



#InvestEUresearch



Horizon 2020 Work Programme for Research & Innovation 2018-2020

€1,3 billion
**Food security, sustainable agriculture and
forestry, marine, maritime and inland
water research and the bioeconomy**

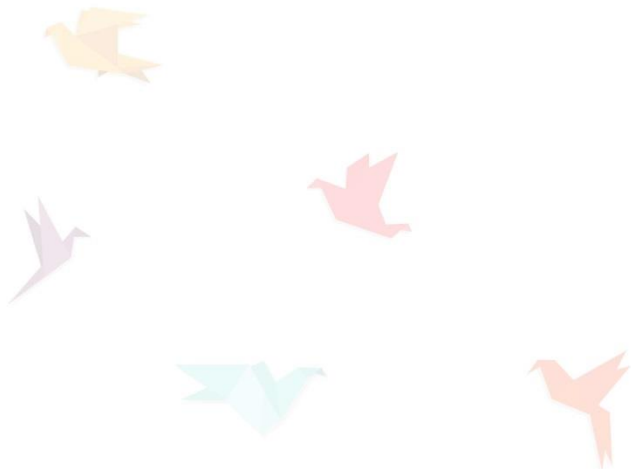
Davide AMATO
Policy Officer – Work Programme
Coordinator

European Commission – DG RTD. 
Bioeconomy Strategy



Content

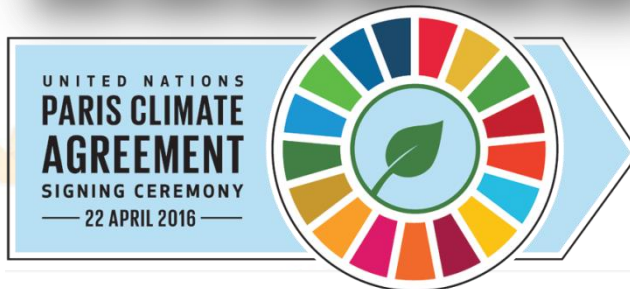
- **Work programme 2019 for Societal Challenge 2**
- **Tips & resources for applicants**
- **Horizon Europe**



WP at a glance

The policy context

- Global commitments

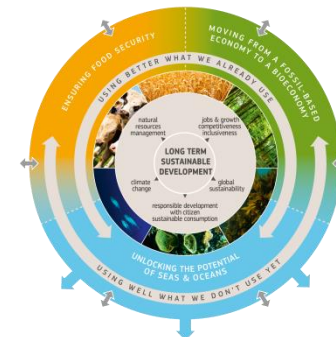


United Nations
Framework Convention on
Climate Change

- European policies



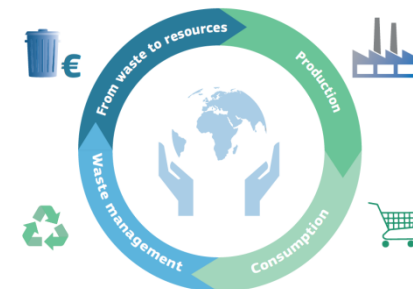
CAP & EIP-AGRI



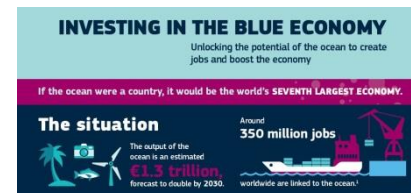
Bioeconomy strategy



Climate & energy



Circular economy



Integrated Maritime and common fisheries policies



Digital single market

WP at a glance

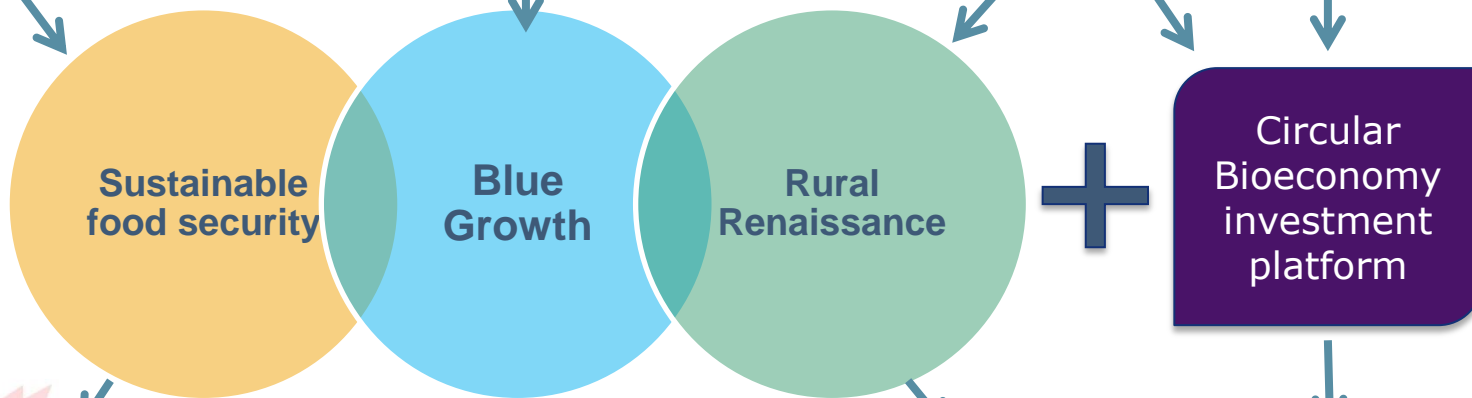
5 priorities



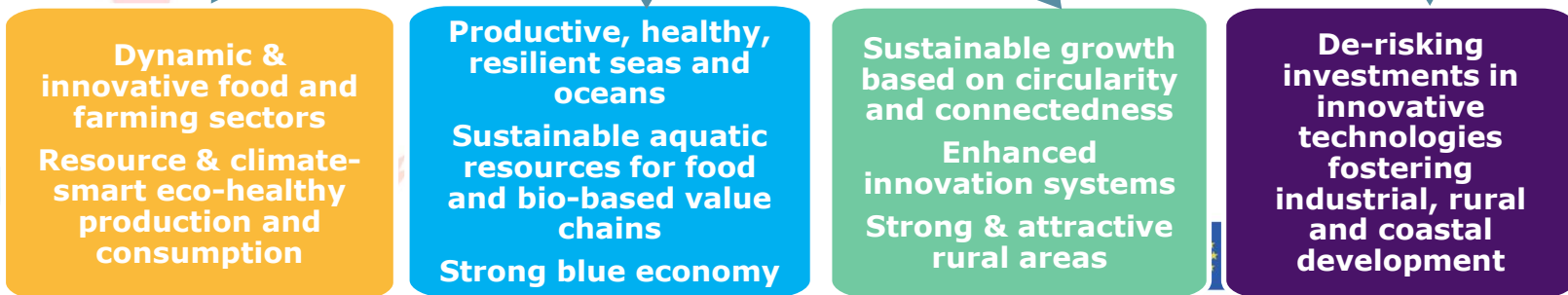
3 goals



3 calls + FI

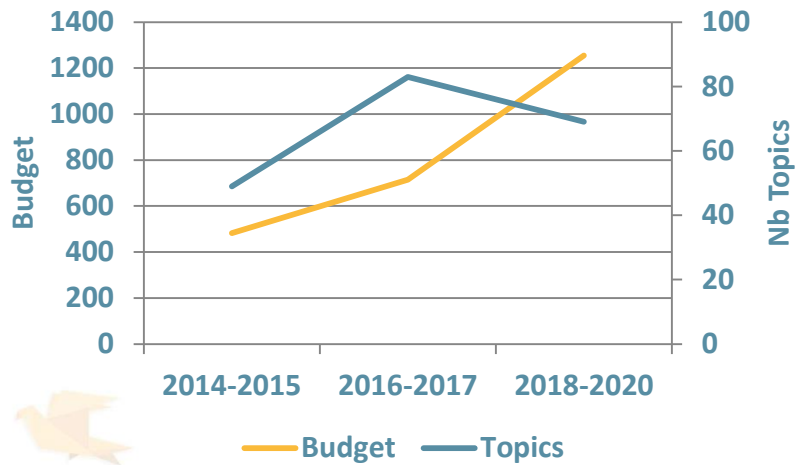


Key impacts

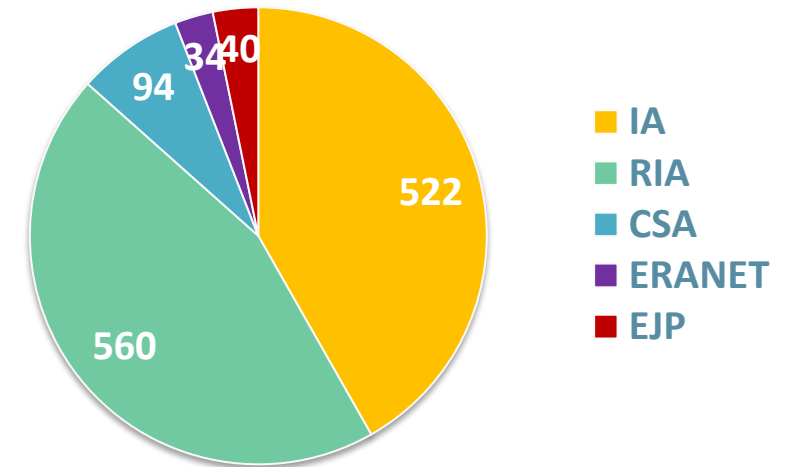


WP at a glance

Evolution of SC2 calls budget and topic counts



Budget by type of action (M€)



Less topics, more budget
→ more projects per topic

Close to market actions with investment in new knowledge

Open innovation, open science, open to the world

- **Open innovation**

- **€500 mio for multi-actor projects** (interactive innovation linked to EIP-AGRI)



- **Open science**

- Research data sharing **by default**
- **Open science clouds**: Food cloud demonstrators (10M€) & Blue cloud services (6M€)



- **Open to the world**

- **89M€** on **EU-AFRICA** partnership on Food and Nutrition Security and Sustainable Agriculture (11 projects): food systems, sustainable intensification and income diversification
- **23M€** on **EU-CHINA** (5 projects): food safety, soil management and bio-based fertilisers
- **64M€** on **"All Atlantic Ocean Research Alliance"** (8 projects): coordination, marine ecosystems and new value chains



- **PRIMA**

Cross-cutting elements

- **A strong commitment to Responsible Research and Innovation**
 - 31 topics under multi-actor approach (500M€ - over 80 grants)
 - 27 topics with strong public engagement requirement
 - 2 topics with a gender dimension
- **A wide space for Social Sciences and Humanities**
 - 55 topics flagged for SSH (75%)
- **Key contributions to global goals (Rio-markers)**
 - Climate
 - Sustainable development
 - Biodiversity

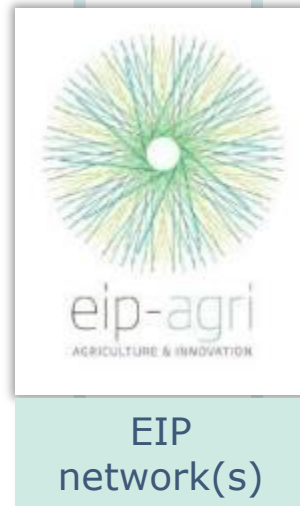


WP at a glance

CAP /Rural development (regional/national level)



Funding for:
OG preparation
OG projects
Innovation support services



**Unique EU knowledge repository
of contacts and practice abstracts**



(European projects)

- **Research projects**
- **Multi-actor projects and thematic networks**
(interactive innovation)



**Involvement of OGs is
strongly recommended**

**Spread
the results**



European
Commission

Societal challenge 2 calls

Sustainable Food Security:
**€ 753 million to use our resources more wisely
and nourish people more sustainably**



**Produce more diverse and healthier food
from well-managed functional ecosystems**



**Increase resource efficiency and
environmental performance of food systems**



**Understand the impact of climate change
and design adaptation strategies**



**Going global: 112 M€ for joint actions with
Africa and China**

Societal challenge 2 calls

Sustainable food security topics (2018-2019)

From functional ecosystems to healthy food

- **Biodiversity in action**
- Microbiome
- **Integrated health approaches**
- IPM
- Healthy beekeeping
- **Animal welfare**
- **Anti-microbials and animal production**
- **African Swine fever**
- Personalised nutrition
- Plant breeding
- Healthy sust. food
- **Alternative proteins**

13 topics – 235 M€

Environment/ Climate-smart Food production and consumption

- **Climate-smart farming**
- **EJP soils**
- **Integrated water management**
- **Citizen-driven food system approaches in cities**
- **Valorising urban biowaste**

5 topics – 107 M€

Building capacities

- **Food cloud**
- **Monitoring R&I investments**
- **GenRes & pre-breeding**
- **Plant-variety testing**
- **Agri-Aqua labs**
- **ERANETs**

6 topics – 91 M€

Targeted international cooperation

- **Microbiome coordination and IBF**
- **EU-Africa**
 - ✓ **Support FNSSA implementation**
 - ✓ **Food systems**
 - ✓ **Sustainable intensification**
- **EU-China**
 - ✓ **Food safety controls**
 - ✓ **Soils management**
 - ✓ **Fertilisers from biogas digestate**

7 topics – 82 M€

Type of actions :
RIA, IA, CSA, EJP, ERANET



European
Commission

Societal challenge 2 calls

Blue Growth 2018-2019

€ 166,5 million to sustainably harvest the potential of aquatic and marine resources, while protecting biodiversity and enhancing climate resilience

Improve knowledge on impact of climate change on marine ecosystems and biological resources to effectively manage their response, mitigation and resilience capacities

Preserve and sustainably exploit marine and coastal ecosystems, and biological resources to deliver improved nutrition and health

De-risk investments and boost blue innovations to develop new bio-based marine value chains and open up new markets

Develop smart and connected territories between land and sea

Strengthen international cooperation, to promote a globally sustainable blue economy

Societal challenge 2 calls

Blue Growth topics (2018-2019): examples

Climate-Ocean

- Blue Bioeconomy Eranet (BG-02, 8 M€)
- The Future of Seas and Oceans Flagship Initiative (BG-07, 18 M€)

2 topics – 26 M€

Sustainable food chains

- Sustainable harvesting of marine biological resources (BG-03, 12 M€)
- Sustainable European aquaculture 4.0: nutrition and breeding (BG-04, 24 M€)

2 topics – 36 M€

De-risking Investments

- Multi-use of the marine space, offshore and near-shore: pilot demonstrators (BG-05, 18 M€)

1 topic – 18 M€

Land-Sea Connection

- Sustainable solutions for bio-based plastics on land and sea (BG-06, 18 M€)

1 topic – 18 M€

International cooperation

- Towards a Baltic and North Sea research and innovation programme (BG-01, 2.5 M€)
- All Atlantic Ocean Research Alliance Flagship (BG-08, 64 M€)
- Coordination of marine and maritime research and innovation in the Black Sea (BG-09, 2 M€)

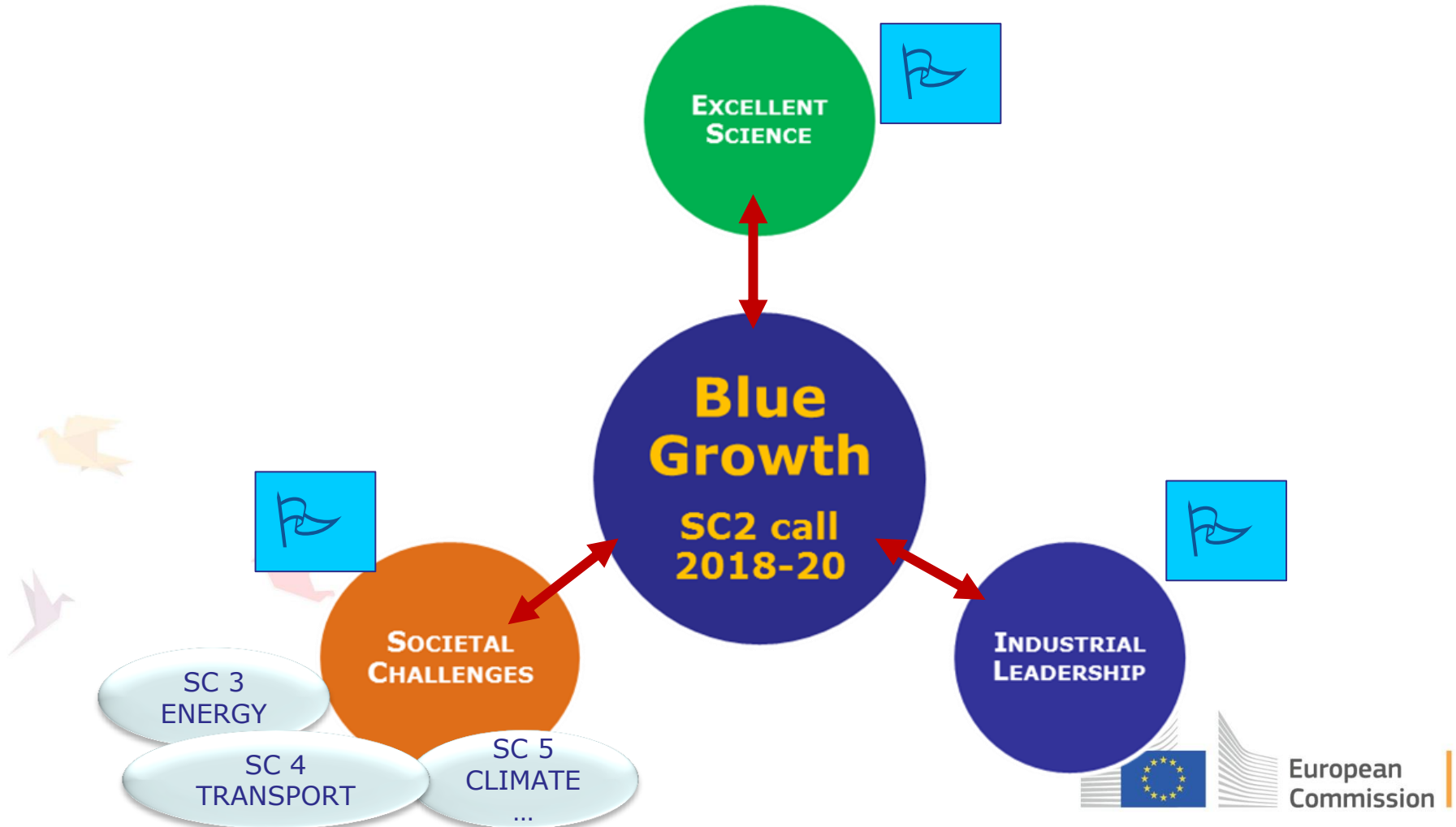
3 topics – 68,5 M€

Type of actions :
RIA, IA, CSA, ERANET



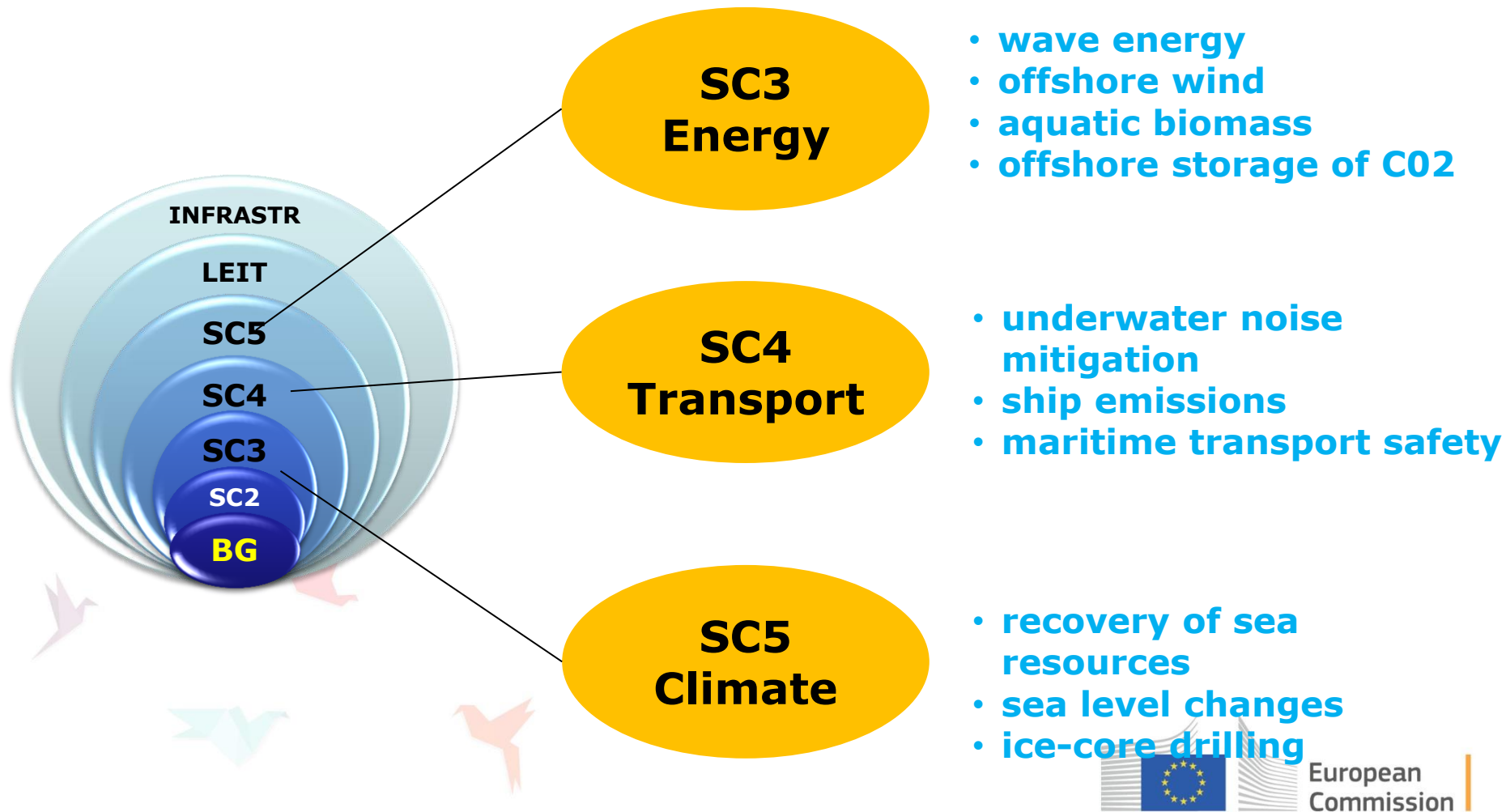
Societal challenge 2 calls

Blue Growth Flags across Horizon 2020 Work Programmes 2018-2020



Societal challenge 2 calls

Blue Growth Flags across Horizon 2020 Work Programmes 2018-2020



Societal challenge 2 calls

Rural renaissance: our territories

€ 263 million for rural territories to become smarter, younger, greener more circular and better connected



Invest in businesses:

125 M€ for developing small scale refineries, boosting regional bioeconomy and innovative supply chains



Invest in people:

41 M€ to boost innovation, co-creation and exploitation of knowledge by improving skills and innovation systems



Invest in policies fit for the future:

60 M€ to modernize policies to favour generation renewal and greater resilience and public goods delivery



Go digital:

37 M€ to take make the promises of the digital revolution come true for farmers and rural people

Societal challenge 2 calls

Rural renaissance topics (2018-2019)

Dynamics & policies

- **Modern policies from long-term visions & societal engagement:**
 - ✓ Science-policy-society hub
 - ✓ Generation renewal
 - ✓ **Mountain value chains and climate change**
- **Socio-economic impacts of digitisation**
- **Contracts for effective agro-environment delivery inc:**
 - Land tenure
 - Result-based policies
 - Collective delivery
- **Analytical tools and models**
 - ✓ New models for policy
 - ✓ **Modelling trade**

4 topics – 60 M€

Food & non-food Value chains

- **Closing nutrient cycles:**
 - ✓ Properties and impacts of biofertilisers
 - ✓ **Bio-based fertilisers from manure**
 - ✓ Bio-based fertilisers from other by products
- **Regional and local bio-based economies**
- **Circular bio-based business models for rural communities**
- **BIOEAST Support Action**
- **Sustainable wood value chains**
 - ✓ **Building with wood**
 - ✓ Resilient forest systems

4 topics – 57 M€

Taking advantage of the digital revolution

- Digital innovation hubs for agriculture
- Preparing advisors for the digital age
- Digital solutions and e-tools to modernise the CAP

3 topics – 37 M€

- + UNDER LEIT-ICT call
- Agricultural cross-cutting integration platforms

1 ICT topics – 15 M€

RUR+ICT:
4 topics – 52 M€

Type of actions :
RIA, IA, CSA

Innovation and human capital

- **Thematic networks compiling knowledge ready for practice**
- **Fuelling the potential of advisors for innovation**

2 topics – 27 M€



Tips & Resources

Call deadlines

Opening	Submission procedure	Stage	Deadline	Info to applicants	Grant Agreements
16 Oct. 2018	single stage	Single stage	23 Jan. 2019	June 2019	Oct. 2019
	2-stages	1 st stage	23 Jan. 2019	May 2019	-
		2 nd stage	04 Sept. 2019	Nov. 2019	May 2020

The Societal Challenge 5 policy context

- Global



United Nations
Framework Convention on
Climate Change



- European



#DigitalSingleMarket



EIP Water

Boosting opportunities – Innovating water



European Innovation
Partnership on Raw Materials





Societal Challenge 5: Climate action, environment, resource efficiency and raw materials - Work Programme 2018-2020

Focus:

- ✓ moving to a greener, more resource efficient and climate-resilient economy in sync with the natural environment
- ✓ demonstrating a strong commitment to supporting the UN's Sustainable Development Goals (SDGs) and the targets of the COP21 Paris Agreement



2 multiannual calls:

"Building a low-carbon, climate resilient future: climate action in support of the Paris Agreement"

"Greening the economy in line with the Sustainable Development Goals (SDGs)"

- **Total indicative budget 2018-2020 €1.1bn, of which 387.5 €m for 2019**
- **2019 topics open:** 14 November 2018
- **Next call deadline:** 19 Feb 2019

Societal Challenge 5: Work Programme 2018-2020

Open to the world



✓ Dedicated international cooperation topics in 2019:

Climate services (Africa)

The Cryosphere (Arctic)

Sustainable urbanisation (CELAC)

✓ International cooperation encouraged in topics 2019:

Decarbonisation topics

Climate change, biodiversity and ecosystem services (esp. CELAC)

Raw materials topics



Call "Building a low-carbon, climate resilient future: climate action in support of the Paris Agreement"

- ✓ **Decarbonisation**
- ✓ **Climate adaptation, impacts and services**
- ✓ **Inter-relations between climate change, biodiversity and ecosystem services**
- ✓ **The Cryosphere**
- ✓ ***Knowledge gaps [in 2020]***
- ✓ ***Earth observation [in 2020]***

➤ **Budget in 2019: €116 million**



Call "Greening the economy in line with the Sustainable Development Goals (SDGs)"

- ✓ **Connecting economic and environmental gains - the circular economy**
- ✓ **Raw materials**
- ✓ **Water for our environment, economy and society**
- ✓ **Innovating cities for sustainability and resilience**
- ✓ **Protecting and leveraging the value of our natural and cultural assets: Earth observation; nature-based solutions, disaster risk reduction and natural capital accounting; heritage alive**

➤ **Budget in 2019: €256.10 million**

EIC Horizon Prize (1)

- 6 prizes launched under the EIC-pilot Work Programme
- For Earth Observation -> EC Horizon Prize for '**Early Warning for Epidemics**'
- Challenge: scalable, reliable and cost-effective early-warning system prototype to forecast and monitor vector-borne diseases
- Contributes to SDG 3 -> "Ensure healthy lives and promote well-being for all at all ages"



EIC Horizon Prize (2)

- Inducement prize of € 5 M
- Effective management of big data in the EO domain shall be an essential element in improving 'early warning' capabilities
- Expected results include a demonstration of the prototype at local level: 'proven prototype'
- Launch: 26 April 2018
Deadline: 1 September 2020



SC5-22-2019: Assessing and fostering the impacts of RIA and IA granted by SC5 in 2014-2015

**New
Topic !**

Specific Challenge

Assess the performance, impact and effectiveness of actions funded by Horizon 2020.

Scope

Assess the impacts of 2014- 2015 RIA and IA projects (87) under the in-depth quantitative and qualitative analysis

Progress made by and achievements of these projects

Best practices and recommendations

Dissemination workshop

CSA
100%

EUR 0.6 mill

12 months

Deadline
19 Feb 2019

SC5-22-2019: Assessing and fostering the impacts of RIA and IA granted by SC5 in 2014-2015

**New
Topic !**

Expected Impact

- maximising the impact of SC5 projects on environmental, social and economic objectives
- enhancing the outcomes of future Work Programmes
- demonstrating and improving the performance of projects funded by SC5
- preparing the SC5 part of the future ex-post evaluation of Horizon 2020.

CSA
100%

EUR 0.6 mill

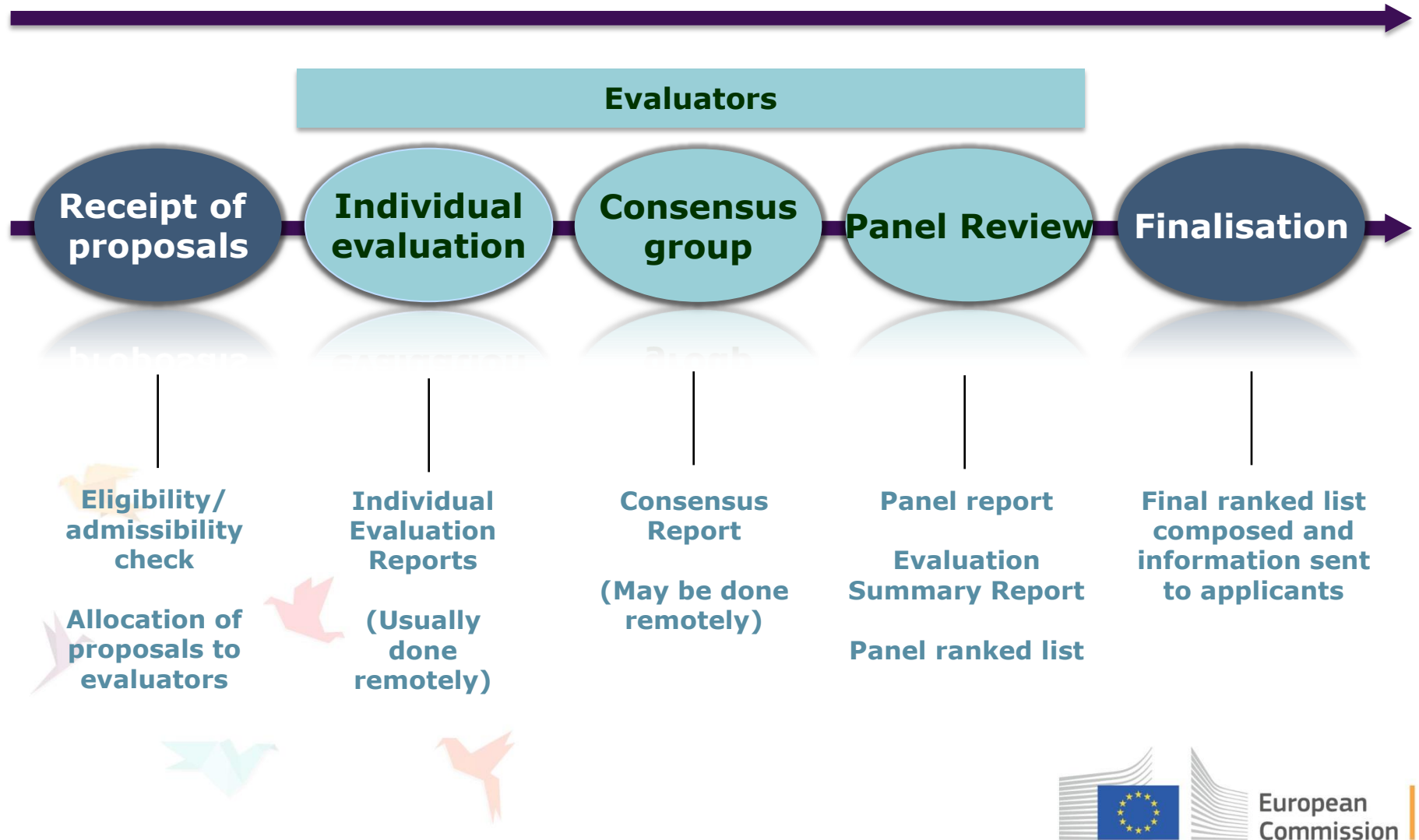
12 months

Deadline
19 Feb 2019

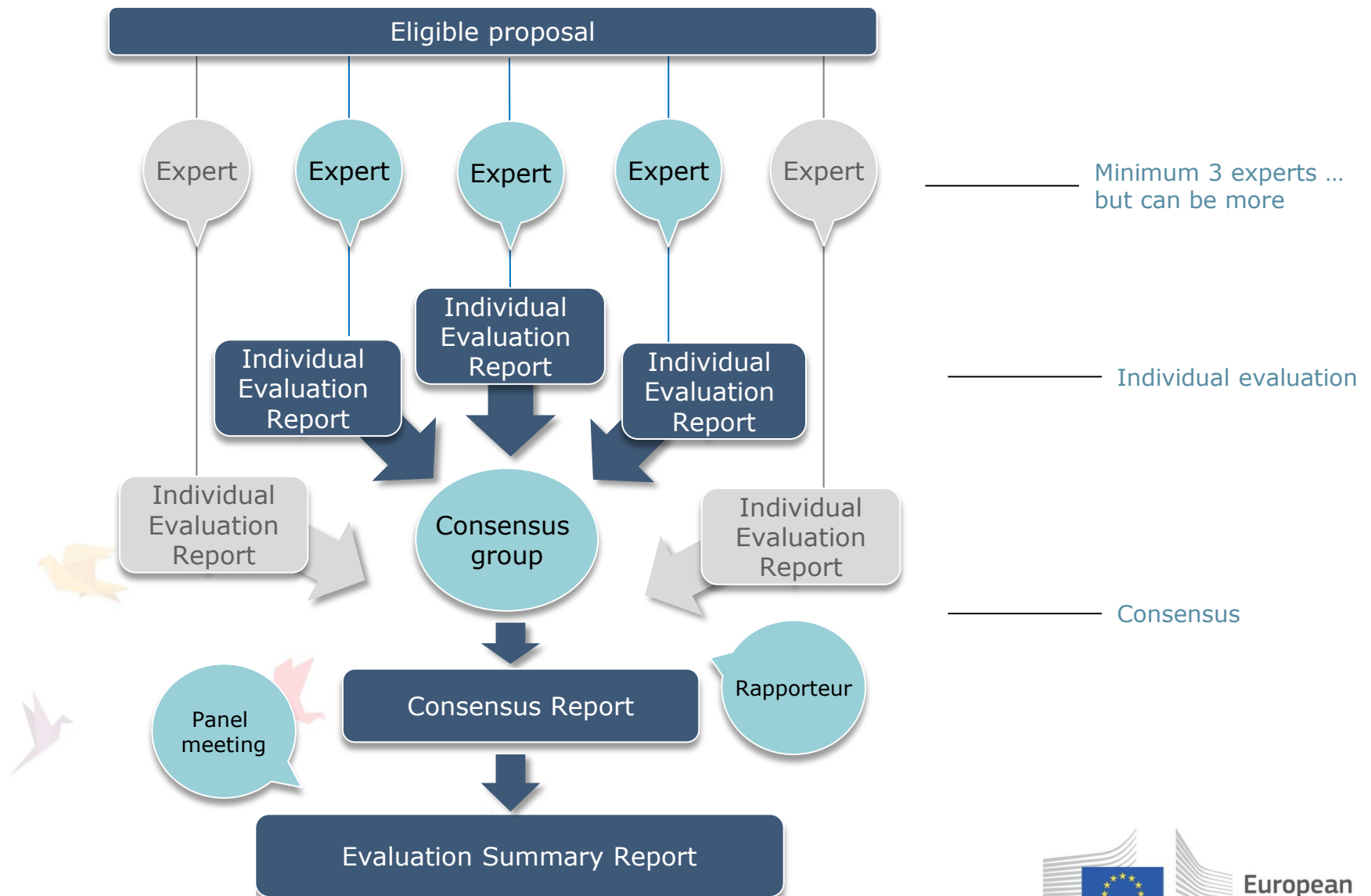
Tips & Resources

Evaluation process for each call

Max. 5 months



Tips & Resources



Tips & Resources

Evaluation of proposals

STANDARD AWARD CRITERIA

EXCELLENCE

IMPACT

**QUALITY &
EFFICIENCY
OF THE ACTION**

✓ **Innovation actions** >> higher weighting for "IMPACT"



Tips & Resources

Scores

0

The proposal **fails** to address the criterion or cannot be assessed due to missing or incomplete information.

1

Poor. The criterion is inadequately addressed, or there are serious inherent weaknesses.

2

Fair. The proposal broadly addresses the criterion, but there are significant weaknesses.

3

Good. The proposal addresses the criterion well, but a number of shortcomings are present.

4

Very Good. The proposal addresses the criterion very well, but a small number of shortcomings are present.

5

Excellent. The proposal successfully addresses all relevant aspects of the criterion. Any shortcomings are minor.

Tips & Resources

Some tips on how to succeed

Start in time & choose your partners well

Avoid "recycling" of former projects or project partners which do not have a specific contribution to the topic

Check for eligibility & read the evaluation criteria – imagine what the evaluator will think

Excellent science is not enough: consider all the criteria & sub-criteria

Impact matters as much as excellence! → Check the expected impacts and scope of the topic in detail

Write clearly & respect the page limits - ask someone impartial to proof-read your proposal

Be coherent! Make sure that the chosen objectives are coherent with the foreseen project activities, the competence of the partners and the planned budget per activity. Make sure the cost/benefit ratio is sound. Keep in mind that all costs should be reasonable in the light of the foreseen outcomes.



Resources, guidance and tools

- **Useful pages and documents**

- Horizon 2020 [online manual](#)
- [Reference documents](#) : work programmes, legal and guidance documents
- [Frequently asked questions](#) (FAQ) on participant portal
- [IT Helpdesk](#) for questions about the Participant Portal tools and processes.

- **You have a specific question?**

- Contact your [National Contact Point](#) or the Horizon 2020 [helpdesk](#) for guidance, practical information and assistance on all aspects of participation in Horizon 2020.



Horizon Europe: investing in R&I to shape our future

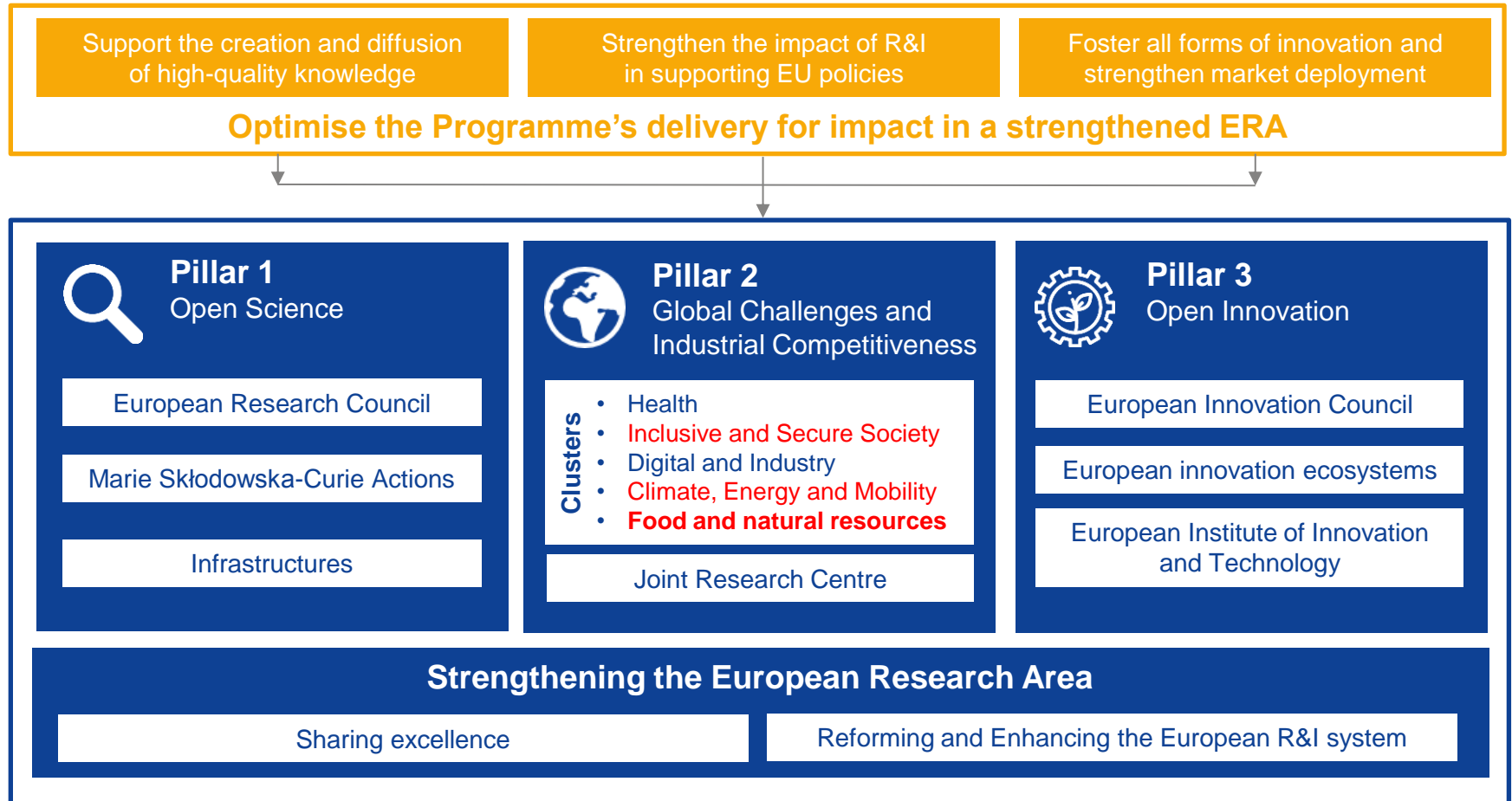
- The vision:
 - " a Europe that protects,
a Europe that empowers,
a Europe that defends"
Jean-Claude Juncker
- Tackling **climate change**
(35 % budgetary target)
- Helping to achieve **Sustainable Development Goals**
- Boosting the Union's
competitiveness and growth



Credits: <https://www.un.org/sustainabledevelopment/sustainable-development-goals/>

Horizon Europe: evolution not revolution

Specific objectives of the Programme



Clusters in 'Global Challenges and Industrial Competitiveness'

Clusters	Areas of intervention	
Health	<ul style="list-style-type: none"> * Health throughout the life course * Non-communicable and rare diseases * Tools, technologies and digital solutions for health and care 	<ul style="list-style-type: none"> * Environmental and social health determinants * Infectious diseases * Health care systems
Inclusive and Secure Societies	<ul style="list-style-type: none"> * Democracy * Social and economic transformations * Protection and Security 	<ul style="list-style-type: none"> * Cultural heritage * Disaster-resilient societies * Cybersecurity
Digital and Industry	<ul style="list-style-type: none"> * Manufacturing technologies * Advanced materials * Next generation internet * Circular industries * Space 	<ul style="list-style-type: none"> * Key digital technologies * Artificial intelligence and robotics * Advanced computing and Big Data * Low carbon and clean industry
Climate, Energy and Mobility	<ul style="list-style-type: none"> * Climate science and solutions * Energy systems and grids * Communities and cities * Industrial competitiveness in transport * Smart mobility 	<ul style="list-style-type: none"> * Energy supply * Buildings and industrial facilities in energy transition * Clean transport and mobility * Energy storage
Food and Natural Resources	<ul style="list-style-type: none"> * Environmental observation * Agriculture, forestry and rural areas * Food systems * Circular systems 	<ul style="list-style-type: none"> * Biodiversity and natural capital * Sea and oceans * Bio-based innovation systems

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

Next steps



Thank you!

#InvestEUresearch

#H2020SC2

www.ec.europa.eu/research/bioeconomy

www.ec.europa.eu/agriculture/research-innovation_en

Participant Portal

<http://ec.europa.eu/research/participants/portal/desktop/en/home.html>