

# Blue Growth and other relevant H2020 calls

NCP/Special adviser Øystein Rønning, 21. november 2017



# Horizon 2020

**EU's framework programme 2014-2020  
79 billion Euro**

Research and Innovation

Jobs and growth – UN-SDGs – Paris agreements

**The world's largest arena for international R&I**



# Bi-annual work programs

2014	2015	2016	2017	2018	2019	2020
Strategic Programme						
Work Programme 1 (plus tentative information for 2016)		Strategic Programme				
		Work Programme 2 (plus tentative information for 2018)	Strategic Programme			
				Work Programme 3 (plus tentative information for 2020)		
						Work Programme 4

## 4 virtual «Focus Areas» for 2018-20



**LC:** Building a **low-carbon**, climate resilient future

**CE:** Connecting economic and environmental gains – the **Circular Economy**'

**DT:** **Digitising** and transforming European industry and services'

**SU:** Boosting the effectiveness of the **Security Union**

# Challenge-driven approach

## Structure of topics



### Challenge

- What is the issue, the reason for including this topic?
- Often related to EU policies and strategies
- A major problem for EU / Europe that needs transnational cooperation to be addressed

### Scope

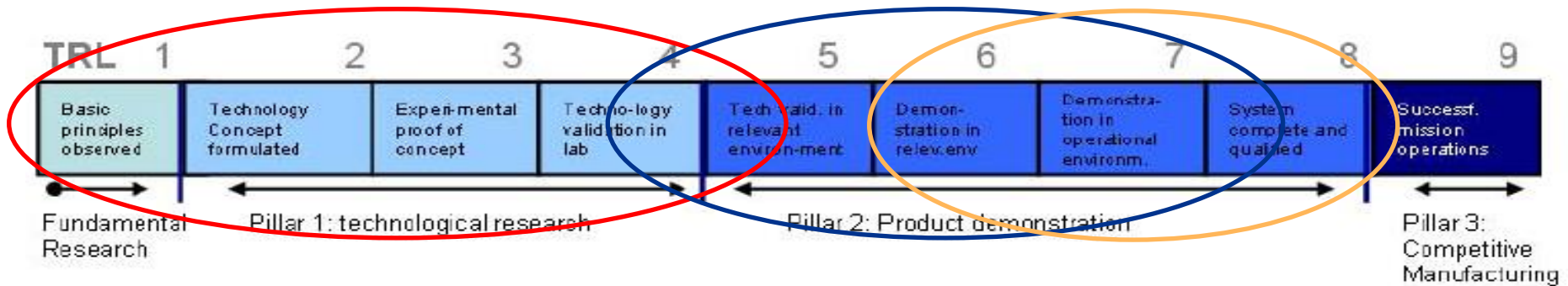
- Outline of what the project (s) should address and in which way. What should be included and what should be delivered

### Impact

- Short-, medium- and long-term effects after ending the project

### Type of Action (RIA, IA, CSA)

# Technology Readiness Levels for Research and innovasjon



**Research and innovation actions (RIA)**

**100% + 25%**

**Innovation actions (IA)**

**70% + 25%**  
 (Except:  
 non-profit  
 organizations:  
 100+25%)

**SME instrument**

Phase 1: Feasibility  
 Phase 2: Innovation projects

**70% + 25%**

# Structure in Horizon 2020

## Excellent Science

- **European Research Council** - *Frontier research by the best individual teams*
- **Future and Emerging Technologies** *Collaborative research to open new fields of innovation*
- **Marie Skłodowska Curie actions** - *Opportunities for training and career development*
- **Research infrastructures** (including e-infrastructure) - *Ensuring access to world-class facilities*

**Budget ca. 32 bill Euro**

## Competitive Industries

- **Leadership in enabling and industrial technologies** (*ICT, nanotechnologies, materials, biotechnology, manufacturing, space*)

Access to risk finance - Leveraging public finance and venture capital for  
**SC2: Food Security, sustainable agriculture and forestry, marine and maritime and inland water research, and the Bioeconomy**

**Budget ca 22 bill Euro**

## Better Societies

- **Health**, Demographic Change and Well-Being
- **Food Security**, sustainable **agriculture** and forestry, **marine and maritime** and inland water research, and the **Bioeconomy**
- Secure, clean and efficient **Energy**
- Smart, green and integrated **Transport**
- **Climate** action, **environment**, resource efficiency and raw materials
- Europe in a changing world – innovative, inclusive and reflective **societies**
- **Secure Societies** – Protecting freedom and security of Europe and its citizens

**Budget ca. 38,5 bill Euro**

European Institute of Innovation and Technology (EIT) 2,71 bill Euro

Widening participation and Spreading Excellence, ca. 800 mill Euro

Science with and for Society, ca. 460 mill Euro

# **Societal Challenge 2 (SC2) Work Programme for 2018-2020**

**Responds to some of the key challenges our planet is facing for the years to come: adapting to and mitigating climate change; ensuring food security; safeguarding the natural resource base, promoting alternatives to fossil-based economies and sustainably using marine resources while protecting the oceans.**

**Agriculture and food systems, forestry, the marine and the bio-based sectors are at the very heart of the challenges to be addressed.**

# Work Programs 2018-2020

## Three calls in SC2:

- 1. Sustainable food security (SFS)**
- 2. Blue Growth (BG)**
- 3. Rural Renaissance (RUR)**



# SFS–Sustainable Food Security

LC-SFS-03-2018: Microbiome applications for sustainable food systems (IA)

Proposals shall focus on concrete microbiome applications which are of benefit to the food system.

Proposals are expected to develop holistic approaches across all stages of the food system from fork to farm including aquatic (marine and fresh water) resources. Activities shall also aim at increasing knowledge and applications derived from the marine microbiome for the development of new products, services or processes .....

# SFS–Sustainable Food Security

Proposals shall identify and assess new or alternative protein sources for food and/or feed and develop/validate efficient production and processing approaches to convert/integrate them into high quality, safe, healthy, and sustainable products or ingredients.

Proposals shall focus on the characterisation of nutritional values, functional and sensory properties of new and alternative proteins, as well as on the deepening of the understanding of protein-protein interactions for knowledge-based (re)formulations of protein blends that partly or fully could substitute traditional sources.

LC-SFS-17-2019 Alternative proteins for food and feed (IA)





## BG- Blue Growth

Activities shall provide fundamental knowledge on the potential role of mesopelagic micro- and macro-organisms for human food chain and other bio-based products and processes, while preserving biodiversity and enhancing resilience to climate change and mitigation.

They shall also address the potential of mesopelagic resources including micro-organisms for marine biotechnological applications.



**BG-02-2018: Blue  
Bioeconomy Public-Public  
Partnership**  
(ERAnet Cofund)

LC-BG-03-2018: Sustainable  
harvesting of marine  
biological resources (RIA)

## RUR 2–Organising sustainable food and non-food value chains under changing condition

CE-RUR-10-2019: Circular bio-  
based business models for  
rural communities (IA)



Based on an established agro-  
food system, consider a variety of  
additional bio-based processes  
and end products that could be  
integrated into the system, .....

In coastal areas, this may include  
fisheries, aquaculture and first  
processing of their products.

# Structure in Horizon 2020

## Excellent Science

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## LEIT Biotechnology

- **Research infrastructures** (including e-infrastructure) - *Ensuring access to world-class facilities*

**Budget ca. 32 bill Euro**

## Competitive Industries

- **Leadership in enabling and industrial technologies** (*ICT, nanotechnologies, materials, biotechnology, manufacturing, space*)
- **Access to risk finance** - *Leveraging private finance and venture capital for research and innovation*
- **Innovation in SMEs** - *Fostering all forms of innovation in all types of SMEs*

**Budget ca 22 bill Euro**

## Better Societies

- **Health**, Demographic Change and Well-Being
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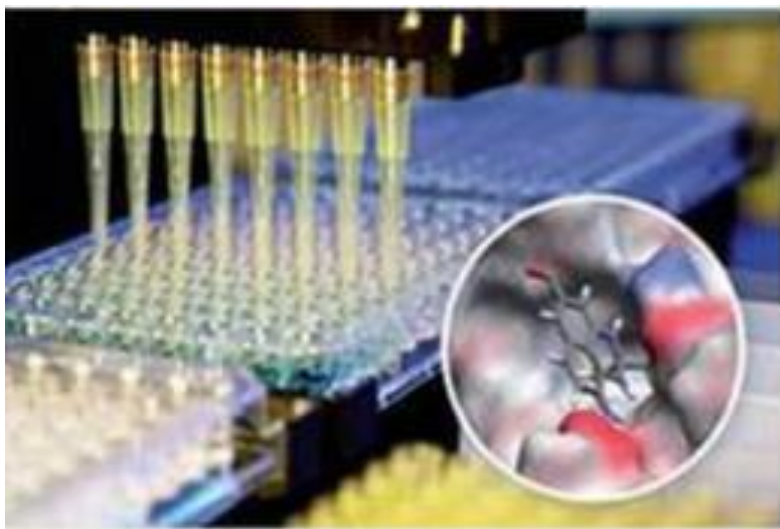
## **LEIT-BIOTECHNOLOGY**

**Topics on biotechnologies should support the European industry through the continued development of cutting-edge biotechnologies, new biotechnologies to address the global challenge of achieving greater environmental protection and breakthrough solutions to transform industrial processes using environmentally friendly and sustainable methods outcompeting conventional alternatives.**



# LEIT Biotech-2018-19

BIOTEC-03-2018: Synthetic biology to expand diversity of nature's chemical production (RIA)



Proposals will consist of the bioengineering of the genome of organisms (e.g. yeast, algae, bacteria) to be used in industrial processes in order to optimise molecular pathways. This should lead to the design and synthesis of naturally unavailable and efficient pathways for the production of new complex and high value added chemicals for the pharmaceutical, agricultural or material sectors.

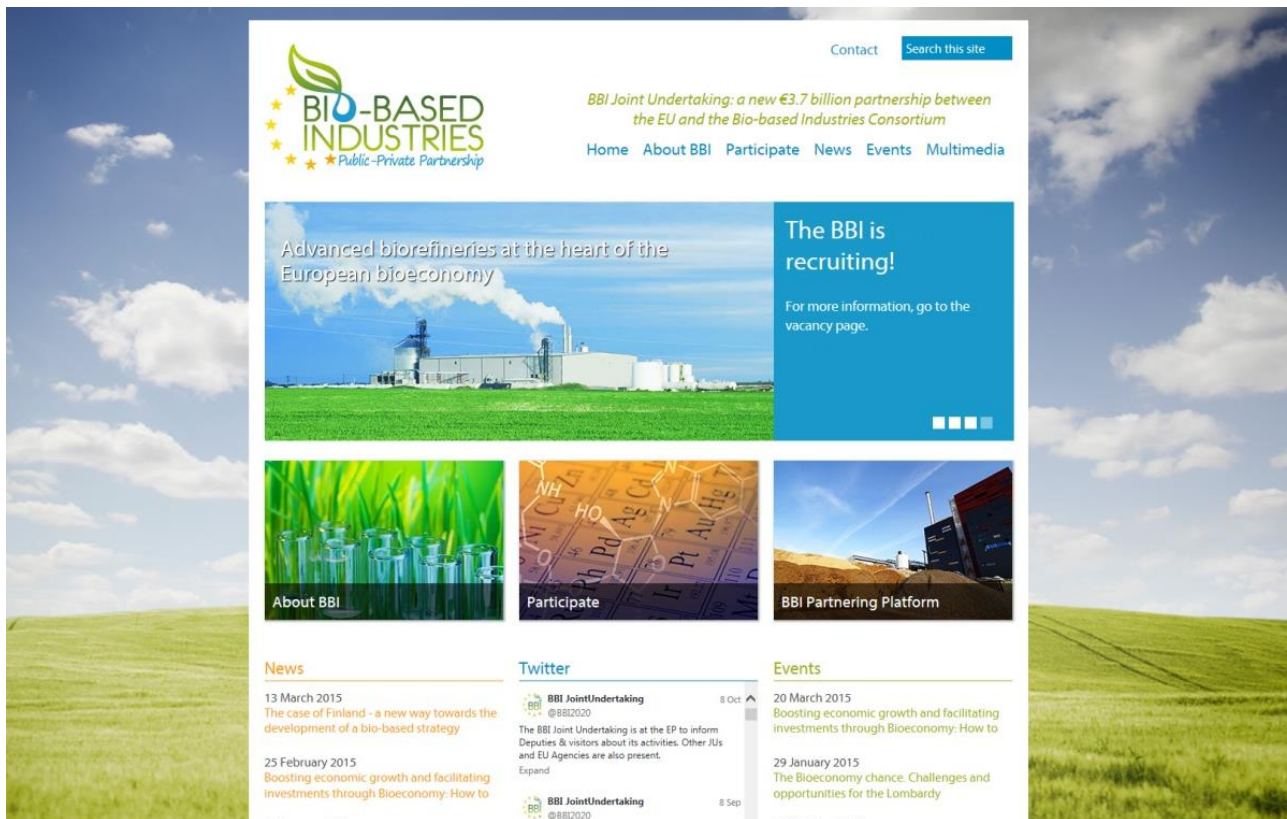
# LEIT Biotech-2018-19

Proposals should work towards the optimisation of photosynthesis by capitalising on multidisciplinary approaches, such as functional genomics, systems biology, metabolic modelling, enzyme engineering, computational biology, synthetic biology, directed evolution and gene editing techniques. Proposals should work with plants or algae and deal with any of the biological components underlying the diversity of photosynthesis.

BIOTEC-02-2019: Boosting the efficiency of photosynthesis (RIA)

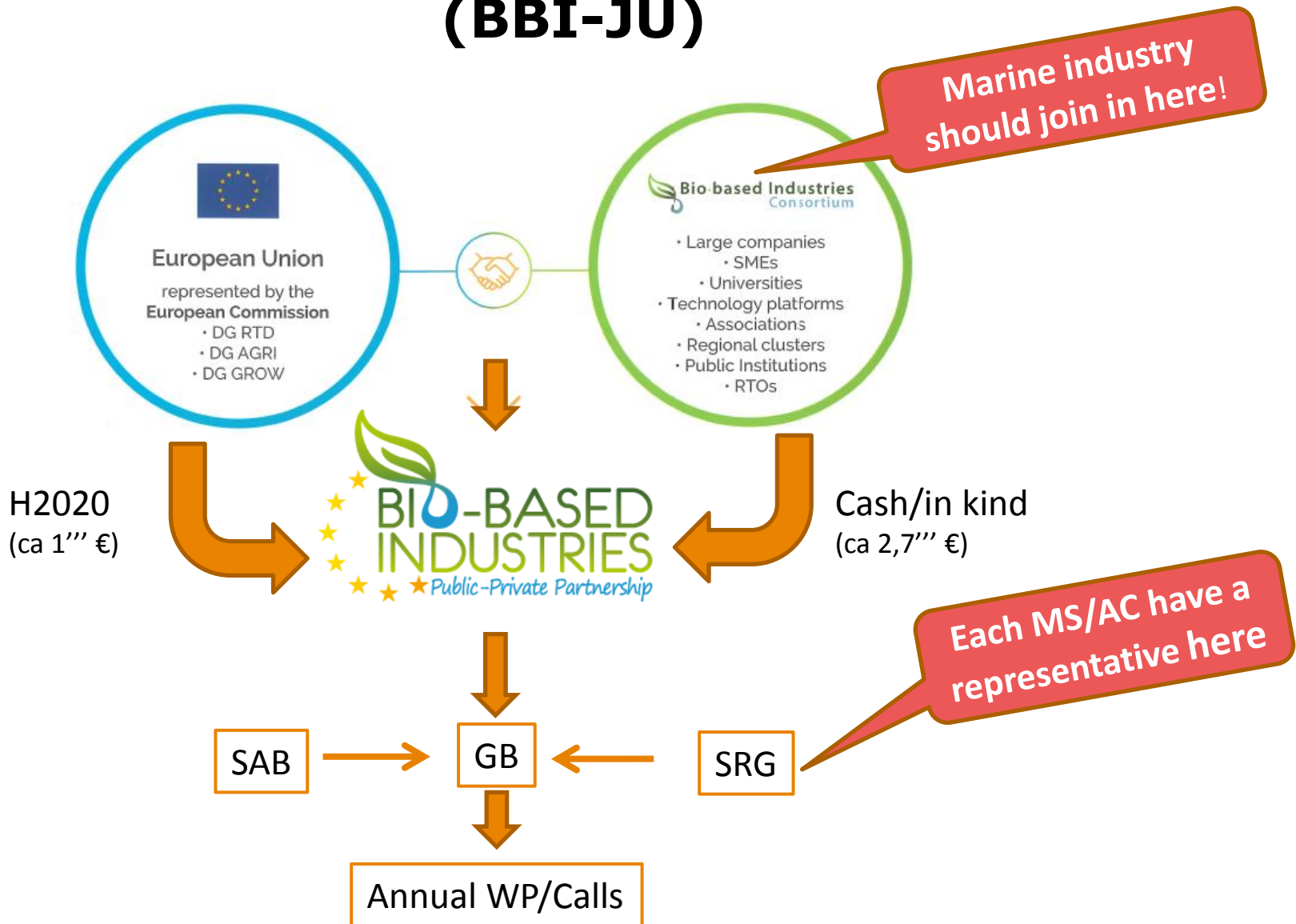
# Bio-based industries (BBI-JU)

**Annual work programs:  
Publication spring 2018  
Submission date autumn 2018**



The screenshot shows the homepage of the BBI Joint Undertaking website. At the top left is the logo for 'BIO-BASED INDUSTRIES' with the tagline 'Public-Private Partnership'. To the right are links for 'Contact' and 'Search this site'. A main headline reads 'BBI Joint Undertaking: a new €3.7 billion partnership between the EU and the Bio-based Industries Consortium'. Below this is a navigation menu with links for 'Home', 'About BBI', 'Participate', 'News', 'Events', and 'Multimedia'. The main content area features a large image of a biorefinery with the text 'Advanced biorefineries at the heart of the European bioeconomy'. To the right of this image is a blue box with the text 'The BBI is recruiting!' and 'For more information, go to the vacancy page.' Below the main image are three smaller images: 'About BBI' (showing laboratory glassware), 'Participate' (showing a periodic table), and 'BBI Partnering Platform' (showing a building). At the bottom, there are sections for 'News', 'Twitter', and 'Events'. The 'News' section includes two articles: 'The case of Finland - a new way towards the development of a bio-based strategy' (13 March 2015) and 'Boosting economic growth and facilitating investments through Bioeconomy: How to' (25 February 2015). The 'Twitter' section shows two tweets from @BBI2020. The 'Events' section includes 'Boosting economic growth and facilitating investments through Bioeconomy: How to' (20 March 2015) and 'The Bioeconomy chance. Challenges and opportunities for the Lombardy' (29 January 2015).

# Bio-based industries Joint Undertaking (BBI-JU)



# SIRA

STRATEGIC INNOVATION & RESEARCH AGENDA



**BIO-BASED INDUSTRIES**  
for Development & Growth in Europe

Aquatic feedstock: aquatic organisms, fisheries and aquaculture sectors and their residues



- Pre-treatment
- Conversion of pre-treated feedstocks to bio-based chemicals and materials
- Downstream processing
- System modelling

High added-value products for specific applications in different market sectors


Proteins and active ingredients for feed/food, pharmaceuticals and cosmetics

# Participant Portal

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## Calls for Proposals



Horizon 2020

[Advanced search for topics](#)  
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- Access to risk finance
- Innovation in SMEs
- Societal Challenges
  - Health, demographic change and wellbeing
  - Food security, sustainable agriculture and forestry, marine and maritime and inland water research and the bioeconomy
  - Secure, clean and efficient energy
  - Smart, green and integrated transport
  - Climate action, environment, resource efficiency and raw materials

Status  Calls with forthcoming topics  Calls with open topics  Calls with only closed topics

Sort by  Call title  Call identifier  Publication date

Filter a call

**FILTER**

**Societal Challenges**  
**Blue Growth**  
H2020-BG-2018-2020

Publication date: 27 October 2017

**Societal Challenges**  
**Rural Renaissance**  
H2020-RUR-2018-2020

Publication date: 27 October 2017

**Societal Challenges**  
**Sustainable Food Security**  
H2020-SFS-2018-2020

Publication date: 27 October 2017