



Horizon 2020 Work Programme for Research & Innovation 2018-2020

The societal challenge 'Health, demographic change and well-being'

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European Commission

Research and Innovation

Research and innovation – a growing priority for the EU Horizon 2020 supports Commission priorities









EU – a stronger global actor



- Couple research to innovation
- Provide evidence-base for addressing societal challenges, supporting EU policies and better regulation
- Strengthen research capacities and innovation strategies across all Member States
- Multidisciplinary and synergistic
- Address people's concerns







Health Research in Horizon 2020



BUDGET: € 3.276 billion

EC: €1.638 bn + EFPIA: €1.425 bn + Associated Partners: €0.213 bn



- 30 November: Launch of Call 13 (16 topics) EU contribution: € 124.5m + In-kind contribution from EFPIA &Associated Partners: € 113.5m
- supports health research and innovation, speeding up the development of innovative medicines, particularly in areas of unmet medical need
- covers the full spectrum of drug discovery and development
- facilitates collaboration between universities, research centres, the pharmaceutical and other industries; SMEs, patient organisations, and medicines regulators
- Strategic Research Agenda based on the WHO Priority Medicine Report renewed in July 2013

http://www.imi.europa.eu/get-involved

http://www.imi.europa.eu/apply-funding

http://www.imi.europa.eu/apply-funding/general-

overview/tips-applicants



BUDGET: ~ € 1.37 billion EC: € 683 m + MS: € 683 m



- EDCTP2 Annual Work Plan 2018 to be adopted mid-2018: EU-funded activities: € 115m + new Participating States: € 115m
- covers research accelerating clinical development of medical interventions to prevent or treat HIV/AIDS, tuberculosis, malaria and other infectious diseases
- includes the development of drugs, microbicides, vaccines, diagnostics and their delivery
- supports coordination of European national research programmes
- funds collaboration between EU, European countries and sub-Saharan African countries

<u>www.edctp.org/see-work/strategy</u> <u>www.edctp.org/funding-opportunities/calls</u>



BUDGET (indicative): € 26 M*



- expected launch date of Call 2018: 5 February 2018 focused on: Smart solutions for ageing well ("open call").
- call addressing both the "private consumer" and "regulated" market (more flexibility → different types of project)
- strong involvement of end users: co-creation process with primary, secondary and tertiary end users in the whole project lifecycle Strong business and market orientation sought
- strong business and market orientation (short time to market: 2 years after the completion of the project)

http://www.aal-europe.eu/get-involved/calls/

*total budget project call 2018 (EC + MS); exact figures MS contribution will be available end 2017



ECOSYSTEM SUPPORT: COACHING, MENTORING for all SME beneficiaries Early stage **Test and co-create** Feasibility / science & tech Scale up Demonstrate, **Development** Startup **Investment** Emerging tech, validate Visionary ideas **FET-OPEN SME SME** FTI **Future Instrument** Soft blending **Instrument** Fast Track to Emerging Phase 1 Phase 2 Innovation **Technologies EIC Inducement Prizes** 1. Innovative Batteries for eVehicles

- 2. Fuel from the Sun: Artificial Photosynthesis
- 3. Early Warning for Epidemics
- 4. Blockchains for Social Good
- 5. Low-Cost Space Launch
- 6. Affordable High-Tech for Humanitarian Aid



EIC Prize Early warning for epidemics

When?

to be launched in February 2018 | deadline in Q1 2020

What's at stake? 5 million EUR

What is required?

- The challenge is to develop an early warning prototype system based on Earth observation data to forecast and monitor vector borne disease outbreaks.
- The aim is to contribute to the prevention of these outbreaks and to support elimination efforts on local regional and global scales; it can also contribute to strengthen and integrate national surveillance systems for vectors, interventions and diseases.
 - It should be compatible for use with data coming from existing multi-disciplinary networks comprising health, humanitarian aid and emergency management actors, in order to leverage data and information from these networks, as well as to showcase the operational potential and added value of the solution

More info: http://europa.eu/!Xt76vW



EIC Prize Affordable High-Tech for Humanitarian Aid

When?

• launched on 30 November 2017 | deadline: 15 January 2020

What's at stake?

5 million EUR divided into 5 categories, including Health and medical care

What is required?

- Proven innovative and more cost-effective solutions to be used in a humanitarian aid context
- Solutions **based on frugal application of advanced technologies**: affordability, inclusiveness, simplicity ("fit for the needs") and sustainability
- Advanced technologies include: nanotechnologies, advanced materials and additive manufacturing

More info:

https://europa.eu/!nH96kd

EC-Tech4Aid-EIC-Prize@ec.europa.eu





Horizon 2020 so far

- 2 biannual Work Programmes: WP 2014-2015, WP 2016-2017
- More than € 2.6 billion investment in Horizon 2020 projects

Horizon 2020 – what comes now

- first triennial Work Programme: WP 2018-2020
- the largest budget/year in the history of the EU Framework Programmes ca. € 700 million/year for collaborative research (excluding IMI, EDTP, and the SME Instrument)
- Topics for 2020 in more detail will be published later likely in 2019





E 2.0 billion

Health collaborative research - 7 priorities for 2018–2020



Personalised medicine



Innovative health and care industry



Innovative health, and care systems –
Integration of care



Infectious diseases and improving global health



Digital transformation in Health and Care



Decoding the role of the environment for health and well-being



Trusted Big Data solutions and Cybersecurity for Health and Care



7 priorities implemented via SC1 Work Programme 2018-2020 through 3 Calls for proposals

Call 'Better Health and care, economic growth and sustainable health systems' 5 main priorities & 32 topics

Call 'Digital transformation in Health and Care'

13 topics

Call 'Trusted digital solutions and Cybersecurity in Health and Care'

3 topics

Other Actions 2018-2019

7 items



Priority 1 – Personalised medicine

- Aim: delivering personalised health and care to benefit patients and citizens
- Focus: complex disorders, human microbiome, rare diseases and data sharing for enabling personalised medicine, economic models, reinforcing international and regional collaboration

POLICY DRIVERS + SUPPORT FOR:

Council conclusions on Personalised Medicine

<u>International Consortium on Personalised Medicine</u>



European Reference Networks







Personalised Medicine in Work Programme 2018–2019 (I)

- BHC-03-2018: Exploiting research outcomes and application potential of the human microbiome for personalised prediction, prevention and treatment of disease
- BHC-04-2018: Rare Disease European Joint Programme Cofund
- BHC-05-2018: International flagship collaboration with Canada for human data storage, integration and sharing to enable personalised medicine approaches
- BHC-01-2019: Understanding causative mechanisms in co- and multimorbidities
- BHC-02-2019: Systems approaches for the discovery of combinatorial therapies for complex disorders



Personalised Medicine in Work Programme 2018–2019 (II)

Coordination and support actions

- HCO-02-2018: Data integration and data-driven in-silico models for enabling personalised medicine - a European standardization framework
- HCO-04-2018: ERA-NET to support the Joint Programming in Neurodegenerative Diseases strategic plan (JPND)
- HCO-01-2018-2019-2020: Actions in support of the International Consortium for Personalised Medicine







Priority 2 – Innovative health and care industry

- Aim: turn innovative knowledge and technologies into practical applications benefiting citizens, healthcare systems and businesses
- Focus: regenerative medicine, advanced therapeutics and regulatory science
- Complementarity with the SME instrument, the Fast Track to Innovation and the Innovative Medicines Initiative (IMI)

POLICY DRIVERS + SUPPORT FOR:

Upgrading the single market





Innovative health and care industry in Work Programme 2018–2019

- BHC-09-2018: Innovation platforms for advanced therapies of the future
- BHC-07-2019: Regenerative medicine: from new insights to new applications
- BHC-10-2019: Innovation Procurement: Next generation sequencing (NGS) for routine diagnosis

Coordination and support actions

 HCO-05-2018: Strengthening regulatory sciences and supporting regulatory scientific advice



Priority 3 – Infectious diseases and improving global health

- Aim: fighting infectious diseases and the growing threat of antimicrobial resistance; addressing the needs of the most vulnerable and the global increase in chronic diseases
- Focus: emerging infectious diseases, poverty and neglected diseases, stratified host-directed approaches to communicable diseases, maternal and child health, global collaboration on non-communicable diseases (cohorts, brain research, hypertension, diabetes, cancer)

POLICY DRIVERS + SUPPORT FOR:

GL PID-R

Global Research
Collaboration for
Infectious Disease
Preparedness





EDCTP

European &
Developing
Countries Clinical
Trials Partnership



Global Action Plan on antimicrobial resistance



Global Alliance for Chronic Diseases

European One Health
Action Plan against
Antimicrobial Resistance



Infectious diseases and improving global health in Work Programme 2018–2019 (I)

- BHC-15-2018: New anti-infective agents for prevention and/or treatment of neglected infectious diseases (NID)
- BHC-16-2018: Global Alliance for Chronic Diseases (GACD) Scalingup of evidence-based health interventions at population level for the prevention and management of hypertension and/or diabetes
- BHC-18-2018: Translational collaborative cancer research between Europe and the Community of Latin American and Caribbean States (CELAC)
- BHC-21-2018: Research on HIV, tuberculosis (TB) and/or hepatitis C (HCV) in patients with mono-, co-infections and/or comorbidities in the context of fostering collaboration with the Russian Federation



Infectious diseases and improving global health in Work Programme 2018–2019 (II)

- BHC-13-2019: Mining big data for early detection of infectious disease threats driven by climate change and other factors
- BHC-14-2019: Stratified host-directed approaches to improve prevention, treatment and/or cure of infectious diseases
- BHC-19-2019: Implementation research for maternal and child health





Infectious diseases and improving global health in Work Programme 2018–2019 (III)

Coordination and support actions

- HCO-06-2018: Establishment of an International Network of Social Sciences Research Centres to help address governance and other challenges in the preparedness for and the response to infectious threats
- HCO-08-2018: Creation of a European wide sustainable clinical research network for infectious diseases
- HCO-09-2018: Building international efforts on population and patient cohorts
- HCO-10-2018: Coordinating European brain research and developing global initiatives
- HCO-11-2018: Strategic collaboration in health research and innovation between EU and China

Priority 4 – Innovative health and care systems – Integration of care

- Aim: develop effective, accessible and sustainable health interventions and integrated care systems
- Focus: mental health in the workplace, novel approaches for palliative care, implementation of personalised medicine, HTA, innovation in health care

POLICY DRIVERS + SUPPORT FOR:

<u>Upgrading the single market</u>

Cross-border healthcare Directive







Innovative health and care systems – Integration of care in Work Programme 2018–2020

- BHC-23-2018: Novel patient-centred approaches for survivorship, palliation and/or end-of-life care
- BHC-26-2018: HTA research to support evidence-based healthcare
- BHC-22-2019: Mental health in the workplace
- BHC-25-2019: Demonstration pilots for implementation of personalised medicine in healthcare

Coordination and support actions

 HCO-12-2018: Innovation in healthcare – a CSA towards using pre-commercial procurement and public procurement of innovative solutions in healthcare systems



Priority 5 – Decoding the role of the environment, including climate change, for health and well-being

- Aim: improving the risk assessment of environment on health and wellbeing, and the related socio-economic impact and developing mitigation measures.
- Focus: new testing/screening methods to identify endocrine disrupting chemicals, the development of the 'human exposome' (to allow the assessment of lifelong environmental influences on individuals) and to set the priorities for a new research agenda

POLICY DRIVERS + SUPPORT FOR:









REACH and EU related policies







Decoding the role of the environment, including climate change, for health and well-being in Work Programme 2018–2019

- BHC-27-2018: New testing and screening methods to identify endocrine disrupting chemicals
- BHC-28-2019: The Human Exposome Project: a toolbox for assessing and addressing the impact of environment on health

Coordination and support actions

HCO-13-2018: Setting the priorities for a European environment, climate and health research agenda











CALL - Digital transformation in Health and Care

- Better access to healthcare and sustainability of health and care systems
- To empower the participation of citizens and facilitate the transformation of health and care services to more digitised, person-centred and communitybased care models
- eHealth and mHealth
- ICT for Active and Healthy Ageing

IMPACT: to maximise the potential of the digital economy in the health and care sectors

POLICY DRIVERS:



Connected Digital
Single Market



<u>European Cloud</u> <u>Initiative</u>



<u>European Free Flow</u> of Data initiative



Silver Economy initiative



CALL - Trusted digital solutions and Cybersecurity in Health and Care

- Multidisciplinary technologies and solutions in health and care with a focus on cybersecurity
- Secure and user-driven ICT-based solutions in early risk detection and interventions
- Aggregation of a variety of new and existing data sources

FOCUS AREAS

- Digitising and transforming European industry and services
- Boosting the effectiveness of the Security Union

POLICY DRIVERS:



Connected Digital Single Market



Big Data in healthcare



Digital Single Market Strategy Mid-term Review



• Digital health and care transformation was included as part of the Digital Single Market mid-term review (adopted 10 May 2017). The DSM proposal aims to ensure that the digitisation in health and care will benefit EU citizens (providing them with better treatment, prevention and early diagnosis of diseases) and deliver more sustainable health and care systems across the Union.

Digital Single Market Strategy Mid-term Review

Digital Transformation of health and care (3 pillars)

- Citizen's secure access to and use of health data
- Advancing research, disease prevention and personalised medicine
- Citizen empowerment and patient-centred care

The Commission will adopt a Communication in 2017 addressing the need and scope for further measures in the area of digital health and care, in line with legislation on the protection of personal data, patient rights and electronic identification, in particular as regards:

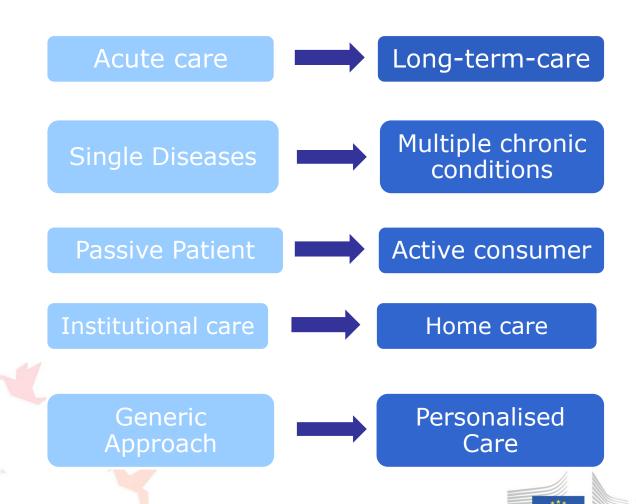
- *citizens' secure access to electronic health records* and the possibility to share it across borders and the use of e-prescriptions.
- supporting data infrastructure, to advance research, disease prevention and personalised health and care in key areas including rare, infectious and complex diseases.
- facilitating feedback and interaction between patients and healthcare providers, to support prevention and citizen empowerment as well as quality and patient-centred care, focussing on chronic diseases and on a better understanding of the outcomes of healthcare systems.





Transformation of Health and Care

S S U Multiple





Prevention and early risk detection



New therapies and diagnostics



Personalised Medicine



New health and care models



Data-driven innovation



Artificial Intelligence

Cloud computing

Advanced Data-Analytics

4G/5G

Internet of Things (IoT)

mHealth

Wearables

Telehealth



CALL - Digital transformation in Health and Care - Submission Deadline 2018

ICT for Health, Well-being and Active & Healthy Ageing, 15:00-17:00, room Gasperich

- DTH-03-2018: Adaptive smart working and living environments supporting active and healthy ageing
- DTH-07-2018: Exploiting the full potential of in-silico medicine research for personalised diagnostics and therapies in cloud-based environments
- DTH-08-2018: Prototyping a European interoperable Electronic Health Record (EHR) exchange
- SC1-HCC-01-2018 Supporting investment in smart living environments for ageing well through certification
- SC1-HCC-03-2018 Support for the large scale uptake of open service platforms in the Active and Healthy Ageing domain
- SC1-HCC-04-2018 Digital health and care services support for strategy and (early) adoption
- SC1-HCC-05-2018 Support to a Digital Health and Care Innovation initiative in the context of Digital Single Market strategy
- DTH-10-2019-2020: Digital health and care services



CALL – Trusted digital solutions and Cybersecurity in Health and Care - Submission Deadline 2018

ICT for Health, Well-being and Active & Healthy Ageing, 15:00-17:00, room Gasperich

- SU-TDS-02-2018 Toolkit for assessing and reducing cyber risks in hospitals and care centres to protect privacy/data/infrastructures
- SU-TDS-03-2018 Raising awareness and developing training schemes on cybersecurity in hospitals
- DT-TDS-01-2019 Smart and healthy living at home





Other actions for 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
- 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



Call deadlines

Better Health and care, economic growth and sustainable health systems

Digital transformation in Health and Care

Trusted digital solutions and Cybersecurity in Health and Care

BHC + HCO call topics Calls open: 7 November 2017 Calls close: 18 April 2018 DTH, HCC, and SU-TDS call topics Calls open: 7 November 2017 Calls close: 24 April 2018

Exception BHC-15-2018

Lump Sum Funding: a pilot topic

Calls open: 7 November 2017 First stage: 6 February 2018 Second stage: 4 September 2018







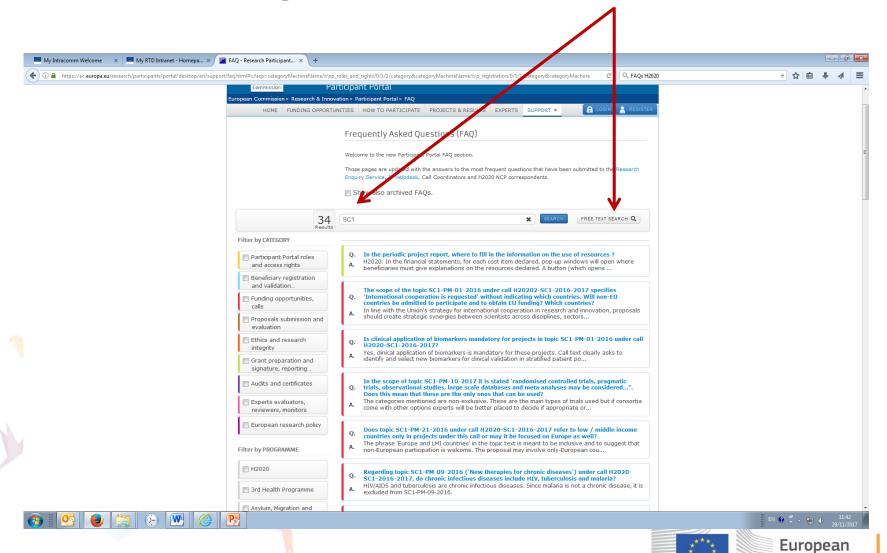
FAQs

- Topic texts are generally complete and self-contained. 'Interpretation' of a specific term or phrase to be decided by independent experts evaluating the proposals. Experts will not be briefed on interpretation beyond the topic texts and FAQs.
- FAQs (generic or topic-specific) provide:
 - Clarification on administrative, legal and financial issues
 - (Exceptionally also) clarification on the content of the call text
- H2020 Participant Portal FAQ section: http://ec.europa.eu/research/participants/portal/desktop/en/support/faq.html
- SC1 specific: search "SC1" or the topic number/text in the "FREE TEXT SEARCH" space:

http://ec.europa.eu/geninfo/query/action?query source=RESEARCHPP&swlang =en&QueryText=SC1



FAQs – Where to find them



Commission

Participant portal – one-stop shop

- Call topics + all related documents
- NCPs
- Expert registration
- Legal & guidance documents
- FAQs
- Access to proposal submission system



http://ec.europa.eu/research/participants/portal



Participation of UK entities

- <u>until the UK leaves the EU, EU law continues to apply to and within the UK</u>, when it comes to rights and obligations; this includes the eligibility of UK legal entities to fully participate and receive funding in Horizon 2020 actions
- eligibility criteria must be complied with for the entire duration of the grant
- if the United Kingdom withdraws from the EU during the grant period without concluding an agreement with the EU ensuring in particular that British applicants continue to be eligible, you will cease to be eligible to receive EU funding (while continuing, where possible, to participate) or be required to leave the project on the basis of Article 50 of the grant agreement





Towards FP9

2017	
Q4	H2020 Work Programme 2018-2020 integrating main findings from the Interim Evaluation
2018	
Q1	 Publication of Commission Communication about: Overall conclusions on the evaluation results State of implementation of the FP7 ex-post HLEG recommendations Response to High Level Group recommendations Messages on Art. 185 and Art. 187 initiatives
Mid	Next Multiannual Financial Framework Commission proposal
	Commission proposal tabled for the next Framework Programme & accompanying Impact Assessment
2019	
	European Parliament elections, appointment of the new Commission
2021	
	Launch of the 9th Framework Programme

Thank you!

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http://ec.europa.eu/research/health http://ec.europa.eu/research/participants/portal





