The EU Framework Programme for Research and Innovation

HORIZON 2020

Opportunities for SMEs in Horizon 2020: first lessons learned

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DG Research & Innovation
European Commission
Horizon 2020 (2014–2020)

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

- Leadership in enabling and industrial technologies
- Access to risk finance
- Innovation in SMEs

Excellent science

Industrial leadership

Societal challenges

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

The new EU programme for research and innovation € 79 billion (2014–2020)
The ecosystem for EU Health Research

Risk level:
- Discovery PoC
- Preclinic
- Phase 1/2a
- Phase 2
- Phase 3
- Commercial

"Valley of Death"

Resources required

- FP7/H2020 Grants
- SME-Instrument
- ERC
- MSCA
- EDCTP
- Horizon Prize
- InnovFin ID
- IMI

H2020 pillars:
- Excellent Science
- Industrial Leadership
- Societal Challenges

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European Commission
EU Research opportunities for SMEs

Funded and implemented by the European Commission

• Collaborative research
• SME instrument
• Fast Track to Innovation (FTI)
• Horizon prize
  o Better Use of Antibiotics
  o Birth Day Prize

Funded and implemented jointly with others

• Public–Private partnership
  o Innovative Medicines Initiative (EC - EFPIA)
• Public–Public partnership
  o European and Developing Countries Clinical Trial Partnership
  o Joint Programming Initiative
  o EUREKA – EUROSTARS
• INNOVFIN Financial Instruments (EC - EIB)
  o INNOVFIN – Infectious Diseases (INNOVFIN-ID)

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EU definition of Small and Medium-sized Enterprise (SME)

Any autonomous entity engaged in an economic activity, irrespective of its legal form, with the following characteristics:

- < 250 employees
- ≤ €50 million annual turnover OR
- ≤ €43 million annual balance sheet
- Autonomous entity

SME instrument: main features

- Single company support possible
- Target group: Innovative SMEs
- Only EU & Associated Country SMEs are allowed to apply for funding
- Market-oriented, project with an EU dimension
- 4 cut-off dates (submission deadlines) per year
- Resubmission is possible
- Short time to contract:
  - 3 months in phase 1
  - 6 months in phase 2
- 3 criteria: Excellence, Impact, Implementation
- Score = Excellence + Impact *1.5 + Implementation
SME instrument: 3 phases

**Phase 1: Feasibility Assessment**
- Feasibility of concept
- Risk assessment
- IP regime
- Partner search
- Design study

Idea

**Phase 2: Innovation project**
- Clinical trials
- Development, prototyping, scaling-up
- Miniaturisation, design
- etc.

**Phase 3: Commercialisation**
- Facilitate access to private finance
- Support via networking, training, coaching, knowledge sharing, dissemination

Market

- €50,000
- ~6 months

- Up to €2.5 / 5 million
- ~36 months
- 70% / 100% funding rate

No direct funding
SME instrument in Societal Challenge 1

2014-2015
• PHC-12: Clinical research for the validation of biomarkers and/or diagnostic medical devices

2016-2017
• SMEInst-05: Supporting innovative SMEs in the healthcare biotechnology sector
  a) Cell technologies in medical applications
  b) Clinical research for the validation of biomarkers and/or diagnostic medical devices (only at the 1st cut-off date/Ph. 2 of 2017)
• SMEInst-06: Accelerating market introduction of ICT solutions for Health, Well-Being and Ageing Well

Phase 1

- Submitted: 1219
- Evaluated: 1206
- Above threshold: 198
- Selected: 165

Phase 2

- Submitted: 751
- Evaluated: 736
- Above threshold: 354
- Selected: 31

13.7% selected
4.2%
PHC-12 project examples

• Development of a digital diagnostics rapid Lung Maturity Test (LMT) for premature infants, to assist neonatologists in the diagnosis of Respiratory Distress Syndrome at birth

• Validation of a point-of-care H-FABP test for a rapid exclusion of Acute Myocardial Infarction in patients with cardiac complaints.

• Validation of PreCursor-M for enhanced Cervical (Pre) Cancer detection

• Moving to Efficient Diabetes care: Multimode Integrated CO-morbidity diagnostics platform

• Validation of clinical performance and pre-commercial development of a novel diagnostic for dental caries assessment
Success story: Immunovia AB

- Immunovia AB: Spin-off from Lund University & CREATE the Center for Translational Cancer Research in Lund - founded in 2007

- IMMray™, a technology platform used to diagnose, predict disease progression and monitor the therapeutic responsiveness of cancers

- Dec. 2014: SME instrument project - EU contribution: 4 million EUR
- Dec. 2015: Initial Public Offering (IPO) at Nasdaq First North Stockholm

- Mats Grahn, CEO of Immunovia: "The fact that we received this very large grant in competition with so many companies and after thorough evaluations has given the confidence to our investors in the process of making the IPO"
Some facts on 2014-2015 SME instrument beneficiaries

- **Young, small & growing**: almost half SMEs are micro-sized and almost a third are younger than 3 years.
- **Manufacturing**: the most common activity, ICT the most trending topic.
- **Spain & Italy**: most successful, Ireland most efficient.
- **New customers & distribution channels**: are a first priority for 44% of SMEs.
- **Recognised potential**: 25% are in the venture radar of top 10% growing companies & 5 are in the Deloitte fast growing enterprises.
- **11%**: backed by accelerators, 12% spin-offs from academia.
- **Better access to private investment**: 3x more private investments; €692m private equity; faster access to markets.
- **Promising projections**: for Phase 1, 400% growth in turnover and 100% in employment expected.
Phase 1 SMEs: staff and years of trading

**Staff in Funded SMEs**
- More than 50 employees: 11%
- 11 to 50 employees: 28%
- 6 to 10 employees: 19%
- Up to 5 employees: 42%
- Unknown: 0%

**Years Trading of Funded SMEs**
- More than 11 years: 30%
- 4 to 10 years: 34%
- Up to 3 years: 35%
- Unknown: 1%
Young companies and start-ups are well represented
Medium sized enterprises ~15% of Phase 2 grants
The Horizon 2020 Participant Portal:

- Calls for proposals
- Horizon 2020 documents
- Support services
- Evaluation experts

**SME Participation**

**SME Instrument**

The SME instrument has been designed specifically for single or groups of highly innovative SMEs with international ambitions, determined to turn strong, innovative business ideas into winners on the market. The instrument provides full-cycle business innovation support from the stage of business idea conception and planning (phase I) over business plan execution and demonstration (phase II) to commercialisation (phase III). Participants will be able to call on business innovation coaching for the duration of their project.

- **Phase I** (proof-of-concept): Explore the scientific or technical feasibility and commercial potential of your new idea in order to develop an innovation project, with the help of a € 10,000 grant, and receive more support in case of a positive outcome.
- **Phase II** (development & demonstration): Develop your sound, ground-breaking business idea further with the help of a grant in the order of € 500,000 to 2.5 million into a market-ready product, service or process.
- **Phase III** (go-to-market): Take advantage of additional EU support to enter the market successfully (no grants).

**Collaborative Projects (SME + partners)**

Work with at least 2 international partners (separate legal entities) from different EU countries (at least 3 in total) and request EU project support. To find partners, you can use the assistance of various partner search services.

**Access to Debt and Equity Financing**

Discover where and how the EU can help your company to access finance for further business development.

For more information, please see the Work Programme part Access to Risk Finance.

**Support to SME**

Get personalized advice and guidance on how to apply from two support networks who understand your local and
Eurostars is...

- Joint programme between EUREKA and EU
- Dedicated to R&D-performing SMEs
- Market-oriented
- Bottom-up
- International cooperation
Eurostars countries

36 countries

Austria  Belgium  Canada  Croatia  Cyprus  Czech Republic  Denmark  Estonia  Finland  France  Germany  Greece  Hungary  Iceland  Ireland  Israel  Italy  Latvia  Lithuania  Luxembourg  Malta  The Netherlands  Norway  Poland  Portugal  Romania  Slovak Republic  Slovenia  South Africa  South Korea  Spain  Sweden  Switzerland  Turkey  United Kingdom
Eurostars under Horizon 2020

1.148 billion
Eurostars total public budget 2014-2020

75% + 25%
EUROSTARS COUNTRIES CONTRIBUTION + EU CONTRIBUTION
Eligibility

- **Project leader** is an R&D-performing SME from a Eurostars country
- **At least 2 Participants**
  - Autonomous entities
  - Legal entities from at least 2 Eurostars countries
- **SMEs** are in the **driving seat**
- **International balance**
- **Project duration** is max. 3 years
- **Market introduction** within 2 years
## Eurostars-2 in numbers

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Projects Submitted</strong></td>
<td>1,553</td>
</tr>
<tr>
<td><strong>Cut-off 1-5</strong></td>
<td>4,951</td>
</tr>
<tr>
<td><strong>Number of Applications</strong></td>
<td>1,511</td>
</tr>
<tr>
<td><strong>Number of Applicants</strong></td>
<td>675</td>
</tr>
<tr>
<td><strong>Projects Funded</strong></td>
<td>472</td>
</tr>
<tr>
<td><strong>Cut-off 1-5</strong></td>
<td>1,511</td>
</tr>
<tr>
<td><strong>Number of Approved Projects</strong></td>
<td>1,511</td>
</tr>
<tr>
<td><strong>Number of Participants</strong></td>
<td>675</td>
</tr>
<tr>
<td><strong>Total Costs of Applications Funded</strong></td>
<td>290 million €</td>
</tr>
<tr>
<td><strong>Estimated Public Funding</strong></td>
<td>675 million €</td>
</tr>
<tr>
<td><strong>Countries Involved</strong></td>
<td>38</td>
</tr>
<tr>
<td><strong>Projects Submitted</strong></td>
<td>2.0 billion €</td>
</tr>
<tr>
<td><strong>Total Costs of Applications</strong></td>
<td>675 million €</td>
</tr>
</tbody>
</table>

**Success Rate:** 30%
Eurostars-2 Health: results from COD 1-5

- 464 applications  
  - 30% of the total
- 163 funded projects  
  - 35% success rate  
  - 89% of projects above threshold
- 533 participants from 26 countries
- €270m public-private investment
Number of projects per health area

- Therapeutic Products and Services: 35
- Diagnostic Products and Services: 40
- Monitoring Equipment: 9
- Drug Delivery And Other Equipment (Including Kidney Dialysis Machines): 15
- Other Medical / Health Related: 27
- Pharmaceuticals/Fine Chemicals: 16
- Imaging, Scanning, Radiography: 15
- Surgical: 6
A typical Eurostars project

- 3–4 participants
- 2–3 countries
- Average duration: 29 months
- Average project cost: €1.4 million
Fast Track to Innovation pilot

- Bottom-up – no topic
- Minimum 3 and maximum 5 partners per project
  - from at least 3 different EU-28 and Associated Countries
- Eligibility rule:
  - minimum 60% of the overall budget allocated to private organisations, **or**
  - private organisations represent the majority in the consortium
- A proposal shall include a business plan
- Max. €3 million per project, funding rate: 70%
- Last cut-off: 25 October 2016 (Budget: €30 m)
What is the Innovative Medicines Initiative?

EU funding goes to:
- universities
- SMEs
- patient groups etc.

EFPIA companies
- receive no funding
- contribute to projects ‘in kind’

Europe’s partnership for health

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SMEs play a leading role in many IMI projects
• Participation is most successful when IMI project objectives are aligned with the SME’s approach

As of March 2016:
• 192 participations out of 1194 beneficiaries receiving funding are SMEs: 16%
• SMEs receive 150 Million Euros out of a total IMI commitment to beneficiaries receiving funding of 1106 Million Euros: 14%
Why should an SME participate in an IMI project?

- Unique collaborative partnerships in pharmaceutical research and development
- IMI projects are focused on translating excellent research into real world outcomes – an opportunity for SMEs
- Collaboration with large pharmaceutical companies on key challenges for the industry
- Build research and business networks
- Funding opportunities

- IMI projects vary in their scope and approach therefore not all IMI projects are suitable for all SMEs
  - Check the call topic text carefully
  - Contact the IMI Programme office
IMI Call 8
Single Stage RIA Call

Ebola and other filoviral haemorrhagic fevers (Ebola+) programme: future outbreaks

This call for proposals is continuously open for a period of two years with the following cut-off dates for submission of proposals:

- 16 March 2016
- 15 September 2016
- 16 March 2017
- 14 September 2017
- 15 March 2018

http://www.imi.europa.eu/content/imi-2-call-8
Future calls

The following topics are under consideration for inclusion in IMI 2 – Call 10

• Understanding hypoglycaemia: the underlying mechanisms and addressing clinical determinants as well as consequences for people with diabetes by combining databases from clinical trials

• Introduction to the IMI2 Big Data for Better Outcomes Programme (BD4BO)

• Improving the care of patients suffering from acute or chronic pain

• Biomanufacturing 2020: Development of Innovative high throughput analytical tools and methods to characterize cell culture fluid during development and commercial cell culture processes

• Precision Medicine Approaches in Autism Spectrum Disorders
Stay in touch

- Dedicated SME contact
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infodesk@imi.europa.eu

- Fiction vs. facts


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Why EU Access to Risk Finance?

Barriers to Innovation & Growth

"68% of companies consider the lack of financial resources as the main obstacle to the commercialisation of innovative products or services."

Source: European Commission, 2014 Innobarometer survey “The role of public support in the commercialisation of innovations”
## InnovFin - EU Finance for Innovators

<table>
<thead>
<tr>
<th>SMEs</th>
<th>Midcaps</th>
<th>Large Caps</th>
<th>Thematic Finance</th>
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<tbody>
<tr>
<td><strong>InnovFin</strong></td>
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<tr>
<td>SME Guarantee</td>
<td>MidCap Guarantee</td>
<td>Large Projects</td>
<td>Energy Demo Projects</td>
</tr>
<tr>
<td>SME Venture Capital</td>
<td>MidCap Growth Finance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SMEs and small Mid-Caps &lt; 500 Employees</td>
<td>Mid-Caps &lt; 3,000 Employees</td>
<td>Large Caps Typically &gt; 3,000 Employees</td>
<td>SPV, Mid-Caps and Large Caps</td>
</tr>
<tr>
<td>Intermediated SME/Mid-Cap Financing</td>
<td>Intermediated and/or direct Corporate lending</td>
<td>Direct Corporate Lending</td>
<td>Project Finance and/or Direct Corporate Lending</td>
</tr>
</tbody>
</table>

**direct products**

**indirect products**

A New Financial Instrument for Infectious Diseases R&D

- Jointly developed by EC and EIB
- Provides loans between EUR 7.5m and EUR 75m to innovative players active in developing **vaccines, drugs, medical and diagnostic devices**, and research **infrastructures** for combatting infectious diseases.
- No calls – demand-driven
- Launched 15 June 2015, 3 deals signed since
Eligible Projects...

- ...must be in pre-commercial phase with **proof-of-concept and pre-clinical research phases completed** and clinical validation required for further development.
- ...must have **proven public health impact and potentially have market prospects**.
- ...should provide for the intellectual property created in the course of the project to remain in the EU

Pipeline YTD

56 proposals submitted since launch:

• 18 Vaccine
• 20 Drugs
• 14 Devices
• 4 Other

3 projects signed
Browse financial support available in your country

http://europa.eu/youreurope/business/funding-grants/access-to-finance/
The 'Birth day' Prize is an initiative of the European Commission which has committed €1 million, with the Bill & Melinda Gates Foundation pledging another €1 million and a further €500 000 donated by the MSD for Mothers programme of Merck Sharp & Dohme Corporation.

Scope: a novel solution to improve the outcome of facility-based deliveries (of a clinical, technological or managerial nature, or a combination of these)

Impact: demonstrated reduction in maternal and/or new-born morbidity and mortality and/or stillbirth during facility-based deliveries,

End date: 6 September 2017

http://ec.europa.eu/research/horizonprize/index.cf m?prize=birthday
Get prepared - free of charge services to assist you

Call text, guide for applicants, FAQ: Participant portal

Practical information & assistance: National Contact Points
http://ec.europa.eu/research/participants/portal/desktop/en/support/national_contact_points.html

Find partners, training, brokerage: Fit for Health 2.0
http://www.fitforhealth.eu/

Find out what projects are or have been funded: EU Health projects database

IP questions and advices: IPR helpdesk
https://www.iprhelpdesk.eu/

SME regulatory one stop shop: EMA SME office

Become evaluator! Select the best projects: Register as Expert

Loan guarantee, equity: Find out financial support available in your country
http://europa.eu/youreurope/business/funding-grants/access-to-finance/

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