SUS-CON is a R&D Collaborative Project funded by the EC through its 7th FP. The 4-year project started in 2012 with the aim of developing new concepts and technology routes for the integration of secondary raw materials (aggregates and binders) in the production cycle of concrete (for both ready-mixed and pre-casted applications) to manufacture a sustainable, innovative and energy-efficient concrete made with 100% secondary materials. The key objectives and challenges of the Project were:

- to reduce the embodied energy and CO₂ footprint of concrete by replacing traditional binders with novel binders from secondary materials;
- to produce novel lightweight aggregates from secondary materials;
- to combine novel aggregates and binders in an energy-efficient lightweight concrete made of 100% secondary materials with improved thermal insulation properties;
- to add additional performance demands (i.e. thermal insulation) in the design methodology.

Several eco-sustainable concretes recipes, based on innovative aggregates and binders from secondary raw materials, have been suitably designed and developed, targeting specific products. Pre-casted (50 panels and 1,000 blocks) and ready-mixed (screeds) SUS-CON prototypes have been industrially produced by European construction companies and the highly compatibility of SUS-CON concretes with existing production processes was demonstrated. In addition, performances of SUS-CON prototypes were tested in terms of mechanical, thermal, acoustic insulation properties and fire resistance. The SUS-CON solutions were installed on 3 real demo buildings located in three different European sites (Spain, Turkey and Romania).