



# **HORIZON 2020**

## **Work Programme 2016-2017**

### **Societal Challenge 2**

**Food security, sustainable agriculture and forestry, marine, maritime and inland water research, and the bioeconomy**



**Call for**  
***Sustainable Food Security***  
**2017**

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# Overview

1. *Societal Challenge 2 Rationale*
2. *Work Programme 2017 – Overview*
3. *Work Programme 2016 – Early Results*
4. *Evaluation and Lessons Learned*
5. *Other calls*
6. *Broader links*

# Societal challenges

*Reflect the policy priorities of the Europe 2020 strategy and addresses major concerns shared by people across Europe and beyond.*

*The challenge-based approach brings together resources and knowledge across different fields, technologies and disciplines, including social sciences and the humanities.*

*The Societal Challenges Programme:*

- ***Covers activities from research to market with a new focus on innovation-related activities, such as pilots, demonstrations and test beds***
- ***Includes support for public procurement and market uptake***
- ***Helps to establish links with the activities of the European Innovation Partnerships (EIP).***

## **WP 2016/2017- objectives**

- **Ensure food and nutrition security, by fostering resilient and resource efficient** primary production and industry as well as **sustainable and healthy consumption**
- **Demonstrate the innovative potential of the oceans,** by bringing technology to market
- **Foster innovation and business opportunities for rural and coastal areas,** through new territorial approaches and business models
- **Re-industrialise Europe,** through new bio-based value-chains, while securing sustainable biomass

## **Sustainable Food Security: our daily bread**



**Putting nature-based and resource-efficient approaches at the heart of research investments**



**Focusing on climate smart agro-food chains**



**Putting nutritious and healthy food from land and seas on our plates**



**Going global: joint actions with Africa and China**

The presentation shall neither be binding nor construed as constituting commitment by the European Commission

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# ***Sustainable Food Security – Resilient and resource-efficient value chains:***



*Call addresses the issues of **resilience and efficiency** in the food value chain. It will support research and innovation all along the food chain, from primary production, food processing to healthy and safe foods and diets.*

*Support to policies and EU food security strategy, comprising:*

- **Europe 2020 Resource-efficient Europe Flagship,**
- **EU Biodiversity Strategy to 2020,**
- **EU Soil Thematic Strategy and other elements of the EU Environmental Policy,**
- **European Innovation Partnership 'Agricultural productivity and sustainability',**
- **Post-2015 Development Cooperation Agenda,**
- **The Common Fisheries Policy,**
- **Common Agricultural Policy**
- **EU Health and Consumer Policy**

# Key Theme: Interactive Innovation



***Definition: "an idea put into practice with success"***

- genuine innovation only if widely adopted and proves usefulness in practice.

*Implemented in SC2 through "multi-actor" project topics.*

## ***The Multi-Actor Approach:***

- "The genuine and sufficient involvement of various actors (end-users such as farmers/farmers' groups, fishers/fisher's groups, advisors, enterprises, etc.) all along the project: from the participation in the planning of work and experiments, their execution up until the dissemination of results and a possible demonstration phase."

*Multi-actor projects may connect with EIP-Agri Operational Groups funded under the RDP*

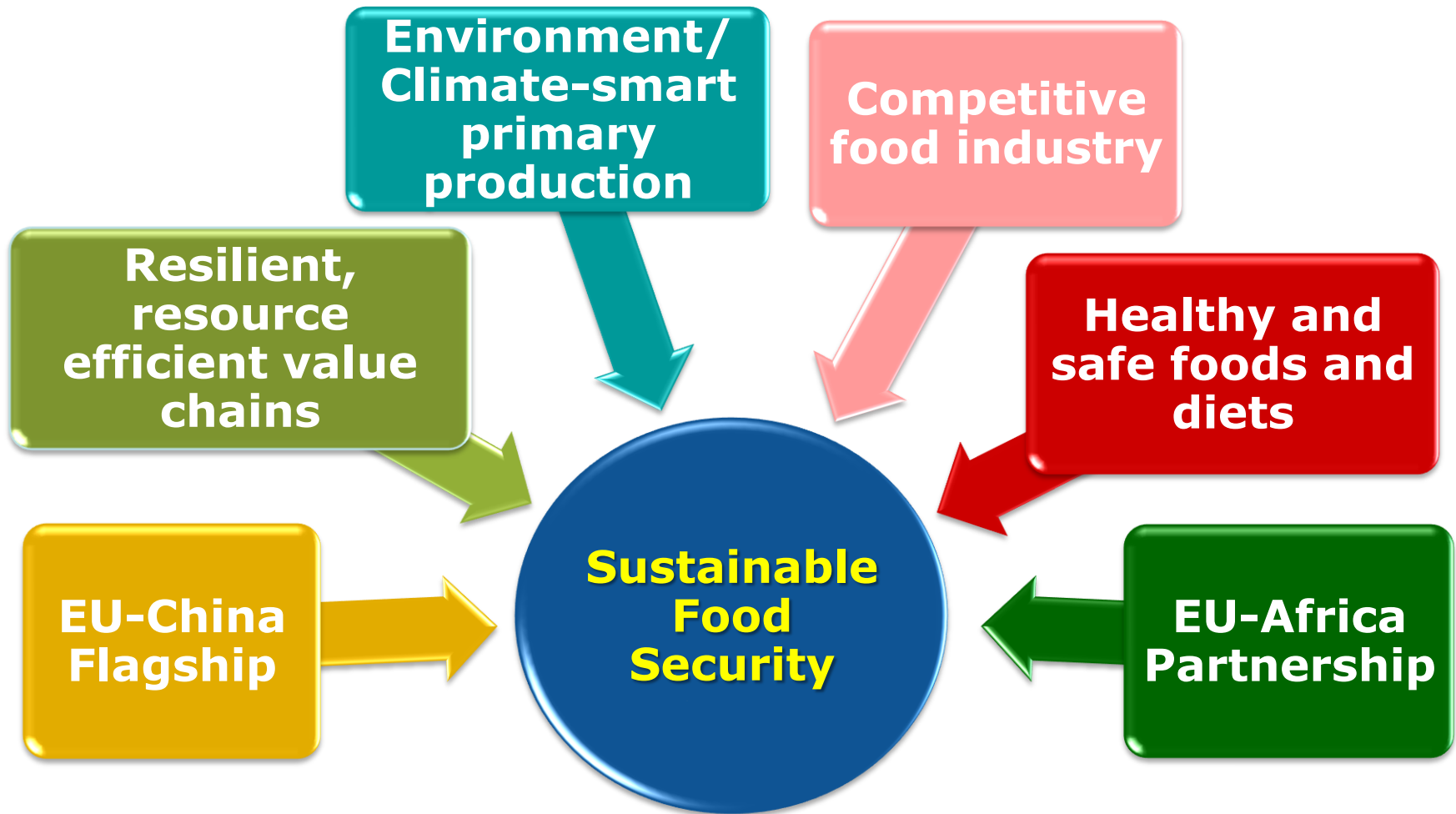
# Additional Stipulations



- Inputs from the **Social Sciences and Humanities explicitly mentioned** in a number of call topics.
- **Interdisciplinary** or **transdisciplinary** approaches also mentioned – clarifications in the WP apply.
- Participation in the **Open Research Data Pilot** is encouraged, but not part of evaluation.
- Data Management Plans (DMPs)
  - What data, how it will be exploited or made accessible for verification and re-use; how it will be curated and preserved.
  - Required if participating in the Open Research Data Pilot.
  - Only prepare if funded
- Some topics have **participatory requirements**



## Sustainable Food Security - AREAS



# Sustainable food security TOPICS summary

## Resilient, resource- efficient value chains

- Abiotic stresses
- Biotic stresses
- Operationalising the resilience concept
- Optimising use of critical inputs
- Specific actions for organic farming
- Sustainable fisheries and aquaculture
- ERANETs/ SCAR

**12 topics 96 M€**

## Environment Climate- smart primary production

- Carbon and nitrogen cycling in agro-ecosystems
- Specific production systems
- Ecosystem services
- Socio-economics, demography and resilience of farms

**5 topics 49 M€**

## Competitive food industry

- Resilient, sustainable and transparent value chains
- Food losses
- Resource efficient processes in food chain
- Food packaging; labelling

**2 topics 18 M€**

## Healthy food and diets for all

- One Health co-fund (zoonoses)
- Dietary choices of children; consumers and food safety;
- Diet/impulsivity/compulsivity; obesity; sweeteners

**3 topics 64M€**

# Sustainable food security – TOPICS 2017



## EU-Africa Partnership

2017

2 topics - 12M€

- ERANET Cofund
- Innovation for promoting food and nutrition security and sustainable agriculture in Africa
- **Earth observation services for the monitoring of agricultural production in Africa**

## EU-China Flagship

2017

3 topics – 17 M€

- **Water retention in soils**
- Breeding of protein crops
- **Urban agriculture**
- **Livestock production and antimicrobial drug use**
- Authentication and traceability

# Sustainable food security – TOPICS 2017



**Resilient, resource  
efficient value  
chains**



**12 topics 96 M€**

## **Examples:**

- New partnerships and tools to enhance European capacities for in-situ conservation
- Robotics Advances for Precision Farming
- Organic Breeding – Increasing the competitiveness of the organic breeding and farming sectors
- Research and approaches for emerging diseases in plants and terrestrial livestock
- Validation of diagnostic tools for animal and crop health
- Breeding livestock for resilience and efficiency
- Bee health and sustainable pollination
- Innovations in plant protection

# Sustainable food security – TOPICS 2017



## Environment/ Climate-smart primary production

**5 topics 49 M€**

### **Examples:**

- Permanent grassland – farming systems and policies
- Functional Biodiversity – Productivity gains through functional biodiversity – effective crop pollinators and pest predators interplay
- Socio-Eco-Economics – Socio economics in ecological approaches
- Closing loops at farm and regional levels to mitigate GHG emissions and environmental contamination: focus on carbon, nitrogen and phosphorus cycling in agro ecosystems



## Competitive food industry

### Two topics.

- Innovative agri-food chains: unlocking the competitiveness and sustainability potential
- Innovative solutions for sustainable food packaging

### Also SME Instrument:

- Resource-efficient eco-innovative food production & processing
- Reduction of food losses and waste on farm and along the value-chain
- Creating added value from waste and by-products generated on farm and along the value-chain

# Sustainable food security – TOPICS 2017



**Healthy and safe  
foods and diets**



## **Three topics. 64M€:**

- Co-fund on "One Health" (zoonoses – emerging threats);
- The impact of consumer practices in food safety
- Impulsivity and compulsivity and the link with nutrition, lifestyle and the socio-economic environment

# Sustainable food security – TOPICS 2017



## EU-Africa Partnership



### Two topics. 12M€:

- EU-Africa Research and Innovation partnership on food and nutrition security and sustainable agriculture;
- Promoting food and nutrition security and sustainable agriculture in Africa: the role of innovation



# Sustainable food security – TOPICS 2017



## EU-China Flagship



### Three topics. 17M€:

- Alternative production system to address anti-microbial usage, animal welfare and the impact on health
- Soil water resources management in the EU and China and its impact on agro-ecosystem functions
- Resource-efficient urban agriculture for multiple benefits – Contribution to the EU-China Urbanisation Partnership

# SC2 Calls 2017 - DATES

<b>Publication</b>	<b>Submission</b>		<b><u>Deadlines</u></b>	<b>Information to applicants</b>	<b>Grant Agreements</b>
<b>2016 version available</b>	<b>two-stage submission (RIA with some exceptions)</b>	<b>1st stage</b>	<b>14 Feb 2017</b>	<b>May 2017</b>	<b>-</b>
		<b>2nd stage</b>	<b>13 Sept 2017</b>	<b>Nov 2017</b>	<b>May 2018</b>
<b>Updates 4 OCT 2016</b>	<b>single stage submission (IA, CSA, ERA Net)</b>	<b>Single stage</b>	<b>14 Feb 2017</b>	<b>June 2017</b>	<b>October 2017</b>

## Success Rates: new rule for two-stage calls

- **In 2014-2015 calls**, low success rates at second stage level
- Introduction of **dynamic threshold** in the first stage evaluation (see General Annexes of Workprogramme 2016-2017)
- Intention: to get a number of proposals which represent approximately 3 times the available budget to the second stage.

# May 2016 Stage 1 results - examples



**SFS-01-2016** Solutions to multiple and combined stresses in crop production; overall threshold applied **9**

- 39 submitted proposals.
- 4 proposals are above threshold; budget for 2 to be funded

**SFS-14-2016** Understanding host-pathogen-environment interactions; overall threshold applied **9.5**

- 27 submitted proposals.
- 5 proposals are above threshold; budget for 2 to be funded

**SFS-03-2016** Testing and breeding for sustainability and resilience in crops; overall threshold applied **8.5**

- 22 submitted proposals.
- 2 proposals are above threshold; budget for 1 to be funded.

# 2016 Stage 1 results – examples (cont)



**SFS-44-2016** A joint plant breeding programme to decrease the EU's and China's dependency on protein imports: overall threshold applied **8**

- 4 submitted proposals.
- 3 proposals are above threshold; budget for 2 to be funded.

**SFS-15-2016** Breeding livestock for resilience and efficiency; overall threshold applied **8**

- 9 submitted proposals.
- 4 proposals are above threshold; budget for 1 to be funded

**Overall 235 proposals submitted; 62 are above threshold**

**Single Stage topics, results expected in June.**

# Evaluation Common Errors



*Consistent errors common across many proposals:*

- *Shoe-horning a project into a topic where it is not a good fit, or too much focus on one aspect at the expense of a balanced project*
- *Missing critical points*
- *Vague risk management*
  - **What is Plan B if Plan A does not bear fruit?**
- *Poorly balanced consortia – no end users and therefore lacking pathway to implementation and exploitation*
- *Generic dissemination and exploitation*
- *Failure to discriminate between communication and dissemination*

# Evaluation Summary Report (ESR)



## Comments from Evaluation:

*"The objectives of the proposal are clear and pertinent to the topic."*

*"The concept is sound and the proposed methodology is credible."*

*"The project presents a continuous development of technologies and stakeholders are integrated into the different levels of this process."*

*"The consortium is well balanced and complementary in terms of skills and expertise."*

*"Within risk management; critical risks are recognised and the appropriate mitigation strategies are outlined. Innovation management is well addressed. "*

*"The proposal has a strong potential to enhance innovation capacity, in particular in technological terms and respective TRL achievement. The partners are already involved in other collaborations outside of the project on these topics and thus, the integration of new knowledge is credible."*

# Common Shortcomings



**Not connected with needs:** *"The project is ambitious. Overall, the proposed concept is good but it has some shortcomings such as the underdeveloped bottom up approach for these innovations and the missing approach related to precise farming use which is important to small farmers."*

**Regional considerations:** *"There are no details on how the various regions and ecosystems will be handled in the work that is proposed."*

**Linking results and practice:** *"...it is not properly described how the achieved results of the project will feed into strategies and improved farming practices, which raises the concern that the impact of the proposed project might be limited."*

**Risk:** *"The related mitigation measures are indicated only loosely and without sufficient evidence-based reassurances, this point is unconvincing."*



# Common Shortcomings



## **All partners need to have a clear and synergistic role:**

*"It is unclear what the Chinese partner will bring as support to the project and appears as not relevant."*

*"Although there is a high diversity of disciplines, the synergies between their knowledge are not sufficiently described."*

## **Wide consideration of impacts:**

*"Social impacts are not sufficiently considered in the proposal."*

## **Describe and explain details:**

*"A clear list of Background IPR of the respective partners required for project implementation is lacking in the proposal."*

*"A significant shortcoming is that in relevant cases the rationale behind the allocation of resources is not plausibly explained."*

# Multi-Actor Approach



## **The Good:**

*"The multi-actor approach is clearly justified. The combination of top-down and bottom-up processes is presented in a convincing way."*

*"Multiple actors are properly engaged into the various activities proposed."*

## **Not quite there:**

*"The proposal is very well engaged with regulators and authorities, but the direct collaboration with farmers in a multiactor approach is not considered, which is considered an important shortcoming."*

*"The proposal has some multi-actor approach as it involves farmers, cooperatives and food processors. However, the downstream value chain actors are not sufficiently involved although the call text focus on a supply-chain approach from farm to consumers and civil society."*

*"Not enough details are provided on the interaction of different stakeholders of the value chain, including actors from farms to food processors."*

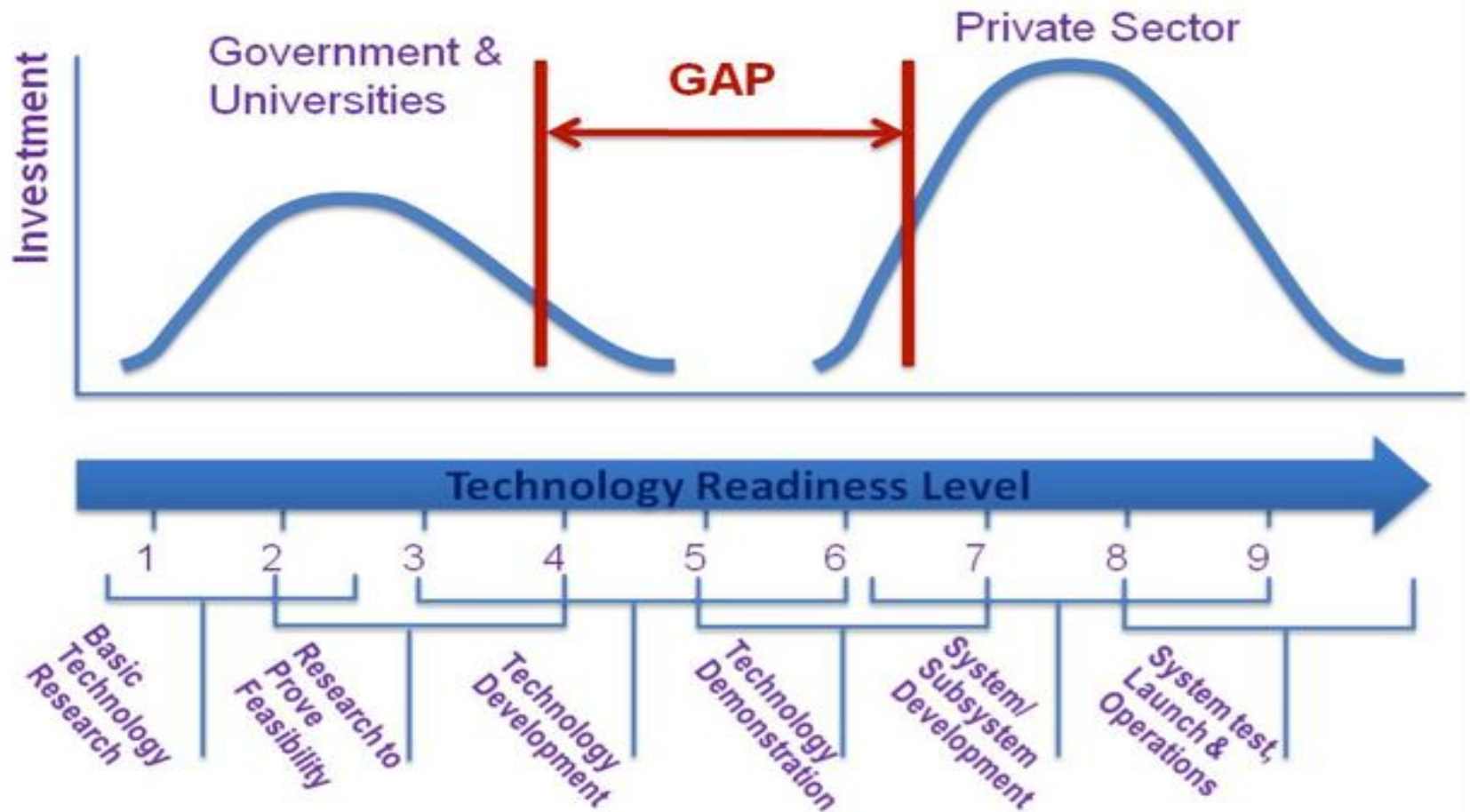
# Technology Readiness Levels



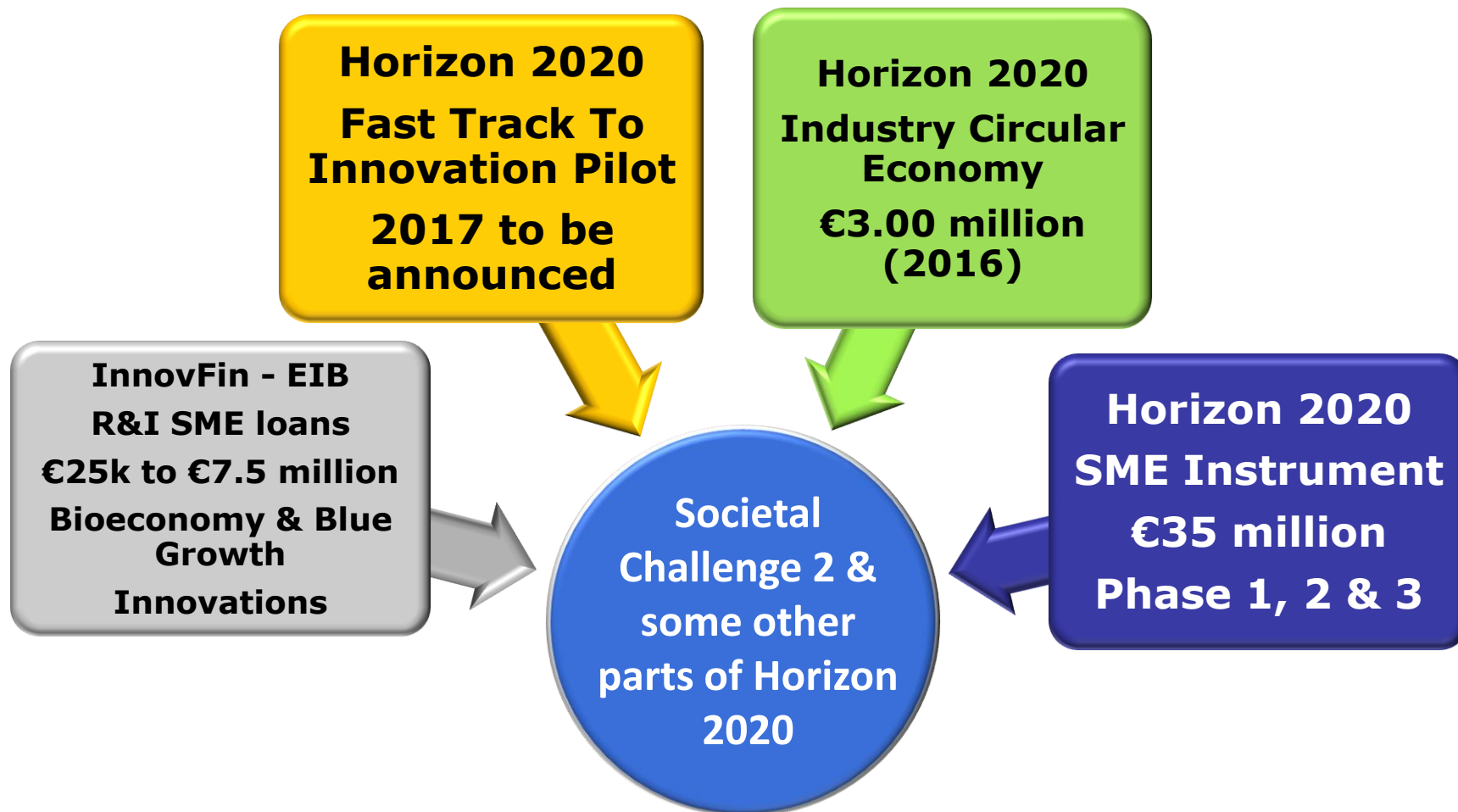
*RIA*

*IA*

*SMEI & FTI*



# SME Instrument, FTI, CE & Innovation Finance



# Pillar 2. Industrial Leadership



## *LEIT - Leadership in Enabling and Industrial Technologies*

- New and breakthrough technologies - areas where industry mastering new technological opportunities will enable and drive innovation.
- Main areas: ICT, IoT, Space. Some potential under **biotech** and nano-tech (veterinary)
- **SME Instrument** – specific challenge-based
- **Fast Track to Innovation** – bottom up (any topic)
- **Several deadlines per year**
- **Highly competitive**
  - SME Instrument – 8.4% Success rate
  - Fast Track to Innovation – 6.6% Success rate

**Only companies with disruptive, game-changing products/ processes need apply**

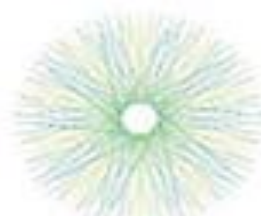
# Horizon 2020 – EIP – RDP



## European Innovation Partnership EIP-AGRI

### Rural Development

- **Funding for setting up of an "Operational Group"**: farmers, advisors, agribusiness, researchers, NGOs, etc) planning an innovation project (Art 35)
- **Project funding** for the Operational Group's project (Art 35). This co-operation could be combined with other RD measures (e.g. investment, knowledge transfer, advice)
- Supporting **innovation support services**



eip-agri

**EIP  
networks  
in  
MS/regions**



### Horizon 2020

- **Research projects**, to provide the knowledge base for innovative actions
- **Interactive** innovation formats such as **multi-actor projects and thematic networks** genuinely involving farmers, advisors, enterprises, etc....  
**"all along the project"**

# Thank you for your attention



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