



Horizon 2020

International Cooperation Opportunities in the Work Programme 2016-2017



EUROPEAN COMMISSION

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Horizon 2020

International Cooperation Opportunities in the Work Programme 2016-2017

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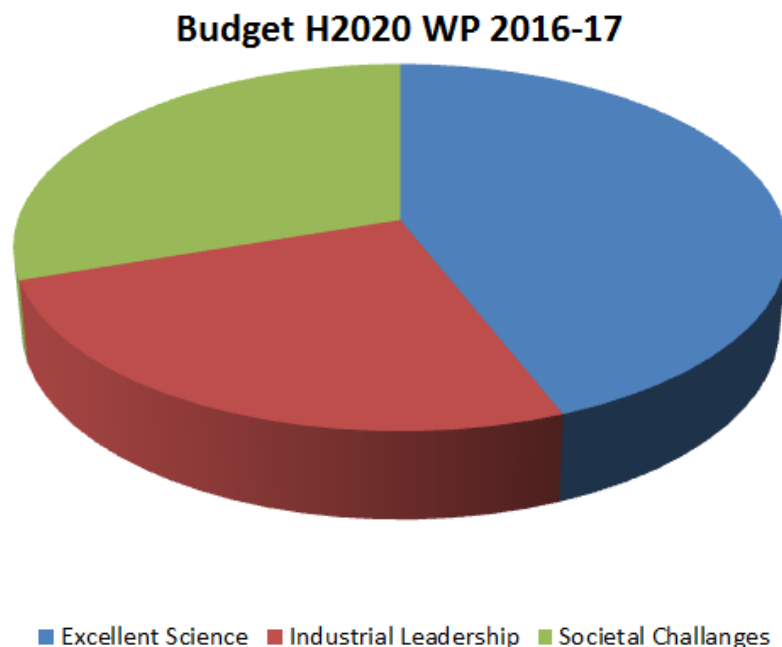
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Horizon 2020 Work programme 2016-2017

Horizon 2020 is the biggest EU research and innovation programme ever and the biggest multinational programme of its kind.

Funding opportunities under [Horizon 2020](#) are set out in multiannual work programmes, announcing the calls and specific topics that will be funded. With a budget of €16 billion, **the work programme 2016-2017** contains more than 60 calls and 600 topics, covering all areas of scientific knowledge¹.

This work programme is complemented by the separate work programmes for the [European Research Council](#), [Euratom](#), the [Joint Research Centre](#) and the [Strategic Innovation Agenda for the European Institute of Innovation and technology](#)(EIT).



Horizon 2020 is Open to the World, meaning that researchers and innovators, from all over the world, regardless of their place of origin or establishment can take part in Horizon 2020. Furthermore, in many cases, the EU will fund, at least partly, the participation of the international partners.

In addition to this general openness, many calls particularly **encourage or require** cooperation with non-EU partners or target a certain country or region.

Joint, coordinated and twinning calls can be agreed with specific partner countries, for enhanced cooperation aiming at mutual benefit.

¹ The Work Programme 2016-17 may be revised during its implementation

Of 613 topics, almost one in three is marked as specifically relevant for international cooperation, covering all regions of the globe.

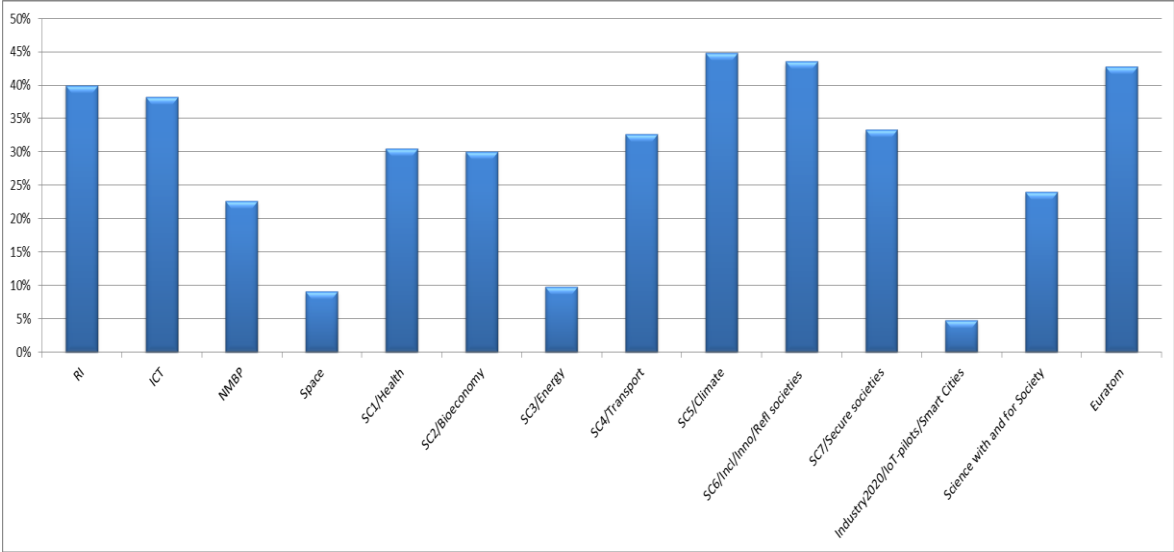
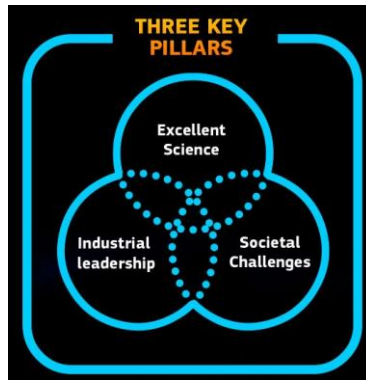


Figure 1: Distribution of targeted actions by topic (for collaborative research projects)



Figure 2: Distribution of targeted actions by country or region (for collaborative research projects)

Horizon 2020 programme pillars



Excellent Science

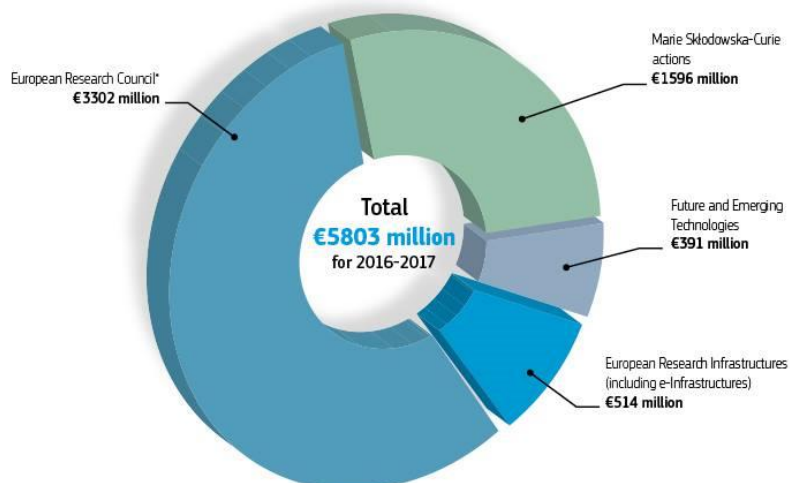
Activities under this pillar aim to reinforce and extend the excellence of the Union's science base and to consolidate the European Research Area in order to make the Union's research and innovation system more competitive on a global scale.

The Excellent Science pillar has four main specific objectives:

- The [European Research Council \(ERC\)](#): Supporting top researchers from anywhere in the world to work in Europe
- [Future and Emerging Technologies \(FET\)](#): Supporting visionary thinking through collaborations between science and engineering²
- [Marie Skłodowska-Curie Actions \(MSCA\)](#): Providing opportunities for training and career development of individual researchers
- [Research Infrastructures](#) (including e-infrastructures): Ensuring access to world-class facilities

In the WP 2016-17, the Excellent Science pillar has 40 calls, of which 14 encourage international cooperation.

Funding for Excellent Science calls



* separate work programme for 2017

2 Calls under FET are open to EU Member States and H2020 Associated countries



European Research Council

'Supporting top researchers from anywhere in the world'

The ERC's mission is to encourage the highest quality research in Europe by supporting investigator-driven ('bottom-up') frontier research across all fields.

The [ERC funding schemes](#) are open to top researchers of any nationality or age who wish to carry out their frontier research in the 28 EU Member States or associated countries. ERC grants are awarded through open competition via international peer-review. The sole criterion for selection is scientific excellence. The aim is to support the best ideas, and confer status and visibility on the best brains in Europe, while also attracting talent from abroad.

By challenging the brightest minds, ERC grants will help to bring about new and unpredictable scientific and technological discoveries - the kind that can form the basis of new industries, markets, and broader social innovations in future.

The total budget allocated to the ERC for the period 2014-2020 is € 13.1 billion and represents 17% of the overall Horizon 2020 budget. Since 2007, more than 5,000 projects have been selected for funding from over 50,000 applications. Under Horizon 2020, it is estimated that around 7,000 grantees will be funded and 42,000 team members supported, offering cutting-edge research training for nearly 11,000 doctoral students and almost 16,000 postdoctoral researchers.

There are three core funding schemes:

- ERC Starting Grants: For researchers of any nationality with 2-7 years of experience since completion of their first PhD, funding per grant: up to € 1.5 million, duration: up to 5 years
- ERC Consolidator Grants: For researchers of any nationality with over 7 and up to 12 years of experience since completion of their first PhD, funding per grant: up to € 2 million, duration: up to 5 years
- ERC Advanced Grant: any nationality, any age. Applicants must be scientifically independent and have a recent research track-record and profile which identifies them as leaders in their respective field(s) of research. Funding: up to € 2.5 million per grant. Duration: up to 5 years

ERC launches its calls for proposals once a year covering all scientific fields and the total budget for 2016 will be almost € 1.7 billion (as from 2016 the call budgets will gradually increase each year).

ERC web site: <https://erc.europa.eu/funding-and-grants/apply-funding/non-european-researchers>

ERC Flyer on ERC Schemes: <https://erc.europa.eu/funding-and-grants/apply-funding/non-european-researchers>

Marie Skłodowska-Curie Actions (MSCA)

Marie Skłodowska-Curie actions (MSCA) support researchers at all stages of their careers, irrespective of nationality. Researchers working across all disciplines, from life-saving healthcare to 'blue-sky' science, are eligible for funding.

The MSCA also support industrial doctorates, combining academic research study with work in companies, and other innovative training that enhances employability and career development.

Types of MSCA:

- Research networks (ITN): support for Innovative Training Networks that develop new researchers
- Individual fellowships (IF): support for experienced researchers undertaking mobility between countries, with the option to work outside academia
- Research and Innovation Staff Exchanges (RISE): for international and inter-sectoral cooperation
- Co-funding of regional, national and international programmes that finance fellowships involving mobility to or from another country

In the Marie Skłodowska-Curie [programme for 2016-17](#), 5 topics target international cooperation

MSCA web site: http://ec.europa.eu/research/mariecurieactions/index_en.htm

MSCA Quick Guide: http://ec.europa.eu/research/mariecurieactions/about-msca/quick-guide/index_en.htm



Research Infrastructures

The aim of these topics is to facilitate the development of global research infrastructures and the cooperation of European infrastructures with their non-European counterparts, ensuring their global interoperability and access.

The [work programme 2016-17](#) contains 6 topics encouraging International Cooperation. Among these, in the call H2020 INFRAIA-2016-2017 – Integrating and Opening Research Infrastructures of European Interest (covering 2 topics) legal entities established in Australia, Brazil, Canada, China, India, Japan, Russia, Mexico and the USA, which provide access to their research infrastructures to researchers from Members States and Associated countries, are eligible for funding from the Union.

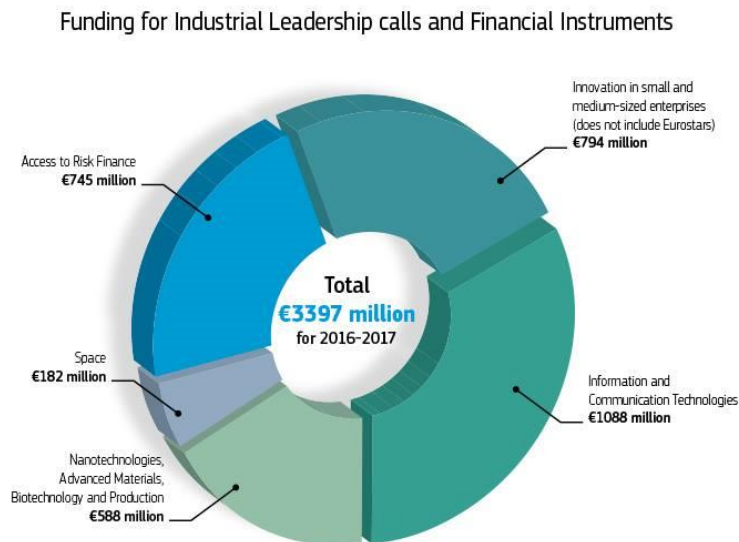
Infrastructures web site:

http://ec.europa.eu/research/infrastructures/index_en.cfm?pg=home

Industrial Leadership

This pillar aims to speed up the development of technologies and innovations that will underpin tomorrow's businesses, like advanced manufacturing, microelectronics, nanotechnology, biotechnology, ICT and space.

The Industrial Leadership pillar has over 120 calls in the WP 2016-17, of which 31 encourage international cooperation³.



Nanotechnologies, advanced materials, biotechnology and production

Nanotechnologies will help address key societal challenges such as climate change, reducing carbon emission, developing renewable energies, more efficient use of resources and addressing medical needs of an ageing population.

The [work programme](#) for industrial technologies related to materials, biotech or manufacturing encourages international collaboration with third countries especially for call topics dealing with development of standards or regulatory frameworks. Other initiatives fall within policy priorities. An example is the substitution of critical raw materials where research actions through Horizon 2020 complement EU initiatives by trade policy or development aid projects.

All projects related to industrial technologies can benefit from participating partners in third countries when they contribute with specific technologies, leading to win-win combinations. Some specific calls, suggest collaborations with technology-leading third countries like Japan, Korea, the USA, or Brazil.

Nanoscience & Technologies web site:

http://ec.europa.eu/research/industrial_technologies/nanoscience-and-technologies_en.html

³ Calls under "Access to Risk Finance" and "Innovation in SME's" are mainly open to EU Member States and H2020 Associated countries



Information and Communication Technologies (ICT)

Digital technologies underpin innovation and competitiveness across a broad range of market sectors. The topics addressed in this work programme part cover ICT in a comprehensive way, from key enabling technologies to networking technologies, robotics, content and information management technologies.

International cooperation has been an important foundation of ICT research and innovation activities since FP7-ICT which included joint calls with Brazil (2), Japan (1) and Russia (1).

Complementing Horizon 2020's general openness to third countries, the [work programme 2016-17](#), contains specific international cooperation instruments including:

- Coordinated/joint calls with Brazil, Japan and Korea
- Targeted openings: collaborative projects with required participation and ring-fenced budget with Taiwan and with "low and middle income countries" (Africa and ASEAN)
- Support Actions devoted to fact finding to identify opportunities for cooperation with China. With Mexico the support action on FIWARE take-up (project networking, standardisation, industrial commitment) and Future Internet developments is complemented by research and innovation actions on the development, implementation and replication of FIWARE-based services in EU and Mexico.
- Collaborative research and innovation projects with China, Japan, South Korea, Taiwan and USA preferentially evaluated under the 5G topic.

The ICT part of WP 2016-17 launch the 1st coordinated call with Korea, the 3rd call with Japan and the 4th call with Brazil.

Compared to the first LEIT-ICT Horizon 2020 work programme (WP2014-15) the work programme 2016-17 represents nearly a 50% increase of the budgetary resources allocated to international cooperation with a stronger strategic focus on the ICT areas / topics (5G, Future Internet, IoT, and Cloud computing) where the international dimension is essential to leverage the impact of EU investment in research and innovation.

ICT web site: <http://ec.europa.eu/digital-agenda/en/research-and-innovation>



Space (LEIT)

The main objective and challenge of space research is to foster a cost-effective competitive and innovative space industry (including SMEs) and research community to develop and exploit space infrastructure to meet future Union policy and societal needs.

In [WP 2016-17](#), one of the four challenges addressed in the work programme is: *Enhancing Europe's standing as attractive partner for international partnerships in space science and exploration*. International cooperation is generally welcome across all calls, but there are 3 topics that specifically encourage international cooperation with countries with relevant expertise and active in space exploration and science.

The results in H2020 so far indicates a higher than average level of international cooperation in the field of Space. In FP7, the significance of the international cooperation dimension in the Space theme was apparent in both the general openness of the activities to third country participants, and the relevant crosscutting actions (significantly targeting the defined geographical areas) included across almost the whole period.

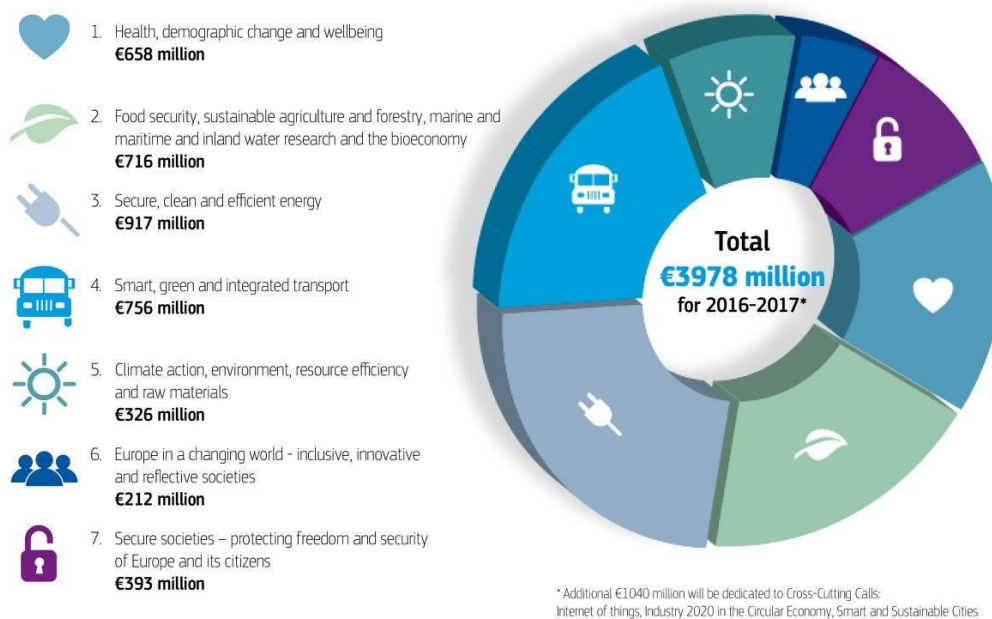
Space web site: http://ec.europa.eu/growth/sectors/space/research/index_en.htm

Societal Challenges

Horizon 2020 reflects the policy priorities of the Europe 2020 strategy and addresses major concerns shared by citizens in Europe and elsewhere.

- Health, demographic change and wellbeing
- Food security, sustainable agriculture, marine and maritime and inland waterway research and the Bioeconomy
- Secure, clean and efficient energy
- Smart, green and integrated transport
- Climate action, environment, resource efficiency and raw materials
- Inclusive, innovative and reflective societies
- Secure societies

Funding for Societal Challenges calls



There are almost 330 Societal challenges topics and more than 160 of those are marked as specifically relevant for international cooperation.



Health, demographic change and wellbeing

The headline goal of the 'Health, Demographic Change and Well-being' Societal Challenge is better health for all. Its main policy objectives are to improve health and wellbeing outcomes, to promote healthy and active ageing, to promote market growth, job creation, and the EU as a global leader in the health area. The overall strategic orientation for the [work programme 2016-2017](#) is 'promoting healthy ageing and personalised healthcare'.

Health challenges are global and applicants are therefore encouraged to include the international dimension in their proposal where relevant.

11 topics under the Health theme encourage international cooperation, some of which are in support of global multilateral initiatives, like the:

- Global Alliance for Chronic Diseases
- International Rare Diseases Research Consortium (2 topics)
- Joint Programming Initiative on antimicrobial resistance
- European and Developing countries Clinical Trials Partnership 2

In addition, 4 topics target specific international partners:

- Joint call with Japan for Novel ICT Robotics
- 2 coordination and support actions referring explicitly to cooperation with the USA in eHealth and in interoperability roadmap
- A Research and innovation action on health provision and integrated care in low and middle income countries

The share of international cooperation topics increased from 18% in WP 2014-2015 to 31% in WP 2016-2017, and the share of budget increased from 16% in WP 2014-2015 to 34% in WP 2016-2017.

In recognition of the opening of the US National Institutes of Health's programmes to European researchers, any legal entity established in the United States of America is eligible to receive Union funding to support its participation in projects under the Health theme.

Some agencies, such as the Canadian Institute of Health Research and the National Health and Medical Research Council of Australia, provide funding, in all calls under the health theme, for their nationals participating in selected H2020 proposals.

Health web site: <http://ec.europa.eu/research/health/index.cfm>



Food security, sustainable agriculture, marine and maritime and inland waterway research and the Bioeconomy

Agriculture, forestry, fisheries and aquaculture, together with the bio-based industries, are integral parts of the European and world economy and society. Relying on the use of limited natural resources, these sectors produce and process biological resources to satisfy the demand of consumers and a wide range of industries for food, feed, bio-energy and bio-based products, requiring new solutions based on research and innovation.

International cooperation activities were included in 26 topics (3 calls) in WP 2014-2015, whereas the [WP 2016-2017](#) contains 27 topics (2 calls) with international cooperation activities.

The prioritisation of international partners in Work Programme 2016-17 is in line with the EU's international cooperation strategy on research and innovation from 2012 and the accompanying multiannual roadmaps. It takes into account the remit of societal challenge 2, the lessons learnt in FP7 and the results of policy-dialogues with the EU's partners.

The work programme 2016-17 foresees actions that are of an appropriate scale, will have impact and be visible and contribute to strengthening the Union's competitiveness, tackling food security and sustainable agriculture and supporting the Union's external policies.

The four priority actions are:

- Support to the implementation of a joint EU-Africa Research and Innovation (R&I) Partnership on food and nutrition security and sustainable agriculture with a dedicated chapter in the Work Programme, with 3 topics. The ERANET COFUND invites funding parties from the EU and Africa to join forces in working towards the establishment of a long-term R&I Partnership with a focus on three thematic pillars: sustainable intensification, nutrition and trade. In addition to these topics, a € 2 million coordination and support action on cooperation on research infrastructures in the domain of food and nutrition security is also part of implementing the R&I Partnership.
- Support to the China Flagship with a focus on 5 topics that were jointly agreed upon with China and reflect common interest, which are: water retention in soils; urban agriculture; breeding of protein crops; authentication and traceability; Livestock production and microbial drug use. As of 2016, the Chinese Ministry of Science and Technology will allocate € 28 million annually to the EU-China Co-funding Mechanism (CFM) and provide competitive funding to China-based entities participating in joint projects with European partners under Horizon 2020. The CFM will be primarily used for Horizon 2020 topics where cooperation with China is targeted.
- Implementation of the Atlantic Ocean Research Alliance with the USA and Canada. The focus in Work Programme 2016/2017 is on the Arctic.
- Valorising the Mediterranean sea basin with an action on integrated Mediterranean sea observing system and support to the Bluemed initiative

In addition, WP 2016-17 will support partnerships initiatives with East-Asian countries on aquaculture and the establishment of an International Research Consortium on animal health.

At EXPO 2015 Commissioner for Research, Science and Innovation Carlos Moedas and Commissioner for Agriculture & Rural Development Phil Hogan announced the development of a Food Research Area and the launch of an agronomic research and innovation strategy in 2016. International cooperation, with special focus on the priority areas outlined before (Africa, China, and Mediterranean region) will be an important pillar of these.

Bioeconomy web site: <http://ec.europa.eu/research/bioeconomy/index.cfm>



Secure, clean and efficient energy

The Energy Challenge is structured around seven specific objectives and research areas:

- Reducing energy consumption and carbon footprint
- Low-cost, low-carbon electricity supply
- Alternative fuels and mobile energy sources
- A single, smart European electricity grid
- New knowledge and technologies
- Robust decision making and public engagement
- Market uptake of energy and ICT innovation.

The priorities for the [WP 2016-17](#) are:

Energy Efficiency

In line with the COP 21 commitments, the EU is aiming to progressively decrease primary energy consumption by 2020 and 2030. Research and demonstration activities within this area will focus on buildings, industry, heating and cooling, SMEs and energy-related products and services, integration of ICT and cooperation with the telecom sector.

Low Carbon Technologies

Research activities within this area will cover: Photovoltaics, Concentrated Solar Power, Wind energy, Ocean Energy, Hydro Power, Geothermal Energy, Renewable Heating and Cooling, Energy Storage, Biofuels and Alternative Fuels, Carbon Capture and Storage.

Smart Cities & Communities

Sustainable development of urban areas requires new, efficient, and user-friendly technologies and services, in particular in the areas of energy, transport and ICT. However, these solutions need integrated approaches, both in terms of research and development of advanced technological solutions, as well as deployment. The focus on [smart cities](#) technologies will result in commercial-scale solutions with a high market potential.

All topics in the WP 2016-17 are open to international partners. In addition, several topics encourage the participation of international partners and there are 6 targeted

actions, on renewable energy technologies & technical and scientific nuclear expertise with specific target countries:

- Brazil on biofuels: Coordinated call
- Mexico on geothermal energy: Coordinated call
- South Korea on CO2 capture: Twinning (high efficiency capture processes) and pre-competitive CO2 capture
- China on CCS in industrial applications: Use of captured CO2 in industry processes, collaboration with SPIRE
- USA and Canada on containment of underground CO2 and natural gas: knowledge sharing in safety and technological areas
- Australia and North America on CO2 storage (Geological storage): twinning topic

Further cooperation is foreseen with international organisations:

- International Energy Agency (IEA): participation in Implementing Agreements;
- International Renewable Energy Agency (IRENA): comprehensive EU approach for international cooperation in renewables;

Energy web site: http://ec.europa.eu/research/energy/index_en.cfm



Smart, green and integrated transport

The Transport Challenge 'Smart, green and integrated transport' aims to achieve efficient transport that respects the environment and provides better mobility, less congestion, and increased safety and security.

International cooperation will have a key role to play, as challenges such as CO2 and polluting emissions, oil dependency, transport safety and security, noise pollution, and standardisation of many services, products and procedures are common and will benefit from global solutions.

Other aspects that are more local in nature such as traffic congestion, land use planning and behavioural issues could profit from the exchange of best practice identified in effective international collaborations.

Potential areas for mutually beneficial cooperation with the US include road transport automation, green vehicles, safety, infrastructure, and climate change mitigation and adaptation. Cooperation with China, Brazil and other countries will focus on green vehicles and safety. Transport safety will be a priority for a Euro-African science diplomacy partnership. Multilateral exchanges on transport R&I strategies and investment priorities could be pursued with the major international partner countries.

The [WP 2016-2017](#) contains 21 topics (3 calls) with international cooperation activities, a 50% increase on the previous WP:

- Safety; Japan, Australia, Canada, USA, Brazil, China, India
- Intelligent transport systems: Japan, USA
- Electrical vehicles - Japan; USA
- Automated road transport: USA

- Green vehicles; Brazil, China, India
- Freight & logistics: Mediterranean region
- Infrastructure: Mediterranean region, USA
- transport safety: Africa

The WP 2016/17 anticipates that new coordinated calls could be foreseen in the revision of WP for 2017 based on the outcome of current initiatives. Such coordinated calls should be promoted in WP 2017 as a form of effective balanced cooperation with key partner countries like China, Japan and others, following successful coordinated calls on Aviation included in the WP 2014/15 (that lead to 11 large joint projects).

Transport web site: http://ec.europa.eu/research/transport/index_en.htm



Climate action, environment, resource efficiency and raw materials

The objective of this Societal Challenge is to achieve a resource efficient and climate change resilient economy and society, the protection and sustainable management of natural resources and ecosystems, and a sustainable supply and use of raw materials, in order to meet the needs of a growing global population within the limits of the planet's natural resources and eco-systems.

To maximise impact in [2016-2017](#), this Societal Challenge will – for the areas on climate change, environment and resource efficiency – prioritise actions which take a systemic approach to promoting a more resource efficient, greener and more competitive economy.

Climate change and the environment are complex, large scale challenges that are not bound by geographical borders, and the raw materials supply chain also has an important international dimension. Thus the work programme seeks international cooperation both by targeting third countries, regions and international partners or programmes with the scope of maximising research and innovation impact as well as by encouraging international partners to join selected calls for proposals.

The work programme for Climate action encourages international cooperation in 12 topics in 2016 and 6 topics in 2017 including multilateral activities such as the Belmont Forum and GEOSS. Of these, 2 topics encourage cooperation with:

- USA and Japan: Raw materials international co-operation;
- Latin America and South East Asia: Promoting nature-based solutions.

Climate action web site: <http://ec.europa.eu/research/environment/index.cfm>



Inclusive, innovative and reflective societies

This challenge funds research into new strategies and governance structures to overcome prevailing economic instability and ensure Europe is resilient to future downturns, demographic change and migration patterns. Funding also supports new forms of innovation such as open innovation, business model innovation, public sector and social innovation to meet social needs. By supporting research and innovation on European heritage, identity, history, culture and Europe's role in the world, the EU is also building 'reflective societies' in which shared values and their contribution to our joint future are explored.

In the [work programme 2016-17](#), 15 topics have been flagged as particularly relevant for international cooperation.

Several topics address the challenges of radicalisation and migration, as well as integration and science diplomacy, and proposals to this set of topics are encouraged to address issues across these challenges:

- Strengthening Europe's position in the global context: science diplomacy and intercultural relations
- Shifting global geopolitics and Europe's preparedness for managing risks, mitigation actions and fostering peace
- The European Union and the global challenge of migration
- Contemporary radicalisation trends and their implications for Europe
- Intra-EU mobility and its impacts for social and economic systems

International cooperation is also explicitly encouraged for two topics addressing inequalities:

- Dynamics of inequalities across the life-course
- Fighting inequalities through policies against tax fraud and tax evasion

Other topics with an international cooperation dimension include:

- Science diplomacy for EU neighbourhood policies
- The strategic potential of EU external trade policy
- The Asia-Pacific as a strategic region for Europe
- The European Union and Central Asia
- EU-China cooperation on sustainable urbanisation
- Centres/Networks of European research and innovation

<p><i>Social Sciences and Humanities:</i> http://ec.europa.eu/research/social-sciences/index.cfm?pg=home <i>International Cooperation web site:</i> http://ec.europa.eu/research/iscp/index.cfm</p>
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Secure societies

The Secure societies challenge targets the research and innovation activities needed to protect our citizens, society and economy as well as our infrastructures and services, our prosperity, political stability and wellbeing.

In line with the EU's strategy for international cooperation in research and innovation, international cooperation is in general encouraged, and in particular with international research partners involved in ongoing discussions and workshops with the European Commission in [WP2016-17](#). There are 11 call topics that encourage international cooperation in general terms in WP2016-17. This includes the Cyber security dialogues with Japan and the US.

Security web site:

http://ec.europa.eu/dgs/home-affairs/financing/fundings/research-for-security/index_en.htm

Other actions

Apart from these 3 pillars, the Horizon 2020 programme also includes other themes relevant for non-EU partners, like:

- Science with and for society
- Cross-cutting activities
- Euratom (separate [work programme](#))



Science with and for society

The specific objective of this programme is to build effective cooperation between science and society, to recruit new talent for science and to pair scientific excellence with social awareness and responsibility.

Science with and for Society will open [one call for proposals](#) which is organised around four themes:

- Institutional Change to Support Responsible Research and Innovation in Research Performing and Funding Organisations
- Embedding Responsible Research and Innovation in Horizon 2020 Research & Innovation
- Strengthening the Science with and for Society Knowledge-Base
- Developing Inclusive, Anticipatory Governance for Research & Innovation

And includes 24 topics, out of which 6 encourage international cooperation.

Science with and for society web site:
<http://ec.europa.eu/research/swafs/index.cfm>

HOW TO PARTICIPATE IN HORIZON 2020?

Horizon 2020 offers opportunities for:

- **Collaborative research & innovation projects:** carried out by consortia of organisations working together on specific research & innovation areas. A consortium must include at least 3 participants from 3 different EU Member States or Associated countries. In addition to these three partners, any legal entity from anywhere in the world can be included in the consortium.
- **Individual researcher projects:** The [European Research Council](#) and the [Marie Skłodowska-Curie actions](#) offer unparalleled funding opportunities for individual researchers who want to work in Europe.

Eligibility for Funding

Horizon 2020 is open to participants from anywhere in the world - though they are not always eligible for H2020 funding. Regarding funding, we can distinguish between countries that are automatically eligible for funding and those that are not.

Automatically eligible for funding

- EU Member States and their overseas territories
- Associated countries - they participate in Horizon 2020 under the same conditions as EU Member States. There are, as of December 2015, [fifteen countries associated to Horizon 2020](#). For the Euratom programme, the only Associated Country is Switzerland.
- Developing countries - Research organisations in some 130 developing countries are automatically eligible for funding. The full list of these countries is provided in [Annex A of the Work Programme](#).

Not automatically eligible for funding

- Industrialised countries and emerging economies - participants from these countries have themselves to determine the sources of funding and find the resources for their part of the action. Several countries have created mechanisms to co-fund their participants in Horizon 2020 actions selected for EU funding.

In exceptional circumstances, industrialised and emerging economies can receive EU funding if:

- there is a **bilateral agreement** between that country and the EU. For instance, researchers in the United States are eligible for EU funding when participating in the health programme on the basis of a reciprocal EU - US/NIH arrangement
- the country is **explicitly identified** in the relevant work programme and call for proposal as being eligible for funding
- their participation is deemed by the European Commission to be **essential** for carrying out the action.

Individual researchers from any country in the world seeking the opportunity to work in Europe for a certain period of their career can apply for funding through the [European Research Council](#) and the [Marie Skłodowska-Curie actions and are eligible for funding](#).

Available support for Horizon 2020

Several industrialised countries have established matching funds, to fund the participation of their nationals in Horizon 2020:

- Countries with jointly agreed co-funding mechanism covering all thematic areas: [Republic of Korea](#), [Mexico](#), [Russia](#), [Taiwan](#)
- Countries with jointly agreed co-funding mechanism covering selected thematic areas: [Australia](#), [China](#), [Hong Kong & Macao](#), [Japan](#)
- Countries with co-funding by a region, for all thematic areas: [Canada](#), [Brazil](#).



ANNEX I – List of International Cooperation topics

Global Initiatives - Topic Title <i>(click topic name to follow link):</i>	Deadline
SC5-12-2016 - Food systems and water resources for the development of inclusive, sustainable and healthy Euro-Mediterranean societies Prima	26-01-2016
BG-11-2017 -The effect of climate change on Arctic permafrost and its socio-economic impact, with a focus on coastal areas GEOSS	14-02-2016
BG-09-2016 - An integrated Arctic observation system GEOSS	17-02-2016
BG-10-2016 - Impact of Arctic changes on the weather and climate of the Northern Hemisphere GEOSS	17-02-2016
SCC-04-2016 - Sustainable urbanisation Belmont Forum	08-03-2016
SC5-28-2016 - Transformations to sustainability Belmont Forum	08-03-2016
SC1-PM-06–2016 - Vaccine development for malaria and/or neglected infectious diseases EDCTP 2	13-04-2016
SC1-HCO-04–2016 - Towards globalisation of the Joint Programming Initiative on Antimicrobial resistance Joint Programming Initiative on antimicrobial resistance (JPIAMR)	13-04-2016
SC1-PM-08–2017 - New therapies for rare diseases International Rare Diseases Research Consortium, IRDiRC	04-10-2016
SC1-HCO-07–2017 - Global Alliance for Chronic Diseases (GACD)	11-04-2017
SC1-PM-03–2017 - Diagnostic characterisation of rare diseases International Rare Diseases Research Consortium IRDiRC	11-04-2017

Calls targeting Africa - Topic Title <i>(click topic name to follow link):</i>	Deadline
MG-3.6-2016 - Euro-African initiative on road safety and traffic management	26-01-2016
SFS-41-2016 - EU-Africa Research and Innovation partnership on food and nutrition security and sustainable agriculture	17-02-2016
SFS-42-2016 - Promoting food and nutrition security and sustainable agriculture in Africa: the role of innovation	17-02-2016
INFRASUPP-01-2016 - Policy and international cooperation measures for research infrastructures	30-03-2016
ENG-GLOBALLY-02-2017 - Shifting global geopolitics and Europe's preparedness for managing risks, mitigation actions and fostering peace	02-02-2017
SFS-43-2017 - Earth observation services for the monitoring of agricultural production in Africa	14-02-2017
ICT-39-2016-2017 - International partnership building in low and middle income countries	25-04-2017
SwafS-14-2017 - A Linked-up Global World of RRI	30-08-2017

Calls targeting Australia - Topic Title <i>(click topic name to follow link):</i>	Deadline
MG-3.5-2016 - Behavioural aspects for safer transport	20-01-2016
SC5-15-2016-2017 - Raw materials policy support actions	08-03-2016
INFRAIA-01-2016-2017 - Integrating Activities for Advanced Communities	30-03-2016
INFRAIA-02-2017 - Integrating Activities for Starting Communities	30-03-2016
LCE-30-2017 - Geological storage pilots	05-01-2017
MG-3.2-2017 - Protection of all road users in crashes	26-01-2017
ENG-GLOBALLY-06-2017 - The Asia-Pacific as a strategic region for Europe	02-02-2017
SFS-39-2017 - How to tackle the childhood obesity epidemic?	14-02-2017

Calls targeting Brazil - Topic Title <i>(click topic name to follow link):</i>	Deadline
MG-3.5-2016 - Behavioural aspects for safer transport	20-01-2016
NMBP-27-2016 - Promoting safe innovation through global consolidation and networking of nanosafety centres	21-01-2016
GV-11-2016 - Stimulating European research and development for the implementation of future road transport technologies	26-01-2016
SCC-04-2016 - Sustainable urbanisation	08-03-2016
INFRAIA-01-2016-2017 - Integrating Activities for Advanced Communities	30-03-2016
INFRAIA-02-2017 - Integrating Activities for Starting Communities	30-03-2016
ICT-13-2016 - Future Internet Experimentation - Building a European experimental Infrastructure	12-04-2016
ENG-GLOBALLY-09-2016 - Centres/Networks of European research and innovation	14-04-2016
EIT-Food - Food4Future - Sustainable Supply Chain from Resources to Consumers	14-07-2016
LCE-22-2016 - International Cooperation with Brazil on advanced lignocellulosic biofuels	08-09-2016
MG-3.2-2017- Protection of all road users in crashes	26-01-2017
EUB-01-2017 - Cloud Computing	14-03-2017
EUB-02-2017 - IoT Pilots	14-03-2017

Calls targeting Canada - Topic Title <i>(click topic name to follow link):</i>	Deadline
BG-09-2016 - An integrated Arctic observation system	17-02-2016
BG-10-2016 - Impact of Arctic changes on the weather and climate of the Northern Hemisphere	27-02-2016
SC5-15-2016-2017 - Raw materials policy support actions	08-03-2016
INFRAIA-01-2016-2017 - Integrating Activities for Advanced Communities	30-03-2016
INFRAIA-02-2017 - Integrating Activities for Starting Communities	30-03-2016
LCE-27-2017 - Measuring, monitoring and controlling the risks of CCS, EGS and unconventional hydrocarbons in the subsurface	05-01-2017
LCE-30-2017 - Geological storage pilots	05-01-2017
MG-3.2-2017- Protection of all road users in crashes	26-01-2017
MG-3.5-2016 - Behavioural aspects for safer transport	20-01-2016
BG-11-2017 - The effect of climate change on Arctic permafrost and its socio-economic impact, with a focus on coastal areas	14-02-2017
SFS-39-2017 - How to tackle the childhood obesity epidemic?	14-02-2017

Calls targeting China - Topic Title (<i>click topic name to follow link</i>):	Deadline
ICT-37-2016 - Collaboration on Future Internet	19-01-2016
MG-3.5-2016 - Behavioural aspects for safer transport	20-01-2016
GV-11-2016 - Stimulating European research and development for the implementation of future road transport technologies	26-01-2016
SFS-45-2016 - Increase overall transparency of processed agro-food products	17-02-2016
SFS-44-2016 - Joint plant breeding programme to decrease dependency of the EU and China on protein imports	17-02-2016
SC5-11-2016 - Supporting international cooperation activities on water	08-03-2016
SCC-02-2016-2017 - Demonstrating innovative nature-based solutions for climate and water resilience in cities	08-03-2016
SC5-10-2016 - Multi-stakeholder dialogue platform to promote innovation with nature to address societal challenges	08-03-2016
SCC-04-2016 - Sustainable Urbanisation, ERA-NET-Cofund	08-03-2016
INFRAIA-01-2016-2017 Integrating Activities for Advanced Communities	30-03-2016
INFRAIA-02-2017 - Integrating Activities for Starting Communities	30-03-2016
ENG-GLOBALLY-08-2016/2017 - EU-China innovation platform on sustainable urbanisation (Coordination and Support Action)	14-04-2016
ENG-GLOBALLY-09-2016 - Centres/Networks of European research and innovation	14-04-2016
ICT-07-2017 - 5G PPP Research and Validation of critical technologies and systems	08-11-2016
ICT-08-2017 - 5G PPP Convergent Technologies	08-11-2016
LCE-29-2017 - CCS in industry, including Bio-CCS	05-01-2017
MG-3.2-2017 - Protection of all road users in crashes	26-01-2017
ENG-GLOBALLY-08-2016/2017 - Cultural and socio-economic aspects of urban issues in China (Research and Innovation Action)	02-02-2017
SFS-46-2017 - Alternative production system to address anti-microbial usage, animal welfare and the impact on health	14-02-2017
SFS-47-2017 - Soil water resources management in the EU and China and its impact on agro-ecosystem functions	14-02-2017
SFS-48-2017 - Resource-efficient urban agriculture for multiple benefits – Contribution to the EU-China Urbanisation Partnership	14-02-2017
SCC-02-2016-2017 - Nature-based solutions for inclusive urban regeneration (including regeneration of deprived districts and neglected or abandoned areas)	07-03-2017
SC1-HCO-07-2017 -Grant to the Global Alliance for Chronic Diseases	11-04-2017

Calls targeting India - Topic Title <i>(click topic name to follow link):</i>	Deadline
MG-3.5-2016 - Behavioural aspects for safer transport	20-01-2016
INFRAIA-01-2016-2017 - Integrating Activities for Advanced Communities	30-03-2016
INFRAIA-02-2017 - Integrating Activities for Starting Communities	30-03-2016
EIT-Food - Food4Future - Sustainable Supply Chain from Resources to Consumers	14-07-2016
MG-3.2-2017- Protection of all road users in crashes	26-01-2017
ENG-GLOBALLY-06-2017 - The Asia-Pacific as a strategic region for Europe	02-02-2017

Calls targeting Japan - Topic Title <i>(click topic name to follow link):</i>	Deadline
NMBP-02-2016 - Advanced Materials for Power Electronics based on wide bandgap semiconductor devices technology	08-12-2015
NMBP-03-2016 - Innovative and sustainable materials solutions for the substitution of critical raw materials in the electric power system	08-12-2015
EUJ-01-2016 - Next Generation Communication Networks	19-01-2016
EUJ-02-2016 - IoT/Cloud/Big Data platforms in social application contexts	19-01-2016
EUJ-03-2016 - Experimental testbeds on Information-Centric Networking	19-01-2016
ART-06-2016 - Coordination of activities in support of road automation	20-01-2016
MG-3.5-2016 - Behavioural aspects for safer transport	20-01-2016
GV-02-2016 - Technologies for low emission light duty powertrains	26-01-2016
SC5-16-2016-2017 - Raw materials international co-operation	08-03-2016
SCC-04-2016 - Sustainable urbanisation	08-03-2016
INFRAIA-01-2016-2017 - Integrating Activities for Advanced Communities	30-03-2016
INFRAIA-02-2017 - Integrating Activities for Starting Communities	30-03-2016
ICT-13-2016 - Future Internet Experimentation	12-04-2016
SC1-PM-14-2016 - EU-Japan cooperation on Novel ICT Robotics based solutions for active and healthy ageing at home or in care facilities	12-04-2016
DS-05-2016 - EU Cooperation and International Dialogues in Cybersecurity and Privacy Research and Innovation	25-08-2016
ICT-07-2017 -5G PPP Research and Validation of critical technologies and systems	08-11-2016
ICT-08-2017 - 5G PPP Convergent Technologies	08-11-2016
MG-3.2-2017- Protection of all road users in crashes	26-01-2017

Calls targeting Japan - Topic Title <i>(click topic name to follow link):</i>	Deadline
GV-08-2017 - Electrified urban commercial vehicles integration with fast charging infrastructure	01-02-2017
ENG-GLOBALLY-06-2017 - The Asia-Pacific as a strategic region for Europe	02-02-2017
INNOSUP-08-2017 - A better access to industrial technologies developed overseas	28-03-2017
ICT-31-2017 - Micro- and nanoelectronics technologies	25-04-2017

Calls targeting Korea - Topic Title <i>(click topic name to follow link):</i>	Deadline
EUK-01-2016 - 5G – Next Generation Communication Networks	19-01-2016
EUK-02-2016 - IoT joint research	19-01-2016
EUK-03-2016 - Federated Cloud resource brokerage for mobile cloud services	19-01-2016
NMBP-27-2016 - Promoting safe innovation through global consolidation and networking of nanosafety centres	21-01-2016
LCE-24-2016 - International Cooperation with South Korea on new generation high-efficiency capture processes	16-02-2016
ICT-13-2016 - Future Internet Experimentation	12-04-2016
ICT-08-2017 - 5G PPP Convergent Technologies	08-11-2016
ICT-07-2017 -5G PPP Research and Validation of critical technologies and systems	08-11-2016
INNOSUP-08-2017 - A better access to industrial technologies developed overseas	28-03-2017
ICT-31-2017 - Micro- and nanoelectronics technologies	25-04-2017

Calls targeting Mexico - Topic Title <i>(click topic name to follow link):</i>	Deadline
ICT-38-2016 - MEXICO: Collaboration on ICT	19-01-2015
LCE-23-2016 - International Cooperation with Mexico on geothermal energy	16-02-2016
SCC-04-2016 - Sustainable urbanisation	08-03-2016
INFRAIA-01-2016-2017 - Integrating Activities for Advanced Communities	30-03-2016
INFRAIA-02-2017 - Integrating Activities for Starting Communities	30-03-2016

Calls targeting Russia - Topic Title <i>(click topic name to follow link):</i>	Deadline
INFRAIA-01-2016-2017 - Integrating Activities for Advanced Communities	30-03-2016
INFRAIA-02-2017 - Integrating Activities for Starting Communities	30-03-2016

Calls targeting USA - Topic Title <i>(click topic name to follow link):</i>	Deadline
ART-04-2016 - Safety and end-user acceptance aspects of road automation in the transition period	20-01-2016
MG-3.4-2016 - Transport infrastructure innovation to increase the transport system safety at modal and intermodal level (including nodes and interchanges)	20-01-2016
ART-05-2016 - Road infrastructure to support the transition to automation and the coexistence of conventional and automated vehicles on the same network	20-01-2016
MG-3.5-2016 - Behavioural aspects for safer transport	20-01-2016
MG-6.2-2016 - Large-scale demonstration(s) of cooperative ITS	20-01-2016
NMBP-27-2016 - Promoting safe innovation through global consolidation and networking of nanosafety centres	21-01-2016
ART-06-2016 - Coordination of activities in support of road automation	26-01-2016
MG-6.3-2016 - Roadmap, new business models, awareness raising, support and incentives for the roll-out of ITS	26-01-2016
GV-02-2016 - Technologies for low emission light duty powertrains	26-01-2016
SC1-HCO-13-2016 - Healthcare Workforce IT skills	16/02/2016
SC1-HCO-14-2016 - EU-US interoperability roadmap	16/02/2016
BG-09-2016 - An integrated Arctic observation system	17-02-2016
BG-10-2016 - Impact of Arctic changes on the weather and climate of the Northern Hemisphere	27-02-2016
SC5-15-2016-2017 - Raw materials policy support actions	08-03-2016
SC5-16-2016-2017 - Raw materials international co-operation	08-03-2016
SCC-04-2016 - Sustainable urbanisation	08-03-2016
INNO SUP-08-2017 - A better access to industrial technologies developed overseas	28-03-2017
INFRAIA-01-2016-2017 - Integrating Activities for Advanced Communities	30-03-2016
INFRAIA-02-2017 - Integrating Activities for Starting Communities	30-03-2016
ICT-13-2016 - Future Internet Experimentation	12-04-2016
ENG-GLOBALLY-09-2016 - Centres/Networks of European research and innovation	14-04-2016
ICT-31-2017 - Micro- and nanoelectronics technologies	25-04-2017
ENG-GLOBALLY-06-2017 - The Asia-Pacific as a strategic region for Europe	02-02-2017
DS-05-2016 - EU Cooperation and International Dialogues in Cybersecurity and Privacy Research and Innovation	25-08-2016

Calls targeting USA - Topic Title <i>(click topic name to follow link)</i> :	Deadline
ICT-07-2017 -5G PPP Research and Validation of critical technologies and systems	08-11-2016
ICT-08-2017 - 5G PPP Convergent Technologies	08-11-2016
LCE-27-2017 - Measuring, monitoring and controlling the risks of CCS, EGS and unconventional hydrocarbons in the subsurface	05-01-2017
LCE-30-2017 - Geological storage pilots	05-01-2017
MG-3.2-2017- Protection of all road users in crashes	26-01-2017
ART-07-2017 - Full-scale demonstration of urban road transport automation	26-01-2017
MG-7.1-2017 - Resilience to extreme (natural and man-made) events	26-01-2017
GV-08-2017 - Electrified urban commercial vehicles integration with fast charging infrastructure	01-02-2017
BG-11-2017 - The effect of climate change on Arctic permafrost and its socio-economic impact, with a focus on coastal areas	14-02-2017
SFS-39-2017 - How to tackle the childhood obesity epidemic?	14-02-2017

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International Cooperation in R&I:

<http://ec.europa.eu/research/iscp/index.cfm>

Horizon 2020:

<http://ec.europa.eu/programmes/horizon2020/>

Participant Portal:

<http://ec.europa.eu/research/participants/portal/desktop/en/home.html>

National Contact Points:

http://ec.europa.eu/research/participants/portal/desktop/en/support/national_contact_points.html

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Practical information

