

## POSTER 110

# LIGHTCOCE. BUILDING AN ECOSYSTEM FOR THE UP-SCALING OF LIGHTWEIGHT MULTIFUNCTIONAL CONCRETE AND CERAMIC MATERIALS

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Poster

### Abstract

During the last decades a trend towards the use of lightweight materials in constructions and infrastructures, as well as in the aerospace and automotive industry is observed. Lightweight components are easy to transport, handle and install and demand less operational energy reducing substantially their environmental footprint and the relative costs. Among other materials, concrete and ceramics are on the focus of interest due to their wide range of application and their durability.

Based on end applications lightweight attributes must be coupled with enhanced properties and multifunctionalities, such as high mechanical strength, self-sensing, self-cleaning properties, which can be achieved with the aid of nanomaterials.

The main objective of the LightCoce project is to cover the gap in the upscaling and testing of multifunctional lightweight concrete and ceramic materials by providing open access to SMEs or Industry to a single entry point ecosystem consisting of already developed Pilot Lines (including three clusters of existing pilot lines; a. Concrete group, b. Conventional Ceramics group, and c. Advanced Ceramics group), process and materials modelling, Characterization, Standardisation, Regulatory, Safety & Environmental Assessment, Data Management and Innovation Management that will be accessible to the interested stakeholders at fair conditions and cost.

The ecosystem will support the upscaling activities of European SMEs and industry, covering a large range of end applications from constructions materials (bricks, ceramic tiles), infrastructures (ready mix concrete, prefabricated components), to high tech applications in automotive & aerospace industry. Thus, LightCoce ecosystem targets will be achieved through the collaboration of a well-balanced multidisciplinary consortium consists of 26 Industrial and RTO partners well recognized and world leading experts in their fields: 5 Large Enterprise 8 RTDs, 12 SMEs, and 1 Association spread across 9 countries.