#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

Alexia ROUBY – Research & Innov. Unit (B2)

European Commission – DG AGRI

Research and Innovation

Contents

- **Work programme 2018-2020 in general**

- **Work programme 2018-2020 for Societal Challenge 2 at a glance**

  - Challenges & policy context

  - Five priorities, goals, calls and impacts

  - Topic and budget contributions

  - Open innovation, science, open to the world

  - Cross-cutting dimensions

  - EIP-AGRI and the multi-actor approach

- **Three Societal Challenge 2 calls**

  - Sustainable food security

  - Blue growth

  - Rural renaissance

  - Thematic investment platform

- **A deeper look at focus areas**

- **Deadlines, tips & resources for applicants**

#InvestEUresearch

Horizon 2020
Work Programme
for Research & Innovation
2018-2020

Work programme 2018-2020 (General)
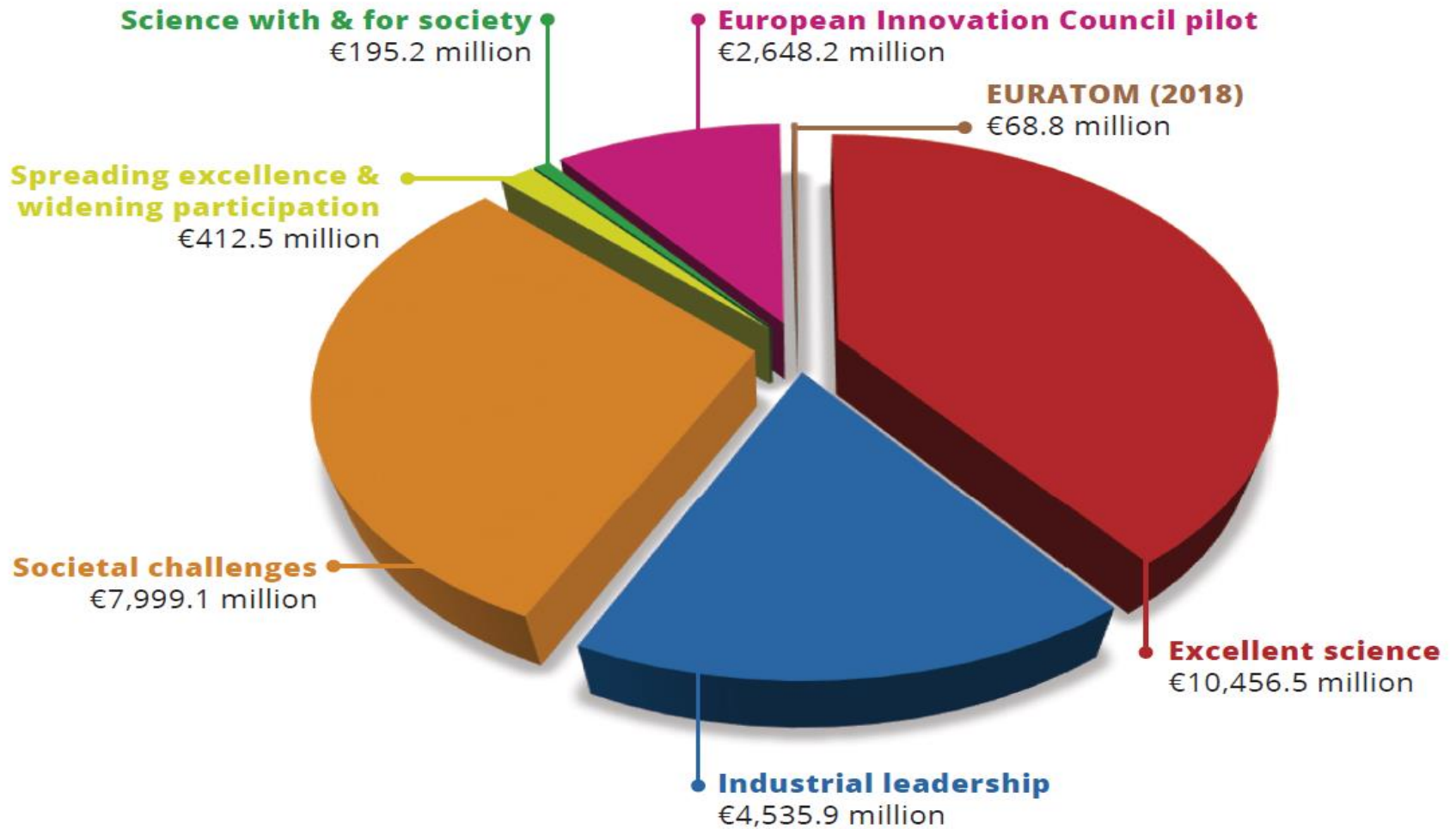
Research and Innovation

Work Programme 2018-2020
R & I investment of € 30 billion for 3 years

➢ **Addressing main concerns of citizens** such as security, migration and economic situation…

➢ **Focus on impact** (fewer & broader topics with sharpened impact statements, better dissemination of results, open access to data…)

➢ **Piloting new initiatives** and **flexibility for 2020**, with 'minimum' content of calls and other actions at this stage

European Commission
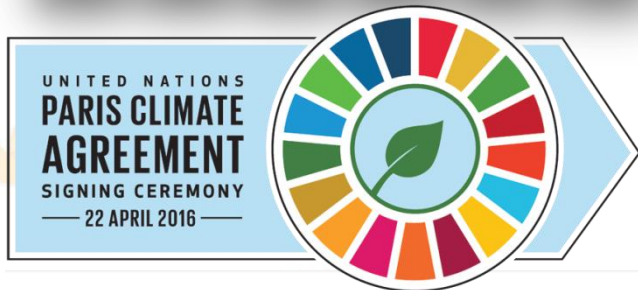
HORIZON 2020 INDICATIVE CALLS BUDGET (2018-2020)

Science with & for society ●
€195.2 million

European Innovation Council pilot
€2,648.2 million

Spreading excellence & widening participation ●
€412.5 million

EURATOM (2018)
€68.8 million

Societal challenges ●
€7,999.1 million

Excellent science
€10,456.5 million

Industrial leadership
€4,535.9 million

The policy context

- **Global commitments**
- **European policies**

SUSTAINABLE DEVELOPMENT GOALS

UNITED NATIONS PARIS CLIMATE AGREEMENT SIGNING CEREMONY — 22 APRIL 2016 —

United Nations Framework Convention on Climate Change

CAP & EIP-AGRI

Climate & energy
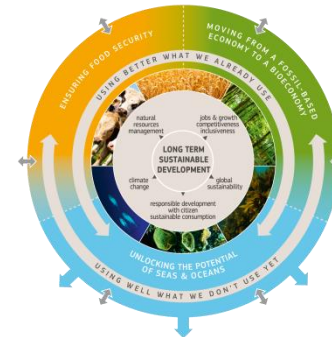
Bioeconomy strategy
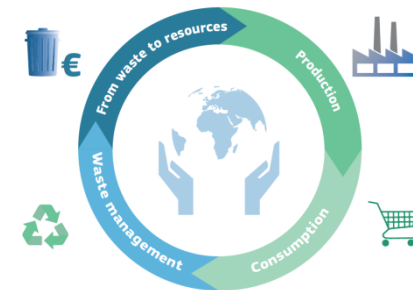
Circular economy

Integrated Maritime and common fisheries policies

Digital single market

The work programme at a glance: five priorities

- Address **climate change and resilience** on land and sea

- Make the transition towards a **circular bioeconomy**

- Foster **functional ecosystems, sustainable food systems,** and **healthy lifestyles**

- Boost major innovations on land and at sea leading to **new products, value chains and markets**

- Develop **smart, connected territories and value chains** in rural and coastal areas

European Commission

What we aim to achieve: three goals

Manage our resources wisely to nourish people sustainably

Understand, preserve and valorise oceans

Develop smarter, greener, circular rural economies

European Commission

Three Societal Challenge 2 Calls

Sustainable food security

Blue Growth

Rural Renaissance

+

Circular Bioeconomy investment platform

European Commission

Key impacts

Sustainable Food Security

- Dynamic & innovative food and farming sectors
- Resource & climate-smart eco-healthy food production and consumption

Blue Growth

- Productive, healthy, resilient seas and oceans.
- Sustainable aquatic resources for food and bio-based value chains
- Strong blue economy

Rural renaissance

- Sustainable growth based on circularity and connectedness
- Enhanced innovation systems
- Strong & attractive rural areas

Circular bioeconomy investment platform

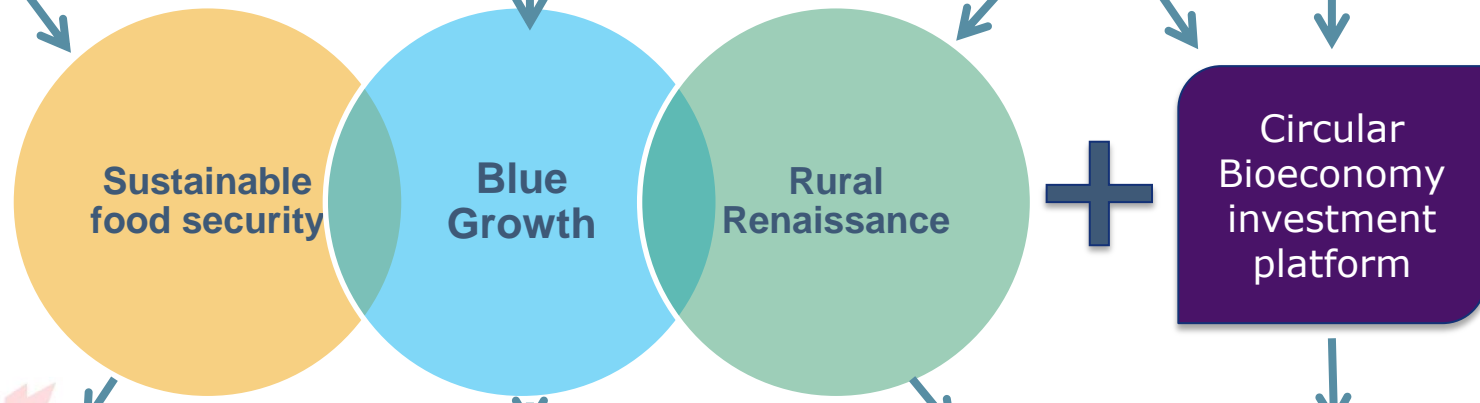- De-risking investments in innovative technologies fostering industrial, rural and coastal development

European Commission
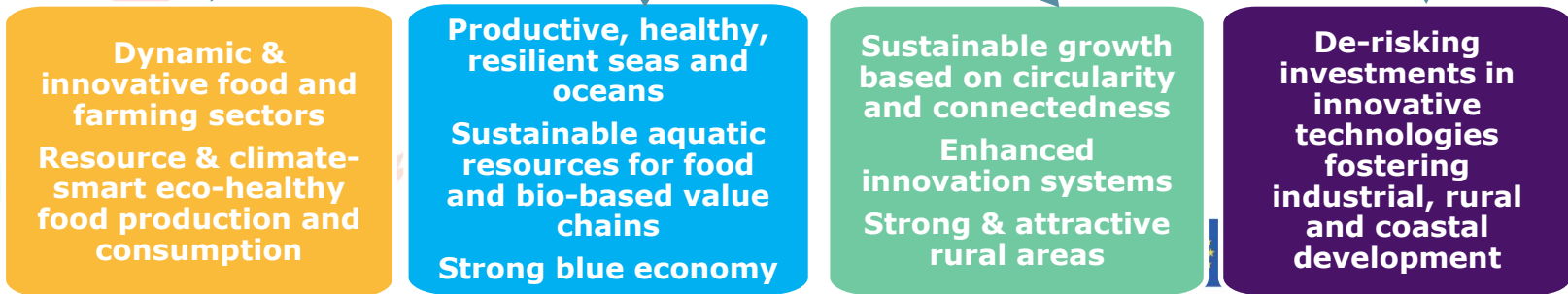
5 priorities

- Foster functional ecosystems, sustainable food systems, and healthy lifestyles
- Address climate change and resilience on land and sea
- Boost major innovations on land and at sea → new products, value chains and markets
- Develop smart, connected territories and value chains in rural and coastal areas
- Make the transition towards a circular bioeconomy

3 goals

- Manage our resources wisely to nourish people sustainably
- Understand, preserve and valorise oceans
- Develop smarter, greener, circular rural economies

3 calls + FI

- Sustainable food security
- Blue Growth
- Rural Renaissance

+

- Circular Bioeconomy investment platform

Key impacts

- Dynamic & innovative food and farming sectors
- Resource & climate-smart eco-healthy food production and consumption

- Productive, healthy, resilient seas and oceans
- Sustainable aquatic resources for food and bio-based value chains
- Strong blue economy

- Sustainable growth based on circularity and connectedness
- Enhanced innovation systems
- Strong & attractive rural areas

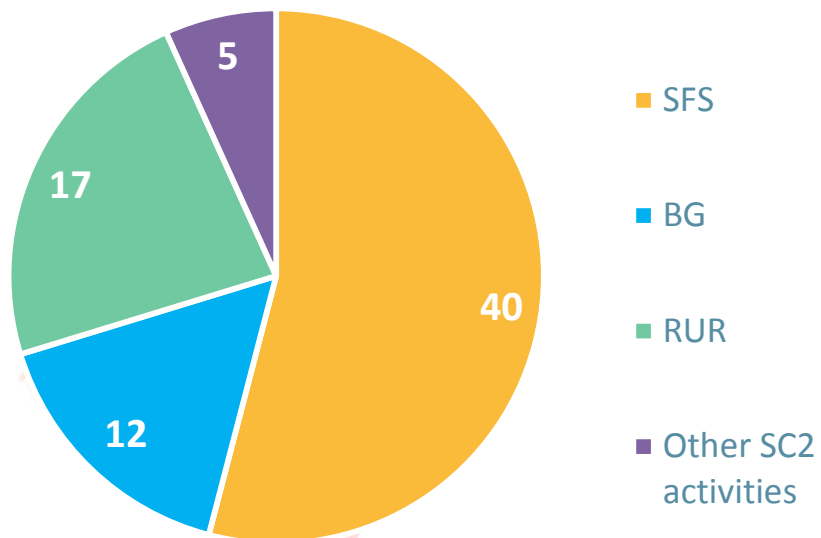- De-risking investments in innovative technologies fostering industrial, rural and coastal development
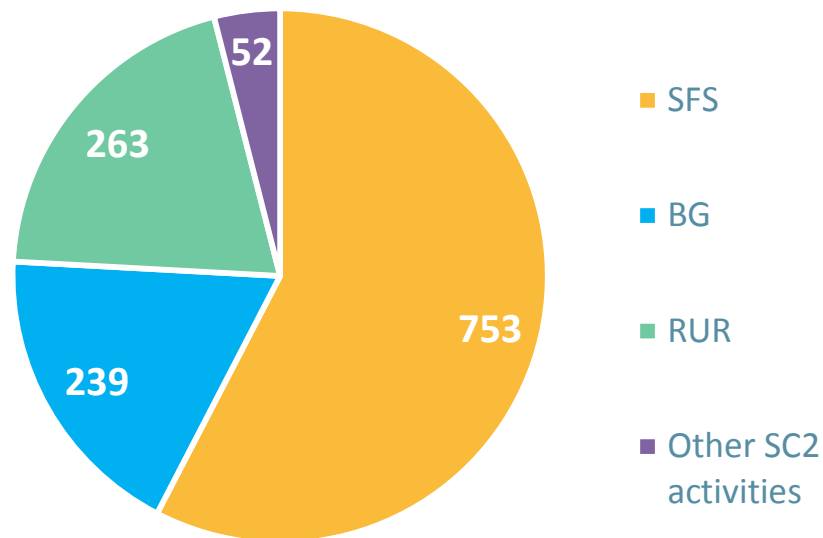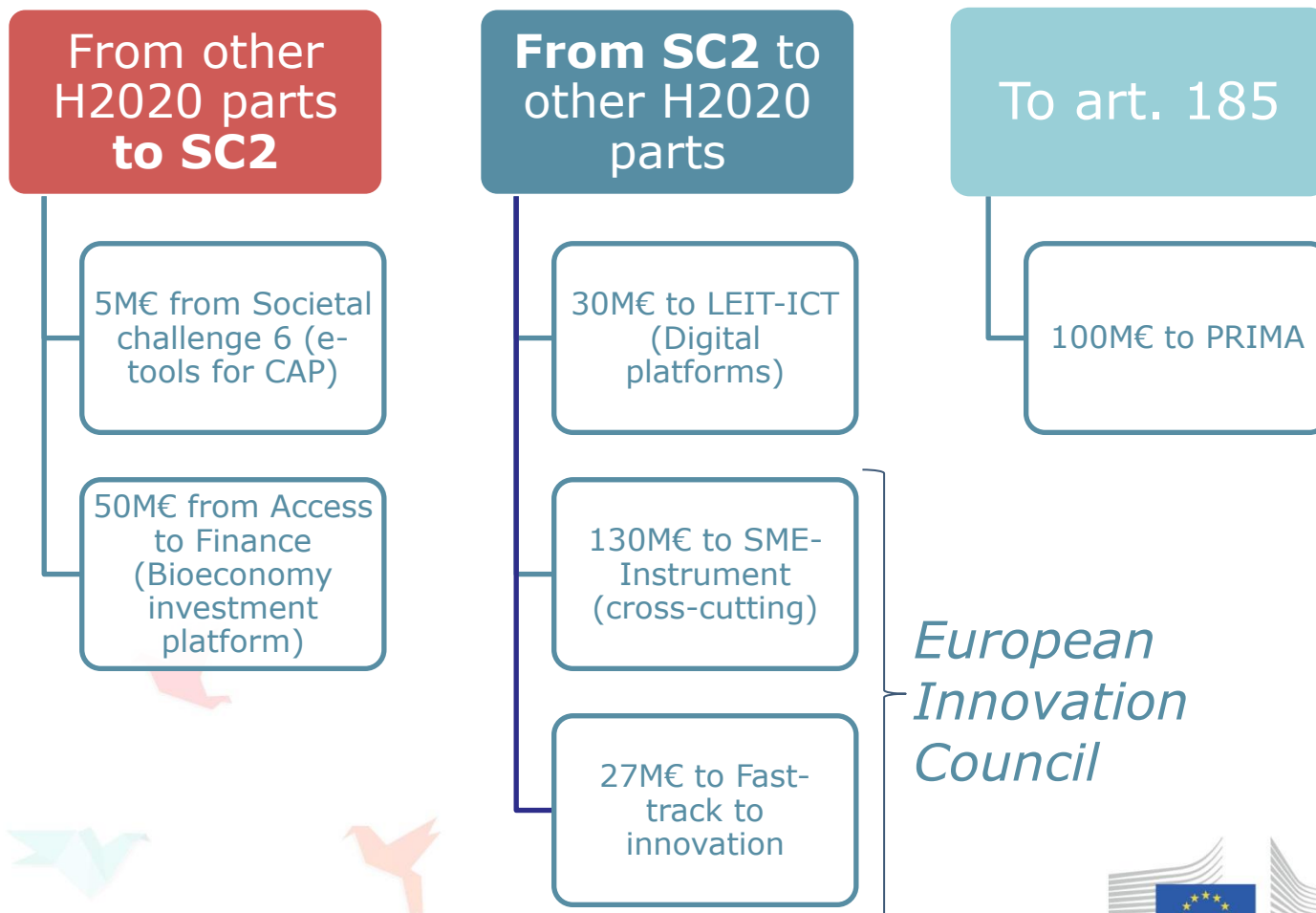
Topic distribution & budget distribution between calls

**Topics - 2018-2020
(SC2 calls and other activities)**

**Budget - 2018-2020 (M€) - Total €1,3 Bn
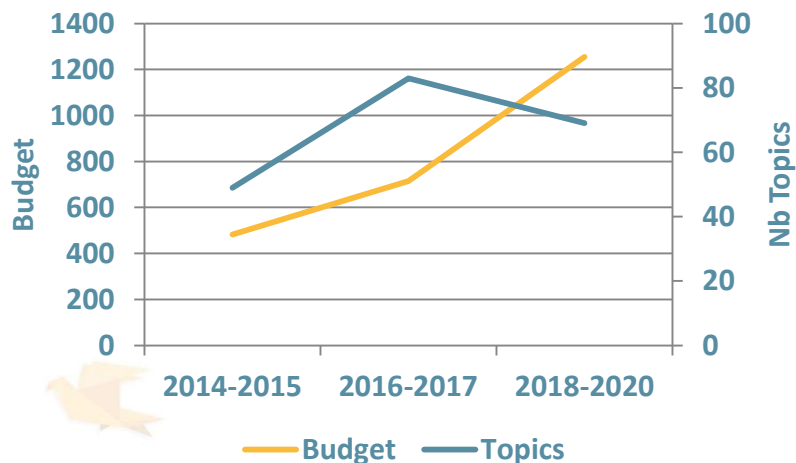(SC2 calls and other activities)**

Legend (both charts):
- SFS
- BG
- RUR
- Other SC2 activities

Topics chart values: 5, 17, 40, 12

Budget chart values: 52, 263, 753, 239

Budget contributions to and from other Horizon 2020 parts or R&I initiatives

From other H2020 parts to SC2

- 5M€ from Societal challenge 6 (e-tools for CAP)
- 50M€ from Access to Finance (Bioeconomy investment platform)

From SC2 to other H2020 parts

- 30M€ to LEIT-ICT (Digital platforms)
- 130M€ to SME-Instrument (cross-cutting)
- 27M€ to Fast-track to innovation

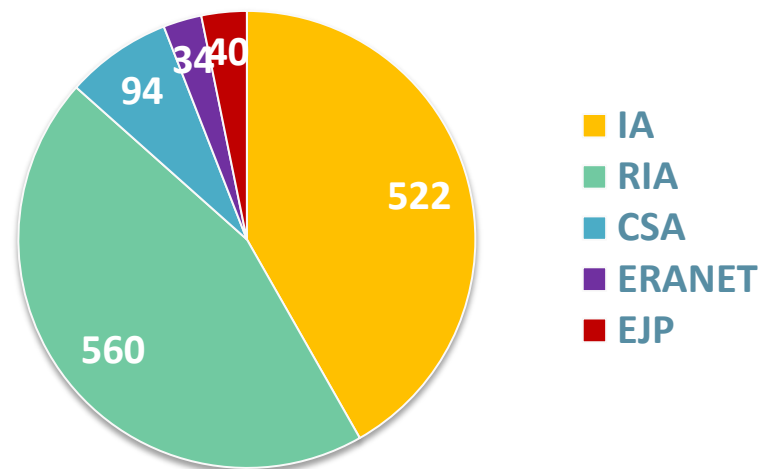*European Innovation Council*

To art. 185

- 100M€ to PRIMA

European Commission

A more strategic and focused approach

Evolution of SC2 calls budget and topic counts

Less topics, more budget → more projects per topic

Budget by type of action (M€)

Legend:
- IA — 522
- RIA — 560
- CSA — 94
- ERANET — 34
- EJP — 40

Close to market actions with investment in new knowledge

European Commission

Open innovation, open science, open to the world

- **Open innovation**
  - **€157 mio for [European Innovation Council](#)** (SME, FTI, FET, Prizes)
  - **€500 mio for multi-actor projects** (interactive innovation - EIP-AGRI)

- **Open science**
  - Research data sharing **by default** (with possibility to opt out)
  - **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
  - **100M€** (out of 220M€) on **PRIMA – P**artnership for **R**&**I** in the **M**editerranean **A**rea
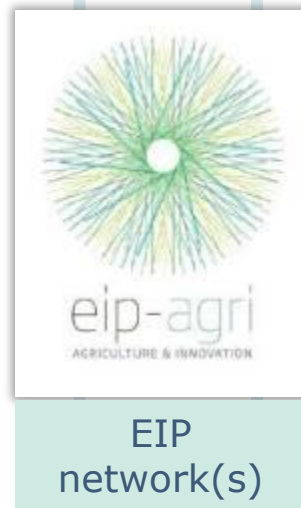
European Commission
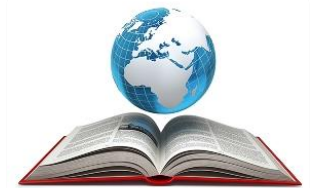
Cross-cutting elements

- **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**

European Commission

CAP /Rural development
(regional/national level)

Farmers

NGOs

Advisors

Agri-
business

**Operational
Group**

Researchers

Funding for:

OG preparation

OG projects

Innovation support services

HORIZON 2020

(European projects)

- **Research projects**

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

eip-agri
AGRICULTURE & INNOVATION

EIP
network(s)

OPERATIONAL GROUP

Involvement of OGs is strongly recommended

Spread the results

Unique EU knowledge repository of contacts and practice abstracts

EIP-AGRI – Where are we?

- 27 Member States, **98 rural development programmes implementing the EIP**

- Around 3 200 OGs planned in 2014-2020. **Over 400 OGs already running**

- **61 H2020 multi-actor projects** ongoing, **including 17 thematic networks**

- **A growing and thriving Network**

An increasing volume of practice-oriented knowledge !

https://ec.europa.eu/eip/agriculture/en/my-eip-agri
https://ec.europa.eu/eip/agriculture/en/my-eip-agri/operational-groups

Operational groups: what are they working on?
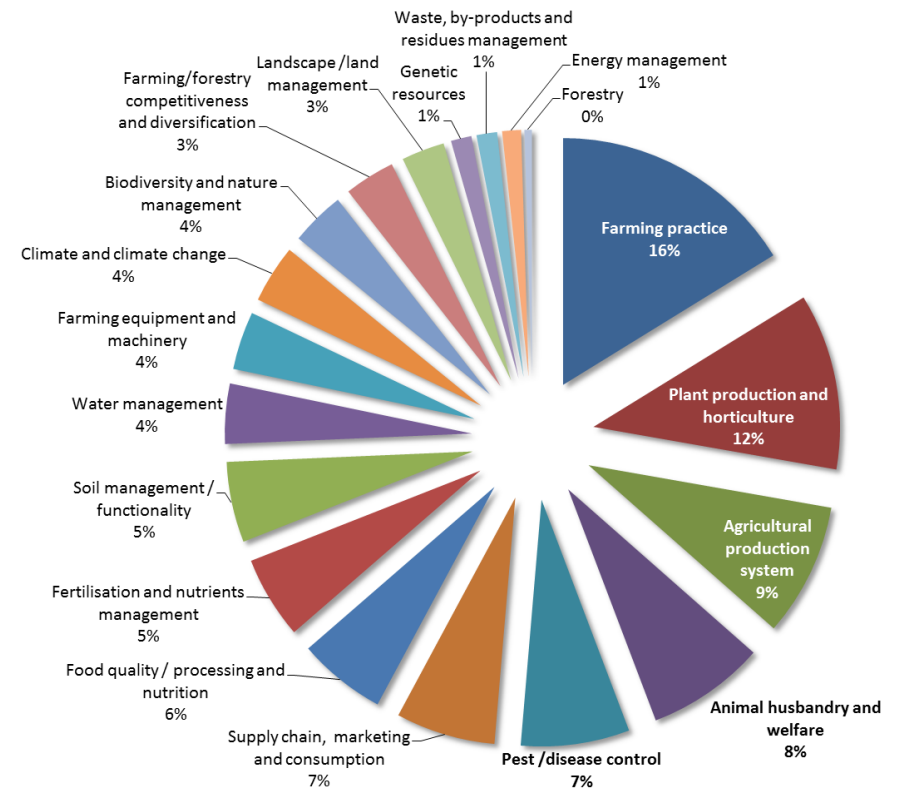
The multi-actor approach under WP2018-2020 Key points

- **The project must respond to real needs of those on the ground**

- **Adequate choice of actors with complementary knowledge**

- **Genuine & sufficient involvement of actors all along the project**

- **Produce practical knowledge easily accessible, understandable and applicable**

- **Dissemination at minimum through Agri EIP with practice abstracts**

Brochure

The EIP common format & practice abstracts

- set of basic elements characterising the project includes one (or more) "practice abstract"(s)

- Two main objectives:
  - enable contacting partners and exchange knowledge
  - disseminate results to practitioners in a concise and easy understandable way

- Can be used to provide information all along the life-cycle of the project:
  - Start: explain what you are going to do
  - Mid-term: update
  - End: disseminate results

- Counts as a "deliverable"

European Commission > EIP-AGRI > EIP-AGRI common format

EIP-AGRI common format

The interactive innovation approach under the European Innovation Partnership Agricultural Productivity and Sustainability (EIP-AGRI) fosters the development of demand-driven innovation, turning creative new ideas into practical applications thanks to interactions between partners, the sharing of knowledge and effective intermediation and dissemination.

Read more about the EIP-AGRI Common format for interactive innovation projects
Click here to Complete the EIP-AGRI Common format for interactive innovation projects

The EIP common format consists of a set of basic elements characterising the project and includes one (or more) "practice abstract"(s). The format was developed with two main objectives:

1. to enable contacting partners and incentivise efficient knowledge exchange, and
2. to disseminate the results of the project in a concise and easy understandable way to practitioners.

The common format allows providing information all along the life-cycle of the project. The content of the common format can be updated at any moment when useful, for instance in an intermediate phase of the project. Project information should at least be available at the beginning (describing the situation at the start of the project, including project title and objectives) and at the end of the project (describing the results/recommendations resulting from the project, including a final project report and one or more practice abstracts).

Attachment	Size
eip_common_format_16_oct_2016.xls	770.5 KB

https://ec.europa.eu/eip/agriculture/en/eip-agri-common-format

In practice:
One excel file
Version tailored for H2020 projects

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Horizon 2020
Work Programme
for Research & Innovation
2018-2020

Societal challenge 2 Calls

Horizon 2020

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: joint actions with Africa and China

European Commission

Sustainable food security – 515M€ (2018-2019)

Environment and climate smart food production and consumption

5 Topics – 107 M€

Building capacities

6 Topics – 91 M€

From functional ecosystems to healthy food

13 Topics – 235 M€

Sustainable Food Security

Targeted international cooperation

7 Topics – 82 M€
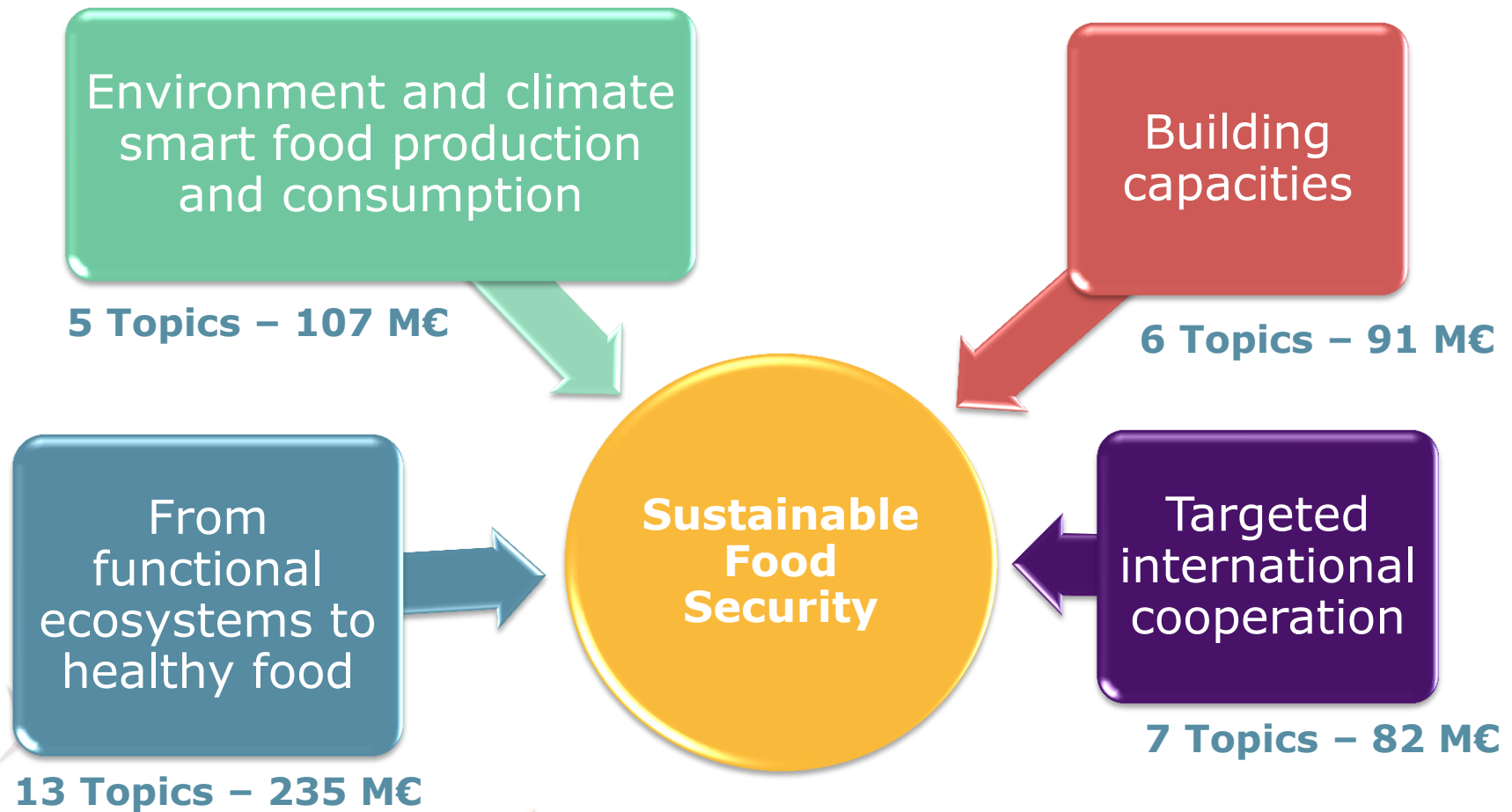
**Type of actions :
RIA, IA, CSA, EJP, ERANET**

European Commission

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
- Personnalised 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€

European Commission

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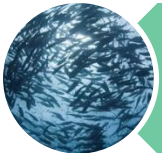
Preserve and sustainably exploit **marine and coastal ecosystems** and biological resources to deliver improved **nutrition and health**

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

Blue Growth topics (2018-2019)

Climate-Ocean

- Blue Bioeconomy PPP (BG-02, 8 M€)

- The Future of Seas and Oceans Flagship Initiative (BG-07, 18 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€)

De-risking Investments

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

Land-Sea Connection

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

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2 topics – 26 M€   **2 topics – 36 M€**   **1 topic – 18 M€**   **1 topic – 18 M€**   **3 topics – 68,5 M€**

European Commission

Blue Growth across Horizon 2020
A strategic coordinated approach for marine and maritime research across all Horizon 2020 parts (250M€/year)

EXCELLENT SCIENCE

Blue Growth
and other SC2 calls

SOCIETAL CHALLENGES

SC 3 ENERGY

SC 4 TRANSPORT

SC 5 CLIMATE
...

INDUSTRIAL LEADERSHIP
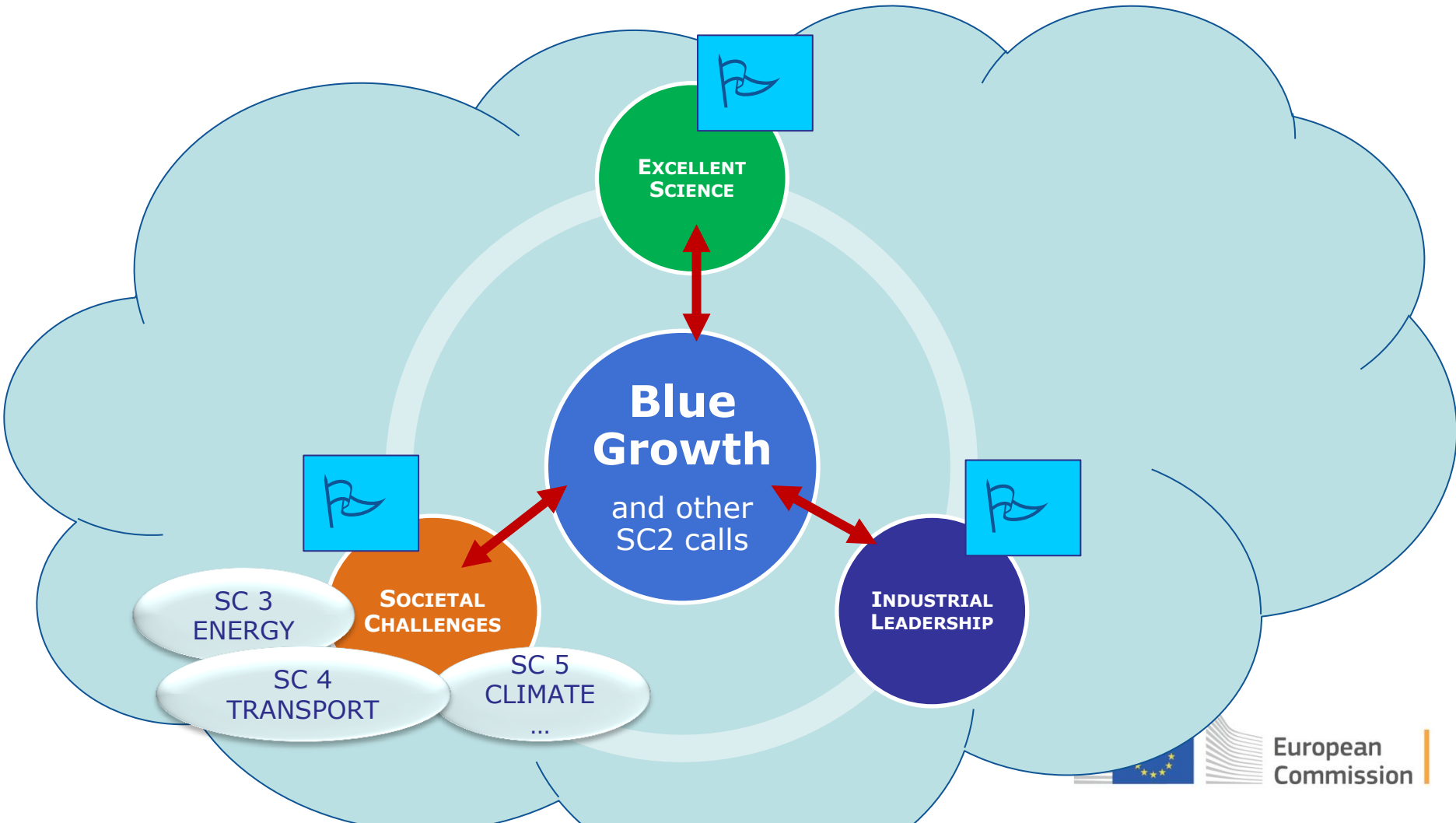
Blue Growth related topics beyond SC2
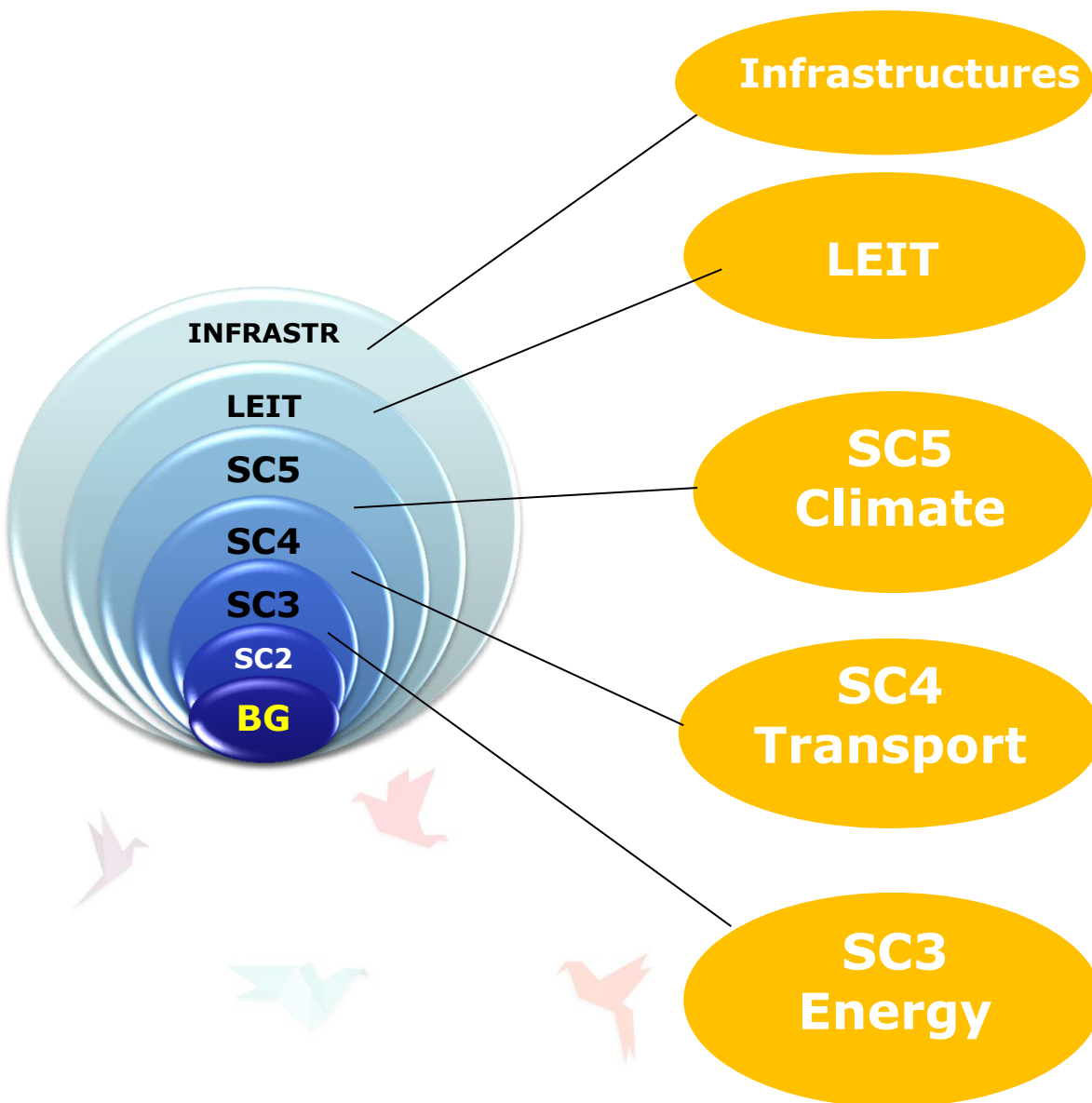
EXAMPLES

Infrastructures
- **Research Vessels**

LEIT
- **SPACE – Copernicus Marine Services, ocean models**
- **NMBP: off-shore energy materials**

SC5 Climate
- **recovery of sea resources**
- **sea level changes**
- **ice-core drilling**

SC4 Transport
- **ships emissions**
- **Unmanned & autonomous activities**
- **maritime transport safety**

SC3 Energy
- **wave energy**
- **offshore wind**
- **renewable energy technologies**

INFRASTR
LEIT
SC5
SC4
SC3
SC2
BG

Rural renaissance

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

Invest in policies fit for the future:

Modernizing policies to favour generation renewal and greater resilience and public goods delivery

Invest in businesses:

Developing small scale refineries, boosting regional bioeconomy and innovative supply chains

Go digital:

Making the promises of the digital revolution come true for farmers and rural people

Invest in people:

Boost innovation, co-creation and exploitation of knowledge by improving skills and innovation systems

European Commission

Rural renaissance – 181M€ (2018-2019)

Organising sustainable **food and non food value chains** under changing conditions

4 Topics - €57 mio

Taking advantage of the **digital revolution**

3 Topics - €37 mio
(+ 1 topics under ICT call)

From farm to society: **understanding dynamics and modernising policies**

4 Topics €60 mio

Rural renaissance

Boosting innovation and enhancing human and social capital

2 Topics - €27 mio

**Type of actions :
RIA, IA, CSA**

European Commission
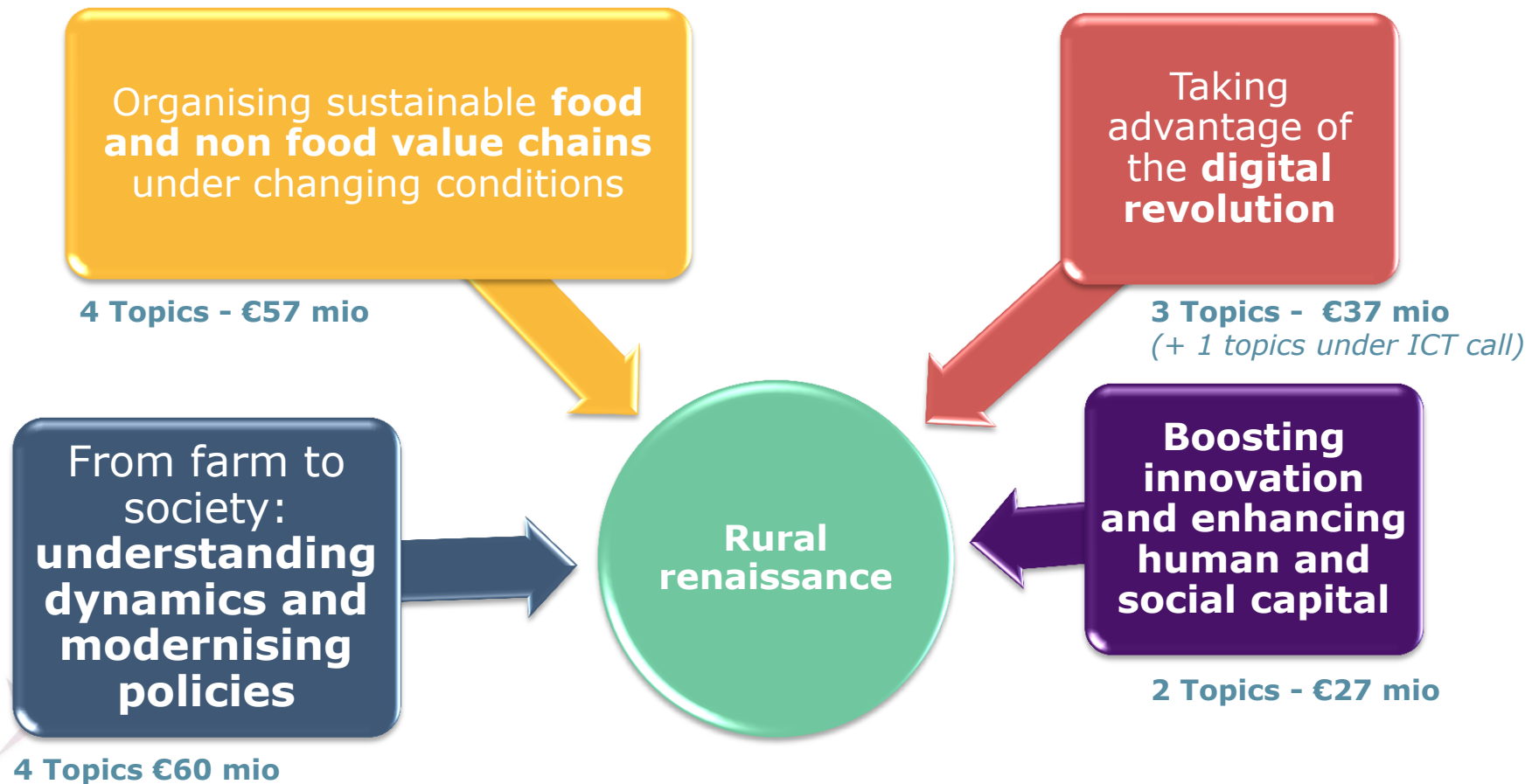
Rural renaissance topics (2018-2019)

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**
- **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€

Innovation and human capital

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

2 topics – 27 M€

RUR+ICT:
4 topics – 52 M€

European Commission

Circular Bio-economy TIP

Sources of funding:

- **EU contribution (used as first risk absorber)**

- **Possibly private investors / fund manager**

- **Possibly other public investors (e.g. national banks; EIB)**

Indicative only

Funding

Investment Platform

Management fee
Performance fee

Fund Manager

Investment strategy

Co-financing (e.g. via debt) a portfolio of projects

Eligible Projects

Revolving funds

Co-financing by others

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Horizon 2020
Work Programme
for Research & Innovation
2018-2020

**Focus areas
&
European Innovation
Council Pilot**

European Commission

Research and Innovation

Focus Areas and other cross-cutting priorities

€ 7 billion for 4 mutually reinforcing focus areas

- aligned to political priorities

- expected to have exceptional impact

- implemented through 'virtual calls cutting across the programme (description in 'General Introduction', common call identifier of contributing calls and topics)

COP 21

Circular Economy

Digitisation

Security
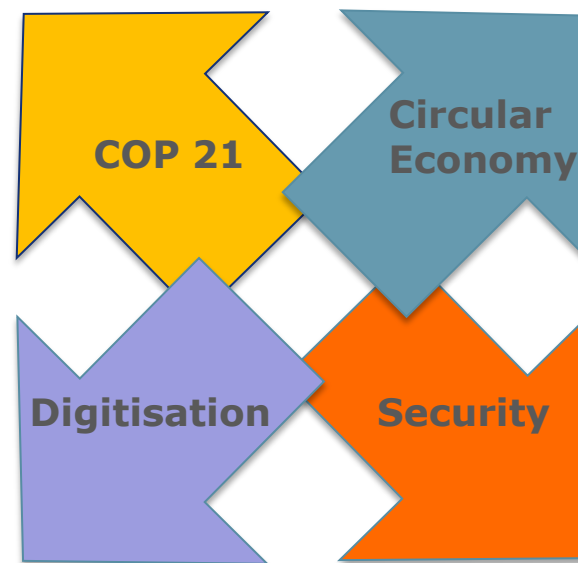
Further cross-cutting priorities

- **Migration (€ 200M)**

- **Batteries (€ 100M + € 100M to come)**

- **Blue Growth, Cities ......**

European Commission

Focus Area 'Building a low-carbon, climate resilient future' (LC)

Contributing to implement the **Paris Agreement**:

- **Accelerate transformation** towards carbon neutrality through **clean technologies**

- Enhance **climate resilience in Europe and beyond**

- Contribute to **long-term mitigation and adaptation policy planning**

€ 3.3 bn

SC2 Contribution: 203M€ (Plants, proteins, climate-smart farming, soils, food systems, marine resources, wood value chains)

European Commission

Focus Area 'Connecting economic and environmental gains – the Circular Economy' (CE)

Supporting the **circular economy policy**:

- Ensure that **growth no longer requires increasing consumption of resources, energy, water and primary raw materials**

- **Reduce waste**, including from plastics

- Create **new business opportunities** and safeguard **competitive advantages**

€ 940 m

SC2 Contribution: 253M€ (Urban food systems, biowaste valorisation, bio-based plastics and fertilisers, bio-based models for rural communities)

European Commission

Focus Area 'Digitising and transforming European industry and services' (DT)

© chombosan - Fotolia.com
#135648762

Enhancing the benefits from the **Digital Single Market Strategy**:

Foster **uptake** of digital technologies and innovations & **synergies** with other key enabling technologies through

- **Cross-sectorial digital platforms and large scale pilots** for co-creation with users (e.g. personalised health, ICT solutions for agriculture, automated driving, inclusive public services)
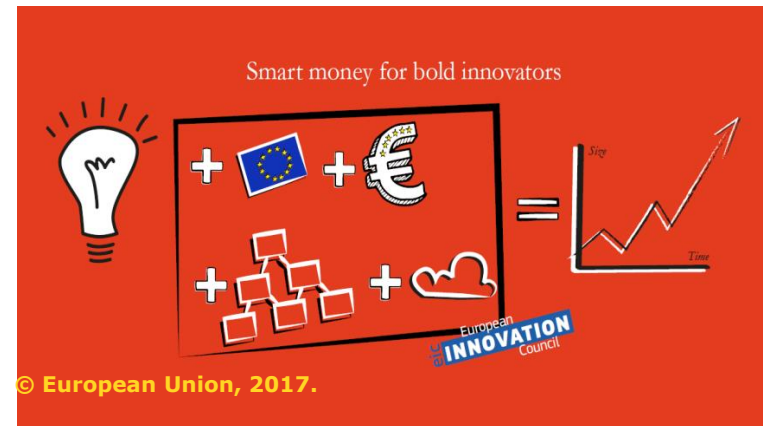
- **Innovation hubs**

€ 1.7 bn

SC2 Contribution: 107M€ (Personalised nutrition, Blue and food clouds, Aquaculture 4.0, Digital innovation hubs)

European Commission

European Innovation Council (EIC) Pilot (1)

Objective: Strengthen breakthrough innovations and boost the number of high-growth companies

Focus on people and companies with ideas for :

- **Radically new**, breakthrough products, services, processes or business models

- That **open up new markets** with the potential for rapid **European and global-scale growth** (high risk, need for significant investment)

Smart money for bold innovators

© European Union, 2017.

- Take shape at the **intersection** between different technologies, industry sectors and scientific disciplines

European Commission

European Innovation Council (EIC) Pilot (2)

Brings together, adapts and aligns innovation schemes addressing different communities in a bottom-up approach:

- **SME Instrument**: close-to-market projects of single SME or a consortium of SMEs (<u>new:</u> non-thematic, focus on cross-disciplinarity, revised evaluation criteria; face-to-face interviews in Phase 2)

- **Fast Track to Innovation (FTI):** close-to-market projects of consortia with industry participation (<u>new</u>: revised evaluation criteria)

- **FET Open:** early stage research by consortia exploring novel ideas for radically new future technologies

- **Six EIC Horizon Prizes** for breakthrough innovations bringing major benefits to society

- **Cross-cutting:** coaching, mentoring (for SME beneficiaries), monitoring progress with innovation radar

Total Budget: € 2.7 billion

SC2 contribution: 157 M€ (SME, FTI)

European Commission

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Horizon 2020
Work Programme
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Deadlines, tips & resources

Horizon 2020

Call deadlines

Opening	Submission procedure	Stage	Deadline	Info to appli-cants	Grant Agree-ments
31 Oct. 2017	**single stage**	Single stage	**13 Feb. 2018**	June 2018	Oct. 2018
	2-stages	1st stage	**13 Feb. 2018**	May 2018	-
		2nd stage	**11 Sept. 2018**	Nov. 2018	May 2019

European Commission

Some tips on how to succeed

- **Start on time**

- **Choose your partners well -** Check for **eligibility**

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

- **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 and concisely (page limits) -** ask someone impartial to proof-read

- **Be coherent!** Make sure that the chosen objectives are coherent with the foreseen activities, the competence of partners and the budget per activity.

- **Is your project good value for money?** Make sure the cost/benefit ratio is sound. Keep in mind that all costs should be reasonable in the light of the foreseen outcomes.

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Some tips on communication & dissemination

- Communication and dissemination activities each have a specific scope.

- Together they ensure that project results are widely known and used by those interested, including **policy makers**.

- They also ensure that project results are **aligned with the needs of users**.

- Ensuring **uptake of project results** enhances the added value of research and innovation funding and means that the newly generated knowledge does not just stay on a dusty shelf.

- The **dissemination & exploitation plan is mandatory** for your project and will help evaluators assess the potential impact of the project.

- Communication and dissemination about the project and its results should **start as soon as possible** and be adapted throughout the project's lifetime.

- Consider including the **right skills for communication and dissemination in the project consortium** from the start.

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Resources, guidance and tools

- **Useful pages and documents**

  - Horizon 2020 <u>online manual</u>

  - <u>Reference documents</u> : work programmes, legal and guidance documents

  - <u>Frequently asked questions</u> (FAQ) on participant portal

  - <u>IT Helpdesk</u> for questions about the Participant Portal tools and processes

  - <u>How to manage data</u>: open data, open access, data management plans

  - <u>Communication</u> and <u>dissemination</u>: <u>what's the difference</u>?

- **You have a specific question?**

  - Contact your <u>National Contact Point</u> or the Horizon 2020 <u>helpdesk</u> for guidance, practical information and assistance on all aspects of participation in Horizon 2020.

EIP-AGRI <u>Brochure</u>
With also elements on SSH, Engagement etc.

InfoWeek on Societal challenge 2 (14-17/11/2017)

- **Infoday recordings and presentations for:**
  - Calls
  - Tips and hints
  - Topics

- **Wider policy background:**
  - Bioeconomy policy day
  - Digitising agriculture and food value chains
  - Blue Growth and R&I

HORIZON 2020 Work Programme 2018-2020

Programme of the H2020 SC2 Infoweek

Info day and brokerage
Bioeconomy policy day
Digitising agriculture and food value chains
Blue growth and R&I

14-17 November 2017

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Thank you!

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https://ec.europa.eu/programmes/horizon2020/en/h2020-section/food-security-sustainable-agriculture-and-forestry-marine-maritime-and-inland-water
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

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