

General Information	
Preliminary title of the European Partnerships	EIT RawMaterials
Short description of the partnership	It is a network of universities, businesses and research organisations delivering solutions to boost competitiveness, growth and attractiveness of the European raw materials sector via radical innovation, new educational approaches and guided entrepreneurship.
Services directly involved	DG EAC, European Institute of Innovation and Technology (EIT)
Context and problem definition	<p>Raw materials are critically important for achieving the EU economic, environmental and climate objectives.</p> <p>Raw materials are essential to securing a transition to green energy technologies, to securing growth and sustainable consumption and to securing access to clean and efficient consumer technologies. For example, the production of low carbon technologies is expected to see the increase of demand for certain raw materials by a factor 20 by 2030.</p> <p>Taken together, raw materials industries provided EUR 280 billion of added value and more than four million jobs in 2012. The economic importance of the raw materials sector goes far beyond the economic activities strictly related to the extractive and processing industries. Looking at the metals value chain alone, the secure supply of raw materials is essential for jobs in downstream manufacturing sectors such as the production of fabricated metal products, electronics, machinery and equipment. More than 11 million jobs are affected, equal to 40 % of the jobs and value added from the EU's entire manufacturing sector.</p> <p>Europe is highly dependent on importing raw materials to secure the global competitiveness of its manufacturing industries and to accelerate the transition to a resource efficient, sustainable society.</p> <p>The EU's mining production has mostly remained stable in absolute amounts during the last 20 years. However, its share of global production has significantly decreased, mostly due to the growth of the global market. Nonetheless, thanks to its long-standing mining history, the EU remains as one of the world's largest producers and net exporters of mining equipment though the competition from China and other countries grows.</p> <p>Innovation is essential for the EU to remain competitive. Top R&D investor companies in the raw materials sector have almost doubled their annual R&D expenditure since 2003. However, EU patent applications in the raw materials sector continued a decreasing trend. The EU raw material companies suffer from a significant talent shortage. At global level, more than 90 % of mineral processing graduates are educated in Asia, Africa, and South and Central America. The number of educational programmes in the EU relevant to raw materials is on decline.</p> <p>These and other raw material challenges are often treated in a segmented manner and with short-term horizon. Putting the sector on more sustainable track requires multiple actors along the value chain acting in synergy. EIT RawMaterials is uniquely positioned to address this challenge and to develop the raw materials sector into a major strength for Europe.</p> <p>The KIC activities are very well aligned with the Raw Materials Initiative, the European Innovation Partnership on Raw Materials, the European Battery Alliance and other EU initiatives addressing the societal challenges of the sustainable supply of raw materials and resource efficiency and others. The KIC also focuses on several mission driven so-called "Lighthouses", which are large-scale and long-term coordinated innovation initiatives addressing critical raw materials challenges for Europe. The first two Lighthouses: "Raw</p>

	<p>Materials and Circular Societies” and “Sustainable Materials for Future Mobility” were launched in 2018.</p>
<p>Objectives and expected impacts</p>	<p>EIT RawMaterials, launched in 2015, aims at developing raw materials into a major strength for Europe. The KIC focuses on metal and mineral raw materials, critical as well as non-critical. Bio-based and polymer materials are included in view of their substitution potential. Other materials are considered in the context of multi-material product recycling.</p> <p>The KIC’s strategic objectives are:</p> <ul style="list-style-type: none"> - Securing raw materials supply: supporting collaboration across the whole raw materials value chain in order to allow for the development of sustainable and efficient raw materials solutions. - Designing materials solutions: offering new opportunities in designing smarter solutions for the circular economy and for the sustainable extraction, processing and use of raw materials from both primary and secondary sources. - Closing materials loops: bringing materials into the loop in a sustainable way, keeping materials in the loop for as long as possible and minimising waste at all stages. <p>EIT RawMaterials concentrates on six knowledge & innovation themes:</p> <ol style="list-style-type: none"> 1. Exploration and raw materials resource assessment 2. Mining in challenging environments 3. Increased resource efficiency in mineral and metallurgical processes 4. Recycling and material chain optimisation for end-of-life products 5. Substitution of critical and toxic materials in products and for optimised performance 6. Design of products and services for the circular economy <p>By 2022 the KIC expects to achieve the following key targets:</p> <p>Industrial competitiveness:</p> <ul style="list-style-type: none"> - Investment attracted, such as in new pilot/demo infrastructure: 800MEUR - Industries with at least 15% savings due to higher material and energy efficiency: 20 <p>Knowledge & Innovation capacity:</p> <ul style="list-style-type: none"> - New KET-related breakthrough innovations applied/in progress: 1 / 2 - Number of new pilot/demo plants, prototypes or production units: 20 <p>Environmental and social sustainability:</p> <ul style="list-style-type: none"> - New/Improved products with reduced content of toxic materials: 50 - Integration of the RIS regions - % funding RIS participants in non-RIS projects: 15% of total funding - Number of applied substitution cases: 20 - New sustainable BATs (Best Available Technologies) accepted / in progress: 3 / 6 - Previously unused waste streams or deposits taken into use to recover critical or valuable raw materials: 20 <p>Education & Human Capital:</p> <ul style="list-style-type: none"> - Women graduating from RM-related courses: 30% of all graduates - Creating/securing jobs in the RM sector: 10,000 <p>The KICs are funded for a period of up to 15 years. After the years of start-up and development, they are expected to become financially sustainable.</p>
<p>Necessity test: rationale for a European Partnership</p>	<p>The most efficient intervention modality needs to:</p> <ul style="list-style-type: none"> - contribute to strengthening local innovation ecosystems, through the involvement of and interaction between local innovation actors;

	<ul style="list-style-type: none"> - create the conditions to incentivise the commitment of innovation actors for a long time, in order to ensure the continuation of the activities once the EU financial support is phased-out. - combine, in an integrated way, the education and training activities, the support to innovation and business creation, the strengthening of innovation ecosystems, with the less administrative efforts (no funding to be allocated to research activities), to tackle a global challenge. - Establish synergies and complementarities with other EU initiatives, in order to make the critical mass of efforts more consistent. <p>Traditional call for proposals are not suitable to achieve the objectives stated above.</p>
Relevant for the following parts of Horizon Europe	<p>Pillar II 'Global Challenges and European Industrial Competitiveness'</p> <ul style="list-style-type: none"> <input type="checkbox"/> Cluster Health <input type="checkbox"/> Cluster Culture, creativity and inclusive society <input type="checkbox"/> Cluster Civil Security for Society <input checked="" type="checkbox"/> Cluster Digital, Industry and Space <input checked="" type="checkbox"/> Cluster Climate, Energy and Mobility <input checked="" type="checkbox"/> Cluster Food, Bioeconomy Natural Resources, Agriculture and Environment <input checked="" type="checkbox"/> Cross-cluster <input checked="" type="checkbox"/> Pillar III 'Innovative Europe'
Currently identified links with other partnership candidates / Union programmes	<p>EIT RM synergizes with the following initiatives:</p> <ul style="list-style-type: none"> - Carbon Neutral and Circular Industry Partnership, Battery Partnership, Circular bio-based Europe partnership. - Raw Materials Initiative, the EU raw materials policy strategy - European Innovation Partnership on Raw Materials - Copernicus collaboration with DG GROW - UN International Resource Panel, World Resource Forum, Club of Rome and other international initiatives. - Synergies with other KICs are mainly steered through the various Cross KIC initiatives.
Does the proposed partnership build on currently active ones?	<p>EIT RawMaterials is the continuation of the EIT-KIC partnership of the same name currently implemented through the EIT. It was established in 2015, following a call for proposal in 2014.</p>
Expected type and composition of partners	<ul style="list-style-type: none"> - EIT RawMaterials comprises of over 120 core and associate partners from leading businesses, universities and research institutes, and an additional 190 project partners from almost all the EU countries. - Partners of EIT RawMaterials are active across the entire raw materials value chain from exploration, mining and mineral processing to substitution, recycling and circular economy. Approximately one-third of the partners are from the industry sector. The KIC also includes many of Europe's most renowned research institutes and universities with competence in specific raw materials related areas. - The KIC is organised around 6 co-location centres (CLCs) in Belgium, Finland, France, Italy, Poland and Sweden, which are geographical hubs for the practical integration of the knowledge triangle (research, education, business). They bring together, at a local or regional level, the education, research and industry partners of the KIC, thereby allowing a face-to-face contact, geographical proximity and practical integration of the knowledge triangle. - In addition, there are five Regional Innovation Centres (RIC) and Regional Innovation Scheme (RIS) Hubs focusing on Eastern and South-Eastern European countries with high potential for raw materials activities.

	<ul style="list-style-type: none"> - Partners come from across the EU. KICs have rules and criteria for bringing in new partners who are usually first associated to KICs activities before eventually become full-fledged KIC partner. Therefore, inclusion of new partners follows the business model and strategic direction of the KIC. - The KICs also runs a number of citizen-engaging activities e.g. in the field of awareness raising on recycling engagement as well as on electronics repair and critical raw materials thus expanding its appeal among non-professional audiences and relevant civil society organizations.
Contributions and commitments expected from partners	In addition to the EIT grant, the KIC budget includes additional revenue streams from several sources, e.g. membership fees, services and consulting, ROI and equity, education, national and regional funding and others. Partners also provide cash and in-kind contributions to co-fund the individual activities.
Currently envisaged implementation mode(s).	<input type="checkbox"/> Co-programmed European Partnership <input type="checkbox"/> Co-funded European Partnership <input type="checkbox"/> Institutionalised European Partnership <ul style="list-style-type: none"> <input type="checkbox"/> Article 185 <input type="checkbox"/> Article 187 <input checked="" type="checkbox"/> EIT-KIC
Justification of the implementation mode	<ul style="list-style-type: none"> - Through on an open and competitive call process, each KIC partnership is selected among a number of proposals based on criteria, including: proposed strategy, implementation aspects and expected impact. - Based on a multiannual strategy and Business Plans, the KIC will run an integrated portfolio of activities in the field of education, support to innovation and entrepreneurship in order to contribute tackling global societal challenges. - Each business plan currently covers a period of one year and it is assessed by external experts, and scrutinised and approved by the EIT GB. It is a mean to flexibly address the key issues a KIC tackles. - The KICs implement place-based approach: i.e. integration of a KIC (through its CLCs, RICs, RIS Hubs) in local innovation ecosystems to strengthen the ties between innovation actors. - A KIC is meant to be financially sustainable and keep operating after the end of the support of the EIT. - Target group: a KIC is meant to involve the actors of the Knowledge Triangle (academia, research and industry). However, a KIC can involve also other actors that can contribute to its objectives (i.e. financial actors, local government, civil society and others). In particular, entities managing and/or funding research and innovation programmes can also be involved in order to ensure synergies with initiatives at national/local level. - Each KIC benefits from the EIT support and guidance on strategic and operational matters, including synergies with other EU initiatives. - Each KIC benefits from the interactions and synergies with the other KICs.
Proposed starting year	EIT RamMaterials is the continuation of the EIT-KIC partnership of the same name currently implemented through the EIT. It was established in 2015 for a maximum duration of 15 years, following a call for proposal in 2014. As of 2021, it will continue to be funded as part of Horizon Europe Programme.