

Aberdeen University

UKRO Visit

21 November 2017

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Mission

- To maximise UK engagement in EU-funded research, innovation and higher education activities

Our office

- Based in Brussels
- European office of the UK Research Councils
- Delivers subscription-based advisory services for around 150 research organisations in the UK and beyond
- Also provides National Contact Point services on behalf of the UK Government



Implications of Brexit for EU Research Funding



Facts and Points of Uncertainty

Post Invoking Article 50

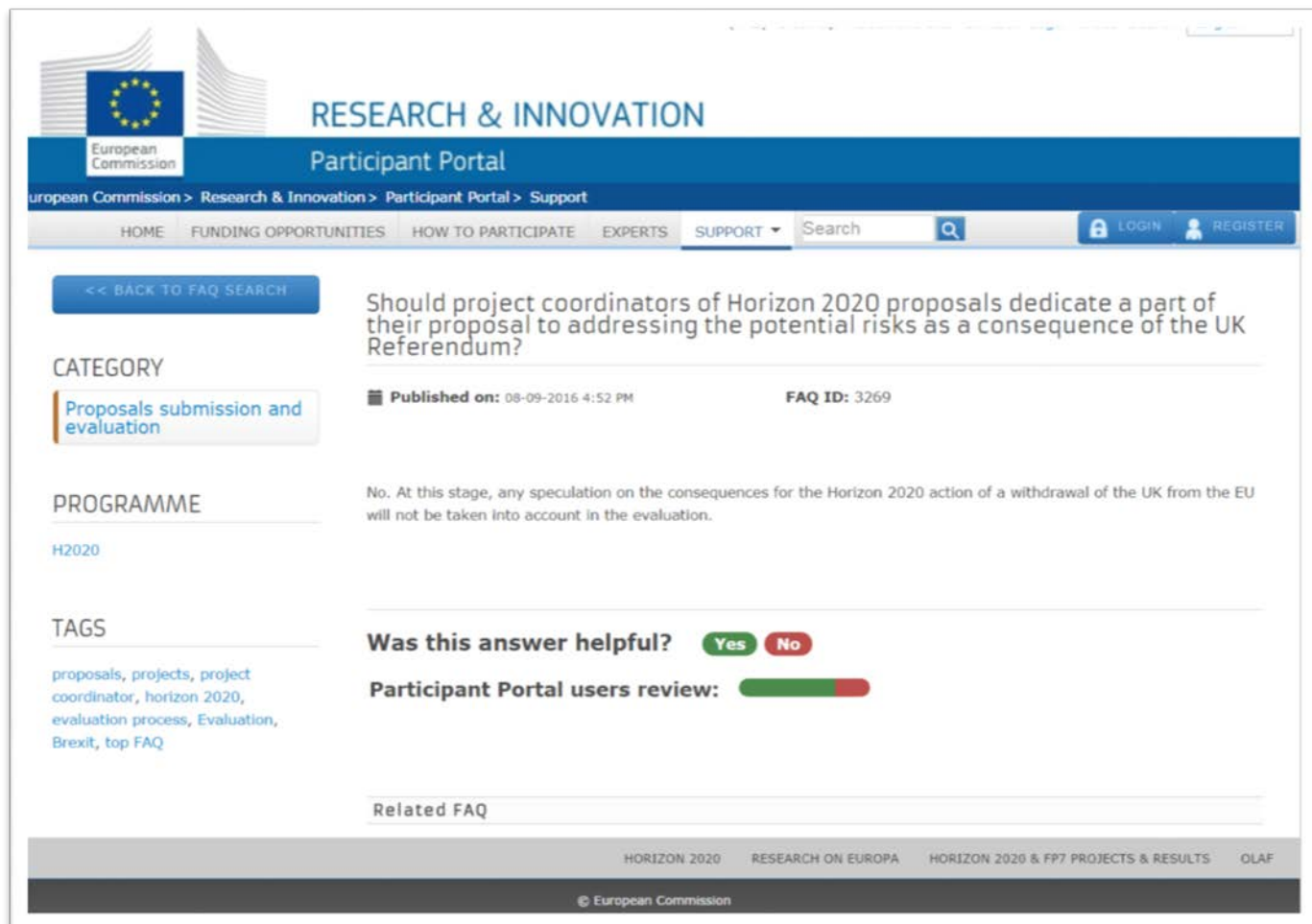
- The UK is still an EU Member State and continues to be until the end of the negotiations.
- This means it has the **same rights and obligations as all other 27 Member States, including the participation in EU funding programmes**
- Details on how the UK can participate after an exit need to be determined during the negotiations
- UK Government has a dedicated inbox for specific concerns Research@beis.gsi.gov.uk and UKRO can advise on latest developments UKRO@bbsrc.ac.uk

The Commission explicitly briefs evaluators in their guidance:



http://ec.europa.eu/research/participants/data/support/expert/h2020_expert-briefing_en.pdf

Commission guidance for coordinators



The screenshot shows the European Commission Research & Innovation Participant Portal. The main heading is "RESEARCH & INNOVATION Participant Portal". The breadcrumb trail is "European Commission > Research & Innovation > Participant Portal > Support". The navigation menu includes "HOME", "FUNDING OPPORTUNITIES", "HOW TO PARTICIPATE", "EXPERTS", and "SUPPORT". A search bar and "LOGIN" / "REGISTER" buttons are also present.

The main content area displays an FAQ entry with the question: "Should project coordinators of Horizon 2020 proposals dedicate a part of their proposal to addressing the potential risks as a consequence of the UK Referendum?". The entry is categorized under "Proposals submission and evaluation" and "PROGRAMME: H2020". It was published on 08-09-2016 4:52 PM with FAQ ID: 3269. The answer states: "No. At this stage, any speculation on the consequences for the Horizon 2020 action of a withdrawal of the UK from the EU will not be taken into account in the evaluation." Below the answer, there is a "Was this answer helpful?" section with "Yes" and "No" buttons, and a "Participant Portal users review:" progress bar.

Tags include: proposals, projects, project coordinator, horizon 2020, evaluation process, Evaluation, Brexit, top FAQ.

At the bottom, there is a "Related FAQ" section and a footer with "© European Commission" and navigation links for "HORIZON 2020", "RESEARCH ON EUROPA", "HORIZON 2020 & FP7 PROJECTS & RESULTS", and "OLAF".

<http://ec.europa.eu/research/participants/portal/desktop/en/support/faqs/faq-3269.html>

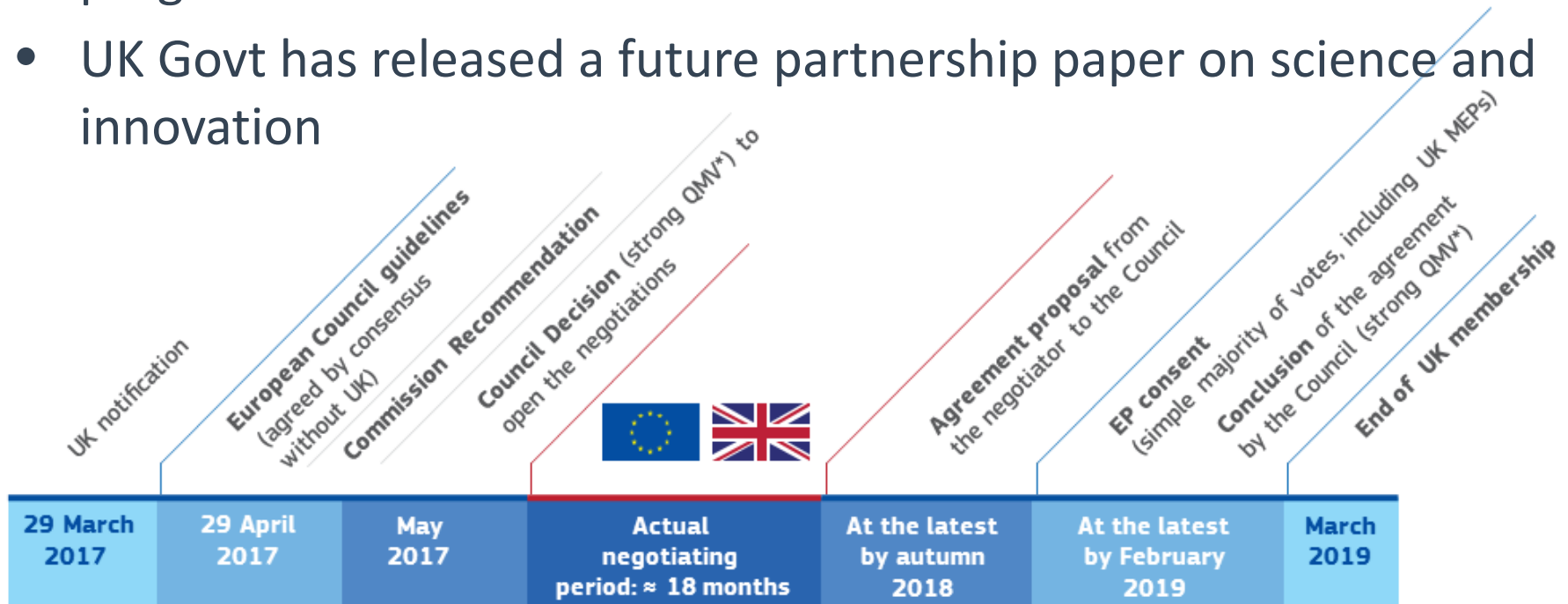
UK Government Statement 13 August 2016

- **Guarantees EU Funding for UK researchers beyond the date the UK leaves the EU:** *"where UK organisations bid directly to the European Commission on a competitive basis for EU funding projects while we are still a member of the EU, for example universities participating in Horizon 2020, the Treasury will underwrite the payments of such awards, even when specific projects continue beyond the UK's departure from the EU"*

- **Q&A released by UK Government in July 2017 gives further clarification.**
- British universities and research organisations should therefore continue to apply for EU funding through mechanisms such as Horizon 2020 while the UK remains a member of the EU.

What happens next?

- Negotiations are on-going
- Too early to speculate on the timing of the negotiations on UK engagement with Horizon 2020 and future funding programmes
- UK Govt has released a future partnership paper on science and innovation



* **Strong QMV** = 72% of the 27 Member States, i.e. 20 Member States representing 65 % of the EU 27 population.

UK Government's Negotiating Objectives for Exiting the EU

- It is impossible at the moment to make any predictions over the future and nature of the UK's participation in EU funded programmes such as Horizon 2020
- The Government confirms the HM Treasury statement and provides further details on research and innovation related matters in the white paper on [The United Kingdom's exit from and new partnership with the European Union](#).

Prime Minister's Speech at Lancaster House – Jan 2017

*"...there may be some **specific European programmes in which we might want to participate**. If so, and this will be for us to decide, it is reasonable that we should make an appropriate contribution..."*

*"We **will continue to attract the brightest and the best to work or study in Britain** – indeed openness to international talent must remain one of this country's most distinctive assets – but that process must be managed properly so that our immigration system serves the national interest."*

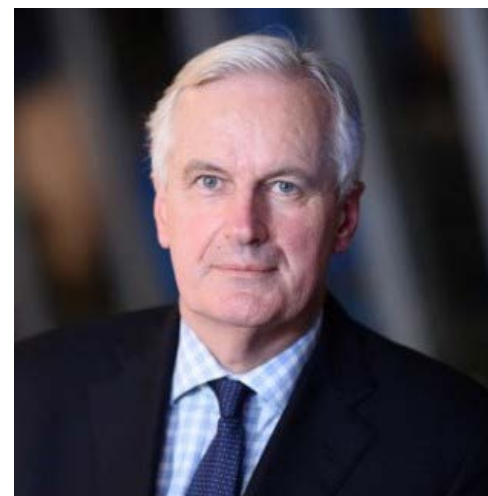
UK Government Future Partnership Paper

- Outlines how continued collaboration in science and innovation is an important part of the UK's future partnership with the EU.
- **"the UK will seek to agree a far-reaching science and innovation agreement with the EU that establishes a framework for future collaboration."**
- Programmes the UK would welcome discussion with the EU on are in particular:
 - The Research and Innovation (R&I) Framework Programmes;
 - The Space programmes;
 - Nuclear R&D and
 - Defence R&D.



*"Our community of values and interests with the United Kingdom goes beyond trade. **We are ambitious in our research and innovation networks, our laboratories and universities,** even if the regulatory and financial framework of our current cooperation will obviously change in the future."*

Michel Barnier, the EU's Chief Negotiator for Brexit, in Florence on 5 May 2017



Lamy Group Report on Horizon 2020 Interim Evaluation

- European Commission's independent High Level Group on maximising the impact of EU Research & Innovation Programmes ([Lamy Group](#)) published its [report](#) 'LAB – FAB – APP: Investing in the European future we want'.
- Makes 11 recommendations, including: No. 10: Make international R&I cooperation a trademark of EU research and innovation.
- Also states:
 - *'The UK has one of the strongest science bases of all European countries. **A positive cooperation model (e.g. based on mutual investment) should be established, so that the UK remains part of the European Research Area.'***

Jo Johnson Speech at HEFCE Conference 12 October 2017

'As the Government set out in its recent paper, we will be seeking an ambitious science and innovation agreement with the EU – one that continues high levels of collaboration with European partners on major science, research, and technology initiatives...

***...We want to remain a player in European science, research and innovation programmes.** And we will continue to attract the best talent from across the world, including the EU.'*



**Jo Johnson, UK Minister of State for
Universities, Science, Research and
Innovation**

Carlos Moedas Speech 16 October 2017

*'While you remain part of the European Union, **the Horizon 2020 programme is fully open to you.** Please keep taking part. Keep collaborating with your European partners. Keep welcoming researchers from other EU countries into your universities and research teams...'*

*'the message from the researchers in other Member States is clear. They want to continue working with their partners in the UK. To build on the relationships that have been developed over the last 40 years. **As the Lamy group put it in their report, Working together in the future is "an obvious win-win".'***



Carlos Moedas, European Commissioner for Research, Science and Innovation at the Royal Society of Edinburgh 16 October 2017

Horizon 2020

The basics on participation

Horizon 2020 – is it for me?

- Variety of instruments available (individual grants, funding for collaboration, prizes...)
- What is the scale of funding required?
- What form of funding do you need?
- Does your project idea have European Added Value (required in most cases)?

Types of action

Research and innovation actions (RIA)/ Innovation actions (IA)	‘Traditional’ multi-national, multi-partner collaborative projects
Coordination and support actions (CSA)	Actions consisting primarily of accompanying measures, e.g. standardisation, dissemination, networking
SME instrument	SMEs only – research can be subcontracted to HEIs
ERA-NET Cofund actions	Programmes run by network of national funders in specific field, part-funded by the EU from Horizon 2020. Issue calls for proposals in their own funding regimes.
European Joint Programme (EJP) Cofund actions	Action designed to support coordinated national research and innovation programmes
Pre-Contractual Procurement (PCP) actions	Public sector buys R&D to steer development of its solutions to its needs
Public Procurement of Innovative Solutions (PPI) actions	Public sectors acts as launching customer/early adopter/first buyer for innovative products and services
Prizes	All or nothing specific competitive calls – content varies

plus ERC frontier research actions
and training and mobility actions

Participation criteria

- In most cases the minimum criteria are three legal entities each of which established in a different Member State or associated country
- Exceptions to the rule: ERC, MSCA, prizes...
- Open access to publications and open data pilot
- Ethics, research integrity,

Funding rates

- **Mostly 100% for direct cost and 25% for indirect costs**
- 70% for Innovation Actions (non-profit organisations receive 100%)
- Unit costs for example for MSCA
- Prizes

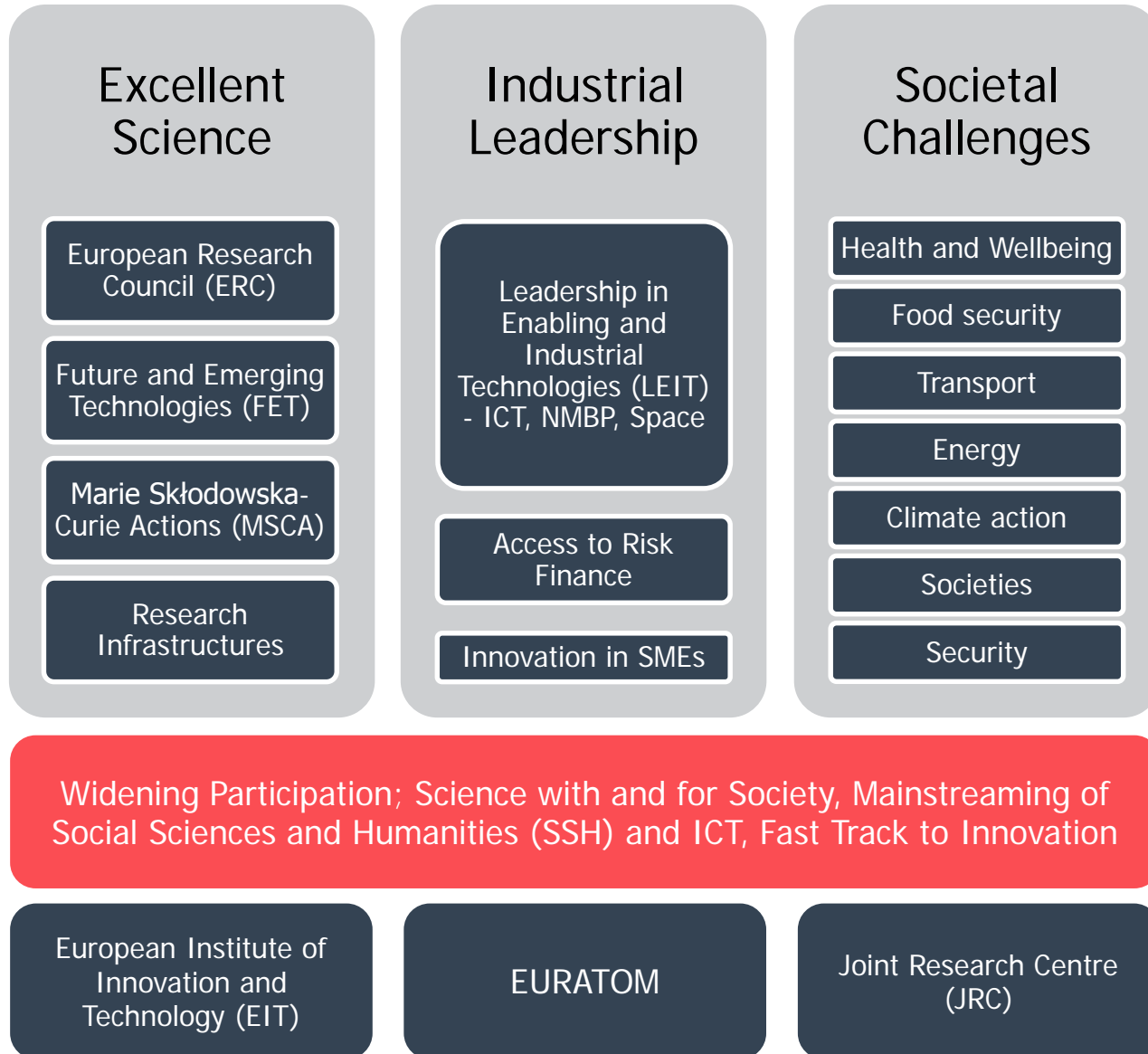
Horizon 2020

2018-2020 Work Programme

2018-2020 Work Programme

- Final three years €30 billion funding
- Last work programme for Horizon 2020 - further work will be needed to fill out 2020 priorities - bridge to FP9
- Taking into account the Interim Evaluation
- Deliver against the EU's political priorities and three O's
- Maximise potential impact - enhancing impact statements at call and topic level

Horizon 2020 structure



2018-2020 Work Programme – Main Priorities

5 main priorities identified:



Increased investment in sustainable development and climate related R&I



Integrating digitisation in all industrial technologies and societal challenges



Strengthening international R&I cooperation



Societal Resilience



Market creating innovation

2018-2020 Work Programme – Focus Areas

- Focus Areas - major actions which cut across the programme boundaries
- Aligns with major political/policy drivers- substantial
- In effect 'virtually linked calls'
- Call and topics still remain in their respective work programme parts



Low carbon future

Circular economy



Digitisation

Security union



Focus areas - content

Building a low-carbon, climate resilient future

LEIT-NMBP

LEIT-Space

SC2

SC3

SC4

SC5

Circular Economy

LEIT-NMBP

SC2

SC3

SC5

Digitising and transforming European industry and services

LEIT-ICT

LEIT-NMBP

LEIT-Space

SC1

SC2

SC3

SC4

SC6

Boosting the effectiveness of the Security Union

LEIT-ICT

LEIT-Space

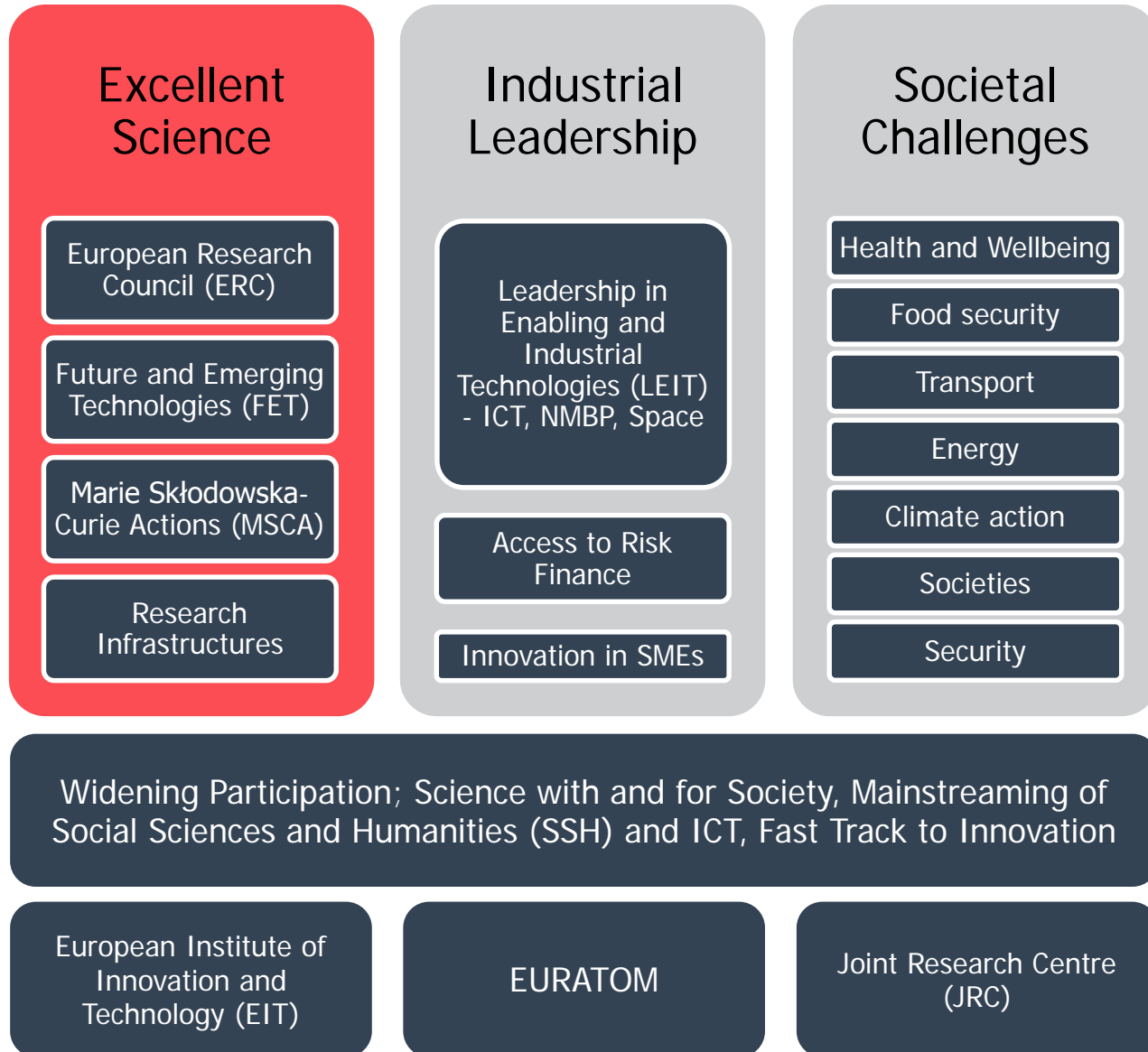
SC1

SC3

SC6

SC7

Horizon 2020 structure



What is the ERC?

“The fundamental activity of the ERC is to provide attractive, long-term funding to support excellent investigators and their research teams to pursue groundbreaking, high-gain/high-risk research.”

“Scientific excellence is the sole criterion on the basis of which ERC frontier research grants are awarded.”

“The ERC’s frontier research grants operate on a ‘bottom-up’ basis without predetermined priorities.”

ERC Work Programme 2018 text

ERC Grant Schemes

Starting Grants

- For PIs 2-7 years from PhD, up to €2 million for 5 years

Consolidator Grants

- For PIs 7-12 years from PhD, up to €2.75 million for 5 years

Advanced Grants

- For leading researchers, up to €3.5 million for 5 years.

Synergy Grants

- for 2 to 4 PIs, up to €14 million for 6 years.

Proof of Concept

- For ERC grant holders only, up to €150,000 for 18 months

ERC 2018 Calls

	Starting Grant	Consolidator Grant	Advanced Grant	Proof of Concept	Synergy Grant
Call identifier	ERC-2018-StG	ERC-2018-CoG	ERC-2018-AdG	ERC-2018-PoC	ERC-2018-SyG
Call Opens	3 August 2017	24 October 2017	17 May 2018	6 September 2017	3 August 2017
Deadline	17 October 2017	15 February 2018	30 August 2018	16/01/2018 18/04/2018 11/09/2018	14 November 2017
Planned dates to inform applicants	14/05/2018 14/08/2018	06/07/2018 30/11/2018	29/01/2019 08/04/2019	30/03/2018 21/07/2018 10/12/2018	23/04/2018 29/08/2018 19/10/2018
Budget €M (grants)	581 (391)	550 (287)	450 (194)	20 (130)	250 (30)

What is FET?

FET “shall support **collaborative** research in order to extend Europe's capacity for advanced and paradigm-changing **innovation**. It shall foster scientific collaboration across disciplines on radically new, **high-risk ideas** and accelerate development of the most promising **emerging areas of science and technology** as well as the Union-wide structuring of the corresponding scientific communities.”

(Regulation establishing Horizon 2020)



What is Funded under FET?

FET Open

Exploring novel ideas

- Early ideas
- Collaborative research projects
- Bottom-up: non-prescriptive with regard to the nature or purpose of the envisaged technologies
- Part of the EIC Pilot

FET Proactive

Developing topics & communities

- Exploration and incubation
- Topical clusters of research projects
- Specific areas defined in the Work Programme
- Also: separate call to implement part of the European HPC strategy

FET Flagships

Addressing grand challenges

- Large-scale partnering initiatives
- Common research agendas
- Two Flagships launched: Graphene and the Human Brain Project
- Quantum Flagship kick start
- Preparatory actions for new Flagships

Open, light and agile

Roadmap based research

Innovative Training Networks (ITN)

- For Early Stage Researchers

Individual Fellowships (IF)

- For Experienced Researchers

Research and Support Staff Exchange (RISE)

- Exchange visits (secondments) of staff

Co-funding of programmes (COFUND)

- For regional, national, international doctoral or fellowship programmes

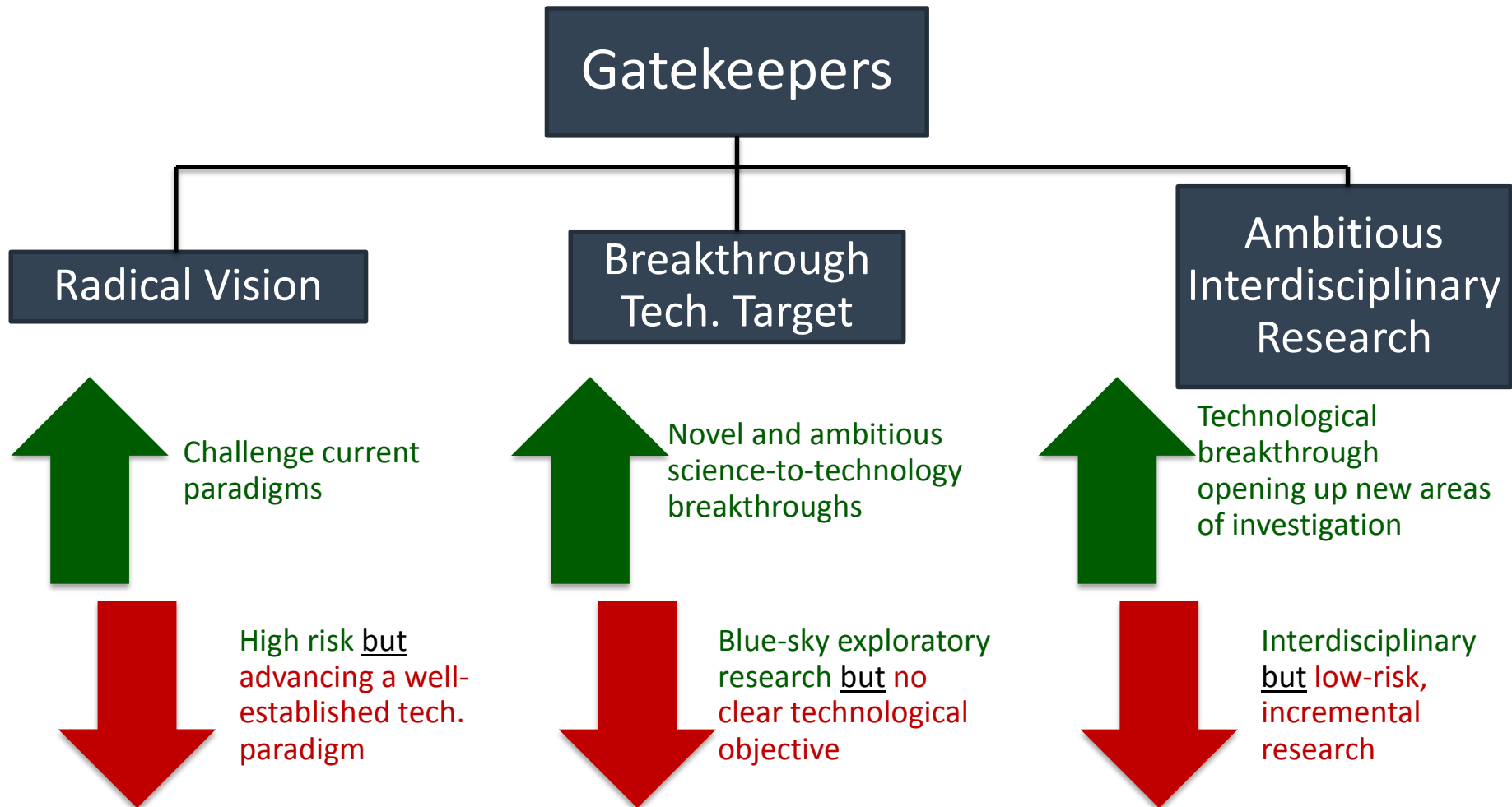
MSCA calls – 2018/19 Call Timetable

Call identifier	Publication date	Deadline	Call budget, €M
MSCA-ITN-2018	12 October 2017	17 January 2018	442
MSCA-ITN-2019	13 September 2018	10 January 2019	470
MSCA-RISE-2018	7 December 2017	18 April 2018	80
MSCA-RISE-2019	4 December 2018	3 April 2019	80
MSCA-IF-2018	12 April 2018	12 September 2018	278
MSCA-IF-2019	11 April 2019	11 September 2019	300
MSCA-COFUND-2018	12 April 2018	27 September 2018	80
MSCA-COFUND-2019	4 April 2019	26 September 2019	90
MSCA Researchers' Night	7 November 2017	13 February 2018	12

What is funded under FET Open?

Challenging Current Thinking (RIA)

- Non-prescriptive with regard to nature or purpose of technologies
- FET Open is part of the European Innovation Council pilot.



What is funded under FET Proactive?

- Addresses promising directions for research on future technologies in order to build up a European critical mass of knowledge and excellence around them
- Pre-defined areas:

Emerging paradigms and communities

- Artificial organs, tissues, cells and sub-cellular structures; time; living technologies; socially interactive technologies; disruptive micro-energy and storage technologies; topological matter
- Indicative requested contribution €4-7 million per proposal (up to €5 for proposals on the sub-topics of 'Time' and 'Topological matter')
- Allowed provision of financial support to third parties established in a MS or AC, either to enhance impacts through punctual small scale experimentation and use of project results by third parties, or to award a prize following a contest organised by the beneficiaries.

Community building in Neuromorphic Computing Technologies

- Networking and coordinating the NMC communities
- Showcasing variety of NMC technologies and their applicability in cognitive computing
- Stimulating wide industrial interest and further public-private investment in the field

What is funded under FET Proactive?

FET ERA-NET Cofund

(Applications through corresponding calls funded by national funding bodies)

- Advance the construction of the European Research Area in the FET domain by sharing a common vision of the various relevant efforts in Europe and fostering cooperation towards the coordinated development of radically new future technologies
- Mandatory activities:
 - Identifying future and emerging technologies where transnational cooperation and community structuration is needed, in complementarity and synergy with FET;
 - Developing strategic agendas for these topics and accompanying the structuration of the related communities through workshops and transversal activities.
- The partnership is expected to aim at being pan-European and as inclusive as possible.

High Performance Computing (HPC)

- International Cooperation on HPC
 - Develop strategic partnership in HPC with Brazil and Mexico (Brazilian/Mexican partners not funded by the EU)
- Extreme scale computing technologies, methods and algorithms for key applications and support to the HPC ecosystem
- Proposals should identify and address at least one of the following areas:
 - System software and management; programming environments; I/O and storage environment for data-centric extreme scale computing; data-intensive supercomputing and emerging HPC use modes; mathematical methods and algorithms

What is funded under FET Flagships?

- Science-driven, large-scale, multidisciplinary research initiatives, aiming to achieve transformational impacts with substantial benefits for European competitiveness and society
- Two Flagships formed under FP7:



Graphene: to take the material graphene and related layered materials from academic laboratories to society



Human Brain Project: to accelerate our understanding of the human brain, make advances in defining and diagnosing brain disorders, and develop new brain-like technologies

- Work Programme provides continued support to Flagships and related initiatives
- Kick-start the support to the new Flagship on Quantum Technologies

Research Infrastructures: What Will Be Funded in 2018-2020 Work Programme

Development and long-term sustainability of new pan-European RIs

Interoperability and European Open Science Cloud

Integrating and Opening RIs of European Interest

European Data Infrastructure

Research Infrastructures in the translation of Open Science to Open Innovation

Support to Policy and International cooperation

Other Actions

FET call information (2018 deadlines)

Call	2018 Deadline	Budget
FETOPEN 1	16 May 2018	€181.2 m
FETOPEN 2	11 April 2018	€2 m
FETOPEN 3	16 October 2018	€2.5 m
FETPROACT 1	22 March 2018	€88.0 m
FETPROACT 2	22 March 2018	€0.5 m
FETPROACT 3	18 December 2018	€6 m
FETHPC 1	15 May 2018	€4 m
FETFLAG 1	20 February 2018 (First Stage) 18 September 2018 (Second Stage)	€6 m
FETFLAG 2	17 April 2018	€10 m
FETFLAG 3 (CSA)	20 February 2018	€2 m
FETFLAG 3 (RIA)	20 February 2018	€130 m

Marie Skłodowska-Curie Actions

- Operates in a '**bottom-up**' basis
- For any research and innovation ideas (basic research; market take-up)
- **Mobility** (cross-border and cross-sector) is a key requirement
- Enhance skills of **people behind research and innovation**
- Strong participation across sectors
- Dissemination and **public engagement** - public outreach
- Gender balance – equal opportunities in the research content

Innovative Training Networks (ITN)

- For Early Stage Researchers

Individual Fellowships (IF)

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Research and Support Staff Exchange (RISE)

- Exchange visits (secondments) of staff

Co-funding of programmes (COFUND)

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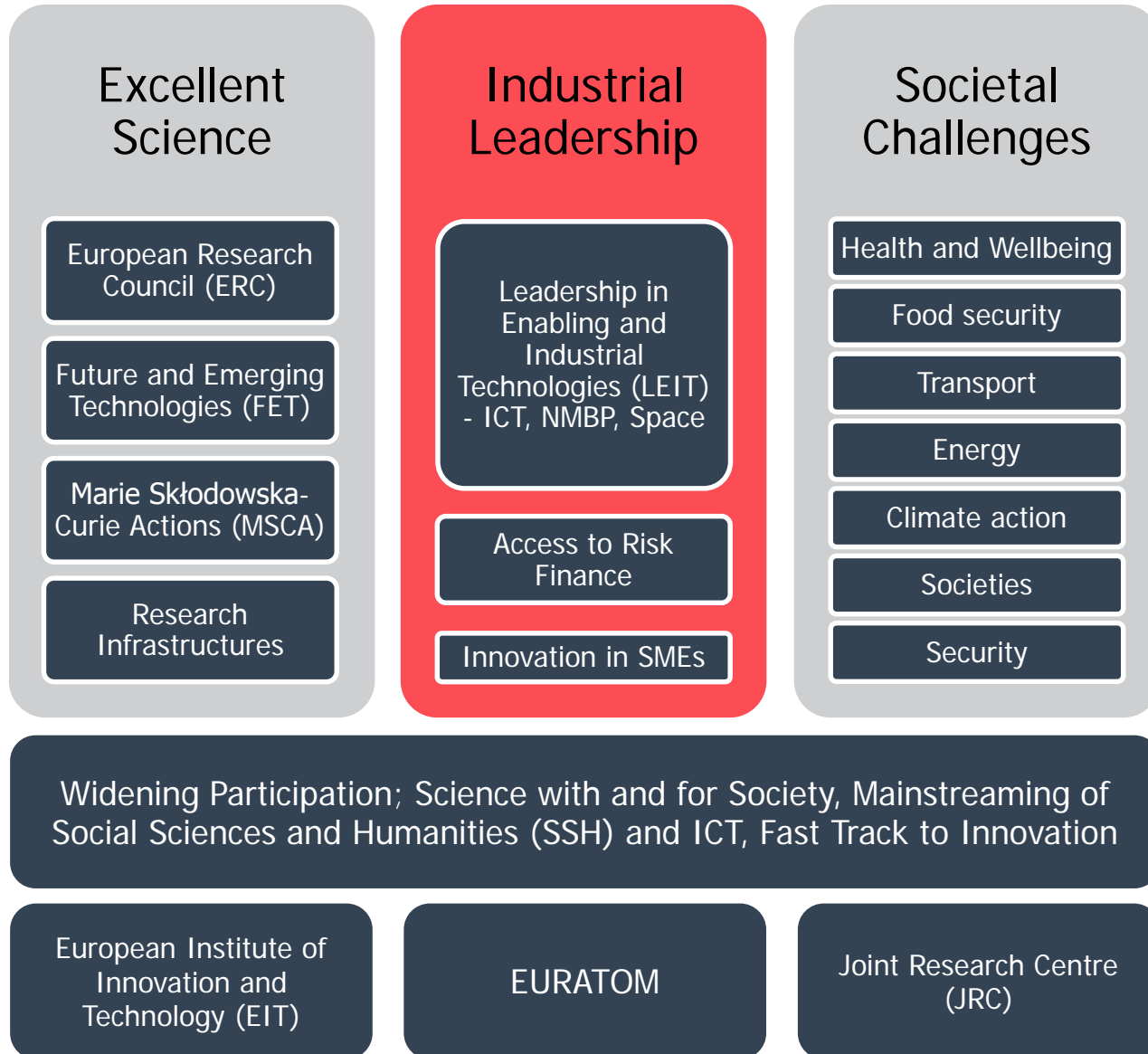
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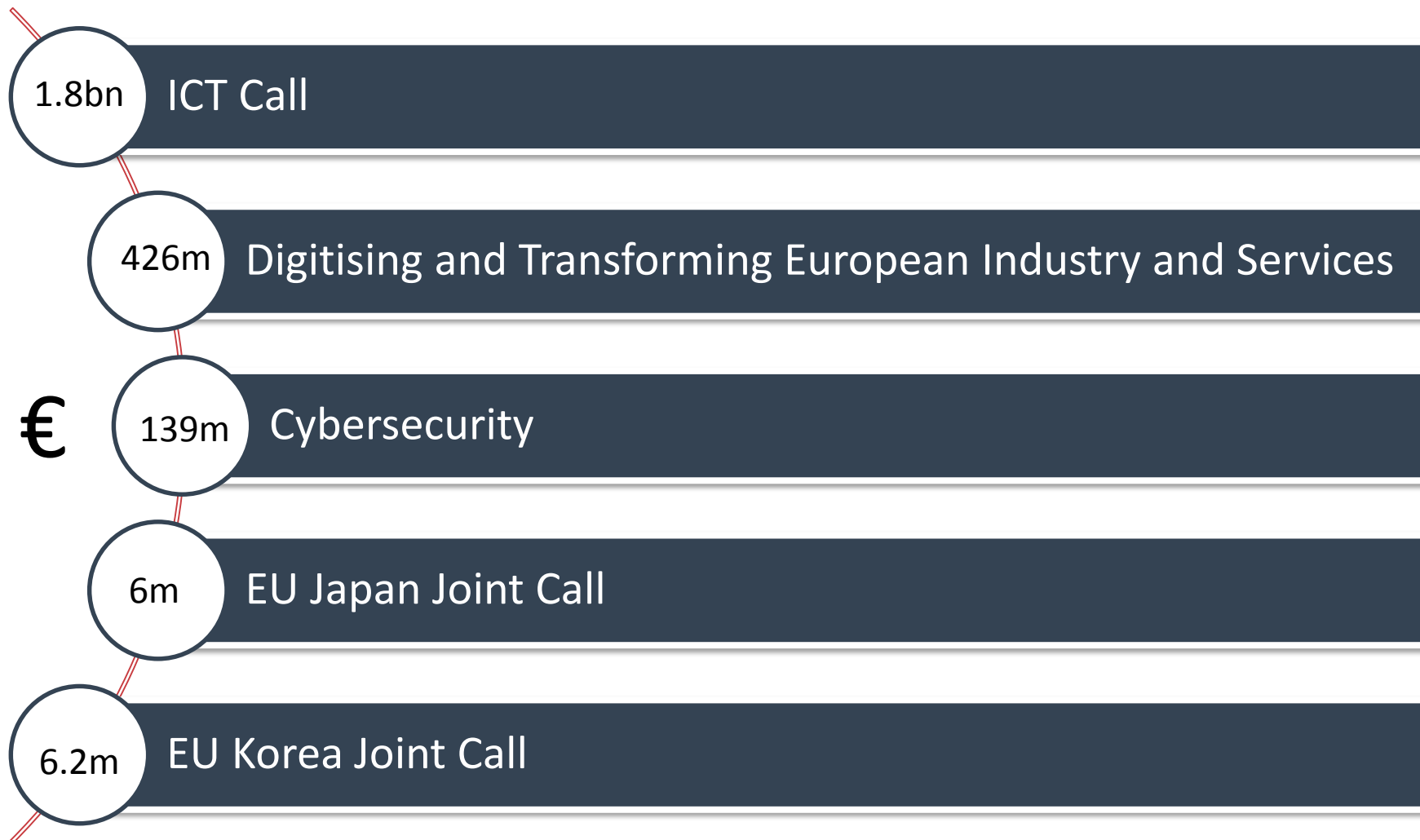
Other Actions

Horizon 2020 structure



ICT Work Programme 2018-2020

Indicative Budget



What is funded (Work Programme 2018- 2020)?

Technologies for Digitising European Industry

- Establish next generation digital platforms and rebuild the underlying digital supply chain on which all economic sectors are dependent
- Enable all sector and application areas to adapt,, transform and benefit from digitisation
- Support to Microelectronics, in particular for higher TRLs, through the ECSEL JU

European Data Infrastructure: HPC, Big Data and Cloud Technologies

- Support the creation of a European Data Infrastructure and a European Data Economy, complementing the relevant activities in the e - Infrastructures and FET WPs.
- Enable the creation of a world - HPC/BD ecosystem based on European leadership in HPC, Cloud and Big Data technologies.

5G

- Phase 3 of 5G cPPP, targeting validation of of R&I on technologies and architectures for 5G
- Support EU 5G policy as outlined in the context of the 5G Action Plan whilst implementing the last phase of the 5G cPPP roadmap
- China and Taiwan collaboration

5G
PPP

Cybersecurity

- Dynamic countering of cyber-attacks
- Building blocks for resilience in evolving ICT systems
- Advanced cybersecurity and digital privacy technologies
- Quantum key distribution testbed

What is funded (Work Programme 2018- 2020)?

Next Generation Internet (NGI)

- Focus on future interactive technologies, advances in AI, IoT, future social networks, media and platforms as well as language technologies, forming a coherent and integrated package of topics

Cross-cutting activities

- Better address innovation in industry and society by engaging artists in European R&I projects through STARTS lighthouse pilots
- Startup Europe for Growth and Innovation Radar
- Enable public procurers to collectively implement PCPs in order to close the gap between supply and demand for innovative ICTs

Digitising and transforming European industry and services

- Projects cutting across technological boundaries and reinforcing links between LEIT and Societal Challenges.
- Two types of activities:
 - Digital innovation hubs
 - Cross-sectorial and integrated digital platforms and large scale pilots

NMBP: Overview

NMBP covers four of the six Key Enabling Technologies identified as priorities by the Commission

Nanotechnology

Advanced Materials

NMBP

Biotechnology

Advanced
Manufacturing and
Processing

Micro- and nano-
electronics

ICT

Photonics

NMBP: Call Structure

NMBP Calls 2018-2020

Foundations For Tomorrow's Industry

Open Innovation Test
Beds

Materials
Characterisation and
Computational
Modelling

Governance, Science-
Based Risk Assessment
and Regulatory Aspects

Transforming European Industry

Factories of the Future

Biotechnology

Medical Technology
Innovations

Industrial Sustainability

Sustainable Process
Industry

Catalysing the Circular
Economy

Clean Energy Through
Innovative Materials

Cultural Heritage

Energy-Efficient Buildings

Space: Work Programme 2018 – 2020

Four main priorities

- Maximising the benefits of space for society and the EU economy;
- Fostering a globally competitive and innovative European space sector;
- Reinforcing Europe's autonomy in accessing and using space in a secure and safe environment;
- Strengthening Europe's role as a global actor and promoting international cooperation.

Two Calls

I. SPACE

II. EGNSS Market Uptake



Call: Space 2018 – 2020

The ‘Space’ call for 2018-2020 is divided into four main areas:

- I. Earth Observation**
- II. Space Business, Entrepreneurship, Outreach and Education**
- III. Space Technologies, Science and Exploration**
- IV. Secure and Safe Space Environment**



The EIC is a pilot scheme, combining four initiatives to support innovation projects with market potential. They mainly target SMEs, but there is space for academic involvement.

- **SME Instrument**

Close-to-market and scale up projects for SMEs

- **Fast Track to Innovation (FTI)**

Close-to-market projects for industry-focussed consortia

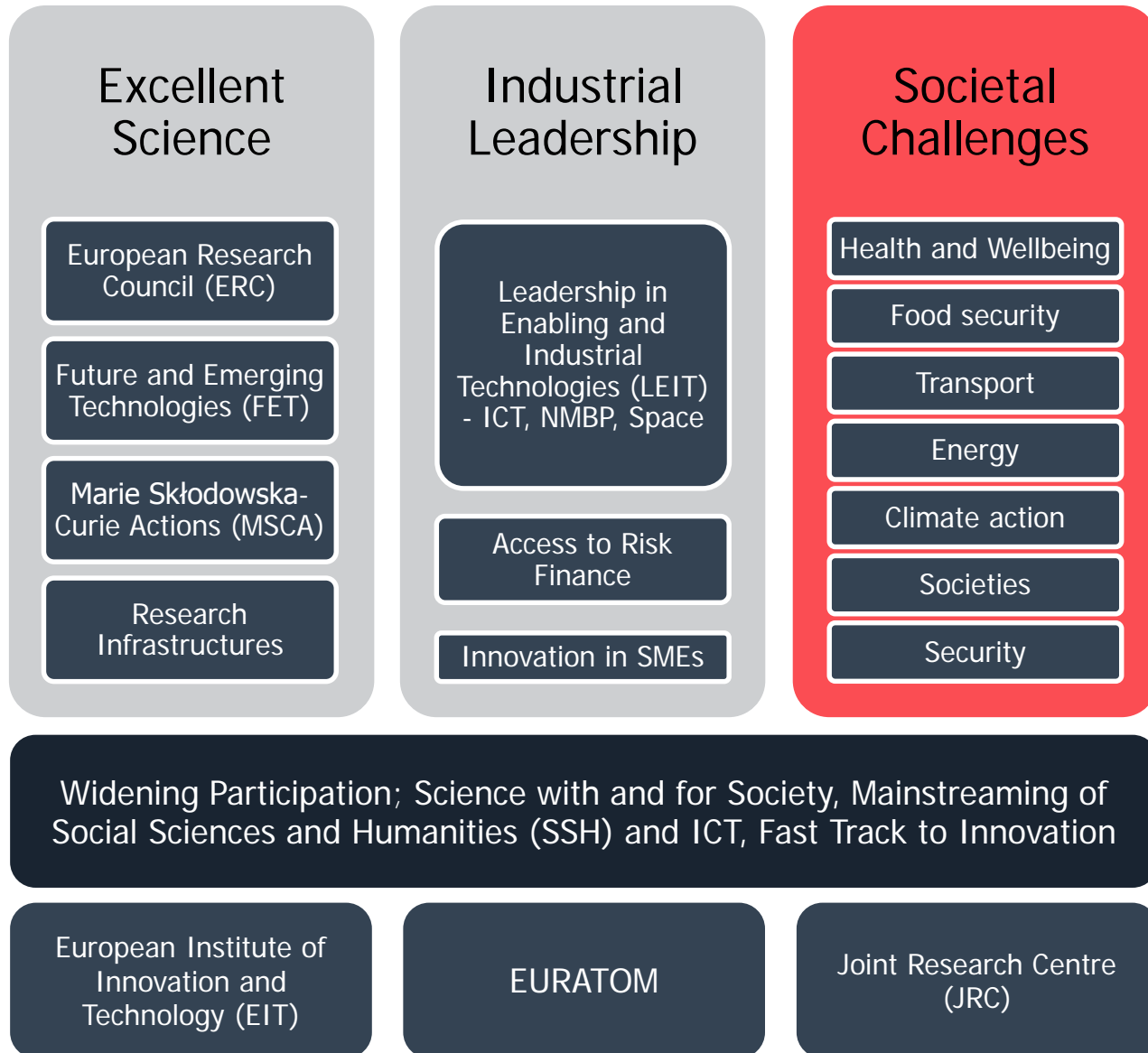
- **FET Open**

The development, promotion or commercialisation of radically new technologies

- **Prizes**

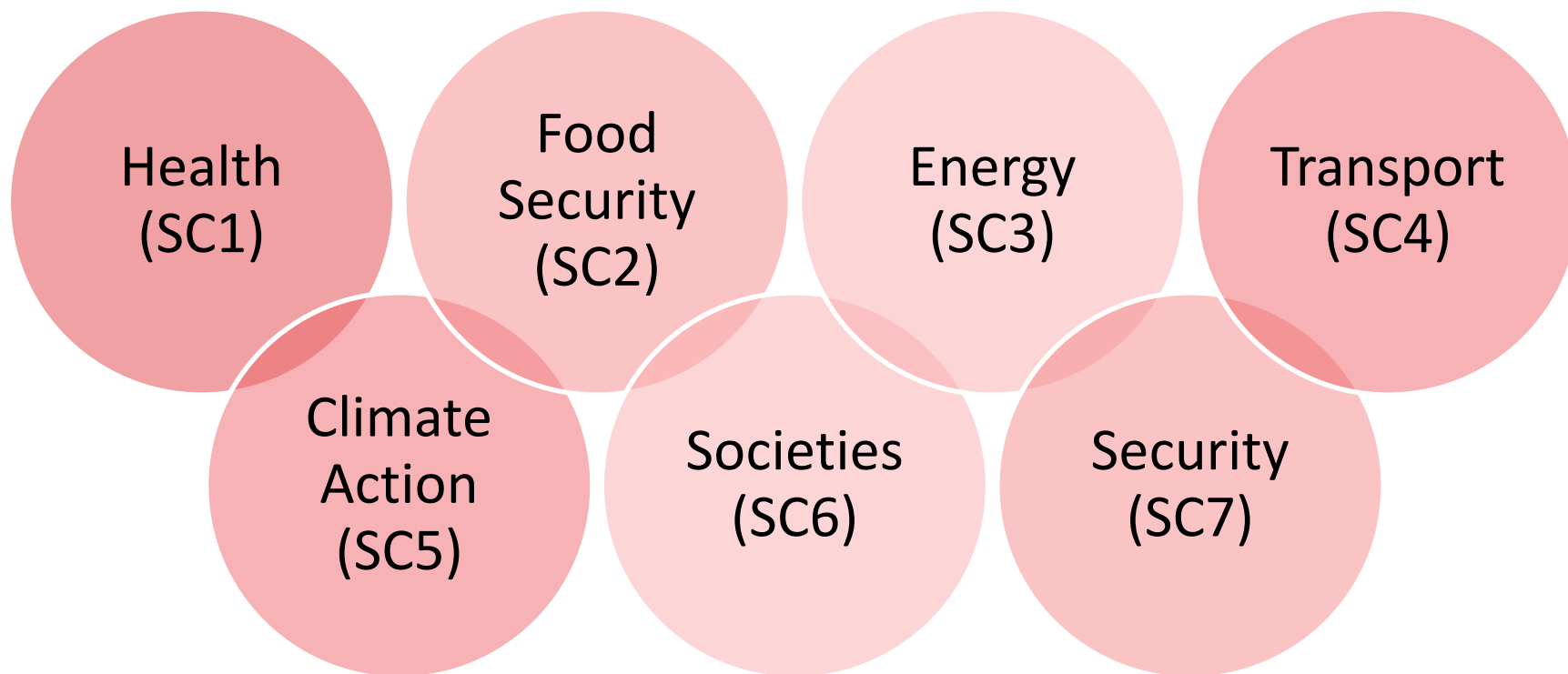
Awards given for highest achievement or the best solution to a stated problem

Horizon 2020 structure



Societal Challenges: Configuration

- The Societal Challenges each have a separate section of the Horizon 2020 work programme, containing background information about the challenge, as well as listing the calls and topics in that area during 2016 - 2017.
- Many of the Societal Challenges overlap, meaning that there may be topics relevant to you in numerous work programmes. Earth Observation-relevant topics, for example, can be found in both Climate Action (SC5) and Food Security (SC2) as well as in the LEIT area of Horizon 2020.



Societal Challenges: Participant Portal

The screenshot shows a web interface for 'Societal Challenges'. On the left is a 'Sections navigation' sidebar with a menu icon. The 'Societal Challenges' section is highlighted in blue. Below it are several menu items: 'Health, Demographic Change and Wellbeing', 'Food Security, Sustainable Agriculture and Forestry, Marine, Maritime and Inland Water Research and the Bioeconomy', 'Secure, Clean and Efficient Energy', 'Smart, Green and Integrated Transport', 'Climate Action, Environment, Resource Efficiency and Raw Materials', 'Europe in a changing world - Inclusive, innovative and reflective societies', and 'Secure societies - Protecting freedom and security of Europe and its citizens'. The main content area is titled 'Societal Challenges' and has two tabs: 'Article' and 'Newsroom'. A yellow highlighted box contains the text: 'Horizon 2020 reflects the policy priorities of the Europe 2020 strategy and addresses major concerns shared by citizens in Europe and elsewhere.' Below this, a paragraph states: 'A challenge-based approach will bring together resources and knowledge across different fields, technologies and disciplines, including social sciences and the humanities. This will cover activities from research to market with a new focus on innovation-related activities, such as piloting, demonstration, test-beds, and support for public procurement and market uptake. It will include establishing links with the activities of the European Innovation Partnerships (EIP).' This is followed by the text 'Funding will focus on the following challenges:' and a bulleted list of seven challenge areas. At the bottom of the main content area is a button labeled 'Work Programme'.

Sections navigation

Societal Challenges

- Health, Demographic Change and Wellbeing
- Food Security, Sustainable Agriculture and Forestry, Marine, Maritime and Inland Water Research and the Bioeconomy
- Secure, Clean and Efficient Energy
- Smart, Green and Integrated Transport
- Climate Action, Environment, Resource Efficiency and Raw Materials
- Europe in a changing world - Inclusive, innovative and reflective societies
- Secure societies - Protecting freedom and security of Europe and its citizens

Societal Challenges

Article Newsroom

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

A challenge-based approach will bring together resources and knowledge across different fields, technologies and disciplines, including social sciences and the humanities. This will cover activities from research to market with a new focus on innovation-related activities, such as piloting, demonstration, test-beds, and support for public procurement and market uptake. It will include establishing links with the activities of the European Innovation Partnerships (EIP).

Funding will focus on the following challenges:

- Health, demographic change and wellbeing;
- Food security, sustainable agriculture and forestry, marine and maritime and inland water research, and the Bioeconomy;
- Secure, clean and efficient energy;
- Smart, green and integrated transport;
- Climate action, environment, resource efficiency and raw materials;
- Europe in a changing world - inclusive, innovative and reflective societies;
- Secure societies - protecting freedom and security of Europe and its citizens.

Work Programme

The Societal Challenges have a homepage on the participant portal containing links to the most recent versions of the Work Programmes.

<http://ec.europa.eu/programmes/horizon2020/en/h2020-section/societal-challenges>

Societal Challenges: Participant Portal

Sections navigation

- Societal Challenges
- Health, Demographic Change and Wellbeing
- Food Security, Sustainable Agriculture and Forestry, Marine, Maritime and Inland Water Research and the Bioeconomy
- Secure, Clean and Efficient Energy
- Smart, Green and Integrated Transport
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Societal Challenges

Article | Newsroom

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A challenge-based approach will bring together resources and knowledge across different fields, technologies and disciplines, including social sciences and the humanities. This will cover activities from research to market with a new focus on innovation-related activities, such as piloting, demonstration, test-beds, and support for public procurement and market uptake. It will include establishing links with the activities of the European Innovation Partnerships (EIP).

Funding will focus on the following challenges:

- Health, demographic change and wellbeing;
- Food security, sustainable agriculture and forestry, marine and maritime and inland water research, and the Bioeconomy;
- Secure, clean and efficient energy;
- Smart, green and integrated transport;
- Climate action, environment, resource efficiency and raw materials;
- Europe in a changing world - inclusive, innovative and reflective societies;
- Secure societies - protecting freedom and security of Europe and its citizens.

Work Programme

Each Societal Challenge homepage contains variously:

- FAQs;
- Policy background and rationale;
- links to objectives or strategies;
- Links to calls;
- Flash call information;
- Events.

Secure societies – Protecting freedom and security of Europe and its citizens

Article | Newsroom

This Challenge is about undertaking 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.

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



Search

Related Horizon 2020
projects

Related Horizon 2020
calls

Societal Challenges: Further Information

The **UKRO Portal** contains news of the latest developments within the Societal Challenges:

- Calls and results
- Resources
- Events
- Policy developments

The screenshot shows the UKRO Portal interface. At the top, there is a navigation bar with the UKRO logo and two dropdown menus: 'About UKRO' and 'ERC NCP'. Below this is a search bar containing the text 'climate action' and a magnifying glass icon. Underneath the search bar are five buttons: 'Everything', 'Articles', 'Pages', 'Documents', and 'Factsheets & Guidance'. The search results section is titled 'Search Results:' and contains two entries. The first entry is titled 'Horizon 2020: Societal Challenge 5: Climate action, environm...' and includes a snippet of text: 'quality and carbon footprints; coordination of research and innovation for **climate action** ... Activities related to **climate action** can also be found in the Blue Growth section of the ...' and a link to 'www.ukro.ac.uk/subscriber/Factsheets/factsheet_climate.pdf'. The second entry is titled 'Climate action, environment, resource efficiency and raw...' and includes a snippet: '2020 for the societal challenge 'Climate action, environment, resource efficiency and raw materials' 5. **CLIMATE ACTION**, ENVIRONMENT ...' and a link to 'www.ukro.ac.uk/authoring/.../150806_sc5_climate_funded_projects.pdf'.

www.ukro.ac.uk

The screenshot shows a factsheet titled 'Horizon 2020 Condensed Societal Challenge 5: Climate action, environment, resource efficiency and raw materials'. The UKRO logo is in the top right corner. The text is as follows: 'What is the 'Climate Challenge'? Funding for the Climate Challenge will be predominantly for collaborative projects in a number of priority areas. The aim of the Challenge is to achieve a resource – and water – 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 to meet the needs of a growing global population within the sustainable limits of the planet's natural resources and eco-systems. The Work Programme focuses on innovation for a green economy and actions are targeted at addressing gaps in knowledge needed to: Understand changes in the environment; Identify policies, methods and tools needed to address the challenges of climate change impact, the reducing availability of natural resources and raw materials, and current production and consumption patterns; Support innovators and business to bring green solutions to the market. Societal Challenge 5 is the lead for two focus areas identified in the Strategic Programme for Horizon 2020 for 2014-2016: Waste: a resource to recycle, reuse and recover raw materials, and Water Innovation: boosting its value for Europe. Activities are expected to contribute to the objectives set out in the European resource efficiency roadmap where the aim is that by 2020 waste will be managed as a resource; waste generated per capita will be in absolute decline and recycling and reuse of waste will be economically attractive options. What will be funded? A brief summary of calls in Societal Challenge 5 follows. For a full description and topic details, please see the Work Programme. Waste: A resource to recycle, reuse and recover raw materials The whole production and consumption cycle is addressed, from waste prevention, through recycling, to waste disposal and reuse. Water Innovation: Boosting its value for Europe Addresses integrated approaches to water and climate change; bringing innovative water solutions to market; and harnessing water research and innovation results for the benefit of industry, policy makers and citizens. Version: May 2015 - This factsheet reflects information available on the date issued. UKRO factsheets are produced for the benefit of staff in UKRO sponsor and subscriber institutions only. 1

An overview factsheet is also available on the UKRO portal for each Societal Challenge.

SC1: What will be funded 2018-2020?

- Largest Societal Challenge budget; with indicative budget of approx. €2 billion for 2018-2020
- Contribution to 'Digitisation' and 'Security Union' Focus Areas

3 main calls:



Better health and care, economic growth and sustainable health systems



Digital transformation in Health and Care



Trusted Big Data solutions and Cybersecurity for Health and Care

Other Actions in 2018-2019



Subscription fee: Human Frontier Science Programme Organisation



Studies, activities of the Scientific Panel for Health, conferences, events and outreach activities



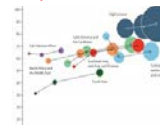
External expertise



Grant to the Global Alliance for Chronic Diseases



Commission expert group for the impact assessment of the planned Commission communication on infectious diseases



Subscription fee: World RePORT international health research database



Mobilisation of research funds in case of Public Health Emergencies

SC1 Info Day for 2018-2020 Work Programme

- European Commission will host an [info day](#) on 2018-2020 Work Programme on **8 December 2017 in Brussels**.
- There will be a satellite event on 'Innovation Procurement in health care' on 7 December 2017 as well as a partnering event organised by the NCP network.

SC2 EU Policy Context (3)

- Five key priorities...

Addressing climate change and resilience on land and sea

Making the transition towards a circular bioeconomy

Fostering functional ecosystems, sustainable food systems, health lifestyles

Boosting major innovation on land and sea

Developing smart, connected territories and value chains in rural and coastal areas

SC2 Policy priorities translated into 3 overarching calls

- Sustainably harvesting the potential of resources from seas, oceans and inland waters...

**Blue Growth
(BG)**



- Food and Nutrition Security in Europe and beyond...

**Sustainable Food
Security (SFS)**



- Enhance the natural, social, cultural and economic potential of rural areas...

**Rural
Renaissance
(RUR)**



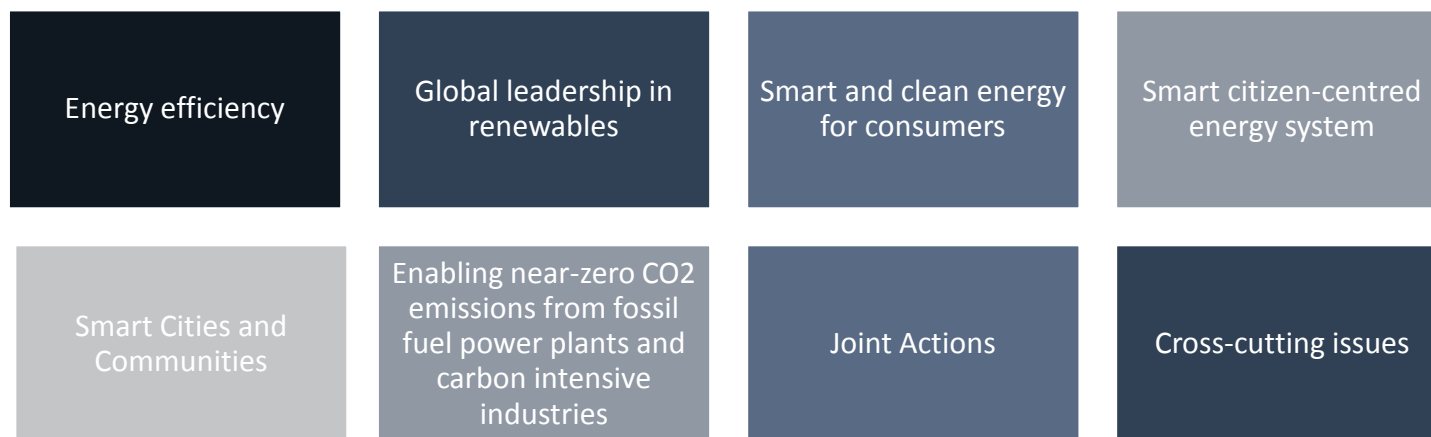
SC2: Call Deadlines 2018-2020

- 2018 Calls will open on 27 October 2017
- 2019 Call will open on 25 October 2018

Call	Deadline
2018 RIA First Stage Calls	13 February 2018
2018 RIA Second Stage Calls	11 September 2018
2018 Single Stage Calls	13 February 2018
2019 RIA First Stage Calls	23 January 2019
2019 RIA Second Stage Calls	4 September 2019
2019 Single Stage Calls	23 January 2019

SC3: What will be funded 2018-2020?

- Calls will contribute to the focus area "Building a low-carbon, climate resilient future" which underpins the goals of the COP21 Paris Agreement and the "Clean Energy for all European" package, the SET-Plan priorities and to the UN's Sustainable Development goals.



- Activities cover the full innovation cycle. Types of projects to be funded:
 - Research and Innovations Actions (with 100% reimbursement rate)
 - Innovation Actions (with 70% reimbursement rate for industry)
 - Coordination and Support Actions
 - ERA-NET Cofunds

SC4: What will be funded 2018-2020?



Mobility for Growth

- Low-carbon and sustainable transport
- Safe, integrated and resilient transport systems
- Global leadership and competitiveness
- Accounting for the people
- Blue growth



Automated Road Transport

- This call contributes to the "Digitising and transforming European industry and services" Focus Area.
- It will look at the development and demonstration of highly automated driving systems (SAE level 4).



Green Vehicles Initiative

- This call contributes to the "Building a low-carbon, climate resilient future" Focus Area.
- The topics will focus on the most critical aspects supporting a massive introduction of electrified vehicles (advances in electric batteries, new architectures and concepts, etc.)

SC5: What will be funded 2018-2020?

Climate in the SC5 WP

Two Calls

- ❑ Building a low-carbon, climate resilient future: climate action in support of the Paris Agreement
- ❑ Greening the economy in line with the **Sustainable Development Goals (SDGs)**

Climate calls elsewhere in H2020

- ❑ SC1 –Health: Decoding the role of the environment, including climate change, for health and well-being
- ❑ SC2 – Food: Addressing climate change and resilience on land and at sea.
- ❑ SC3 –Energy: Enabling near-zero CO2 emissions from fossil fuel power plants and carbon intensive industries.
- ❑ SC4 – Transport: Low-carbon and sustainable transport
- ❑ LEIT –SPACE-Multiple topics across ‘Earth Observation’ call and Space Business, focus on weather change/observation



SUSTAINABLE DEVELOPMENT GOALS

1 NO POVERTY 	2 ZERO HUNGER 	3 GOOD HEALTH AND WELL-BEING 	4 QUALITY EDUCATION 	5 GENDER EQUALITY 	6 CLEAN WATER AND SANITATION
7 AFFORDABLE AND CLEAN ENERGY 	8 DECENT WORK AND ECONOMIC GROWTH 	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 	10 REDUCED INEQUALITIES 	11 SUSTAINABLE CITIES AND COMMUNITIES 	12 RESPONSIBLE CONSUMPTION AND PRODUCTION
13 CLIMATE ACTION 	14 LIFE BELOW WATER 	15 LIFE ON LAND 	16 PEACE, JUSTICE AND STRONG INSTITUTIONS 	17 PARTNERSHIPS FOR THE GOALS 	SUSTAINABLE DEVELOPMENT GOALS

SC6: What will be funded 2018-2020?

Migration Call

Transformations Call

Governance for the future Call

- Indicative budget of approx. **€551million** for 2018-20 (incl. Other Actions)
- International cooperation emphasised in topics requiring to look beyond EU borders and design comparative research
- Multidisciplinary, cross-national, comparative and participatory approaches; where necessary calls include focus on social and ICT-based innovation.
- Contribution to 'Digitisation' and 'Security Union' Focus Areas

Secure Societies: What Will Be Funded in 2018-2020 Work Programme

Infrastructure
Protection

Security*

Digital Security

Fast-Track to
Innovation

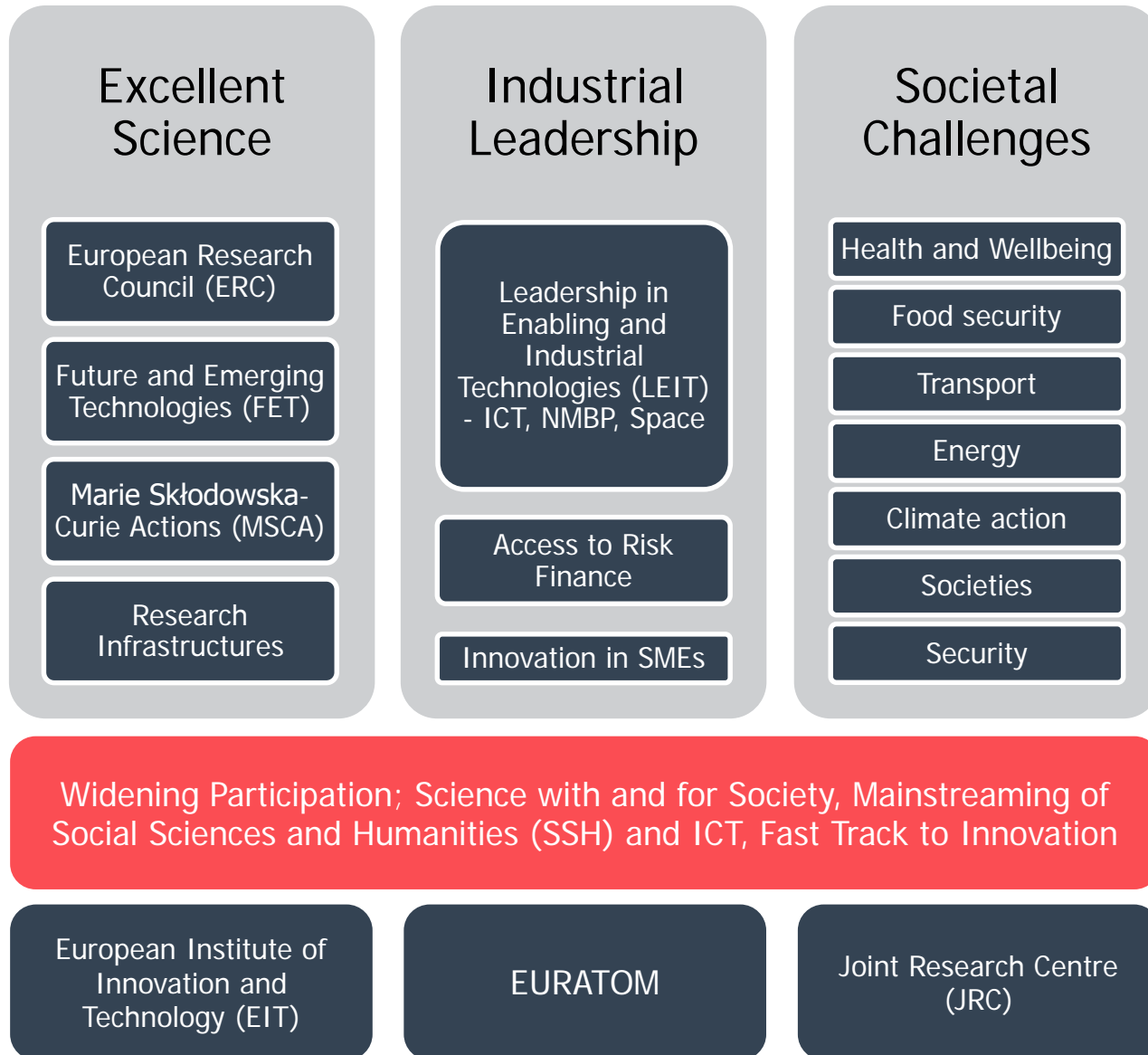
Other Actions

*Security has sub-calls: Disaster Resilient Society (DRS), Fighting Against Crime and Terrorism (FCT), Border and External Security (BES), General Matters (GM)

Secure Societies: 2018-2020 Calls

- **2018 Calls:** opening - 15 March 2018, closing - 23 August 2018
 - **Except those funded under other Work Programmes:**
 - DS-06-2017 – opening/closing: 08 Dec 2016/25 Apr 2017
 - SMEInst-13-2016-2017 – cut-off dates throughout the year
- **2019 Calls:** opening - 15 March 2019, closing - 22 August 2019
- **2020 Calls:** opening – 15 March 2020, closing - 27 August 2020

Horizon 2020 structure



5 Strategic orientations for 2018-20

€63.50M in 2018 and €62.50M in 2019; one call around the following themes

Accelerating and catalysing processes of **institutional change**

Stepping up the support to **Gender Equality**
in Research & Innovation policy

Building the **territorial dimension** of SWAFS partnerships

Exploring and supporting **citizen science**

Building the **knowledge base** for SWAFS

Any Questions?
