



VANGUARD INITIATIVE

New growth through smart specialisation



ESM

Efficient and Sustainable Manufacturing

INTRODUCTION TO THE PILOT

The ESM Pilot aims at the realisation of an integrated network of European pilot plants and demo-sites supporting the uptake of advanced technologies boosting manufacturing efficiency and sustainability.

To compete globally and to continue guaranteeing welfare and jobs, European manufacturing value chains should focus on added-value products and processes, while becoming at the same time more efficient and sustainable. The ESM pilot offers companies, including SMEs, the opportunity to access the latest technologies and competences to set up sustainable and efficient processes by de-risking the uptake phase in a logic of inter-regional synergy.

ACTIVITIES

The ESM pilot is organised in demo cases addressing the development of a European network of pilot plants to uptake innovative sustainable technologies and methods in strategic areas of European manufacturing. Based on major trends which affect the future of manufacturing (i.e. circular economy, digitisation, smart materials, human-centred approach etc.), such demo cases are the result of an orchestrated process where regional stakeholders (including clusters, companies, RTOs, universities and regional authorities) collaboratively identify strategic innovation topics, based on smart specialisation, which need novel piloting infrastructure.

The ESM Pilot offers a structured cooperation environment and a tested methodology for effective interregional cooperation to identify promising topics to be addressed, implementing a proper governance for the mobilisation of committed industrial communities, as well as to design and implement a network of pilot plants.

DEMO CASES

De- and Remanufacturing

Technologies and business models for circular economy to re-use, remanufacture and recycle products and materials in all sectors.

Polymer-based functional products

Advanced sustainable surface treatments and material technologies for functional polymer components in various applications.

Digital Transformation

“Industry 4.0” technologies applied to manufacturing environments to realise highly performing and human-centred digital/virtual factories.

Energy-flexible and resource-efficient factory operation

Technologies and methods to optimise energy/material consumption in manufacturing processes and to realise emission-neutral factories.

CONTACT DETAILS

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