Horizon 2020 Programme Sections and Types of Actions: select overview

EXCELLENT SCIENCE		
Programme Sections and Types of actions/activities		**Description**
The European Research Council[1]	ERC Starting grants	Support for top researchers with 2 to 7 years of experience after their PhD. Grants amount to up to €2 million for up to 5 years.
	ERC Consolidator grants	Support for top researchers with 7 to 12 years of experience after their PhD. Grants amount to up to €2.75 million for up to 5 years.
	ERC Advanced grants	Open to excellent established researchers who have a recent research track-record which identifies them as leaders in their respective field of research. Grants amount to up to €3.5 million for up to 5 years.
	ERC Proof of Concept	For ERC grant holders only. Bridging gap between research – earliest stage of marketable innovation. Up to €150,000.
	ERC Synergy Grants	Pilot scheme which is intended to enable a small group of excellent researchers and their teams to bring together complementary skills, knowledge, and resources in new ways, in order to jointly address research problems. Funding up to a maximum of €15 million for a period up to 6 years.
Future and Emerging Technologies	FET Open	Support for early-stage joint S&T research around new ideas for radically new future technologies. FET Open represents 40% of the overall FET budget in Horizon 2020.
	FET Proactive	FET Proactive nurtures emerging themes and communities by addressing a number of promising exploratory research themes with the potential to generate a critical mass of inter-related projects. Through this line of activity FET engages in the coordinated exploration of a new theme, as well as in the consolidation of promising future technologies to be taken up by industry and society.
	FET Flagships	Support for ambitious large-scale, science-driven research aimed at grand interdisciplinary S&T challenges. Such activities require and will benefit from the alignment of European and national agendas, and provide a strong and broad basis for future technological innovation and economic application in a variety of areas, as well as novel benefits for society. FET will provide the main EU support in H2020 of the two FET flagships already chosen under FP7: 'Graphene' and 'Human Brain Project' (HBP).

[1] ERC website: http://erc.europa.eu/funding-schemes

Marie-Sklodowska-Curie Actions	MSCA Innovative Training Networks (ITN)	ITN supports competitively selected joint research training and/or doctoral programmes, implemented by partnerships of universities, research institutions, research infrastructures, businesses, SMEs, and other socio-economic actors from different countries across Europe and beyond. Duration of support: 3-36 months
	MSCA Research and Innovation Staff Exchange (RISE)	RISE supports short-term mobility of research and innovation staff at all career levels, including also administrative and technical staff. It is open to partnerships of universities, research institutions, and non-academic organisations both within and beyond Europe. Participants in RISE shall be established in at least three different countries of which at least two must be EU Member States or Associated Countries. Duration of support: 1-12 months.
	Individual fellowships (IF): European Fellowships	Support is foreseen for individual, trans-national fellowships awarded to the best or most promising researchers for employment in EU Member States or Associated Countries, based on an application made jointly by the researcher and host organisation in the academic or non-academic sectors. European Fellowships are held in EU Member States or Associated Countries and are open to researchers either coming to Europe or moving within Europe. The grant usually covers salary, a mobility allowance, research costs and overheads for the host institution. Duration of support: 12-24 months.
	Individual fellowships (IF): European Fellowships-Reintegration Panel	Support for return and reintegration of researchers into a longer term research position in Europe. Duration of support: 12-24 months.
	Individual fellowships (IF): Global Fellowships	Global Fellowships are based on a secondment to a third country and a mandatory 12 month return period to a European host. Duration of support: 12-24 months for the outgoing phase plus 12 month return phase in Europe.
	Co-funding of regional, national and international programmes (COFUND)	The MSCA offer additional funding to regional, national and international programmes for research training and career development. COFUND programmes encourage the movement of researchers across borders and provide good working conditions. The scheme can support doctoral and fellowship programmes. Participants in COFUND shall be legal entities established in an EU Member State or Associated Country that fund or manage doctoral programmes or fellowship programmes for researchers. Duration of support: minimum 3 months.
European research infrastructures (including e-Infrastructures)		Activities aim at developing the European research infrastructures for 2020 and beyond, fostering their innovation potential and human capital and reinforcing European research infrastructure policy.

INDUSTRIAL LEADERSHIP	
Programme Sections	**Description**
Leadership in Enabling and Industrial Technologies	Dedicated support for research, development and demonstration and, where appropriate, for standardisation and certification, on information and communications technology (ICT), nanotechnology, advanced materials, biotechnology, advanced manufacturing and processing and space.
Access to risk finance	This section will help companies and other types of organisation engaged in research and innovation to gain easier access, via financial instruments, to loans, guarantees, counter-guarantees and hybrid, mezzanine and equity finance. Firms and other entities located in an EU Member State or Associated Country are eligible as beneficiaries.
Innovation in SMEs	Provides SME-tailored support to stimulate all forms of innovation in SMEs, targeting those with the potential to grow and internationalise across the single market and beyond. 'Innovation in SMEs' includes the SME instrument, for which budget is allocated in the Societal Challenges and Leadership in Enabling and Industrial Technologies, the support to the EUREKA/Eurostars initiative that provides funding for transnational collaborative projects of research-intensive SMEs and various actions that aim at developing and providing better innovation support services to SMEs.
SOCIETAL CHALLENGES	
Programme Sections	**Description**
Health, Demographic Change and Wellbeing	Responding to this challenge, research and innovation (R&I) under Horizon 2020 is an investment in better health for all. It aims to keep older people active and independent for longer and supports the development of new, safer and more effective interventions. R&I under Horizon 2020 also contributes to the sustainability of health and care systems.
Food Security, Sustainable Agriculture and Forestry, Marine, Maritime and Inland Water Research and the Bioeconomy	Activities under this challenge aim at making the best of our biological resources in a sustainable way. The objective is to contribute to securing sufficient supplies of safe, healthy and high quality food and other bio-based products, by developing productive, sustainable and resource-efficient primary production systems, fostering related ecosystem services and the recovery of biological diversity, alongside competitive and low carbon supply chains.

Secure, Clean and Efficient Energy	The Energy Challenge is designed to support the transition to a reliable, sustainable and competitive energy system. It 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.
Smart, Green and Integrated Transport	This challenge will contribute to four key objectives, each supported by specific activities: • resource efficient transport that respects the environment; • better mobility, less congestion, more safety and security; • global leadership for the European transport industry; • a socio-economic and behavioural research and forward looking activities for policy making.
Climate Action, Environment, Resource Efficiency and Raw Materials	This challenge funds research and innovation with the following specific objectives: • 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, in order to meet the needs of a growing global population within the sustainable limits of the planet's natural resources and eco-systems.
Europe in a changing world – Inclusive, innovative and reflective societies	This challenge will address social exclusion, discriminations and various forms of inequalities. It will explore new forms of innovation and strengthen the evidence base for the Innovation Union, the European Research Area and other relevant EU policies. It will promote coherent and effective cooperation with third countries. Finally, it will address the issues of memories, identities, tolerance and cultural heritage.
Secure societies – Protecting freedom and security of Europe and its citizens	The primary aims of challenge are: • to enhance the resilience of the European society against natural and man-made disasters; • to fight crime and terrorism; • to improve border security; • to provide enhanced cyber-security.

Main types of actions under Horizon 2020 (*not applicable to ERC grants and MSCA*)

Research and innovation actions (RIA)

Description: Action primarily consisting of activities aiming to establish new knowledge and/or to explore the feasibility of a new or improved technology, product, process, service or solution. For this purpose they may include basic and applied research, technology development and integration, testing and validation on a small-scale prototype in a laboratory or simulated environment.

Projects may contain closely connected but limited demonstration or pilot activities aiming to show technical feasibility in a near to operational environment.

Duration: usually 3 – 5 years.

Minimum conditions: 3 independent legal entities from 3 different EU Member States or H2020 Associated Countries.

Occurrence: most common type of projects.

Innovation actions (IA)

Description: Action primarily consisting of activities directly aiming at producing plans and arrangements or designs for new, altered or improved products, processes or services. For this purpose they may include prototyping, testing, demonstrating, piloting, large-scale product validation and market replication.

Projects may include limited research and development activities.

Duration: 2 – 3 years on average.

Minimum conditions: 3 independent legal entities from 3 different EU Member States or H2020 Associated Countries.

Occurrence: most frequent in the "Industrial Leadership" part of H2020.

Coordination and support actions (CSA)

Description: Actions consisting primarily of accompanying measures such as standardisation, dissemination, awareness-raising and communication, networking, coordination or support services, policy dialogues and mutual learning exercises and studies, including design studies for new infrastructure and may also include complementary activities of strategic planning, networking and coordination between programmes in different countries.

Duration: 1 – 2 years.

Minimum conditions: 1 legal entity established in an EU Member States or H2020 Associated Country.

Occurrence: to be found throughout "Industrial Leadership" and "Societal Challenges", but less frequent than RIA or IA.

SME instrument

Description: The SME instrument is targeted at all types of innovative SMEs showing a strong ambition to develop, grow and internationalise. It provides staged support covering the whole innovation cycle in three phases complemented by a mentoring and coaching service.

Duration: Phase 1: 6 months, Phase 2: 1-2 Years.

Minimum conditions: 1 for-profit SME established in an EU Member State or H2020 Associated Country.

Occurrence: limited number of projects so far.

ERA-NET Cofund

Description: ERA-NET Cofund under Horizon 2020 is designed to support public-public partnerships, including joint programming initiatives between the EU Member States, in their preparation, establishment of networking structures, design, implementation and coordination of joint activities as well as Union topping-up of a trans-national call for proposals. It is based on the merger of the former ERA-NET and ERA-NET Plus actions and is implemented by using 'programme co-fund actions'. It allows for programme collaboration in any part of the entire research-innovation cycle.

The main and compulsory activity of the ERA-NET Cofund under Horizon 2020 is the implementation of the co-funded joint call for proposals that leads to the funding of trans-national research and/or innovation projects. The call is normally based on a call for proposals resulting in grants to third parties. In addition to the co-funded call the consortia may implement other joint activities including other joint calls without Union co-funding.