



#InvestEUresearch



Horizon 2020 Work Programme for Research & Innovation 2018-2020

Societal Challenge 5 'Climate action, environment,
resource efficiency and raw materials'

Portugal Info Day, 27 November 2017

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Research and
Innovation



Work Programme 2018-2020

R & I investment of € 30 billion for 3 years



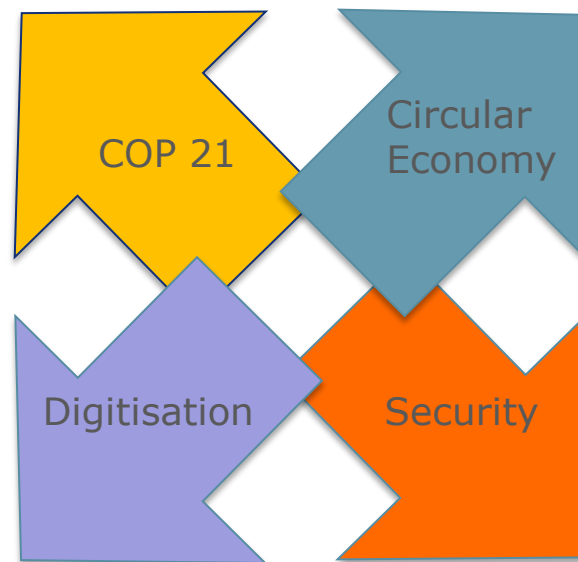
- **Addressing main concerns of citizens** such as security, migration and economic situation...
- **Focus on impact** (fewer & broader topics with sharpened impact statements, better dissemination of results, open access to data...)
- **Piloting new initiatives and flexibility for 2020**, with 'minimum' content of calls and other actions at this stage



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)



Further cross-cutting priorities

- Migration (€ 200M)
- Batteries (€ 100M + € 100M to come)
- Blue Growth, Cities



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

'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:

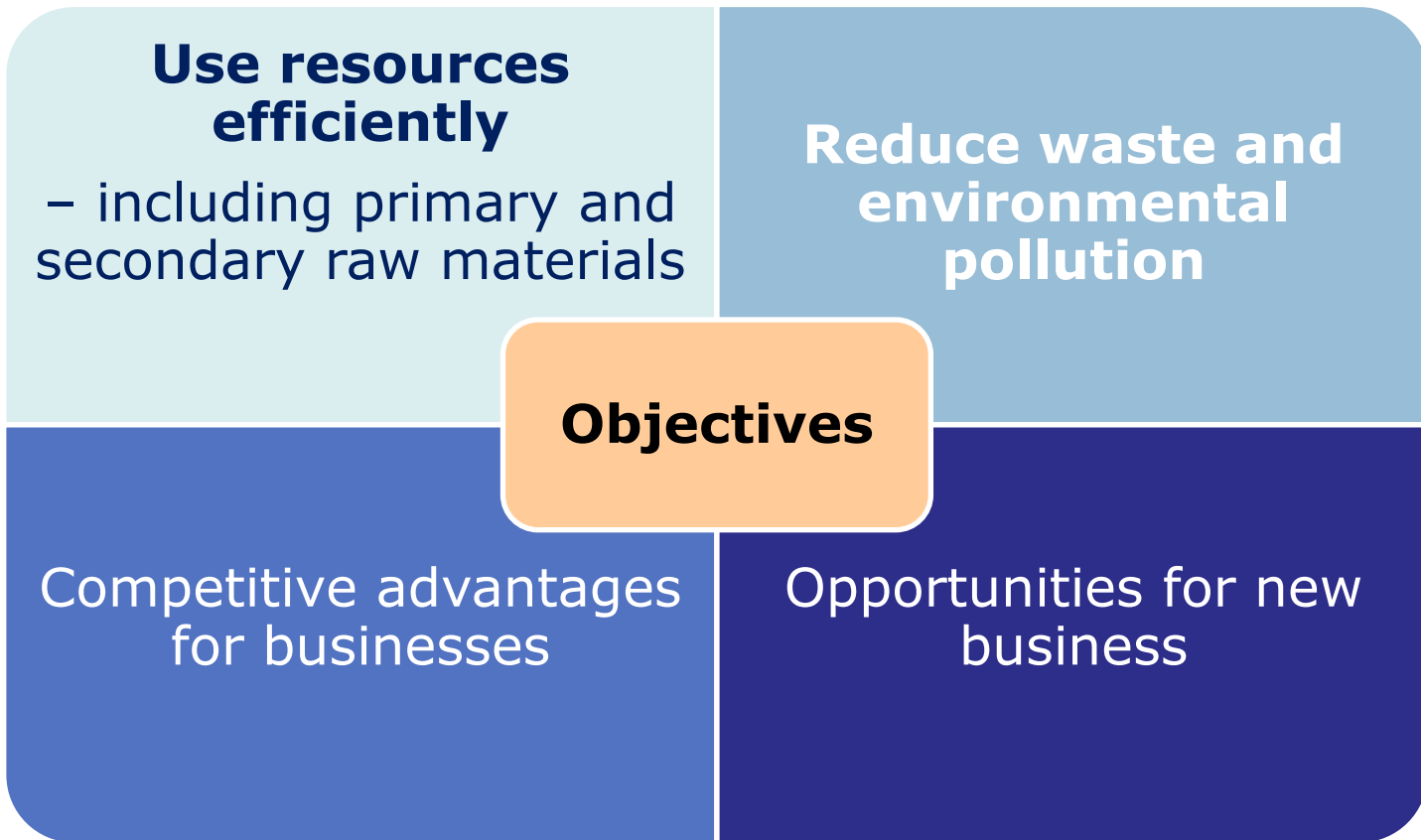


**Total indicative budget
(2018-2020):**

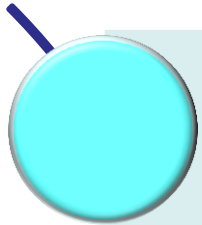
EUR 940 million

'Connecting economic and environmental gains – the Circular Economy'

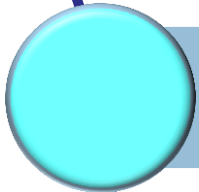
Focus Area



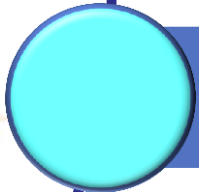
'Connecting economic and environmental gains – the Circular Economy' Focus Area



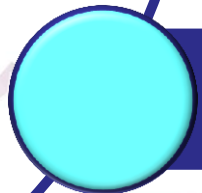
Industrial technologies (LEIT-NMBP): topics in call 'Industrial Sustainability' (notably **Sustainable Process Industry** and **Catalysing the Circular Economy**); and in industrial biotechnology: €370 million



Food security and Bioeconomy (SC2): topics in calls 'Sustainable Food Security', 'Blue Growth' and 'Rural Renaissance', including access to risk finance: €253 million



Energy (SC3): Carbon dioxide reuse: €12 million



Climate, Environment and Raw Materials (SC5): topics in call 'Greening the economy in line with the SDGs' – circular economy and raw materials: €306 million

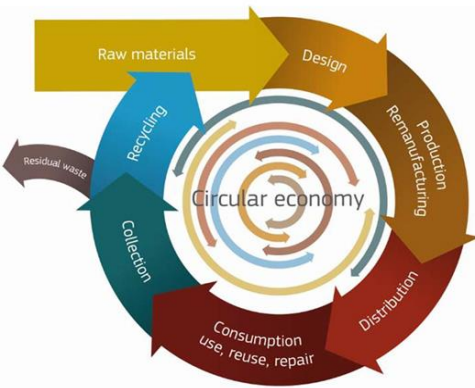


Call "Greening the economy in line with the Sustainable Development Goals (SDGs)"

- Budget in 2018
€219.7 million
- 2018 topics open: 7
November 2017
- First call deadline:
27 Feb 2018

- ✓ **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

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



Connecting economic and environmental gains - the circular economy: Objectives

- substantially improve efficiency of resource use
- increase use of resources originating from secondary sources, while avoiding adverse health effects
- minimise production of waste (including through design for product durability), pollution and GHG emissions
- enhance cities' capacity to embrace circular econ. approaches
- support transition to systemic, integrated solutions for closed cycles of resource use in the water sector
- contribute to implementing the Circular Economy Action Plan and key high-level EU priorities, including jobs, growth and investment, climate and energy, strengthened industrial base
- support EU endeavours to implement the SDGs, particularly SDGs 12, 6, 11 and 13, and Habitat III New Urban Agenda

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

Connecting economic and environmental gains - the circular economy

- **CE-SC5-01-2018: Methods to remove hazardous substances and contaminants from secondary raw materials (RIA)**
- **CE-SC5-02-2018: Independent testing programme on premature obsolescence (RIA)**
- **CE-SC5-03-2018: Demonstrating systemic urban development for circular and regenerative cities (IA)**
- **CE-SC5-05-2018: Coordinated approaches to funding and promotion of research and innovation for the circular economy (CSA)**

CE-SC5-01-2018 Methods to remove hazardous substances and contaminants from secondary raw materials

Specific Challenge:

- Reuse and recycling of many secondary raw materials continues low
- Uptake and recyclability of secondary raw materials could be hampered by the presence of contaminants, additives or even substances of concern
- Removal could improve the purity of the resulting secondary raw material

Scope:

- Develop innovative solutions for removing undesirable substances from secondary raw materials
- Undesirable substances: those posing risks (health/env) and/or those affecting quality of the secondary raw materials
- Safe utilisation or disposal of the removed substances addressed as well
- Economic feasibility and environmental performance to be considered

CE-SC5-01-2018 Methods to remove hazardous substances and contaminants from secondary raw materials

Expected impact:

- Increased purity and/or desirable quality of the secondary raw mats
- Increased recycling rate, reduced landfill & incineration
- Reduced risk of retaining hazardous substances in recyclates
- Contribution to: EU Circular Economy Action Plan; Strategy on Plastics in Circular Economy; implementation of the SPIRE Roadmap;

SMEs

Total budget: 34.00 EUR Million

27 Feb 2018 (First Stage)

04 Sep 2018 (Second Stage)

*EUR 3-5
millions*

CE-SC5-02-2018 Independent testing programme on premature obsolescence

RIA
100%

Specific Challenge:

- Making products more durable and easier to repair, upgrade or remanufacture and lightening their lifetime

Scope:

- Prepare an independent testing programme to help identify issues related to premature obsolescence to be used by relevant stakeholders (eg. testing bodies, consumer organisations or product designers)
- Focus on a group of consumer products for which the issue of obsolescence is important from the resource efficiency point of view
- Convincing methodology used to select products group
- Including a research component for the identification of key aspects to be tested and validated in several case studies
- Actions to be tackled by a multi-disciplinary consortium addressing also standardisation issues
- Participation of the retail sector is encouraged

CE-SC5-02-2018 Independent testing programme on premature obsolescence

Expected impact:

- Development of products designed for durability, interoperability, repair and reuse
- Development of markets based on durability
- Reduced materials consumption and waste generation
- Reduced information asymmetry between producers and consumers regarding product durability
- Increased awareness and understanding of the types of design that may lead to premature obsolescence
- Support the implementation of the EU Circular Economy Action Plan

Total budget: 5.00 EUR Million

27 Feb 2018 (First Stage)

04 Sep 2018 (Second Stage)

EUR 3-5 millions



CE-SC5-03-2018: Demonstrating systemic urban development for circular and regenerative cities (IA) (1/3)

To enable cities to design and implement **circular urban processes** and **regenerative practices - urban and peri-urban areas** including surrounding **industrial areas** and **commercial ports**;

Develop and implement:

- innovative **urban planning** approaches, practices and instruments (e.g. 3D real time geospatial data and planning tools, new design approaches, business models, innovative governance) allowing for the **design** and **implementation** of **circular** and **regenerative processes** and the sustainable **(re)using** and **(re)programming** of existing **buildings**, **open spaces** and **(infra)structures** for circular initiatives;
- Demonstrate **innovative solutions** to **close the loop** of urban **material** and **resource flows** within and **across sectors and nexuses**;
- Innovative **monitoring**, new **indicators** and **digital solutions** enabling **continuous monitoring** for processes **optimisation** and rapid **management interventions**;

CE-SC5-03-2018: Demonstrating systemic urban development for circular and regenerative cities (2/3)

- **Multi-stakeholder** consortia actively involving public authorities, societal stakeholders and **community-based partners such as city-makers, urban (fab-) labs, urban planners, (urban) designers, cultural & creative organisations, and start-ups;**
- **innovative local governance structures** and **interdisciplinary practices**, including SSH, addressing also **behavioural aspects and behavioural economics;**
- **Sustainable data platforms** for **open access data** on impact of the intervention;
- Projects **must** engage in substantial **networking, training** and **mentoring** towards **cities outside the project** to disseminate experience, knowledge and expertise for **replication** of "approaches";
- Resources must be foreseen for **clustering;**
- Indicative budget per project: **EUR 10 million**

CE-SC5-03-2018: Demonstrating systemic urban development for circular and regenerative cities (3/3)

Eligibility and admissibility conditions

At least 4 cities from different Member States and/or Associated Countries to ensure coverage of diverse contexts across the EU

Grant Conditions

Funding rate for **direct costs of construction and installation of “infrastructure-targeted”** interventions is 20% of the eligible costs



CE-SC5-05-2018 Coordinated approaches to funding and promotion of research and innovation for the circular economy

CSA
100%

Specific Challenge:

- Need to develop a strategic approach to overcome fragmentation of national/regional R&I programmes on CE and strengthen coordination and implementation synergies

Scope:

- Bring together national and regional programme owners to establish a joint platform to formulate R&I needs and priorities
- Action should encompass joint development of objectives, priority setting, impact assessment, and programme and project organisation, summarise recommendations for research priorities, coordinated programming and funding and mechanisms and produce a Strategic Research and Innovation Agenda for CE
- Innovation involving SMEs should be explicitly addressed, available expertise and experience to be considered and multinational R&I actions and dissemination of best practices to be considered

CE-SC5-05-2018 Coordinated approaches to funding and promotion of research and innovation for the circular economy

Expected impact:

- Alignment and coordination of regional, national and European programming of R&I in the area of the circular economy and associated environmental impacts
- Effective regional, national and European R&I funding in the field of the circular economy, with special attention to SMEs
- Accelerated diffusion of state-of-the-art circular economy solutions and best practices in circular economy R&I throughout Europe
- Support the implementation of national and EU-level action plans including the Circular Economy Action Plan, the Green Action Plan for SMEs, and Eco-Innovation Action Plan

Total budget: 2.00 EUR Million

27 Feb 2018 (One Stage Topic)

EUR 2 millions



Thank you!

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More information:

www.ec.europa.eu/research

Participant Portal:

www.ec.europa.eu/research/participants/portal/desktop/en/home.html

SC5 social media network on 'Yammer':

<http://www.tinyurl.com/greenRTD>