Horizon 2020
Work Programme
for Research & Innovation
2018-2020

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

Philippe Cupers, Deputy Head of Unit
Health research strategy Unit
Health Directorate, European Commission
What is Horizon 2020?

**HORIZON 2020** is the framework programme for research and innovation of the European Union

- 28 Member States + 11 Associated Countries pooling resources in one unique R&I programme
What do you need to know about Horizon 2020?

1. European largest integrated R&I programme, from basic research to close-to-market innovation.

2. Total budget (2014-2020) of ~EUR 77 billion – this represents ~10% of public R&I spending in the EU.

3. ~3,000 grants signed per year.

4. Horizon 2020 contributes to ~90% of the total transnational research funding in the EU.

(~75% of Horizon 2020 funding goes to transnational projects)
What do you need to know about Horizon 2020?

**Excellence** as guiding principle for selection of projects

A large **toolbox of funding instruments** and actions

**Open to business:** from 2014 to 2016, **23.9% of funds go to Small and Mediums Enterprises (SMEs)**

**Open to international collaboration:** participation of 130 countries
EU Horizon 2020: a three-pillar structure

- European Research Council
- Future and Emerging Technologies
- Marie Skłodowska-Curie actions
- Research infrastructures

Excellent science

Industrial leadership

Societal challenges

SC1- Health, demographic changes and wellbeing (€ 7.4 b)

- Leadership in enabling and industrial technologies
- Access to risk finance
- Innovation in SMEs
Horizon 2020
Work Programmes 2018-2020
Political context
Research and innovation – policy drivers (I)

Contribution to 3 of the 10 Commission priorities

• Jobs, growth & investment
• Digital single market
• EU – a stronger global actor
Research and innovation – policy drivers (II)

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
Key findings from the H2020 INTERIM EVALUATION

KEY STRENGTHS

An attractive, simplified and well-performing programme, highly relevant for stakeholders and societal needs

€

On track to deliver value for money and to meet its knowledge-creating objectives

Strong EU Added Value through unique opportunities, competition & access to new knowledge
Key findings from the H2020 INTERIM EVALUATION

KEY AREAS FOR IMPROVEMENT

Underfunding
Has lower success rates than FP7, esp. for high quality proposals

Support for market-creating innovation
Demonstrates potential for breakthrough, market-creating innovation, but it should be strengthened substantially

Greater outreach to civil society
Should better explain the impacts of R&I, and involve even more the users & citizens in agenda-setting & implementation
EU Horizon 2020: supports health research from bench to bedside
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
Collaborative research – Societal Challenge 1

'Health, demographic change and well-being'
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
EU-supported research: Brain research

A positioning system in the brain

EU FP5 Life Sciences ('NAPPY') and FP7 Health ('SPACEBRAIN') collaborative research grants

& ERC grants
EU-supported research: Regenerative medicine

Treating leukaemia with designer immune cells

Baby girl is first in the world to be treated with 'designer immune cells'

Genetically engineered cells successfully used to treat aggressive form of childhood leukaemia, but landmark treatment had only been tested on mice.

A baby girl with aggressive leukaemia has become the first in the world to be treated with designer immune cells that were genetically engineered to wipe out her cancer.
EU-supported research: Regenerative medicine

Project "ESPOIR"

- Heart valve defect (2 in every 100 babies born): valve-replacement surgery very successful BUT limited immune tolerance in young patients, outgrow their valve, re-operations required every 5-10 years
- Implant a *decellularised human donor valve*: does not activate the immune system, and promotes tissue regeneration
- 121 patients treated: zero valve-related mortality - 83 % of patients free from any re-intervention or re-operation
- Obtained regulatory and reimbursement approval for decellularised human heart valves in DE, CH, NL, IT, UK, BE
What about France in H2020 SC1?

EC contribution

EU contribution by inhabitant

In € per inhabitant

0
0.01 - 0.1
0.1 - 0.9
0.9 - 2.9
2.9 - 5.2
5.2 - 13.9
13.9 - 14.1
14.1 +
Which FR region has received the most funding?

<table>
<thead>
<tr>
<th>Regions</th>
<th>EU Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>FR10 - Ile de France</td>
<td>169,343,154</td>
</tr>
<tr>
<td>FR71 - Rhône-Alpes</td>
<td>18,502,971</td>
</tr>
<tr>
<td>FR52 - Bretagne</td>
<td>9,315,085</td>
</tr>
<tr>
<td>FR30 - Nord - Pas-de-Calais</td>
<td>8,519,863</td>
</tr>
<tr>
<td>FR51 - Pays de la Loire</td>
<td>7,168,131</td>
</tr>
<tr>
<td>FR81 - Languedoc-Roussillon</td>
<td>7,101,331</td>
</tr>
<tr>
<td>FR82 - Provence-Alpes-Côte d'Azur</td>
<td>7,040,079</td>
</tr>
<tr>
<td>FR42 - Alsace</td>
<td>6,048,594</td>
</tr>
<tr>
<td>FR61 - Aquitaine</td>
<td>4,908,851</td>
</tr>
<tr>
<td>FR62 - Midi-Pyrénées</td>
<td>3,348,687</td>
</tr>
<tr>
<td>FR63 - Limousin</td>
<td>2,179,500</td>
</tr>
<tr>
<td>FR24 - Centre</td>
<td>1,571,204</td>
</tr>
<tr>
<td>FR22 - Picardie</td>
<td>1,143,147</td>
</tr>
<tr>
<td>FR23 - Haute-Normandie</td>
<td>769,250</td>
</tr>
<tr>
<td>FR43 - Franche-Comté</td>
<td>761,049</td>
</tr>
<tr>
<td>FR26 - Bourgogne</td>
<td>584,250</td>
</tr>
<tr>
<td>FR41 - Lorraine</td>
<td>525,143</td>
</tr>
<tr>
<td>FR21 - Champagne-Ardenne</td>
<td>142,125</td>
</tr>
<tr>
<td>FR53 - Poitou-Charentes</td>
<td>70,005</td>
</tr>
<tr>
<td>FR25 - Basse-Normandie</td>
<td>1,700</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td><strong>249,044,117</strong></td>
</tr>
</tbody>
</table>

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

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

6. Digital transformation in Health and Care

7. 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:**

- [Council conclusions on Personalised Medicine](#)
- [International Consortium on Personalised Medicine](#)
- [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)

EU-supported research: Treating colorectal cancer

Project "APO-decide"
A systems-based modelling of apoptosis signalling pathways to deliver new prognostic and predictive biomarkers for advanced colorectal cancer.
**EU-supported research: Pharmacogenomics for personalised medicine**

<table>
<thead>
<tr>
<th>Patients tested for activity of many genes linked to drug actions</th>
<th>Data collected and embedded into e-records of patients in 7 countries</th>
<th>Doctors e-alerted when a drug is prescribed for a patient with &quot;risky&quot; genotype</th>
<th>Analysis of health outcomes and cost-effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>4000 patients + 4000 controls; 18 months</td>
<td>4000 patients + 4000 controls; 18 months</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**EU project "U-PGx"**

Higher dose needed for these drugs.

Risk of overdosing and harm to patient if prescribed as usual.

![Safety Code Image]
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:**

[link to 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:**

[Image: European One Health Action Plan against Antimicrobial Resistance (AMR)]

[Image: World Health Organization]

Global Action Plan on antimicrobial resistance

[Image: European Commission]
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) - Scaling-up 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 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:**
- Upgrading the single market
- 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 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)
- World Health Organization Regional Office for Europe
- The UNFCCC Paris Agreement
- REACH and EU related policies
- WHO Environment and Health Process (since 1989)
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


Coordination and support actions

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

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

Digital transformation in Health and Care
Trusted digital solutions and Cybersecurity in Health and Care
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, 16 AC and 124 Third countries (General Annexes A.) + USA
- 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** (e.g. CELAC, Russian Federation, Canada, etc.)

- 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)
ALPHA MAN: Building on successes from FP5 and FP6 to FP7 and beyond

FP5 EURAMAN
Enzyme replacement therapy in a mouse model for alpha-mannosidosis

FP6 HUE-MAN
Pre-clinical and clinical therapy protocols; Conditions for large-scale enzyme production

FP7 ALPHA-MAN
First in man clinical trials for the therapy; Demonstration of safety and efficacy

Marketing authorisation has been applied for

IRDiRC initiative

Headline goal:
1000 new therapies and means to diagnose most rare diseases by 2020
The International Human Epigenome Consortium: A Blueprint for Scientific Collaboration and Discovery

Hendrik G. Stunnenberg,1,* The International Human Epigenome Consortium,4 and Martin Hirst2,3,*
1Department of Molecular Biology, Faculties of Science and Medicine, Radboud University, Nijmegen, 6525AG, the Netherlands
2Department of Microbiology and Immunology, Michael Smith Laboratories, University of British Columbia, Vancouver, BC V6T 1Z4, Canada
3Canada’s Michael Smith Genome Sciences Centre, BC Cancer Agency, Vancouver, BC V5Z 4S6, Canada
4http://ihec-epigenomes.org/
*Correspondence: h.stunnenberg@nhcmls.ru.nl (H.G.S.), mhirst@bcgsc.ca (M.H.)
http://dx.doi.org/10.1016/j.cell.2016.11.007

The International Human Epigenome Consortium (IHEC) coordinates the generation of a catalog of high-resolution reference epigenomes of major primary human cell types (see the Cell Press IHEC web portal at http://www.cell.com/ihec). The IHEC Data Portal allows the coordinated achievements of IHEC teams to gather and interpret the datasets to gain insights in the epigenetic control of cell states and disease.

More than 1,000 epigenomes mapped through IHEC initiative, special issue in Cell, success of 'BluePrint' EU project
Clinical studies
Template
Essential information about clinical studies

• 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

Template

Essential information about clinical studies

- Use of template mandatory for certain single-stage and second-stage topics, if a clinical study is included
  - But: no eligibility criterion, no disadvantage when information provided in other part of proposal
  - Rather: more and more appreciated (applicants, evaluators) as an opportunity for structured information
- These topics are listed in the template itself
Template
Essential information about clinical studies

- Ethical considerations have to be addressed in the respective separate section

- Risks and contingency plans have to be addressed in the respective section of the proposal (part B.3.2 and table 3.2.a) ... If contingency plans are not outlined in the proposal (and the grant agreement), your grant agreement might be terminated and/or the EU contribution significantly reduced if a study cannot proceed as planned

"Extensions of project duration can generally not be granted in H2020. Significantly delayed key study milestones (e.g. 'first patient/first visit') might lead to the termination of the grant agreement"
Open research data pilot
Open Research Data Pilot

- **Introduced** with H2020 as part of Open Science and Open Access policies of DG RTD.

- **Legal basis:** Art. 29.3 of the H2020 MGA

- A **default** as of 01 January 2017 for SC1 projects

- 'Opt-out' option only for specific and well justified reasons

- **Principle:** 'As open as possible, as closed as necessary'

- **Type of Data concerned**
  - Data underlying scientific publications (raw/individual patient data (IPD) not concerned)
  - Additional data defined and agreed by the consortium in the data management plan (DMP) (avoiding potential IP and confidentiality infringements)
Open Research Data Pilot

• 'Opt-out' possible at any stage (but rarely justified):
  o during the application phase
  o during the grant agreement preparation (GAP) phase and
  o after the signature of the grant agreement

• **Costs** associated with open access to research data, can be claimed as eligible costs of any Horizon 2020 grant

• Participation in the ORD pilot is **not part of the evaluation of proposals**

• **First version of the DMP** (as a deliverable) must be submitted within the first 6 months of the project

• General **DMP template*** is available online, draft annotations specific for health research will be available in the near future

• The DMP needs to be updated over the course of the project whenever significant changes arise

Public-Private Partnership
**BUDGET: € 3.276 billion**


- **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
IMI – Lead factory

Joint European Compound Collection
320 000 cpds from 7 pharma companies
200 000 cpds from public partners

European Screening Centre
Advanced, ultra high throughput screening facilities & expertise on logistics, medicinal chemistry, etc.

‘Access to the European Lead Factory has fast-forwarded our drug discovery programme in the field of oncology by several years.’ – Huib Ovaa, Netherlands Cancer Institute

‘ELF support & its high quality compound library … will allow Effecta Pharma to expand its drug discovery efforts for dengue and gives an important boost to tackling this viral disease.’ – Effecta Pharma, UK biotech company

- Leading role for SMEs
- Quality & diversity of compounds recognised
- Award-winning IP solution
- Happy users!
Public-Public Partnership
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)
EDCTP
European & Developing Countries Clinical Trials Partnership

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

www.edctp.org/see-work/strategy
www.edctp.org/funding-opportunities/calls
Two HIV paediatric formulas – safe and highly effective at protecting infants during breastfeeding up to 12 months after birth

_The Lancet, 18 November 2015_

Pyramax® approved as antimalarial for treatment of multiple episodes of malaria

_EMA news: Meeting highlights from the Committee for Medicinal Products for Human Use (CHMP) 16-19 November 2015_

9 December 2015 – EDCTP receives Science Diplomacy Award at South African Science Forum
Support to Small and Medium Entreprises

European Innovation Council (EIC) pilot

The EIC pilot supports top-class innovators, entrepreneurs, small companies and scientists with bright ideas and the ambition to scale up internationally. It brings together the parts of Horizon 2020 that provide funding, advice and networking opportunities for those at cutting edge of innovation.
European Innovation Council: pilot 2018-2020
€ 2.7 billion to support +5,000 SMEs and innovators

ECOSYSTEM SUPPORT: COACHING, MENTORING for all 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

6 EIC 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 High-Tech for Humanitarian Aid
EIC – new website

- Cleaner interface
- Highlighting success stories
- Wizard guides you to the calls that fit

[link]

ec.europa.eu/research/eic
Full bottom-up and introduction of interviews are the main new features of the evaluation under EIC Pilot.
<table>
<thead>
<tr>
<th>Instrument →</th>
<th>SME-Instrument</th>
<th>FTI</th>
<th>FET-Open</th>
<th>EIC Horizon prizes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>For whom</strong></td>
<td>One or more eligible(^1) SMEs</td>
<td>From 3 to 5 eligible(^1) entities (mostly industrial(^2))</td>
<td>At least 3 entities(^3)</td>
<td>One or more entities (with restrictions(^1) for some of the prizes)</td>
</tr>
<tr>
<td><strong>Maximum funding(^4)</strong></td>
<td>50,000 €</td>
<td>2.5 M€</td>
<td>3 M€</td>
<td>3 M€ (RIAs) 0.5 M€ (CSAs)</td>
</tr>
<tr>
<td><strong>Total budget 2018-20</strong></td>
<td>164 M€</td>
<td>1425 M€</td>
<td>300 M€</td>
<td>40 M€</td>
</tr>
<tr>
<td><strong>Focus</strong></td>
<td>Exploring the feasibility of a business idea (~ 6 months)</td>
<td>Breakthrough innovation &amp; international growth (12-24 months)</td>
<td>Close-to-market innovation</td>
<td>Radically new technologies</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6 different topics (major societal issues)</td>
</tr>
</tbody>
</table>

\(^1\) Applicants must be established in an EU Member State or in a country associated to Horizon 2020
\(^2\) This industry involvement implies: (a) either the allocation of at least 60% of the budget to industry participants in the consortium, or (b) the presence of a minimum number of two industry participants in a consortium of three or four partners, or of three industry participants in a consortium of five partners
\(^3\) A FET-Open consortium must always include at least 3 participants from 3 different EU Member States or Associated Countries. In addition to these three partners, any legal entity from anywhere in the world can also be included in the consortium.
\(^4\) Per project – with possible exceptions
EU-funding boosts SMEs deal activity

2010-2015: **4,6 deals per SME** (twice more than for non-EU funded SMEs)

Example: **NABATIVI project**

![Chart showing deal types of EU-funded healthcare SMEs (2010–2015)]

1,806 Total

- Partnership
- Merger/Acquisition
- Private Placement
- Venture Financing
- Private Equity

Source: CORDA/ MedTrack

**EU-funding boosts SME's Initial Public Offering**

- Example: **Immunovia**
- Listed at Nasdaq North, market value tripled in 18 months to €300m

![Immunovia AB first trading day on Nasdaq First North]

![Chart showing IPOs and EU-funded healthcare biotech SMEs in Europe]

Source: BIOCOM, CORDA (European Commission)
Research Infrastructures
Health-related ESFRIs: covers the whole spectrum

**Biological Resource Centres**
- **BBMRI** - Biobanks and Biomolecular Resources
- **EMBRC** - Marine biology resources
- **EU-OPENSCREEN** - Chemical libraries
- **INFRAFRONTIER** - Mouse archives and clinics
- **MIRRI** – Microbial resources

**Genomics and proteomics facilities**
- **INSTRUCT** - Structural biology facilities

**Bioinformatics resources**
- **ELIXIR** – Data repositories
- **ISBE** – Infrastructure for systems biology

**Imaging facilities**
- **EUROBIOIMAGING** – Imaging facilities

**Medical research facilities**
- **EATRIS** - Translational research facilities
- **ECRIN** - Clinical trial platform
- **ERINHA** - High-security labs
Thank you!

@EUScienceInnov
#InvestEUresearch
#EUHealthResearch

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