

General Information	
Preliminary title of the European Partnerships	EIT Manufacturing
Short description of the partnership	It brings actors together in an innovation ecosystem that aims at boosting manufacturing innovation in Europe with a focus on skills and talent, digitalisation, socially and environmentally sustainable manufacturing.
Services directly involved	DG EAC, European Institute of Innovation and Technology (EIT)
Context and problem definition	<p>The manufacturing industry and its link with services play an important role in putting Europe's economy back on the tracks of growth. The EU manufacturing sector is an engine for growth and jobs:</p> <ul style="list-style-type: none"> • 22.8% contribution to employment (30 million jobs directly; twice as many indirectly) generates a turnover of €7 000 billion • 80% of total EU export • 25% contribution to non-financial business economy value-added <p>The manufacturing sector is crucial for competitiveness, innovation and job creation in Europe already now and even more in the coming years. Increasing stakeholders' synergies in an efficient and visible way, reducing fragmentation and strengthening the links between the relevant ecosystems, and encouraging the identification of innovation hotspots are of high priority for European manufacturing.</p> <p>Talented people are crucial to the future leadership of global high-value manufacturing. Due to demographic factors and increasing skill requirements, European manufacturing industries simultaneously face a lack of available employees and increasing skill gaps among employees. European industry therefore quickly needs to accelerate its ability to engage, empower and reskill its best people, regardless of age and background, while at the same time recruiting more skilled personnel.</p> <p>Great potential lies in new ways to increase manufacturing agility and flexibility to face challenging market demands requiring products and services tailored to individual customer needs. Products become more complex and resulting value networks require high levels of digitalisation and interaction between actors. The necessary technology is complex and expensive, especially for SMEs, which generally lack financial resources for high investments in technology. At present, only 36% of European SMEs use industrial robots, compared to 74% of larger companies (>1,000 employees). SMEs also face higher risks caused by digital security, intellectual property protection, personal data and privacy, and interoperability of systems.</p> <p>Progress towards the Sustainable Development Goals requires an environmentally sustainable and responsible industry as well as radical transition towards a circular economy. In Europe, the manufacturing sector contributes to about 25% of the waste, 23% of greenhouse gases, and 26% of NOx generated. Consequently, manufacturing innovation has huge potential to reduce negative environmental impact through a wide range of efforts including the increase of energy and resource efficiency, waste reduction, extended use of secondary raw materials, and production of more eco-intelligent products. The shift of European companies towards more sustainable business models will create important cost savings, new jobs, and opportunities for workers and entrepreneurs.</p>
Objectives and expected impacts	<p>Its mission is to integrate European manufacturing actors from research, education and business in innovation ecosystems that add unique value to European products, processes, services – and inspire the creation of globally competitive and sustainable manufacturing.</p> <p>EIT Manufacturing has six strategic objectives:</p>

1. Excellent manufacturing skills and talents: adding value through an upskilled workforce and engaged students.
2. Efficient manufacturing innovation ecosystems: adding value through creating ecosystems for innovation, entrepreneurship and business transformation focused on innovation hotspots.
3. Full digitalisation of manufacturing: adding value through digital solutions and platforms that connect value networks globally.
4. Customer-driven manufacturing: adding value through agile and flexible manufacturing that meets global personalised demand.
5. Socially sustainable manufacturing: adding value through safe, healthy, ethical and socially sustainable production and products.
6. Environmentally sustainable manufacturing: adding value by making industry greener and cleaner.

EIT Manufacturing will create a new mindset within the manufacturing sector, will reduce fragmentation within the European innovation landscape and develop SME-friendly business support activities, thus delivering high value across the whole manufacturing network. It will advance technology and digitalisation and develop social and environmental sustainability and responsibility for the benefit of European society.

EIT Manufacturing will contribute to upskill and/or reskill the current industrial workforce through customised education and training, meeting emerging requirements of digitalisation and automation, resulting in improved productivity and innovation capability of manufacturing industry. The attractiveness of manufacturing jobs will be increased, enticing the best talents, and more women in line with the strategic initiatives promoting gender equality. Providing new skills to the workforce while fostering innovations and new business models in companies, driven by artificial intelligence, automation, circular economy, digitalisation and green solutions, will lead to increased productivity, agility and the ability to adapt faster to rapidly changing European industrial landscape and markets.

EIT Manufacturing will stimulate economic growth by supporting the emergence, acceleration and transformation of start-ups and gazelles, by helping them launch and develop innovations together with large industry players, by attracting investments, increasing their profitability through productivity gains and market shares. This approach will result in high value products and services, and ultimately improved competitiveness of European manufacturing industry, which will allow to retain and create new jobs.

EIT Manufacturing will create social impacts through the promotion of activities and investments in social entrepreneurship and innovation that aim to solve societal problems and to create a more inclusive and reflective society. Digitised industry has the potential to vastly improve health and safety since enhanced technologies can also lead to better working conditions and safer environments. The creation of a “green” mind-set through the support of green and sustainable industrial products, processes and services has far-reaching benefits for society as a whole. Promoting circular economy in manufacturing will lead to smarter, cleaner and greener energy. Resource efficiency and intelligent use of raw materials will not only create sustainable technical solutions but also important business opportunities for improving Europe’s global competitiveness.

Necessity test: rationale for a European Partnership	<p>A partnership approach is more effective in achieving the objectives because of the following reasons:</p> <ul style="list-style-type: none"> - The magnitude and systemic nature of the problem addressed requires knowledge and resources sharing, and long-term, concerted actions (based on a joint strategy and shared vision) from a broad range of stakeholders: academia, industry, SMEs, regulators, investors, utilities etc. - It ensures the achievement of critical mass to ensure the scale and scope required and, at the same time, thus overcoming the sector fragmentation through coordination, structuration and prioritisation. - It contributes to strengthening local innovation ecosystems, through the involvement of and interaction between local innovation actors; - It creates 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. - It establishes synergies and complementarities with other EU initiatives, in order to make the critical mass of efforts more consistent.
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 checked="" 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 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>Examples of collaboration opportunities with other EU initiatives:</p> <ul style="list-style-type: none"> - Links with candidates partnerships such as Clean Sky 3, Clean Steel (low carbon steel making), Key Digital Technologies, Clean Hydrogen Europe and Carbon neutral and circular industry (process industries) are expected. - Synergies with Erasmus in developing and running highly innovative curricula with strong entrepreneurial components. - At local level, EIT Manufacturing will link with RIS3 and the Vanguard Initiative via its CLCs and ecosystem to increase the impact of initiatives. - EIC: EIT Manufacturing could provide support to deliver business acceleration services to EIC beneficiaries. - EIT Manufacturing will provide solutions for substantial reductions in energy consumption, material usage, and end waste and the efforts are aligned with the <i>EU Action Plan for the Circular Economy</i> - EIT Manufacturing will interact with the European Investment Bank, providing ambitious investment targets for InvestEU and a relay for the European Investment Advisory Hub towards the KIC.
Does the proposed partnership build on currently active ones?	<p>EIT Manufacturing is the continuation of the EIT-KIC partnership of the same name currently implemented through the EIT. It was established in 2019 for a maximum duration of 15 years, following a call for proposal in 2018.</p>
Expected type and composition of partners	<ul style="list-style-type: none"> - EIT Manufacturing currently manages a formal partnership of 50 partners, co-ordinated by the Laboratory for Manufacturing Systems and Automation - University of Patras, and organised in five regional European Co-location Centres (CLCs): CLC North (Gothenburg), CLC Central (Darmstadt), CLC South (Milan), CLC East (Vienna) and CLC West (Bilbao).

	<p>- Main industrial partners include: ArcelorMittal, Volkswagen, Siemens, Whirlpool, Volvo, Atos, Sandvik.</p> <p>- Main academic partners include: Aalto University, Chalmers University of Technology, Czech Technical University in Prague, Politecnico di Milano, Politecnico di Torino, TU Darmstadt, TU Delft, TU Wien, University of Tartu, University College Dublin.</p> <p>- Main research partners include: CEA, IK4, TecNALIA, BIBA, RISE, DFKI</p> <p>- Partners come from across the EU. Under Horizon Europe, the ambition is to strengthen rules and criteria for bringing in new partners who are usually first associated to KICs activities before eventually become fully-fledged KIC partner. Therefore, inclusion of new partners follows the business model and strategic direction of the KIC.</p> <p>- EIT Manufacturing promotes a consumers-centred approach in many innovation projects. It also promotes direct citizen involvement in its education dimension, through massive open on-line courses and awareness raising activities.</p>
Contributions and commitments expected from partners	EIT Manufacturing shall establish a financial sustainability strategy building on a sustainable mix of income sources to finance its operations. In addition to the EIT grant, the KIC budget will include additional revenue from various sources, such as membership fees, regional funding, ROI from shares in companies, business support services, fees from EIT labelled educational programmes, education certificates, etc. Partners also provide in-kind contributions to co-fund the 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 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. • the KIC will run an integrated portfolio of activities in the field of education, support to innovation and to entrepreneurship in order to contribute tackling global challenges. • Each business plan covers a period of one year; it is assessed by external experts, scrutinised and approved by the EIT GB. It is a mean to flexibly address the key issues a KIC tackles. • Place-based approach: i.e. integration of a KIC through its co-location centres 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 (business, education and research). However, a KIC can involve also other actors that can contribute to its objectives (i.e. financial actors, local government, civil society). In particular, entities managing and/or funding research and innovation programmes can also be involved in order to ensure synergies with initiative at national/local level. • Each KIC benefits from the interactions and synergies with the other KICs.
Proposed starting year	The partnership was established in 2019. It is proposed to continue funding this KIC in the course of Horizon Europe.