

# Commission proposal for **Horizon Europe**

THE NEXT EU RESEARCH & INNOVATION  
PROGRAMME (2021 – 2027)

#HorizonEU

***Inclusive Society***

Harald Hartung

Impact of SSH for a European Research Agenda

28/11/2018 Vienna



“

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

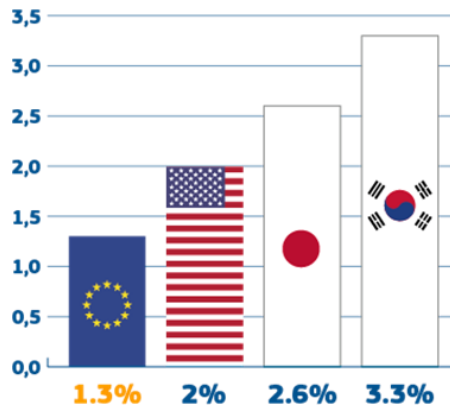
”

*Milton Friedman*

## 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



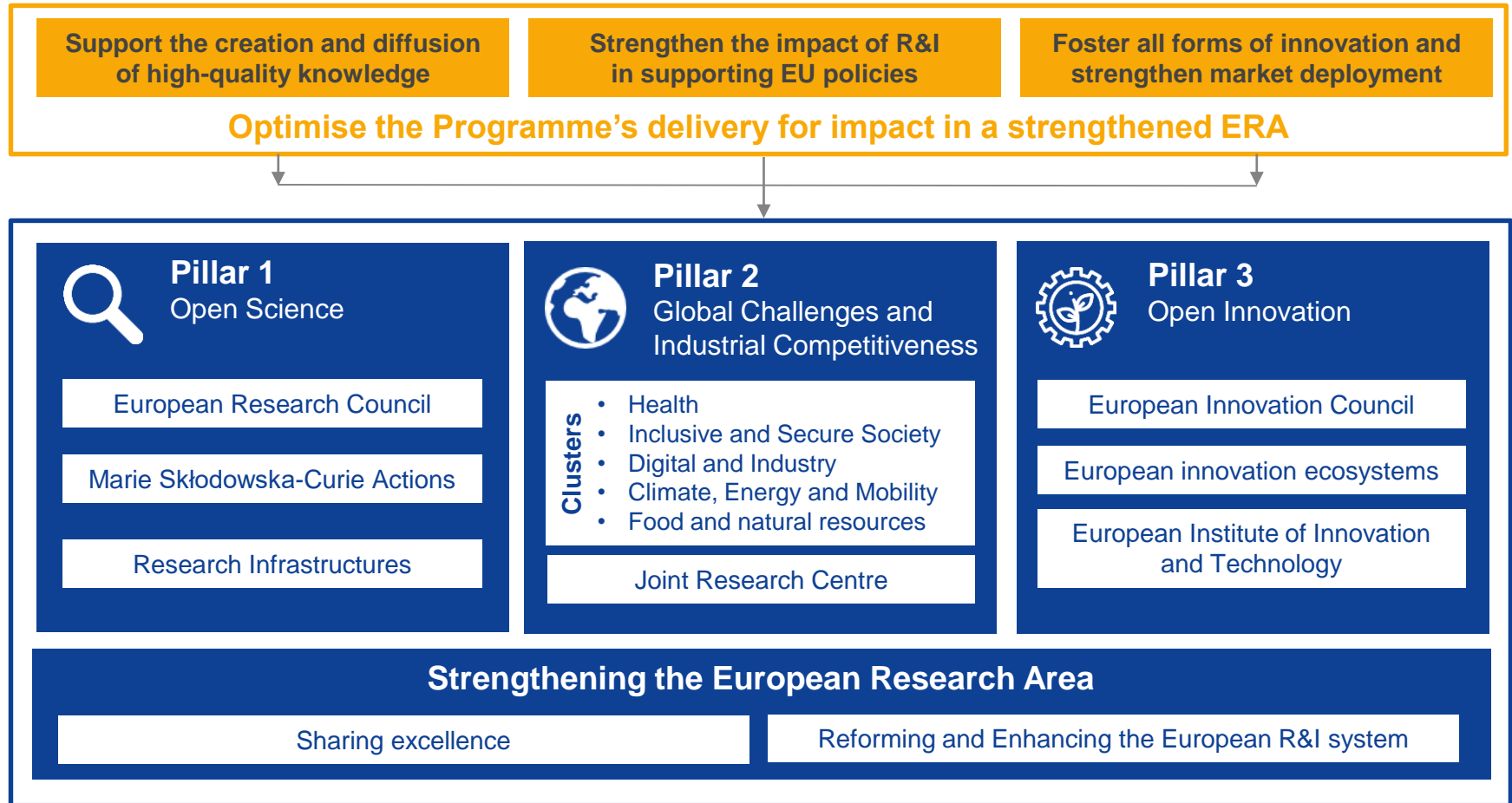
**1.3%**  
EU business  
R&D  
investment

**...Europe fails to transform leadership in science into leadership in innovation and entrepreneurship**

**Horizon Europe**  
**an**  
**Evolution no Revolution**  
*(Structure and Novelties)*

# Horizon Europe: evolution not revolution

## Specific objectives of the Programme



# Lessons Learned

## from Horizon 2020 Interim Evaluation



Support breakthrough innovation



Create more impact through mission-orientation and citizens' involvement



Break down silos



Move from output to impact



# Key Novelties

## in Horizon Europe

European Innovation Council

R&I Missions

Collaborative and cross-sectoral approach  
- Clusters -

Impact Pathways



# MR JUNCKER'S WORLD



Jean-Claude Juncker  
President  
European Commission



“

**No Discipline knows more than  
all disciplines.**

”

*Francois Taddei, Director of the  
Centre for Research and  
Interdisciplinarity at Paris Descartes  
University*



# 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



# Social Sciences and Humanities (SSH) in Horizon Europe

# 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

## Sustainable Development Goals





# Three Intervention areas especially relevant for the SSH in Cluster 2:

- **Democracy**

Strengthen European democratic values and address issues of trust.

- **Cultural Heritage**

Safeguard and promote our **cultural heritage**.

- **Social and economic transformations**

Take advantage of socio-economic transformations and promote **inclusive growth** while responding to globalization, and technological advancements.

# Democracy: Broad Lines of Activities

- **The history, evolution and efficacy of democracies**, at different levels and in different forms; digitisation aspects and the effects of social network communication and the role of education and youth policies as cornerstones of democratic citizenship;
- **Innovative approaches** to support the transparency, responsiveness, accountability effectiveness and legitimacy of **democratic governance** in full respect of fundamental rights and of the rule of law;
- Strategies to address **populism, extremism, radicalisation, terrorism** and to **include and engage** disaffected and **marginalised citizens**;
- Better understand the role of **journalistic standards and user-generated content** in a hyper-connected society and develop tools to combat disinformation;



# Democracy: Broad Lines of Activities

- The role of **multi-cultural citizenship and identities** in relation to democratic citizenship and political engagement;
- The **impact of technological and scientific advancements**, including big data, online social networks and artificial intelligence **on democracy**;
- **Deliberative and participatory democracy** and active and inclusive citizenship, including the digital dimension;
- **The impact of economic and social inequalities on political participation** and democracies, demonstrating how reversing inequalities and combatting all forms of discrimination including gender, can sustain democracy.

# Cultural Heritage : Broad Lines of Activities

- **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;
- **Connect cultural heritage with emerging creative sectors**;
- The **contribution of cultural heritage to sustainable development** through conservation, safeguarding and regeneration of cultural landscapes, with the EU as a laboratory for heritage-based innovation and cultural tourism;
- **Conservation, safeguarding, enhancement and restoration of cultural heritage and languages** with the use of cutting edge technologies including digital;
- Influence of **traditions, behavioural patterns, perceptions and beliefs on values and sense of belonging**.

# Social and Economic Transformations: Broad Lines of Activities

- 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;
- **Social sustainability beyond GDP** only indicators especially new economic and business models and new financial technologies;
- Statistical and other **economic tools for a better understanding of growth and innovation** in a context of sluggish productivity gains;
- New **types of work, the role of work, trends and changes in labour markets** and income in contemporary societies, and their **impacts on income distribution**, non-discrimination including gender equality and social inclusion;
- **Tax and benefits systems** together with social security and social investment policies with a view **to reversing inequalities and addressing the negative impacts of technology**, demographics and diversity;

# Social and Economic Transformations: Broad Lines of Activities

- **Human mobility** in the global and local contexts **for better migration governance, integration of migrants including refugees**; respect of international commitments and human rights; greater, improved access to quality education, training, support services, active and inclusive citizenship especially for the vulnerable;
- **Education and training systems to foster** and make the **best use of the EU's digital transformation**, also to manage the risks from global interconnectedness and technological innovations, especially emerging online risks, ethical concerns, socio-economic inequalities and radical changes in markets;
- **Modernisation of public authorities** to meet citizens' expectation regarding **service provision, transparency, accessibility, openness, accountability** and user centricity.
- **Efficiency of justice systems** and improved access to justice based on judiciary independence and **rule of law** principles, with fair, efficient and transparent procedural methods both in civil and criminal matters.

# Socio-economic sciences and humanities (SSH)

- **Integrated approach:** SSH included as an integral part of the activities, working beyond 'silos' (e.g. understanding the determinants of health and optimising the effectiveness of healthcare systems)
- The '**Inclusive and Secure Society**' challenge: issues such as smart and sustainable growth, social transformations, social innovation and creativity, the position of Europe as a global actor
- **Bottom-up funding:** ERC, MSCA, Research Infrastructures

# Impact

*(Definition, Assessment Measuring)*



# EVOLUTION FOR HORIZON EUROPE

## Horizon 2020 system

- 3 headline indicators **not directly attributable** to the programme
- **55 Horizon 2020 Key performance and Cross-Cutting issues** indicators:
  - 27 are related to **management and implementation data** (e.g. funding, participation)
  - 28 are related to **outputs, results or impacts**, out of which:
    - none is related to the whole programme (covering only programme parts)
    - 9 relate to publications
    - 7 relate to intellectual property rights and innovations
    - 4 relate to leveraged funding
    - 4 relate to researchers' mobility and access to infrastructures

## Evolution for Horizon Europe

- All Horizon 2020 indicators related to outputs, results and impacts are maintained but **streamlined and further specified** to cover the whole Programme
- Management and implementation data are still collected and made available in close-to-real time through **online Dashboard** but are not part of “performance indicators”
- Key indicators are set at **Programme level** according to the Programme objectives and are attributable to the Programme
- Key indicators are classified according to **9 key impact pathways**, for tracking impact through short, medium and long term indicators – for more accurate reporting over time
- Higher reliance on external data sources, qualitative data and automated data tracking to **minimise burden on beneficiaries**
- Possibility for programme part or action specific indicators (but not in the legal base)

# Examples of KPIs H2020 1/2

	#	Key performance indicator <sup>2</sup>	Definition of the indicator	Type of data required	Baseline at the start of Horizon 2020 (latest available) <sup>3</sup>	Target at the end of Horizon 2020
SOCIETAL CHALLENGES	14	Societal Challenges - Publications in peer-reviewed high impact journals in the area of the different Societal Challenges	The percentage of publications published in the top 10% impact ranked journals by subject category	Publications from relevant funded projects (DOI: Digital Object Identifiers); Journal impact benchmark (ranking) data to be collected by commercially available bibliometric databases	[ <u>new approach</u> under Horizon 2020]	[ <u>On average, 20 publications per €10 million funding (for all societal challenges)</u> ]
	15	Societal Challenges - Patent applications and patents awarded in the area of the different Societal Challenges	Number of patent applications by theme; Number of awarded patents by theme	Patent application number	[ <u>new approach</u> under Horizon 2020]	On average, 2 per €10 million funding (2014 - 2020)
	16	Societal Challenges - Number of prototypes and testing activities	Number of prototypes, testing (feasibility/demo) activities, clinical trials	Reports on prototypes, and testing activities, clinical trials	[ <u>new approach</u> under Horizon 2020]	[ <u>To be developed on the basis of first Horizon 2020 results</u> ]

# Examples of KPIs - H2020 2/2

	#	Key performance indicator <sup>2</sup>	Definition of the indicator	Type of data required	Baseline at the start of Horizon 2020 (latest available) <sup>3</sup>	Target at the end of Horizon 2020
SOCIETAL CHALLENGES	17	Societal Challenges - Number of joint public-private publications	Number and percentage of joint public-private publications out of all relevant publications	Properly flagged publications data (DOI) from relevant funded projects	[new approach under Horizon 2020]	[To be developed on the basis of first Horizon 2020 results]
	18*	New products, processes, and methods launched into the market	Number of projects with new innovative products, processes and methods	Project count and drop down list allowing to choose the type processes, products and methods	[new approach under Horizon 2020]	[To be developed on the basis of first Horizon 2020 results]
	19*	Percentage of the overall Energy challenge funds allocated to the following research activities: renewable energy, end user energy-efficiency, smart grids and energy storage activities	Percentage of the overall Energy challenge funds allocated to the following research activities: renewable energy, end user energy-efficiency, smart grids and energy storage activities	Financial data related to the funds allocated to the mentioned activities under Societal Challenge "Secure, clean and efficiency energy"	[new approach under Horizon 2020]	85%

# 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



# CLASSIFICATION OF IMPACTS FOR THE INTERIM EVALUATION HORIZON 2020

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

## *Scientific impacts*

EU world-class excellence in science

Better cross-border & cross-sector  
coordination & integration of R&I efforts

Emergence of new technologies or field of  
science in the EU

## *Innovation/economic impacts*

Better innovation capability of EU firms

EU technological leadership &  
strengthened competitive position of  
European industry (incl. SMEs, start-ups)

Diffusion of innovation in the economy  
(incl. in SMEs) generating jobs, growth  
and investments

## *Societal impacts*

Better contribution of R&I to tackling  
societal challenges

Stronger global role of the EU, steering  
the international agenda to tackle global  
societal challenges

Better societal acceptance of science and  
innovative solutions

Source: Interim Evaluation of Horizon 2020



# 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

# Horizon Europe

**Impact pathways will be time-sensitive:**

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

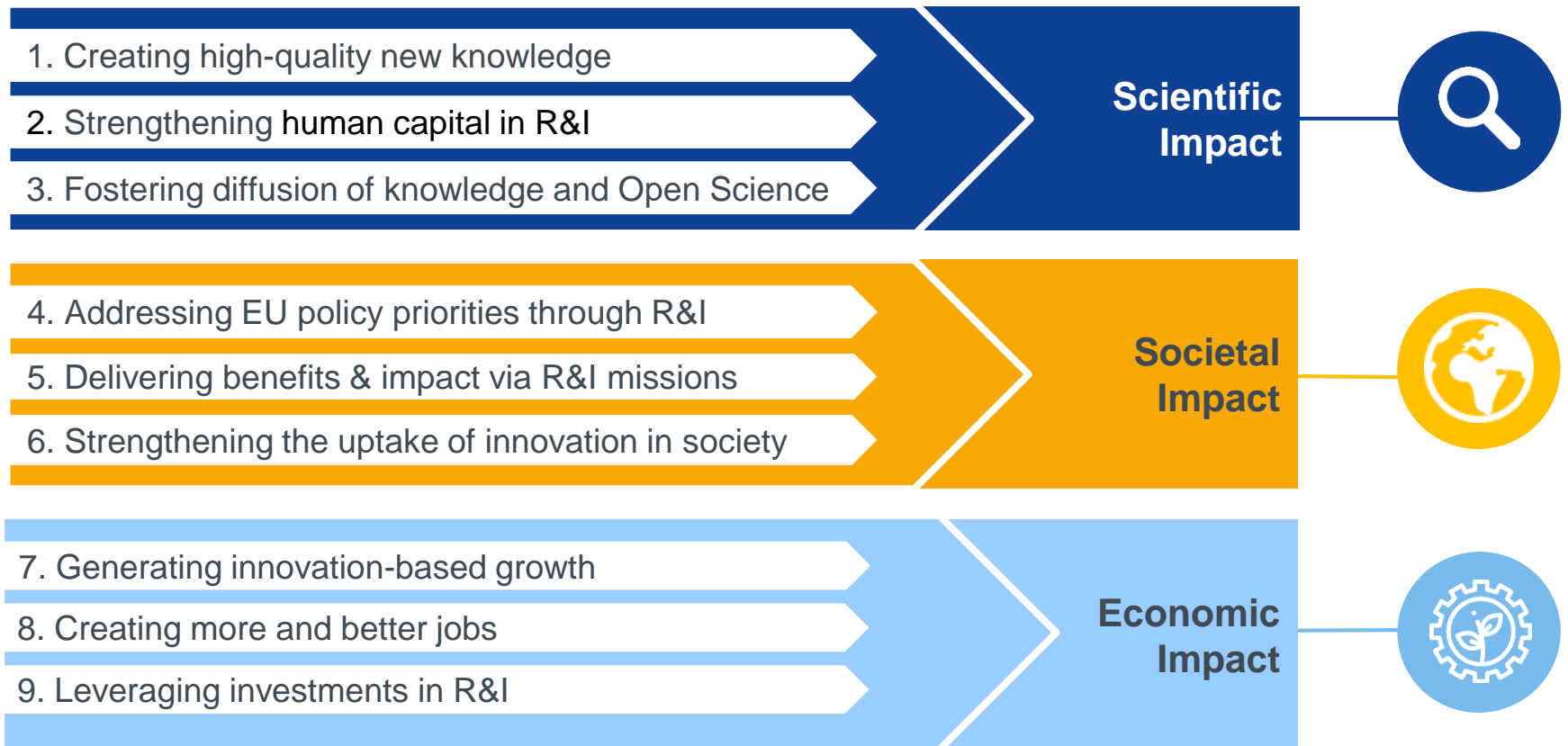
=> **medium** (typically as of three years, and for the interim evaluation) and

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

*They will contain both qualitative and quantitative information*

# 3. TRACKING IMPACT IN HORIZON EUROPE

## 9 KEY IMPACT PATHWAYS TO TRACK PROGRESS

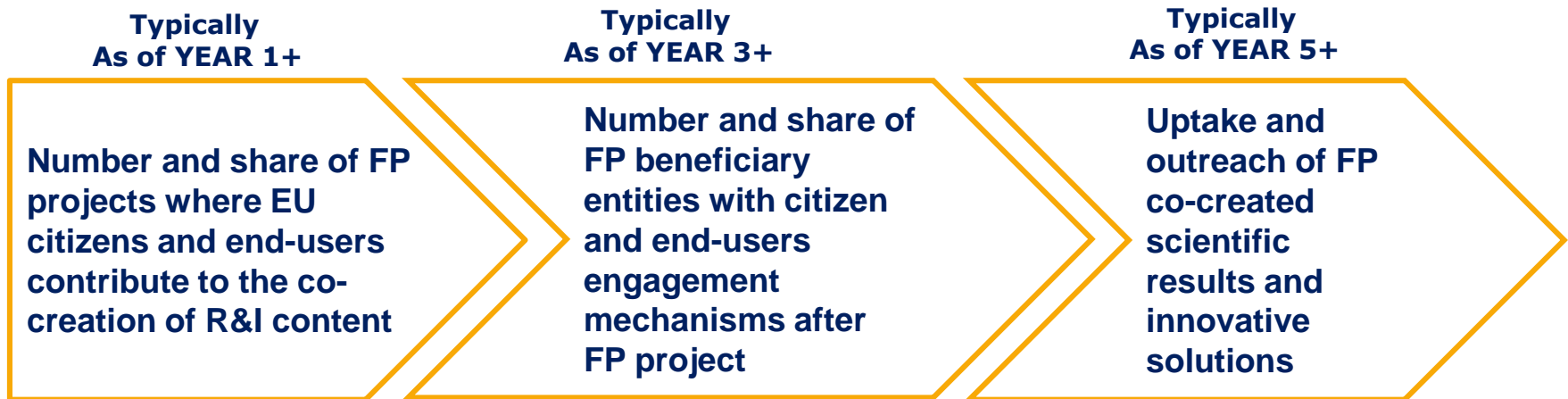


# Pathway 6. Strengthening the uptake of innovation in society



**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)



*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.*

# Example from a topic

# Expected Impact in Call

**Topic:** Contemporary radicalisation trends and their implications for Europe (SC6-REV- INEQUAL-02-2016)

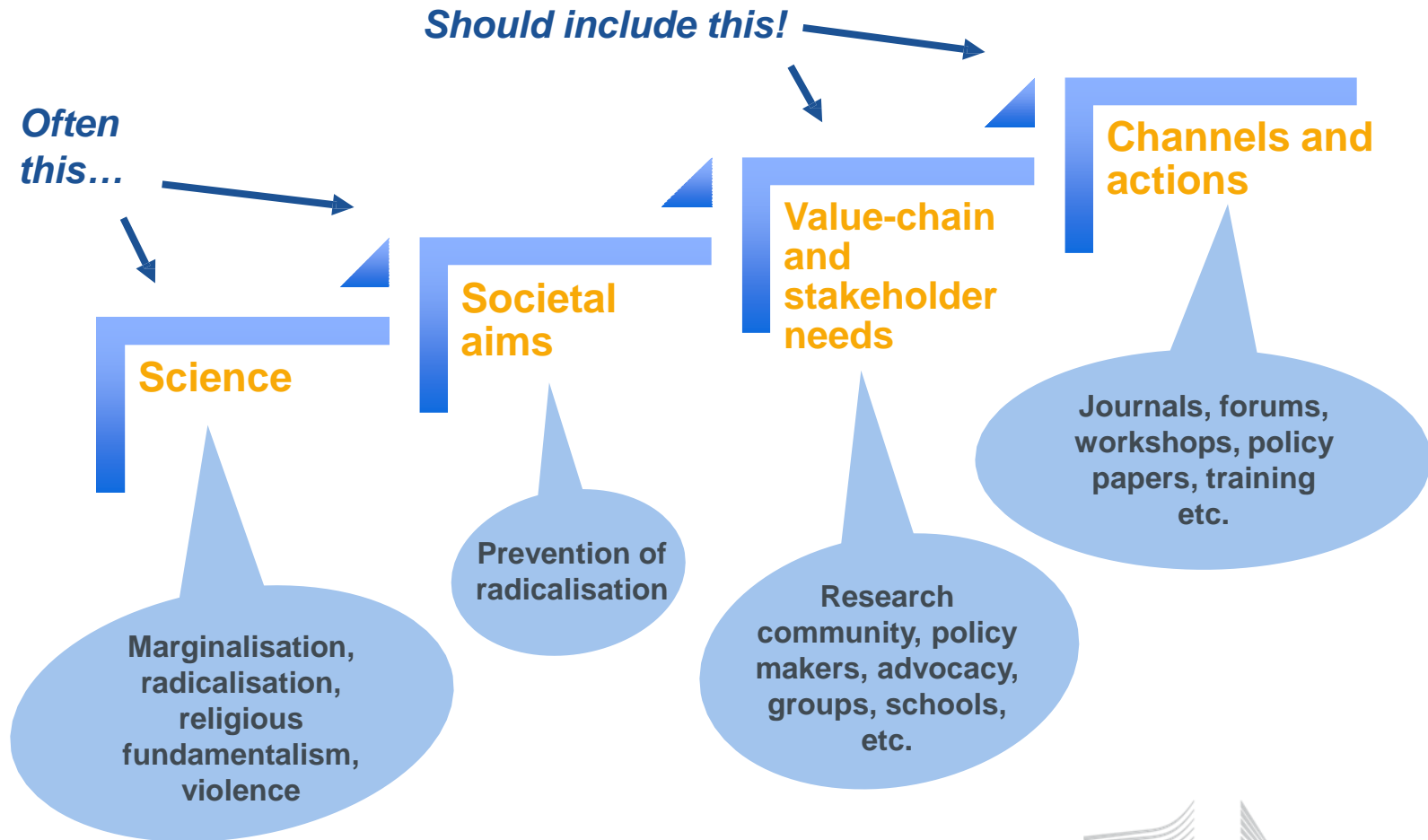
**Expected impact:** Research under this topic will considerably **enhance the knowledge base** on the scope, origins, causes and cognitive as well as emotional dynamics of radicalisation. Projects will also **devise new methods** for studying radicalisation **beyond traditional perspectives** in particular in relation to young people. Research will provide the **basis for future evaluation of policies**, envisaging innovative solutions, in particular with regard to their effects on radicalisation and (dis)integration. Research will also **furnish recommendations** on how to address religious fundamentalism in and outside of Europe. Projects will also **produce profiles of recruiters and targeted individuals and groups** such as young women. **Recommendations on effective strategies, practices and new options** of de-radicalisation and for the prevention of radicalisation will be made not least in relation to education policies.



# Writing Impact

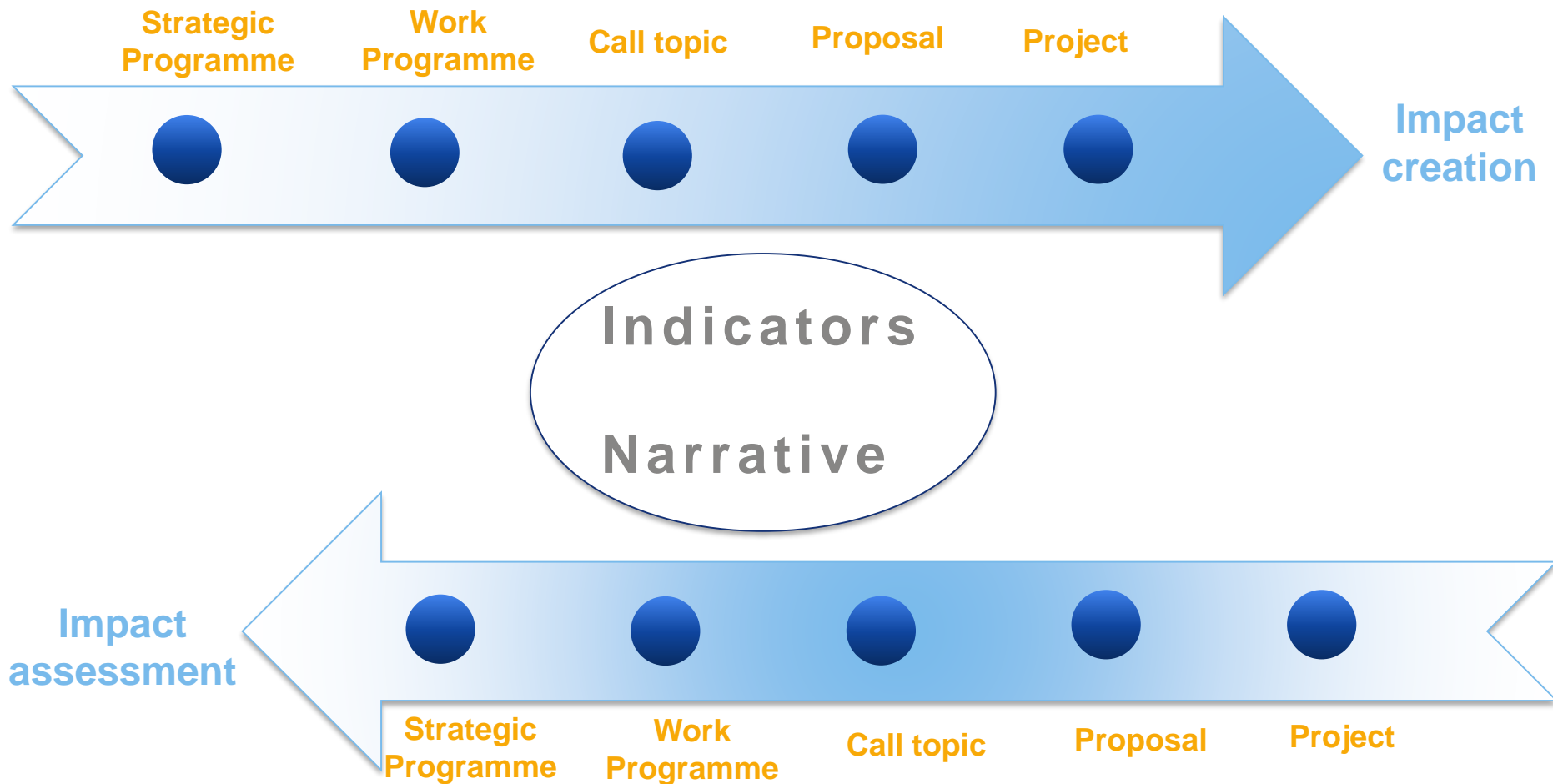
1. Read the work programme and identify the expected impacts related to the call
2. Identify additional impacts taken into account in the evaluation criteria
3. **Identify the steps needed to achieve the expected impacts and the relevant stakeholders**
4. Decide what role each stakeholder should play in the project
5. Plan exploitation to involve the stakeholders
6. Plan dissemination and communication activities to involve
7. the stakeholders
8. Plan management of intellectual property and research data
9. Write the proposal

# Reaching to impact: What are you communicating?



# The Challenge

# Holistic approach to impact





# Thank you!

#HorizonEU

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