

The poster features a dark blue background with a starry sky and a glowing blue nebula. At the top center is the European Commission logo. Below it, the text reads: "HORIZON 2020 Societal Challenge 5 'Climate action, Environment, Resource Efficiency and Raw Materials'". Further down, it says "Work Programme 2016-2017" and "National Information Day, Prague, Czech Republic". A small globe is shown on the left side. At the bottom right, the name "Tomáš Turecki, Climate Action & Resource Efficiency, DG Research and Innovation" is listed. A small "HORIZON 2020" logo is at the bottom center.

  
**HORIZON 2020**  
**Societal Challenge 5**  
**"Climate action, Environment,  
Resource Efficiency and Raw  
Materials"**  
**Work Programme 2016-2017**  
National Information Day, Prague, Czech Republic  
*Tomáš Turecki,  
Climate Action & Resource Efficiency,  
DG Research and Innovation*  
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## Horizon 2020: addressing Europe's challenges

- **Investing in research and innovation 2014-2020**
- **Budget of €77 billion**
- **Contributing to the Juncker Commission's policy agenda** as a core component of **Europe 2020, Innovation Union & European Research Area**
  - ✓ Investing in jobs and growth
  - ✓ Addressing people's concerns ('societal challenges')
- **Coupling research to innovation to maximise impact**

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



- ❑ Increased emphasis on delivering innovative solutions
- ❑ Systemic approach to innovation
- ❑ Large-scale demonstration projects with replication potential

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## Societal Challenge 5: Priorities for 2016-2017

### Climate action

- Climate services
- Low-carbon Europe
- Arctic dimension

### Nature-based solutions:

- for territorial resilience
- for sustainable cities

### Raw materials

Systemic eco-innovation for a circular economy

### Mainstreaming water R&I

### Sustainable growth by harnessing:

- Earth observation data
- Cultural heritage

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## 2016-2017: Structure of the calls

- **SC5 call 'Greening the economy'**
- **Contribution to cross-cutting calls:**
  - 'Industry 2020 in the Circular Economy'
  - 'Smart and Sustainable Cities'
- **Contribution to calls in other WP parts:**
  - 'Blue growth – demonstrating an ocean of opportunities' (SC2)
  - 'Sustainable Food Security – Resilient and resource-efficient value chains' (SC2)



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## Climate services



- ❑ building Europe's capacity to respond to and improve resilience to climate change
- ❑ strengthening significantly the nascent global market for climate services
- ❑ addressing both climate change mitigation and adaptation needs

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## Climate services : 2016 topics



### Call 'Greening the economy':

- SC5-01-2016: **Exploiting the added value of climate services**
  - Demonstration of climate services (IA)
- SC5-03-2016: **Climate services market research** (RIA)
- SC5-05-2016: **A 1.5 million year look into the past for improving climate predictions** (CSA)

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## Towards a low-carbon Europe



- ❑ deepening the analysis of possible and cost-effective trajectories for Europe to achieve its medium and long-term climate objectives
- ❑ maximising societal benefits and economic prosperity

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## Towards a low-carbon Europe: 2016 topics



### Call 'Greening the economy':

- SC5-06-2016: **Pathways towards the decarbonisation and resilience of the European economy in the timeframe 2030- 2050 and beyond (RIA)**
  - Managing technology transition
  - Assessment of the global mitigation efforts in the perspective of the long-term climate goal

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## The Arctic Dimension of climate change



- ❑ the region of the globe with most rapid climate change
- ❑ changes in the Arctic have global consequences with socio-economic impact on the EU
- ❑ deepening knowledge and identifying sustainable, innovative approaches to tackle the challenges climate change is posing in the Arctic region
- ❑ improving our predictive capability of the evolution of climate-related changes

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## The Arctic Dimension: 2016 topics

Call 'Blue growth – demonstrating  
an ocean of opportunities':

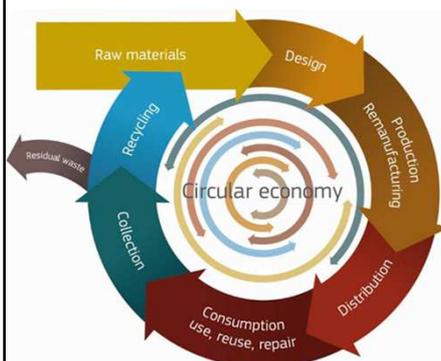


- BG-09-2016: **An integrated Arctic observing system** (RIA)
- BG-10-2016: **Impact of Arctic changes on the weather and climate of the Northern Hemisphere** (RIA)

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## Eco-innovation for circular economy

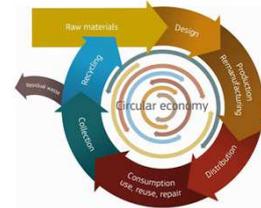


- from 2014-2015 calls on 'Waste' and 'Water' to systems-wide approach to innovation
- demonstrating the economic and environmental feasibility of the circular economy
- supporting systemic innovation to obtain a systems-wide transformation
- reorganising production and consumption to maintain/enhance value of products, components, materials and resources throughout the value chain and product life

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## Circular economy: 2016 topics



### Cross-cutting call 'Industry 2020 in the Circular Economy':

- **CIRC-01-2016: Systemic, eco-innovative approaches for the circular economy: large-scale demonstration projects** (IA)
  - Design for circular value and supply chains
- **CIRC-02-2016: Water in the context of the circular economy** (IA)
  - Demonstrating the potential of efficient nutrient recovery from water
- CIRC-03-2016: **Smart Specialisation for systemic eco-innovation/circular economy** (CSA)
- CIRC-04-2016: **New models and economic incentives for circular economy business** (RIA)

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## Nature-based solutions



- inspired or supported by nature
- economic, social and environmental benefits and resilience
- systemic, resource-efficient locally adapted interventions
- more nature and natural features into cities and landscapes

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## Sustainable cities through nature-based solutions: 2016 topics

### Cross-cutting call 'Smart and Sustainable Cities':



- SCC-02-2016: **Demonstrating innovative nature-based solutions in cities** (IA)
  - Demonstrating innovative nature-based solutions for climate and water resilience in cities
- SCC-03-2016: **New governance, business, financing models and economic impact assessment tools for sustainable cities with nature-based solutions (urban re-naturing)** (RIA)
- SCC-04-2016: **Sustainable urbanisation** (ERA-NET Cofund)

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## Nature-based solutions for territorial resilience: 2016 topics

### Call 'Greening the economy':



- SC5-09-2016: **Operationalising insurance value of ecosystems** (RIA)
- SC5-10-2016: **Multi-stakeholder dialogue platform to promote innovation with nature to address societal challenges** (CSA)

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## Raw materials



- ❖ **securing the EU's supply of primary and secondary raw materials through research and innovation**

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## Raw materials: Rationale



### EU Policy - "Raw Materials Initiative"

- aim: securing sustainable supplies of raw materials
- non-energy, non-agricultural raw materials
- integrated strategy (3 pillars)
- list of Critical Raw Materials (CRM) - 20 CRMs in 2014

### European Innovation Partnership on Raw Materials

EIP Pillars: Technology, Non-Technology Policy, International Cooperation

EIP targets:

- Up to 10 innovative pilot actions - in WP 2016-2017
- Substitutes for at least 3 applications of CRMs
- Regulatory framework for primary and secondary RM
- EU RM Knowledge base
- international cooperation strategy

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## Raw materials: 2016 topics



### Call 'Greening the economy':

- SC5-13-2016: **New solutions for sustainable production of raw materials** (RIA)
  - Sustainable selective low impact mining
  - New technologies for the enhanced recovery of by-products
- SC5-14-2016: **Raw materials Innovation actions** (IA)
  - Intelligent mining on land
- SC5-15-2016: **Raw materials policy support actions**
  - Expert network on Critical Raw Materials (CSA)
- SC5-16-2016: **Raw materials international co-operation**
  - Demand-supply forecast and raw materials flows at global level (CSA)
  - Advancing the idea of a World Forum on Raw Materials (CSA)
- SC5-17-2016: **ERA-NET Cofund on Raw materials**

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## Water



- ❑ mainstreamed through WP 2016-2017, as part of the systemic approach
- ❑ continuity with 2014-2015 Focus Area call on 'Water Innovation: Boosting its value for Europe'

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## Water: where to find topics ?



SC5 2016 topics with relevance to water:

- SC5-01-2016: **Exploring the added value of climate services**
- SC5-03-2016: **Climate services market research**
- CIRC-02-2016: **Water in the context of the circular economy**
- SCC-02-2016: **Demonstrating innovative nature-based solutions in cities** (for climate and water resilience)
- SPIRE-01-2016: **Systematic approaches for resource-efficient water management systems in process industries**

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## Earth observation



- ❑ maximising the benefits for European citizens of the Earth observation infrastructure
- ❑ developing innovative services to support more sustainable production and consumption patterns and resilient societies
- ❑ enabling the sharing and full, open and unrestricted access to validated Earth observation datasets
- ❑ engaging with the private sector to leverage emerging technologies and develop services

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## Earth observation: 2016 topics

### Call 'Greening the economy':

- SC5-20-2016: **European data hub of the GEOSS information system (RIA)**



### Call 'Blue growth – demonstrating an ocean of opportunities' (SC2):

- BG-09-2016: **An integrated Arctic observing system (RIA)**
- BG-12-2016: **Towards an integrated Mediterranean Sea Observing System (RIA)**

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## Cultural heritage for sustainable growth



- ❑ A more dynamic approach to cultural heritage, beyond mere conservation
- ❑ cultural heritage as a production rather than a cost factor and a strategic resource
- ❑ cultural heritage as a catalyst for regeneration, sustainable development, economic growth and quality of life
- ❑ European reference framework and robust EU-wide evidence

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## Cultural heritage for sustainable growth: 2016 topic



### Call 'Greening the economy':

- **Cultural heritage as a driver for sustainable growth (IA)**
  - Heritage-led urban regeneration

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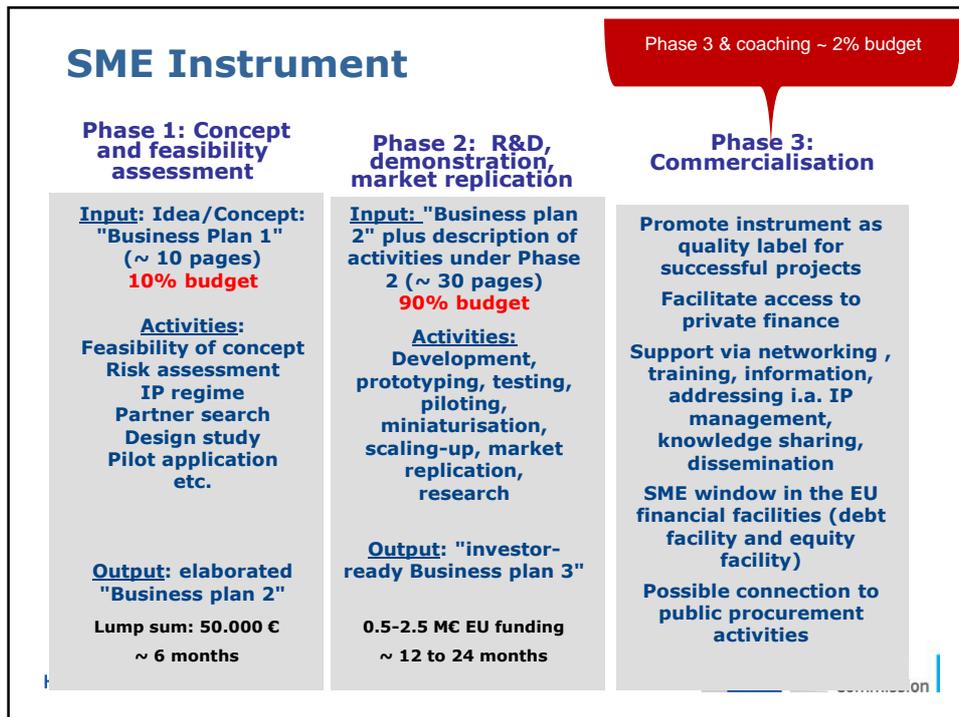
## SME Instrument call: SC5 topic

### **SMEinst-12-2016-2017: Boosting the potential of small businesses in the areas and priorities of Societal Challenge 5**

- Commercialising innovative solutions for green growth
- In any SC5 area, including 2016-2017 strategic priorities
- Only SMEs allowed to participate and to apply for funding and support
- Minimum condition: participation of one SME (based in the EU or associated countries)
- 70% co-funding

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## Fast Track to Innovation pilot

- continues in 2016
- Close-to-market innovation activities
- Innovation Actions (70% EU co-funding)
- bottom-up logic: any technology field under 'Leadership in enabling and industrial technologies' and 'Societal challenges'
- Consortia comprising 3-5 entities from at least 3 different EU MS or associated countries
- continuously open call, three cut-off dates per year in 2016
- each grant maximum EUR 3 million

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## For further information

- **Research Participant Portal**

<http://ec.europa.eu/research/participants/portal/desktop/en/home.html>

- **Horizon 2020 Helpdesk**

<http://ec.europa.eu/research/enquiries>

- **Expert evaluators needed!**

<http://ec.europa.eu/research/participants/portal/desktop/en/experts/index.html>

- **Learn more about Horizon 2020**

<http://ec.europa.eu/horizon2020>

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## Calendar and caveats

### Expected adoption date: 13 October 2015

The draft WP has been made public just before the adoption process of the work programme to provide potential participants with the currently expected main lines of the Work Programme 2016-2017. It is a working document not yet endorsed by the Commission and its content does not in any way prejudice the final decision of the Commission.

The adoption and the publication of the work programme by the Commission are expected in mid-October 2015. Only the adopted work programme will have legal value. This adoption will be announced on the Horizon 2020 participant portal.

Information and topic descriptions presented today may not appear in the final work programme; likewise, new elements may be introduced at a later stage. Any information disclosed by any other party shall not be construed as having been endorsed by or affiliated to the Commission. The Commission expressly disclaims liability for any future changes of the content of the draft Work Programme.

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**Thank you  
for your attention!**

**Find out more:**  
[www.ec.europa/research/horizon2020](http://www.ec.europa/research/horizon2020)

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