Framing Present Challenges in the EU agenda

Harald Hartung
Head of Unit, Open and inclusive societies
30 January 2019
1. Structure and Place of SSH in Horizon Europe

2. SSH Integration – latest findings and way forward

3. To Societal Impact in Horizon Europe
1. Structure and Place of SSH in Horizon Europe
Horizon Europe

is the Commission proposal for a €100 billion research and innovation funding programme for seven years (2021-2027)

- to strengthen the EU's scientific and technological bases
- to boost Europe's innovation capacity, competitiveness and jobs
- to deliver on citizens' priorities and sustain our socio-economic model and values

Additional €4.1 billion are proposed to be allocated for defence research, in a separate proposal for a European Defence Fund
Horizon Europe: evolution not revolution

Specific objectives of the Programme

Support the creation and diffusion of high-quality knowledge
Strengthen the impact of R&I in supporting EU policies
Foster all forms of innovation and strengthen market deployment

Optimise the Programme’s delivery for impact in a strengthened ERA

Pillar 1
Open Science
European Research Council
Marie Skłodowska-Curie Actions
Research Infrastructures

Pillar 2
Global Challenges and Industrial Competitiveness
- Health
- Inclusive and Secure Society
- Digital and Industry
- Climate, Energy and Mobility
- Food and natural resources
Joint Research Centre

Clusters

Pillar 3
Open Innovation
European Innovation Council
European innovation ecosystems
European Institute of Innovation and Technology

Strengthening the European Research Area
Sharing excellence
Reforming and Enhancing the European R&I system
Lessons Learned
from Horizon 2020 Interim Evaluation

- Support breakthrough innovation
- Create more impact through mission-orientation and citizens' involvement
- Strengthen international cooperation
- Reinforce openness
- Rationalise the funding landscape

Key Novelties
in Horizon Europe

- European Innovation Council
- R&I Missions
- Extended association possibilities
- Open science policy
- New approach to Partnerships
Pillar II – Evidence from the Impact Assessment

A systemic approach along the lines of the SDGs and the Paris Climate Agreement

• **Clusters** break classical boundaries between disciplines, sectors and policy areas

• **Interdisciplinarity** brings more collaboration and increased impact (Allmendinger, RISE policy brief, 2015)
  • It generates new knowledge with transformative power
  • Explores and exploits new types of problem-driven and user-oriented R&I
  • Accelerate value creation across different industries (e.g. synthetic biology, nanoscience, smart cities)

• Engaging **all actors** to **co-design** and **co-create** research and innovation

• Better alignment with actions in the rest of the world
Commission Proposal - Pillar 2

Global Challenges & Industrial Competitiveness:
boosting key technologies and solutions underpinning
EU policies & Sustainable Development Goals

<table>
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<tr>
<th>Clusters</th>
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<td>implemented through usual calls, missions &amp; partnerships</td>
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<tr>
<td>Health</td>
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**Joint Research Centre**
supports European policies with independent scientific evidence &
technical support throughout the policy cycle
Inclusive and Secure Society: fact & figures

- Freedom in the World Report 2018: democracy faces **most serious crisis** in decades. Decline in democratic standards a constant trend of last decade. Various European surveys show **declining levels of trust** to political institutions.

- Cultural Heritage creates **12 million jobs**; promotes European values and helps develop a European Identity.

- Automation impact: **14% of jobs** in 32 OECD countries are highly automatable, equivalent to 66 million jobs (OECD 2018. Also Mckinsey 2017).

- Need to reduce **rising inequalities** (European Pillar of Social Rights).

- Largest number of arrivals of **refugees and migrants** since end of Second World War. Respond to challenges, promote integration, enhance governance.
CLUSTER 2: Inclusive and Secure Society

- Strengthen **European democratic values** and address issues of **trust**.
- Safeguard and promote our **cultural heritage**.
- Take advantage of socio-economic transformations and promote **inclusive growth** while responding to globalization, and technological advancements.
- Prepare for and respond to **human-made and natural disasters**, e.g. climate-related extreme weather events, terrorism, earthquakes.
- Respond to changing **security threats**, both physical and digital, and support EU border management.
Three Intervention areas especially relevant for the SSH in Cluster 2:

- **Democracy**
  Support the transparency, responsiveness, accountability, effectiveness, and legitimacy of democratic governance in full respect of fundamental rights and of the rule of law.

- **Cultural Heritage**
  Heritage studies and sciences, with cutting edge technologies including digital ones. Access to and sharing of cultural heritage, with innovative patterns and uses and participatory management models.

- **Social and economic transformations**
  Knowledge base for advice on investments and policies especially education and training, for high value added skills, productivity, social mobility, growth, social innovation and job creation. The role of education and training to tackle Inequalities.
Integration of SSH throughout the programme:

- Specific focus area on challenges for our societies in Cluster II of Horizon Europe on Inclusive and Secure Societies
- Inside and across Clusters, including Missions (social, economic, cultural, human aspects are essential for both impact and relevance)
- Continued monitoring while broadening the scope (the ambition is to cover practically the whole of Horizon Europe)
- Evaluation procedures (composition of panels, briefing and guidance documents)
2. SSH Integration – latest findings and way forward
Social Sciences & Humanities monitoring report

Principles

- Monitoring SSH integration is an obligation under the FP

- Two-fold approach to SSH in Horizon 2020 (streamlining of cross-cutting issue and focus in SC6 ‘Inclusive, innovative and reflective societies’

- Quantitative and qualitative assessment of SSH integration

- This report describes the integration of SSH in the SSH flagged topics and projects of the year 2017
Overview of SSH integration in other programme parts

- **European Research Council (ERC):** 23% of the overall grant financing went to SSH related projects

- **Maria Skłodowska-Curie Actions (MSCA):** 15% of the total budget allocation was for SSH

- **Research infrastructures (RI):** the SSH related share stood at c. 6.7% of the general RI expenditure

- **Future Emerging Technologies (FET):** c. 49.5% of total budget was allocated to SSH relevant topics
I.1. The quantitative integration of SSH is clearly on the rise

BUDGET FOR SSH FLAGGED TOPICS, IN MILLION EURO 2014-17

- SC6 contribution
- Budget allocated to SSH-partners in SSH flagged topics
- Total budget for SSH flagged topics
II.1. The quality of SSH integration is improving gradually

Good quality of Integration

- at 10% threshold
- at 20% threshold
Conclusions

**Obligation to**
- integrate SSH expertise in relevant scientific projects
- monitor the quality of their integration in Horizon 2020

**Has led to**
- major step forward in cross-sectoral co-operation in European research of which SSH integration is a precursor.
- a rather stable level of quantitative and qualitative SSH integration
- probably reached its limits in the quantity and quality of SSH integration under the current rules.

=> The way in which SSH should be integrated will have to be redefined for the Horizon Europe Programme
Way forward for Horizon Europe

• Flagging in a realistic way

• Follow a holistic approach covering the entire cycle (from co-design to selection and implementation of project)

• Integrate SSH expertise in a more binding way
  ➢ Drafting calls/topics
  ➢ Concept & consortia projects
  ➢ Evaluation & selection of project
  ➢ Evaluators with SSH expertise
3. Societal Impact in Horizon Europe
While benefiting from world-class research and strong industries...

Our knowledge and skills are our main resources.

→ 7% of the world's population
→ 20% of global R&D
→ 1/3 of all high-quality scientific publications

...Europe fails to transform leadership in science into leadership in innovation and entrepreneurship
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# EVOLUTION FOR HORIZON EUROPE

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<tr>
<th>Horizon 2020 system</th>
<th>Evolution for Horizon Europe</th>
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<tbody>
<tr>
<td>▪ 3 headline indicators <strong>not directly attributable</strong> to the programme</td>
<td>▪ All Horizon 2020 indicators related to outputs, results and impacts are maintained but <strong>streamlined and further specified</strong> to cover the whole Programme</td>
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<td>▪ 55 Horizon 2020 Key performance and Cross-Cutting issues indicators:</td>
<td>▪ Management and implementation data are still collected and made available in close-to-real time through <strong>online Dashboard</strong> but are not part of “performance indicators”</td>
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<td>• 27 are related to <strong>management and implementation data</strong> (e.g. funding, participation)</td>
<td>▪ Key indicators are set at <strong>Programme level</strong> according to the Programme objectives and are attributable to the Programme</td>
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<tr>
<td>• 28 are related to <strong>outputs, results or impacts</strong>, out of which:</td>
<td>▪ Key indicators are classified according to <strong>9 key impact pathways</strong>, for tracking impact through short, medium and long term indicators – for more accurate reporting over time</td>
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<td>▪ none is related to the whole programme (covering only programme parts)</td>
<td>▪ Higher reliance on external data sources, qualitative data and automated data tracking to <strong>minimise burden on beneficiaries</strong></td>
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<td>▪ 9 relate to publications</td>
<td>▪ Possibility for programme part or action specific indicators (but not in the legal base)</td>
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<td>▪ 7 relate to intellectual property rights and innovations</td>
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<td>▪ 4 relate to leveraged funding</td>
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<td>▪ 4 relate to researchers’ mobility and access to infrastructures</td>
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LEARNING FROM HORIZON 2020 INTERIM EVALUATION

- **Specificity of research and innovation (R&I) investments:**
  - risky endeavor involving multiple trials and errors
  - spreading widely and unexpectedly into multiple domains & applications
  - providing invaluable solutions often in the very long term

- Need to be able to **tell the difference EU funding is making at any moment in time:** tell the story of the programme as a whole, according to its set of objectives

- Need **realistic** indicators to track progress in **short, medium** and **long term**

- Need **minimised burden** on participants, also after project ends

- **Need distinction** between management indicators & performance indicators
TRACKING IMPACT IN HORIZON EUROPE

THREE TYPES OF IMPACT BASED ON OBJECTIVES

**Scientific impact**
Create and diffuse high-quality new knowledge, skills, technologies and solutions to global challenges

**Societal impact**
Strengthen the impact of research and innovation in developing, supporting and implementing EU policies, and support the uptake of innovative solutions in industry and society to address global challenges

**Economic impact**
Foster all forms of innovation, including breakthrough innovation, and strengthening market deployment of innovative solutions
Different impacts

Societal impact
- Quality of life
- Health
- Environment
- Public services
- Policy
- Creative activity
- Public engagement
- Understanding
- Education

Economic impact
- Innovations
- Competitiveness
- Growth
- Jobs
- Budget savings

Academic impact
- Theory
- Method
- Knowledge
- Technology development
- Researcher training
- Teaching and training
- Application

Source: University of Helsinki
CLASSIFICATION OF IMPACTS FOR THE INTERIM EVALUATION

HORIZON 2020

Contribution to expected impacts from projects' outputs + up to 10 to 20 years

Source: Interim Evaluation of Horizon 2020
3. TRACKING IMPACT IN HORIZON EUROPE

9 KEY IMPACT PATHWAYS TO TRACK PROGRESS

1. Creating high-quality new knowledge
2. Strengthening human capital in R&I
3. Fostering diffusion of knowledge and Open Science
4. Addressing EU policy priorities through R&I
5. Delivering benefits & impact via R&I missions
6. Strengthening the uptake of innovation in society
7. Generating innovation-based growth
8. Creating more and better jobs
9. Leveraging investments in R&I
Pathway 6. Strengthening the uptake of innovation in society

STORY LINE: The FP strengthens the uptake of innovation in society, as shown by the engagement of citizen in the projects and beyond the projects by improved uptake of scientific results and innovative solutions.

- Indicator (short, medium, long-term)

  - Typically As of YEAR 1+
    - Number and share of FP projects where EU citizens and end-users contribute to the co-creation of R&I content

  - Typically As of YEAR 3+
    - Number and share of FP beneficiary entities with citizen and end-users engagement mechanisms after FP project

  - Typically As of YEAR 5+
    - Uptake and outreach of FP co-created scientific results and innovative solutions

Data needs: Collection of data at proposal stage on the roles of partners (incl. citizen) in the projects, structured survey of beneficiary entities and tracking of uptake and outreach through patents and trademarks and media analysis.
Horizon Europe

Impact pathways will be time-sensitive:

=> **short** (typically as of one year, when the first projects are completed),

=> **medium** (typically as of three years, and for the interim evaluation) and

=> **long** term (typically as of five years, and for the ex-post evaluation).

They will contain both qualitative and quantitative information
Holistic approach to impact

Impact creation

Indicators
Narrative

Impact assessment

Strategic Programme
Work Programme
Call topic
Proposal
Project

European Commission
One of the great mistakes is to judge policies and programs by their intentions rather than their results.

Milton Friedman
Thank you!

#HorizonEU

http://ec.europa.eu/horizon-europe