About the network

Extreme is a Network of Infrastructure made of research and technology organizations, universities and companies, with laboratories, advanced equipment, demo and pilot plants, focused on the substitution/reduction of critical raw materials used under challenging conditions of temperature, wear, friction, loading, corrosion, etc. This network, established through a project funded by the Knowledge & Innovation Community EIT RawMaterials, can offer support to enterprises, industries and RTOs operating in those technological fields where such conditions are commonly reached, like manufacturing, machining, transport, energy, construction and nuclear.

Facilities available in EXTREME

EXTREME offers a wide range of facilities, like e.g.: Fabrication and treatment of materials Powder metallurgy; Materials casting and forming; Additive manufacturing; Thermal spraying; Advanced PVD systems; Other deposition and synthesis; Surface treatments; Thermal annealing; Laser machining; Characterization and testing of materials High resolution microscopy; Micro- and Nanotomography; X-ray and electron diffraction; Compositional microanalysis; Optical characterization; Particle analysis; Thermal and thermo-electric characterization; Hardness and adhesion test; Wear and friction measurements; Mechanical tests; Corrosion and tribocorrosion; Degradation test in controlled environments.

ICT, modeling and computational tools High performance computing; Ab-initio and classical molecular dynamics simulations; Simulation of structural, mechanical, thermomechanical, electronic, magnetic, thermodynamic properties of materials and components; Forming, welding and high-speed deformation simulation; Life cycle assessment. Recovery and recycling Recovery and recycling by pyro- and hydrometallurgy (pilot scale). Recycling from EOL products by electrochemical and inert liquid technologies.

...and many more!

Actions & Services

The network acts through:
- Developing new initiatives
- Supporting Education activities
- Assisting enterprises, industries, and RTOs

By offering access to facilities and expertise of its partners, EXTREME can help those who have needs in the areas of interest. The network can supply single standard services as well as multiple and customizable services depending on customers' requests, thus providing a complete and integrated offer to fulfill complex requirements.

Partners & Expertise