



#InvestEUresearch

Horizon 2020 Work Programme for Research & Innovation 2018-2020

Lessons learnt – Do's and don't's of proposal elaboration and submission

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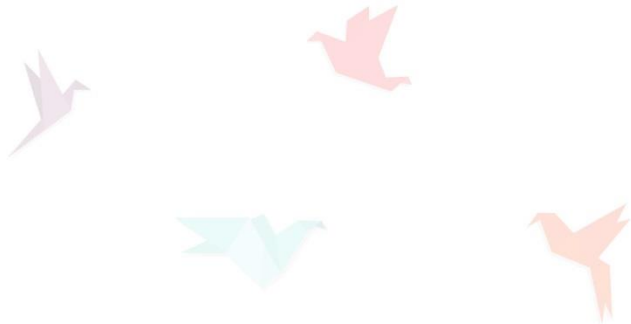
Health Info Day
05 July 2019

Research and
Innovation



Horizon 2020

- The European Union programme for research and innovation for 2014-2020 with a budget of €79 billion
- Rationale: R&D is increasingly complex, interdisciplinary, costly, requiring critical mass
- Europe = 28 countries: need for increased collaboration

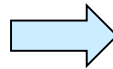


Research and innovation – a growing priority for the EU

Horizon 2020 supports Commission priorities



- Jobs and growth
- Societal challenges
- European industrial leadership and competitiveness
- EU international excellence



- 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 synergies
- Address people's concerns

There are many ways to measure impact

Evidence based policy making



Medicines for children



Health
Technology
Assessment



ATMP

and many others...

Taking the lead in new areas of growth



Personalised
medicine

Responding to emergencies



The drug fexpirair is being tested at this Ebola treatment center in Guéckédou, Guinea.

INFECTIOUS DISEASES

Ebola drug trials lurch ahead

Changing epidemiology and hints of success alter studies of experimental treatments

By Kai Kupferschmidt and Jon Cohen

Even the researchers whose trial of a po- of the epidemic in September when more than 700 cases were reported in a single week in West Africa.

Knowledge creation and exploitation



SME
SMALL & MEDIUM ENTERPRISES

To Be Updated



Public Public Partnerships in H2020, SC1

Overall investment by Member States: More than 2500 M€, 7 actions (Feb'16)

JPIs	TOTAL INVESTMENT in JOINT Calls and Actions (MS+EC)
Neurodegenerative Diseases (+CSA/ERA-NET)	27 Countries, 2009-2020, ~130 M€ + 10 M€ EC
Anti-Microbial Resistance (+CSA/ERA-NET)	22 Countries, 2011-2020, ~50 M€ + 7.8 M€ EC
More Years, Better Life (+CSA)	19 Countries, 2011-2020, < 10 M€ + 2 M€ EC
Heathy Diet for a Healthy Life (+CSA/ERA-NET)	25 Countries, 2010-2020, > 30 M€ + > 5 M€ EC
Total Investment	4 JPIs: ~200 M€ + > 25 M€ from EC
Art.185 Initiatives	TOTAL INVESTMENT in JOINT Calls and Actions (MS+EC)
Ambient Assisted Living (AAL)	22 Countries, 2006-2024, ~0.7 B€ + 0.5 B€ EC + Industry
EU & Dev. Cy Clinical Trials Partners. (EDCTP)	14+14 Countries, 2006-2024, ~1 B€ + 1 B€ EC + BM Gates
EU Metrology Pgm for Inno & Research (EMPIR)	28 Countries, 2006-2024, ~0.6 B€ + 0.6 B€ EC
Total Investment	3 Art.185: ~2.3 B€ + > 2 B€ from EC + Others

7/10/2019

To Be
Updated

Coordinating national research

Joint Programming initiative on Neurodegenerative Disease Research (JPND)



- 30 countries; EU Member States-led initiative **to increase coordinated investment among participating countries**
- Strategic Research Agenda spanning biomedical, healthcare and social science research
- **Public database mapping** relevant national and European research and infrastructures
- Informing **national research agendas/plans**
- Currently some **EUR 123 million invested in 9 transnational calls (incl. co-fund of 10 million from EC)**



To Be Updated



ERA-NET Cofund actions in H2020, SC1

Overall investment by Member States: More than 350 M€, 9 actions (Jan '17)

Co-Fund: ERA-NET & EJP	TOTAL INVESTMENT in JOINT Calls and Actions (MS+EC)
E-RARE 3 Rare Diseases Runs from ('15-'19)	17 Countries (19.5 + 5.8 + ~30 Additional Own calls) ~50 M€ (48M€ - 95 % done)
JP cofund, Neurodegenerative diseases ('15-'19)	20 Countries (35 + 10 ? + ? additional) > 40 M€ (46 M€ done, more to do)
TransCan2 Translational Cancer ('15-'19)	19 Countries (17 + 6.7 + ~30 Additional Own calls) ~50 M€ (47 M€ - 95% done)
ERACo-Sysmed System Biology Medicine ('15-'19)	13 Countries (10 + 4 + Additional Own calls?) > 15 M€ (21 M€ --> More to do)
ERA-NET NEURON Brain diseases ('16-'20)	17 Countries (17 + 6.8 + ~40 Additional Own calls) ~60 M€ (40 M€ - 66% done)
ERA-NET JPI Anti-Microbial resistance ('16-'20)	18 Countries (21 + 7.8 + Additional Own calls?) > 26.4 (43 M€ done +more todo)
ERA-CVD Cardiovascular Runs from ('16-'20)	18 Countries (11.4 + 2.5 + Additional Own calls?) ~20 M€ (14M€ --> More to do)
PM-05-2016 EJP Human Biomonitoring Initiative	26 Countries, 2017-2022, > 25 M€ + 50 M€ EC (70% fund.)
HCO-03-2017 ERA-NET Personalised Medicine	> 20 Countries, 2018-2023, > 12 M€ + 5-6 M€ EC
Total Investment	8 ERA-NET + 1 EJP: ~250 M€ + 100 M€ from EC

7/10/2019

7

To Be Updated

European Innovation Council: pilot 2018-2020

€ 2.7 billion to support +5,000 SMEs and innovators

ECOSYSTEM SUPPORT: COACHING, MENTORING for all SME beneficiaries

Early stage science & tech
Emerging tech, Visionary ideas

Test and co-create
Demonstrate, validate

Feasibility / Startup

Development

Scale up Investment

FET-OPEN
Future Emerging Technologies

FTI
Fast Track to Innovation

SME Instrument
Phase 1

SME Instrument
Phase 2

Soft blending

HORIZON 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-HighTech for Humanitarian Aid

MARKET CREATING



European Commission

Horizon 2020 Work Programmes 2018-2020

Political context



Research and innovation – policy drivers



SC1 policy drivers

- The 2030 Agenda for Sustainable Development and its Sustainable Development Goals
- Council Conclusions on Personalised Medicine and on Pharmaceuticals
- Digital Single Market
- COP21 and the goals of the Ostrava Declaration on Environment and Health
- The new European One Health Action Plan against Antimicrobial Resistance
- Cross-border healthcare directive (and its support to the European Reference Networks)
- Communication on upgrading the single market (and its proposed health technology assessments initiative)
- Building on the principle of openness – open science, open innovation and open to the world

What is health collaborative research?

What are the requirements?

- Biannual work-programmes (with updates) published by EC
- Aims to foster collaboration between
 - ✓ Countries: minimum 3 legal entities from 3 different EU Member States or FP-associated countries
 - ✓ Sectors: pre-clinical, clinical, ...
 - ✓ Disciplines: cell biology, genetics, imaging, clinical trial, ...

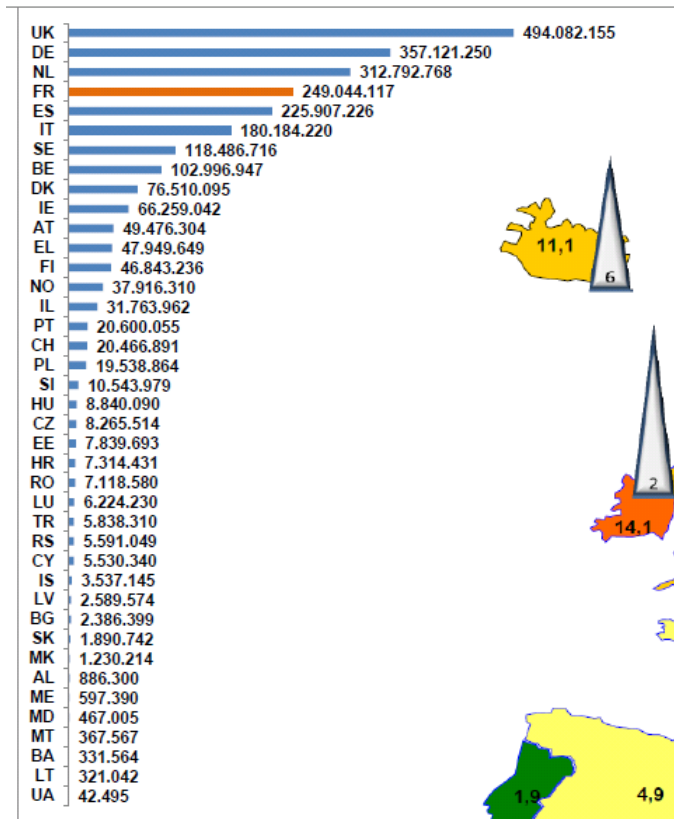
Broad range of topics ...

- *From ...* BHC-01-2019: Understanding causative mechanisms in co- and multimorbidities
- *To ...* HCO-05-2018: Strengthening regulatory sciences and supporting regulatory scientific advice

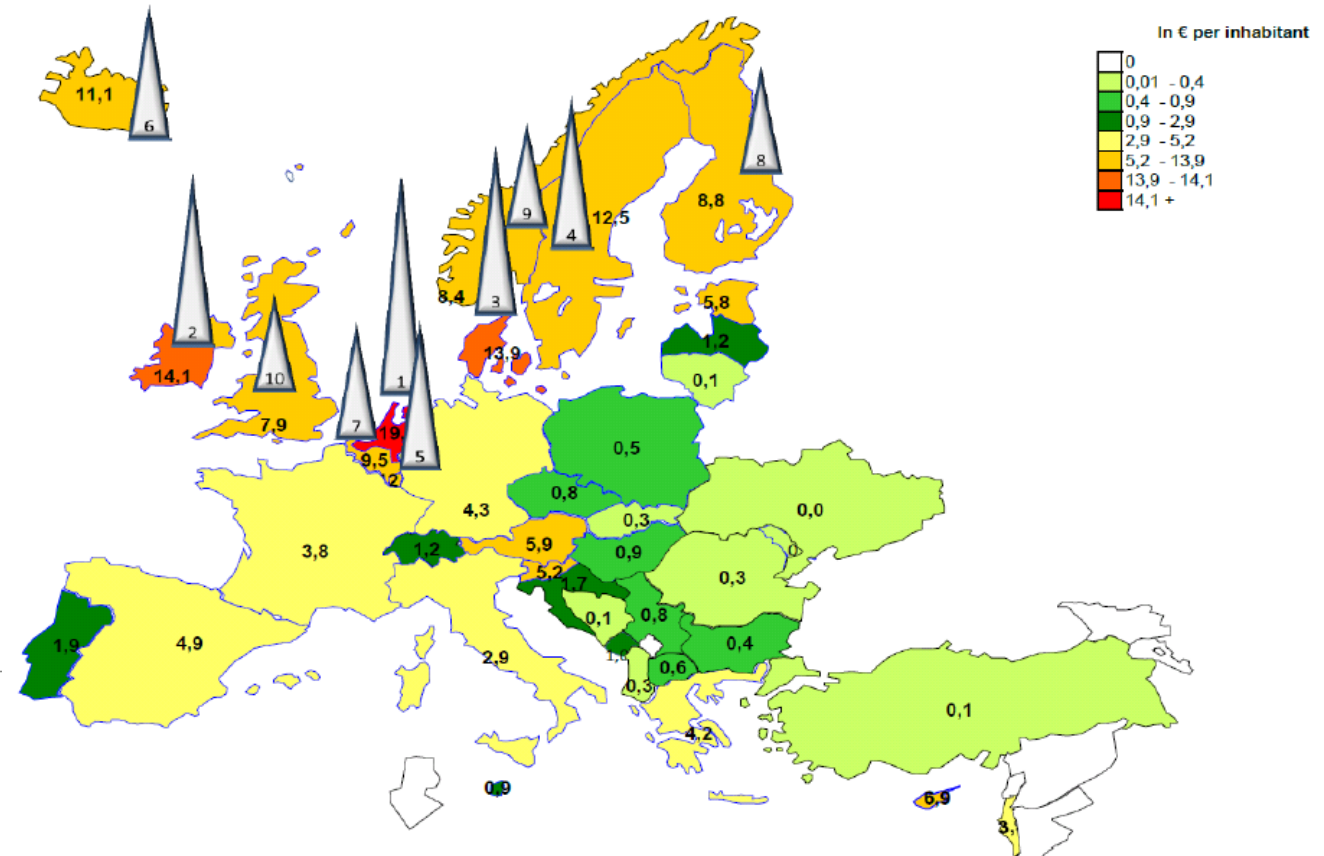
To Be Updated

What about COUNTRY in H2020 SC1 ?

EC contribution

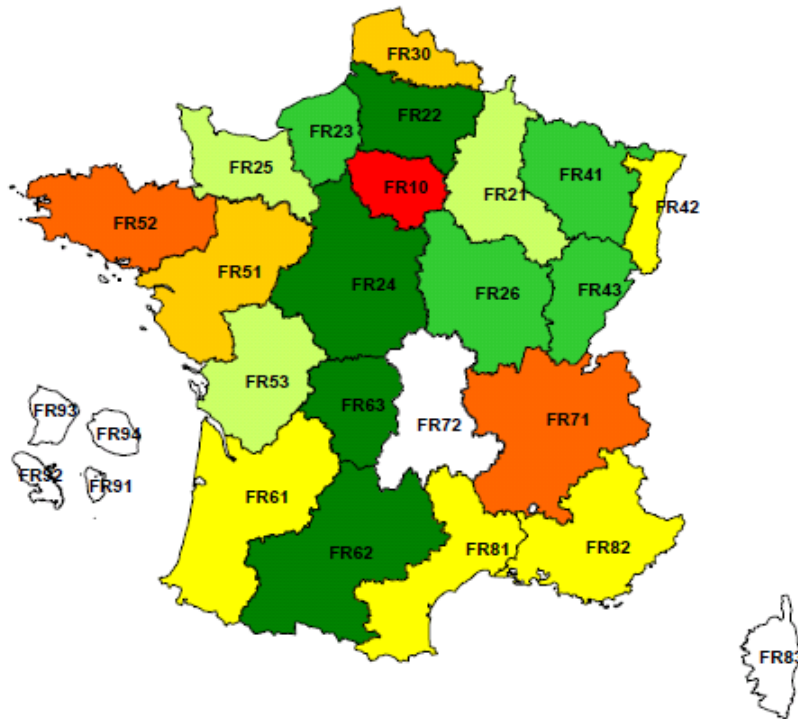


EU contribution by inhabitant

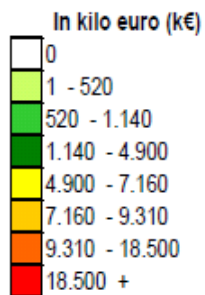


To Be Updated

Which COUNTRY has received the most funding?



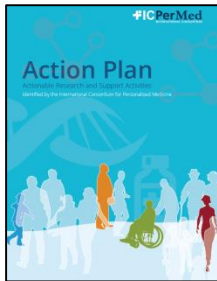
Regions	EU Contribution
FR10 - Île de France	169.343.154
FR71 - Rhône-Alpes	18.502.971
FR52 - Bretagne	9.315.085
FR30 - Nord - Pas-de-Calais	8.519.863
FR51 - Pays de la Loire	7.168.131
FR81 - Languedoc-Roussillon	7.101.331
FR82 - Provence-Alpes-Côte d'Azur	7.040.079
FR42 - Alsace	6.048.594
FR61 - Aquitaine	4.908.851
FR62 - Midi-Pyrénées	3.348.687
FR63 - Limousin	2.179.500
FR24 - Centre	1.571.204
FR22 - Picardie	1.143.147
FR23 - Haute-Normandie	769.250
FR43 - Franche-Comté	761.049
FR26 - Bourgogne	584.250
FR41 - Lorraine	525.143
FR21 - Champagne-Ardenne	142.125
FR53 - Poitou-Charentes	70.005
FR25 - Basse-Normandie	1.700
Grand Total	249.044.117



France key figures

EU contribution (million €)	249,0
Number of participations	551
Average amount by participation (€)	451.986

Health collaborative research – 7 priorities for 2018–2020



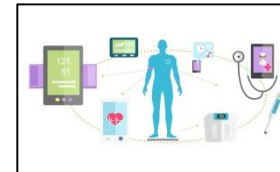
1. Personalised medicine



2. Innovative health and care industry



3. Infectious diseases and improving global health



4. Innovative health, and care systems – Integration of care



6. + 7. Digital transformation in Health and Care



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



8. Trusted Big Data solutions and Cybersecurity for Health and Care

Priority 1 – Personalised medicine

AIM: Delivering personalised health and care to benefit patients and citizens

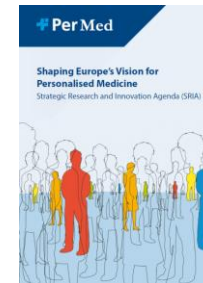
FOCUS: complex disorders, human microbiome, rare diseases and data sharing for enabling personalised medicine, economic models, reinforcing international and regional collaboration

POLICY DRIVERS:

[Council conclusions on Personalised Medicine](#)

[International Consortium on Personalised Medicine](#)

[European Reference Networks](#)



Call 1. Better health and care ...

Priority Area 1.1 Personalised Medicine

- Topic SC1-BHC-06-2020: Digital diagnostics – developing tools for supporting clinical decisions by integrating various diagnostic data

Coordination and Support Actions

- Topic SC1-HCO-01-2018-2019-2020: Actions in support of the International Consortium for Personalised MedicineTopic
- Topic SC1-HCO-03-2020: Bridging the divide in health research and innovation – boosting return on investment
- Topic SC1-HCO-14-2020: ERA-NET: Sustained collaboration of national and regional programmes in cancer research

Call 1. Better health and care ...)

Priority Area 1.1 Personalised Medicine (II)

- Topic SC1-HCO 16 – 2020: ERA-NET: Sustained collaboration of national and regional programmes in research on brain-related diseases and disorders of the nervous system
- Topic SC1-HCO-17-2020: Coordinating and supporting research on the human microbiome in Europe and beyond



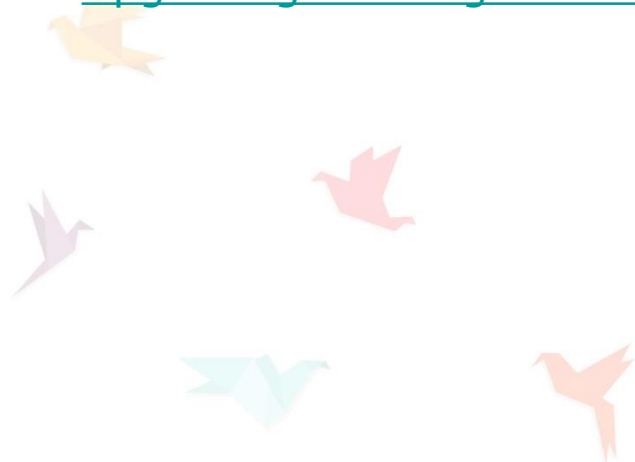
Priority 2 – Innovative health and care industry

AIM: Turn innovative knowledge and technologies into practical applications benefiting citizens, healthcare systems and businesses

FOCUS: Regenerative medicine, advanced therapeutics and regulatory science

POLICY DRIVERS:

[Upgrading the single market](#)



Call 1. Better health and care ...

Priority Area 1.2 Innovative health and care industry

- Topic SC1-BHC-08-2020: New interventions for Non-Communicable Diseases
- Topic SC1-BHC-11-2020: Advancing the safety assessment of chemicals without the use of animal testing

Coordination and Support Actions

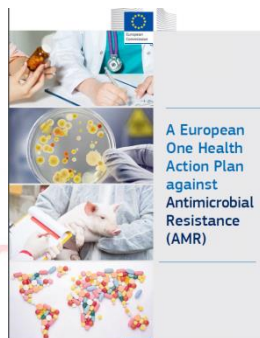
- Topic SC1-HCO-18-2020 - Developing methodological approaches for improved clinical investigation and evaluation of high-risk medical devices
- Topic SC1-HCO-19-2020 - Reliable and accessible information on cell and gene-based therapies

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:



[Global Action Plan on antimicrobial resistance](#)

[European One Health Action Plan against Antimicrobial Resistance](#)



Call 1. Better health and care ...

Priority Area 1.3 Infectious diseases and improving global health

- Topic SC1-BHC-17-2020: Global Alliance for Chronic Diseases (GACD) - Prevention and/or early diagnosis of cancer
- Topic SC1-BHC-20A-2020: Pre-commercial procurement (PCP) for integrated care solutions
- Topic SC1-BHC-20B-2020: Public procurement of innovative solutions (PPI) for diagnostics for infectious diseases
- Topic SC1-BHC-33-2020 - Addressing low vaccine uptake

Call 1. Better health and care ...

Priority Area 1.3 Infectious diseases and improving global health (II)

- Topic SC1-BHC-34-2020 - New approaches for clinical management and prevention of resistant bacterial infections in high prevalence settings
- Topic SC1-BHC-35-2020 - Creation of a European wide sustainable network for harmonised large-scale clinical research studies for infectious diseases

Coordination and Support Action

- Topic SC1-HCO-07-2020: ERA-NET to support the Joint Programming Initiative on Antimicrobial resistance (JPIAMR)

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:

[Upgrading the single market](#)

[Cross-border healthcare Directive](#)



European
Commission

Call 1. Better health and care ...

Priority Area 1. 4 Innovative health and care systems - Integration of care

- Topic SC1-BHC-24-2020: Healthcare interventions for the management of the elderly multimorbid patient
- New Topic SC1-BHC-37-2020: Towards the new generation of clinical trials – trials methodology research

Coordination and Support Action

- Topic SC1-HCO-20-2020 - Coordination of clinical research activities of the European Reference Networks



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 well-being, 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:



[The 7th Environment Action Programme \(EAP\)](#)



[The UNFCCC Paris Agreement](#)



[REACH and EU related policies](#)

[WHO Environment and Health Process \(since 1989\)](#)



European Commission

Call 1. Better health and care ...

Priority Area 1. 5 Decoding the role of the environment, including climate change, for health and well-being

- Topic SC1-BHC-29-2020: Innovative actions for improving urban health and wellbeing - addressing environment, climate and socioeconomic factors
- Topic SC1-BHC-36-2020 - Micro- and nano-plastics in our environment: Understanding exposures and impacts on human health



CALL 2 (+Priority 6)

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 community-based care models, eHealth and mHealth, ICT for Active and Healthy Ageing
- Secure and interoperable data as an enabler together with state of the art technologies such as Artificial Intelligence and Big Data analytics

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

POLICY DRIVERS:



Connected Digital Single Market



European Cloud Initiative



European Free Flow of Data initiative



Silver Economy initiative



European Commission

Call 1. Better health and care ...

Priority Area 1.6 supporting the digital transformation in Health and Care (Also see Call 2.)

- Topic SC1-DTH-12-2020 - Use of Real-World Data to advance research on the management of complex chronic conditions
- Topic SC1-DTH-13-2020 - Implementation research for scaling up and transfer of innovative solutions involving digital tools for people-centred care

Coordination and Support Action

- Topic SC1-HCC-10-2020 - Towards a Health research and innovation Cloud: Capitalising on data sharing initiatives in health research



Call 2. Digital transformation in Health and Care

- Topic SC1-DTH-02-2020: Personalised early risk prediction, prevention and intervention **based on Artificial Intelligence and Big Data technologies**
- Topic SC1-DTH-04-2020: International cooperation in smart living environments for ageing people
- Topic SC1-DTH-06-2020: Accelerating the uptake of **computer simulations** for testing medicines and medical devices
- Topic SC1-DTH-14-2020: Pre-Commercial Procurement for Digital Health and Care Solutions

Call 2. Digital transformation in Health and Care

Coordination and Support Actions

- Topic SC1-HCC-06-2020: Coordination and Support to better data and secure cross-border digital infrastructures building on European capacities for genomics and personalised medicine
- Topic SC1-HCC-07-2020: Support for European eHealth Interoperability roadmap for deployment
- Topic SC1-HCC-08-2020: Scaling up innovation for active and healthy ageing
- Topic SC1-HCC-09-2020: Supporting deployment of eHealth in low and lower middle income countries in Africa for better health outcomes

CALL 3. – Trusted digital solutions and Cybersecurity in Health and Care

- Multidisciplinary solutions in health and care with a focus on Artificial Intelligence, High Performance Computing and 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



European Data Protection Regulation



European Commission

Call 3. Trusted digital solutions and Cybersecurity in Health and Care

- Topic DT-ICT-12-2020: AI for the smart hospital of the future
- Topic DT-TDS-04-2020: AI for Genomics and Personalised Medicine
- Topic DT-TDS-05-2020: AI for Health Imaging



Updated

Call deadlines

**Better Health and care,
economic growth and
sustainable health systems**

BHC + HCO + DTH-12 and
HCC-10 call topics

Calls open: 4 July 2019
Calls close: 7 April 2020

Digital transformation in Health & Care

**Trusted digital solutions and
Cybersecurity in Health & Care**

Other DTH, HCC & TDS-04 topics
Calls open: 19 November 2019
Calls close: 22 April 2020

Exceptions
BHC-08, BHC-24-, BHC-28 & DTH-13-2020

Two Stage call

Call open: 4 July 2019
1st stage closes: 24 September 2019
2nd stage closes: 7 April 2020

Exceptions
HCC-06, HCC-07 & TDS-05
Call open: 9 July 2019
Closes: 13 November 2019



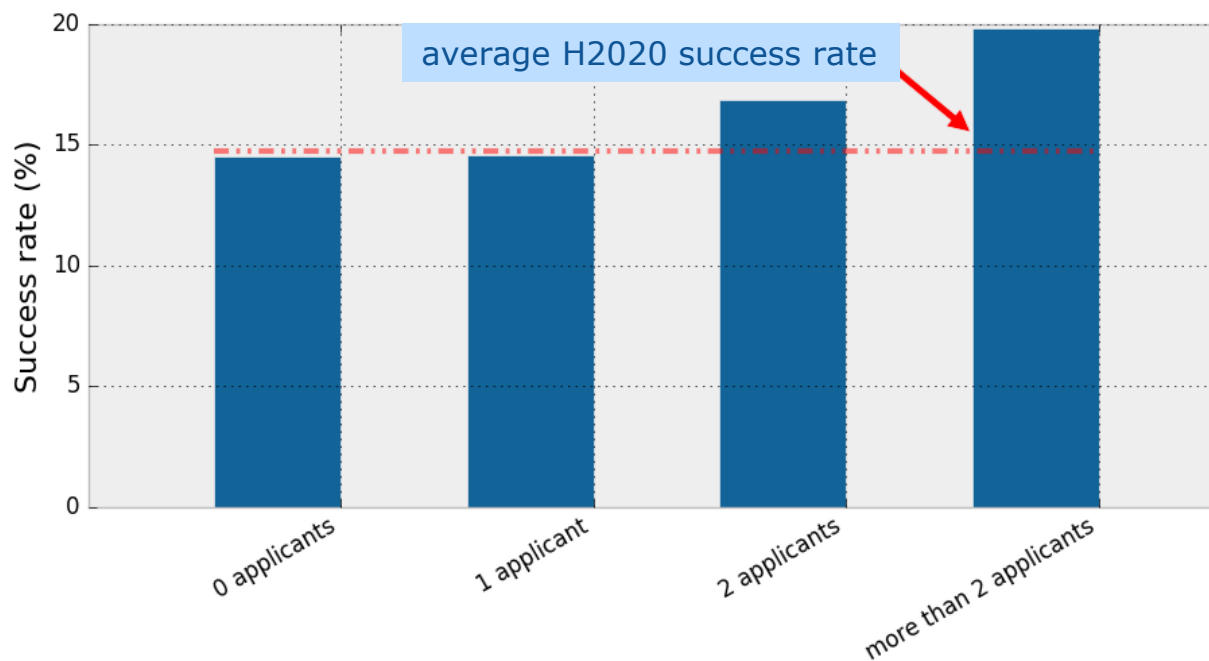


International cooperation



Why International Collaboration?

Success rates of proposals with different numbers of applicants from non-associated countries



Note: Data for collaborative projects of Horizon 2020. Success rate is the ratio of mainlisted over eligible proposals.
Source: DG RTD - International Cooperation
Data: CORDA (JRC, EIT & art.185 not included), extraction date: 17/10/2017



International Cooperation: main features of WP 2018-2020

General opening: all topics open to international cooperation

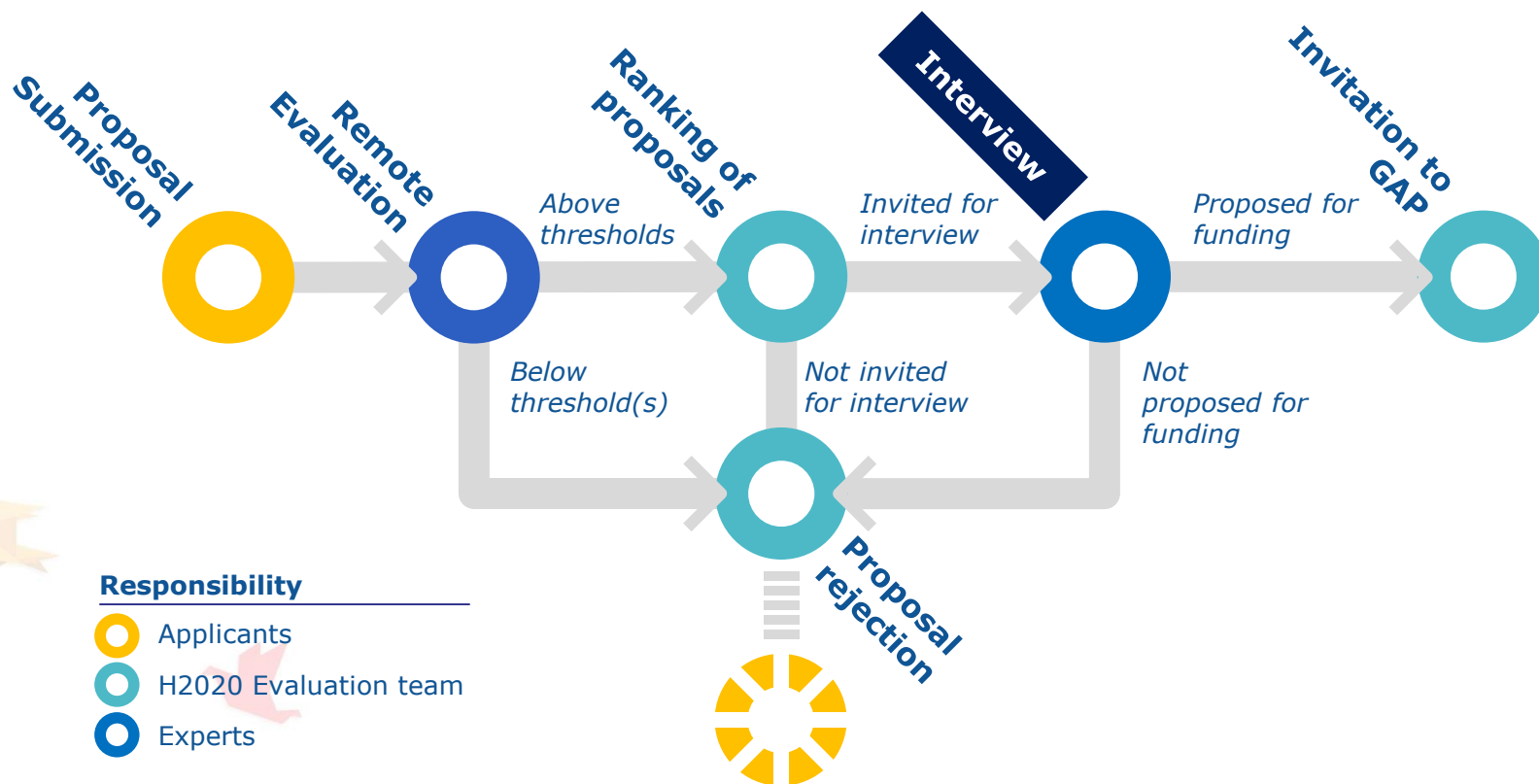
- **All SC1 topics are open to international cooperation**
- EC contribution: 28 MS, 18 AC and 124 Third countries (TC General Annexes A.) **+ USA in most topics (see call conditions)**
- For some other TC: co-funding mechanism (CFM) => Australia, Brazil, Canada, China, Hong Kong & Macau, India, Japan, Republic of Korea, Mexico, Russia, Taiwan

Topics targeting specific countries/regions (Africa, Japan and Canada in 2020)

- Lower overall participation of TC in WPs 2014-2016 if compared to FP7
- Need to get higher and more visible participation of TC in the last WP
- Stimulate cooperation on targeted areas that represent a burden for EU and TC (e.g. cancer for CELAC)
- Give a politically visible 'sign' of cooperation (science diplomacy)

To Be Updated

Full bottom-up and introduction of interviews are the main new features of the evaluation under EIC Pilot



Template

Essential information about clinical studies |

PURPOSE

- Providing structured information to experts for evaluation
- Giving applicants the chance to provide detailed information about clinical studies without page limitations
Reasons:
 - detailed but important information, e.g. about Scientific Advice Meetings, relevant (regulatory) guidelines, in- / exclusion- criteria, etc.
 - potentially high number of studies
- Providing necessary information to request 'unit costs'

Available under 'call documents'¹ and in submission system

¹http://ec.europa.eu/research/participants/data/ref/h2020/other/legal/templ/h2020_tmpl-clinical-studies_2018-2020_en.pdf

Preparing the proposal: the idea

DOs

- Does the idea respond to the topic?
- Will it achieve the impacts listed in the topic?
- Be specific regarding the impact listed in the topic
- Integrate cross-cutting issues from the beginning
- Involve the end-user/patients/medical staff from the concept

DON'Ts

- Don't stretch your idea to answer the scope of the topic
- Don't submit in several topics if slightly relevant

Preparing the proposal: the consortium

DOs

- The right expertise for the right tasks
- Include multidisciplinary teams, for the benefit of the proposal
- Include expertise for crosscutting issues: in ethics, SSH, data management, CT, IPR...
- Involvement of the end-user in the consortium (patients, medical staff...)

DON'Ts

- Size does not matters!
- Don't overload one or two partners: balance consortium

Addressing the criteria

DOs

- All criteria are important, not just excellence
- Write the right information for the right criterion
- All information should be in the proposal (no further information in a web site)
- If a CT is involved, use the EC template
- Try to balance budget between partners, if not provide a clear justification

DON'Ts

- Repeat the same information in different parts of the proposal
- Insert graphs only if relevant. If so, make sure they are readable
- Do not add supporting letters
- If the concept is based on unpublished data don't assume that they will be believed as such by the evaluators: justify them

Updated

Funding and tender portal – one-stop shop

- Call topics
- NCPs
- Expert registration
- Documents
- Project officers' list for questions
- FAQs
- Rules for participation
- Upload project reports

The screenshot shows the 'RESEARCH & INNOVATION Participant Portal' for the European Commission. The header includes the European Commission logo and navigation links: HOME, FUNDING OPPORTUNITIES, HOW TO PARTICIPATE, EXPERTS, SUPPORT, a search bar, and LOGIN/REGISTER buttons. A main banner for 'Horizon 2020 Funding Starting from 1/1/2014' features a globe icon. Below the banner, text states: 'On this site you can find and secure **funding** for projects under the following EU programmes:'. A list of programmes follows: '2014-2020 Horizon 2020 - research and innovation framework programme', '2007-2013 7th research framework programme (FP7) and Competitiveness & Innovation Programme (CIP)', and '3rd Health Programme, Asylum, Migration and Integration Fund, Consumer Programme, COSME, Internal Security Fund Borders, Internal Security Fund Police, Justice Programme, Promotion of Agricultural Products Programme, Rights, Equality and Citizenship Programme and Research Fund for Coal & Steel'. Two columns of user actions are provided: 'Non-registered users' (search for funding, read H2020 Online Manual & download legal documents, check registration status, contact support) and 'Registered users' (submit proposal, sign grant, manage project lifecycle, register as expert). At the bottom, six icons represent: WHAT'S NEW?, FUNDING OPPORTUNITIES, HOW TO PARTICIPATE, WORK AS AN EXPERT, MY PERSONAL AREA, and INFORMATION AND SUPPORT.

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/home>

Participation of UK entities

- until the UK leaves the EU, EU law continues to apply to and within the UK, 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

Thank you!

@EUScienceInnov

#InvestEUresearch

#EUHealthResearch

<http://ec.europa.eu/research/health>

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/home>

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

<https://ec.europa.eu/programmes/horizon2020/en/what-work-programme>