum of support during the start up and development of companies.</p>	<p>The Equity facility will focus on early-stage venture capital funds providing venture capital and quasi-equity (including mezzanine capital) to early-stage, individual portfolio enterprises. The facility will also have the possibility to make expansion and growth-stage investments in conjunction with the Equity Facility for Growth under the Programme for the Competitiveness of Enterprises and SMEs, to ensure a continuum of support during the start up and development of companies.</p>	<p>The Equity facility will focus on early-stage venture capital funds and funds-of-funds providing venture capital and quasi-equity (including mezzanine capital) to individual portfolio enterprises. The facility will also have the possibility to make expansion and growth-stage investments in conjunction with the Equity Facility for Growth under the Programme for the Competitiveness of Enterprises and SMEs, to ensure a continuum of support during the start up and development of companies.</p>	
<p>The equity facility, which will be primarily demand-driven, shall use a portfolio approach, where venture capital funds and other comparable intermediaries select the firms to be invested in.</p>	<p><i>[no change]</i></p>	<p><i>[no change]</i></p>	

Earmarking may be applied to help achieve particular policy goals, building on the positive experience in the Competitiveness and Innovation Framework Programme with earmarking for eco-innovation.	Earmarking may shall be applied to help achieve particular policy goals, building on the positive experience in the Competitiveness and Innovation Framework Programme with earmarking for eco-innovation, <i>in particular for achieving goals related to the identified societal challenges.</i>	[no change]	
	<i>The proof-of-concept window shall support knowledge and technology transfer processes at the stages prior to the industry uptake phase, with the aim of verifying and, where appropriate, increasing the innovatory market impact of the transfer, thereby reducing the uncertainty and risks inherent in transferring research results and inventions stemming from the sphere of public research to the productive sector.</i>		

<p>The start-up window, supporting the seed and early stages, shall enable equity investments in, amongst others, knowledge-transfer organisations, seed capital funds, cross-border seed funds, business angel co-investment vehicles, intellectual property assets, platforms for the exchange and trading of intellectual property rights, and early-stage venture capital funds.</p>	<p>The start-up window, supporting the seed and early stages, shall enable equity investments in, amongst others, knowledge-transfer organisations, seed capital funds, cross-border seed and early-stage funds, business angel co-investment vehicles, intellectual property assets, platforms for the exchange and trading of intellectual property rights, and early-stage venture capital funds and funds of start-up funds for cross-border activities, possibly combined with the Equity Facility for Growth (EFG) under the Programme for the Competitiveness of Enterprises and SMEs.</p>	<p>The start-up window, supporting the seed and early stages, shall enable equity investments in, amongst others, knowledge-transfer organisations, seed capital funds, cross-border seed funds, business angel co-investment vehicles, intellectual property assets, platforms for the exchange and trading of intellectual property rights, and early-stage venture capital funds and funds-of-funds operating across borders and investing in venture capital funds.</p>	
<p>The growth window shall make expansion and growth-stage investments in conjunction with the Equity Facility for Growth under the Programme for the Competitiveness of Enterprises and SMEs, including investments in funds-of-funds operating across borders and investing in venture capital funds, most of which will have a thematic focus that supports the goals of Europe 2020.</p>	<p>The growth window shall make expansion and growth-stage investments in conjunction with the Equity Facility for Growth under the Programme for the Competitiveness of Enterprises and SMEs EFG, including investments in private and public sector funds-of-funds operating across borders and investing in venture capital funds, most of which will have a thematic focus that supports the goals of Europe 2020.</p>	<p>[no change]</p>	

	<p><u>AMD 134</u> (paragraph 7 a (new)) <i>In the light of the extremely difficult situation in the European venture capital market, and given the urgency involved, it ought to be possible to set up a fund of venture capital funds on a pilot basis by the start of the forthcoming 2014-2020 budgetary period.</i></p>		
	<p><u>AMD 135</u> (paragraph 7 b (new)) <i>The Equity facility providing equity finance shall be operated in conjunction with the EFG as a single, integrated EU instrument to provide enterprises with venture capital funding for innovation and growth from the seed phase through to the growth phase.</i></p>		

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
3. Innovation in Small and Medium Sized Enterprises	<u>AMD 136</u> 3. Innovation in Small and Medium Sized Enterprises	3. Innovation in Small and Medium Sized Enterprises	
3.1 Specific objective	3.1 Specific objective	3.1 Specific objective	
The specific objective is to stimulate growth by means of increasing the levels of innovation in SMEs, covering their different innovation needs over the whole innovation cycle for all types of innovation, thereby creating more fast-growing, internationally active SMEs.	The specific objective is to stimulate <u>sustainable economic</u> growth by means of increasing the levels of innovation in SMEs, covering their different innovation needs over the whole innovation cycle for all types of innovation, thereby creating more fast-growing, internationally active SMEs.	[no change]	
Considering the central role of SMEs in Europe's economy, research and innovation in SMEs will play a crucial role in increasing competitiveness, boosting economic growth and job creation and thus in achieving the objectives of Europe 2020 and notably its flagship initiative Innovation Union.	[no change]	[no change]	

<p>However, SMEs have – despite their important economic and employment share and significant innovation potential – size-related problems to become more innovative and more competitive. Although Europe produces a similar number of start-up companies than the United States of America, European SMEs are finding it much harder to grow into large companies than their US counterparts. The internationalised business environment with increasingly interlinked value chains puts further pressure on them. SMEs need to enhance their innovation capacity. They need to generate, take up and commercialise new knowledge and business ideas faster and to a greater extent to compete successfully on fast evolving global markets. The challenge is to stimulate more innovation in SMEs, thereby enhancing their competitiveness and growth.</p>	<p>However, SMEs have – despite their important economic and employment share and significant innovation potential – size-related several types of problems to become more innovative and more competitive including <i>shortage of financial resources and access to finance, shortage in skills in innovation management, weaknesses in networking and cooperation with external parties and insufficient use of public procurement to foster innovation in SMEs</i>. Although Europe produces a similar number of start-up companies than the United States of America, European SMEs are finding it much harder to grow into large companies than their US counterparts. The internationalised business environment with increasingly interlinked value chains puts further pressure on them. SMEs need to enhance their research and innovation capacity. They need to generate, take up and commercialise new knowledge and business ideas faster and to a greater extent to compete successfully on fast evolving global markets. The challenge is to stimulate more innovation in SMEs, thereby enhancing their competitiveness and growth sustainability.</p>	<p>However, SMEs have – despite their important economic and employment share and significant innovation potential – size-related problems to become more innovative and more competitive. Although Europe produces a similar number of start-up companies than to the United States of America, European SMEs are finding it much harder to grow into large companies than their US counterparts. The internationalised business environment with increasingly interlinked value chains puts further pressure on them. SMEs need to enhance their innovation capacity. They need to generate, take up and commercialise new knowledge and business ideas faster and to a greater extent to compete successfully on fast evolving global markets. The challenge is to stimulate more innovation in SMEs, thereby enhancing their competitiveness and growth.</p>	
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<p>The proposed actions aim to complement national and regional business innovation policies and programmes, to foster cooperation between SMEs and other innovation-relevant actors, to bridge the gap between research/development and successful market uptake, to provide a more business innovation friendly environment, including demand-side measures, and support taking into account the changing nature of innovation processes, new technologies, markets and business models.</p>	<p>The proposed actions aim to complement national and regional business innovation policies and programmes, to foster cooperation between SMEs and other innovation-relevant actors, to bridge the gap between research/development and successful market uptake, to provide a more business innovation friendly environment, including demand-side measures <i>and other measures geared to boosting the transfer of knowledge carried out in the public sphere</i> and support taking into account the changing nature of innovation processes, new technologies, markets and business models.</p>	<p>The proposed actions aim to complement national and regional business innovation policies and programmes, to foster cooperation between SMEs, including transnational cooperation, clusters and other innovation-relevant actors in Europe, to bridge the gap between research/development and successful market uptake, to provide a more business innovation friendly environment, including demand-side measures, and support taking into account the changing nature of innovation processes, new technologies, markets and business models.</p>	
<p>Strong links with industry-specific Union policies, notably the Programme for the Competitiveness of Enterprises and SMEs and Cohesion Policy funds, will be established to ensure synergies and a coherent approach.</p>	<p><i>[no change]</i></p>	<p><i>[no change]</i></p>	

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
3.2. Rationale and Union added value	3.2. Rationale and Union added value	3.2. Rationale and Union added value	
SMEs are key drivers of innovation thanks to their ability to quickly and efficiently transform new ideas in successful businesses. They serve as important conduits of knowledge spill-over bringing research results to the market. The last twenty years have shown that entire sectors have been renewed and new industries created driven by innovative SMEs. Fast growing enterprises are crucial for the development of emerging industries and for the acceleration of the structural changes that Europe needs to become a knowledge based and low carbon economy with sustained growth and high quality jobs.	<i>[no change]</i>	SMEs are key drivers of innovation thanks to their ability to quickly and efficiently transform new ideas in successful businesses. They serve as important conduits of knowledge spill-over bringing research results to the market. The last twenty years have shown that entire sectors have been renewed and new industries created driven by innovative SMEs. Fast growing enterprises are crucial for the development of emerging industries and for the acceleration of the structural changes that Europe needs to become a knowledge based and low carbon sustainable economy with sustained growth and high quality jobs.	

<p>SMEs can be found in all sectors of the economy. They form a more important part of the European economy than of other regions such as the United States of America. All types of SMEs can innovate. They need to be encouraged and supported to invest in research and innovation. In doing so they should be able to draw on the full innovative potential of the internal market and the ERA so as to create new business opportunities in Europe and beyond and to contribute to find solutions to key societal challenges.</p>	<p>SMEs can be found in all sectors of the economy. They form a more important part of the European economy than of other regions such as the United States of America. All types of SMEs can innovate. They need to be encouraged and supported to invest in research and innovation <i>and also to enhance their capacity to manage innovation processes</i>. In doing so they should be able to draw on the full innovative potential of the internal market and the ERA so as to create new business opportunities in Europe and beyond and to contribute to find solutions to key societal challenges.</p>	<p>[no change]</p>	
<p>Participation in Union research and innovation strengthens the R&D and technology capability of SMEs, increases their capacity to generate, absorb and use new knowledge, enhances the economic exploitation of new solutions, boosts innovation in products, services and business models, promotes business activities in larger markets and internationalises the knowledge networks of SMEs. SMEs that have a good innovation management in place, thereby often relying on external expertise and skills, outperform others.</p>	<p>Participation in Union research and innovation strengthens the R&D and technology capability of SMEs, increases their capacity to generate, absorb and use new knowledge, enhances the economic exploitation of new solutions, boosts innovation in products, services and business models, promotes business activities in larger markets and internationalises the knowledge networks of SMEs. SMEs that have a good innovation management in place, thereby often relying on external expertise and skills, outperform others. <i>SMEs also have a key role to play as recipients of technology and knowledge transfer processes, contributing to the market transfer of innovations stemming from the research carried out in universities, public research bodies</i></p>	<p>[no change]</p>	

	<i>and research performing SMEs.</i>		
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<p>Cross-border collaborations are an important element in the innovation strategy of SMEs to overcome some of their size-related problems, such as access to technological and scientific competences and new markets. They contribute to turn ideas into profit and company growth and in return to increase private investment in research and innovation.</p>	<p>Cross-border collaborations are an important element in the innovation strategy of SMEs to overcome some of their size-related problems, such as access to technological and scientific competences and new markets. They contribute to turn ideas into profit and company growth and in return to increase private investment in research and innovation. <i>Training and technology transfer to SMEs can be key components in increasing their competitiveness and innovation potential.</i></p>	<p>[no change]</p>	
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<p>Regional and national programmes for research and innovation, often backed by European cohesion policy, play an essential role in promoting SMEs. In particular, Cohesion Policy funds have a key role to play through building capacity and providing a stairway to excellence for SMEs in order to develop excellent projects that may compete for funding under Horizon 2020. Nevertheless, only a few national and regional programmes provide funding for transnational research and innovation activities carried out by SMEs, the Union-wide diffusion and uptake of innovative solutions or cross-border innovation support services. The challenge is to provide SMEs with thematically open support to realise international projects in line with companies' innovation strategies. Actions at Union level are therefore necessary to complement activities undertaken at national and regional level, to enhance their impact and to open up the research and innovation support systems.</p>	<p><i>[no change]</i></p>	<p><i>[no change]</i></p>	
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COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
3.3. Broad lines of the activities	3.3. Broad lines of the activities	3.3. Broad lines of the activities	
(a) Mainstreaming SME support	(a) Mainstreaming <i>Support to SMEs through a dedicated SME support Instrument</i>	[no change]	
SMEs shall be supported across Horizon 2020. For this purpose a dedicated SME instrument shall provide staged and seamless support covering the whole innovation cycle. The SME instrument shall be targeted at all types of innovative SMEs showing a strong ambition to develop, grow and internationalise. It shall be provided for all types of innovation, including service, non-technological and social innovations. The aim is to develop and capitalise on the innovation potential of SMEs by filling the gap in funding for early stage high risk research and innovation, stimulating innovations and increasing private-sector commercialisation of research results.	SMEs shall be supported across Horizon 2020. For this purpose A dedicated SME instrument shall provide staged and seamless support covering the whole innovation cycle. The SME instrument shall be targeted at all types of innovative and SMEs showing a strong ambition to develop, grow, and internationalise <i>and innovate, with a particular focus on start-ups, spin-offs and fast growing SMEs. The SMEs will be the main applicant, but will be encouraged to cooperate with research institutes and other companies.</i> It shall be provided for all types of innovation, including service, non-technological and social innovations, <i>given each activity has a clear Union added-value.</i> The aim is to develop and capitalise on the innovation potential of SMEs by filling the gap in funding for early stage high risk research and innovation, stimulating innovations and increasing private-sector commercialisation of research results. <i>The instrument will provide a quality label for successful SMEs in view of their participation in public procurement.</i>	SMEs shall be supported across Horizon 2020. For this purpose, to participate in Horizon 2020, better conditions for SMEs shall be established. In addition, a dedicated SME instrument shall provide staged and seamless support covering the whole innovation cycle. The SME instrument shall be targeted at all types of innovative SMEs showing a strong ambition to develop, grow and internationalise. It shall be provided for all types of innovation, including service, non-technological and social innovations-, given each activity has a clear European added-value. The aim is to develop and capitalise on the innovation potential of SMEs by filling the gap in funding for early stage high risk research and innovation, stimulating innovations and increasing private-sector commercialisation of research results.	

	<i>The instrument will operate under a single management structure, light administrative regime and a single entry point. It shall be implemented in a bottom-up logic with open calls.</i>		
	<i>Dedicated innovation support services for the SMEs participating in the SME instrument will be implemented, building on existing structures such as the Enterprise Europe Network and other innovation service providers and mentoring/coaching schemes.</i>		
All of the specific objectives on societal challenges and on leadership in enabling and industrial technologies will apply the dedicated SME instrument and will allocate an amount for this.	All of the specific objectives on societal challenges and on leadership in enabling and industrial technologies will apply the dedicated SME instrument and will allocate an amount for this. <i>This instrument shall create the necessary flexibility to allow for the integration of SMEs at project runtime and for limited shorter-than-project timeframes into research projects.</i>	[no change]	
	<i>The SME instrument may also serve as an instrument for pre-commercial procurement or procurement of innovative solutions</i>		

(b) Support for research intensive SMEs	<i>[no change]</i>	<i>[no change]</i>	
The goal is to promote market-oriented innovation of R&D performing SMEs. A specific action shall target research intensive SMEs in high-technology sectors that show the capability to commercially exploit the project results.	<i>[no change]</i>	The goal is to promote transnational market-oriented innovation of R&D performing SMEs. A specific action shall target research intensive SMEs in high-technology any sectors that show the capability to commercially exploit the project results. This action will be built on the Eurostars Programme.	
(c) Enhancing the innovation capacity of SMEs	(c) Mainstreaming SME support and enhancing the innovation capacity of SMEs	<i>[no change]</i>	
Activities assisting the implementation and complementing the SME specific measures across Horizon 2020 shall be supported, notably to enhance the innovation capacity of SMEs.	<i>SMEs shall be supported throughout Horizon 2020. For this purpose, activities assisting the implementation and complementing the SME specific measures across Horizon 2020 and creating better conditions for SMEs shall be supported, notably to enhance the innovation capacity of SMEs, including by providing funding for European applied research institutes to work on projects agreed with individual SMEs.</i>	Transnational activities assisting the implementation and complementing the SME specific measures across Horizon 2020 shall be supported, notably to enhance the innovation capacity of SMEs. These activities shall be coordinated with similar national measures when appropriate. Close cooperation with the National Contact Point (NCP) Network and the Enterprise Europe Network (EEN) is envisaged.	

(d) Supporting market-driven innovation	<i>[no change]</i>	<i>[no change]</i>	
Supporting market-driven innovation to improve the framework conditions for innovation and tackling the specific barriers preventing, in particular, the growth of innovative SMEs.	Supporting market-driven innovation to improve the framework conditions for innovation, and tackling the specific barriers preventing, in particular, the growth of innovative on <i>in SMEs, and introducing an innovation clause enabling the selection of SMEs proposing innovative products.</i>	Supporting transnational market-driven innovation to improve the framework conditions for innovation and tackling the specific barriers preventing, in particular, the growth of innovative SMEs.	
	<i>(da) Supporting the transfer of knowledge and technology between public research and the market</i>		
	<i>Supporting the transfer processes between the sphere of public research and innovatory SMEs, as an effective mechanism for the market transfer of research results and inventions generated by universities, research centres and research performing SMEs.</i>		

PART III: SOCIETAL CHALLENGES

	<u>AMD 137</u> (point -1(new)) <i>-1. Science with and for society : A cross-cutting Challenge</i>		
	<i>-1.1. Specific objective</i>		
	<i>The specific objective is to build an effective cooperation between science and society, to recruit new talent for science and to pair scientific excellence with social awareness and responsibility.</i>		
	<i>Rapid advances in contemporary scientific research and innovation have led to a rise of important ethical, legal and social issues that require a reinforced relationship and engagement between science and society.</i>		

	<p><i>Finding the right answers to the challenges Europe is facing requires the involvement of as many diverse actors as possible in the research and innovation process. Traditionally, interaction between science and society has been limited to a one-way, top-down, transfer of knowledge from experts to citizens. Advancing towards an open, effective and democratic knowledge-based society requires a change to a more bidirectional dialogue and active cooperation beyond traditional science education or the current conception of citizens as mere consumers of research findings. This dialogic relationship and active cooperation will undoubtedly allow science and innovation to proceed more responsibly.</i></p>		
	<p><i>The Union needs all its talents to boost its competitive edge in a global economy. To meet the 1 million net additional researchers needed in Europe by 2020 to reach the objective of a R&D intensity of 3% of GDP the Union needs its young people to pursue a career in science and it needs a diverse and gender-balanced workforce.</i></p>		

	<i>Yet it has been increasingly difficult to attract a higher proportion of young people to science and technology and there is a growing concern in Europe that many talented young people do not opt for a career in these domains. In addition, it is also necessary to ensure that people who have embarked on a scientific or technological career can retain their enthusiasm and motivation and have opportunities for personal development, without having to abandon their disciplines.</i>		
	<i>There is also a clear gender imbalance in science. If Europe wants to make sure it funds an effective and efficient research and innovation programme, special attention needs to be paid to the under-representation of women in science and the lack of consideration to gender differences within research and innovation.</i>		
	<i>-1.2. Rationale and Union added value</i>		

	<i>Improving the cooperation between science and society to enable a widening of the social and political support to science and to technology in all Member States is increasingly a crucial issue that the current economic crisis has greatly exacerbated. In democratic societies, priority to public investment in science requires a vast social and political constituency sharing the values of science, educated in its processes and able to recognise its contributions to knowledge, to society and to economic progress.</i>		
	<i>This can only be achieved if a fruitful and rich dialogue and active cooperation between science and society is developed to ensure a more responsible science and to enable the development of policies more relevant to citizens.</i>		
	<i>Moreover, promoting in such an interactive way a scientific culture in Europe will strengthen democratic values and will help increasing the interest in science and technology. The strength of the European science and technology system depends on its capacity to harness talent and ideas from wherever they exist.</i>		

	<i>-1.3. Broad lines of the activities</i>		
	<i>Measures should aim at attracting new talent to the study of science and technology in European societies and bridging the gender gap in human resources working in research in the Union. Increasing our capacity to incorporate science and technological knowledge and methods in decision-making processes, developing mechanisms allowing for the broadening and deepening of the social appraisal of scientific options and making sure ethical and social values are taken on board in the whole innovation process will also be supported.</i>		
	<i>The focus of activities shall be to:</i>		
	<i>(a) make scientific and technological careers attractive to young students, and foster sustainable interaction between schools, research institutions, industry and civil society organisations;</i>		

	<i>(b) promote gender equality in both its dimensions by supporting changes in: (i) the organisation of research institutions and (ii) the design of research programmes. This encompasses its various dimensions relating in particular to: ensuring equality in research careers, decision-making and including the gender dimension in the research and innovation content;</i>		
	<i>(c) integrate society in science and innovation issues in order to integrate citizens' interests and values and to increase the quality, relevance, acceptability and sustainability of the research and innovation outcomes;</i>		
	<i>(d) encourage citizens to engage in science through formal and informal science education, and promote the diffusion of science-based activities, namely in science centres and other appropriate channels;</i>		
	<i>(e) enhance the open access to scientific results and data in order to augment scientific excellence and economic competitiveness;</i>		

	<i>(f) develop the governance for the development of responsible research and innovation by all stakeholders (researchers, public authorities, industry and civil society organisations), which is sensitive to society needs and demands; promote an ethics framework for research and innovation;</i>		
	<i>(g) improve knowledge on science communication in order to improve the quality and effectiveness of interactions between scientists, general media and the public.</i>		

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
1. Health, demographic change and wellbeing	<u>AMD 138</u> 1. Health, demographic change and wellbeing	1. Health, demographic change and wellbeing	
1.1. Specific objective	1.1. Specific objective	1.1. Specific objective	
The specific objective is to improve the lifelong health and wellbeing of all.	<i>[no change]</i>	<i>[no change]</i>	
Lifelong health and wellbeing for all, high-quality and economically sustainable health and care systems, and opportunities for new jobs and growth are the aims of support to research and innovation in response to this challenge and will make a major contribution to Europe 2020.	Lifelong health and wellbeing for all, high-quality and economically sustainable <i>safe and secure</i> health and care systems <i>ensuring social welfare, and solutions to deal with the autonomy of an ageing population</i> and opportunities for new jobs and growth are the aims of support to research and innovation in response to this challenge and will make a major contribution to Europe 2020.	Lifelong health and wellbeing for all, high-quality and , economically sustainable and innovative health and care systems, and opportunities for new jobs and growth are the aims of support to research and innovation in response to this challenge and will make a major contribution to Europe 2020.	

<p>The cost of Union health and social care systems is rising with care and prevention measures in all ages increasingly expensive, the number of Europeans aged over 65 expected to nearly double from 85 million in 2008 to 151 million by 2060, and those over 80 to rise from 22 to 61 million in the same period. Reducing or containing these costs such that they do not become unsustainable depends in part on ensuring the lifelong health and wellbeing of all and therefore on the effective prevention, treatment and management of disease and disability.</p>	<p><i>Eradicating inequalities in health is a major concern in Europe as they are on the increase while</i> the cost of Union health and social care systems is rising with care and prevention measures in all ages increasingly expensive, the number of Europeans aged over 65 expected to nearly double from 85 million in 2008 to 151 million by 2060, and those over 80 to rise from 22 to 61 million in the same period. <i>Costs also result from discrimination on the basis of disability and from the creation of physical and social environments which are inaccessible to persons with disabilities.</i> Reducing or containing these costs such that they do not become unsustainable depends in part on <i>informing people better and encouraging responsible health choices so as to optimise</i> the lifelong health and wellbeing of all and therefore on the effective prevention, treatment and management of disease and disability. <i>Incremental development, based solely on present knowledge, will not meet these needs; radical novel ideas and knowledge must be sought and implemented. Close collaboration between academia, industry, healthcare providers and regulatory agencies will be needed to meet the challenges.</i></p>	<p>The cost of Union health and social care systems is rising with care and prevention measures in all ages increasingly expensive, the number of Europeans aged over 65 expected to nearly double from 85 million in 2008 to 151 million by 2060, and those over 80 to rise from 22 to 61 million in the same period. Reducing or containing these costs such that they do not become unsustainable depends in part on ensuring improving the lifelong health and wellbeing of all and therefore on the effective prevention, treatment and management of disease and disability.</p>	
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Chronic conditions such as cardiovascular disease (CVD), cancer, diabetes, neurological and mental health disorders, overweight and obesity and various functional limitations are major causes of disability, ill-health and premature death, and present considerable social and economic costs.	Chronic conditions such as cardiovascular disease (CVD), cancer, diabetes, <i>respiratory, rheumatic, musculoskeletal, neurodegenerative and autoimmune diseases</i> , neurological and mental health disorders, overweight and obesity and various functional limitations are major causes of disability, ill-health and premature death, and present considerable social and economic costs. <i>In the case of other conditions, in particular neurodegenerative diseases, if prevention strategies are to be effective a major boost will need to be given to etiological research and better early diagnosis and treatment options will need to be developed.</i>	Chronic conditions such as cardiovascular disease (CVD), cancer, diabetes, neurological and mental health disorders, overweight and obesity and various functional limitations and diseases are major causes of disability, ill-health and health related retirement , premature death, and present considerable social and economic costs.	
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<p>In the Union, CVD annually accounts for more than 2 million deaths and costs the economy more than EUR 192 billion while cancer accounts for a quarter of all deaths and is the number one cause of death in people aged 45-64. Over 27 million people in the Union suffer from diabetes and the total cost of brain disorders (including, but not limited to those affecting mental health) has been estimated at EUR 800 billion. Environmental, life-style and socio-economic factors are relevant in several of these conditions with up to one third of the global disease burden estimated to be related to these.</p>	<p>In the Union, CVD annually accounts for more than 2 million deaths and costs the economy more than EUR 192 billion while cancer accounts for a quarter of all deaths and is the number one cause of death in people aged 45-64. Over 27 million people in the Union suffer from diabetes and <i>over 120 million from rheumatic and musculoskeletal conditions.</i> The total cost of brain disorders (including, but not limited to those affecting mental health) has been estimated at EUR 800 billion. <i>This figure will continue to rise dramatically, largely as a result of Europe's ageing population and the associated increases in neurodegenerative diseases.</i> Environmental, life-style and socio-economic factors are relevant in several of these conditions with up to one third of the global disease burden estimated to be related to these. <i>It is estimated that depression alone affects 165 million people in the Union, at a cost of EUR 118 000 million. For neurodegenerative diseases, amongst other conditions, effective prevention strategies will first require a considerable boost in research into their causes and the development of better early diagnosis and treatment options, including, where appropriate, personalised advanced therapies.</i></p>	<p>In the Union, cardiovascular disease (CVD) annually accounts for more than 2 million deaths and costs the economy more than EUR 192 billion while cancer accounts for a quarter of all deaths and is the number one cause of death in people aged 45-64. Over 27 million people in the Union suffer from diabetes and the total cost of brain disorders (including, but not limited to those affecting mental health) has been estimated at EUR 800 billion. Environmental, occupational, life-style and socio-economic factors are relevant in several of these conditions with up to one third of the global disease burden estimated to be related to these.</p>	
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	<i>Rare diseases remain a major challenge, affecting approx. 30 million people across Europe. Effective treatments can only be developed if member states cooperate, as the cases in any given member state are not enough for effective research to be done.</i>		
	<i>Diseases in children, including premature born children.</i>		
	<i>Children's health is a top priority for the European Union. As in the case of rare diseases, effective research and treatment can only be developed within the framework of a common European strategy.</i>		
Infectious diseases (e.g. HIV/AIDS, tuberculosis and malaria), are a global concern, accounting for 41 % of the 1.5 billion disability adjusted life years worldwide, with 8 % of these in Europe. Emerging epidemics and the threat of increasing anti-microbial resistance must also be prepared for.	Infectious diseases (e.g. HIV/AIDS, tuberculosis and , malaria and neglected diseases), are a global concern, accounting for 41 % of the 1.5 billion disability adjusted life years worldwide, with 8 % of these in Europe. Emerging epidemics, re-emerging infectious diseases and the threat of increasing anti-microbial resistance must also be prepared for. Of increasing concern are water related diseases.	Infectious diseases (e.g. HIV/AIDS, tuberculosis and malaria), are a global concern, accounting for 41 % of the 1.5 billion disability adjusted life years worldwide, with 8 % of these in Europe. Emerging epidemics and the threat of increasing anti-microbial resistance must also be prepared for. Increased risk for animal-borne diseases should be considered.	

Meanwhile, drug and vaccine development processes are becoming more expensive and less effective. Persistent health inequalities must be addressed, and access to effective and competent health systems must be ensured for all Europeans.	Meanwhile, drug and vaccine development processes are becoming more expensive and less effective, and the validity of the underlying animal tests for humans more and more challenged . Persistent health inequalities must be addressed (<i>e.g. the need for therapeutics in rare, neglected and auto-immune diseases is enormous</i>), and access to effective and competent health systems must be ensured for all Europeans irrespective of their age or background .	Meanwhile, drug and vaccine development processes are becoming more expensive and less effective. Persistent health inequalities must be addressed, and access to effective and competent health and care systems must be ensured for all Europeans.	
	Research should allow advanced therapies and cellular therapies that would be focused on the treatment of chronic and degenerative diseases to be improved.		
		Other factors such as nutrition, physical activity, wealth, inclusion, engagement, social capital, and work also affect health and well-being and a holistic approach must be taken.	
		Due to higher life expectancy the age and population structure in Europe will change. Therefore, research furthering lifelong health, active ageing and wellbeing for all will be a cornerstone of the successful adaptation of societies to demographic change.	

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
1.2. Rationale and Union added value	1.2. Rationale and Union added value	1.2. Rationale and Union added value	
Disease and disability are not stopped by national borders. An appropriate European level research and innovation response can and should make a crucial contribution to addressing these challenges, deliver better health and wellbeing for all, and position Europe as a leader in the rapidly expanding global markets for health and wellbeing innovations.	Disease and disability are not stopped by national borders. An appropriate European level research and innovation response <i>in partnership with third countries</i> can and should make a crucial contribution to addressing these <i>global</i> challenges, <i>thereby working to achieve the Millennium Development Goals</i> , deliver better health and wellbeing for all, <i>prevent global pandemics</i> , and position Europe as a leader in the rapidly expanding global markets for health and wellbeing innovations.	Disease and disability are not stopped by national borders. An appropriate European level research, development and innovation response effort with the involvement of stakeholders, patients and end-users can and should make a crucial contribution to addressing these challenges, deliver better health and wellbeing for all, and position Europe as a leader in the rapidly expanding global markets for health and wellbeing innovations.	

<p>The response depends on excellence in research to improve our fundamental understanding of health, disease, disability, development and ageing (including of life expectancy), and on the seamless and widespread translation of the resulting and existing knowledge into innovative, scalable and effective products, strategies, interventions and services. Furthermore, the pertinence of these challenges across Europe and in many cases, globally, demands a response characterised by long term and coordinated support for co-operation between excellent, multidisciplinary and multi-sector teams.</p>	<p>The response depends on excellence in research to improve our fundamental understanding of <i>the determinants of</i> health, disease, disability, development and ageing (including of life expectancy), and on the seamless and widespread translation of the resulting and existing knowledge into innovative, scalable and effective <i>and accessible, safe</i> products, strategies, interventions and services. Furthermore, the pertinence of these challenges across Europe and in many cases, globally, demands a response characterised by long term and coordinated support for co-operation between excellent, multidisciplinary and multi-sector teams <i>globally, including research and development capacity in endemic areas. It is also necessary to address the challenge from the perspective of the social and economic sciences and humanities.</i></p>	<p>The response depends on excellence in research to improve our fundamental understanding of the determinants of health, disease, disability, healthy employment conditions, development and ageing (including of life expectancy), and on the seamless and widespread translation of the resulting and existing knowledge into innovative, scalable and effective products, strategies, interventions and services. Furthermore, the pertinence of these challenges across Europe and in many cases, globally, demands a response characterised by long term and coordinated support for co-operation between excellent, multidisciplinary and multi-sector teams. It is also necessary to address the challenge from the perspective of the social and economic sciences and humanities.</p>	
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<p>Similarly, the complexity of the challenge and the interdependency of its components demand a European level response. Many approaches, tools and technologies have applicability across many of the research and innovation areas of this challenge and are best supported at Union level. These include the development of long term cohorts and the conduct of clinical trials, the clinical use of "-omics" or the development of ICT and their applications in healthcare practice, notably e-health. The requirements of specific populations are also best addressed in an integrated manner, for example in the development of stratified and/or personalised medicine, in the treatment of rare diseases, and in providing assisted and independent living solutions.</p>	<p>Similarly, the complexity of the challenge and the interdependency of its components demand a European level response. Many approaches, tools and technologies have applicability across many of the research and innovation areas of this challenge and are best supported at Union level. These include <i>understanding the molecular basis of disease, the identification of innovative therapeutic strategies and novel model systems, the multidisciplinary application of knowledge in physics, chemistry and systems biology to health control</i>, the development of long term cohorts and the conduct of clinical trials (<i>which focus on the developments and effects of medicines in all age groups</i>), the clinical use of "-omics" or the development of ICT and their applications in healthcare practice, notably e-health. The requirements of specific populations are also best addressed in an integrated manner, for example in the development of stratified and/or personalised medicine, in the treatment of <i>poverty-related, neglected and</i> rare diseases, and in providing assisted and independent living solutions.</p>	<p>Similarly, the complexity of the challenge and the interdependency of its components demand a European level response. Many approaches, tools and technologies have applicability across many of the research and innovation areas of this challenge and are best supported at Union level. These include the development of long term cohorts and the conduct of clinical trials, the clinical use of "-omics", systems bio-medicine or the development of ICT and their applications in healthcare practice, notably e-health. The requirements of specific populations are also best addressed in an integrated manner, for example in the development of stratified and/or personalised medicine, in the treatment of rare diseases, and in providing assisted and independent living solutions.</p>	
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<p>To maximise the impact of Union level actions, support will be provided to the full spectrum of research and innovation activities. From basic research through translation of knowledge to large trials and demonstration actions, mobilising private investment; to public and pre-commercial procurement for new products, services, scalable solutions, which are when necessary, interoperable and supported by defined standards and/or common guidelines. This co-ordinated, European effort will contribute to the ongoing development of the ERA. It will also interface, as and when appropriate, with activities developed in the context of the Health for Growth Programme and the European Innovation Partnership on Active and Health Ageing.</p>	<p>To maximise the impact of Union level actions, support will be provided to the full spectrum of research and innovation activities. From basic research through translation of <i>fundamental</i> knowledge <i>on disease to new therapeutics</i>, to large trials and demonstration actions, mobilising private investment; to public and pre-commercial procurement for new products, services, scalable solutions, which are when necessary, interoperable and supported by defined standards and/or common guidelines. <i>In order to foster strategic coordination of health research and innovation across Horizon 2020 and promote transnational medical research, the corresponding Scientific steering panels for Health will be established. This coordination can be extended to other programmes and instruments related to this challenge.</i> This co-ordinated, European effort will <i>increase the scientific and human capabilities in health research and</i> contribute to the ongoing development of the ERA. It will also interface, as and when appropriate, with activities developed in the context of the Health for Growth Programme and the European Innovation Partnership on Active and Health Ageing.</p>	<p>To maximise the impact of Union level actions, support will be provided to the full spectrum of research, development and innovation activities. From basic research through translation of knowledge to large trials, piloting and demonstration actions, mobilising private investment; to public and pre-commercial procurement for new products, services, scalable solutions, which are when necessary, interoperable and supported by defined standards and/or common guidelines. This co-ordinated, European effort will contribute to the ongoing development of the ERA. It will also interface, as and when appropriate, with activities developed in the context of the Health for Growth Programme, the Joint Programming Initiatives, including “Neurodegenerative Disease Research”, “A Healthy Diet for a Healthy Life”, “Antimicrobial resistance” and “More Years, Better Lives” and the European Innovation Partnership on Active and Healthy Ageing.</p>	
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COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
1.3. Broad lines of the activities	1.3. Broad lines of the activities	1.3. Broad lines of the activities	
Effective health promotion, supported by a robust evidence base, prevents disease, improves wellbeing and is cost effective. Health promotion and disease prevention also depend on an understanding of the determinants of health, on effective preventive tools, such as vaccines, on effective health and disease surveillance and preparedness, and on effective screening programmes.	Effective health promotion, supported by a robust evidence base, prevents disease, improves wellbeing and is cost effective. Health promotion and disease prevention, including occupational illnesses , also depend on an understanding of the determinants of health including socio-economic status and gender , on effective preventive tools (such as vaccines and policy interventions targeting social determinants and at risk groups) on effective health and disease surveillance and preparedness, and on effective screening programmes.	Effective health promotion, supported by a robust evidence base, prevents disease, improves contributes to wellbeing and is cost effective. Health promotion to contain costs. Promotion of health, active ageing, wellbeing and disease prevention also depend on an understanding of the determinants of health, on effective preventive tools, such as vaccines , on effective health and disease surveillance and preparedness, and on effective screening programmes.	

Successful efforts to prevent, manage, treat and cure disease, disability and reduced functionality are underpinned by the fundamental understanding of their determinants and causes, processes and impacts, as well as factors underlying good health and wellbeing. Effective sharing of data and the linkage of these data with large scale cohort studies is also essential, as is the translation of research findings into the clinic, in particular through the conduct of clinical trials.	Successful efforts to prevent, manage, treat and cure disease, disability and reduced functionality are underpinned by the fundamental understanding of their determinants and causes, processes and impacts, as well as factors underlying good health and wellbeing. Effective sharing of data, standardised data processing and the linkage of these data with large scale cohort studies is also essential, as is the translation of research findings into the clinic, in particular including through the conduct of clinical trials, which should address all age groups to ensure that medicines are adapted to their use.	Successful efforts to prevent, early detect , manage, treat and cure disease, disability, frailty and reduced functionality are underpinned by the fundamental understanding of their determinants and causes, processes and impacts, as well as factors underlying good health and wellbeing. Improved understanding of health and disease will demand close linkage between fundamental, clinical, epidemiological and socio-economic research. Effective sharing of data and the linkage of these data with large scale cohort studies is also essential, as is the translation of research findings into the clinic, in particular through the conduct of clinical trials.	
	<i>Poverty related and neglected diseases are a global concern and research gaps must be addressed through creating innovation driven by patients' needs. The resurgence of old infectious diseases including tuberculosis in the European region, the increased prevalence of vaccine-preventable diseases in developed countries and the growing problem of anti-microbial resistance further underlines the need for a comprehensive approach and increased public support for R&D for those diseases that kill millions of people every year.</i>		

	<i>Personalised medicine must be developed, in order to generate new preventive and therapeutic strategies which can be adjusted to patient requirements, so as to increase the prevention and early detection of diseases. The factors which influence therapeutic decision-making must be identified, further elucidated and developed through research.</i>		
An increasing disease and disability burden in the context of an aging population places further demands on health and care sectors. If effective health and care is to be maintained for all ages, efforts are required to improve decision making in prevention and treatment provision, to identify and support the dissemination of best practice in the health and care sectors, and to support integrated care and the wide uptake of technological, organisational and social innovations empowering in particular older persons as well as disabled persons to remain active and independent. Doing so will contribute to increasing, and lengthening the duration of their physical, social, and mental well-being.	An increasing disease and disability burden together with problems of mobility and accessibility in the context of an aging population places further demands on health and care sectors. If effective health and care is to be maintained for all ages, efforts are required to improve decision making in prevention and treatment provision, to identify and support the dissemination of best practice in the health and care sectors, and to support integrated care and the wide uptake of technological, organisational and social innovations empowering in particular older persons, persons with chronic diseases as well as disabled persons to remain active and independent. Doing so will contribute to increasing, and lengthening the duration of their physical, social, and mental well-being.	An increasing disease and disability burden in It is a societal challenge to adjust to the context of an aging population places further demands on health and care sectors: due to the ageing population. If effective health and care is to be maintained for all ages, efforts are required to improve decision making in prevention and treatment provision, to identify and support the dissemination of best practice in the health and care sectors, and to support integrated care and . A better understanding of ageing processes and the prevention of age-related illnesses are the basis for keeping European citizens healthy and active throughout the course of their lives. Similarly important is the wide uptake of technological, organisational and social innovations empowering in particular older persons as well as disabled persons to remain active, productive and independent. Doing so will contribute to increasing, and lengthening the duration of their physical, social, and mental well-	

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<p>All of these activities shall be undertaken in such a way as to provide support throughout the research and innovation cycle, strengthening the competitiveness of the European based industries and development of new market opportunities.</p>	<p>All of these activities shall be undertaken in such a way as to provide support throughout the research and for long term research programmes that covers the full innovation cycle, strengthening the competitiveness of the European based industries and development of new market opportunities. Emphasis will also be placed on engaging all health stakeholders – including patients and patient organisations – in order to develop a research and innovation agenda that actively involves citizens and reflects their needs and expectations.</p>	<p>[no change]</p>	
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<p>Specific activities shall include: understanding the determinants of health (including environmental and climate related factors), improving health promotion and disease prevention; understanding disease and improving diagnosis; developing effective screening programmes and improving the assessment of disease susceptibility; improving surveillance and preparedness; developing better preventive vaccines; using in-silico medicine for improving disease management and prediction; treating disease; transferring knowledge to clinical practice and scalable innovation actions; better use of health data; active ageing, independent and assisted living; individual empowerment for self-management of health;</p>	<p>Specific activities shall include: understanding the determinants of health (including food genetic, pathogen, environmental, and climate, social, gender and poverty related factors), improving health promotion and disease prevention; understanding the basis of disease and improving diagnosis in different socio-economic contexts; developing effective screening programmes and improving the assessment of disease susceptibility; improving the surveillance of infectious diseases in the Union as well as in neighbouring and developing countries and preparedness for combating epidemics and emerging diseases; developing new and better preventive vaccines and drugs; using in-silico medicine for improving disease management and prediction; developing adapted treatments and treating disease; transferring knowledge to clinical practice and scalable innovation actions; better collection and use of health cohort and administrative data; standardised data analysis techniques; healthy and active ageing, independent and assisted living; improving palliative medicine individual empowerment for self-management of health;</p>	<p>Specific activities shall include: understanding the determinants of health (including nutrition, physical activity, environmental, socio-economic and occupational and climate related factors), improving health promotion and disease prevention; understanding disease and improving diagnosis and prognosis; developing effective prevention and screening programmes and improving the assessment of disease susceptibility; improving surveillance and preparedness; developing better preventive and therapeutic vaccines; using in-silico medicine for improving disease management and prediction; developing regenerative medicine treating disease; transferring knowledge to clinical practice and scalable innovation actions; improving health information and better use of health data; active ageing, independent and assisted living; individual awareness and empowerment for self-management of health;</p>	
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<p>promotion of integrated care; improving scientific tools and methods to support policy making and regulatory needs; and optimising the efficiency and effectiveness of healthcare systems and reducing inequalities by evidence based decision making and dissemination of best practice, and innovative technologies and approaches.</p>	<p>promotion of integrated care, <i>including psychsocial aspects</i>; improving scientific tools and methods to support policy making and regulatory needs; and optimising the efficiency and effectiveness of healthcare systems and reducing <i>health disparities and</i> inequalities by evidence based decision making and dissemination of best practice, and innovative technologies and approaches. <i>All of these activities shall properly account for gender and sex analysis. The activities shall take full advantage of the opportunities presented for a true interdisciplinary approach, combining knowledge from all seven challenges and the other pillars to ensure sustainable solutions within the domain. Active involvement of health care providers must be encouraged in order to secure rapid take-up and implementation of results.</i></p>	<p>promotion of integrated care; improving scientific tools and methods to support policy making and regulatory needs; and optimising the efficiency and effectiveness of healthcare systems provision and reducing inequalities by evidence based decision making and dissemination of best practice, and innovative technologies and approaches.</p>	
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COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
2. FOOD SECURITY, SUSTAINABLE AGRICULTURE, MARINE AND MARITIME RESEARCH AND THE BIO- ECONOMY	AMD 139 2. Food <u>quality, safety and</u> security, sustainable agriculture <u>and forestry</u> , marine and maritime research and the bio- ECONOMY <u>based industries</u>	2. EUROPEAN BIOECONOMY CHALLENGES: FOOD SECURITY, SUSTAINABLE AGRICULTURE AND FORESTRY, MARINE AND MARITIME AND INLAND WATER RESEARCH and the bio- economy	
2.1 Specific objective	2.1 Specific objective	2.1 Specific objective	
The specific objective is to secure sufficient supplies of safe and high quality food and other bio-based products, by developing productive and resource-efficient primary production systems, fostering related ecosystem services, along side competitive and low carbon supply chains. This will accelerate the transition to a sustainable European bio-economy.	The specific objective is to secure sufficient supplies of safe and high quality <u>healthy</u> food and other bio-based products, by developing productive, <u>sustainable</u> and resource-efficient primary production <u>and food processing</u> systems, fostering related ecosystem services, along side competitive and low carbon supply chains. This will accelerate the transition to a sustainable European bio-economy.	The specific objective is to secure sufficient supplies of safe, <u>healthy</u> and high quality food and other bio-based products, by developing productive, <u>sustainable</u> and resource-efficient primary production systems, fostering related ecosystem services <u>and the recovery of biological diversity</u> , along side competitive and low carbon supply, <u>processing and marketing</u> chains. This will accelerate the transition to a sustainable European bio-economy, <u>bridging the gap between new technologies and their implementation.</u>	

<p>Over the coming decades, Europe will be challenged by increased competition for limited and finite natural resources, by the effects of climate change, in particular on primary production systems (agriculture, forestry, fisheries and aquaculture) and by the need to provide a sustainable, safe and secure food supply for the European and an increasing global population. A 70 % increase of the world food supply is estimated to be required to feed the 9 billion global population by 2050. Agriculture accounts for about 10 % of Union greenhouse gases emissions, and while declining in Europe, global emissions from agriculture are projected to increase up to 20 % by 2030. Furthermore, Europe will need to ensure sufficient supplies of raw materials, energy and industrial products, under conditions of decreasing fossil carbon resources (oil and liquid gas production expected to decrease by about 60 % by 2050), while maintaining its competitiveness. Bio-waste (estimated at up to 138 million tonnes per year in the Union, of which up to 40 % is land-filled) represents a huge problem and cost, despite its high potential added value.</p>	<p>Over the coming decades, Europe will be challenged by increased competition for limited and finite natural resources, by the effects of climate change, in particular on primary production systems (agriculture, forestry, fisheries and aquaculture) and by the need to provide a sustainable, safe and secure food supply for the European and an increasing global population. A 70 % increase of the world food supply is estimated to be required to feed the 9 billion global population by 2050. Agriculture accounts for about 10 % of Union greenhouse gases emissions, and while declining in Europe, global emissions from agriculture are projected to increase up to 20 % by 2030. Furthermore, Europe will need to ensure sufficient supplies of raw materials, clean water resources, energy and industrial products, under conditions of decreasing fossil carbon resources (oil and liquid gas production expected to decrease by about 60 % by 2050), while maintaining its competitiveness. Bio-waste (estimated at up to 138 million tonnes per year in the Union, of which up to 40 % is land-filled) represents a huge problem and cost, despite its high potential added value.</p>	<p>Over the coming decades, Europe will be challenged by increased competition for limited and finite natural resources, by the effects of climate change, in particular on primary production systems (agriculture including animal husbandry and horticulture, forestry, fisheries and aquaculture) and by the need to provide a sustainable, safe and secure food supply for the European and an increasing global population. A 70 % increase of the world food supply is estimated to be required to feed the 9 billion global population by 2050. Agriculture accounts for about 10 % of Union greenhouse gases emissions, and while declining in Europe, global emissions from agriculture are projected to increase up to 20 % by 2030. Furthermore, Europe will need to ensure sufficient and sustainably produced supplies of raw materials, energy and industrial products, under conditions of decreasing fossil carbon resources (oil and liquid gas production expected to decrease by about 60 % by 2050), while maintaining its competitiveness. Bio-waste (estimated at up to 138 million tonnes per year in the Union, of which up to 40 % is land-filled) represents a huge problem and cost, despite its high potential added value.</p>	
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<p>For example, an estimated 30 % of all food produced in developed countries is discarded. Major changes are needed to reduce this amount by 50 % in the Union by 2030²⁶. In addition, national borders are irrelevant in the spread of animal and plant pests and diseases, including zoonotic diseases, and food borne pathogens. While effective national prevention measures are needed, action at Union level is essential for ultimate control and the effective running of the single market. The challenge is complex, affects a broad range of interconnected sectors and requires a plurality of approaches.</p> <hr/> <p>²⁶ COM (2011)0112</p>	<p><i>[no change]</i>.</p>	<p>For example, an estimated 30 % of all food produced in developed countries is discarded. Major changes are needed to reduce this amount by 50 % in the Union by 2030²⁶¹⁰. In addition, national borders are irrelevant in the entry and spread of animal and plant pests and diseases, including zoonotic diseases, and food borne pathogens. While effective national prevention measures are needed, action at Union level is essential for ultimate control and the effective running of the single market. The challenge is complex, affects a broad range of interconnected sectors and requires a plurality of approaches. holistic and systemic approach.</p> <hr/> <p>²⁶¹⁰ COM (2011)0112</p>	
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<p>More and more biological resources are needed to satisfy market demand for a secure and healthy food supply, bio-materials, biofuels and bio-based products, ranging from consumer products to bulk chemicals. However the capacities of the terrestrial and aquatic ecosystems required for their production are limited, while there are competing claims for their utilisation, and often not optimally managed, as shown for example by a severe decline in soil carbon content and fertility. There is under-utilised scope for fostering ecosystem services from farmland, forests, marine and fresh waters by integrating agronomic and environmental goals into sustainable production.</p>	<p>More and more biological resources are needed to satisfy market demand for a secure and healthy food supply, bio-materials, biofuels and bio-based products, ranging from consumer products to bulk chemicals. However the capacities of the terrestrial and aquatic ecosystems required for their production are limited, while there are competing claims for their utilisation, and often not optimally managed, as shown for example by a severe decline in soil carbon content and fertility <i>and fish stock depletion</i>. There is under-utilised scope for fostering ecosystem services from farmland, forests, marine and fresh waters by integrating agronomic and environmental goals into sustainable production.</p>	<p>More and more biological resources are needed to satisfy market demand for a secure and healthy food supply, bio-materials, biofuels and bio-based products, ranging from consumer products to bulk chemicals. However the capacities of the terrestrial and aquatic ecosystems required for their production are limited, while there are competing claims for their utilisation, and often not optimally managed, as shown for example by a severe decline in soil carbon content and fertility. There is under-utilised scope for fostering ecosystem services from farmland, forests, marine and fresh waters by integrating agronomic and, environmental and social goals into sustainable production- and consumption.</p>	
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<p>The potential of biological resources and ecosystems could be used in a much more sustainable, efficient and integrated manner. For examples, the potential of biomass from forests and waste streams from agricultural, aquatic, industrial, and also municipal origins could be better harnessed</p>	<p>The potential of biological resources and ecosystems could be used in a much more sustainable, efficient and integrated manner. For examples, the potential of biomass from agriculture, forests and waste streams from agricultural, aquatic, industrial, and also municipal origins could be better harnessed</p>	<p>[no change]</p>	
<p>In essence, a transition is needed towards an optimal and renewable use of biological resources and towards sustainable primary production and processing systems that can produce more food and other bio-based products with minimised inputs, environmental impact and greenhouse gas emissions, enhanced ecosystem services, zero-waste and adequate societal value. A critical effort of interconnected research and innovation is a key element for this to happen, in Europe and beyond.</p>	<p>In essence, a transition is needed towards an optimal and renewable use of biological resources and towards sustainable primary production and processing systems that can produce more food, fibre and other bio-based products with minimised inputs, environmental impact and greenhouse gas emissions, enhanced ecosystem services and zero-waste and adequate societal value. <i>The aim is establishing food production systems that - rather than degrading the natural resources they depend upon - strengthen, reinforce and nourish the resource base, which would enable sustainable wealth generation. Responses to the way we generate, distribute, market, consume and regulate food production must be better understood and developed.</i> A critical effort of interconnected research and innovation is a key element for this to happen, in Europe and beyond.</p>	<p>In essence, a transition is needed towards an optimal and renewable use of biological resources and towards sustainable primary production and processing systems that can produce more food and other bio-based products with minimised inputs, environmental impact and greenhouse gas emissions, enhanced ecosystem services, zero-waste and adequate societal value. A critical effort of interconnected research and innovation is a key element for this to happen, in Europe and beyond as well as a continuous dialogue between political, social, economic and other stakeholder groups.</p>	

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
2.2 Rationale and Union added value	2.2 Rationale and Union added value	2.2 Rationale and Union added value	
<p>Agriculture, forestry and fisheries together with the bio-based industries are the major sectors underpinning the bio-economy. This latter represents a large and growing market estimated to be worth over EUR 2 trillion, providing 20 million jobs and accounting for 9 % of total employment in the Union in 2009. Investments in research and innovation under this societal challenge will enable Europe to take leadership in the concerned markets and will play a role in achieving the goals of the Europe 2020 strategy and its Innovation Union and Resource Efficient Europe flagship initiatives.</p>	<p><i>[no change]</i></p>	<p>Agriculture, forestry and, fisheries and aquaculture together with the bio-based industries are the major sectors underpinning the bio-economy. This latter represents a large and growing market estimated to be worth over EUR 2 trillion, providing 20 million jobs and accounting for 9 % of total employment in the Union in 2009. Investments in research and innovation under this societal challenge will enable Europe to take leadership in the concerned markets and will play a role in achieving the goals of the Europe 2020 strategy and its Innovation Union and Resource Efficient Europe flagship initiatives.</p>	

<p>A fully functional European bio-economy – encompassing the sustainable production of renewable resources from land and aquatic environments and their conversion into food, bio-based products and bioenergy as well as the related public goods - will generate high European added value. Managed in a sustainable manner, it can reduce the environmental footprint of primary production and the supply chain as a whole. It can increase their competitiveness and provide jobs and business opportunities for rural and coastal development. The food security, sustainable agriculture, and overall bio-economy – related challenges are of a European and global nature. Actions at Union level are essential to bring together clusters to achieve the necessary breadth and critical mass to complement efforts made by a single or groups of Member States.</p>	<p>A fully functional European bio-economy – encompassing the sustainable production of renewable resources from land terrestrial, marine and aquatic freshwater environments and their conversion into food, feed, fibre, bio-based products and bioenergy as well as the related public goods – will generate high European added value. <i>In parallel to the market related function, the bio-economy sustains also a wide range of public goods function and ecosystem services that should be preserved: agricultural and forested landscape, farmland and forest biodiversity, water quality and availability, soil functionality, climate stability, air quality, resilience to flooding and fire.</i> Managed in a sustainable manner, it can reduce the environmental footprint of primary production and the supply chain as a whole. It can increase their competitiveness, <i>enhance Europe's self-reliance</i> and provide jobs and business opportunities for rural and coastal development. The food security, sustainable agriculture, and overall bio-economy – related challenges are of a European and global nature. Actions at Union level are essential to bring together clusters to achieve the necessary breadth and critical mass to complement efforts made by a single or groups of Member States.</p>	<p>A fully functional European bio-economy – encompassing the sustainable production of renewable resources from land, fisheries and aquatic aquaculture environments and their conversion into food, bio-based products and bioenergy as well as the related public goods - will generate high European added value. Managed in a sustainable manner, it can reduce the environmental footprint of primary production and the supply chain as a whole. It can increase their competitiveness and provide jobs and business opportunities essential for rural and coastal development. The food security, sustainable agriculture, and farming, aquatic production, forestry and overall bio-economy – related challenges are of a European and global nature. Actions at Union level are essential to bring together clusters to achieve the necessary breadth and critical mass to complement efforts made by a single or groups of Member States.</p>	
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<p>A multi-actor approach will ensure the necessary cross-fertilising interactions between researcher, businesses, farmers/producers, advisors and end-users. The Union level is also necessary to ensure coherence in addressing this challenge across sectors and with strong links to relevant Union policies. Coordination of research and innovation at Union level will stimulate and help to accelerate the required changes across the Union.</p>	<p>A multi-actor approach will ensure the necessary cross-fertilising interactions between researcher, businesses, farmers/producers, advisors, consumers and end-users. The Union level is also necessary to ensure coherence in addressing this challenge across sectors and with strong links to relevant Union policies. Coordination of research and innovation at Union level will stimulate and help to accelerate the required changes across the Union.</p>	<p>A multi-actor approach will ensure the necessary cross-fertilising interactions between researchers, businesses, farmers/producers, advisors and end-users. The Union level is also necessary to ensure coherence in addressing this challenge across sectors and with strong links to relevant Union policies. Coordination of research and innovation at Union level will stimulate and help to accelerate the required changes across the Union.</p>	
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<p>Research and innovation will interface with a wide spectrum of Union policies and related targets, including the Common Agriculture Policy (in particular the Rural Development Policy) and the European Innovation Partnership 'Agricultural Productivity and Sustainability', the Common Fisheries Policy, the Integrated Maritime Policy, the European Climate Change Programme, the Water Framework Directive, the Marine Strategy Framework Directive, the Forestry Action Plan, the Soil Thematic Strategy, the Union's 2020 Biodiversity Strategy, the Strategic Energy Technology Plan, the Union's innovation and industrial policies, external and development aid policies, plant health strategies, animal health and welfare strategies and regulatory frameworks to protect the environment, health and safety, to promote resource efficiency and climate action, and to reduce waste.</p>	<p>Research and innovation will interface with a wide spectrum of Union policies and related targets, including the Common Agriculture Policy (in particular the Rural Development Policy) and the European Innovation Partnership 'Agricultural Productivity and Sustainability', <i>the European Innovation Partnership on Water</i>, the Common Fisheries Policy, the Integrated Maritime Policy, the European Climate Change Programme, the Water Framework Directive, the Marine Strategy Framework Directive, the Forestry Action Plan, the Soil Thematic Strategy, the Union's 2020 Biodiversity Strategy, the Strategic Energy Technology Plan, the Union's innovation and industrial policies, external and development aid policies, plant health strategies, animal health and welfare strategies and regulatory frameworks to protect the environment, health and safety, to promote resource efficiency and climate action, and to reduce waste.</p>	<p>Research and innovation will interface with and support elaboration of a wide spectrum of Union policies and related targets, including the Common Agriculture Policy (in particular the Rural Development Policy, the Joint Programming Initiatives, including “Agriculture, Food Security and Climate Change”, “A Healthy Diet for a Healthy Life” and “Healthy and Productive Seas and Oceans”) and the European Innovation Partnership 'Agricultural Productivity and Sustainability', the Common Fisheries Policy, the Integrated Maritime Policy, the European Climate Change Programme, the Water Framework Directive, the Marine Strategy Framework Directive, the EU Forestry Action Plan, the Soil Thematic Strategy, the Union's 2020 Biodiversity Strategy, the Strategic Energy Technology Plan, the Union's innovation and industrial policies, external and development aid policies, plant health strategies, animal health and welfare strategies and regulatory frameworks to protect the environment, health and safety, to promote resource efficiency and climate action, and to reduce waste.</p>	
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A better integration of research and innovation into related Union policies will significantly improve their European added value, provide leverage effects, increase societal relevance and help to further develop sustainable land, seas and oceans management and bio-economy markets.	A better integration of <i>the full cycle from fundamental</i> research and to innovation into related Union policies will significantly improve their European added value, provide leverage effects, increase societal relevance, <i>provide healthy food products</i> and help to further develop sustainable land, seas and oceans management and bio-economy markets.	[no change]	
For the purpose of supporting Union policies related to the bio-economy and to facilitate governance and monitoring of research and innovation, socio-economic research and forward looking activities will be performed in relation to the bio-economy strategy, including development of indicators, data bases, models, foresight and forecast, impact assessment of initiatives on the economy, society and the environment.	[no change]	[no change]	

<p>Challenge-driven actions focusing on social and economic benefits and the modernisation of the bio-economy associated sectors and markets shall be supported through multi-disciplinary research, driving innovation and leading to the development of new practices, products and processes. It shall also pursue a broad approach to innovation ranging from technological, non-technological, organisational, economic and social innovation to for instance novel business models, branding and services.</p>	<p>Challenge-driven actions focusing on ecological, social and economic benefits and the modernisation of the bio-economy associated sectors, participating actors and markets shall be supported through multi-disciplinary research, driving innovation and leading to the development of new practices, sustainable products and processes. It shall also pursue a broad approach to innovation ranging from technological, non-technological, organisational, economic and social innovation to for instance novel business models, branding and services. <i>The potential of farmers and SMEs to contribute to innovation in the field must be fully recognised. The approach to the bio-based economy shall take account of the importance of local knowledge enhancing local capabilities, while also accommodating diversity and complexity.</i></p>	<p>Challenge-driven actions focusing on social and, economic and environmental benefits and the modernisation of the bio-economy associated sectors and markets shall be supported through multi-disciplinary research, driving innovation and leading to the development of new strategies, practices, products and processes. It shall also pursue a broad approach to innovation ranging from technological, non-technological, organisational, economic and social innovation to, for instance, ways for technology transfer, novel business models, branding and services.</p>	
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COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
2.3 Broad lines of activities	2.3 Broad lines of activities	2.3 Broad lines of activities	
(a) Sustainable agriculture and forestry	(a) Sustainable <i>and competitive</i> agriculture, <i>livestock farming</i> and forestry	[no change]	
The aim is to supply sufficient food, feed, biomass and other raw-materials, while safeguarding natural resources and enhancing ecosystems services, including coping with and mitigating climate change. The activities shall focus on more sustainable and productive agriculture and forestry systems which are both resource-efficient (including low-carbon) and resilient, while at the same time developing of services, concepts and policies for thriving rural livelihoods.	The aim is to supply sufficient food, feed, biomass and other raw-materials, while safeguarding <i>the</i> natural resources <i>base and biodiversity, in a European and world-wide perspective</i> and enhancing ecosystems services, including coping with and mitigating climate change. The activities shall focus on more sustainable and productive agriculture, <i>livestock</i> and forestry systems which are both resource-efficient (including low-carbon, <i>low external input and organic farming</i>) <i>protect natural resources, are diverse, produce less waste, can adapt to a changing environment</i> and <i>are</i> resilient, <i>on increasing the quality and value of agricultural products, while</i> and at the same time developing of services, concepts and policies for <i>diverse food systems and</i> thriving rural livelihoods.	The aim is to supply sufficient food, feed, biomass and other raw-materials, while safeguarding natural resources, such as water and soil , and enhancing ecosystems services, including coping with and mitigating climate change. The activities shall focus on delivering more sustainable and productive agriculture, including animal husbandry and forestry systems which are both resource-efficient (including low-carbon and water) and resilient; while at and produce less waste. Furthermore, the same time activities shall focus on developing of services, concepts and policies for thriving rural livelihoods and encouraging sustainable consumption.	

	<i>In particular for forestry, the aim is to sustainably produce bio-based products, ecosystems services with due consideration to economical, ecological and social aspects of forestry. Activities will focus on the further development of production and sustainability of resource efficient forestry systems which are instrumental in the strengthening of forest resilience and biodiversity protection.</i>	In particular for forestry, the aim is to sustainably produce bio-based products, ecosystems, services and sufficient biomass, with due consideration to economical, ecological and social aspects of forestry. Activities will focus on the further development of production and sustainability of resource efficient forestry systems which are instrumental in the strengthening of forest resilience and biodiversity protection, and which can meet increased biomass demand.	
		The interaction of functional plants with health and well being, as well as the exploitation of horticulture and forestry for the development of urban greening will also be considered.	

(b) Sustainable and competitive agri-food sector for a safe and healthy diet	(b) Sustainable and competitive agri-food sector for a safe, affordable and healthy diet	[no change]	
The aim is to meet the requirements of citizens for safe, healthy and affordable food, and to make food and feed processing and distribution more sustainable and the food sector more competitive. The activities shall focus on healthy and safe foods for all, informed consumer choices, and competitive food processing methods that use less resources and produce less by-products, waste and green-house gases.	The aim is to meet the requirements of citizens for safe, healthy and affordable food, and to make food and feed processing and distribution as well as food consumption more sustainable and the food sector more competitive. The activities shall focus on a broad diversity of healthy, high quality and safe foods for all, informed consumer choices, and competitive food processing methods that use less resources and additives and produce less by-products, waste and green-house gases.	The aim is to meet the requirements of citizens and the environment for safe, healthy and affordable food, and to make food and feed processing and distribution and consumption more sustainable and the food sector more competitive while also considering the cultural component of food quality . The activities shall focus on healthy and safe foods for all, informed consumer choices, dietary solutions and innovations for improved health and competitive food processing methods that use less resources and produce less by-products, waste and green-house gases.	
(c) Unlocking the potential of aquatic living resources	(c) Unlocking the potential of aquatic living resources fisheries, aquaculture and marine biotechnologies	[no change]	

<p>The aim is to sustainably exploit aquatic living resources to maximise social and economic benefits/returns from Europe's oceans and seas. The activities shall focus on an optimal contribution to secure food supplies by developing sustainable and environmentally friendly fisheries and competitive European aquaculture in the context of the global economy and on boosting marine innovation through biotechnology to fuel smart "blue" growth</p>	<p>The aim is to sustainably exploit and maintain aquatic living resources to maximise social and economic benefits/returns from Europe's oceans and seas while protecting biodiversity and ecosystem services. The activities shall focus on an optimal contribution to secure food supplies by developing sustainable and environmentally friendly fisheries and competitive European aquaculture in the context of the global economy and on boosting marine innovation through biotechnology to fuel smart "blue" growth with due respect for both the limitations and the potentials of the marine environment.</p>	<p>The aim is to sustainably exploit manage aquatic living resources to maximise social and economic benefits/returns from Europe's oceans and, seas and inland waters. The activities shall focus on an optimal contribution to secure food supplies by developing sustainable and environmentally friendly fisheries, sustainable management of ecosystems providing goods and services, competitive as well as environmentally friendly European aquaculture in the context of the global economy and on boosting marine and maritime innovation through biotechnology to fuel smart "blue" growth. Cross-cutting marine and maritime scientific and technological knowledge will be addressed with a view to unlock the potential of the seas and inland waters across the range of marine and maritime industries, while protecting the environment and adapting to climate change.</p>	
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(d) Sustainable and competitive bio-based industries	<i>[no change]</i>	(d) Sustainable and competitive bio-based industries and supporting the development of a European bio-economy	
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<p>The aim is the promotion of low carbon, resource efficient, sustainable and competitive European bio-based industries. The activities shall focus on fostering the bio-economy by transforming conventional industrial processes and products into bio-based resource and energy efficient ones, the development of integrated biorefineries, utilising biomass from primary production, biowaste and bio-based industry by-products, and opening new markets through supporting standardisation, regulatory and demonstration/field trial activities and others, while taking into account the implication of the bio-economy on land use and land use changes.</p>	<p>The aim is the promotion of low carbon, resource efficient (<i>including nutrient, energy, carbon, water and soil use efficiency</i>), sustainable and competitive European bio-based industries, <i>while making bio-waste an asset used at its full potential, for which it is vital to establish a closed circuit of nutrients between urban and rural areas</i>. The activities shall focus on fostering the bio-economy by transforming conventional industrial processes and products into bio-based resource and energy efficient ones, the development of integrated <i>second and third generation</i> biorefineries, <i>producing and utilising biomass and other residues</i> from primary <i>agricultural and forestry</i> production, biowaste and bio-based industry by-products, and opening new markets <i>transformation of bio-waste in urban areas into agricultural inputs through efficient cleaning</i>, through supporting, <i>where necessary</i>, standardisation, <i>and certification schemes, but also through</i> regulatory and demonstration/field trial activities and others, while taking into account the <i>environmental and socioeconomic</i> implication of the bio-economy on land use and land use changes, <i>as well as the civil society views and concerns</i>.</p>	<p>The aim is the promotion of low carbon, resource efficient, sustainable and competitive European bio-based industries. The activities shall focus on fostering the knowledge-based bio-economy by transforming conventional industrial processes and products into bio-based resource and energy efficient ones, the development of integrated biorefineries, utilising optimising the use of biomass from primary production, biowaste and bio-based industry by-products, and opening new markets through supporting standardisation and certification systems, regulatory and demonstration/field trial activities and others, while taking into account the implication of the bio-economy on land use and land use changes.</p>	
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	<i>(da) Cross-cutting marine and maritime research</i>		
	<i>The exploitation of living and non-living marine resources as well as the use of different sources of marine energy and the wide range of different uses that is made of the seas raise cross-cutting scientific and technological challenges.</i>		
	<i>Seas and oceans also play a crucial role in climate regulation, but they are heavily impacted by inland, coastal and maritime human activities and also by climate change. The overall aim is to develop cross-cutting marine and maritime scientific and technological knowledge (including through study of paleoic birds) with a view to unlock the blue growth potential across the range of marine and maritime industries, while protecting the marine environment and adapting to climate change. This strategic coordinated approach for marine and maritime research across all challenges and pillars of Horizon 2020 will also support the implementation of relevant Union policies to help deliver key blue growth objectives.</i>		

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
3. SECURE, CLEAN AND EFFICIENT ENERGY	<u>AMD 140</u> 3. SECURE, CLEAN AND EFFICIENT ENERGY	3. SECURE, CLEAN AND EFFICIENT ENERGY	
3.1. Specific objective	3.1. Specific objective	3.1. Specific objective	
The specific objective is to make the transition to a reliable, sustainable and competitive energy system, in the face of increasingly scarce resources, increasing energy needs and climate change.	The specific objective is to make the transition to a reliable, <u>affordable</u> , sustainable and competitive energy system, in the face of increasingly scarce resources, increasing energy needs and climate change.	The specific objective is to make the transition to a reliable, <u>publicly accepted</u> , sustainable and competitive energy system, <u>aiming at reducing fossil fuel dependency</u> in the face of increasingly scarce resources, increasing energy needs and climate change.	
The Union intends to reduce greenhouse gas emissions by 20 % below 1990 levels by 2020, with a further reduction to 80-95 % by 2050. In addition, renewables should cover 20 % of final energy consumption in 2020 coupled with a 20 % energy efficiency target.	<i>[no change]</i>	<i>[no change]</i>	

<p>Achieving these objectives will require an overhaul of the energy system combining low carbon profile, energy security and affordability, while at the same time reinforcing Europe's economic competitiveness. Europe is currently far from this overall goal. 80 % of the European energy system still relies on fossil fuels, and the sector produces 80 % of all the Union's greenhouse gas emissions.</p>	<p><i>All decarbonisation scenarios in the Energy Roadmap 2050 show that renewable energy technologies will account for the biggest share of energy supply technologies. This must be accompanied by ambitious energy efficiency policies as the most cost-effective way of reaching our long-term decarbonisation goals. It is therefore appropriate for 75% of the budget under this Challenge to go towards research and innovation in renewable energy, end- user- energy efficiency, smart grids and energy storage. An additional 15% shall go to the Intelligent Energy Europe Programme.</i> Achieving these objectives will require an overhaul of the energy system combining low carbon profile <i>the development of alternatives to fossil fuels</i>, energy security and affordability, while at the same time reinforcing Europe's economic competitiveness. Europe is currently far from this overall goal. 80 % of the European energy system still relies on fossil fuels, and the sector produces 80 % of all the Union's greenhouse gas emissions.</p>		
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<p>Every year 2.5 % of the Union's Gross Domestic Product (GDP) is spent on energy imports and this is likely to increase. This trend would lead to total dependence on oil and gas imports by 2050. Faced with volatile energy prices on the world market, coupled with concerns over security of supply, European industries and consumers are spending an increasing share of their income on energy.</p>	<p><i>[no change]</i></p>	<p>Every year 2.5 % of the Union's Gross Domestic Product (GDP) is spent on energy imports and this is likely to increase. This trend would lead to total dependence on oil and gas imports by 2050. Faced with volatile energy prices on the world market, coupled with concerns over security of supply, European industries and consumers are spending an increasing share of their income on energy. European cities are responsible for 70-80%¹¹ of the total energy consumption in the EU and for about the same share of green house gas emissions.</p> <hr/> <p>¹¹ World Energy Outlook 2008, OECD- IEA, 2008</p>	
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<p>The roadmap to a competitive low-carbon economy in 2050²⁷ shows that the targeted reductions in greenhouse gas emissions will have to be met largely within the territory of the Union. This would entail reducing CO₂ emissions by over 90 % by 2050 in the power sector, by over 80 % in industry, by at least 60 % in transport and by about 90 % in the residential sector and services.</p> <hr/> <p>²⁷ COM(2011) 112</p>	<p>The roadmap to a competitive low-carbon economy in 2050 shows that the targeted reductions in greenhouse gas emissions will would have to be met largely within the territory of the Union. This would entail reducing CO₂ emissions by over 90 % by 2050 in the power sector, by over 80 % in industry, by at least 60 % in transport and by about 90 % in the residential sector and <i>in</i> services. <i>The roadmap also shows that inter-alia, natural gas, in the short to medium term, can contribute to the transformation of the energy sector combined with the use of CCS technology.</i></p>	<p>The roadmap to a competitive low-carbon economy in 2050²⁷¹² shows suggests that the targeted reductions in greenhouse gas emissions will have to be met largely within the territory of the Union. This would entail reducing CO₂ emissions by over 90 % by 2050 in the power sector, by over 80 % in industry, by at least 60 % in transport and by about 90 % in the residential sector and services. The roadmap also shows that inter-alia gas, in the short to medium term, can contribute to the transformation of the energy system.</p> <hr/> <p>²⁷¹² COM(2011) 112</p>	
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<p>To achieve these reductions, significant investments need to be made in research, development, demonstration and market roll-out of efficient, safe and reliable low-carbon energy technologies and services. These must go hand in hand with non-technological solutions on both the supply and demand sides. All this must be part of an integrated low-carbon policy, including mastering key enabling technologies, in particular ICT solutions and advanced manufacturing, processing and materials. The goal is to produce efficient energy technologies and services that can be taken up widely on European and international markets and to establish intelligent demand-side management based on an open and transparent energy trade market and intelligent energy efficiency management systems.</p>	<p>To achieve these the reductions, significant investments need to be made in research, development, demonstration and market roll-out at affordable prices of efficient, safe, secure and reliable low-carbon energy technologies and services, including electricity storage and the roll-out of small and micro-scale energy systems. These must go hand in hand with non-technological solutions on both the supply and demand sides. All this must be part of an integrated sustainable low-carbon policy, including mastering key enabling technologies, in particular ICT solutions and advanced manufacturing, processing and materials. The goal is to produce efficient energy technologies and services that will contribute to tackling energy challenges, mainly linked to the integration of renewable energy, and that can be taken up widely on European and international markets and to establish intelligent demand-side management based on an open and transparent energy trade market and secure intelligent energy efficiency management systems.</p>	<p>To achieve these ambitious reductions, significant investments need to be made in research, development, demonstration and market roll-out of efficient, safe and reliable low-carbon energy technologies, including gas, and services. These must go hand in hand with non-technological solutions on both the supply and demand sides by initiating participation processes and integrating consumers. All this must be part of an integrated low-carbon policy, including mastering key enabling technologies, in particular ICT solutions and advanced manufacturing, processing and materials. The goal is to develop and produce efficient energy technologies and services that can be taken up widely on European and international markets and to establish intelligent demand-side management based on an open and transparent energy trade market and intelligent energy efficiency management systems.</p>	
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COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
3.2. Rationale and Union added value	3.2. Rationale and Union added value	3.2. Rationale and Union added value	
New technologies and solutions must compete on cost and reliability against highly optimised energy systems with well-established incumbents and technologies. Research and innovation are critical to make these new, cleaner, low-carbon, more efficient energy sources commercially attractive on the scale needed. Neither industry alone, nor Member States individually, are able to bear the costs and risks, for which the main drivers (transition to a low carbon economy, providing affordable and secure energy) are outside the market.	New technologies and solutions must compete on cost and reliability against highly optimised in energy systems with well-established <i>designed for historic</i> incumbents and technologies <i>which have absorbed the vast majority of the world and Europe's research funding and subsidies until today.</i> Research and innovation are critical to make these new, cleaner, low-carbon <i>renewable and</i> more efficient energy sources commercially attractive on the scale needed. Neither industry alone, nor Member States individually, are able to bear the costs and risks, for which the main drivers (transition to a low carbon economy, providing affordable and secure energy) are outside the market.	[no change]	

Speeding up this development will require a strategic approach at Union level, spanning energy supply, demand and use in buildings, services, transport and industrial value chains. This will entail aligning resources across the Union, including cohesion policy funds, in particular through the national and regional strategies for smart specialisation, emission trading schemes (ETS), public procurement and other financing mechanisms. It will also require regulatory and deployment policies for renewables and energy efficiency, tailored technical assistance and capacity-building to remove non-technological barriers.	Speeding up this development will require a strategic approach at Union level, spanning energy supply, demand and use in buildings, services, transport and industrial value chains. This will entail aligning resources across the Union, including cohesion policy funds, in particular through the national and regional strategies for smart specialisation, emission trading schemes (ETS), public procurement and other financing mechanisms. It will also require regulatory and deployment policies for renewables, and energy efficiency tailored technical assistance and capacity-building to remove non-technological barriers.	Speeding up this development will require a strategic approach at Union level, spanning energy supply, demand and use in buildings, services, domestic use , transport and industrial value chains. This will entail aligning resources across the Union, including cohesion policy funds, in particular through the national and regional strategies for smart specialisation, emission trading schemes (ETS), public procurement and other financing mechanisms. It will also require regulatory and deployment policies for renewables and energy efficiency, tailored technical assistance and capacity-building to remove non-technological barriers.	
The Strategic Energy Technology Plan (SET Plan) offers such a strategic approach. It provides a long term agenda to address the key innovation bottlenecks that energy technologies are facing at the frontier research and R&D/proof-of-concept stages and at the demonstration stage when companies seek capital to finance large, first-of-a-kind projects and to open the market deployment process.	The Strategic Energy Technology Plan (SET Plan) offers such a strategic approach. It provides a long term agenda to address the key innovation bottlenecks that energy technologies are facing at the frontier research and R&D/proof-of-concept stages and at the demonstration stage when companies seek capital to finance large, first-of-a-kind projects and to open the market deployment process. <i>Besides the many technologies represented in the SET-Plan, other newly emerging technologies with disruptive potential will not be neglected.</i>	<i>[no change]</i>	

<p>The resources required to implement the SET Plan in full have been estimated at EUR 8 billion per year over the next 10 years²⁸. This is well beyond the capacity of individual Member States or research and industrial stakeholders alone. Investments in research and innovation at Union level are needed, combined with mobilisation of efforts across Europe in the form of joint implementation and risk and capacity sharing. Union funding of energy research and innovation shall therefore complement Member States' activities by focusing on activities with clear Union added value, in particular those with high potential to leverage national resources. Action at Union level shall also support high-risk, high-cost, long-term programmes beyond the reach of individual Member States, pool efforts to reduce investment risks in large-scale activities such as industrial demonstration and develop Europe-wide, interoperable energy solutions.</p> <hr/> <p>²⁸ COM(2009) 519</p>	<p>The resources required to implement the SET Plan in full have been estimated at EUR 8 billion per year over the next 10 years. This is well beyond the capacity of individual Member States or research and industrial stakeholders alone. Investments in research and innovation at Union level are needed, combined with mobilisation of efforts across Europe in the form of joint implementation and risk and capacity sharing. Union funding of energy research and innovation shall therefore complement <i>and scale up</i> Member States' activities by focusing on activities with clear Union added value, in particular those with high potential to leverage national resources <i>and create jobs in Europe</i>. Action at Union level shall also support high-risk, high-cost, long-term programmes beyond the reach of individual Member States, pool efforts to reduce investment risks in large-scale activities such as industrial demonstration and develop Europe-wide, interoperable energy solutions. <i>Union funding shall be used to fund sustainable technology, in line with the Union's long-term climate and energy goals.</i></p>	<p>The resources required to implement the SET Plan in full have been estimated at EUR 8 billion per year over the next 10 years²⁸¹³. This is well beyond the capacity of individual Member States or research and industrial stakeholders alone. Investments in research and innovation at Union level are needed, combined with mobilisation of efforts across Europe in the form of joint implementation and risk and capacity sharing. Union funding of energy research and innovation shall therefore complement Member States' activities by focusing on <i>cutting-edge technologies and</i> activities with clear Union added value, in particular those with high potential to leverage national resources. Action at Union level shall also support high-risk, high-cost, long-term programmes beyond the reach of individual Member States, pool efforts to reduce investment risks in large-scale activities such as industrial demonstration and develop Europe-wide, interoperable energy solutions.</p> <hr/> <p>²⁸¹³ COM(2009) 519</p>	
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Implementation of the SET-Plan as the research and innovation pillar of European energy policy will reinforce the Union's security of supply and the transition to a low-carbon economy, help to link research and innovation programmes with trans-European and regional investments in energy infrastructure and increase the willingness of investors to release capital for projects with long lead-times and significant technology and market risks. It will create opportunities for innovation for small and large companies and help them become or remain competitive at world level, where opportunities for energy technologies are large and increasing.	Implementation of the SET-Plan as the research and innovation pillar of European energy policy will reinforce the Union's security of supply and the transition to a low-carbon economy, help to link research and innovation programmes with trans-European and regional investments in energy infrastructure and increase the willingness of investors to release capital for projects with long lead-times and significant technology and market risks. It will create opportunities for innovation for small and large companies and help them become or remain competitive at world level, where opportunities for energy technologies are large and increasing. <i>The SET-plan technologies will be financed through separate budget lines.</i>	[no change]	
On the international scene, the action taken at Union level provides a 'critical mass' to attract interest from other technology leaders and foster international partnerships to achieve the Union's objectives. It will make it easier for international partners to interact with the Union to build common action where there is mutual benefit and interest.	[no change]	[no change]	

The activities under this challenge will therefore form the technological backbone of European energy and climate policy. They will also contribute to achieving the Innovation Union in the field of energy and the policy goals outlined in 'Resource Efficient Europe', 'An Industrial Policy for the Globalisation Era' and 'A Digital Agenda for Europe'.	<i>[no change]</i>	<i>[no change]</i>	
Research and innovation activities on nuclear fission and fusion energy are carried out in the EURATOM part of Horizon 2020.	Research and innovation activities on nuclear fission and fusion <i>and on the safety and security aspects of nuclear fission</i> energy are carried out in the EURATOM part of Horizon 2020. <i>Possible synergies between the "secure, clean and efficient energy" challenge and the EURATOM part of HORIZON 2020 shall be envisaged.</i>	Research and innovation activities on nuclear fission and fusion energy are carried out in the EURATOM part of Horizon 2020, but coordination with the energy challenge should be sought in order to foster synergies between both programmes.	

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
3.3 Broad lines of the activities	3.3 Broad lines of the activities	3.3 Broad lines of the activities	
(a) Reducing energy consumption and carbon footprint by smart and sustainable use	(a) <i>Increasing energy efficiency and</i> reducing energy consumption and carbon footprint by smart and sustainable <i>and secure</i> use	[no change]	
Activities shall focus on research and full-scale testing of new concepts, non-technological solutions, more efficient, socially acceptable and affordable technology components and systems with in-built intelligence, to allow real-time energy management for near-zero-emission buildings, renewable heating and cooling, highly efficient industries and mass take-up of energy efficiency solutions by companies, individuals, communities and cities.	Activities shall focus on research and full-scale testing of new concepts, non-technological solutions, more efficient, socially acceptable and affordable technology components and systems with in-built intelligence, to allow real-time energy management for <i>cities and territories,</i> near-zero-emission <i>and positive energy</i> buildings, <i>retrofitted buildings,</i> renewable heating and cooling, highly efficient industries and mass take-up of energy efficiency <i>and energy saving</i> solutions <i>and services</i> by companies, individuals, communities and cities.	Activities shall focus on research and full-scale testing of new concepts, non-technological solutions, more efficient, socially acceptable and affordable technology components and systems with in-built intelligence, to allow real-time energy management for <i>new and existing</i> near-zero-emission buildings, <i>cities and districts,</i> renewable heating and cooling, highly efficient industries and mass take-up of energy efficiency solutions by companies, individuals, communities and cities.	
(b) Low-cost, low-carbon electricity supply	(b) <i>Sustainable</i> low-cost, low-carbon electricity supply	[no change]	

Activities shall focus on research, development and full scale demonstration - of innovative renewables and carbon capture and storage technologies offering larger scale, lower cost, environmentally safe technologies with higher conversion efficiency and higher availability for different market and operating environments.	Activities shall focus on research, development and full scale demonstration - of innovative renewables and carbon capture, and storage technologies offering larger scale, lower cost, environmentally safe technologies <i>which offer an alternative to fossil fuels or contribute to reducing the carbon footprint of fossil fuels substantially</i> with higher conversion <i>and storage</i> efficiency and higher availability for different market and operating environments.	Activities shall focus on research, development and full scale demonstration - of innovative renewables, efficient and flexible fossile power plants (including those using natural gas) and carbon capture and storage, or CO₂ re-use technologies, offering larger scale, lower cost, environmentally safe technologies with higher conversion efficiency and higher availability for different market and operating environments.	
(c) Alternative fuels and mobile energy sources	<i>[no change]</i>	<i>[no change]</i>	
Activities shall focus on research, development and full scale demonstration of technologies and value chains to make bio-energy more competitive and sustainable, to reduce time to market for hydrogen and fuel cells and to bring new options showing long-term potential to maturity.	Activities shall focus on research, development and full scale demonstration of technologies and value chains to make bio-energy, hydrogen, fuel cells and other alternative liquid or gaseous fuels with potential for more efficient energy conversion more competitive and sustainable. to reduce time to market for hydrogen and fuel cells and to bring new options showing long-term potential to maturity	Activities shall focus on research, development and full scale demonstration of technologies and value chains to make bio-energy more competitive and sustainable, for power and heat, surface, maritime and air transport , to reduce time to market for hydrogen and fuel cells and to bring new options showing long-term potential to maturity.	

	<i>Activities shall also focus on the development and deployment of back-up and balancing technologies, including conventional power plants, enabling higher flexibility and efficiency in order to successfully cope with the necessity to step in when variable renewable energy are not able to deliver the system and to ensure grid stability.</i>		
(d) A single, smart European electricity grid	(d) A single, smart, flexible , European electricity energy grid	[no change]	
Activities shall focus on research, development and full scale demonstration of new grid technologies, including storage, systems and market designs to plan, monitor, control and safely operate interoperable networks in an open, decarbonised, climate resilient and competitive market, under normal and emergency conditions.	Activities shall focus on research, development and full scale demonstration of new grid technologies, including flexible energy storage systems along the whole electricity chain and market designs to plan, monitor, control and safely operate interoperable and flexible networks and balance an increased share of renewables in an open, decarbonised, environmentally sustainable climate resilient and competitive market, under normal and emergency conditions, thus supporting the full deployment and utilisation of variable renewable energy sources .	Activities shall focus on research, development and full scale demonstration of new smart energy grid technologies, including storage, systems and market designs to plan, monitor, control and safely operate interoperable networks, including standardisation issues , in an open, decarbonised, climate resilient and competitive market, under normal and emergency conditions.	
	<i>Attention shall also be given to 'intelligent grids' in rural areas, which present specific challenges and require innovative technological advances.</i>		

(e) New knowledge and technologies	<i>[no change]</i>	<i>[no change]</i>	
Activities shall focus on multi-disciplinary research for energy technologies (including visionary actions) and joint implementation of pan-European research programmes and world-class facilities.	Activities shall focus on multi-disciplinary research for sustainable energy technologies (including visionary actions) and joint implementation of pan-European research programmes and world-class facilities. <i>Technological innovation will be accompanied by policies and initiatives that support non-technological innovation.</i>	Activities shall focus on multi-disciplinary research for clean, safe and sustainable energy technologies (including visionary actions) and joint implementation of pan-European research programmes and world-class facilities.	
(f) Robust decision making and public engagement	<i>[no change]</i>	<i>[no change]</i>	
	Activities shall focus on the development of tools, methods and models <i>such as forward-looking scenarios</i> for a robust and transparent policy support, including activities on public acceptance and engagement, user involvement, <i>environmental impact assessment</i> and sustainability.		

(g) Market uptake of energy innovation	(g) Market uptake of energy innovation, <i>empowering markets and consumers through Intelligent Energy Europe III.</i>	[no change]	
Activities shall focus on applied innovation to facilitate the market uptake of energy technologies and services, to address non-technological barriers and to accelerate the cost effective implementation of the Union's energy policies.	Activities shall focus on applied innovation to facilitate the market uptake of <i>sustainable</i> energy technologies and services, to address non-technological barriers and to accelerate the cost effective implementation of the Union's energy policies. <i>In this context the Intelligent Energy Europe Programme, successfully implemented throughout the Competitiveness and Innovation Programme shall be continued with an ambitious budgetary allocation under the current Horizon 2020 programme.</i>	Activities shall focus on applied innovation and promotion of standards to facilitate the market uptake of energy technologies and services, to address non-technological barriers and to accelerate the cost effective implementation of the Union's energy policies. Attention will also be given to innovation for the smart and sustainable use of existing technologies.	

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
4. SMART, GREEN AND INTEGRATED TRANSPORT	<u>AMD 141</u> 4. Smart, green and integrated transport <u>and mobility</u>	4. SMART, GREEN AND INTEGRATED TRANSPORT	
4.1 Specific objective	4.1 Specific objective	4.1 Specific objective	
The specific objective is to achieve a European transport system that is resource-efficient, environmentally-friendly, safe and seamless for the benefit of citizens, the economy and society.	The specific objective is to achieve a European transport system <u>(including its infrastructure networks)</u> that is resource-efficient, <u>affordable, climate- and</u> environmentally-friendly, safe, and <u>seamless interoperable</u> for the benefit of citizens, the <u>Union</u> economy and society. <u>That transport system shall embrace the "healthy ageing" philosophy, benefiting all, regardless of age, sex and disability and taking into consideration the universal design dimensions.</u>	[no change]	

Europe must reconcile the growing mobility needs of its citizens with the imperatives of economic performance and the requirements of a low-carbon society and climate resilient economy. Despite its growth, the transport sector must achieve a substantial reduction in greenhouse gases and other adverse environmental impacts, and must break its dependency on oil, while maintaining high levels of efficiency and mobility.	Europe must reconcile the growing mobility changing needs in terms of the mobility of its citizens, shaped by new demographic and societal challenges, and territorial cohesion with the imperatives of economic performance and the requirements of a an energy efficient , low-carbon society and climate resilient economy. Despite its growth, the transport sector must achieve a substantial reduction in greenhouse gases and other adverse environmental impacts, and must break its dependency on oil and other fossil fuels , while maintaining high levels of efficiency, affordability and mobility without increasing the remoteness of regions that are already isolated . Mass transportation systems present security challenges that need to be addressed already in the research stage.	Europe must reconcile the growing mobility needs of its citizens and goods with the imperatives of economic performance and the requirements of an energy-efficient low-carbon society and climate resilient economy. Despite its growth, the transport sector must achieve a substantial reduction in greenhouse gases and other adverse environmental impacts, and must break its dependency on oil, while maintaining high levels of efficiency and mobility.	
Sustainable mobility can only be achieved through a radical change in the transport system, inspired by breakthroughs in transport research, far-reaching innovation, and a coherent, Europe-wide implementation of greener, safer and smarter transport solutions.	Sustainable mobility can only be achieved through a radical change in the transport and mobility system, inspired by breakthroughs in transport its research, far-reaching innovation, and a coherent, Europe-wide implementation of greener, healthier , safer, more reliable and smarter transport and mobility solutions.	Sustainable mobility can only be achieved through a radical change in the transport system including in public transport , inspired by breakthroughs in transport research, far-reaching innovation, and a coherent, Europe-wide implementation of greener, safer and smarter transport solutions.	

Research and innovation must bring about focussed and timely advances that will help achieve key Union policy objectives, while boosting economic competitiveness, supporting the transition to a climate-resilient and low-carbon economy, and maintaining global market leadership.	Research and innovation must bring about focussed and timely advances <i>for each transport mode</i> that will help achieve key Union policy objectives, while boosting economic competitiveness, supporting the transition to a climate-resilient and <i>renewable based and energy efficient</i> low-carbon economy, <i>increasing mobility across Europe</i> and maintaining global market leadership.	Research and innovation must bring about focussed and timely advances that will help achieve key Union policy objectives, while boosting economic competitiveness, supporting the transition to a climate-resilient and low-carbon economy, and maintaining global market leadership both for the service industry as well as the manufacturing industry.	
Although the necessary investments in research, innovation and deployment will be significant, failing to improve the sustainability of transport will result in unacceptably high societal, ecological, and economic costs in the long term.	Although the necessary investments in research, innovation and deployment will be significant, failing to improve the sustainability of <i>the whole transport and mobility system</i> will result in unacceptably high societal, ecological, and economic costs in the long term. <i>Similarly, failing to maintain European technological leadership in transport will hamper the achievement of the above objective and have severe and damaging consequences for European jobs and long term economic growth.</i>	Although the necessary investments in research, innovation and deployment will be significant, failing to improve the sustainability of the whole transport system will result in unacceptably high societal, ecological, and economic costs in the long term, and damaging consequences on European jobs and long term economic growth.	

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
4.2 Rationale and Union added value	4.2 Rationale and Union added value	4.2 Rationale and Union added value	
Transport is a major driver of Europe's economic competitiveness and growth. It ensures the mobility of people and goods necessary for an integrated European single market and an open and inclusive society. It represents one of Europe's greatest assets in terms of industrial capability and quality of service, playing a leading role in many world markets.	Transport is a major driver of Europe's economic competitiveness and growth. It ensures territorial cohesion and the mobility of people and goods necessary for an integrated the integration of the European single market and an open and inclusive society. It represents one of Europe's greatest assets in terms of industrial capability and quality of service, playing a leading role in many world markets.	[no change]	

<p>Transport industry and transport equipment manufacturing together represent 6.3 % of the Union's GDP. At the same time, the European transport industry faces increasingly fierce competition from other parts of the world. Breakthrough technologies will be required to secure Europe's future competitive edge and to mitigate the drawbacks of our current transport system.</p>	<p>Transport industry and transport equipment manufacturing together alone represent 6.3 % of the Union's GDP <i>and around 13 million jobs. However, the transport sector's overall contribution to the Union economy is much greater, given that trade in goods, which accounts for almost 30% of the Union's GDP, many services and workers who travel as part of their jobs depend entirely on efficient transport. The contribution transport makes to society by connecting people is also important, but difficult to quantify, and is fundamental to freedom of movement in Europe.</i> At the same time, the European transport industry faces increasingly fierce competition from other parts of the world. Breakthrough technologies will be required to secure Europe's future competitive edge and to mitigate the drawbacks of our current transport system.</p>		
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<p>The transport sector is a major contributor to greenhouse gases and generates up to a quarter of all emissions. Transport is 96 % dependent on fossil fuels. Meanwhile, congestion is an increasing problem; systems are not yet sufficiently smart; alternatives for shifting between different modes of transport are not always attractive; road fatalities remain dramatically high at 34 000 per year in the Union; citizens and businesses expect a transport system that is safe and secure. The urban context poses specific challenges to the sustainability of transport.</p>	<p>The transport sector is a major contributor to greenhouse gases and generates up to a quarter of all emissions. Transport is 96 % dependent on fossil fuels. Meanwhile, congestion is an increasing problem; systems are not yet sufficiently smart; alternatives for shifting between different towards more sustainable modes of transport are not always attractive; road fatalities remain dramatically high at 34 000 per year in the Union; citizens and businesses expect a transport system that is accessible to all, safe and secure. The urban context poses specific challenges to a better balance of quality of life and the sustainability of transport and mobility.</p>	<p>The transport sector is a major contributor to greenhouse gases and generates up to a quarter of all emissions. It is also a major contributor to other air pollution problems. Transport is still 96 % dependent on fossil fuels. Meanwhile, It is essential to reduce this environmental impact through targeted technological improvement, bearing in mind that each mode of transport faces varying challenges and is characterised by different technology integration cycles. Moreover congestion is an increasing problem; systems are not yet sufficiently smart; alternatives for shifting between different modes of transport are not always attractive; road fatalities remain dramatically high at 34 000 per year in the Union; citizens and businesses expect a transport system that is safe and secure. The urban context poses specific challenges and opportunities to the sustainability of transport.</p>	
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<p>Within a few decades the expected growth rates of transport would drive European traffic into a gridlock and make its economic costs and societal impact unbearable. Passenger-kilometres are predicted to double over the next 40 years and grow twice as fast for air travel. CO₂ emissions would grow 35 % by 2050. Congestion costs would increase by about 50 %, to nearly EUR 200 billion annually. The external costs of accidents would increase by about EUR 60 billion compared to 2005.</p>	<p>Within a few decades the expected growth rates of transport would drive European traffic into a gridlock and make its economic costs and societal impact unbearable, <i>with disastrous economic and societal repercussions. If tendencies of the past continue in the future</i>, passenger-kilometres are predicted to double over the next 40 years and grow twice as fast for air travel. CO₂ emissions would grow 35 % by 2050. Congestion costs would increase by about 50 %, to nearly EUR 200 billion annually. The external costs of accidents would increase by about EUR 60 billion compared to 2005.</p>	<p>Within a few decades the expected growth rates of transport would drive European traffic into a gridlock and make its economic costs and societal impact unbearable. Passenger-kilometres are predicted to double over the next 40 years and grow twice as fast for air travel. CO₂ emissions would grow 35 % by 2050-¹⁴ Congestion costs would increase by about 50 %, to nearly EUR 200 billion annually. The external costs of accidents would increase by about EUR 60 billion compared to 2005.</p> <hr/> <p>¹⁴ Commission White Paper on "Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system" COM(2011) 144 final.</p>	
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Business-as-usual is therefore not an option. Research and innovation, driven by policy objectives and focused on the key challenges, shall contribute substantially to achieve the Union's targets of limiting global temperature increase to 2°C, cutting 60 % of CO ₂ emissions from transport, drastically reduce congestion and accident costs, and virtually eradicating road deaths by 2050.	<i>[no change]</i>	Business-as-usual is therefore not an option. Research and innovation, driven by policy objectives and focused on the key challenges, shall contribute substantially to achieve the Union's targets of limiting global temperature increase to 2°C, cutting ¹⁵ 60 % of CO ₂ emissions from transport, drastically reduce congestion and accident costs, and virtually eradicating road deaths by 2050. <hr/> ¹⁵ Commission White Paper on "Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system" COM(2011) 144 final.	
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<p>The problems of pollution, congestion, safety and security are common throughout the Union and call for collaborative Europe-wide responses. Accelerating the development and deployment of new technologies and innovative solutions for vehicles, infrastructures and transport management will be key to achieve a cleaner and more efficient transport system in the Union; to deliver the results necessary to mitigate climate change and improve resource efficiency; to maintain European leadership on the world markets for transport related products and services. These objectives cannot be achieved through fragmented national efforts alone.</p>	<p>The problems of pollution, congestion, safety and security are common throughout the Union and call for collaborative Europe-wide responses. Accelerating the development and deployment of new technologies and innovative solutions for vehicles infrastructures and which ensure the coherent development of infrastructure and transport management will be key to achieve a cleaner, safer, and more secure, accessible and efficient transport system in the Union; to deliver the results necessary to mitigate climate change and improve resource efficiency; to maintain European leadership on the world markets for transport related products and services. These objectives cannot be achieved through fragmented national efforts alone.</p>	<p>The problems of pollution, congestion, safety and security are common throughout the Union and call for collaborative Europe-wide responses. Accelerating the development and deployment of new technologies and innovative solutions for vehicles¹⁶, infrastructures and transport management will be key to achieve a cleaner and more efficient intermodal and multi-modal transport system in the Union; to deliver the results necessary to mitigate climate change and improve resource efficiency; to maintain European leadership on the world markets for transport related products and services. These objectives cannot be achieved through fragmented national efforts alone.</p> <p>_____</p> <p>¹⁶ “Vehicles” is to be understood in a broad sense, including all means of transport.</p>	
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	<p><i>It is also essential to support existing solutions by creating effective, smart, interoperable and interconnected systems related to SESAR, Galileo, EGNOS, GMES, ERTMS, RIS, SafeSeaNet, LRIT and ITS systems. Initiatives such as eSafety and eCall must also be continued.</i></p>		
<p>Union level funding of transport research and innovation will complement Member States' activities by focussing on activities with a clear European added-value. This means that emphasis will be placed on priority areas that match European policy objectives; where a critical mass of effort is necessary; where Europe-wide, interoperable transport solutions need to be pursued; or where pooling efforts trans-nationally can reduce research investment risks, pioneer common standards and shorten time-to-market of research results.</p>	<p>Union level funding of transport research and innovation will complement Member States' activities by focussing on activities with a clear European added-value. This means that emphasis will be placed on priority areas that match European policy objectives; where a critical mass of effort is necessary; where Europe-wide transport systems, up-to-date sources of propulsion and power, interoperable transport solutions or multimodal integrated transport solutions and infrastructures need to be pursued; or where pooling efforts trans-nationally can remove bottlenecks in the transport system and reduce research investment risks, pioneer common standards and standardisation and shorten time-to-market of research results.</p>	<p>Union level funding of transport research and innovation will complement Member States' activities by focussing on activities with a clear European added-value. This means that emphasis will be placed on priority areas that match European policy objectives; where a critical mass of effort is necessary; where Europe-wide, interoperable transport solutions need to be pursued; or where pooling efforts trans-nationally and making better use of and effectively disseminating existing research evidence can reduce research investment risks, pioneer common standards and shorten time-to-market of research results.</p>	

<p>Research and innovation activities shall include a wide range of initiatives that cover the full innovation chain. Several activities are specifically intended to help bring results to the market: a programmatic approach to research and innovation, demonstration projects, market take-up actions and support for standardisation, regulation and innovative procurement strategies all serve this goal. In addition, using stakeholders' engagement and expertise will help bridge the gap between research results and their deployment in the transport sector.</p>	<p>Research and innovation activities shall include a wide range of initiatives that cover the full innovation chain <i>and follow an integrated approach to innovative transport solutions from innovation in relation to vehicles, to infrastructures as well as to transport systems.</i> Several activities are specifically intended to help bring results to the market: a programmatic approach to research and innovation, demonstration projects, market take-up actions and support for standardisation, regulation and innovative procurement strategies all serve this goal. In addition, using stakeholders' engagement and expertise will help bridge the gap between research results and their deployment in the transport sector.</p>	<p>Research and innovation activities shall include a wide range of initiatives, including relevant public-private partnerships, that cover the full innovation chain. Several activities are specifically intended to help bring results to the market: a programmatic approach to research and innovation, demonstration projects, market take-up actions and support for standardisation, regulation and innovative procurement strategies all serve this goal. In addition, using stakeholders' engagement and expertise will help bridge the gap between research results and their deployment in the transport sector.</p>	
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Investing in research and innovation for a greener, smarter and more integrated transport system will make an important contribution to the Europe 2020 goals of smart, sustainable and inclusive growth and the objectives of the Innovation Union flagship initiative. The activities will support the implementation of the White Paper on Transport aiming at a Single European Transport Area. They will also contribute to the policy goals outlined in the flagship initiatives on 'Resource Efficient Europe', 'An Industrial Policy for the Globalisation Era' and 'A Digital Agenda for Europe'.	Investing in research and innovation for a greener, smarter and more fully integrated reliable transport system will make an important contribution to the Europe 2020 goals of smart, sustainable and inclusive growth and the objectives of the Innovation Union flagship initiative. The activities will support the implementation of the White Paper on Transport aiming at a Single European Transport Area. They will also contribute to the policy goals outlined in the flagship initiatives on 'Resource Efficient Europe', 'An Industrial Policy for the Globalisation Era' and 'A Digital Agenda for Europe'.	Investing in research and innovation for a greener, smarter and more fully integrated transport system will make an important contribution to the Europe 2020 goals of smart, sustainable and inclusive growth and the objectives of the Innovation Union flagship initiative. The activities will support the implementation of the White Paper on Transport aiming at a Single European Transport Area. They will also contribute to the policy goals outlined in the flagship initiatives on 'Resource Efficient Europe', 'An Industrial Policy for the Globalisation Era' and 'A Digital Agenda for Europe'. They will also interface with the relevant Joint Programming Initiatives.	
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COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
4.3. Broad lines of the activities	4.3. Broad lines of the activities	4.3. Broad lines of the activities	
		<u>The activities will be organised in such a way as to allow for an integrated and mode-specific approach as appropriate. Multiannual visibility and continuity will be necessary in order to take into account the specificities of each transport mode and the holistic nature of challenges, as well as the relevant Strategic Research and Innovation Agendas of the transport European Technology Platforms.</u>	
(a) Resource efficient transport that respects the environment	(a) Resource efficient transport that respects the environment <i>and public health</i>	[no change]	
The aim is to minimise transport's impact on climate and the environment by improving its efficiency in the use of natural resources, and by reducing its dependence on fossil fuels.	The aim is to minimise transport's impact on climate and the environment, <i>as well as on public health</i> , by improving its <i>quality</i> , efficiency <i>and effectiveness</i> in the use of natural resources, <i>diversifying fuel supply sources</i> and by reducing its dependence on fossil fuels <i>while reducing also greenhouse gas emissions. To increase the cost efficiency attention is to be paid to maintenance, repair, retrofitting and recycling for all transport modes.</i>	The aim is to minimise transport's systems' impact on climate and the environment (including noise and air pollution) by improving its efficiency in the use of natural resources, and by reducing its dependence on fossil fuels.	

<p>The focus of activities shall be to reduce resource consumption and greenhouse gas emissions and improve vehicle efficiency, to accelerate the development and deployment of a new generation of electric and other low or zero emission vehicles, including through breakthroughs in engines, batteries and infrastructure; to explore and exploit the potential of alternative fuels and innovative and more efficient propulsion systems, including fuel infrastructure; to optimise the use of infrastructures, by means of intelligent transport systems and smart equipment; and to increase the use of demand management and public and non-motorised transport, particularly in urban areas.</p>	<p>The focus of activities shall, <i>as a first step, be to reduce resource consumption, noise levels</i> and greenhouse gas emissions and improve vehicle <i>the energy efficiency of all kinds of vehicles</i>, to accelerate the development and deployment of a new generation of electric and other low or zero emission vehicles <i>and the accompanying infrastructure</i>, including through breakthroughs in engines, batteries and infrastructure; to explore and exploit <i>and the use of renewables in rail, water and air transport. Moreover, all innovation aimed at achieving low or zero emissions in all modes of transport should be encouraged, including developing the huge potential of alternative and sustainable fuels, and developing innovative and more efficient propulsion systems, including fuel infrastructure; to optimise working on optimising fuel systems, vehicle weights and aerodynamics, and development and infrastructure, and optimising the use of infrastructures by means of using intelligent transport systems and smart equipment. It is important to increase the use of demand management and public and non-motorised transport and intermodal mobility chains,</i> particularly in urban areas.</p>	<p>The focus of activities shall be to reduce resource consumption, particularly fossil fuels, and greenhouse gas emissions and, as well as improve vehicle transport efficiency, to accelerate the development, manufacturing and deployment of a new generation of clean (electric, hydrogen and other low or zero emission) vehicles, including through breakthroughs and optimization in engines, batteries energy storage and infrastructure; to explore and exploit the potential of alternative fuels and innovative and more efficient propulsion and operating systems, including fuel infrastructure and charging; to optimise the planning and use of infrastructures, by means of intelligent transport systems, logistics, and smart equipment; and to increase the use of demand management and public and non-motorised transport, particularly in urban areas.</p>	
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(b) Better mobility, less congestion, more safety and security	(b) Better mobility and accessibility , less congestion, more safety and security	[no change]	
The aim is to reconcile the growing mobility needs with improved transport fluidity, through innovative solutions for seamless, inclusive, safe, secure and robust transport systems.	The aim is to reconcile the growing mobility needs with improved transport fluidity, through innovative solutions for seamless, intermodal , inclusive, accessible , safe, secure, healthy , and robust transport systems, not forgetting the importance of high-quality, innovative and intermodal infrastructure .	The aim is to reconcile the growing mobility needs with improved transport fluidity, through innovative solutions for seamless, inclusive, affordable , safe, secure and robust transport systems.	
The focus of activities shall be to reduce congestion, improve accessibility and match user needs by promoting integrated door-to-door transport and logistics; to enhance inter-modality and the deployment of smart planning and management solutions; and to drastically reduce the occurrence of accidents and the impact of security threats.	The focus of activities shall be to reduce congestion, improve life quality , accessibility and interoperability and mobility management; to accelerate intermodal solutions for passengers (intermodal ticketing) ; to enhance inter-modality inter- and multi-modality and the deployment of smart planning and management solutions; and to drastically reduce the occurrence of accidents and the impact of security threats.	The focus of activities shall be to reduce congestion, improve accessibility, passenger choices and match user needs by promoting integrated door-to-door transport and logistics; to enhance inter-modality and the deployment of smart planning and management solutions; and to drastically reduce the occurrence of accidents and the impact of security threats.	

(c) Global leadership for the European transport industry	<i>[no change]</i>	<i>[no change]</i>	
The aim is to reinforce the competitiveness and performance of European transport manufacturing industries and related services.	The aim is to reinforce the competitiveness and performance of European transport manufacturing industries and related services <i>in view of the promising, but highly competitive, future global market. Due attention is to be paid to logistic processes, maintenance, repair, retrofitting and recycling.</i>	The aim is to reinforce the competitiveness and performance of European transport manufacturing industries and related services including logistic processes and retain areas of European leadership (e.g. such as aeronautics).	
The focus of activities shall be to develop the next generation of innovative transport means and to prepare the ground for the following one, by working on novel concepts and designs, smart control systems and interoperable standards, efficient production processes, shorter development times and reduced lifecycle costs.	The focus of activities shall be to develop the next generation of innovative transport means and to prepare the ground for the following one, by working on novel <i>configurations and technologies, concepts and designs, smart control systems and interoperable standards, efficient production processes, use of advanced materials and biological bi-products which are more sustainable, innovative certification procedures, shorter development times and reduced lifecycle costs, or new more sustainable materials or coatings.</i>	The focus of activities shall be to develop the next generation of innovative air, waterborne and land transport means, ensure sustainable manufacturing of innovative systems and equipment and to prepare the ground for the following one future transport means , by working on novel technologies , concepts and designs, smart control systems and interoperable standards, efficient production processes, innovative services and certification procedures , shorter development times and reduced lifecycle costs without compromising operational safety and security.	

	<i>(ca) Smart logistics</i>		
	<i>The aim is to reconcile growing new consumer patterns with an efficient resource supply chain and optimal last mile freight distribution.</i>		
	<i>The focus of activities shall be to better understand the impact of new and future consumer patterns and urban freight logistics, traffic and congestion; develop new IT and management tools for logistics, by improving real time information systems to manage, track and trace freight flows, integration and communication on vehicle and with infrastructure; to develop unconventional systems for goods distribution; to develop competitive intermodal solutions for the supply chain and logistics platforms that improve freight flows.</i>		
(d) Socio-economic research and forward looking activities for policy making	(d) Socio-economic and behavioural research and forward looking activities for policy making	<i>[no change]</i>	
The aim is to support improved policy making which is necessary to promote innovation and meet the challenges raised by transport and the societal needs related to it.	The aim is to support improved policy making which is necessary to promote innovation and meet the challenges raised by transport and mobility and the societal and individual needs related to it.	<i>[no change]</i>	

The focus of activities shall be to improve the understanding of transport related socio-economic trends and prospects, and provide policy makers with evidence-based data and analyses.	The focus of activities shall be to improve the understanding of transport related socio-economic trends and prospects, and provide policy makers with evidence-based data and analyses <i>disseminated inter alia via the European Commission's Transport Research Knowledge Centre.</i>	The focus of activities shall be to improve the understanding of transport related socio-economic impacts , trends and prospects, including the evolution of future demand , and provide policy makers with evidence-based data and analyses.	
	<i>The organisation of all transport-related activities will follow an integrated and mode-specific approach and be in line with the Strategic Research and Innovation agendas of European Technology Platforms. Multiannual visibility and continuity are essential in order to ensure true Union added-value and to take into account the numerous specificities of each transport mode.</i>		

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
5. CLIMATE ACTION, RESOURCE EFFICIENCY AND RAW MATERIALS	<u>AMD 142</u> 5. Climate action, <u>environment</u>, resource efficiency and <u>sustainable use of</u> raw materials	5. CLIMATE ACTION, RESOURCE EFFICIENCY AND RAW MATERIALS	
5.1. Specific objective	5.1. Specific objective	5.1. Specific objective	
The specific objective is to achieve a resource efficient and climate change resilient economy and a sustainable supply of raw materials, in order to meet the needs of a growing global population within the sustainable limits of the planet's natural resources. Activities will contribute to increasing European competitiveness and improving well being, whilst assuring environmental integrity and sustainability, keeping average global warming below 2 °C and enabling ecosystems and society to adapt to climate change.	The specific objective is to achieve a resource efficient, <u>secure</u> and climate change resilient economy and <u>society, the protection and sustainable management of natural resources and ecosystems</u> , a sustainable <u>use and</u> supply of raw materials <u>and water</u> , in order to meet the needs of a growing global population within the sustainable limits of the planet's <u>terrestrial and marine</u> natural resources. Activities will contribute to increasing European competitiveness <u>and raw materials security</u> and improving well being, whilst assuring environmental integrity, <u>resilience</u> and sustainability keeping average global warming below 2 °C and , enabling ecosystems and society to adapt to climate change.	The specific objective is to achieve a resource - <u>and water</u> - efficient and climate change resilient economy and <u>society, protection of the environment</u> and a sustainable supply of raw materials, in order to meet the needs of a growing global population within the sustainable limits of the planet's natural resources- <u>and eco-systems</u> . Activities will contribute to increasing European competitiveness, <u>raw materials security</u> and improving well being, whilst assuring environmental integrity, <u>resilience</u> and sustainability, <u>with the aim of</u> keeping average global warming below 2°C and enabling ecosystems and society to adapt to climate change- <u>and other environmental changes</u> .	

<p>During the 20th century, the world increased both its fossil fuel use and the extraction of material resources by of the order of a factor of ten. This era of seemingly plentiful and cheap resources is coming to an end. Raw materials, water, air, biodiversity and terrestrial, aquatic and marine ecosystems are all under pressure. Many of the world's major ecosystems are being degraded, with up to 60 % of the services that they provide being used unsustainably. In the Union, some 16 tonnes of materials are used per person each year, of which 6 tonnes are wasted, with half going to landfill. The global demand for resources continues to increase with the growing population and rising aspirations, in particular of middle income earners in emerging economies. There needs to be an absolute decoupling of economic growth from resource use.</p>	<p><i>[no change]</i></p>	<p>During the 20th century, the world increased both its fossil fuel use and the extraction of material resources by of the order of a factor of ten. This era of seemingly plentiful and cheap resources is coming to an end. Raw materials, water, air, biodiversity and terrestrial, aquatic and marine ecosystems are all under pressure. Many of the world's major ecosystems are being degraded, with up to 60 % of the services that they provide being used unsustainably. In the Union, some 16 tonnes of materials are used per person each year, of which 6 tonnes are wasted, with half going to landfill. The global demand for resources continues to increase with the growing population and rising aspirations, in particular of middle income earners in emerging economies. There needs to be an absolute decoupling of economic growth from resource use.</p>	
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<p>The average temperature of the Earth's surface has increased by about 0.8°C over the past 100 years and is projected to increase by between 1.8 to 4°C by the end of the 21st century (relative to the 1980-1999 average)²⁹. The likely impacts on natural and human systems associated with these changes will challenge the planet and its ability to adapt, as well as threatening future economic development and the well being of humanity.</p> <hr/> <p>²⁹ IPCC 4th Assessment Report , 2007, (www.ipcc.ch)</p>	<p>The average temperature of the Earth's surface has increased by about 0.8°C over the past 100 years and is projected to increase by between 1.8 to 4°C by the end of the 21st century (relative to the 1980-1999 average). The likely impacts on natural and human systems associated with these changes will challenge the planet and its ability to adapt, as well as threatening future economic development and the well being of humanity. <i>The consequences of climate change and pollution, in combination with growing urbanisation, mass tourism, human negligence and the over-exploitation of resources are endangering the fragile cultural fabric of the communities which embody Europe's cultural heritage.</i></p>	<p>The average temperature of the Earth's surface has increased by about 0.8°C over the past 100 years and is projected to increase by between 1.8 to 4°C by the end of the 21st century (relative to the 1980-1999 average)²⁹¹⁷. The likely impacts on natural and human systems associated with these changes will challenge the planet and its ability to adapt, as well as threatening future economic development and the well being of humanity.</p> <hr/> <p>²⁹¹⁷ IPCC 4th Assessment Report , 2007, (www.ipcc.ch)</p>	
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<p>The growing impacts from climate change and environmental problems, such as ocean acidification, ice melting in the Arctic, land degradation and use, water shortages, chemical pollution and biodiversity loss, indicate that the planet is approaching its sustainability boundaries. For example, without improvements in efficiency, water demand is projected to overshoot supply by 40 % in 20 years time. Forests are disappearing at an alarmingly high rate of 5 million hectares per year. Interactions between resources can cause systemic risks – with the depletion of one resource generating an irreversible tipping point for other resources and ecosystems. Based on current trends, the equivalent of more than two planet Earths will be needed by 2050 to support the growing global population.</p>	<p>The growing impacts from climate change and environmental problems, such as ocean acidification, <i>changes in ocean circulation, increase of seawater temperature</i>, ice melting in the Arctic <i>and decreased seawater salinity</i>, land degradation and use, <i>loss of soil fertility</i>, water shortages, <i>hydrological anomalies, rainfall temporal and spatial heterogeneity, changes in spatial distribution of species</i>, chemical pollution and biodiversity loss, indicate that the planet is approaching its sustainability boundaries. For example, without improvements in efficiency, water demand is projected to overshoot supply by 40 % in 20 years time. Forests are disappearing at an alarmingly high rate of 5 million hectares per year. Interactions between resources can cause systemic risks – with the depletion of one resource generating an irreversible tipping point for other resources and ecosystems. Based on current trends, the equivalent of more than two planet Earths will be needed by 2050 to support the growing global population.</p>	<p>The growing impacts from climate change and environmental problems, such as ocean acidification, changes in ocean circulation, increase of seawater temperature, ice melting in the Arctic, land degradation and use, water shortages scarcity, droughts and floods, seismic and volcanic hazards, chemical pollution, resources over-exploitation and biodiversity loss, indicate that the planet is approaching its sustainability boundaries. For example, without improvements in efficiency, water demand is projected to overshoot supply by 40 % in 20 years time. Forests are disappearing at an alarmingly high rate of 5 million hectares per year. Interactions between resources can cause systemic risks – with the depletion of one resource generating an irreversible tipping point for other resources and ecosystems. Based on current trends, the equivalent of more than two planet Earths will be needed by 2050 to support the growing global population.</p>	
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	<p><i>There is an urgent need for integrated water system innovations in Europe. Europe faces an ageing water infrastructure (both waste water and drinking water supply), increased water shortages, higher risks of urban flooding, water pollution and a growing and more specific water demand from agriculture, industries and urban population.</i></p>		
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<p>The sustainable supply and resource efficient management of raw materials, including their exploration, extraction, processing, re-use, recycling and substitution, is essential for the functioning of modern societies and their economies. European sectors, such as construction, chemicals, automotive, aerospace, machinery and equipment, which provide a total added value of some EUR 1.3 trillion and employment for approximately 30 million people, heavily depend on access to raw materials. However, the supply of raw materials to the Union is coming under increasing pressure. Furthermore, the Union is highly dependent on imports of strategically important raw materials, which are being affected at an alarming rate by market distortions. Moreover, the Union still has valuable mineral deposits, whose exploration and extraction is limited by a lack of adequate technologies and hampered by increased global competition. Given the importance of raw materials for European competitiveness, the economy and for their application in innovative products, the sustainable supply and resource efficient management of raw materials is a vital priority for the Union.</p>	<p>The sustainable supply and resource efficient <i>and secure</i> management of raw materials, including their exploration, extraction, processing, <i>resource efficient use</i>, re-use, recycling and substitution, is essential for the functioning of modern societies and their economies. European sectors, such as construction, chemicals, automotive, aerospace, machinery and equipment, which provide a total added value of some EUR 1.3 trillion and employment for approximately 30 million people, heavily depend on access to raw materials. However, the supply of raw materials to the Union is coming under increasing pressure <i>especially considering poor waste cycle management</i>. Furthermore, the Union is highly dependent on imports of strategically important raw materials, which are being affected at an alarming rate by market distortions. Moreover, the Union still has valuable mineral deposits, whose exploration, and, extraction <i>and processing</i> is limited by a lack of adequate technologies, <i>by missing investment</i> and hampered by increased global competition. Given the importance of raw materials for European competitiveness, the economy and for their application in innovative products, the sustainable supply and resource efficient management of raw materials is a vital priority for the Union.</p>	<p>The sustainable supply and resource-efficient management of raw materials, including their exploration, extraction, processing, re-use, recycling and substitution, is essential for the functioning of modern societies and their economies. European sectors, such as construction, chemicals, automotive, aerospace, machinery and equipment, which provide a total added value of some EUR 1.3 trillion and employment for approximately 30 million people, heavily depend on access to raw materials. However, the supply of raw materials to the Union is coming under increasing pressure. Furthermore, the Union is highly dependent on imports of strategically important raw materials, which are being affected at an alarming rate by market distortions. Moreover, the Union still has valuable mineral deposits, whose exploration and extraction is limited by a lack of adequate technologies and hampered by increased global competition. Given the importance of raw materials for European competitiveness, the economy and for their application in innovative products, the sustainable supply and resource efficient management of raw materials is a vital priority for the Union.</p>	
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<p>The ability of the economy to adapt and become more climate change resilient, resource efficient and at the same time remain competitive depends on high levels of eco-innovation, of both a societal and technological nature. With the global market for eco-innovation worth around EUR 1 trillion per annum and expected to triple by 2030, eco-innovation represents a major opportunity to boost competitiveness and job creation in European economies.</p>	<p>The ability of the economy to adapt and become more climate change resilient, resource efficient and at the same time remain competitive depends on high levels of eco-innovation, of both a societal, organisational and technological nature. With the global market for eco-innovation worth around EUR 1 trillion per annum and expected to triple by 2030, eco-innovation represents a major opportunity to boost competitiveness and job creation in European economies.</p>	<p>The ability of the economy to adapt and become more climate change resilient, resource efficient and at the same time remain competitive depends on high levels of eco-innovation, of both a societal, economic and technological nature. With the global market for eco-innovation worth around EUR 1 trillion per annum and expected to triple by 2030, eco-innovation represents a major opportunity to boost competitiveness and job creation in European economies.</p>	
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COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
5.2. Rationale and Union added value	5.2. Rationale and Union added value	5.2. Rationale and Union added value	
Meeting Union and international targets for greenhouse gas emissions and concentrations and coping with climate change impacts requires the development and deployment of cost-effective technologies, and mitigation and adaptation measures. Union and global policy frameworks must ensure that ecosystems and biodiversity are protected, valued and appropriately restored in order to preserve their ability to provide resources and services in the future. Research and innovation can help secure reliable and sustainable access to raw materials and ensure a significant reduction in resource use and wastage.	Meeting Union and international targets for greenhouse gas emissions and concentrations and coping with climate change impacts requires the development and deployment of cost-effective technologies, and sustainable and effective non-technological and technological solutions, and mitigation and adaptation measures. Union and global policy frameworks must ensure that ecosystems and biodiversity are protected, valued and appropriately restored in order to preserve their ability to provide resources and services in the future. Research and innovation can help secure reliable and sustainable access to and exploitation of raw materials and ensure a significant reduction in resource use and wastage.	Meeting Union and international targets for greenhouse gas emissions and concentrations and coping with climate change impacts requires a transition towards a low-carbon society and the development and deployment of cost-effective technologies, and mitigation and adaptation measures, and a stronger understanding of societal responses to these challenges. Union and global policy frameworks must ensure that ecosystems and biodiversity are protected, valued and appropriately restored in order to preserve their ability to provide resources and services in the future. Research and innovation can help secure reliable and sustainable access to and exploitation of raw materials on land and sea bed and ensure a significant reduction in resource use and wastage.	

<p>The focus of Union actions shall therefore be on supporting key Union objectives and policies including: the Europe 2020 strategy; the Innovation Union; Resource-Efficient Europe and the corresponding Roadmap; the Roadmap for moving to a competitive low carbon economy in 2050³⁰; Adapting to climate change: Towards a European framework for action³¹; the Raw Materials Initiative³²; the Union's Sustainable Development Strategy³³; an Integrated Maritime Policy for the Union³⁴; the Marine Strategy Framework Directive³⁵; the Eco-innovation Action Plan and the Digital Agenda for Europe³⁶.</p> <hr/> <p>³⁰ COM (2011) 112 ³¹ COM (2009) 147 ³² COM(2011) 25 ³³ COM(2009) 400 ³⁴ COM(2007) 575 final ³⁵ DIRECTIVE 2008/56/EC ³⁶ COM(2010) 245</p>	<p>The focus of Union actions shall therefore be on supporting key Union objectives and policies including: the Europe 2020 strategy; the Innovation Union; Resource-Efficient Europe and the corresponding Roadmap; the Roadmap for moving to a competitive low carbon economy in 2050; <i>the Integrated Industrial Policy for the globalisation era</i>; Adapting to climate change: Towards a European framework for action; the Raw Materials Initiative; the Union's Sustainable Development Strategy; an Integrated Maritime Policy for the Union; the Marine Strategy Framework Directive; the Eco-innovation Action Plan and the Digital Agenda for Europe; <i>the European Innovation Partnership for Raw Materials; the European Innovation Partnership on Water; and the 7th Environmental Action Programme.</i></p>	<p>The focus of Union actions shall therefore be on supporting key Union objectives and policies covering the whole innovation cycle and the elements of the knowledge triangle including: the Europe 2020 strategy; the Innovation Union; the Industrial Policy for a globalised era, Resource-Efficient Europe and the corresponding Roadmap; the Roadmap for moving to a competitive low carbon economy in 2050³⁰¹⁸; Adapting to climate change: Towards a European framework for action³⁴¹⁹; the Raw Materials Initiative³²²⁰; the Union's Sustainable Development Strategy³³²¹; an Integrated Maritime Policy for the Union³⁴²²; the Marine Strategy Framework Directive³⁵²³; the Water Framework Directive and daughter Directives; the Flood Directive; the Eco-innovation Action Plan and the Digital Agenda for Europe³⁶²⁴. These actions shall, when appropriate, interface with relevant European Innovation Partnerships and Joint Programming Initiatives.</p> <hr/> <p>³⁰¹⁸ COM (2011) 112 ³⁴¹⁹ COM (2009) 147 ³²²⁰ COM(2011) 25 ³³²¹ COM(2009) 400 ³⁴²² COM(2007) 575 final ³⁵²³ DIRECTIVE 2008/56/EC ³⁶²⁴ COM(2010) 245</p>	
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These actions shall reinforce the ability of society to become more resilient to environmental and climate change and ensure the availability of raw materials.	[no change]	[no change]	
Given the transnational and global nature of the climate and the environment, their scale and complexity, and the international dimension of the raw materials supply chain, activities have to be carried out at the Union level and beyond. The multi-disciplinary character of the necessary research requires pooling complementary knowledge and resources in order to effectively tackle this challenge. Reducing resource use and environmental impacts, whilst increasing competitiveness, will require a decisive societal and technological transition to an economy based on a sustainable relationship between nature and human well-being. Coordinated research and innovation activities will improve the understanding and forecasting of climate and environmental change in a systemic and cross-sectoral perspective, reduce uncertainties, identify and assess vulnerabilities, risks, costs and opportunities, as well as expand the range and improve the effectiveness of societal and policy responses and solutions.	Given the transnational and global nature of the climate and the environment, their scale and complexity, and the international dimension of the raw materials supply chain, activities have to be carried out at the Union level and beyond. The multi-disciplinary character of the necessary research requires pooling complementary knowledge and resources in order to effectively tackle this challenge. Reducing resource use and environmental impacts, whilst increasing competitiveness, will require a decisive societal and technological transition to an a sustainable economy based on a sustainable mutually beneficial relationship between nature and biodiversity and the human well-being population . Coordinated research and innovation activities will improve the understanding and forecasting of climate and environmental change in a systemic and cross-sectoral perspective, reduce uncertainties, identify and assess vulnerabilities, risks, costs and opportunities, as well as expand the range and improve the effectiveness of societal and policy responses and solutions.	Given the transnational and global nature of the climate and the environment, their scale and complexity, and the international dimension of the raw materials supply chain, activities have to be carried out at the Union level and beyond. The multi-disciplinary character of the necessary research requires pooling complementary knowledge and resources in order to effectively tackle this challenge in a sustainable way . Reducing resource use and environmental impacts, whilst increasing competitiveness, will require a decisive societal and technological transition to an economy based on a sustainable relationship between nature and human well-being. Coordinated research and innovation activities will improve the understanding and forecasting of climate and environmental change in a systemic and cross-sectoral perspective, reduce uncertainties, identify and assess vulnerabilities, risks, costs and opportunities, as well as expand the range and improve the effectiveness of societal and policy responses and solutions.	

Actions will also seek to empower actors at all levels of society to actively participate in this process.	<i>[no change]</i>	Actions will also seek to improve research and innovation delivery and dissemination to support policy-making and to empower actors at all levels of society to actively participate in this process. In this context, water challenges include water use in rural, urban and industrial environments and the protection of aquatic ecosystems.	
Addressing the availability of raw materials calls for co-ordinated research and innovation efforts across many disciplines and sectors to help provide safe, economically feasible, environmentally sound and socially acceptable solutions along the entire value chain (exploration, extraction, processing, re-use, recycling and substitution). Innovation in these fields will provide opportunities for growth and jobs, as well as innovative options involving science, technology, the economy, policy and governance. For this reason, a European Innovation Partnership on Raw Materials is being prepared.	Addressing the <i>sustainable use and</i> availability of raw materials calls for co-ordinated research and innovation efforts across many disciplines and sectors to help provide safe, economically feasible, environmentally sound and socially acceptable solutions along the entire value chain (exploration, extraction, design , processing, re-use, recycling and substitution). Innovation in these fields will provide opportunities for growth and jobs, as well as innovative options involving science, technology, the economy, policy and governance. For this reason, a European Innovation Partnerships on <i>Water Efficiency and Raw Materials</i> is <i>are</i> being prepared <i>and, for the critical raw materials called rare earths, a European Rare Earth Competency Network set up.</i>	Addressing the availability of raw materials calls for co-ordinated research and innovation efforts across many disciplines and sectors to help provide safe, economically feasible, environmentally sound and socially acceptable solutions along the entire value chain (exploration, extraction, processing, re-use, recycling and substitution). Innovation in these fields will provide opportunities for growth and jobs, as well as innovative options involving science, technology, the economy, society , policy and governance. For this reason, a European Innovation Partnership on Raw Materials is being prepared.	

<p>Eco-innovation will provide valuable new opportunities for growth and jobs. Solutions developed through Union level action will counter key threats to industrial competitiveness and enable rapid uptake and replication across the Single Market and beyond. This will enable the transition towards a green economy that takes into account the sustainable use of resources. Partners for this approach will include: International, European and national policy makers; international and Member State research and innovation programmes; European business and industry; the European Environment Agency and national environment agencies; and other relevant stakeholders.</p>	<p><i>[no change]</i></p>	<p>Responsible eco-innovation will may provide valuable new opportunities for growth and jobs. Solutions developed through Union level action will counter key threats to industrial competitiveness and enable rapid uptake and replication across the Single Market and beyond. This will enable the transition towards a green economy that takes into account the sustainable use of resources. Partners for this approach will include: International, European and national policy makers; international and Member State research and innovation programmes; European business and industry; the European Environment Agency and national environment agencies; and other relevant stakeholders.</p>	
<p>In addition to bilateral and regional cooperation, Union level actions will also support relevant international efforts and initiatives, including the Intergovernmental Panel on Climate Change (IPCC), the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) and the Group on Earth Observations (GEO).</p>	<p>In addition to bilateral and regional cooperation, Union level actions will also support relevant international efforts and initiatives, including the Intergovernmental Panel on Climate Change (IPCC), the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES), <i>the International Resource Panel</i>, and the Group on Earth Observations (GEO).</p>	<p><i>[no change]</i></p>	

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
5.3. Broad lines of the activities	5.3. Broad lines of the activities	5.3. Broad lines of the activities	
(a) Fighting and adapting to climate change	<i>[no change]</i>	<i>[no change]</i>	
The aim is to develop and assess innovative, cost-effective and sustainable adaptation and mitigation measures, targeting both CO ₂ and non-CO ₂ greenhouse gases, and underlining both technological and non-technological green solutions, through the generation of evidence for informed, early and effective action and the networking of the required competences. Activities shall focus on: improving the understanding of climate change and the provision of reliable climate projections; assessing impacts, vulnerabilities and developing innovative cost-effective adaptation and risk prevention measures; supporting mitigation policies.	The aim is to develop and assess innovative, cost-effective and sustainable adaptation and mitigation measures and strategies , targeting both CO ₂ and non-CO ₂ greenhouse gases and particles, rising levels of sea and inland waters ; and underlining both technological and non-technological green solutions, through the generation of evidence for informed, early and effective action and the networking of the required competences. Activities shall focus on: improving the understanding of climate change and the risks associated with extreme events and abrupt changes through the provision of reliable climate projections; understanding the ozone-climate interactions and the water cycle in the atmosphere ; assessing impacts at global, regional and local level , vulnerabilities and developing innovative cost-effective adaptation and risk prevention and management measures in key socio-economic sectors (e.g. agriculture, energy, transport, tourism, built environment and cultural heritage) ; supporting mitigation policies and defining fast-action strategies for climate responses within few decades .	The aim is to develop and assess innovative, cost-effective and sustainable adaptation and mitigation measures, targeting both CO ₂ and non-CO ₂ greenhouse gases, and underlining both technological and non-technological green solutions, through the generation of evidence for informed, early and effective action and the networking of the required competences. Activities shall focus on: improving the understanding of climate change and the provision of reliable climate projections; assessing impacts, vulnerabilities and developing innovative cost-effective adaptation and risk prevention and management measures; supporting mitigation policies- including studies that focus on impact from other sectoral policies .	

(b) Sustainably managing natural resources and ecosystems	(b) <i>Protecting the environment</i> , sustainably managing natural resources, <i>water, biodiversity</i> and ecosystems	(b) Sustainably managing Protection of the environment, sustainable management of natural resources, <i>water, biodiversity</i> and ecosystems	
The aim is to provide knowledge for the management of natural resources that achieves a sustainable balance between limited resources and the needs of society and the economy. Activities shall focus on: furthering our understanding of the functioning of ecosystems, their interactions with social systems and their role in sustaining the economy and human well-being; and providing knowledge and tools for effective decision making and public engagement.	The aim is to provide knowledge <i>and tools</i> for the management <i>and protection</i> of natural resources that achieves a sustainable balance between limited resources and the needs of society and the economy. Activities shall focus on: <i>ensuring action to safeguard the sustainable transition, management and use of water resources and water services,</i> furthering our understanding of the functioning of ecosystems, <i>including the regulatory role played by oceans and forests to prevent global warming,</i> their interactions with social systems and their role in sustaining the economy and human well-being; and providing knowledge and tools for effective decision making and public engagement.	The aim is to provide knowledge <i>and tools</i> for the management <i>and protection</i> of natural resources that achieves a sustainable balance between limited resources and <i>the present and future</i> needs of society and the economy. Activities shall focus on: furthering our understanding of <i>biodiversity and</i> the functioning of ecosystems, their interactions with social systems and their role in sustaining the economy and human well-being; <i>developing integrated approaches for the sustainable management of water-related challenges;</i> and providing knowledge and tools for effective decision making and public engagement.	

(c) Ensuring the sustainable supply of non-energy and non-agricultural raw materials	(c) Ensuring the sustainable use, management and supply of non-energy and non-agricultural raw materials	[no change]	
The aim is to improve the knowledge base on raw materials and develop innovative solutions for the cost-effective and environmentally friendly exploration, extraction, processing, recycling and recovery of raw materials and for their substitution by economically attractive alternatives with a lower environmental impact. Activities shall focus on: improving the knowledge base on the availability of raw materials; promoting the sustainable supply and use of raw materials; finding alternatives for critical raw materials; and improving societal awareness and skills on raw materials.	The aim is to improve the knowledge base on raw materials and develop innovative solutions for the cost-effective, resource efficient and environmentally friendly exploration, extraction, processing, use, re-use and recycling and recovery of raw materials and for their substitution by economically attractive alternatives with a lower environmental impact. Activities shall focus on: improving the knowledge base on the availability of raw materials; promoting eco-design; promoting the sustainable supply, and use efficient use and re-use of raw materials; finding alternatives for critical raw, materials, developing closed-loop processes and systems, support recycling and re-use strategies and technology; demand-side measure empowering citizens and consumers for the reduction of raw materials consumption and wastage; and improving societal awareness and skills on raw materials, establishing and stimulating regional and national raw material clusters.	The aim is to improve the knowledge base on raw materials and develop innovative solutions for the cost-effective and environmentally friendly exploration, extraction, processing, re-use , recycling and recovery of raw materials and for their substitution by economically attractive and environmentally sustainable alternatives with a lower environmental impact. Activities shall focus on: improving the knowledge base on the availability of raw materials; promoting the sustainable supply and use of raw materials, including mineral resources, from land and sea; finding alternatives for critical raw materials; and improving societal awareness and skills on raw materials.	

(d) Enabling the transition towards a green economy through eco-innovation	<i>[no change]</i>	(d) Enabling the transition towards a green economy and society through eco-innovation	
The aim is to foster all forms of eco-innovation that enable the transition to a green economy. Activities shall focus on: strengthening eco-innovative technologies, processes, services and products and boosting their market uptake and replication, with special attention for SMEs; supporting innovative policies and societal changes; measuring and assessing progress towards a green economy; and fostering resource efficiency through digital systems.	The aim is to foster all forms of eco-innovation that enable the transition to a green economy. Activities shall focus on: strengthening eco-innovative technologies, processes, services and products and boosting their market uptake and replication, with special attention for SMEs; supporting innovative policies <i>sustainable economic models</i> and societal changes; <i>supporting the research of safe substitutes for substances indicated as dangerous under Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 (REACH Regulation)</i> ; measuring and assessing progress towards a green economy; and fostering resource efficiency through digital systems. <i>In particular the Eco-Innovation Programme successfully implemented under the Competitiveness and Innovation Programme in the previous EU Multi-Annual Financial Framework shall be continued under Horizon 2020.</i>	The aim is to foster all forms of eco-innovation that enable the transition to a green economy. Activities shall focus on: strengthening eco-innovative technologies, processes, services and products, including exploring ways to reduce the quantities of raw materials in production and consumption, and overcoming barriers in this context , and boosting their market uptake and replication, with special attention for SMEs; supporting innovative policies and societal changes; measuring and assessing progress towards a green economy; and fostering resource efficiency through digital systems.	

(e) Developing comprehensive and sustained global environmental observation and information systems	<i>[no change]</i>	<i>[no change]</i>	
The aim is to ensure the delivery of the long-term data and information required to address this challenge. Activities shall focus on the capabilities, technologies and data infrastructures for earth observation and monitoring that can continuously provide timely and accurate information, forecasts and projections. Free, open and unrestricted access to interoperable data and information will be encouraged.	The aim is to ensure the delivery of the long-term data and information required to address this challenge. Activities shall focus on the capabilities, technologies and data infrastructures for earth observation and monitoring <i>from both remote sensing and in situ measurements</i> that can continuously provide timely and accurate information <i>and permit</i> forecasts and projections. Free, open and unrestricted access to interoperable data and information will be encouraged.	The aim is to ensure the delivery of the long-term data and information required to address this challenge. Activities shall focus on the capabilities, technologies and data infrastructures for E arth observation and monitoring that can continuously provide timely and accurate information, forecasts and projections. Free, open and unrestricted access to interoperable data and information will be encouraged. Activities shall help define future operational activities of the European Earth Monitoring programme (GMES) and enhance the use of GMES data for research activities.	

		(f) Cultural heritage	
		<p>The aim is to research into the strategies, methodologies and tools needed to enable a dynamic and sustainable cultural heritage in Europe in response to climate change. Cultural heritage in its diverse physical forms provides the living context for resilient communities responding to multivariate changes. Research in cultural heritage requires a multidisciplinary approach to improve the understanding of historical material. Activities shall focus on identifying resilience levels via observations, monitoring and modelling as well as provide for a better understanding on how communities perceive and respond to climate change and seismic and volcanic hazards.</p>	

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
6. INCLUSIVE, INNOVATIVE AND SECURE SOCIETIES	(part of) AMD 143 6. <u>Understanding Europe in a</u> <u>changing world</u> - inclusive, innovative and secure<u>reflective</u> societies	6. <u>EUROPE IN A CHANGING</u> <u>WORLD</u> – INCLUSIVE, INNOVATIVE AND SECURE <u>REFLECTIVE SOCIETIES</u>	
6.1 Specific objective	6.1 Specific objective	6.1 Specific objective	
The specific objective is to foster inclusive, innovative and secure European societies in a context of unprecedented transformations and growing global interdependencies.	The specific objective is to foster inclusive, innovative, and secure <u>creative and reflective</u> European societies <u>through a greater</u> <u>understanding of Europe</u> in a context of unprecedented transformations and growing global interdependencies.	The specific objective is to foster <u>a</u> <u>greater understanding of Europe,</u> <u>provide solutions and support</u> inclusive, innovative and secure <u>reflective</u> European societies in a context of unprecedented transformations and growing global interdependencies.	

<p>Europe is confronted with major socio-economic challenges which significantly affect its future - such as growing economic and cultural interdependencies, ageing, social exclusion and poverty, inequalities and migration flows, closing the digital divide, fostering a culture of innovation and creativity in society and enterprises, as well ensuring security and freedom, trust in democratic institutions and between citizens within and across borders. These challenges are enormous and they call for a common European approach.</p>	<p>Europe is confronted with major socio-economic challenges which significantly affect its future, such as growing economic and cultural interdependencies, ageing <i>and demographic change</i>, social exclusion and poverty, inequalities and migration flows, closing the digital divide, fostering a culture of <i>science</i>, innovation and creativity in society and enterprises, as well <i>as</i> ensuring security and freedom, trust in democratic institutions and between citizens within and across borders. <i>Moreover the role of public social policies in Europe is increasingly perceived as a critical element for the sustainability of the European social model itself.</i> These challenges are enormous and they call for a common European approach <i>an increasingly complex mix of approaches, based upon shared scientific knowledge that social sciences and humanities can provide.</i></p>	<p>Europe is confronted with major socio-economic challenges which significantly affect its common future such as. These include: growing economic and cultural interdependencies, ageing and demographic change, social exclusion and poverty, integration and disintegration, inequalities and migration flows, closing the a growing digital divide, fostering a culture of innovation and creativity in society and enterprises, as well ensuring security and freedom, a decreasing sense of trust in democratic institutions and between citizens within and across borders. These challenges are enormous and they call for a common European approach.</p>	
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<p>First, significant inequalities persist in the Union both across countries and within them. In 2010 the Human Development Index, an aggregate measure of progress in health, education and income, scores the Union's Member States between 0,743 and 0,895, thus reflecting considerable divergences between countries. Significant gender inequalities also persist: for instance, the gender pay gap in the Union remains at 17.8 % in favour of men³⁷. One in every six Union citizens today (around 80 million people) is at risk of poverty. Over the past two decades the poverty of young adults and families with children has risen. The youth unemployment rate is above 20 %. 150 million Europeans (some 25 %) have never used the internet and may never get sufficient digital literacy. Political apathy and polarisation in elections has also risen, reflecting citizen's faltering trust in current political systems.</p> <hr/> <p>³⁸ COM(2010) 491 final.</p>	<p>First, Significant inequalities persist in the Union both across countries and within them. In 2010 the Human Development Index, an aggregate measure of progress in health, education and income, scores the Union's Member States between 0,743 and 0,895, thus reflecting considerable divergences between countries. Significant gender inequalities also persist: for instance, the gender pay gap in the Union remains at 17.8 % in favour of men. One in every six Union citizens today (around 80 million people) is at risk of poverty. Over the past two decades the poverty of young adults and families with children has risen. The youth unemployment rate is above 20 %. 150 million Europeans (some 25 %) have never used the internet and may never get sufficient digital literacy. Political apathy and polarisation in elections has also risen, reflecting citizen's faltering trust in current political systems.</p>	<p>First, Significant inequalities persist in the Union both across countries and within them. In 2010 2011 the Human Development Index, an aggregate measure of progress in health, education and income, scores the Union's Member States between 0, 743 771 and 0, 895 910, thus reflecting considerable divergences between countries. Significant gender inequalities also persist: for instance, the gender pay gap in the Union remains at an average of 17.8 % in favour of men²⁵. One in every six Union citizens today (around 80 million people) is at risk of poverty. Over the past two decades the poverty of young adults and families with children has risen. The youth unemployment rate is above 20 %. 150 million Europeans (some 25 %) have never used the internet and may never get sufficient digital literacy. Political apathy and polarisation in elections has also risen, reflecting citizen's faltering trust in current political systems.</p> <hr/> <p>³⁸²⁵ COM(2010) 491 final.</p>	
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These figures suggest that some social groups and communities are persistently left out of social and economic development and/or democratic politics.	<i>[no change]</i>	These figures suggest that some social groups and communities are persistently left out of social and economic development and/or democratic politics. These inequalities do not only stifle societal development but hamper the economies in the European Union and reduce the research and innovation capacities within and across countries.	
		A central challenge in addressing these inequalities will be the fostering of settings in which European, national and ethnic identities can coexist and be mutually enriching.	
		Moreover, the number of Europeans aged over 65 is expected to rise significantly by 42% from 87 million in 2010 to 124 million in 2030. This presents a major challenge for the economy, society and the sustainability of public finances.	

<p>Second, Europe's productivity and economic growth rates have been relatively decreasing for four decades. Furthermore, its share of the global knowledge production and its innovation performance lead compared to key emerging economies such as Brazil and China are declining fast. Although Europe has a strong research base, it needs to make this base a powerful asset for innovative goods and services.</p>	<p>Second, Europe's productivity and economic growth rates have been relatively decreasing for four decades. Furthermore, its share of the global knowledge production and its innovation performance lead compared to key emerging economies such as Brazil and China are declining fast. Although Europe has a strong research base, it needs to make this base a powerful asset for innovative goods and services.</p>	<p>Second, Europe's productivity and economic growth rates have been relatively decreasing for four decades. Furthermore, its share of the global knowledge production and its innovation performance lead compared to key emerging economies such as Brazil and China are declining fast. Although Europe has a strong research base, it needs to make this base a powerful asset for innovative goods and services.</p>	
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<p>Whereas it is well-known that Europe needs to invest more in science and innovation, it will also have to coordinate these investments much more smartly than in the past: more than 95 % of national R&D budgets is spent without any coordination across the Union, a formidable potential waste of resources at a time of shrinking funding possibilities. Furthermore, the innovation capacities of the Member States, despite some recent convergence, remain very different, with large gaps between 'innovation leaders' and 'modest innovators'³⁸.</p> <hr/> <p>³⁸ Innovation Union Scoreboard 2010.</p>	<p>Whereas it is well-known that Europe needs to invest more in science and innovation, it will also have to coordinate these investments much more smartly than in the past: more than 95 % of national R&D budgets is spent without any coordination across the Union, a formidable potential waste of resources representing significant inefficiencies at a time of shrinking funding possibilities. Furthermore, the innovation capacities of the Member States, despite some recent convergence, remain very different, with large gaps between 'innovation leaders' and 'modest innovators'.</p>	<p>Whereas it is well-known that Europe needs to invest more in science and innovation, it will also have to coordinate these investments much more smartly than in the past: more than 95 % of national R&D budgets is spent without any coordination across the Union, a formidable potential waste of resources at a time of shrinking funding possibilities. Furthermore, the innovation capacities of the Member States, despite some recent convergence, remain very different, with large gaps between 'innovation leaders' and 'modest innovators'³⁰Since the financial crisis many economic and social inequalities in Europe have been aggravated even further and the return of pre-crisis rates of economic growth seems a long way off for most of the European Union. The current crisis also suggests that it is challenging to find solutions to crises that reflect the heterogeneity of Member States and their interests.</p> <hr/> <p>³⁰ Innovation Union Scoreboard 2010.</p>	
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<i>[nota bene: the part of the Commission text on <u>specific objectives</u> on secure societies has been moved to new SC7 where <u>Secure societies</u> are adressed]</i>	<i>[nota bene: the part of the EP AMD143 <u>specific objectives</u> on secure societies has been moved to new SC7 where <u>Secure societies</u> are adressed]</i>	<i>[nota bene: the part of the PGA text on <u>specific objectives</u> on secure societies is in the new SC7 where <u>Secure societies</u> are adressed]</i>	
These challenges must be tackled together and in innovative ways because they interact in complex and often unexpected ways. Innovation may lead to weakening inclusiveness, as can be seen, for instance, in the phenomena of digital divide or labour market segmentation. Social innovation, social trust and security are sometimes difficult to reconcile in policies, for instance in socially depressed areas in large cities in Europe. Besides, the conjunction of innovation and citizens' evolving demands also lead policymakers and economic and social actors to find new answers that ignore established boundaries between sectors, activities, goods or services. Phenomena such as the growth of Internet, of the financial systems, of the ageing economy and of the ecological society abundantly show how it is necessary to think and respond to these issues across their dimensions of inclusiveness, innovation and security at the same time.	These challenges must be tackled together and in innovative ways because they interact in complex and often unexpected ways. Innovation may lead to weakening inclusiveness, as can be seen, for instance, in the phenomena of digital divide or labour market segmentation. Social innovation, social trust and security are sometimes difficult to reconcile in policies, for instance in socially depressed areas in large cities in Europe. Besides, the conjunction of innovation and citizens' evolving demands also lead policymakers and economic and social actors to find new answers that ignore established boundaries between sectors, activities, goods or services. Phenomena such as the growth of Internet, of the financial systems, of the ageing economy and of the ecological society abundantly show how it is necessary to think and respond to these issues across their dimensions of inclusiveness; and innovation and security at the same time.	These challenges must be tackled together and in innovative and multi-disciplinary ways because they interact in complex and often unexpected ways. Innovation may lead to weakening inclusiveness, as can be seen, for instance, in the phenomena of digital divide or labour market segmentation. Social innovation; and social trust and security are sometimes difficult to reconcile in policies, for instance in socially depressed areas in large cities in Europe. Besides, the conjunction of innovation and citizens' evolving demands also lead policymakers and , economic and social actors to find new answers that ignore established boundaries between sectors, activities, goods or services. Phenomena such as the growth of Internet, of the financial systems, of the ageing economy and of the ecological society abundantly show how it is necessary to think and respond to these issues across their dimensions of inclusiveness and ; innovation and security at the same time.	

<p>The in-built complexity of these challenges and the evolutions of demands thus make it essential to develop innovative research and new smart technologies, processes and methods, social innovation mechanisms, coordinated actions and policies that will anticipate or influence major evolutions for Europe. It calls for understanding the underlying trends and impacts at play in these challenges and rediscovering or reinventing successful forms of solidarity, coordination and creativity that make Europe a distinctive model of inclusive, innovative and secure societies compared to other world regions. It requires a more strategic approach to cooperation with third countries. Finally, as security policies should interact with different social policies, enhancing the societal dimension of security research will be an important aspect of this challenge.</p>	<p>The in-built complexity of these challenges and the evolutions of demands thus make it essential to develop innovative research and new smart technologies, processes and methods, social innovation mechanisms, coordinated actions and policies that will anticipate or influence major evolutions for Europe. It calls for understanding the underlying trends and impacts at play in these challenges and rediscovering or reinventing successful forms of solidarity, coordination and creativity that make Europe a distinctive model of inclusive, <i>and</i> innovative and secure societies compared to other world regions. It requires a more strategic approach to cooperation with third countries. Finally, as security policies should interact with different social policies, enhancing the societal dimension of security research will be an important aspect of this challenge. <i>Both objective-driven research as well as bottom-up research are needed to address effectively those challenges. Finally, a more strategic approach to cooperation with third countries is required.</i></p>	<p>The in-built complexity of these challenges and the evolutions of demands thus make it essential to develop innovative research and new smart technologies, processes and methods, social innovation mechanisms, coordinated actions and policies that will anticipate or influence major evolutions for Europe. It calls for a renewed understanding of determinants of innovation, interactions between science and society as well as principles and practices with respect to responsible research and innovation. In addition, it calls for understanding the underlying trends and impacts at play within these challenges and rediscovering or reinventing successful forms of solidarity, behaviour, coordination and creativity that make Europe a distinctive model in terms of inclusive, innovative and secure reflective societies compared to other world regions. It also requires a more strategic approach to cooperation with third countries. Finally that is based on a deeper understanding of the Union's past and its current and future role as security policies should interact with different social policies, enhancing the societal dimension of security research will be an important aspect of this challenge a global player.</p>	
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COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
6.2. Rationale and Union added value	6.2. Rationale and Union added value	6.2. Rationale and Union added value	
These challenges ignore national borders and thus call for more complex comparative analyses of mobility (of people, goods, services and capital but also of competences and knowledge) and forms of institutional cooperation, intercultural interactions and international cooperation. If they are not better understood and anticipated, forces of globalisation also push European countries to compete with each other rather than cooperate, thus accentuating differences in Europe rather than commonalities and a right balance between cooperation and competition. Addressing such critical socio-economic challenges only at national level carries the danger of inefficient use of resources, externalisation of problems to other European and non-European countries and the accentuation of social, economic and political tensions that may directly affect the aims of the European Treaty regarding its values, in particular Title I of the Treaty on European Union.	These challenges ignore national borders and thus call for more complex comparative analyses of mobility (of people, goods, services and capital but also of competences and knowledge) and forms of institutional cooperation, intercultural interactions and international cooperation. If they are not better understood and anticipated, forces of globalisation also push European countries to compete with each other rather than cooperate, thus accentuating differences in Europe rather than commonalities and a right balance between cooperation and competition. Addressing such critical socio-economic challenges only at national level carries the danger of inefficient use of resources, externalisation of problems to other European and non-European countries and the accentuation of social, economic and political tensions that may directly affect the aims of the European Treaty regarding its values, in particular Title I of the Treaty on European Union.	These challenges ignore go beyond national borders and thus call for more complex comparative analyses of mobility (of people, goods, services and capital but also of competences and , knowledge and ideas) and forms of institutional cooperation, intercultural interactions and international cooperation. If they are not better understood and anticipated, forces of globalisation also push European countries to compete with each other rather than cooperate, thus accentuating differences in Europe rather than commonalities and a right balance between cooperation and competition. Addressing such critical issues, including socio-economic challenges, only at national level, carries the danger of inefficient use of resources, externalisation of problems to other European and non-European countries and the accentuation of social, economic and political tensions that may directly affect the aims of the European Treaty regarding its values, in particular Title I of the Treaty on European Union.	

	<i>across the European societies. Their links with national and European public policies in the context of globalisation, require not only setting up mutually recognised research agendas but also creating a shared and denser European knowledge base upon which national and European policies can be better understood and evaluated.</i>		
In order to build inclusive, innovative and secure societies, Europe requires a response which implies to develop new knowledge, technologies and capabilities as well as the identification of policy options. Such endeavour will help Europe tackle its challenges not only internally but also as a global player on the international scene. This, in turn, will also help Member States benefit from experiences elsewhere and allow them to better define their own specific actions corresponding to their respective contexts.	In order to build inclusive, innovative and secure reflective societies, Europe requires a response which implies to develop new knowledge, <i>and</i> technologies and capabilities as well as the identification of policy options. Such endeavour will help Europe tackle its challenges not only internally but also as a global player on the international scene. This, in turn, will also help Member States benefit from experiences elsewhere and allow them to better define their own specific actions corresponding to their respective contexts.	In order to understand, analyse and build inclusive, innovative and secure reflective societies, Europe requires a response which implies unfolds the potential of shared ideas for the European future to develop create new knowledge, technologies and capabilities as well as the identification of policy options. The concept of inclusive societies acknowledges the diversity in culture, regions and socio-economic settings as a European strength. Turning European diversity into a source of innovation and development is needed. Such endeavour will help Europe tackle its challenges not only internally but also as a global player on the international scene. This, in turn, will also help Member States benefit from experiences elsewhere and allow them to better define their own specific actions corresponding to their respective contexts.	

<p>Fostering new modes of cooperation between countries within the Union and worldwide, as well as across relevant research and innovation communities, will therefore be a central task under this challenge. Engaging citizens and industry, supporting social and technological innovation processes, encouraging smart and participatory public administration, as well as promoting evidence based policymaking will be systematically pursued in order to enhance the relevance of all these activities for policymakers, social and economic actors and citizens. In this regard, research and innovation will be a precondition for the competitiveness of European industries and services, in particular in the areas of security, digital development and privacy protection.</p>	<p>Fostering new modes of cooperation between countries within the Union and worldwide, as well as across relevant research and innovation communities, will therefore be a central task under this challenge. Engaging citizens and industry, supporting social and technological innovation processes, Encouraging smart and participatory public administration, as well as promoting evidence based policymaking will be systematically pursued in order to enhance the relevance of all these activities for policymakers, social and economic actors and citizens. In this regard, research and innovation will be a precondition for the competitiveness of European industries and services. , in particular in the areas of security, digital development and privacy protection.</p>	<p>Fostering new modes of cooperation between countries within the Union and worldwide, as well as across relevant research and innovation communities, will therefore be a central task under this challenge. Engaging citizens and industry, supporting social and technological innovation processes, encouraging smart and participatory public administration, as well as informing and promoting evidence based policymaking will be systematically pursued in order to enhance the relevance of all these activities for policymakers, social and economic actors and citizens. In this regard, research Research and innovation will be a precondition for the competitiveness of European industries businesses and services, in with particular in the areas of security, digital development and privacy protection attention to sustainability, advancing education, increasing employment, and reducing poverty.</p>	
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<p>Union funding under this challenge will thus support the development, implementation and adaptation of key Union policies, notably Europe 2020 priorities for smart, sustainable and inclusive growth, the Common Foreign and Security Policy and the Union's Internal Security Strategy, including policies on disaster prevention and response. Coordination with the Joint Research Centre direct actions will be pursued.</p>	<p>Union funding under this challenge will thus support the development, implementation and adaptation of key Union policies, notably Europe 2020 priorities for smart, sustainable and inclusive growth, the Common Foreign and Security Policy and the Union's Internal Security Strategy, including policies on disaster prevention and response. <i>It will interface with Joint Programming Initiatives and</i> coordination with the Joint Research Centre direct actions will be pursued.</p>	<p>Union funding under this challenge will thus support the development, implementation and adaptation of key Union policies, notably Europe 2020 priorities for smart, sustainable and inclusive growth, the Common Foreign and Security Policy and the Union's Internal Security Strategy, including policies on disaster prevention and response. <i>Coordination. It will interface, as and when appropriate, with Joint Programming Initiatives, including “Cultural Heritage”, “More Years, Better Lives” and “Urban Europe” and coordination</i> with the Joint Research Centre direct actions will be pursued.</p>	
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COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
6.3. Broad lines of activities	6.3. Broad lines of activities	6.3. Broad lines of activities	
<i>6.3.1. Inclusive societies</i>	<i>6.3.1. Inclusive societies</i>	<i>6.3.1. Inclusive societies</i>	
The aim is to enhance solidarity as well as social, economic and political inclusion and positive inter-cultural dynamics in Europe and with international partners, through cutting-edge science and interdisciplinarity, technological advances and organisational innovations.	The aim is to enhance solidarity as well as social , gain a greater understanding of societal changes in Europe, their impact on social cohesion and economic and political inclusion and positive inter-cultural dynamics in Europe and with international partners, through cutting-edge science and interdisciplinarity, technological advances and organisational innovations the main consequences for the well-being and quality of life of individuals, families and societies. The main challenges to be tackled will address the European models for social cohesion and well-being and the need for a considerable knowledge base in the areas of inequalities and social exclusion, demographic change and the ageing society, life course and family transitions, working and living conditions, migration and mobility, education and lifelong learning, multilingualism, social policies and governance dynamics, while also taking into account the economic and social European diversity.	The aim is to enhance solidarity as well as understand, analyse and develop social, economic and political inclusion and positive inter-cultural dynamics in Europe and with international partners, through cutting-edge science and interdisciplinarity, technological advances and organisational innovations. The main challenges to be tackled concerning a European models for social cohesion are migration, integration, demographic change, the ageing society and disability, as well as the reduction of poverty taking into account the different regional and cultural characteristics.	

<p>Humanities research can play an important role here. Research shall support policymakers in designing policies that combat poverty and prevent the development of various forms of divisions, discriminations and inequalities in European societies, such as gender inequalities or digital or innovation divides, and with other world regions. It shall in particular feed into the implementation and the adaptation of the Europe 2020 strategy and the broad external action of the Union. Specific measures shall be taken to unlock excellence in less developed regions, thereby widening participation in Horizon 2020.</p>	<p><i>Social sciences and</i> humanities research can play an important role here. Research shall support policymakers in designing policies, that combat poverty, <i>conflict, political and social exclusion</i> and prevent the development of various forms of divisions, discriminations and inequalities in European societies, such as gender inequalities or digital or innovation divides, and with other world regions. It shall in particular feed into the implementation and the adaptation of the Europe 2020 strategy and the broad external action of the Union. Specific measures shall be taken to unlock excellence in less developed regions, thereby widening participation in Horizon 2020. <i>It is also essential to understand and explore as well as promote the access and preservation of Europe's vast cultural heritage as a means of bringing Union citizens closer together and strengthening the cohesion of European society.</i></p>	<p>Social Sciences and Humanities research can play an important a leading role here- as they explore changes over time and space and enable exploration of imagined futures. Europe has a huge shared history of both co-operation and conflict. Its dynamic cultural interactions provide inspiration and opportunities. Research shall is needed to understand identity and belonging across communities, regions and nations. Research will support policymakers in designing policies that foster employment, combat poverty and prevent the development of various forms of divisions, discriminations and inequalities in European societies, such as gender and intergenerational inequalities, discrimination due to disability or ethnic origin or digital or innovation divides, and with other world regions. It shall in particular feed into the implementation and the adaptation of the Europe 2020 strategy and the broad external action of the Union. Specific measures shall be taken to unlock excellence in less developed regions, low performing RDI regions, and thereby widening participation in Horizon 2020.</p>	
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The focus of activities shall be to:	<i>[no change]</i>	The focus of activities shall be to understand and foster or implement:	
(a) promote smart, sustainable and inclusive growth;	<i>[no change]</i>	(a) the mechanisms to promote smart, sustainable and inclusive growth;	
(b) build resilient and inclusive societies in Europe;	<i>[no change]</i>	(b) trusted organisations, practices, services and policies that are necessary to build resilient and , inclusive, participatory, open and creative societies in Europe; in particular taking into account migration, integration and demographic change;	
	<i>(ba) address the European models for social cohesion and well-being;</i>		
(c) strengthen Europe's role as a global actor;	<i>[no change]</i>	(c) strengthen Europe's role as a global actor; notably regarding human rights and global justice;	
(d) close the research and innovation divide in Europe.	(d) close the research and innovation divide in Europe.	(d) the processes and practices to close the research and innovation divide in Europe;	
		(e) the promotion of sustainable and inclusive environments through innovative spatial and urban planning and design.	

6.3.2. <i>Innovative societies</i>	6.3.2. <i>Innovative and reflective societies</i>	6.3.2. <i>Innovative societies</i>	
The aim is to foster the development of innovative societies and policies in Europe through the engagement of citizens, enterprises and users in research and innovation and the promotion of coordinated research and innovation policies in the context of globalisation. Particular support will be provided for the development of the ERA and the development of framework conditions for innovation.	The aim is to foster the development of innovative societies and policies in Europe through the engagement of citizens, <i>civil society organisations</i> , enterprises and users in research and innovation and the promotion of coordinated research and innovation policies in the context of globalisation. Particular Support will be provided for <i>research related to</i> the development of the ERA and the development of framework conditions for innovation, <i>including a better understanding of societal constraints and opportunities and their role in the innovation process.</i>	The aim is to foster the development of innovative societies and policies in Europe through the engagement of citizens, enterprises and users in research and innovation and the promotion of coordinated research and innovation policies in the context of globalisation and the need to promote the highest ethical standards. Particular support will be provided for the development of the ERA and the development of framework conditions for innovation. Cultural and societal knowledge is a major source of creativity and innovation, including business, public sector and social innovation. In many cases social and user-led innovations also precede the development of innovative technologies, services and economic processes. The creative industries are a major resource to tackle societal challenges and for competitiveness. As interrelations between social and technological innovation are complex, and rarely linear, further research, including cross-sectoral and multidisciplinary research, is needed into the development of all types of innovation and activities funded to encourage its effective development into the future.	

The focus of activities shall be to:	<i>[no change]</i>	<i>[no change]</i>	
(a) strengthen the evidence base and support for the Innovation Union and ERA;	<i>[no change]</i>	<i>[no change]</i>	
(b) explore new forms of innovation, including social innovation and creativity;	(b) explore <i>and understand</i> new forms of innovation, including social innovation and creativity;	(b) explore new forms of innovation, including with special emphasis on social innovation and creativity; and understand how all forms of innovation are developed, succeed or fail;	
	<i>(ba) explore processes which provide a favourable background to creativity and innovation;</i>	(c) make use of the innovative, creative and productive potential of all generations;	
(c) ensure societal engagement in research and innovation;	(c) ensure societal engagement in research and innovation;	(c) (d) ensure societal engagement in research and innovation;	
(d) promote coherent and effective cooperation with third countries.	(d) promote <i>understand how</i> coherent and effective cooperation <i>in research and advanced training</i> with third countries <i>fosters innovation.</i>	(d) (e) promote coherent and effective cooperation with third countries.	
	<i>(da) promote cultural heritage and European identity</i>		

<p>6.3.3. Secure societies <i>[nota bene: the part of the Commission text on broad lines of activities on secure societies has been moved to new SC7 where <u>Secure societies</u> are addressed]</i></p>		<p>6.3.3. . Secure societies Reflective Societies – cultural heritage and European identity</p>	
		<p>The aim is to contribute to an understanding of Europe's intellectual basis: its history and the many European and non-European influences; as an inspiration for our lives today. Europe is characterized by a variety of different peoples (including minorities and indigenous people), traditions and regional and national identities as well as by different levels of economic and societal development. Migration and mobility, the media, industry and transport contribute to the diversity of views and lifestyles. This diversity and its opportunities should be recognized and considered.</p>	

		<p>European collections in libraries, including digital ones, archives, museums, galleries and other public institutions have a wealth of rich, untapped documentation and objects for study. These archival resources, together with intangible heritage, represent the history of individual Member States but also the collective heritage of a European Union that has emerged through time. Such materials should be made accessible, also through new technologies, to researchers and citizens to enable a look to the future through the archive of the past. Accessibility and preservation of cultural heritage in these forms is needed for the vitality of the living engagements within and across European cultures now and contributes to sustainable economic growth.</p>	
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The focus of activities shall be to:		<i>[no change]</i>	
		(a) study European heritage, memory, identity, integration and cultural interaction and translation, including its representations in cultural and scientific collections, archives and museums, to better inform and understand the present by richer interpretations of the past;	
		(b) research into European countries' and regions' history, literature, art, philosophy and religions and how these have informed contemporary European diversity;	
		(c) research on Europe's role in the world, on the mutual influence and ties between the world regions, and a view from outside on European cultures.	

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
	<i>(part of) AMD 144 (point 6 a (new)) 6a. Secure societies – protecting freedom and security of europe and its citizens</i>	7. SECURE SOCIETIES – PROTECTING FREEDOM AND SECURITY OF EUROPE AND ITS CITIZENS	
	<i>6a.1. Specific objective</i>	7.1. Specific objective	
	<i>The specific objective is to protect freedom and foster security in Europe in a context of global interdependencies and sophistication of threats while strengthening the European culture of freedom and justice and its compliance.</i>	The specific objective is to foster secure European societies in a context of unprecedented transformations and growing global interdependencies and threats, while strengthening the European culture of freedom and justice.	
	<i>Europe has never been so peacefully consolidated and the levels of security enjoyed by European citizens are considerably high compared to other parts of the world. However, Europe's vulnerability continues to exist in a context of ever-increasing globalisation in which societies are facing security threats and challenges that are growing in scale and sophistication.</i>		

	<p><i>The threat of large-scale military aggressions has been subsided and security concerns are focused on new multifaceted, interrelated and transnational threats. Consequently the concept of security has been broadened from a military definition to include other aspects such as human rights, environmental degradation, political stability and democracy, social issues, cultural and religious identity or immigration. In this context the internal and external aspects of security are inextricably linked. The current threats to security and freedom are numerous, complex and fluid and include terrorism, organised crime, cyber attacks, piracy, regional instability or natural and man-made disasters, violence, privacy abuses and other forms of social and economic disorders. These threats affect citizens and have an impact on notions of trust, care and communication as well as economic and social impact, and therefore demand a corresponding variety of preventive and counter actions.</i></p>		
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<p><i>[nota bene: parts of the text have been moved here from SC6 where Secure societies are addressed in the Commission proposal]</i></p> <p>Third, many forms of insecurity, whether crime, violence, terrorism, cyber attacks, privacy abuses and other forms of social and economic disorders increasingly affect citizens.</p>	<p>(part of) AMD 143</p> <p>Third, many forms of insecurity, whether crime, violence, terrorism, cyber attacks, privacy abuses and other forms of social and economic disorders increasingly affect citizens.</p>	<p>Third, many forms There is a widespread perception of insecurity, whether from crime, violence, terrorism, natural/man-made disasters, cyber attacks, privacy abuses and other forms of social and economic disorders increasingly. This affects citizens directly and has a wider impact on notions of trust, care and communication and links to the level of preparation and organisation of society.</p>	
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<p>According to estimates, there is likely to be up to 75 million direct victims of crime every year in Europe³⁹. The direct cost of crime, terrorism, illegal activities, violence and disasters in Europe has been estimated at at least EUR 650 billion (about 5 % of the Union's GDP) in 2010. A vivid example of the consequences of terrorism is the attack against the Twin Towers in Manhattan on 11 September 2001. Thousands of lives were lost and it is estimated that this event caused losses in US productivity amounting to US\$ 35 billion, US\$ 47 billion in total output and a rise in unemployment by almost 1 % in the following quarter. Citizens, firms and institutions are increasingly involved in digital interactions and transactions in social, financial and commercial areas of life but the development of Internet has also led to cyber crime worth billion of Euros each year and breaches of privacy affecting individual or associations across the continent. The development of insecurity in everyday life and because of unexpected situations is likely to affect the citizens' trust not only in institutions but also in each other.</p> <p>³⁹ COM(2011) 274 final.</p>	<p>According to estimates, there is likely to be up to 75 million direct victims of crime every year in Europe. The direct cost of crime, terrorism, illegal activities, violence and disasters in Europe has been estimated at at least EUR 650 billion (about 5 % of the Union's GDP) in 2010. <i>Terrorism has shown its fatal consequences in several parts of Europe costing thousands of lives, and important economic losses.</i> A vivid example of the consequences of terrorism is the attack against the Twin Towers in Manhattan on 11 September 2001. Thousands of lives were lost and it is estimated that this event caused losses in US productivity amounting to US\$ 35 billion, US\$ 47 billion in total output and a rise in unemployment by almost 1 % in the following quarter. Citizens, firms and institutions are increasingly involved in digital interactions and transactions in social, financial and commercial areas of life but the development of Internet has also led to cyber crime worth billion of Euros each year and breaches of privacy affecting individual or associations across the continent. <i>Cyber attacks are also having a serious impact on critical infrastructures.</i> The development of insecurity in everyday life and because of unexpected situations is likely to affect the citizens' trust not only in institutions but also in each other.</p>	<p>According to estimates, there is are likely to be up to 75 million direct victims of crime every year in Europe²⁶. The direct cost of crime, terrorism, illegal activities, violence and disasters in Europe has been estimated at least EUR 650 billion (about 5 % of the Union's GDP) in 2010. A vivid example of the consequences of terrorism is the attack against the Twin Towers in Manhattan on 11 September 2001.</p> <p>Thousands of lives were lost and it is estimated that this event caused losses in US productivity amounting to US\$ 35 billion, US\$ 47 billion in total output and a rise in unemployment by almost 1 % in the following quarter. It also had a significant cultural and global impact. Citizens, firms and institutions are increasingly involved in digital interactions and transactions in social, financial and commercial areas of life but the development of Internet has also led to cyber crime worth billion of Euros each year and breaches of privacy affecting individuals or associations across the continent. The development Changes in the nature and perception of insecurity in everyday life is are likely to affect citizens' trust not only in institutions but also in each other.</p> <p>²⁶ COM(2011) 274 final</p>	
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	<i>In order to anticipate, prevent and manage these threats, it is necessary to understand and address the root causes of insecurity and to develop and apply innovative technologies, solutions, foresight tools and knowledge, stimulate cooperation between providers and users, find civil security solutions, improve the competitiveness of the European security and services industries and prevent and combat the abuse of privacy and breaches of human rights in the Internet, and elsewhere, while ensuring European citizens individual rights and freedom.</i>	In order to anticipate, prevent and manage these threats, it is necessary to develop and apply innovative technologies, solutions, foresight tools and knowledge, stimulate cooperation between providers and users, find civil security solutions, improve the competitiveness of the European security industry and services, including ICT, and prevent and combat the abuse of privacy and breaches of human rights in the Internet, and elsewhere, while ensuring European citizens individual rights and freedom.	
	<i>To enhance better cross-border collaboration between different kinds of emergency services, attention should be given to interoperability and standardisation.</i>	To enhance better cross-border collaboration between different kinds of emergency services, attention should be given to interoperability and standardisation.	
	<i>Finally, as security policies should interact with different social policies, enhancing the societal dimension of security research will be an important aspect of this challenge.</i>	Finally, as security policies should interact with different social policies, enhancing the societal dimension of security research will be an important aspect of this challenge.	
	<i>Respecting fundamental values is a building block of each effective security research and policy. Seeking and implementing security solutions implies to respect values such as freedom, democracy, equality and the rule of law. This must be at the base of any activity to provide security to European citizens.</i>		

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
	<i>(part of) AMD 144 6a.2. Rationale and Union added value</i>	7.2. Rationale and Union added value	
	<i>No single Member State is able to respond to threats on its own because most security challenges are cross-border and cross-sectoral and consequently require complex and broad comparative analyses and reinforced forms of institutional and international cooperation.</i>	Security is a legitimate concern for Europe and its citizens and in this respect represents a major challenge for society. The European Union, its citizens, its industry and its international partners are confronted with a range of security threats like crime, terrorism, illegal trafficking and mass emergencies due to man-made or natural disasters. These threats can span across borders and aim at physical targets or the cyberspace with attacks arising from different sources. Attacks against information or communication systems of public authorities and private entities, for instance, not only undermine the citizen's trust in information and communication systems and lead to direct financial losses and a loss of business opportunities, but may also seriously affect critical infrastructure and services such as energy, aviation and other transport, water and food supply, health, finance or telecommunications.	

	<p><i>In order to protect freedom and security, the Union requires effective responses using a comprehensive and innovative suite of security instruments. Research and innovation can play a clear supporting role as a force enabler although it cannot alone guarantee security. Research and innovation activities should aim at understanding, preventing, deterring, preparing and protecting against security threats. Furthermore, security presents fundamental challenges that cannot be resolved by independent and sector-specific treatment but rather need more ambitious, coordinated and holistic approaches.</i></p>	<p>These threats could possibly endanger the inner foundations of our society. Technology and creative design can bring an important contribution to any response to be made. Yet, new solutions should be developed while bearing in mind the appropriateness of the means and their adequacy to the societal demand, in particular in terms of guarantees for citizens' fundamental rights and freedoms.</p>	
	<p><i>Cooperation among Member States but also with third countries and international organisations is a central part of this challenge.</i></p>	<p>Finally, security also represents a major economic challenge. The security market is worth around 100 billion euro per year worldwide, of which Europe's share is between 25 and 35%. Moreover, it is a fast growing market despite the present economic crisis. Given the potential impact of some threats on services, networks or businesses, the deployment of adequate security solutions has become critical for the economy and European manufacturing competitiveness.</p>	

	<p><i>Union research and innovation funding under this challenge will thus underpin the development, implementation and adaptation of key Union policies notably Europe 2020 priorities for smart and inclusive growth, the Common Foreign and Security Policy and the Union's Internal Security Strategy. Coordination with the Joint Research Centre direct actions will be pursued.</i></p>	<p>Union funding under this challenge will thus support the development, implementation and adaptation of key Union policies, notably Europe 2020 priorities for smart sustainable and inclusive growth, the Common Foreign and Security Policy, the Union's Internal Security Strategy and the Digital Agenda for Europe. Coordination with the Joint Research Centre direct actions will be pursued.</p>	
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COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
<i>[nota bene: in the CION proposal under 6.3.3]</i>	<i>(parts of) AMD 143 and of AMD 144 6a.3. Broad lines of activities</i>	7.3. Broad lines of activities	
The aim is to support Union policies for internal and external security and to ensure cyber security, trust and privacy in the Digital Single Market, whilst at the same time improving the competitiveness of the Union's security, ICT and service industries. This will be done by developing innovative technologies and solutions that address security gaps and lead to the prevention of security threats.	The aim is to support Union policies for internal and external security and to ensure cyber security, trust and privacy in the Digital Single Market, whilst at the same time improving the competitiveness of the Union's security, ICT and service industries. <i>The activities will include a focus on understanding the causes of insecurity and conflict and research and development of the next generation of innovative solutions, by working on novel concepts and designs, and interoperable standards.</i> This will be done by developing innovative <i>policies</i> technologies and solutions that address security gaps and lead to the prevention of security threats.	The aim is to support Union policies for internal and external security and to ensure cyber security, trust and privacy in the Digital Single Market, whilst at the same time improving the competitiveness of the Union's security, ICT and service industries. industry and services, including ICT. The activities will include a focus on the research and development of the next generation of innovative solutions, by working on novel concepts and designs, and interoperable standards. This will be done by developing innovative technologies and solutions that address security gaps and lead to a reduction in the risk from security threats.	

These mission-oriented actions will integrate the demands of different end-users (citizens, businesses, and administrations, including national and international authorities, civil protections, law enforcement, border guards, etc.) in order to take into account the evolution of security threats and privacy protection and the necessary societal aspects.	These mission-oriented activities will integrate the demands of different end-users (citizens, businesses, and administrations civil society organisations and administrations, including national and public sector institutions and agencies international authorities, civil protections, law enforcement, border guards, etc) in order to take into account the evolution of security threats and challenges, privacy protection by design and the necessary societal aspects.	[no change]	
	<i>Research in this challenge will thus be aimed at preventing, deterring, preparing and protecting against security threats, and supporting the Common Foreign and Security Policy and the Union's Internal Security Strategy, including policies on disaster prevention and response.</i>		
The focus of activities shall be to:	[no change]	[no change]	
(a) fight crime and terrorism;	[no change]	(a) fight crime, illegal trafficking and terrorism, including understanding and tackling terrorist ideas and beliefs;	
	<i>(b) protect and improve resilience of critical infrastructures;</i>	(b) protect and improve the resilience of critical infrastructures, supply chains and transport modes;	

(b) strengthen security through border management;	<i>(c) strengthen security through border management and maritime security;</i>	(b) (c) [no change]	
(c) provide cyber security;	(c) (d) [no change]	(c) (d) provide improve cyber security;	
(d) increase Europe's resilience to crises and disasters;	(d) (e) [no change]	(d) (e) [no change]	
(e) ensure privacy and freedom in the Internet and enhance the societal dimension of security.	(e) (f) enhance the societal dimension of security and ensure privacy and freedom in the Internet;	(e) (f) ensure privacy and freedom, including in the Internet and enhance the societal dimension legal and ethical understanding of all areas of security, risk and management ;	
	<i>(i) enhance standatisation and interoperability;</i>	(g) Enhance standardisation and interoperability of systems, including for emergency purposes.	
	<i>(g) support the Union's internal and external security policies;</i>		
	<i>(h) strengthen security and the transformation of conflicts within third countries through conflict prevention, peacebuilding, dialogue, mediation and reconciliation and civilian security sector reform;</i>		

PART IV: Non-Nuclear Direct Actions of the Joint Research Centre (JRC)		PART IV: Non-Nuclear Direct Actions of the Joint Research Centre (JRC) <u>NON-NUCLEAR DIRECT ACTIONS OF THE JOINT RESEARCH CENTRE (JRC)</u>	
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COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
1. Specific objective	<u>AMD 145</u> 1. Specific objective	1. Specific objective	
The specific objective is to provide customer-driven scientific and technical support to Union policies, while flexibly responding to new policy demands.	<i>[no change]</i>	<i>[no change]</i>	

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
2. Rationale and Union added value	2. Rationale and Union added value	2. Rationale and Union added value	
The Union has defined an ambitious policy agenda to 2020 which addresses a set of complex and interlinked challenges, such as sustainable management of resources and competitiveness. In order to successfully tackle these challenges, robust scientific evidence is needed which cuts across different scientific disciplines and allows the sound assessment of policy options. The JRC, further strengthening its role as the science service for Union policy making will provide the required scientific and technical support throughout all stages of the policy-making cycle, from conception to implementation and assessment. To this aim it will focus its research clearly on Union policy priorities while enhancing cross-cutting competences.	<i>[no change]</i>	The Union has defined an ambitious policy agenda to 2020 which addresses a set of complex and interlinked challenges, such as sustainable management of resources and competitiveness. In order to successfully tackle these challenges, robust scientific evidence is needed which cuts across different scientific disciplines and allows the sound assessment of policy options. The JRC, further strengthening playing its role as the science service for Union policy making will provide the required scientific and technical support throughout all stages of the policy-making cycle, from conception to implementation and assessment. To this aim it will focus its research clearly on Union policy priorities while enhancing cross-cutting competences and cooperation with the Member States.	

<p>The JRC's independence of special interests, whether private or national, combined with its scientific-technical reference role enable it to facilitate the necessary consensus building between stakeholders and policy makers. Member States and Union citizens' benefit from the research of the JRC, most visibly in areas such as health and consumer protection, environment, safety and security, and management of crises and disasters.</p>	<p>The JRC's independence of special interests, whether private or national, combined with its scientific-technical reference role enable it to facilitate the necessary consensus building between stakeholders and policy makers. Member States and Union citizens' regions will benefit from the research support of the JRC to their Smart Specialisation Strategies and from its research, most visibly in areas such as health and consumer protection, environment, safety and security, and management of crises and disasters. Union citizens' will also be beneficiaries of that research.</p>	<p>[no change]</p>	
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<p>The JRC is an integral part of the ERA and will continue to actively support its functioning through close collaboration with peers and stakeholders, opening access to its facilities and through the training of researchers. This will also promote the integration of new Member States and Associated Countries; for these, the JRC will continue to provide dedicated training courses on the scientific-technical basis of the body of Union law. The JRC will establish coordination links with relevant other Horizon 2020 specific objectives. As a complement to its direct actions and for the purpose of further integration and networking in the ERA, the JRC may also participate in Horizon 2020 indirect actions and co-ordination instruments in areas where it has the relevant expertise to produce added value.</p>	<p><i>[no change]</i></p>	<p>The JRC is an integral part of the ERA and will continue to actively support its functioning through close collaboration with peers and stakeholders, opening maximizing access to its facilities and through the training of researchers and by close cooperation with MS and international institutions that pursue similar objectives. This will also promote the integration of new Member States and Associated Countries; for these, the JRC will continue to provide dedicated training courses on the scientific-technical basis of the body of Union law. The JRC will establish coordination links with relevant other Horizon 2020 specific objectives. As a complement to its direct actions and for the purpose of further integration and networking in the ERA, the JRC may also participate in Horizon 2020 indirect actions and co-ordination instruments in areas where it has the relevant expertise to produce added value.</p>	
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COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
3. Broad lines of activities	3. Broad lines of activities	3. Broad lines of activities	
The JRC activities in Horizon 2020 will focus on the Union policy priorities and the societal challenges addressed by them; they are aligned with Europe 2020 and its main objectives of smart, sustainable and inclusive growth, Security and Citizenship, and Global Europe.	<i>[no change]</i>	<i>[no change]</i>	
The JRC's key competence areas will be energy, transport, environment and climate change, agriculture and food security, health and consumer protection, information and communication technologies, reference materials, and safety and security (including nuclear in the Euratom programme).	The JRC's key competence areas will be energy, transport, environment and climate change, agriculture and food security, health and consumer protection, information and communication technologies, reference materials, and safety and security (including nuclear in the Euratom programme). <i>The JRC activities in these areas will be conducted taking into account relevant initiatives at the level of regions, Member States or the Union, within the perspectives of shaping the ERA.</i>	The JRC's key competence areas will be energy, transport, environment and climate change, agriculture and food security, health and consumer protection, information and communication technologies, reference materials, and safety and security (including nuclear in the Euratom programme). The JRC activities in these areas will be conducted taking into account relevant initiatives at the level of regions, Members States or the EU, within the perspective of shaping the European Research Area.	

These competence areas will be significantly enhanced with capacities to address the full policy cycle and to assess policy options. This includes strengthening capacities in	<i>[no change]</i>	These competence areas will be significantly enhanced with capacities to address the full policy cycle and to assess policy options. This includes strengthening capacities in	
(a) anticipation and foresight - proactive strategic intelligence on trends and events in science, technology and society and their possible implications for public policy.	<i>[no change]</i>	<i>[no change]</i>	
(b) economics - for an integrated service covering both the scientific-technical and the macro-economic aspects.	<i>[no change]</i>	<i>[no change]</i>	
(c) modelling - focussing on sustainability and economics and making the Commission less dependent on outside suppliers for vital scenario analysis.	<i>[no change]</i>	<i>[no change]</i>	

(d) policy analysis - to allow cross-sectoral investigation of policy options.	<i>[no change]</i>	<i>[no change]</i>	
(e) impact assessment - providing scientific evidence to support policy options.	<i>[no change]</i>	<i>[no change]</i>	
The JRC shall continue to pursue excellence in research as the basis for credible and robust scientific-technical policy support. To that aim, it will strengthen collaboration with European and international partners, i.a. by participation in indirect actions. It will also carry out exploratory research and build up competences in emerging, policy-relevant areas on a selective basis.	<i>[no change]</i>	The JRC shall continue to pursue excellence in research and extensive interaction with research institutions as the basis for credible and robust scientific-technical policy support. To that aim, it will strengthen collaboration with European and international partners, i.a. by participation in indirect actions. It will also carry out exploratory research and build up competences in emerging, policy-relevant areas on a selective basis.	
The JRC shall focus on:	<i>[no change]</i>	<i>[no change]</i>	

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
3.1 Excellent science	3.1 Excellent science	3.1 Excellent science	
Carry out research to enhance the scientific evidence base for policy making and examine emerging fields of science and technology, including through an exploratory research programme.	<i>[no change]</i>	<i>[no change]</i>	
3.2 Industrial leadership	3.2 Industrial leadership	3.2 Industrial leadership	
Contribute to European competitiveness through support to the standardisation process and standards with pre-normative research, development of reference materials and measurements, and harmonization of methodologies in five focal areas (energy; transport; Digital Agenda; security and safety; consumer protection). Carry out safety assessments of new technologies in areas such as energy and transport and health and consumer protection. Contribute to facilitating the use, standardisation and validation of space technologies and data, in particular to tackle the societal challenges.	<i>[no change]</i>	<i>[no change]</i>	

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
3.3 Societal challenges	3.3 Societal challenges	3.3 Societal challenges	
(a) Health, demographic change and wellbeing	<i>[no change]</i>	<i>[no change]</i>	
Contribute to health and consumer protection through scientific and technical support in areas such as food, feed, consumer products; environment and health; health-related diagnostic and screening practices; and nutrition and diets.	<i>[no change]</i>	<i>[no change]</i>	
(b) Food security, sustainable agriculture, marine and maritime research and the bio-economy	(b) Food quality, safety and security, sustainable agriculture and forestry , marine and maritime research and the bio-economy based industries	(b) European bioeconomy challenges: Food security, sustainable agriculture and forestry , marine and maritime and inland water research the bio-economy	
Support the development, implementation and monitoring of European agriculture and fisheries policies, including food safety and security and the development of a bio-economy through e.g. crop production forecasts, technical and socio-economic analyses and modelling.	Support the development, implementation and monitoring of European agriculture and fisheries policies, including food safety and security and the development of a bio-economy through e.g. crop production forecasts, technical and socio-economic analyses and modelling, and promoting healthy and productive seas.	<i>[no change]</i>	

(c) Secure, clean and efficient energy	<i>[no change]</i>	<i>[no change]</i>	
Support the 20/20/20 climate and energy targets with research on technological and economic aspects of energy supply, efficiency, low-carbon technologies, energy/electricity transmission networks.	<i>[no change]</i>	<i>[no change]</i>	
(d) Smart, green and integrated transport	(d) Smart, green and integrated transport and mobility	<i>[no change]</i>	
Support the Union's policy for the sustainable, safe and secure mobility of persons and goods with laboratory studies, modelling and monitoring approaches, including low carbon technologies for transport, such as electrification, clean and efficient vehicles and alternative fuels, and smart mobility systems.	<i>[no change]</i>	<i>[no change]</i>	
(e) Climate action, resource efficiency and raw materials	(e) Climate action, environment , resource efficiency and sustainable use of raw materials;	<i>[no change]</i>	
Investigate the cross-sectoral challenges of the sustainable management of natural resources through monitoring of key environmental variables and the development of an integrated modelling framework for sustainability assessment.	<i>[no change]</i>	<i>[no change]</i>	

Support resource efficiency, emission reductions and sustainable supply of raw materials through the integrated social, environmental and economic assessments of clean production processes, technologies, and products and services.	<i>[no change]</i>	<i>[no change]</i>	
Support Union development policy goals with research to help ensure adequate supplies of essential resources focussing on monitoring environmental and resource parameters, food safety and security related analyses, and knowledge transfer.	<i>[no change]</i>	<i>[no change]</i>	
(f) Inclusive, innovative and secure Societies	(f) <i>Understanding Europe in a changing world</i> - inclusive, innovative and secure <i>reflective</i> societies	(f) Europe in a changing world - Inclusive, innovative and reflective secure Societies	
Contribute to and monitor the implementation of the Innovation Union with macro-economic analyses of the drivers and barriers of research and innovation, and development of methodologies, scoreboards and of indicators.	<i>[no change]</i>	<i>[no change]</i>	

Support the European Research Area (ERA) by monitoring the functioning of the ERA and analysing drivers of and barriers to some of its key elements; and by research networking, training, opening JRC facilities and databases to users in Member States and Candidate and Associated Countries.	<i>[no change]</i>	<i>[no change]</i>	
Contribute to the key goals of the Digital Agenda by qualitative and quantitative analyses of economic and social aspects (Digital Economy, Digital Society, Digital Living).	<i>[no change]</i>	<i>[no change]</i>	
	<i>(fa) Secure societies - Protecting freedom and security of Europe and its citizens</i>	<i>(g) Secure societies - Protecting freedom and security of Europe and its citizens.</i>	
Support internal safety and security through the identification and assessment of the vulnerability of critical infrastructures as vital components of societal functions; and through the operational performance assessment of technologies related to the digital identity; Address global security challenges including emerging or hybrid threats through the development of advanced tools for information mining and analysis as well as for crisis management.	Support internal safety and security through the identification and assessment of the vulnerability of critical infrastructures as vital components of societal functions; and through the operational, <i>social and ethical</i> performance assessment of technologies related to the digital identity; Address global security challenges including emerging or hybrid threats through the development of advanced tools for information mining and analysis as well as for crisis management	<i>[no change]</i>	

Enhance the Union capacity for managing natural and man-made disasters by strengthening the monitoring of infrastructures and the development of global multi-hazard early warning and risk management information systems, making use of satellite-based earth observation frameworks.	Enhance the Union's capacity for managing natural and man-made disasters by strengthening the monitoring of infrastructures and the development of <i>test facilities</i> , global multi-hazard early warning and risk management information systems, making use of satellite-based earth observation frameworks.	<i>[no change]</i>	
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PART V: The European Institute of Innovation and Technology (EIT)		PART V: The European Institute of Innovation and Technology	
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COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
1. Specific objective	<u>AMD 146</u> 1. Specific objective	1. Specific objective	
The specific objective is to integrate the knowledge triangle of research, innovation and education and thus to reinforce the Union's innovation capacity and address societal challenges.	The specific objective is to integrate the knowledge triangle of research, innovation and education and thus to reinforce, <i>accelerate and widen</i> the Union's innovation capacity and address <i>in particular</i> societal challenges.	The specific objective is to integrate the knowledge triangle of research, innovation and <u>higher</u> education and thus to reinforce the Union's innovation capacity and address societal challenges.	

Europe is facing a number of structural weaknesses when it comes to innovation capacity and the ability to deliver new services, products and processes. Among the main issues at hand are Europe's relatively poor record in talent attraction and retention; the underutilisation of existing research strengths in terms of creating economic or social value; low levels of entrepreneurial activity; a scale of resources in poles of excellence which is insufficient to compete globally; and an excessive number of barriers to collaboration within the knowledge triangle of higher education, research and business on a European level.	Europe is facing a number of structural weaknesses when it comes to innovation capacity and the ability to deliver new services, products and processes. Among the main issues at hand are Europe's relatively poor record in talent attraction and retention; the underutilisation of existing research strengths in terms of creating economic or social value; <i>the lack of research results brought to the market;</i> low levels of entrepreneurial activity <i>and mindset;</i> <i>low leverage of private investment in R&D,</i> a scale of resources, <i>including human resources,</i> in poles of excellence which is insufficient to compete globally; and an excessive number of barriers to collaboration within the knowledge triangle of higher education, research and business on a European level.	Europe is facing a number of structural weaknesses when it comes to innovation capacity and the ability to deliver new services, products and processes thereby hampering sustainable economic growth and job creation. Among the main issues at hand are Europe's relatively poor record in talent attraction and retention; the underutilisation of existing research strengths in terms of creating economic or social value; low levels of entrepreneurial activity; a scale of resources in poles of excellence which is insufficient to compete globally; and an excessive number of barriers to collaboration within the knowledge triangle of higher education, research and business on a European level.	
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COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
2. Rationale and Union added value	2. Rationale and Union added value	2. Rationale and Union added value	
If Europe is to compete on an international scale, these structural weaknesses need to be overcome. The elements identified above are common across Member States and affect the Union's innovation capacity as a whole.	<i>[no change]</i>	<i>[no change]</i>	
The EIT will address these issues by promoting structural changes in the European innovation landscape. It will do so by fostering the integration of higher education, research and innovation of the highest standards, thereby creating new environments conducive to innovation, and by promoting and supporting a new generation of entrepreneurial people. In doing so, the EIT will contribute fully to the objectives of Europe 2020 and notably the Innovation Union and Youth on the Move flagship initiatives.	The EIT will address these issues by promoting structural changes in the European innovation landscape. It will do so by fostering the integration of higher education, research and innovation of the highest standards, thereby creating new environments conducive to innovation, and by promoting and supporting a new generation of entrepreneurial people <i>with entrepreneurial skills and experiences and by stimulating the creation of innovative spin-offs and start-ups.</i> In doing so, the EIT will contribute fully to the objectives of Europe 2020 and notably the Innovation Union and Youth on the Move flagship initiatives.	The EIT will address these issues by promoting structural changes in the European innovation landscape. It will do so by fostering the integration of higher education, research and innovation of the highest standards, notably via its Knowledge and Innovation Communities (KICs), thereby creating new environments conducive to innovation, and by promoting and supporting a new generation of entrepreneurial people. In doing so, the EIT will contribute fully to the objectives of Europe 2020 and notably the Innovation Union and Youth on the Move flagship initiatives.	

	<i>In particular, the EIT activities through the KICs will contribute to implement the specific objectives of the "societal challenges" and "leadership in enabling and industrial technologies" established under the Horizon 2020 Specific Programme. In addition, the EIT and its KICs should foster synergies and interaction across pillars in Horizon 2020 and with other relevant initiatives.</i>	In addition, the EIT and its KICs should seek synergies and interaction across pillars in Horizon 2020 and with other relevant initiatives.	
<i>Integrating education and entrepreneurship with research and innovation</i>	<i>[no change]</i>	<i>[no change]</i>	
The specific feature of the EIT is to integrate education and entrepreneurship with research and innovation as links in a single innovation chain across the Union and beyond.	The specific feature of the EIT is to integrate higher education and entrepreneurship with research and innovation as links in a single innovation chain across the Union and beyond, leading to an increase of innovative services, products and processes brought to the market.	The specific feature of the EIT is to integrate higher education and entrepreneurship with research and innovation as links in a single innovation chain across the Union and beyond.	

<i>Business logic and a results-oriented approach</i>	<i>[no change]</i>	<i>[no change]</i>	
The EIT, via its KICs, operates in line with business logic. Strong leadership is a pre-requisite: each KIC is driven by a CEO. KIC partners are represented by single legal entities to allow more streamlined decision-making. KICs must produce annual business plans, including an ambitious portfolio of activities from education to business creation, with clear targets and deliverables, looking for both market and societal impact. The current rules concerning participation, evaluation and monitoring of KICs allow fast-track, business-like decisions.	The EIT, via its KICs, operates in line with business logic and is results-oriented . Strong leadership is a pre-requisite: each KIC is driven by a CEO. KIC partners are represented by single legal entities to allow more streamlined decision-making. KICs must produce annual business plans, including an ambitious portfolio of activities from education to business creation, with clear targets and deliverables, looking for both market and societal impact, and clear value added, determined by means of a results-based approach . The current rules concerning participation, evaluation and monitoring of KICs allow fast-track, business-like decisions and the KICS should be able to mobilise investment and long term commitment for the business sector. The KICs, however, being also funded by public sources, need to remain accountable and to function in an open and transparent way, in particular towards other actors in their area of activity.	The EIT, via its KICs, operates in line with business logic. Strong leadership is a pre-requisite: each KIC is driven by a CEO. KIC partners are represented by single legal entities to allow more streamlined decision-making. KICs must produce clearly defined annual business plans, setting out a multiannual strategy and including an ambitious portfolio of activities from education to business creation, with clear targets and deliverables, looking for both market and societal impact. The current rules concerning participation, evaluation and monitoring of KICs allow fast-track, business-like decisions. Business and entrepreneurs should have a strong role in driving activities in KICs and the KICs should be able to mobilize investment and long-term commitment from the business sector.	

<i>Overcoming fragmentation with the aid of long-term integrated partnerships</i>	<i>[no change]</i>	<i>[no change]</i>	
The EIT KICs are highly integrated ventures, bringing together partners from industry, higher education, research and technology institutes, renowned for their excellence. KICs allow world-class partners to unite in new, cross-border configurations, optimise existing resources and open up access to new business opportunities via new value chains, addressing higher-risk, larger-scale challenges.	The EIT KICs are highly integrated ventures, bringing together partners from industry, including SME , higher education, research and technology institutes, renowned for their excellence. KICs allow world-class partners to unite in new, cross-border configurations, optimise existing resources and open up access to new business opportunities via new value chains, addressing higher-risk, larger-scale challenges. <i>It is essential that KICs provide the opportunity for SMEs to fully participate in all their activities: widening participation to new entrants bringing new ideas and in particular increasing participation of SMEs should be part of the KICs strategy for growth.</i>	The EIT KICs are highly integrated ventures, bringing together partners from industry including SMEs , higher education, research and technology institutes, renowned for their excellence, in an open and transparent manner . KICs allow world-class partners from across the EU and beyond to unite in new, cross-border configurations, optimise existing resources and open up access to new business opportunities via new value chains, addressing higher-risk, larger-scale challenges.	

<i>Nurturing Europe's main innovation asset: its highly talented people</i>	<i>[no change]</i>	<i>[no change]</i>	
Talent is a key ingredient of innovation. The EIT nurtures people and interactions between them, by putting students, researchers and entrepreneurs at the centre of its innovation model. The EIT will provide an entrepreneurial and creative culture and cross-disciplinary education to talented people, via EIT-labelled Masters and PhD degrees, intended to emerge as an internationally recognised brand of excellence. In doing so, the EIT strongly promotes mobility within the knowledge triangle.	Talent is a key ingredient of innovation. The EIT nurtures people and interactions between them, by putting students, researchers and entrepreneurs at the centre of its innovation model. The EIT will provide an entrepreneurial and creative culture and cross-disciplinary education to talented people, via EIT-labelled Masters and PhD degrees, <i>summer and distant courses</i> , intended to emerge as an internationally recognised brand of excellence. In doing so, the EIT <i>ensures optimum development and dynamic use of Europe's intellectual capital and</i> strongly promotes mobility within the knowledge triangle.	Talent is a key ingredient of innovation. The EIT nurtures people and interactions between them, by putting students, researchers and entrepreneurs at the centre of its innovation model. The EIT will provide an entrepreneurial and creative culture and cross-disciplinary education to talented people, via EIT-labelled Masters and PhD degrees, intended to emerge as an internationally recognised brand of excellence. In doing so, the EIT strongly promotes mobility and training within the knowledge triangle.	

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
3. Broad lines of the activities	3. Broad lines of the activities	3. Broad lines of the activities	
The EIT shall operate mainly, but not exclusively, via the Knowledge and Innovation Communities (KICs) in areas of societal challenges that are of utmost relevance to Europe's common future. While the KICs have a large degree of autonomy in defining their own strategies and activities, there are a number of innovative features common to all KICs. The EIT will moreover enhance its impact by making the experiences from the KICs available across the Union and by actively fostering a new culture of knowledge sharing.	The EIT shall operate mainly, but not exclusively, via the Knowledge and Innovation Communities (KICs) in areas of societal challenges that are of utmost relevance to Europe's common future and offer innovation potential . While the KICs have a large degree of autonomy in defining their own strategies and activities, there are a number of innovative features common to all KICs where coordination and synergies shall be sought . The EIT will moreover enhance its impact by making the experiences from the KICs available across the Union, by disseminating good practices on how to integrate the knowledge triangle and the development of entrepreneurship, promoting the inclusion of additional partners and by actively fostering a new culture of knowledge sharing.	The EIT shall operate mainly, but not exclusively, via the Knowledge and Innovation Communities (KICs) particularly in areas of societal challenges that are of utmost relevance to Europe's common future. While the KICs have which offer a large degree of true innovation potential . While the KICs have overall substantial autonomy in defining their own strategies and activities, there are a number of innovative features common to all KICs where coordination and synergies shall be sought . The EIT will moreover enhance its impact by making disseminating good practices on how to integrate the experiences from knowledge triangle and the KICs available across the Union development of entrepreneurship, integrating relevant new partners where they can provide added value, and by actively fostering a new culture of knowledge sharing.	

(a) Transferring and applying higher education, research and innovation activities for new business creation	[no change]	[no change]	
The EIT shall aim to unleash the innovative potential of people and capitalise on their ideas, irrespective of their place in the innovation chain. Thereby, the EIT will also help to address the 'European paradox' that excellent existing research is far from being harnessed to the full. In doing so, the EIT shall help to bring ideas to the market. Chiefly via its KICs and its focus on fostering entrepreneurial mindsets, it will create new business opportunities in the form of both start-ups and spin-offs but also within existing industry.	The EIT shall aim to unleash the innovative potential of people and capitalise on their ideas, irrespective of their place in the innovation chain. Thereby, the EIT will also help to address the 'European paradox' that excellent existing research is far from being harnessed to the full. In doing so, the EIT shall help to <i>transfer knowledge and technology in order to</i> bring ideas to the market. <i>The EIT must ensure access to all high quality European research communities.</i> Chiefly via its KICs and its focus on fostering entrepreneurial mindsets, it will create new business opportunities in the form of both start-ups and spin-offs but also within existing industry. <i>Focus will not only be on technological innovations but also on social and non-technological innovation and the promotion of social entrepreneurship.</i>	The EIT shall aim to unleash create an environment to develop the innovative potential of people and capitalise on their ideas, irrespective of their place in the innovation chain. Thereby, the EIT will also help to address the 'European paradox' that excellent existing research is far from being harnessed to the full. In doing so, the EIT shall help to bring ideas to the market. Chiefly via its KICs and its focus on fostering entrepreneurial mindsets, it will create new business opportunities in the form of both start-ups and spin-offs but also within existing industry.	

(b) Cutting-edge and innovation-driven research in areas of key economic and societal interest	<i>[no change]</i>	<i>[no change]</i>	
The EIT's strategy and activities shall be driven by a focus on societal challenges that are of utmost relevance to the future, such as climate change or sustainable energy. By addressing key societal challenges in a comprehensive way, the EIT will promote inter- and multi-disciplinary approaches and help focus the research efforts of the partners in the KICs.	The EIT's strategy and activities shall be driven by a focus on societal challenges <i>addressed in Horizon2020</i> that are of utmost relevance to the future, such as climate change or sustainable energy <i>and which offer a true innovation potential</i> . By addressing key societal challenges in a comprehensive way, the EIT will promote inter- and multi-disciplinary approaches and help focus the research efforts of the partners in the KICs. <i>In particular the EIT will develop the potential for non-technological, organisational and systems innovation as well as social entrepreneurship as a necessary complement to its technological and industrial focus.</i>	The EIT's strategy and activities shall be driven by a focus on areas which offer a true innovation potential and has a clear relevance to the societal challenges that are of utmost relevance to the future, such as climate change or sustainable energy. addressed in Horizon 2020. By addressing key societal challenges in a comprehensive way, the EIT will promote inter- and multi-disciplinary approaches and help focus the research efforts of the partners in the KICs.	

(c) Development of talented, skilled and entrepreneurial people with the aid of education and training	<i>[no change]</i>	<i>[no change]</i>	
The EIT shall fully integrate education and training at all stages of careers and develop new and innovative curricula to reflect the need for new profiles engendered by complex societal and economic challenges. To this end, the EIT will play a key role in encouraging recognition of new degrees and diplomas in Member States.	The EIT shall fully integrate education and training at all stages of careers and develop support and facilitate the development of new and innovative curricula to reflect the need for new profiles engendered by complex societal and economic challenges. To this end, the EIT will play a key role in encouraging recognition of new degrees and diplomas in Member States. <i>A gender dimension shall be integrated in the analysis of needs for new profiles. The EIT shall envisage education and training in a gender-sensitive way and integrate the gender dimension in new curricula as a way to ensure the efficiency and quality of training and education as well as its innovative dimension.</i>	The EIT shall fully integrate education and training at all stages of careers and develop new and innovative curricula to reflect the need for new profiles engendered by complex societal and economic challenges. To this end, the EIT will play a key role in encouraging recognition of promoting new joint or multiple degrees and diplomas in Member States- respecting the principle of subsidiarity.	
The EIT will also play a substantial role in fine-tuning the concept of ‘entrepreneurship’ via its educational programmes, which promote entrepreneurship in a knowledge-intensive context, building on innovative research and contributing to solutions of high societal relevance.	<i>[no change]</i>	<i>[no change]</i>	

(d) Dissemination of best practice and systemic knowledge-sharing	<i>[no change]</i>	<i>[no change]</i>	
The EIT shall aim to pioneer new approaches in innovation and to develop a common innovation and knowledge-transfer culture, among other things by sharing the diverse experience of its KICs via various dissemination mechanisms, such as a stakeholder platform and a fellowship scheme.	The EIT shall aim to pioneer new approaches in innovation and to develop a common innovation and knowledge-transfer culture, <i>paying special attention to SMEs. This could happen,</i> among other things, by sharing the diverse experience of its KICs via various dissemination mechanisms, such as a stakeholder platform, <i>awards and competitions, product and process exhibitions, intellectual property and patent pools</i> and a fellowship scheme.	<i>[no change]</i>	
(e) International dimension	<i>[no change]</i>	<i>[no change]</i>	
The EIT acts conscientious of the global context it operates in and shall help to forge links with key international partners. By scaling up centres of excellence via the KICs and by fostering new educational opportunities, it will aim to make Europe more attractive for talent from abroad.	<i>[no change]</i>	The EIT acts conscientious of the global context it operates in and shall help to forge links with key international partners in accordance with article 21(2) . By scaling up centres of excellence via the KICs and by fostering new educational opportunities, it will aim to make Europe more attractive for talent from abroad.	

(f) Enhancing European wide impact via an innovative funding model	<i>[no change]</i>	<i>[no change]</i>	
The EIT will make a strong contribution to the objectives set in Horizon 2020, in particular by addressing societal challenges in a way complementing other initiatives in these areas. It will test out new and simplified approaches to funding and governance and thereby play a pioneering role within the European innovation landscape. Its approach to funding will be firmly based on a strong leverage effect, mobilising both public and private funds. Moreover, it will employ entirely new vehicles for targeted support to individual activities through the EIT Foundation.	The EIT will make a strong contribution to the objectives set in Horizon 2020, in particular by addressing societal challenges in a way complementing other initiatives in these areas. It will test out new and simplified approaches to funding and governance and thereby play a pioneering role within the European innovation landscape. <i>A large part of the annual contribution will be attributed to KICs in a competitive way, based on the evaluation of their annual plans, objectives, obtained results and further potential.</i> Its approach to funding will be firmly based on a strong leverage effect, mobilising both public and private funds. Moreover, it will employ entirely new vehicles for targeted support to individual activities through the EIT Foundation.	The EIT will make a strong contribution to the objectives set in Horizon 2020, in particular by addressing societal challenges in a way complementing other initiatives in these areas. Within the framework of Horizon 2020 it will test out new and simplified approaches to funding and governance and thereby play a pioneering role within the European innovation landscape. Its approach to funding will be firmly based on a strong leverage effect, mobilising both public and private funds at national and EU level and will be communicated, in a transparent manner, to the Member States and relevant stakeholders. Moreover, it will employ entirely new vehicles for targeted support to individual activities through the EIT Foundation.	

(g) Linking regional development to European opportunities	<i>[no change]</i>	<i>[no change]</i>	
Via the KICs and their co-location centres – nodes of excellence, bringing together higher education, research and business partners in a given geographical location – the EIT will also be linked to regional policy. In particular, it shall ensure a better connection between higher education institutions and regional innovation and growth, in the context of regional and national smart specialisation strategies. In doing so, it will contribute to the objectives of the Union’s Cohesion Policy.	Via the KICs and their co-location centres – nodes of excellence, bringing together higher education, research and business partners in a given geographical location – the EIT will also be linked to regional policy. In particular, it shall ensure a better connection between higher education institutions, <i>the labour market</i> and regional innovation and growth, in the context of regional and national smart specialisation strategies. In doing so, it will contribute to the objectives of the Union's Cohesion Policy.	Via the KICs and their co-location centres – nodes of excellence, bringing together higher education, research and business partners in a given geographical location – the EIT will also be linked to regional policy. In particular, it shall ensure a better connection between higher education institutions and regional innovation and growth, in the context of regional and national smart specialisation strategies. In doing so, it will contribute to the objectives of the Union’s Cohesion Policy.	

ANNEX II: Breakdown of the budget**COMMISSION PROPOSAL**

The indicative breakdown for Horizon 2020 is as follows (in EUR million):

I	Excellent science, of which:	27818
1.	The European Research Council	15008
2.	Future and Emerging Technologies	3505
3.	Marie Curie actions on skills, training and career development	6503
4.	European research infrastructures (including eInfrastructures)	2802
II	Industrial leadership, of which:	20280
1.	Leadership in enabling and industrial technologies*	15580 of which 500 for EIT
2.	Access to risk finance**	4000
3.	Innovation in SMEs	700
III	Societal challenges, of which	35888
1.	Health, demographic change and wellbeing;	9077 of which 292 for EIT
2.	Food security, sustainable agriculture, marine and maritime research and the bio- economy;	4694 of which 150 for EIT
3.	Secure, clean and efficient energy	6537 of which 210 for EIT
4.	Smart, green and integrated transport	7690 of which 247 for EIT
5.	Climate action, resource efficiency and raw materials	3573 of which 115 for EIT
6.	Inclusive, innovative and secure societies	4317 of which 138 for EIT
European Institute of Innovation and Technology (EIT)		1542 + 1652***
Non-nuclear direct actions of the Joint Research Centre		2212
TOTAL		87740

*Including EUR 8975 million for Information and Communication Technologies (ICT) of which EUR 1795 million for photonics and micro- and nanoelectronics, EUR 4293 million for nanotechnologies, advanced materials and advanced manufacturing and processing, EUR 575 million for biotechnology and EUR 1737 million for space. As a result, EUR 6663 million will be available to support Key Enabling Technologies.

** Around EUR 1131 million of this amount may go towards the implementation of Strategic Energy Technology Plan (SET Plan) projects. Around one third of this may go to SMEs.

*** The total amount will be made available through allocations as foreseen in Article 6(3). The second allocation of EUR 1652 million shall be made available pro-rata from the budgets of the Societal challenges and Leadership in enabling and industrial technologies, on an indicative basis and subject to the review set out in Article 26(1)

ANNEX II: Breakdown of the budget**EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)****AMD 147**

The ~~indicative~~ breakdown for Horizon 2020 is as follows (in EUR million):

I	Excellent science, of which:	27818 32,6%
1.	The European Research Council	15008 16,3%
2.	Future and Emerging <i>Science and</i> Technologies	3505 3,5%
3.	Marie <i>Sklodowska</i> -Curie actions on skills, training and career development	6503 8,3%
4.	European research infrastructures (including eInfrastructures)	2802 3,6%
5.	<i>Widening Excellence</i>	0,9%
II	Industrial leadership, of which:	20280 24,3%
1.	Leadership in enabling and industrial technologies*	15580 of which 500 for EIT 15,8%
2.	Access to risk finance**	4000 4,0%
3.	Innovation in SMEs	700 4,5%
III	Societal challenges, of which	35888 37,5%
	-1. Science for and with Society	0,4%
1.	Health, demographic change and wellbeing;	9077 of which 292 for EIT 9,0%
2.	Food <i>quality, safety and</i> security, sustainable agriculture <i>and forestry</i> , marine and maritime research and the bio- economy <i>based industries</i> ;	4694 of which 150 for EIT 4,9%
3.	Secure, clean and efficient energy	6537 of which 210 for EIT 8,4%
4.	Smart, green and integrated transport <i>and mobility</i>	7690 of which 247 for EIT 6,9%
5.	Climate action, <i>environment</i> , resource efficiency and <i>sustainable use of</i> raw materials	3573 of which 115 for EIT 4,0%
6.	<i>Understanding Europe in a changing world</i> -Inclusive, innovative and secure <i>reflective</i> societies	4317 of which 138 for EIT 1,7%
6a.	<i>Protecting freedom and security in Europe</i>	2,1%
	European Institute of Innovation and Technology (EIT)	1542 + 1652*** 3,3%
	Non-nuclear direct actions of the Joint Research Centre	2212 2,4%
	TOTAL	87740 100%*
	* <i>According to the Matias and Garriga reports</i>	

[Nota bene: see AMDs 148, 149 and 150 below on EP amendments to the * text]

ANNEX II: Breakdown of the budget

COMPROMISE TEXT

The indicative breakdown for Horizon 2020 is as follows (in EUR million):

COMMISSION PROPOSAL	EUROPEAN PARLIAMENT (ITRE VOTE 28.11.12)	COUNCIL (PGA ADOPTED ON 31.05.12)	COMPROMISE TEXT
*Including EUR 8975 million for Information and Communication Technologies (ICT) of which EUR 1795 million for photonics and micro- and nanoelectronics, EUR 4293 million for nanotechnologies, advanced materials and advanced manufacturing and processing, EUR 575 million for biotechnology and EUR 1737 million for space. As a result, EUR 6663 million will be available to support Key Enabling Technologies.	AMD 148 *Including EUR 8975 million 57,6% for Information and Communication Technologies (ICT) of which 20% EUR 1795 million for photonics and micro- and nanoelectronics, EUR 4293 million 27,6% for nanotechnologies, advanced materials and advanced manufacturing and processing, EUR 575 million 3,7% for biotechnology and EUR 1737 million 11,1% for space. As a result, EUR 6663 42,8% million will be available to support Key Enabling Technologies.		
**Around EUR 1131 million of this amount may go towards the implementation of Strategic Energy Technology Plan (SET Plan) projects. Around one third of this may go to SMEs.	AMD 149 **Around EUR 1131 million 28,3% of this amount may go towards the implementation of Strategic Energy Technology Plan (SET Plan) projects. Around one third of this may go to SMEs.		
*** The total amount will be made available through allocations as foreseen in Article 6(3). The second allocation of EUR 1652 million shall be made available pro-rata from the budgets of the Societal challenges and Leadership in enabling and industrial technologies, on an indicative basis and subject to the review set out in Article 26(1)	AMD 150 *** The total amount will be made available through allocations as foreseen in Article 6(3). The second allocation of EUR 1652 million shall be made available pro-rata from the budgets of the Societal challenges and Leadership in enabling and industrial technologies, on an indicative basis and subject to the review set out in Article 26(1)		

	<u>AMD 151</u> <i>Annex IIa</i>		
	<i>HORIZON 2020</i>		
	<i>"Instruments" Toolbox</i>		
	<i>The comprehensive nature of Horizon 2020, its multiple objectives, features and the range of activities covered dictate that a variety of implementation means ("instruments") should be available and could be used in a flexible manner.</i>		
	<i>The aim of this table is to provide an overview of the instruments toolbox proposed in Horizon 2020 which give rise to financial support from the Union.</i>		
	<i>The toolbox builds on the experience gained throughout the successive research framework programmes, with some improvements and a general effort for the simplification of the instruments. Only a very limited number of new ones have been introduced in Horizon 2020, which responds to a clear demand from participants and after pilot testing in the Seventh Framework Programme.</i>		

(Cont.) AMD 151 [nota bene: EP's own highlighted text in the amendmen; it does not indicate any change]

Primary objectives	Description	Predominant form of funding ¹ /implementation
Support to individuals		
ERC (European Research Council)	<u>Individual researchers performing frontier research</u>	Grants
Marie Skłodowska-Curie Actions	<u>Research training and career and knowledge-exchange through cross-border and cross-sector mobility</u>	Grants
Support to collaborative research and innovation		
Collaborative projects	<u>Universities, research performing organisations and enterprises (including SMEs), in joint collaboration with common objectives and shared capacities, to achieve specific research and innovation outcomes,</u> <u>[FEST (Future and Emerging Sciences and Technologies)- spans across scientific and engineering disciplines, creating the basis for radically new technologies]</u>	Grants, Prizes, Procurement
Specific Support to SMEs		
SME measure (SBIR type)	<u>Fill the gap in funding for early stage high risk research and innovation, through staged support covering the whole innovation cycle, targeted at all types of innovative SMEs</u>	Grants Financial instruments (debt and equity)
Support to high tech SMEs	<u>Market-oriented innovation of R&D performing SMEs, targeting research intensive sectors.</u>	[Article 185 - TFEU]
Support to infrastructure	<u>Fostering world-class research infrastructures, accessible to all researchers in Europe and beyond and their full exploitation</u>	Grants, Procurement
Support to leverage finance	<u>Overcome deficits in the availability of debt and equity finance for R&D and innovation-driven companies and projects at all stages of development</u>	Financial instruments (debt and equity)
Support to partnership		
Public- private partnership (contractual PPPs)	<u>Contractual agreement between partners, which specifies the objectives of the partnership, respective commitments of the partners, key performance indicators, and outputs to be delivered</u>	Grants
Public- private	<u>Joint undertakings between public and private partners, where there is justifiable scope</u>	[Article 187 - TFEU] ⁱ

<i>partnership (JTIs)</i>	<u>and scale of the objectives pursued, due commitment from the private sector and the resources required</u>	
<i>Public - public partnership (ERA Net, potential support to JPIs)</i>	<u>Preparation and establishment of structures towards public public partnerships</u>	<i>Grants</i>
<i>Public - public partnership (art. 185)</i>	<u>Joint support to the development and implementation of a research and innovation programme or activities by public sector bodies or bodies with a public service mission at regional, national or international level</u>	<i>[Article 185 - TFEU]²ⁱ</i>
<i>Knowledge and Innovation Communities (KICs)</i>	<u>Highly integrated partnerships, bringing together universities, research centres, small and large companies and other innovation actors on a long-term basis around specific societal challenges</u>	<i>[Article 173 (3) - TFEU]ⁱⁱ</i>

COMPROMISE TEXT

(Cont.) AMD 151
