HORIZON Europe, RFCS & Innovation Fund

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HORIZON 2020

Industrial R&I H2020 & HEurope

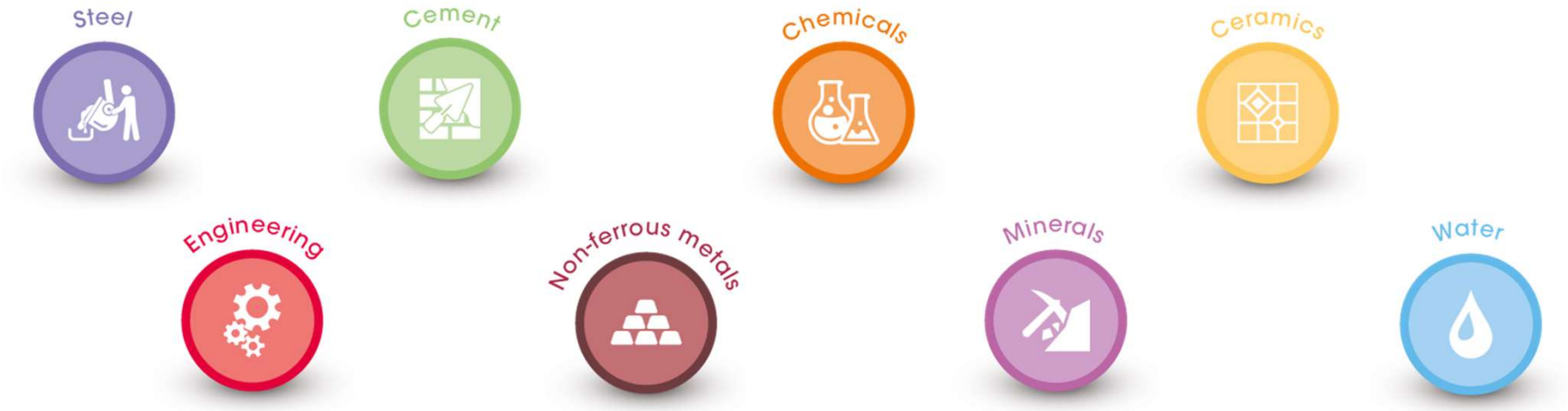
- Horizon 2020
  - The Leadership in Enabling and Industrial Technologies (LEIT)
    - Areas covered: Nanotechnologies; Advanced materials; Biotechnology; and Advanced manufacturing and processing (NMBP)
    - NMBP Work programs 2014-2020 covering calls on KETs, high performance materials, EE improvements, product substitution, CCU, etc.
  - Societal challenge 5, Climate Action, Environment, Resource Efficiency and Raw Materials
    - Areas covered: resource efficiency, raw materials management and supply and climate change resilience
  - Contractual Public-Private Partnerships with industry (cPPPs)
    - Example: Sustainable Process Industries (SPIRE)
- Horizon Europe - Pillar 2 – Global challenges and Industrial Competitiveness
  - Cluster 4 - Digital, Industry and Space
  - Cluster 5 - Climate, Energy and Mobility

Synergies between Horizon Europe & the Innovation Fund

- Building a project pipeline for the IF
- Ensuring continuity of funding for projects
- Ensuring a single direction allowing companies clear planning
- Avoid overlaps with other programs
- Limit administrative burden
- Important collaboration and learnings built up with the energy intensive process industry (SPIRE)

SPIRE: Sustainable Process Industry through Resource and Energy Efficiency

- EU contribution of 900 Million (2014-2020) to pursue a common goal through a 7-year research roadmap
- 8 energy intensive industrial sectors which core activity is highly dependent on the introduction of low-carbon processes.
- Role of partnerships under H2020?



Relevant H2020 projects for the IF (1)

- CC
  - CEMCAP - Cement production (for retrofitting) (-2018)
  - STEPWISE - Iron and steel industry (-2019)
  - LEILAC – Lime and cement industry (-2021)
  - CLEANKER – Calcium looping in cement plants (-2021)
- CCU
  - Methanol production from CO2 waste streams (MefCO2;- 2019) (FreSME; -2020)
  - Electrochemical production of Ethilene Oxide (CO_2EXID; -2020)
  - Polyuretanes production (Carbon4PUR; -2020)
  - Hydrocarbons (waxes) production (ICO2CHEM; -2021)
  - CO2 recycling with the production of added value additives (RECO_2DE (-2021); ENGICOIN (-2022)
- Materials recycling and recovery
  - New Recovery Processes to produce Rare Earth -Magnesium Alloys of High Performance and Low Cost (REMAGHIC; -2018)
  - Use of supplementary cementitious materials (SCM) to partially replace clinker (EPOS; -2019)
  - Steel slag utilisation (RESLAG; -2019)

Relevant H2020 projects for the IF (2)

- Energy recovery and energy efficiency
  - Energy source flexibility opportunities e.g. via hybrid furnaces and induction microwaves (BAMBOO; -2022)
  - Waste Heat Recovery for Power Valorisation with Organic Rankine Cycle Technology (TASIO; -2018)
  - Waste Heat Recovery in Drying Processes (Dryficiency; -2020)
  - Heat storage and heat recovery solutions (SMARTREC; -2029)
  - Membrane technologies in chemical processing (ROMEO; -2019)
  - Manganese ores pre-treatment (PreMA; -2022)
- Low Carbon Steelmaking
  - Smart Carbon Usage
    - CCU - Steelanol, advanced biofuels from steel gases for use transport sector (-2018)
    - Process integration - IGAR, Injection of reformed steel plant gases in Blast Furnace (ArchelorMittal, -2022)
  - Carbon direct avoidance
    - Hydrogen-based metallurgy - H2Future, Fully scale demonstration of an electrolyser unit for H2 production (-2021)
    - Electric steelmaking/ Iron Oxide electrolysis - SIDERWIN, Fully electricity based steel production route. (ArcelorMittal, - 2022).

EP Pilot Project: Research on reduction of CO_2 emissions in steel production

- **Objectives:**
  - Aiming at exploring:
    - Breakthrough technology for clean steelmaking with almost zero CO_2 emissions
    - Ways of optimising synergy of EU policies and funding
- **Budget earmarked: EUR 1.247.660**

Expected publication of call for proposals	**April/May 2019**

Thank you for your attention

Questions?

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