

Innovation aspects of Horizon 2020 and COSME and the role of dissemination in European projects

Horizon 2020 – The basics (1)

What is Horizon 2020?

***A European Commission proposal to launch a 70-80 billion euro
Research & Innovation programme from 2014 to 2020
(under negotiation)***

- part of the multiannual financial framework for the EU
 - financial tool for implementing Europe 2020, Innovation Union & European Research Area
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- to respond to the economic crisis by investing in the future
 - to address people's concerns
 - to strengthen the EU's global position in research, innovation and technology



Horizon 2020 – The basics (2)

What is it based on?

- the **results of EU Presidencies** (e.g. Spain: integration of research and innovation, Hungary: FP7 interim evaluation)
- **European Parliament reports** (Audy: FP7 evaluation, Matias: Horizon 2020)
- **public consultation** (over 2.000 contributions)
- **survey** on administrative cost for FP7 participants
- dozens of **workshops** on the future content of Horizon 2020



Horizon 2020 – The basics (3)

What's new?

- **simple:** simplified access for all EU countries and beyond
- **comprehensive:** covering all forms of innovation from research to retail; focusing all EU societal challenges from health to transport
- **both:** a single programme to run three different programmes
 - the continuation of the **Framework Programmes**
 - the innovation aspects of the **Competitiveness and Innovation Framework Programme (CIP)**
 - the EU part of contributions to the **European Institute of Innovation and Technology (EIT)**



Socio-economic sciences and humanities (SSH)

- **integrated approach:** SSH included as an integral part of the activities, understanding the determinants of health and optimising the effectiveness of healthcare systems)
- **the 'Inclusive, Innovative and Secure Societies' challenge:** smart and sustainable growth, social transformations, social innovation and creativity the position of Europe as a global actor
- **secure society:** SSH have the tools to contribute to addressing security challenges, enhancing the societal dimension of security policy and research



Gender issues

- **integrated approach:** rectifying imbalances between women and men, integrating a gender dimension in research and innovation programming and content

Small and medium-sized enterprises (SMEs)

- **integrated approach:** around 15% of the total budget for societal challenges and the for the activities in the priority ,Leadership in enabling and industrial technologies, go to SMEs (→ see slide Priority 2.)
- simplification of particular benefit to SMEs (e.g. single entry point)
- a dedicated activity for research-intensive SMEs in ,Innovation in SMEs'



Horizon 2020 – Priorities (1)

Priority 1 - Excellent science

- world class science is the foundation of tomorrow's technologies & jobs → **supporting world class scientists** in blue sky research; development of future and emerging technologies
- Europe needs research talent → **providing training and career opportunities**
- researchers need access to the best infrastructures → **new research infrastructures**



Horizon 2020 – Priorities (2)

**Proposed funding for its 4 specific objectives
(under negotiation)**

European Research Council – 13.268 million euro

Future and Emerging Technologies – 3100 million euro

Marie Curie actions – 5572 million euro

Research infrastructures (including e-infrastructure) – 2478 million euro

Horizon 2020 – Priorities (3)

Priority 2 - Competitive industries in Europe

- strategic investments in key technologies → **providing access to risk finance activity**
- more private investment is needed in Research & Innovation → **stimulating private investment**
- more innovative SMEs are needed to create growth and jobs → **supporting innovation, increasing market uptake, strengthening innovative SMEs**



Horizon 2020 – Priorities (4)

Envimpact
& proceed

**Proposed funding for its 3 specific objectives
(under negotiation)**

**Leadership in enabling and industrial technologies – 13.781 million
euro**

Access to risk finance – 3538 million euro

Innovation in SMEs – 619 + 6829 million euro



Horizon 2020 – Priorities (5)

Priority 3 - Better society/societal challenges

Tackling societal challenges (examples):

- resources → **green, affordable electricity**
- transport → **smart, green transport**
- feeding the planet → **safe, secure food supply**
- safer Internet → **competitive European security**
- resistance to antibiotics → **new treatments and cooperations**



Horizon 2020 – Priorities (6)

Proposed funding for its 7 special objectives (under negotiation)

Health, demographic change and wellbeing – 8033 million euro

Food security, sustainable agriculture, marine and maritime research & the bioeconomy – 4152 million euro

Secure, clean and efficient energy – 5482 million euro (partly from the Euratom Treaty activities)

Smart, green and integrated transport – 6802 million euro

Climate action, resource efficiency and raw materials – 3160 million euro

Inclusive, innovative and secure societies – 3819 million euro



Horizon 2020 – Priority 1 - Activities (1)

Priority 1 - Excellent science

- aims at **reinforcing and extending the excellence of the Union's science** base and to consolidate the European Research Area in order to make the Union's research and innovation system more competitive on a global scale → **the European scientific community will play a strong role in determining the avenues of research**
- **challenges:** the EU is less selective in allocating resources than the US leading to a significantly lower investment per researcher; conditions are less attractive for young researchers to stay → the US attracts the best researchers from the world



Horizon 2020 – Priority 1 - Activities (2)

- **activities:**

1. **European Research Council (ERC)**

- the ERC shall provide attractive long-term funding to support excellent investigators to pursue ground-breaking research
- scientific excellence shall be the sole criterion** on which ERC grants are awarded → open to individual teams of researchers of any age, gender and from any country in the world
- particular priority** shall be given to assisting the **best starting researchers**
- the **ERC shall share experience and best practices** with regional and national research **funding agencies** to support excellent researchers
- the ERC's **Scientific Council shall continuously monitor** the operations of the ERC **for best achievement**



Horizon 2020 – Priority 1 - Activities (3)

- **challenges:**

- fostering radically new technologies by exploring novel and high-risk ideas building on scientific foundations to contribute to the European next generation industries
- fostering novel and visionary thinking to open new paths towards powerful new technologies

- **activities:**

2. Future and Emerging Technologies (FET)

- FET Open: fostering new ideas
- FET Proactive: nurturing emerging themes and communities
- FET Flagships: pursuing grand interdisciplinary S&T challenges



Horizon 2020 – Priority 1 - Activities (4)

- **challenges:**

- ensuring the optimum development and dynamic use of the pool for scientific research
- few scientist work in the business sector (compared to the US numbers)

- **activities:**

3. Marie Skłodowska-Curie Actions

- excellent initial training
- cross-border and cross-sector mobility
- cross-fertilization of knowledge to stimulate innovation
- co-funding of activities to increase structural impact
- specific support and policy action to monitor progress



Horizon 2020 – Priority 1 - Activities (5)

- **challenges:**

- endowing Europe with world-class research infrastructures
- Innovation Europe, Digital Agenda for Europe** initiatives

- **activities:**

4. Research Infrastructures

- developing the European 2020 research infrastructures and beyond
- fostering the innovation potential and human resources
- reinforcing European research infrastructure policy and international cooperation

Horizon 2020 – Priority 2 - Activities (1)

Priority 2 – Competitive industries in Europe

- aims at **speeding up development of the technologies and innovations** that will underpin future businesses and **help innovative European SMEs to grow** into world-leading companies
- **activities:**
 1. **Leadership in enabling and industrial technologies**
 - ❑ to maintain and build global leadership in enabling technologies and space research and innovation to underpin competitiveness
 - ❑ Key Enabling Technologies (KETs): micro- and nanoelectronics, photonics, nanotechnology, biotechnology, advanced materials and advanced manufacturing systems



Horizon 2020 – Priority 2 - Activities (2)

- Information and Communication Technologies (ICT)
- Nanotechnologies
- Advanced materials
- Biotechnology
- Advanced manufacturing and processing
- Space

2. Access to risk finance

- the Debt facility providing debt finance for R&I
- the Equity facility providing equity finance for R&I

3. Innovation in Small and Medium-sized Enterprises

- mainstreaming SME support
- support for research intensive SMEs



Horizon 2020 – Priority 2 - Activities (3)

- enhancing the innovation capacity of SMEs
- supporting market-driven innovation



Horizon 2020 – Priority 3 - Activities (1)

Priority 3 – Better society/societal challenges

- aims at **responding to the societal challenges identified in the Europe 2020 strategy** and **stimulating the critical mass of research and innovation needed** to achieve the Union's policy goals
- **activities:**
 1. **Health, democratic change and wellbeing**
 - effective health promotion
 - prevent, detect manage, treat and cure disability, frailty and reduced functionality



Horizon 2020 – Priority 3 - Activities (2)

2. European Bioeconomy challenges: food security, sustainable agriculture and forestry, marine and maritime and inland water research

- sustainable agriculture and forestry
- sustainable and competitive agri-food sector for a safe and healthy diet
- unlocking the potential of aquatic living resources
- sustainable and competitive bio-based industries and supporting the development of a European bio-economy

3. Secure, clean and efficient energy

- reducing energy consumption and carbon footprint
- low-cost, low-carbon electricity supply



Horizon 2020 – Priority 3 - Activities (3)

- alternative fuels and mobile energy sources
- single and smart European electricity grid
- new knowledge and technologies
- robust decision making and public engagement

4. Smart, green and integrated transport

- resource efficient transport respecting the environment
- better mobility, less congestion, more safety and security
- global leadership for the European transport industry
- socio-economic research and forward-looking activities for policy-making

Horizon 2020 – Priority 3 - Activities (4)

5. Climate action, resource efficiency and raw materials

- fighting and adapting to climate change
- protection of the environment
- sustainability of supplies of non-energy and non-agricultural raw materials
- transition towards a green economy and society through eco-innovation
- developing comprehensive and sustained global environmental observation and information systems

Horizon 2020 – Priority 3 - Activities (5)

6. Europe in a changing world – inclusive, innovative and reflective societies

- inclusive societies
- innovative societies
- reflective societies

7. Secure societies – protecting freedom and security of Europe and its citizens

- fight crime, illegal trafficking and terrorism
- protect and improve the resilience of critical infrastructures, supply chains and transport modes
- strengthen security through border management
- improve cyber security
- increase Europe's resilience to crises and disasters
- ensure privacy and freedom
- enhance standardisation of systems (including emergency purposes)



Horizon 2020 – EURATOM

Euratom Programme (2014-2018)

- **programme for 5 years**, in line with the Euratom Treaty
- **total budget: 1665 million euro** (including the Joint Research Centre with 656 million euro)
- **one single Euratom programme bringing together three separate decisions**
- same rules for participation as in the Horizon 2020 - **simplified access**
- contributes to the implementation of priorities of Horizon 2020
- stronger **focus on nuclear safety and nuclear training**
- **Fusion research programme will be restructured**



Horizon 2020 – ERA

Contribution to the European Research Area (ERA)

- **ERA framework proposal in 2012 to create a genuine, single market for knowledge research and innovation**
- **removing barriers**, open to the world and in cooperation of third countries
- **complemented by Horizon 2020** through:
 - ❑ boosting support to ERA priorities – mobility, infrastructures, knowledge transfer, policy learning
 - ❑ **stronger partnerships with Member States** and private sector to invest more efficiently
 - ❑ taking account of gender, ethical issues, researcher careers and **open access** to results

Horizon 2020 – Simplifications (1)

Participation made simpler

- **single set of rules for all participants**
 - adapted for the whole research and innovation cycle
 - covering all research programmes and funding bodies
- **one project – one funding rate**
 - maximum of 100% of the total eligible costs (except for actions close to market, where a 70% maximum will apply)
 - indirect eligible costs: a flat rate of 20% of direct eligible costs
- **uniform evaluation criteria**
 - Excellence – Impact – Implementation



Horizon 2020 – Simplifications (2)

- **new forms of funding aimed at innovation:** pre-commercial procurement, inducement prizes, dedicated loan and equity instruments
- **international participation:** facilitated but better protecting EU interests
- **easier grant management:** broader acceptance of participants accounting practices for direct costs, flat rate for indirect costs, no time-sheets for personnel working full time on a project, possibility of output-based grants
- **fewer and more targeted audits**
 - lowest possible level of requirements for submission of audit certificates without undermining sound financial management
 - audit strategy focused on risk and fraud prevention

Horizon 2020 – Simplifications (3)

- **improved rules on intellectual property**
 - balance between legal security and flexibility
 - tailor-made IPR provisions for new forms of funding
 - new emphasis on open access to research publications

Summary

- ✓ **single set of simpler and more coherent participation rules**
- ✓ **only two funding rates for different beneficiaries and activities**
- ✓ **only single flat rate calculation method for overhead/indirect costs**
- ✓ **successful applicants to get working more quickly: reduction of average time to grant by 100 days (current average of cca 350 days)**



Horizon 2020 – COSME (1)

COSME

Programme for the Competitiveness of Enterprises and SMEs (2014-2020)

- **problems:**
 - administrative difficulties for SMEs**
 - low number of self-employed European citizens**
 - SMEs are unable to obtain a loan**
- **strengthening the competitiveness and sustainability of European enterprises**
- **encouraging entrepreneurship and promoting SMEs**
- **key challenge:** stabilising the financial and economic system while **taking measures to create economic opportunities**

Horizon 2020 – COSME (2)

- **continuity with** initiatives and actions already undertaken under the **Competitiveness and Innovation Framework Programme (CIP)**
- **including the Enterprise Europe Network (EEN)**, with a simplified way of management
- **main beneficiaries:** existing entrepreneurs, future entrepreneurs, national, regional and local authorities
- **expected results:**
 - ❑ easier access to finance for entrepreneurs and small businesses
 - ❑ more prominent role for self-employment and business development as source of growth and new jobs
- **expected to contribute to an annual increase of 1.1 billion euro in the EU's GDP**

Horizon 2020 – COSME (3)

- **Enterprise Europe Network (EEN)** is expected to assist **40.000 companies** with partnership agreements, resulting in 1200 new business products, services or processes annually
- **total budget: 2.5 billion euro**
- **complementary with Horizon 2020 but with a different focus:**
 - ❑ Horizon 2020: innovation driven growth, direct financial assistance to innovative projects
 - ❑ COSME: support to create favourable business environment and competitiveness, policy support and horizontal actions **← need for a specific SME programme to take full account of their economic and political importance**

Horizon 2020 – COSME (4)

COSME and Horizon 2020 will support two EU financial instruments for SMEs

- **equity instrument for SME's growth and RDI**
 - Equity Facility for Growth (COSME)
 - Equity Facility for R&I (H2020)

- **debt instrument for SME's growth and RDI**
 - Loan Guarantee Facility (COSME)
 - SMEs & Small Midcaps Guarantee Facility for R&I (H2020)

Horizon 2020 – Open Access (1)

Open Access

- **publicly-funded research results** need to be circulated rapidly and widely, using digital media to accelerate scientific discovery by generating competition
- in R&I, there **are two main categories to be published: peer-reviewed scientific research** articles and **scientific research data**
- **Open access** is the practice of providing on-line access to scientific information that is free of charge to the reader
- **two ways of accessing the articles:**
 - ❑ **green open access** (also called self-archiving): after an embargo period of 6 or 12 months the access is paid by the reader
 - ❑ **gold open access** (also called author pays): published immediately



Horizon 2020 – Open Access (2)

- to find out more about the process, the **EC launched a pilot** on open access covering 20% of the FP7 budget in seven research areas of FP7
- the EC also funds **Open AIRE (Open Access Infrastructure for research in Europe)** which provides infrastructure and national helpdesks (over 27.000 FP7 publications so far)



Horizon 2020 – Partners (1)

Who can participate?

Public private partnerships:

- through Joint Technology Initiatives or other formal structures (Art. 187)
- through contractual agreements, which provide inputs for work programmes
- only when criteria met, e.g. clear commitments from private partners

Public public partnerships:

- through « ERA-Nets » for topping up individual calls/actions (replacing current ERA-Net, ERA-Net Plus, Inco-Net, Inno-net)
- through participation in joint programmes between Member States
- supporting agendas of Joint Programming Initiatives when in line with H2020



Horizon 2020 – Partners (2)

European Innovation Partnerships:

- not funding instruments, but for coordination with broader policies and programmes

European Institute Technology (EIT):

- combining research, innovation & training in knowledge and Innovation Communities

Joint Research Centre (JRC):

- providing a robust, evidence base for EU policies



Horizon 2020 – Partners (3)

Widening participation

- **principle of excellence:** continue to allocate funding on the basis of competitive calls, selecting only the best projects
- **clear division of labour between cohesion policy and Horizon 2020**
- **accompanying measures in Horizon 2020 to ensure**
- **that excellence prevails** wherever it exists, including: twinning, ERA chairs, support for access to international networks, development of smart specialisation strategies
- **principle of general openness:** the programme will remain to be the most open funding programme in the world
- **Horizon 2020 shall be open to the association of:** acceding countries, candidate countries and potential candidates and selected third that fulfil the relevant criteria



Horizons

Next steps

Mid 2012: Final calls under 7th Framework Programme for research to bridge gap towards Horizon 2020

February-March 2013: Parliament and Council negotiations on EU budget 2014-2020 (including overall budget for Horizon 2020)

Mid 2013: Adoption of legislative acts by Parliament and Council on Horizon 2020

1 January 2014: Horizon 2020 launched



Dissemination – Basics

Dissemination is not only an obligation... it is also an opportunity.

- Who?** → every project, the EC
- To whom?** → Scientific Officer, scientific community, policy makers, general public, the media
- What?** → research results and key project events
- Why?** → visibility, impact, responsibility to EU citizens, obligation in Grant Agreement
- Where?** → scientific journals, scientific events, Internet, the media
- How?** → website, materials (brochures, posters), press releases, publishable summaries, pictures, videos, podcasts, etc.
- When?** → on time 😊 = before, during and after the project



Dissemination – What? Why?

- **publicly-funded research: visibility on use of Community funds**
 - taxpayers' money = accountability, reputation
 - showing results = making a case for research funding
 - influencing young people: making the scientific career (more) attractive
- **public opinion: focus on research results**
 - relevancy to everyday life (new jobs, novel technologies, better life)
 - e.g. 70% of Europeans are interested in medical & health research
- **advantages: visibility and prestige**
 - to contribute to collaborative research (e.g. open access)
 - to inform policy/decision makers



Dissemination – Where? How?

- **two levels: specialised + general**

- design your website for different levels (from members-only to public)
- create your brochures and info materials for different target groups
- press: press releases, articles (from wide public to scientific publications)

- **the EC can help you**

- inform your Scientific Officer in advance
- send up-to-date materials & news for the EC information services – draft your press releases in parallel
- embargo period – release them on the same day



Dissemination – When?

Before, during and after the project

- **before:** in the **Proposal** (points are allocated to impact resulting from dissemination activities during the evaluation period)
- **during: compulsory deliverables:**
 - setting up a **project webpage** (to be updated on a regular basis)
 - submitting **Periodic Reports** and a **Final Report** (with a **Publishable Summary** for the wide public) to the Commission
- **after:** compiling a **Final plan for the use and dissemination of foreground** (knowledge generated during the project) for the future (as a deliverable) → see next slide

Dissemination – Obligations (1)

Your plans for dissemination should appear in Annex I

- **dedicated work package(s)**
- **B.3.2 Plan for the use and dissemination of foreground**
 - based on section 3.2 of the original proposal: consortium's strategy, measures to ensure the optimal dissemination and use/exploitation of project results
 - the management of knowledge and intellectual property
 - the plan for the use of results (e.g. further research or commercial exploitation)
 - dissemination of the foreground beyond the Consortium



Dissemination – Obligations (2)

Logos

- any notice or publication about the project must specify that the project has received research funding from the EU's Seventh Framework Programme, including at:
 - ❑ conferences, presentations, posters, articles, books, training materials, softwares, websites, advertisements
- logos may not be identical or similar to the European emblem:
- the European emblem must be given adequate prominence when displayed with your logo
- downloads: http://europa.eu/abc/symbols/emblem/index_en.htm



Dissemination – Checklist

- ✓ **ensure good management:** time & money allocated properly, professionals involved, continuity ensured
- ✓ **define your goals & objectives:** specified, neither too ambitious nor too weak
- ✓ **pick your audience:** well defined audience, relevant target groups
- ✓ **choose your message:** news or not, audience's needs, FAQ
- ✓ **use the right medium and means:** right level(s), multipliers, go beyond the obvious
- ✓ **evaluate your efforts:** goals reached or not, lessons learnt



Sources

Find out more:

- www.ec.europa.eu/research/horizon2020
- <http://www.ec.europa.eu/enterprise/cosme>
- <http://ec.europa.eu/cip/>
- http://ec.europa.eu/research/science-society/open_access
- <http://www.openaire.eu/>



Thank you for your kind attention!

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