

## Horizon 2020 – The Framework Programme for Research and Innovation

Horizon 2020 commenced in January 2014 as the new Framework Programme to implement the [Innovation Union](#) with research and innovation funds of €80 billion from 2014 – 2020. Horizon 2020 addresses all research and innovation funding that was previously provided through the Framework Programmes for Research and Technical Development (e.g. FP7), Competitiveness and Innovation Programme (CIP) and European Institute of Innovation and Technology.

Support proposed for Research and Innovation under Horizon 2020 includes:

- Strengthening research in Science (budget of €24.5 billion)
- Strengthening Industrial leadership in Innovation (budget of €22.6 billion), including investment in key technologies, access to capital and support for SMEs
- Address Societal challenges (budget of €31 billion) such as climate change, sustainable transport and mobility, affordable renewable energy, food security, ageing population

This Guide to Horizon 2020 provides an overview of Calls, themes and deadlines from 2016 Calls for Proposals within the **Marie Curie, eInfrastructures, Leadership in Enabling and Industrial Technologies** (LEIT - Components and Systems, Advanced Computing, Future Internet, Content Technologies and Information Management, Robotics and Key enabling Technologies (Micro-nano-electronics and photonics)) and each of the **Societal Challenges** (Health, Food Security and Agriculture, Energy, Transport, Environment, Inclusive and Reflective Societies, Secure Societies) Work Programmes. The individual Work Programmes for 2016-2017 for each thematic area were initially published on 14 October 2015. Please find links to these work programmes within the relevant sections in this Guide.

Horizon 2020 is fully open to International Cooperation. African research institutions can participate as part of International Consortia with partners from Europe to apply for funding as part of an international project addressing the challenges published in the Work Programme.

ICT is a horizontal activity that is included across a number of Work Programmes within LEIT and within Societal Challenges Work Programmes. Download [Guide to ICT-related Activities in Work Programmes](#)

Please visit the [Horizon 2020 section within the Participants portal](#) to download the Proposers Guide and specific templates to prepare proposals for submission under Horizon 2020 2016 calls within specific Marie Curie, eInfrastructures, LEIT and Societal Challenges themes.

<b>Innovation Union</b>	<a href="http://ec.europa.eu/research/innovation-union/index_en.cfm">http://ec.europa.eu/research/innovation-union/index_en.cfm</a>
<b>Guide to ICT-related Activities in H2020 2016-17 Work Programmes</b>	<a href="http://www.ist-africa.org/home/files/GuideICTinWPs2016-17.pdf">http://www.ist-africa.org/home/files/GuideICTinWPs2016-17.pdf</a>
<b>Horizon 2020 Calls – Participants Portal</b>	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/index.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/index.html</a>
<b>IST-Africa Guide to 2016 Calls within Horizon 2020</b>	<a href="http://www.ist-africa.org/home/files/IST-Africa_Guide_2016Calls_Horizon2020.pdf">http://www.ist-africa.org/home/files/IST-Africa_Guide_2016Calls_Horizon2020.pdf</a>
ICT in Horizon 2020 2016 - 2017 Work Programmes - presentation by Mr Morten Moller, DG CONNECT; November 2015	<a href="http://www.ist-africa.org/home/files/eChallenges_H2020-WP2016-17-ICT-251115_v4.2_MMoller.pdf">http://www.ist-africa.org/home/files/eChallenges_H2020-WP2016-17-ICT-251115_v4.2_MMoller.pdf</a>

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## I. Excellent Science

With the aim of increasing excellence in science, it is envisaged that Horizon 2020 will support frontier research, collaborative research on [Future and Emerging Technologies](#) (FET), training and career development through [Marie Curie Actions](#) and [research infrastructures](#) (including elnfrastructures).

<b>Future and Emerging Technologies (FET)</b>	<a href="http://cordis.europa.eu/fp7/ict/programme/fet_en.html">http://cordis.europa.eu/fp7/ict/programme/fet_en.html</a>
<b>Marie Curie Actions</b>	<a href="http://ec.europa.eu/research/mariecurieactions/">http://ec.europa.eu/research/mariecurieactions/</a>
<b>Research infrastructures (including elnfrastructures)</b>	<a href="http://ec.europa.eu/research/infrastructures/index_en.cfm">http://ec.europa.eu/research/infrastructures/index_en.cfm</a>

### Marie Curie

<b>Marie Sklodowska-Curie Work Programme 2016 - 2017</b>	<a href="http://www.ist-africa.org/home/files/h2020-wp1617-msca_en.pdf">http://www.ist-africa.org/home/files/h2020-wp1617-msca_en.pdf</a>
<b>Marie Sklodowska-Curie Innovative Training Networks (ITN)</b>	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2056-msca-itn-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2056-msca-itn-2016.html</a>
<b>Single Stage Calls 2016 - Deadline 12 January</b>	
H2020-MSCA-ITN-2016	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-msca-itn-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-msca-itn-2016.html</a>
<b>Marie Sklodowska-Curie Research and Innovation Staff Exchange (RISE)</b>	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2117-msca-rise-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2117-msca-rise-2016.html</a>
<b>Single Stage Calls 2016 - Deadline 28 April</b>	
H2020-MSCA-RISE-2016	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-msca-rise-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-msca-rise-2016.html</a>
<b>Individual Fellowships (IF)</b>	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2226-msca-if-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2226-msca-if-2016.html</a>
<b>Single Stage Calls 2016 - Deadline 14 September</b>	
H2020-MSCA-IF-2016	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-msca-if-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-msca-if-2016.html</a>

## Research Infrastructures Work Programme

<b>Infrastructures 2016 – 2017 Work Programme</b>	<a href="http://www.ist-africa.org/home/files/h2020-wp1617-infrastructures_en.pdf">http://www.ist-africa.org/home/files/h2020-wp1617-infrastructures_en.pdf</a>
<b>Single stage calls 2016 - Deadline 30 March</b>	
E-Infrastructures (EINFRA) EINFRA-11-2016: Support to the next implementation phase of Pan-European High Performance Computing infrastructure and services (PRACE) EINFRA-22-2016: User-driven e-infrastructure innovation	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-einfra-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-einfra-2016-2017.html</a>
Development and long-term sustainability of new pan-European research infrastructures (INFRADEV) INFRADEV-03-2016-2017: Individual support to ESFRI and other world-class research infrastructures	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2119-einfra-11-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2119-einfra-11-2016.html</a> <a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2120-einfra-22-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2120-einfra-22-2016.html</a>
Fostering the innovation potential of Research Infrastructures (INFRAINNOV) INFRAINNOV-02-2016: Support to Technological Infrastructures	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-infradev-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-infradev-2016-2017.html</a> <a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2055-infradev-03-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2055-infradev-03-2016-2017.html</a> <a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-infrainnov-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-infrainnov-2016-2017.html</a>
Support to policy and international cooperation (INFRASUPP) INFRASUPP-01-2016: Policy and international cooperation measures for research infrastructures INFRASUPP-03-2016: Support to policies and international cooperation for e-infrastructure	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2126-infrainnov-02-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2126-infrainnov-02-2016.html</a> <a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-infrasupp-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-infrasupp-2016-2017.html</a> <a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2076-infrasupp-01-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2076-infrasupp-01-2016.html</a> <a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2077-infrasupp-03-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2077-infrasupp-03-2016.html</a>
<b>Single stage calls 2016 - Deadline 22 June</b>	
Development and long-term sustainability of new pan-European research infrastructures (INFRADEV) INFRADEV-02-2016: Preparatory Phase of ESFRI projects INFRADEV-04-2016: European Open Science Cloud for Research	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-infradev-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-infradev-2016-2017.html</a> <a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2053-infradev-02-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2053-infradev-02-2016.html</a> <a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2054-infradev-04-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2054-infradev-04-2016.html</a>
<b>Single stage calls 2016 - Deadline 20 September</b>	
E-Infrastructures (EINFRA) EINFRA-21-2017: Platform-driven e-infrastructure innovation (PPI Public Procurement of Innovative solutions)	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-einfra-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-einfra-2016-2017.html</a> <a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2122-einfra-21-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2122-einfra-21-2017.html</a>

## II. Leadership in Enabling and Industrial Technologies

With the aim to make Europe a more attractive location for investment in research and innovation, it is envisaged that Horizon 2020 will build

- Leadership in enabling and industrial technologies with dedicated support for ICT, nanotechnologies, advanced materials, biotechnology, advanced manufacturing and processing, and space, while also providing support for cross-cutting actions to capture the accumulated benefits from combining several Key Enabling Technologies;
- Facilitate access to risk finance;
- Provide support for innovation in SMEs.

LEIT ICT Work Programme 2016 – 2017	<a href="http://www.ist-africa.org/home/files/h2020-wp1617-leit-ict_en.pdf">http://www.ist-africa.org/home/files/h2020-wp1617-leit-ict_en.pdf</a>
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ICT related challenges include Components and Systems, Advanced Computing, Future Internet, Content Technologies and Information Management, Robotics and Key enabling Technologies (Micro-nano-electronics and photonics). Pursuing the change initiated under Work Programme 2014-2015, activities will continue to promote more innovation-orientation to ensure that the EU industry remains strong in the core technologies that are at the roots of future value chains. The total budget available in 2016 is €762.55 million.

### Leadership in Enabling and Industrial Technologies 2016 Calls

<b>ICT 2015 - Information and Communications Technologies</b>	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-ict-2016-2017.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-ict-2016-2017.html</a>
<b>Single Stage Calls 2016 - Deadline 19 January</b>	
<b>International Cooperation Activities</b>	
ICT-37-2016: CHINA: Collaboration on Future Internet	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5079-ict-37-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5079-ict-37-2016.html</a>
ICT-38-2016: MEXICO: Collaboration on ICT	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5080-ict-38-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5080-ict-38-2016.html</a>
ICT-39-2016-2017: International partnership building in low and middle income countries	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5078-ict-39-2016-2017.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5078-ict-39-2016-2017.html</a>
<b>EU-Japan Joint Call</b>	
EUJ-01-2016: 5G – Next Generation Communication Networks	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2418-euj-01-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2418-euj-01-2016.html</a>
EUJ-02-2016: IoT/Cloud/Big Data platforms in social application contexts	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2419-euj-02-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2419-euj-02-2016.html</a>
EUJ-03-2016: Experimental testbeds on Information-Centric Networking	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2420-euj-03-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2420-euj-03-2016.html</a>
<b>EU-South Korea Joint Call</b>	
EUK-01-2016: 5G – Next Generation Communication Networks	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2333-euk-01-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2333-euk-01-2016.html</a>
EUK-02-2016: IoT joint research	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2334-euk-02-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2334-euk-02-2016.html</a>
EUK-03-2016: Federated Cloud resource brokerage for mobile cloud services	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2335-euk-03-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2335-euk-03-2016.html</a>

**Single Stage Calls 2016 - Deadline 12 April**

<p><b>A new Generation of Components and Systems</b>          ICT-01-2016: Smart Cyber-Physical Systems          ICT-02-2016: Thin, Organic and Large Area Electronics          ICT-03-2016: SSI – Smart System Integration</p>	<p><a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5085-ict-01-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5085-ict-01-2016.html</a>  <a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5082-ict-02-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5082-ict-02-2016.html</a>  <a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5090-ict-03-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5090-ict-03-2016.html</a></p>
<p><b>Advanced Computing and Cloud Computing</b>          ICT-06-2016: Cloud Computing</p>	<p><a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5091-ict-06-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5091-ict-06-2016.html</a></p>
<p><b>Future Internet</b>          ICT-10-2016: Software Technologies          ICT-12-2016: Net Innovation Initiative          ICT-13-2016: Future Internet Experimentation - Building a European experimental Infrastructure</p>	<p><a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5098-ict-10-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5098-ict-10-2016.html</a>  <a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5083-ict-12-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5083-ict-12-2016.html</a>  <a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5089-ict-13-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5089-ict-13-2016.html</a></p>
<p><b>Content</b>          ICT-14-2016-2017: Big Data PPP: cross-sectorial and cross-lingual data integration and experimentation          ICT-15-2016-2017: Big Data PPP: Large Scale Pilot actions in sectors best benefitting from data-driven innovation          ICT-17-2016-2017: Big data PPP: Support, industrial skills, benchmarking and evaluation          ICT-18-2016: Big data PPP: privacy-preserving big data technologies          ICT-21-2016: Support technology transfer to the creative industries          ICT-22-2016: Technologies for Learning and Skills          ICT-24-2016: Gaming and gamification</p>	<p><a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5093-ict-14-2016-2017.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5093-ict-14-2016-2017.html</a>  <a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5097-ict-15-2016-2017.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5097-ict-15-2016-2017.html</a>  <a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5074-ict-17-2016-2017.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5074-ict-17-2016-2017.html</a>  <a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5087-ict-18-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5087-ict-18-2016.html</a>  <a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5099-ict-21-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5099-ict-21-2016.html</a>  <a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5086-ict-22-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5086-ict-22-2016.html</a>  <a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5088-ict-24-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5088-ict-24-2016.html</a></p>
<p><b>Robotics and Autonomous Systems</b>          ICT-25-2016-2017: Advanced robot capabilities research and take-up          ICT-26-2016: System abilities, development and pilot installations</p>	<p><a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5081-ict-25-2016-2017.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5081-ict-25-2016-2017.html</a>  <a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5096-ict-26-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5096-ict-26-2016.html</a></p>
<p><b>ICT Key Enabling Technologies</b>          ICT-29-2016: Photonics KET 2016</p>	<p><a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5094-ict-29-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5094-ict-29-2016.html</a></p>
<p><b>Innovation and Entrepreneurship support</b>          ICT-34-2016: Pre-Commercial Procurement open</p>	<p><a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5095-ict-34-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5095-ict-34-2016.html</a></p>
<p><b>Responsibility and Creativity</b>          ICT-35-2016: Enabling responsible ICT-related research and innovation          ICT-36-2016: Boost synergies between artists, creative people and technologists</p>	<p><a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5084-ict-35-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5084-ict-35-2016.html</a>  <a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5092-ict-36-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5092-ict-36-2016.html</a></p>



**Single Stage Calls 2016 - Deadline 8 November**

<p><b>A new Generation of Components and Systems</b> ICT-04-2017: Smart Anything Everywhere Initiative</p>	<p><a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5061-ict-04-2017.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5061-ict-04-2017.html</a></p>
<p><b>Future Internet</b> ICT-07-2017: 5G PPP Research and Validation of critical technologies and systems ICT-08-2017: 5G PPP Convergent Technologies ICT-09-2017: Networking research beyond 5G</p>	<p><a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5064-ict-07-2017.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5064-ict-07-2017.html</a> <a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5062-ict-08-2017.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5062-ict-08-2017.html</a> <a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5065-ict-09-2017.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5065-ict-09-2017.html</a></p>
<p><b>Content</b> ICT-19-2017: Media and content convergence</p>	<p><a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5063-ict-19-2017.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5063-ict-19-2017.html</a></p>

### III. Societal Challenges

As part of addressing the Europe 2020 strategy, funding will focus on the following challenges:

- Health, demographic change and wellbeing – Download [Work Programme](#)
- Food security, sustainable agriculture, marine and maritime research, and the bio-economy - Download [Work Programme](#)
- Secure, clean and efficient energy - Download [Work Programme](#)
- Smart, green and integrated transport - Download [Work Programme](#)
- Climate action, resource efficiency and raw materials - Download [Work Programme](#)
- Inclusive, innovative and reflective societies – Download [Work Programme](#)
- Secure Societies – Download [Work Programme](#)

<b>Health, Demographic Change and Wellbeing</b> Work Programme	<a href="http://www.ist-africa.org/home/files/h2020-wp1617-health_en.pdf">http://www.ist-africa.org/home/files/h2020-wp1617-health_en.pdf</a>
<b>Food Security, Sustainable Agriculture, Marine and Maritime Research, and the Bio-Economy</b> Work Programme	<a href="http://www.ist-africa.org/home/files/h2020-wp1617-food_en.pdf">http://www.ist-africa.org/home/files/h2020-wp1617-food_en.pdf</a>
<b>Secure, Clean and Efficient Energy</b> Work Programme	<a href="http://www.ist-africa.org/home/files/h2020-wp1617-energy_en.pdf">http://www.ist-africa.org/home/files/h2020-wp1617-energy_en.pdf</a>
<b>Smart, Green and Integrated Transport</b> Work Programme	<a href="http://www.ist-africa.org/home/files/h2020-wp1617-transport_en.pdf">http://www.ist-africa.org/home/files/h2020-wp1617-transport_en.pdf</a>
<b>Climate Action, Resource Efficiency and Raw Materials</b> Work Programme	<a href="http://www.ist-africa.org/home/files/h2020-wp1617-climate_en.pdf">http://www.ist-africa.org/home/files/h2020-wp1617-climate_en.pdf</a>
<b>Inclusive, Innovative and Reflective Societies</b> Work Programme	<a href="http://www.ist-africa.org/home/files/h2020-wp1617-societies_en.pdf">http://www.ist-africa.org/home/files/h2020-wp1617-societies_en.pdf</a>
<b>Secure Societies</b> Work Programme	<a href="http://www.ist-africa.org/home/files/h2020-wp1617-security_en.pdf">http://www.ist-africa.org/home/files/h2020-wp1617-security_en.pdf</a>

#### Societal Challenge 1: Health Demographic Change and Wellbeing

The Horizon 2020 Societal Challenge of [‘Health, Demographic Change and Wellbeing’ \(SC1\)](#) for 2016 and 2017 includes 21 topics in the ‘Personalised Health’ focus area call (13 in 2016 only, 8 in 2017 only and 4 which are open in both years) and 16 topics in the ‘Co-ordination Activities’ call (13 in 2015 and 3 in 2017). The estimated budget available for 2016 is €500.18 million.

Topics in the call are divided into 7 areas that reflect the need for a transnational and integrated approach to the challenge, providing support both to longer and mid-term research as well as to shorter-term innovation activities. The overall strategic orientation for the 'Health, Demographic Change and Well-being' Work Programme 2016-2017 is 'promoting healthy ageing and personalised healthcare'. The programme will implement several research priorities: personalised medicine, rare diseases, human biomonitoring, mental health, comparative effectiveness research, advanced technologies, e/mhealth, robotics, patient empowerment, active and healthy ageing, data security, big data, valorisation, anti-microbial resistance, infectious diseases including vaccines, maternal and child health and the silver economy under following areas:

- Understanding health, well-being and disease



- Preventing disease
- Treating and managing diseases
- Active ageing and self-management of health
- Methods and data
- Health care provision and integrated care
- Co-ordination Activities

<b>Societal Challenge 1: Health Demographic Change and Wellbeing</b>		<a href="http://ec.europa.eu/programmes/horizon2020/en/h2020-section/health-demographic-change-and-wellbeing">http://ec.europa.eu/programmes/horizon2020/en/h2020-section/health-demographic-change-and-wellbeing</a>
<b>Personalised Medicine (PM &amp;HCO)</b>		<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-sc1-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-sc1-2016-2017.html</a>
<b>Single stage calls 2016 - Deadline 16 February</b>		
1.4 Active ageing and self-management of health SC1-PM-12-2016: PCP - eHealth innovation in empowering the patient		<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2446-sc1-pm-12-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2446-sc1-pm-12-2016.html</a>
SC1-PM-13-2016: PPI for deployment and scaling up of ICT solutions for active and healthy ageing		<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2447-sc1-pm-13-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2447-sc1-pm-13-2016.html</a>
1.5 Methods and data SC1-PM-18-2016: Big Data supporting Public Health policies		<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2442-sc1-pm-18-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2442-sc1-pm-18-2016.html</a>
Coordination activities (HCO) SC1-HCO-10-2016: Support for Europe's leading Health ICT SMEs		<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2448-sc1-hco-10-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2448-sc1-hco-10-2016.html</a>
SC1-HCO-11-2016: Coordinated action to support the recognition of Silver Economy opportunities arising from demographic change		<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2438-sc1-hco-11-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2438-sc1-hco-11-2016.html</a>
SC1-HCO-12-2016: Digital health literacy		<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2439-sc1-hco-12-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2439-sc1-hco-12-2016.html</a>
SC1-HCO-13-2016: Healthcare Workforce IT skills		<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2444-sc1-hco-13-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2444-sc1-hco-13-2016.html</a>
SC1-HCO-14-2016: EU-US interoperability roadmap		<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2443-sc1-hco-14-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2443-sc1-hco-14-2016.html</a>
SC1-HCO-15-2016: EU eHealth Interoperability conformity assessment		<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2440-sc1-hco-15-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2440-sc1-hco-15-2016.html</a>
SC1-HCO-16-2016: Standardisation needs in the field of ICT for Active and Healthy Ageing		<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2445-sc1-hco-16-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2445-sc1-hco-16-2016.html</a>
<b>Single stage calls 2016 - Deadline 12 April</b>		
1.4 Active ageing and self-management of health SC1-PM-14-2016: EU-Japan cooperation on Novel ICT Robotics based solutions for active and healthy ageing at		<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2433-sc1-pm-14-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2433-sc1-pm-14-2016.html</a>

home or in care facilities	
<b>Single stage calls 2016 - Deadline 13 April</b>	
<p><b>Coordination activities (HCO)</b></p> <p>SC1-HCO-01-2016: Valorisation of FP7 Health and H2020 SC1 research results</p> <p>SC1-HCO-02-2016: Standardisation of pre-analytical and analytical procedures for in vitro diagnostics in personalised medicine</p> <p>SC1-HCO-04-2016: Towards globalisation of the Joint Programming Initiative on Antimicrobial resistance</p> <p>SC1-HCO-05-2016: Coordinating personalised medicine research</p> <p>SC1-HCO-06-2016: Towards an ERA-NET for building sustainable and resilient health system models</p> <p><b>1.1 Understanding health, well-being and disease</b></p> <p>SC1-PM-01-2016: Multi omics for personalised therapies addressing diseases of the immune system</p> <p>SC1-PM-04-2016: Networking and optimising the use of population and patient cohorts at EU level</p> <p><b>1.2 Preventing disease</b></p> <p>SC1-PM-05-2016: The European Human Biomonitoring Initiative</p> <p>SC1-PM-06-2016: Vaccine development for malaria and/or neglected infectious diseases</p> <p><b>1.3 Treating and managing diseases</b></p> <p>SC1-PM-09-2016: New therapies for chronic diseases</p>	<p><a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/3057-sc1-hco-01-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/3057-sc1-hco-01-2016.html</a></p> <p><a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/3054-sc1-hco-02-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/3054-sc1-hco-02-2016.html</a></p> <p><a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/3059-sc1-hco-04-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/3059-sc1-hco-04-2016.html</a></p> <p><a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2449-sc1-hco-05-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2449-sc1-hco-05-2016.html</a></p> <p><a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/3058-sc1-hco-06-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/3058-sc1-hco-06-2016.html</a></p> <p><a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/3055-sc1-pm-01-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/3055-sc1-pm-01-2016.html</a></p> <p><a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/3051-sc1-pm-04-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/3051-sc1-pm-04-2016.html</a></p> <p><a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/3050-sc1-pm-05-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/3050-sc1-pm-05-2016.html</a></p> <p><a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/3052-sc1-pm-06-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/3052-sc1-pm-06-2016.html</a></p> <p><a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/3060-sc1-pm-09-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/3060-sc1-pm-09-2016.html</a></p>
<b>Two stage calls 2016 - Stage 1 Deadline: 4 October 2016, Stage 2 Deadline: 11 April 2017</b>	
<p><b>1.1 Understanding health, well-being and disease</b></p> <p>SC1-PM-02-2017: New concepts in patient stratification</p> <p><b>1.2 Preventing disease</b></p> <p>SC1-PM-07-2017: Promoting mental health and well-being in the young</p> <p><b>1.3 Treating and managing diseases</b></p> <p>SC1-PM-08-2017: New therapies for rare diseases</p> <p>SC1-PM-10-2017: Comparing the effectiveness of existing healthcare interventions in the adult population</p>	<p><a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2434-sc1-pm-02-2017.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2434-sc1-pm-02-2017.html</a></p> <p><a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2437-sc1-pm-07-2017.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2437-sc1-pm-07-2017.html</a></p> <p><a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2436-sc1-pm-08-2017.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2436-sc1-pm-08-2017.html</a></p> <p><a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2435-sc1-pm-10-2017.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2435-sc1-pm-10-2017.html</a></p>

## Societal Challenge 2: Food security, sustainable agriculture, marine and maritime research, and the bio-economy

The Horizon 2020 Societal Challenge of [‘Food Security, Sustainable Agriculture, Marine and Maritime Research and the Bio-economy’ \(SC2\)](#) for 2016 and 2017 is composed of four calls, addressing all the bioeconomy sectors from the sustainable exploration of the oceans and seas and the development of a blue economy, to climate-smart agriculture, new models for development in rural areas, new biobased goods and services.

This Work Programme will leverage research and innovation to address major societal challenges:

- Ensuring food and nutritional security, together with resource efficiency, and facing climate change
- Sustainably exploiting the potential of the oceans
- Promoting dynamic territorial development, through the mobilisation of rural and coastal economies
- Boosting investment, employment and economic growth in the European Union

Many of the challenges addressed in this Work Programme are of global nature, requiring the development of global solutions in cooperation with third countries and relevant international organisations or initiatives. Particular priorities for international cooperation are:

- Blue Growth, which will support the implementation of the Atlantic Ocean Research Alliance (focus on Arctic) and the BLUEMED Initiative on marine and maritime research and innovation activities in the Mediterranean area;
- Sustainable Food Security, which will support flagships initiatives with China and partnerships initiatives with East-Asian countries on aquaculture and Africa on Food and Nutrition Security, Sustainable Agriculture and the establishment of an International Research Consortium on animal health.

The estimated total budget available for 2016 is EUR 364.52 million.

<b>Societal Challenge 2: Food security, sustainable agriculture, marine and maritime research, and the bio-economy</b> <a href="http://ec.europa.eu/programmes/horizon2020/en/h2020-section/food-security-sustainable-agriculture-and-forestry-marine-maritime-and-inland-water">http://ec.europa.eu/programmes/horizon2020/en/h2020-section/food-security-sustainable-agriculture-and-forestry-marine-maritime-and-inland-water</a>	
<b>Single stage calls 2016 - Deadline 17 February</b>	
<b>Sustainable Food Security (SFS) - Resilient and resource-efficient value chains</b>	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-sfs-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-sfs-2016-2017.html</a>
More resilient and resource efficient value chains	
SFS-09-2016: Spotlight on critical outbreak of pests: the case of <i>Xylella fastidiosa</i>	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/6071-sfs-09-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/6071-sfs-09-2016.html</a>
SFS-12-2016: Support for international research on animal health	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/6073-sfs-12-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/6073-sfs-12-2016.html</a>
SFS-19-2016: ERA-NET Cofund: Public-Public Partnerships in the bioeconomy	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/6075-sfs-19-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/6075-sfs-19-2016.html</a>
SFS-24-2016: Reinforcing international cooperation on sustainable aquaculture production with countries from South-East Asia	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/6076-sfs-24-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/6076-sfs-24-2016.html</a>

<p>SFS-25-2016: Support Action to a common agricultural and wider bioeconomy research agenda Support to the Implementation of the EU-Africa Partnership on Food and Nutrition Security and Sustainable Agriculture SFS-41-2016: EU-Africa Research and Innovation partnership on food and nutrition security and sustainable agriculture</p>	<p><a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/6072-sfs-25-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/6072-sfs-25-2016.html</a>  <a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/6074-sfs-41-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/6074-sfs-41-2016.html</a></p>
<p><b>Blue Growth (BG) - Demonstrating an ocean of opportunities</b></p>	<p><a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-bg-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-bg-2016-2017.html</a></p>
<p>Boosting Innovation for emerging Blue Growth activities BG-01-2016: Large-scale algae biomass integrated biorefineries BG-02-2016-2017: High value-added specialised vessel concepts enabling more efficient servicing of emerging coastal and offshore activities BG-03-2016: Multi-use of the oceans' marine space, offshore and near-shore: compatibility, regulations, environmental and legal issues BG-05-2016: ERA-NET Cofund on marine technologies The Arctic Dimension BG-09-2016: An integrated Arctic observation system BG-10-2016: Impact of Arctic changes on the weather and climate of the Northern Hemisphere Valorising the Mediterranean Sea Basin BG-13-2016: Support to the BLUEMED Initiative: Coordination of marine and maritime research and innovation activities in the Mediterranean</p>	<p><a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5121-bg-01-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5121-bg-01-2016.html</a>  <a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5119-bg-02-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5119-bg-02-2016-2017.html</a>  <a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5117-bg-03-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5117-bg-03-2016.html</a>  <a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5118-bg-05-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5118-bg-05-2016.html</a>  <a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5122-bg-09-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5122-bg-09-2016.html</a> <a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5123-bg-10-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5123-bg-10-2016.html</a>  <a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5120-bg-13-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5120-bg-13-2016.html</a></p>
<p><b>Rural Renaissance (RUR) - Fostering innovation and business opportunities</b></p>	<p><a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-rur-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-rur-2016-2017.html</a></p>
<p>New value chains and business models RUR-08-2016: Demonstration of integrated logistics centres for food and non-food applications Innovation and skill development RUR-10-2016-2017: Thematic Networks compiling knowledge ready for practice RUR-11-2016: On-farm demonstrations: deepening farmer-to-farmer learning mechanisms</p>	<p><a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5114-rur-08-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5114-rur-08-2016.html</a>  <a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5115-rur-10-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5115-rur-10-2016-2017.html</a>  <a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5113-rur-11-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5113-rur-11-2016.html</a></p>
<p><b>Bio-based innovation for sustainable goods and services (BB) - Supporting the development of a European Bioeconomy</b></p>	<p><a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-bb-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-bb-2016-2017.html</a></p>

<p>Securing sustainable biomass supply for bio-based goods and services          BB-04-2016: Intelligent solutions and tools in forest production systems, fostering a sustainable supply of quality wood for the growing bioeconomy          Building the "bio-based markets of the future"- mobilising stakeholders engagement          BB-06-2016: The regional dimension of bio-based industries</p>	<p><a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/6083-bb-04-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/6083-bb-04-2016.html</a>   <a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/6082-bb-06-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/6082-bb-06-2016.html</a></p>
<p><b>Two stage calls 2016 - Stage 1 Deadline: 17 February, Stage 2 Deadline: 13 September 2016</b></p>	
<p><b>Sustainable Food Security (SFS) – Resilient and resource-efficient value chains</b></p>	<p><a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-sfs-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-sfs-2016-2017.html</a></p>
<p>More resilient and resource efficient value chains          SFS-01-2016: Solutions to multiple and combined stresses in crop production          SFS-02-2016: Teaming up for good: Exploiting the benefits of species diversity in cropping systems          SFS-03-2016: Testing and breeding for sustainability and resilience in crops          SFS-06-2016: Weeding - strategies, tools and technologies for sustainable weed management          SFS-07-2016-2017: Organic breeding – Increasing the competitiveness of the organic breeding and farming sectors          SFS-11-2016: Challenges for disease management: Perennial crops in the tropics and sub-tropics          SFS-14-2016: Understanding host-pathogen-environment interactions          SFS-15-2016-2017: Breeding livestock for resilience and efficiency          SFS-21-2016-2017: Advancing basic biological knowledge and improving management tools for commercially important fish and other seafood species          SFS-23-2016: Improving the technical performance of the Mediterranean aquaculture          Environment-smart and climate-smart primary production          SFS-26-2016: Legumes - transition paths to sustainable legume-based farming systems and agri-feed and food chains          SFS-31-2016: Farming for tomorrow - developing an enabling environment for resilient and sustainable agricultural systems</p>	<p><a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5133-sfs-01-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5133-sfs-01-2016.html</a>  <a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5146-sfs-02-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5146-sfs-02-2016.html</a>  <a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5129-sfs-03-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5129-sfs-03-2016.html</a>  <a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5142-sfs-06-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5142-sfs-06-2016.html</a>  <a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5141-sfs-07-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5141-sfs-07-2016-2017.html</a>  <a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5138-sfs-11-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5138-sfs-11-2016.html</a>  <a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5130-sfs-14-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5130-sfs-14-2016.html</a>  <a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5145-sfs-15-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5145-sfs-15-2016-2017.html</a>  <a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5136-sfs-21-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5136-sfs-21-2016-2017.html</a>  <a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5135-sfs-23-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5135-sfs-23-2016.html</a>  <a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5134-sfs-26-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5134-sfs-26-2016.html</a>  <a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5137-sfs-31-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5137-sfs-31-2016.html</a></p>



<p>Environment-smart and climate-smart primary production SFS-33-2016: Understanding food value chain and network dynamics</p>	<p><a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5143-sfs-33-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5143-sfs-33-2016.html</a></p>
<p>Healthy and safe foods and diets for all SFS-37-2016: The impact of consumer practices in food safety: risks and mitigation strategies</p>	<p><a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5139-sfs-37-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5139-sfs-37-2016.html</a></p>
<p>SFS-38-2016: Impulsivity and compulsivity and the link with nutrition, lifestyle and the socio-economic environment</p>	<p><a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5140-sfs-38-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5140-sfs-38-2016.html</a></p>
<p>Support to the Implementation of the EU-Africa Partnership on Food and Nutrition Security and Sustainable Agriculture SFS-42-2016: Promoting food and nutrition security and sustainable agriculture in Africa: the role of innovation</p>	<p><a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5132-sfs-42-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5132-sfs-42-2016.html</a></p>
<p>Implementation of the EU-China FAB Flagship initiative SFS-44-2016: A joint plant breeding programme to decrease the EU's and China's dependency on protein imports</p>	<p><a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5144-sfs-44-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5144-sfs-44-2016.html</a></p>
<p>SFS-45-2016: Increase overall transparency of processed agri-food products</p>	<p><a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5131-sfs-45-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5131-sfs-45-2016.html</a></p>
<p><b>Blue Growth (BG) - Demonstrating an ocean of opportunities</b></p>	<p><a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-bq-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-bq-2016-2017.html</a></p>
<p>Valorising the Mediterranean Sea Basin BG-12-2016: Towards an integrated Mediterranean Sea Observing System</p>	<p><a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5116-bq-12-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5116-bq-12-2016.html</a></p>
<p><b>Rural Renaissance (RUR) - Fostering innovation and business opportunities</b></p>	<p><a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-rur-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-rur-2016-2017.html</a></p>
<p>New approaches towards policies and governance RUR-01-2016: Consolidated policy framework and governance models for synergies in rural-urban linkages</p>	<p><a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5105-rur-01-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5105-rur-01-2016.html</a></p>
<p>RUR-04-2016: Water farms – improving farming and its impact on the supply of drinking water</p>	<p><a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5107-rur-04-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5107-rur-04-2016.html</a></p>
<p>New value chains and business models RUR-06-2016: Crop diversification systems for the delivery of food, feed, industrial products and ecosystems services - from farm benefits to value-chain organisation</p>	<p><a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5106-rur-06-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5106-rur-06-2016.html</a></p>
<p>RUR-07-2016: Resource-efficient and profitable industrial crops on marginal land</p>	<p><a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5104-rur-07-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5104-rur-07-2016.html</a></p>
<p>Innovation and skill development RUR-14-2016: Advisors' roles in the functioning of AKIS and advisory policies boosting innovation in sustainable agriculture</p>	<p><a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5103-rur-14-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5103-rur-14-2016.html</a></p>



<b>Bio-based innovation for sustainable goods and services (BB) - Supporting the development of a European Bioeconomy</b>	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-bb-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-bb-2016-2017.html</a>
Securing sustainable biomass supply for bio-based goods and services BB-01-2016: Sustainability schemes for the bio-based economy	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/6080-bb-01-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/6080-bb-01-2016.html</a>
<b>Single stage calls 2016 - Deadline 13 September</b>	
<b>Sustainable Food Security (SFS) – Resilient and resource-efficient value chains</b>	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-sfs-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-sfs-2016-2017.html</a>
More resilient and resource efficient value chains SFS-18-2016: Framework Partnership Agreement supporting Joint Actions towards Public-Public Partnerships in the Bioeconomy	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5147">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5147</a>

### Societal Challenge 3: Secure, Clean and Efficient Energy

The Horizon 2020 Societal Challenge of [“Secure, clean and efficient energy” \(SC3\)](#) for 2016 and 2017 is composed of two focus areas "Energy Efficiency" and "Competitive Low-Carbon Energy". These activities cover the full innovation cycle – from 'proof of concept' to applied research, pre-commercial demonstration and market uptake measures. They also exploit synergies with other relevant areas, e.g. information and communication technologies. In addition, the Energy Challenge contributes to the 'Blue Growth' focus area as well as to the Public Private Partnerships Energy-efficient Buildings and Sustainable Process Industries (SPIRE - Topic EE17).

International cooperation with strategic partner countries and global technology leaders will support European energy and climate objectives and contribute to the global efforts to mitigate climate change and reduce CO2 emissions. In line with the objectives of the EU's strategy for international cooperation in research and innovation, all activities are open for third country participants, while certain partner countries are also specifically targeted in a number of topics (Topics targeting third countries: LCE 22-2016, LCE 23-2016, LCE 24-2016, LCE 27-2017, LCE 29-2017 and LCE 30-2017)

The estimated total budget available for 2016 is EUR 674.74 million.

<b>Societal Challenge 3: Secure, Clean and Efficient Energy</b> <a href="http://ec.europa.eu/programmes/horizon2020/en/h2020-section/secure-clean-and-efficient-energy">http://ec.europa.eu/programmes/horizon2020/en/h2020-section/secure-clean-and-efficient-energy</a>	
<b>Single stage calls 2016 - Deadline 21 January</b>	
<b>Energy Efficiency (EE)</b>	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-ee-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-ee-2016-2017.html</a>
Heating and cooling EE-03-2016: Standardised installation packages integrating renewable and energy efficiency solutions for heating, cooling and/or hot water preparation	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5056-ee-03-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5056-ee-03-2016.html</a>

EE-04-2016-2017: New heating and cooling solutions using low grade sources of thermal energy	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5055-ee-04-2016-2017.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5055-ee-04-2016-2017.html</a>
EE-05-2016: Models and tools for heating and cooling mapping and planning	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5057-ee-05-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5057-ee-05-2016.html</a>
Engaging consumers towards sustainable energy	
EE-07-2016-2017: Behavioural change toward energy efficiency through ICT	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5059-ee-07-2016-2017.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5059-ee-07-2016-2017.html</a>
EE-08-2016: Socio-economic research on consumer's behaviour related to energy efficiency	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5058-ee-08-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/5058-ee-08-2016.html</a>
Buildings	
EE-10-2016: Supporting accelerated and cost-effective deep renovation of buildings through Public Private Partnership (EeB PPP)	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/4088-ee-10-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/4088-ee-10-2016.html</a>
Industry, services and products	
EE-17-2016-2017: Valorisation of waste heat in industrial systems (SPIRE PPP)	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/4087-ee-17-2016-2017.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/4087-ee-17-2016-2017.html</a>

**Single stage calls 2016 - Deadline 16 February**

<b>Competitive Low-Carbon Energy (LCE)</b>	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-lce-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-lce-2016-2017.html</a>
Renewable energy technologies	
LCE-07-2016-2017: Developing the next generation technologies of renewable electricity and heating/cooling	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2180-lce-07-2016-2017.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2180-lce-07-2016-2017.html</a>
LCE-08-2016-2017: Development of next generation biofuel technologies	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2182-lce-08-2016-2017.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2182-lce-08-2016-2017.html</a>
LCE-23-2016: International Cooperation with Mexico on geothermal energy	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2181-lce-23-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2181-lce-23-2016.html</a>
Enabling the decarbonisation of the use of fossil fuels during the transition to a lowcarbon economy	
LCE-24-2016: International Cooperation with South Korea on new generation high-efficiency capture processes	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2179-lce-24-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2179-lce-24-2016.html</a>
LCE-25-2016: Utilisation of captured CO2 as feedstock for the process industry	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2177-lce-25-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2177-lce-25-2016.html</a>
Social, economic and human aspects of the energy system	
LCE-31-2016-2017: Social Sciences and Humanities Support for the Energy Union	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2178-lce-31-2016-2017.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2178-lce-31-2016-2017.html</a>
Cross-cutting issues	
LCE-36-2016: Support to the energy stakeholders to contribute to the SET-Plan	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2169-lce-36-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2169-lce-36-2016.html</a>

<b>Single stage calls 2016 - Deadline 5 April</b>	
<b>Competitive Low-Carbon Energy (LCE)</b>	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-lce-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-lce-2016-2017.html</a>
Towards an integrated EU energy system	
LCE-01-2016-2017: Next generation innovative technologies enabling smart grids, storage and energy system integration with increasing share of renewables: distribution network	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2185-lce-01-2016-2017.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2185-lce-01-2016-2017.html</a>
LCE-02-2016: Demonstration of smart grid, storage and system integration technologies with increasing share of renewables: distribution system	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2184-lce-02-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2184-lce-02-2016.html</a>
LCE-03-2016: Support to R&I strategy for smart grid and storage	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2183-lce-03-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2183-lce-03-2016.html</a>
Enabling the decarbonisation of the use of fossil fuels during the transition to a lowcarbon economy	
LCE-26-2016: Cross-thematic ERA-NET on Applied Geosciences	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2167-lce-26-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2167-lce-26-2016.html</a>
Social, economic and human aspects of the energy system	
LCE-32-2016: European Platform for energy-related Social Sciences and Humanities research	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2166-lce-32-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2166-lce-32-2016.html</a>
Supporting the development of a European research area in the field of energy	
LCE-33-2016: European Common Research and Innovation Agendas (ECRIAs) in support of the implementation of the SET Action Plan	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2164-lce-33-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2164-lce-33-2016.html</a>
LCE-34-2016: Joint Actions towards the demonstration and validation of innovative energy solutions	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2165-lce-34-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2165-lce-34-2016.html</a>
<b>Single stage calls 2016 - Deadline 8 September</b>	
<b>Competitive Low-Carbon Energy (LCE)</b>	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-lce-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-lce-2016-2017.html</a>
Renewable energy technologies	
LCE-09-2016: Increasing the competitiveness of the EU PV manufacturing industry	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2151-lce-09-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2151-lce-09-2016.html</a>
LCE-13-2016: Solutions for reduced maintenance, increased reliability and extended life-time of off-shore wind turbines/farms	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2155-lce-13-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2155-lce-13-2016.html</a>
LCE-15-2016: Scaling up in the ocean energy sector to arrays	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2153-lce-15-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2153-lce-15-2016.html</a>
LCE-19-2016-2017: Demonstration of the most promising advanced biofuel pathways	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2152-lce-19-2016-2017.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2152-lce-19-2016-2017.html</a>
LCE-20-2016-2017: Enabling pre-commercial production of advanced aviation biofuel	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2154-lce-20-2016-2017.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2154-lce-20-2016-2017.html</a>

LCE-22-2016: International Cooperation with Brazil on advanced lignocellulosic biofuels Supporting the development of a European research area in the field of energy	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2150-lce-22-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2150-lce-22-2016.html</a>
LCE-35-2016: Framework Partnership Agreement supporting Joint Actions towards the demonstration and validation of innovative energy solutions	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2163-lce-35-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2163-lce-35-2016.html</a>
<b>Single stage calls 2016 - Deadline 15 September</b>	
<b>Energy Efficiency (EE)</b>	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-ee-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-ee-2016-2017.html</a>
Engaging consumers towards sustainable energy	
EE-06-2016-2017: Engaging private consumers towards sustainable energy	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/4095-ee-06-2016-2017.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/4095-ee-06-2016-2017.html</a>
EE-09-2016-2017: Engaging and activating public authorities	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/4098-ee-09-2016-2017.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/4098-ee-09-2016-2017.html</a>
Buildings	
EE-11-2016-2017: Overcoming market barriers and promoting deep renovation of buildings	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/4097-ee-11-2016-2017.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/4097-ee-11-2016-2017.html</a>
EE-13-2016: Cost reduction of new Nearly Zero-Energy buildings	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/4091-ee-13-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/4091-ee-13-2016.html</a>
EE-14-2016-2017: Construction skills	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/4092-ee-14-2016-2017.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/4092-ee-14-2016-2017.html</a>
Industry, services and products	
EE-16-2016-2017: Effective implementation of EU product efficiency legislation	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/4096-ee-16-2016-2017.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/4096-ee-16-2016-2017.html</a>
EE-21-2016: ERA-NET Cofund actions supporting Joint Actions towards increasing energy efficiency in industry and services	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/4090-ee-21-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/4090-ee-21-2016.html</a>
Innovative financing for energy efficiency investments	
EE-22-2016-2017: Project Development Assistance	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/4099-ee-22-2016-2017.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/4099-ee-22-2016-2017.html</a>
EE-24-2016-2017: Making the energy efficiency market investible	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/4093-ee-24-2016-2017.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/4093-ee-24-2016-2017.html</a>
EE-25-2016: Development and roll-out of innovative energy efficiency services	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/4094-ee-25-2016.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/4094-ee-25-2016.html</a>

### **Societal Challenge 4: Smart, Green and Integrated Transport**

The Horizon 2020 Societal Challenge of 'Smart, green and integrated transport' (SC4) for 2016 and 2017 is structured in four broad lines of activities aiming at:

- a) Resource efficient transport that respects the environment.
- b) Better mobility, less congestion, more safety and security.

- c) Global leadership for the European transport industry.
- d) Socio-economic and behavioural research and forward-looking activities for policy making.

These activities are addressed in this Work Programme by three Calls for proposals:

1. Mobility for Growth
2. Green Vehicles
3. Small Business and Fast Track Innovation for Transport (SME instrument)

The total 2016 budget available is EUR 450.77 million.

<b>Societal Challenge 4: Smart, green and integrated transport</b>	
<i>Two stage calls 2016 - Stage 1 Deadline: 20 January, Stage 2 Deadline: 29 September 2016</i>	
<b>Mobility for Growth (MG)</b>	<a href="http://ec.europa.eu/programmes/horizon2020/en/h2020-section/smart-green-and-integrated-transport">http://ec.europa.eu/programmes/horizon2020/en/h2020-section/smart-green-and-integrated-transport</a>
Aviation	
MG-1.1-2016: Reducing energy consumption and environmental impact of aviation	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2094-mg-1.1-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2094-mg-1.1-2016.html</a>
MG-1.4-2016-2017: Breakthrough innovation	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2085-mg-1.4-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2085-mg-1.4-2016-2017.html</a>
Intelligent Transport Systems	
MG-6.1-2016: Innovative concepts, systems and services towards 'mobility as a service'	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2086-mg-6.1-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2086-mg-6.1-2016.html</a>
MG-6.2-2016: Large-scale demonstration(s) of cooperative ITS	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2087-mg-6.2-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2087-mg-6.2-2016.html</a>
Logistics	
MG-5.1-2016: Networked and efficient logistics clusters	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2084-mg-5.1-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2084-mg-5.1-2016.html</a>
Safety	
MG-3.3-2016: Safer waterborne transport and maritime operations	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2089-mg-3.3-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2089-mg-3.3-2016.html</a>
MG-3.4-2016: Transport infrastructure innovation to increase the transport system safety at modal and intermodal level (including nodes and interchanges)	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2088-mg-3.4-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2088-mg-3.4-2016.html</a>
MG-3.5-2016: Behavioural aspects for safer transport	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2090-mg-3.5-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2090-mg-3.5-2016.html</a>
Urban Mobility	
MG-4.5-2016: New ways of supporting development and implementation of neighbourhood-level and urban-district-level transport innovations	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2093-mg-4.5-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2093-mg-4.5-2016.html</a>



<p><b>Waterborne</b>  MG-2.2-2016: Development, production and use of high performance and lightweight materials for vessels and equipment  MG-2.3-2016: New and improved transport concepts in waterborne transport</p>	<p><a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2091-mg-2.2-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2091-mg-2.2-2016.html</a>   <a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2092-mg-2.3-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2092-mg-2.3-2016.html</a></p>
<p><b>Automated Road Transport (ART)</b></p>	<p><a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-art-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-art-2016-2017.html</a></p>
<p>ART-02-2016: Automation pilots for passenger cars  ART-04-2016: Safety and end-user acceptance aspects of road automation in the transition period  ART-05-2016: Road infrastructure to support the transition to automation and the coexistence of conventional and automated vehicles on the same network</p>	<p><a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2058-art-02-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2058-art-02-2016.html</a>  <a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2057-art-04-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2057-art-04-2016.html</a>   <a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2059-art-05-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2059-art-05-2016.html</a></p>
<p><b>Single stage calls 2016 - Deadline 26 January</b></p>	
<p><b>Mobility for Growth (MG)</b></p>	<p><a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-mg-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-mg-2016-2017.html</a></p>
<p><b>Aviation</b>  MG-1.5-2016-2017: Identification of gaps, barriers and needs in the aviation research</p>	<p><a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2082-mg-1.5-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2082-mg-1.5-2016-2017.html</a></p>
<p><b>Intelligent Transport Systems</b>  MG-6.3-2016: Roadmap, new business models, awareness raising, support and incentives for the roll-out of ITS</p>	<p><a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2098-mg-6.3-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2098-mg-6.3-2016.html</a></p>
<p><b>Logistics</b>  MG-5.3-2016: Promoting the deployment of green transport, towards Eco-labels for logistics</p>	<p><a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2099-mg-5.3-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2099-mg-5.3-2016.html</a></p>
<p><b>Safety</b>  MG-3.1-2016: Addressing aviation safety challenges  MG-3.6-2016: Euro-African initiative on road safety and traffic management</p>	<p><a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2083-mg-3.1-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2083-mg-3.1-2016.html</a>  <a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2097-mg-3.6-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2097-mg-3.6-2016.html</a></p>
<p><b>Socio-Economic and Behavioural Research and Forward Looking Activities for Policy Making</b>  MG-8.1-2016: Research, technology development and market trends for the European transport manufacturing industries  MG-8.3-2016: Assessing future requirements for skills and jobs across transport modes and systems  MG-8.6-2016: Innovation awards for students and researchers in the context of the Transport Research Arena conference - TRA 2018</p>	<p><a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2102-mg-8.1-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2102-mg-8.1-2016.html</a>   <a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2081-mg-8.3-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2081-mg-8.3-2016.html</a>   <a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2101-mg-8.6-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2101-mg-8.6-2016.html</a></p>
<p><b>Urban Mobility</b>  MG-4.4-2016: Facilitating public procurement of innovative sustainable transport and mobility solutions in urban areas</p>	<p><a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2100-mg-4.4-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2100-mg-4.4-2016.html</a></p>



<b>Green Vehicles (GV)</b>	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-gv-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-gv-2016-2017.html</a>
GV-02-2016: Technologies for low emission light duty powertrains	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2064-gv-02-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2064-gv-02-2016.html</a>
GV-03-2016: System and cost optimised hybridisation of road vehicles	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2065-gv-03-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2065-gv-03-2016.html</a>
GV-11-2016: Stimulating European research and development for the implementation of future road transport technologies	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2067-gv-11-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2067-gv-11-2016.html</a>
GV-12-2016: ERA-NET Co-fund on electromobility	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2066-gv-12-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2066-gv-12-2016.html</a>

**Societal Challenge 5: Climate action, resource efficiency and raw materials**

The Horizon 2020 Societal Challenge of '[Climate action, resource efficiency and raw materials](#)' (SC5) for 2016 and 2017 is composed of following topics, under the "Greening the Economy" call:

- Climate services
- Towards a low-carbon Europe
- Nature-based solutions for territorial resilience
- Water
- Raw materials
- Earth Observation
- Cultural heritage for sustainable growth
- Support to policy and preparing for innovation procurement

Within the overall objective of taking a systemic approach to moving towards a more resource efficient, greener and more competitive economy, this call addresses the priority areas of climate services, moving towards a low-carbon Europe, nature-based solutions for territorial resilience, water, raw materials, Earth observation and cultural heritage for sustainable growth.

The total budget available in 2016 is EUR 358.55 million.

<b>Societal Challenge 5: Climate action, resource efficiency and raw materials</b>		<a href="http://ec.europa.eu/programmes/horizon2020/en/h2020-section/climate-action-environment-resource-efficiency-and-raw-materials">http://ec.europa.eu/programmes/horizon2020/en/h2020-section/climate-action-environment-resource-efficiency-and-raw-materials</a>
<b>Single stage calls 2016 - Deadline 26 January</b>		
Support to policy and preparing for innovation procurement SC5-24-2016: Support to confirmed Presidency event (conference) in Slovakia		<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2186-sc5-24-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2186-sc5-24-2016.html</a>
Water SC5-12-2016: Food systems and water resources for the development of inclusive, sustainable and healthy Euro-Mediterranean societies		<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2187-sc5-12-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2187-sc5-12-2016.html</a>
<b>Single stage calls 2016 - Deadline 8 March</b>		
Climate services SC5-03-2016: Climate services market research SC5-05-2016: A 1.5 million year look into the past for improving climate predictions		<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2200-sc5-03-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2200-sc5-03-2016.html</a> <a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2212-sc5-05-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2212-sc5-05-2016.html</a>
Earth Observation SC5-20-2016: European data hub of the GEOSS information system		<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2207-sc5-20-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2207-sc5-20-2016.html</a>

<p>Nature-based solutions for territorial resilience            SC5-09-2016: Operationalising insurance value of ecosystems            SC5-10-2016: Multi-stakeholder dialogue platform to promote innovation with nature to address societal challenges</p>	<p><a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2208-sc5-09-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2208-sc5-09-2016.html</a>  <a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2209-sc5-10-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2209-sc5-10-2016.html</a></p>
<p>Raw materials            SC5-13-2016-2017: New solutions for sustainable production of raw materials            SC5-15-2016-2017: Raw materials policy support actions            SC5-16-2016-2017: Raw materials international co-operation            SC5-17-2016: ERA-NET Cofund on Raw materials</p>	<p><a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2205-sc5-13-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2205-sc5-13-2016-2017.html</a>  <a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2202-sc5-15-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2202-sc5-15-2016-2017.html</a>  <a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2203-sc5-16-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2203-sc5-16-2016-2017.html</a>  <a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2206-sc5-17-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2206-sc5-17-2016.html</a></p>
<p>Support to policy and preparing for innovation procurement            SC5-23-2016-2017: Support to confirmed Presidency events (conferences) – Malta, United Kingdom, Estonia            SC5-25-2016: Macro-economic and societal benefits from creating new markets in a circular economy            SC5-27-2016: Preparing for pre-commercial procurement (PCP) and/or public procurement of innovative solutions (PPI) in support of climate action, environment, resource efficiency and raw materials            SC5-28-2016: Transformations to sustainability</p>	<p><a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2211-sc5-23-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2211-sc5-23-2016-2017.html</a>  <a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2214-sc5-25-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2214-sc5-25-2016.html</a>  <a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2210-sc5-27-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2210-sc5-27-2016.html</a>  <a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2204-sc5-28-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2204-sc5-28-2016.html</a></p>
<p>Towards a low-carbon Europe            SC5-06-2016-2017: Pathways towards the decarbonisation and resilience of the European economy in the timeframe 2030-2050 and beyond</p>	<p><a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2201-sc5-06-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2201-sc5-06-2016-2017.html</a></p>
<p>Water            SC5-11-2016: Supporting international cooperation activities on water            Support to policy and preparing for innovation procurement            SC5-29-2016: Framework Partnership Agreement supporting Joint Actions towards a sustainable green economy in Europe and beyond</p>	<p><a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2213-sc5-11-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2213-sc5-11-2016.html</a>  <a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2197-sc5-29-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2197-sc5-29-2016.html</a></p>
<p><b>Two stage calls 2016 - Stage 1 Deadline: 8 March, Stage 2 Deadline: 6 September 2016</b></p>	
<p>Climate services            SC5-01-2016-2017: Exploiting the added value of climate services (IA Innovation action)</p>	<p><a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2190-sc5-01-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2190-sc5-01-2016-2017.html</a></p>

Cultural heritage for sustainable growth

SC5-21-2016-2017: Cultural heritage as a driver for sustainable growth

<https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2199-sc5-21-2016-2017.html>

Raw materials

SC5-14-2016-2017: Raw materials Innovation actions

<https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2198-sc5-14-2016-2017.html>

**Societal Challenge 6: Inclusive, innovative and reflective societies**

The Horizon 2020 Societal Challenge of [‘Europe in a changing world – Inclusive, innovative and reflective societies’ \(SC6\)](#) for 2016 and 2016 is composed of four calls,

- Co-Creation for Growth and Inclusion
- Reversing Inequalities and Promoting Fairness
- Engaging Together Globally
- Understanding Europe - Promoting the European Public and Cultural Space

This Societal Challenge 6 Work Programme addresses key challenges of the beginning of 21st century like radicalisation and migration that appear in cross-cutting way in several Topics throughout the Work Programme and complementarily with Societal Challenge 7 - Secure societies "Protecting freedom and security of Europe and its citizens". Many of the Topics of this Work Programme aim also to reduce the gap between institutions and citizens - through better understanding, analysis and practical solutions - in order to build a more trustful European society. Many Topics also integrate the gender dimension as a key element of inclusive societies.

The total budget available for 2016 is EUR 155.78 million

<b>Societal Challenge 6: Inclusive, innovative and reflective societies</b> <a href="http://ec.europa.eu/programmes/horizon2020/en/h2020-section/europe-changing-world-inclusive-innovative-and-reflective-societies">http://ec.europa.eu/programmes/horizon2020/en/h2020-section/europe-changing-world-inclusive-innovative-and-reflective-societies</a>	
<b>Single stage calls 2016 - Deadline 4 February</b>	
<b>Co-Creation for Growth and Inclusion</b>	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-sc6-co-creation-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-sc6-co-creation-2016-2017.html</a>
CO-CREATION-02-2016: User-driven innovation: value creation through design-enabled innovation	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/3077-co-creation-02-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/3077-co-creation-02-2016.html</a>
CO-CREATION-03-2016: Piloting demand-driven collaborative innovation models in Europe	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/3076-co-creation-03-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/3076-co-creation-03-2016.html</a>
CO-CREATION-08-2016-2017: Better integration of evidence on the impact of research and innovation in policy making	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/3075-co-creation-08-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/3075-co-creation-08-2016-2017.html</a>
CO-CREATION-09-2016: A European map of knowledge production and co-creation in support of research and innovation for societal challenges	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/3078-co-creation-09-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/3078-co-creation-09-2016.html</a>
<b>Understanding Europe - Promoting the European Public and Cultural Space</b>	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-sc6-cult-coop-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-sc6-cult-coop-2016-2017.html</a>
CULT-COOP-08-2016: Virtual museums and social platform on European digital heritage, memory, identity and cultural interaction.	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/3089-cult-coop-08-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/3089-cult-coop-08-2016.html</a>
CULT-COOP-11-2016-2017: Understanding the transformation of European public administrations	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/3088-ccult-coop-11-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/3088-ccult-coop-11-2016-2017.html</a>

<b>Reversing Inequalities and Promoting Fairness</b>	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-sc6-rev-inequal-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-sc6-rev-inequal-2016-2017.html</a>
REV-INEQUAL-01-2016: An empirically informed European theory of justice and fairness	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2300-rev-inequal-01-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2300-rev-inequal-01-2016.html</a>
REV-INEQUAL-02-2016: Contemporary radicalisation trends and their implications for Europe	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2295-rev-inequal-02-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2295-rev-inequal-02-2016.html</a>
REV-INEQUAL-03-2016: Dynamics of inequalities across the life-course	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2292-rev-inequal-03-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2292-rev-inequal-03-2016.html</a>
REV-INEQUAL-04-2016: Intra-EU mobility and its impacts for social and economic systems	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2294-rev-inequal-04-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2294-rev-inequal-04-2016.html</a>
REV-INEQUAL-05-2016: Inequalities in the EU and their consequences for democracy, social cohesion and inclusion	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2299-rev-inequal-05-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2299-rev-inequal-05-2016.html</a>
REV-INEQUAL-06-2016: Tackling inequalities at their roots: new policies for fairness in education from early age	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2298-rev-inequal-06-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2298-rev-inequal-06-2016.html</a>
REV-INEQUAL-07-2016: Spatial justice, social cohesion and territorial inequalities	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2297-rev-inequal-07-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2297-rev-inequal-07-2016.html</a>
REV-INEQUAL-08-2016: Fighting inequalities through policies against tax fraud and tax evasion	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2296-rev-inequal-08-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2296-rev-inequal-08-2016.html</a>
REV-INEQUAL-10-2016: Multi-stakeholder platform for enhancing youth digital opportunities	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2293-rev-inequal-10-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2293-rev-inequal-10-2016.html</a>
<b>Single stage calls 2016 - Deadline 14 April</b>	
<b>Engaging Together Globally</b>	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-sc6-eng-globally-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-sc6-eng-globally-2016-2017.html</a>
ENG-GLOBALLY-08-2016-2017: EU-China cooperation on sustainable urbanisation (CSA Coordination and support action)	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2304-eng-globally-08-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2304-eng-globally-08-2016-2017.html</a>
ENG-GLOBALLY-09-2016: Centres/Networks of European research and innovation	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2310-eng-globally-09-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2310-eng-globally-09-2016.html</a>
<b>Single stage calls 2016 - Deadline 24 May</b>	
<b>Co-Creation for Growth and Inclusion</b>	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-sc6-co-creation-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-sc6-co-creation-2016-2017.html</a>
CO-CREATION-05-2016: Co-creation between public administrations: once-only principle	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/3074-co-creation-05-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/3074-co-creation-05-2016.html</a>



## Societal Challenge 7: Secure Societies

The Horizon 2020 Societal Challenge of '[Secure Societies - Protecting freedom and security of Europe and its citizens](#)' (SC7) for 2016 and 2017 is composed of three calls:

- Critical Infrastructure Protection
- Security, addressing following topics:
  - Disaster-resilience: safeguarding and securing society
  - Fight against crime and Terrorism
  - Border Security and External Security
  - General Matters
- Digital Security Focus Area

The primary aims of the Secure Societies Challenge are: to enhance the resilience of our society against natural and man-made disasters, ranging from the development of new crisis management tools to communication interoperability, and to develop novel solutions for the protection of critical infrastructure; to fight crime and terrorism ranging from new forensic tools to protection against explosives; to improve border security, ranging from improved maritime border protection to supply chain security and to support the Union's external security policies including through conflict prevention and peace building and to provide enhanced cyber-security, ranging from secure information sharing to new assurance models.

The total budget available for 2016 is approximately EUR 185.34 million.

<b>Societal Challenge 7: Secure Societies</b>		<a href="http://ec.europa.eu/programmes/horizon2020/en/h2020-section/secure-societies-%E2%80%93-protecting-freedom-and-security-europe-and-its-citizens">http://ec.europa.eu/programmes/horizon2020/en/h2020-section/secure-societies-%E2%80%93-protecting-freedom-and-security-europe-and-its-citizens</a>
<b>Single stage calls 2016 - Deadline 16 February</b>		
<b>Digital Security Focus Area (DS)</b>		<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-ds-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-ds-2016-2017.html</a>
DS-03-2016: Increasing digital security of health related data on a systemic level		<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2329-sec-16-bes-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2329-sec-16-bes-2017.html</a>
<b>Single stage calls 2016 - Deadline 12 April</b>		
<b>Digital Security Focus Area (DS)</b>		<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-ds-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-ds-2016-2017.html</a>
DS-01-2016: Assurance and Certification for Trustworthy and Secure ICT systems, services and components		<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2323-sec-14-bes-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2323-sec-14-bes-2016.html</a>
<b>Single stage calls 2016 - Deadline 25 August</b>		
<b>Critical Infrastructure Protection (CIP)</b>		<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-cip-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-cip-2016-2017.html</a>
CIP-01-2016-2017: Prevention, detection, response and mitigation of the combination of physical and cyber threats to the critical infrastructure of Europe.		<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2301-cip-01-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2301-cip-01-2016-2017.html</a>
<b>Digital Security Focus Area (DS)</b>		<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-ds-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-ds-2016-2017.html</a>
DS-02-2016: Cyber Security for SMEs, local public		<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2328-sec-15-bes-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2328-sec-15-bes-2017.html</a>

administration and Individuals DS-04-2016: Economics of Cybersecurity DS-05-2016: EU Cooperation and International Dialogues in Cybersecurity and Privacy Research and Innovation	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2331-sec-17-bes-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2331-sec-17-bes-2017.html</a> <a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2332-sec-18-bes-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2332-sec-18-bes-2017.html</a>
<b>Security (SEC)</b>	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-sec-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-sec-2016-2017.html</a>
<b>Disaster-resilience: safeguarding and securing society</b>	
SEC-01-DRS-2016: Integrated tools for response planning and scenario building	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2425-ds-01-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2425-ds-01-2016.html</a>
SEC-02-DRS-2016: Situational awareness systems to support civil protection preparation and operational decision making	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2423-ds-02-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2423-ds-02-2016.html</a>
SEC-03-DRS-2016: Validation of biological toxins measurements after an incident: Development of tools and procedures for quality control	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2424-ds-03-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2424-ds-03-2016.html</a>
<b>Fight against crime and Terrorism</b>	
SEC-05-DRS-2016-2017: Chemical, biological, radiological and nuclear (CBRN) cluster (CSA Coordination and support action)	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2422-ds-05-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2422-ds-05-2016.html</a>
SEC-06-FCT-2016: Developing a comprehensive approach to violent radicalization in the EU from early understanding to improving protection	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2426-ds-06-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2426-ds-06-2017.html</a>
SEC-07-FCT-2016-2017: Human Factor for the Prevention, Investigation, and Mitigation of criminal and terrorist acts	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2427-ds-07-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2427-ds-07-2017.html</a>
SEC-08-FCT-2016: Forensics techniques on: a) trace qualification, and b) broadened use of DNA	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2428-ds-08-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2428-ds-08-2017.html</a>
SEC-11-FCT-2016: Detection techniques on explosives: Countering an explosive threat, across the timeline of a plot	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2320-sec-03-drs-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2320-sec-03-drs-2016.html</a>
SEC-12-FCT-2016-2017: Technologies for prevention, investigation, and mitigation in the context of fight against crime and terrorism	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2326-sec-04-drs-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2326-sec-04-drs-2017.html</a>
<b>Border Security and External Security</b>	
SEC-14-BES-2016: Towards reducing the cost of technologies in land border security applications	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2317-sec-06-fct-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2317-sec-06-fct-2016.html</a>
SEC-19-BES-2016: Data fusion for maritime security applications	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2315-sec-11-fct-2016.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2315-sec-11-fct-2016.html</a>
SEC-20-BES-2016: Border Security: autonomous systems and control systems	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2314-sec-12-fct-2016-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2314-sec-12-fct-2016-2017.html</a>
<b>General Matters</b>	
SEC-21-GM-2016-2017: Pan European Networks of practitioners and other actors in the field of security	<a href="https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2327-sec-13-bes-2017.html">https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2327-sec-13-bes-2017.html</a>

## Relevant Links

Please visit the Horizon 2020 section within the Participants portal to download the Proposers Guide and specific templates to prepare proposals for submission under calls open in 2016 within specific Societal Challenges and LEIT themes:

<http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/index.html>

<b>Relevant Links to get more information</b>	
Horizon 2020 Official site	<a href="http://ec.europa.eu/programmes/horizon2020/">http://ec.europa.eu/programmes/horizon2020/</a>
Horizon 2020 Calls on Participants Portal	<a href="http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/index.html">http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/index.html</a>
Frequently Asked Questions on Horizon 2020	<a href="http://ec.europa.eu/programmes/horizon2020/en/faq">http://ec.europa.eu/programmes/horizon2020/en/faq</a>
International Cooperation in Research and Innovation, Communication COM (2012) 497 Sept 2012	<a href="http://www.ist-africa.org/home/files/InternationalCooperation_ResearchInnovation_Com_2012_497_Sept2012.pdf">http://www.ist-africa.org/home/files/InternationalCooperation_ResearchInnovation_Com_2012_497_Sept2012.pdf</a>
ICT in Horizon 2020 2016 - 2017 Work Programmes - presentation by Mr Morten Moller, DG CONNECT; November 2015	<a href="http://www.ist-africa.org/home/files/eChallenges_H2020-WP2016-17-ICT-251115_v4.2_MMoller.pdf">http://www.ist-africa.org/home/files/eChallenges_H2020-WP2016-17-ICT-251115_v4.2_MMoller.pdf</a>