SME targeted support measures within Horizon2020 / EUREKA EUROSTARS

Silver Toomla
Programme development

FP1 (1984-1987) 3,3
FP2 (1987-1991) 5,4
FP3 (1990-1994) 6,6
FP4 (1994-1998) 13,1
FP5 (1998-2002) 15
FP6 (2002-2006) 17,5
FP7 (2007-2013) 53,2
Horizon 2020 (2014-2020) 70
Horizon2020 set-up

**Tackling Societal Challenges**
- Health, demographic change and wellbeing
- Food security, sustainable agriculture and the bio-based economy
- Secure, clean and efficient energy
- Smart, green and integrated transport
- Climate action, resource efficiency and raw materials
- Inclusive, innovative and reflective societies
- Secure Societies

**Creating Industrial Leadership and Competitive Frameworks**
- Leadership in enabling and industrial technologies
  - ICT
  - Nanotech., Materials, Manuf. and Processing
  - Biotechnology
  - Space
- Access to risk finance
- Innovation in SMEs

**Excellence in the Science Base**
- Frontier research (ERC)
- Future and Emerging Technologies (FET)
- Skills and career development (Marie Curie)
- Research infrastructures

**Common rules, toolkit of funding schemes**
• TRL 1 – basic principles observed
• TRL 2 – technology concept formulated
• TRL 3 – experimental proof of concept
• TRL 4 – technology validated in lab
• TRL 5 – technology validated in relevant environment (industrially relevant environment in the case of key enabling technologies)
• TRL 6 – technology demonstrated in relevant environment (industrially relevant environment in the case of key enabling technologies)
• TRL 7 – system prototype demonstration in operational environment
• TRL 8 – system complete and qualified
• TRL 9 – actual system proven in operational environment
## Project types – funding and outcomes

<table>
<thead>
<tr>
<th>Project type</th>
<th>Funding instrument</th>
<th>Funding rate</th>
<th>Expected outcome</th>
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</table>
| **Research and Innovation actions**       | • Collaboration projects (one phase submission / two phase submission)              | Up to 100 % (25 % flat overhead) | TRL 3 – experimental proof of concept  
• TRL 4 – technology validated in lab  
• TRL 5 – technology validated in relevant |
| **Innovation Actions**                    | • SME Instrument  
• Collaboration projects                                                          | 70-100% (25 % flat overhead)  | TRL 6 – technology demonstrated in relevant environment  
• TRL 7 – system prototype demonstration in operational environment  
• TRL 8 – system complete and qualified |
| **Coordination and support actions**      | • Coordination / support                                                            | Up to 100 % (25 % flat overhead) | Sector analyses; R&D cooperation |
| **Marie Curie Actions**                   | • Collaborative projects and individual grants                                     | Up to 100 % (25 % flat overhead) | Development of research careers; Academia-industry cooperation |
SME instrument set-up

Phase 1: Concept and feasibility assessment

Input: Idea/Concept: "Business Plan I" (~ 10 pages)
Activities:
- Feasibility of concept
- Risk assessment
- IP regime
- Partner search
- Design study
- Pilot application etc.

Output: elaborated "Business plan II" (Lump sum): 50,000 – 6 month

Phase 2: R&D, demonstration, market replication

Input:
"Business plan II" plus description of activities under Phase II (~ 30 pages)
Activities:
- Development
- Prototyping
- Testing
- Piloting
- Miniaturisation
- Scaling-up
- Market replication

Output: investor-ready "Business plan III"

to 3 M€ EC funding
~ 12 to 24 months

Phase 3: Commercialisation

Support via networking,
- training, information,
- addressing i.a. IP management,
- knowledge sharing,
- dissemination

No direct funding
SME Instrument – funding & set-up

- 70% of eligible cost funded
- Budget up to 3 million Euros
- 25% overhead included
- Up to 80% as pre-financing
- Product development grant – TRL6-TRL8
- Eligible costs – personnel, consumables, prototyping cost, testing/demo equipment depreciation, subcontracting
- One applicant – SME (possible to engage more)
- Cooperation partners engaged as subcontractors
Information and Communication Technologies


• **Specific Challenge:** The challenge is to provide support to a large set of early stage high risk innovative SMEs in the ICT sector. Focus will be on SME proposing innovative ICT concept, product and service applying new sets of rules, values and models which ultimately disrupt existing markets.

• Budget 45 M Euros (2014) out of which 4,5 for Phase 1 and 43 M Euros (2015) out of which 4,3 for Phase 1
Nanomaterials

- NMP 25 – 2014/2015: Accelerating the uptake of nanotechnologies, advanced materials or advanced manufacturing and processing technologies by SMEs

- Specific challenge: Research results should be taken up by industry, harvesting the hitherto untapped potential of nanotechnologies, advanced materials and advanced manufacturing and processing technologies. The goal is to create added value by creatively combining existing research results with other necessary elements, to transfer results across sectors where applicable, to accelerate innovation and eventually create profit or other benefits. The research should bring the technology and production to industrial readiness and maturity for commercialisation after the project.

- Budget 21,8 M Euros (2014) out of which 2,18 for Phase 1 and 23,8 M Euros (2015) out of which 2,38 for Phase 1
Biotechnology

- **SME boosting biotechnology-based industrial processes driving competitiveness and sustainability**

- **Specific challenge:** The large number of SMEs which characterize the EU biotechnology sector are playing a crucial role in the move to competitive and sustainable biotechnology-based processes. These SMEs are characterized by their research intensity and long lead times between early technological development and market introduction. They therefore need to be supported to overcome the so-called “valley of death”.

- Budget 3.8 M Euros (2014) out of which 0.38 for Phase 1 and 2.4 M Euros (2015) out of which 0.24 for Phase 1
• SME-SPACE-1-2014/2015: SME instrument

• Specific challenge: To engage small and medium enterprises in space research and development. The specific challenge of the actions envisaged under this call could cover any aspect of the Specific Programme for Space. However, it is considered that actions in the areas of applications, especially in connection to the flagship programmes Galileo and Copernicus, spinning-in (i.e. application of terrestrial solutions to challenges in space) and the development of certain critical technologies could be adequately suited for this call

• Budget 8,5 M Euros (2014) out of which 0,85 for Phase 1 and 8,55 M Euros (2015) out of which 0,875 for Phase 1
• PHC 12 – 2014/2015: Clinical research for the validation of biomarkers and/or diagnostic medical devices

• Specific challenge: Biomarkers are used in clinical practice to describe both normal and pathological conditions. They can also have a prognostic or a predictive power. Only a few of them are however validated for use in a clinical research setting. Such validation implies the demonstration of a link to a pertinent clinical endpoint or process, as well as a robust and appropriate analytical method. **The clinical validation of biomarkers** will be increasingly important for the development of new diagnostics, and this is a research area where many small European companies are active. Improved clinical decisions should lead to better health outcomes while contributing to the sustainability of the health care system.

• Budget 66,1 M Euros (2014) out of which 6,61 for Phase 1 and 45 M Euros (2015) out of which 4,5 for Phase 1
• **SFS-08-2015-1 - Resource-efficient eco-innovative food production and processing**

• **Specific Challenge:** The development of more resource-efficient and sustainable food production and processing, throughout the food system, at all scales of business, in a competitive and innovative way is required. Current food production and processing systems, especially in the SME sector, need to be revised and optimised with the aim of achieving a significant reduction in water and energy use, greenhouse gas emissions and waste generation, while at the same time improving the efficiency in the use of raw materials, increasing climate resilience and ensuring or improving shelf life, food safety and quality.

• **Budget 10 M Euros (2014) out of which 1 for Phase 1 and 17 M Euros (2015) out of which 1,7 for Phase 1**
Energy

- SIE 1 – 2014/2015: Stimulating the innovation potential of SMEs for a low carbon and efficient energy system
  - Reducing energy consumption and carbon footprint by smart and sustainable use (including energy-efficient products and services as well as ‘Smart Cities and Communities’),
  - Low-cost, low-carbon electricity supply (including renewable energy as well as CCS and re-use),
  - Alternative fuels and mobile energy sources,
  - A single, smart European electricity grid,
  - New knowledge and technologies, and
  - Robust decision making and public engagement

Budget 33,9 M Euros (2014) out of which 3,4 for Phase 1 and 3,48 M Euros (2015) out of which 1,7 for Phase 1
• **IT-1-2015-1 - Small business innovation research for Transport**

• **Specific challenge:** The European transport sector must have the capacity to deliver the best products and services, in a time and cost efficient manner, in order to preserve its leadership and create new jobs, as well as to tackle the environmental and mobility defies.

Budget 35,8 M Euros (2014) out of which 3,59 for Phase 1 and 38,96 M Euros (2015) out of which 3,9 for Phase 1
Eco-Innovation

• SC5-20-2014/2015: Boosting the potential of small businesses for eco-innovation and a sustainable supply of raw materials

• **Specific challenge:** Innovative SMEs have been recognised as being able to become the engine of the green economy and to facilitate the transition to a resource efficient, circular economy. This topic is targeted at all types of eco-innovative SMEs in all areas addressing the climate action, environment, resource efficiency and raw materials challenge, focusing on SMEs showing a strong ambition to develop, grow and internationalise. All kinds of promising ideas, products, processes, services and business models, notably across sectors and disciplines, for commercialisation both in a business-to-business (B2B) and a business-to-customer (B2C) context, are eligible.

Budget 17 M Euros (2014) out of which 1,7 for Phase 1 and 19 M Euros (2015) out of which 1,9 for Phase 1
Blue growth

- **BG-12-2015-1 - Supporting SMEs efforts for the development - deployment and market replication of innovative solutions for blue growth**
- The potential of Europe’s Oceans, seas and coasts is significant for job and growth creation if the appropriate investments in research and innovation are made. However, SMEs lack access to finance to develop their activities and the economic and financial crisis has made access to finance even more difficult. This is particularly true in the previously mentioned maritime sectors, where access to finance for SMEs is considered as one of the most important barriers for the development of **innovative maritime economic activities**.

Budget 33,9 M Euros (2014) out of which 3,4 for Phase 1 and 3,48 M Euros (2015) out of which 1,7 for Phase 1
Mobile Government

- INSO-9-2015: Innovative mobile e-government applications by SMEs
- The aim is to help the interaction of citizens and businesses with public administrations. This may be done through the combination of public and private sector services, through mobile technologies. Although they may be first piloted in a local context – with the involvement of public administrations and end users - the solutions need to ensure replicability, also taking into account multi-lingualism and, where necessary, the cross-border dimension. Scalability and sustainability issues are to be considered

Budget 4 M Euros (2015) out of which 0,4 for Phase 1
<table>
<thead>
<tr>
<th>Phase 1</th>
<th>Phase 2</th>
</tr>
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<tbody>
<tr>
<td>Innovative (novel) idea matching the Call expectations</td>
<td></td>
</tr>
<tr>
<td>TRL level 6 as a starting point</td>
<td></td>
</tr>
<tr>
<td>Clear understanding of the business opportunity, market and competing solutions / clear understanding of user needs</td>
<td>Existing business plan</td>
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<tr>
<td>Existing intellectual property</td>
<td>Freedom to operate</td>
</tr>
</tbody>
</table>
SME Instrument evaluation

• Remote evaluation – 4 experts on each proposal
• No consensus meeting
• Short standardized feedback
• Only one application per company allowed for all phases
IMPACT – evaluation and writing tips

- Market overview and a good description of targeted users
- Market conditions, growth rate, competitive solutions (your benefits)
- Effect of the innovation in your company - growth
- Alignment of the project in your overall strategy
- Initial commercialization plan - requirements for commercial exploitation
- Commercial and managerial experience
- Clear European dimension
- Status and strategy of knowledge protection
EXCELLENCE - evaluation and writing tips

• Innovation addressing EU/global challenges
• Realistic description of the current stage of development; added value of innovation;
• understanding of competing solutions
• Project results are convincing and have a relevant commercial potential;
• Good understanding of both risks and opportunities related to a successful market introduction of the innovation, both from a technical, commercial point of view
IMPLEMENTATION - evaluation and writing tips

• Existing resources (personal, facilities, networks, etc) to develop its activities in the most suitable conditions
• If relevant, describes in a realistic way how key stakeholders/partners/subcontractors could be involved
• The proposal includes a realistic time frame and a comprehensive description of work
• The team has relevant technical/scientific knowledge/management experience, including a good understanding of the relevant market aspects for the particular innovation. If relevant the proposal includes a plan to acquire missing competences
Feedback from the Commission on Phase 1 proposal

- Too much focused on the project and not enough on the business opportunity;
- Not convincing when describing the company and why it is this company succeeding and not a competitor;
- Not providing enough information on competing solutions (which shows that the company has not made a good market analysis);
- A too low level of innovation, no breakthrough, only very incremental improvements or planning to develop a product for which already many solutions exist on the market;
- Proposing just an idea without any concept for its commercialization;
- Just trying one's luck (a small number of applications were so sloppy that it can only be assumed that the applicants were thinking that the SME Instrument is a lottery!).
EUROSTARS

- Close to market research project focused on specific applications (duration 2-3 years)
- Important to reflect scientific novelty, market potential and the ability of the consortium to bring the innovation to the market
- Minimum 2 partners from 2 different EUROSTARS member countries.
- Good opportunity to launch a development project with your customer / end-user
- Product/service has to be on market two years after project completion
- Mostly targeted for research intensive SMEs (large companies can participate)
- University participation is complicated
- Funding through local agencies
Project writing tips (SME instrument)

- Evaluate your TRL level
- Evaluate the novelty of your solution – compared to alternatives
- Provide measurable benefits
- Describe your previous research and intellectual property
- Describe clearly your business model and market potential – SME instrument Phase 1 projects means that you have to conduct a market survey.
- Your company profile is not a description of your firm but a selling pitch – why you should get this project and why you have the potential to bring the innovation to the market.
- Project has to be clearly written – more emphasis on the business opportunity and less on technological advantages.
Future questions

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