



#InvestEUresearch



# Horizon 2020 Work Programme for Research & Innovation 2018-2020

**'Connecting economic and  
environmental gains – the Circular  
Economy' Focus Area**

**SusChem Brokerage Event 2018, Brussels, 23  
October 2018**

Panagiotis Balabanis  
Deputy Head of Eco-Innovation Unit  
DG Research & Innovation

Research and  
Innovation



# 'Connecting economic and environmental gains – the Circular Economy' Focus Area

Covers the main actions in Work Programme 2018-2020 which will directly **support the circular economy policy**

- integrating production, consumption, waste management and raw materials
- \* Ensure that growth no longer requires increasing consumption of resources, energy, water and primary raw materials
- \* Minimise waste, including from plastics
- \* Enhance industrial competitiveness

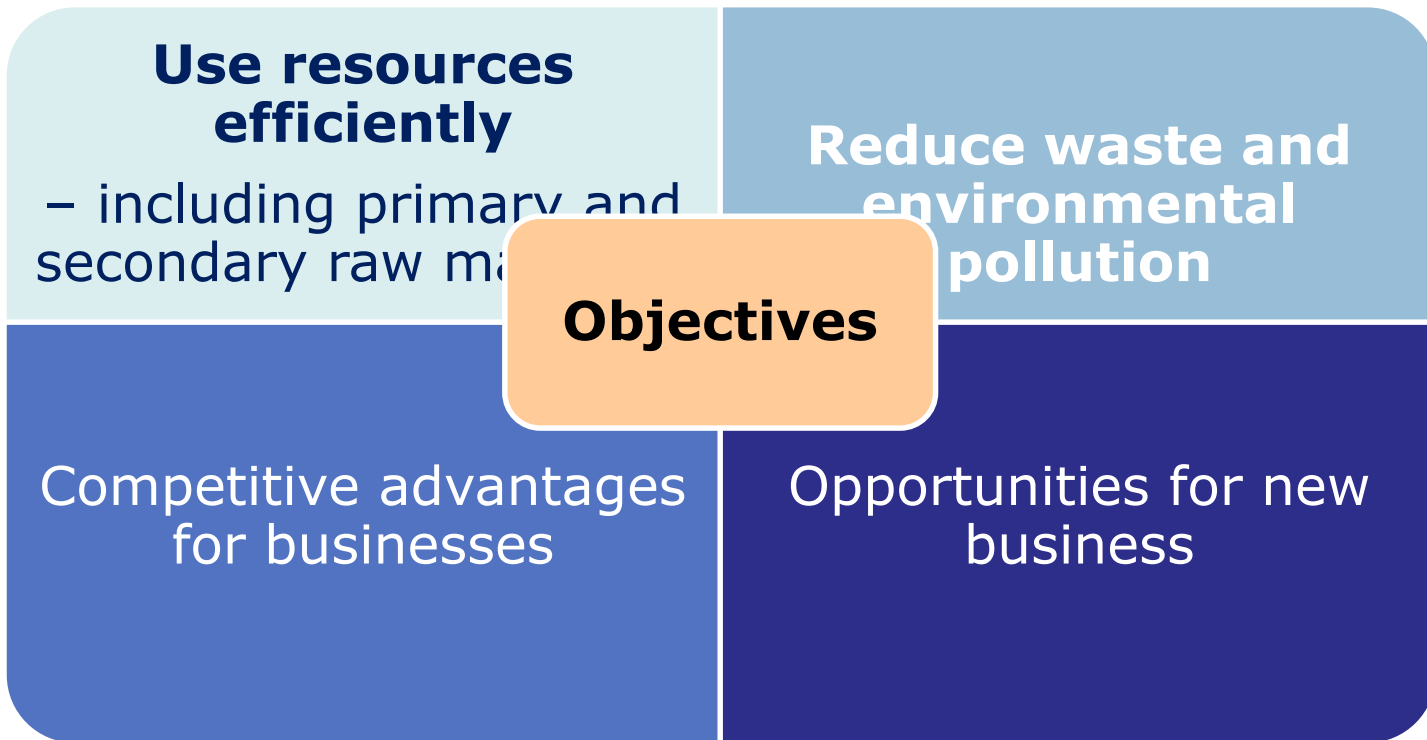
## SDGs:



**Total indicative budget  
(2018-2020):**

**964 M€**

# 'Connecting economic and environmental gains – the Circular Economy' Focus Area



<http://ec.europa.eu/environment/circular-economy/>

# ***'Connecting economic and environmental gains – the Circular Economy' Focus Area***

- **Industrial technologies (LEIT-NMBP)**
  - Sustainable Process Industry;
  - Catalysing the Circular Economy;
  - Industrial biotechnology
- **Food security and Bioeconomy (SC2)**
  - 'Sustainable Food Security', 'Blue Growth' and 'Rural Renaissance' calls;
  - Access to risk finance
- **Energy (SC3):** Carbon dioxide reuse

# 'Connecting economic and environmental gains – the Circular Economy' Focus Area



## ➤ **Climate, Environment and Raw Materials (SC5)**

'Greening the economy in line with the SDGs' call – circular economy and raw materials

- Connecting economic and environmental gains - the circular economy (~197 M€)
- Innovating cities for sustainability and resilience and the InnovFin Water Facility (~30 M€)
- Raw materials (~116 M€)

# CE-SC5-04-2019 Building a water-smart economy and society

IA  
70%

## Specific Challenge:

- Need to ensure water of good quality and quantity for both our society and economic activities, by testing and deployment in operational environments and at scales suitable for encouraging wider uptake, the potential of circular economy in water.

## Scope:

- Actions should demonstrate the feasibility of a 'water smart' economy and society in which all available water resources, including surface, groundwater, waste water, and process water, are managed in such a way as to avoid water scarcity and pollution, increase resilience to climate change, appropriately manage water-related risks, and ensure that all valuable substances are recovered.
- Actions should address **only one** of the following sub-topics:
  - a) Symbiosis between industry and water utilities
  - b) Large scale applications with multiple water users at various relevant scales



# CE-SC5-04-2019 Building a water-smart economy and society

**IA**  
70%

## Scope:

- **For both sub-topics:**

- Deployment of enabling digital solutions for the monitoring, control and optimisation of data and processes is also encouraged
- Where appropriate, related regulatory and institutional barriers which prevent the wide application of developed innovative solutions should be addressed.
- Where technological innovation is concerned, TRL 5-7 should be achieved.
- To assure applicability and wide deployment of the innovative water technologies in different conditions (including different water resources, economic, social and regulatory settings) involvement of market take-up partners and/or end users from a wide range of different European regions is strongly encouraged, as well as SME participation.

**TRL**  
**5-7**

# CE-SC5-04-2019 Building a water-smart economy and society

## Expected impact:

- Significantly reduced use of water from freshwater sources;
- Improved recovery and use of resources, including energy;
- Mobilisation of water-related investments and synergies with other funding instruments.
- Creation of new business opportunities and increased competitiveness of EU industries;
- Supporting, as appropriate, the implementation of EU water policies, Circular Economy, Climate change, Sustainable Development Goals;
- Implementation of the objectives of the EIP Water and, where appropriate, technology verification schemes, including the EU Environmental Technology Verification Pilot (ETV) programme

*SMEs*

*EUR 10-15  
millions*

**Total budget: 72.00 EUR Million**

**19 Feb 2019 (First Stage)**

**04 Sep 2019 (Second Stage)**



# Raw Materials

- ✓ **CE-SC5-07-2018-2019-2020: Raw materials innovation for the circular economy: sustainable processing, reuse, recycling and recovery schemes (IA)**
  - ✓ a) Sustainable processing and refining of primary and/or secondary raw materials (2018, 2019)
  - ✓ b) Recycling of raw materials from end-of-life products (2018, 2019)
  - ✓ c) Recycling of raw materials from buildings (2018, 2019)
  - ✓ d) Advanced sorting systems for high-performance recycling of complex end-of-life products (2018, 2019):
- ✓ **CE-SC5-08-2018-2019-2020: Raw materials policy support actions for the circular economy (CSA)**
  - ✓ c) Responsible sourcing of raw materials in global value chains (2019)
- ✓ **SC5-09-2018-2019: New solutions for the sustainable production of raw materials (RIA)**
  - ✓ b) Digital mine (2019)
  - ✓ c) Recovery of metals and minerals from sea resources (2019)
- ✓ **SC5-10-2019-2020: Raw materials innovation actions: exploration and Earth observation in support of sustainable mining (IA)**
  - ✓ a) Integrated exploration solutions (2019)
  - ✓ b) Services and products for the extractive industries life cycle (2019)

# Research and Innovation Role in CE

## *Create the right environment for innovation & investments*

- ❖ **DEMONSTRATING** the opportunities for moving towards a circular economy through the **Focus Area "Industry 2020 in the Circular Economy"**
- ❖ **REGULATORY INNOVATION:** addressing regulatory barriers to circular economy activities or business models, through the implementation of **Innovation Deals**
- ❖ **Financial Innovation:** Assessment of the possibility of launching a platform together with the EIB and national banks to support the financing of the circular economy and supporting **FINANCING TOOLS** and **ADVISORY SERVICES** through **InnovFin**
- ❖ **Product/social innovation:** Assessment of the possibility of an independent **testing programme on planned obsolescence**

# Indicative topics for WP 2020

## Connecting economic and environmental gains - the circular economy

- ✓ Improving the sorting, separation and recycling of composite and multi-layer materials
- ✓ Understanding the transition to a circular economy and its implications on the environment, economy and society
- ✓ Develop and pilot circular systems in plastics, textiles and furniture sectors

## Raw Material

- ✓ Raw materials innovation for the circular economy
- ✓ Raw materials policy support actions for the circular economy
- ✓ Raw materials Innovation actions
- ✓ Sustainable management in extractive industries

# Thank you!

#InvestEUresearch

More information:

[www.ec.europa.eu/research](http://www.ec.europa.eu/research)

Participant Portal:

[www.ec.europa.eu/research/participants/portal/desktop/en/home.html](http://www.ec.europa.eu/research/participants/portal/desktop/en/home.html)

Horizon Europe:

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