

**Project title:** High Energy savings in building cooling by ROof TILEs shape optimization toward a better above sheathing ventilation (LIFE **HEROTILE**)

**PROJECT LOCATIONS:** Italy, France, Germany, Spain and Israel.

**BUDGET INFO:** Total amount: 2,515,306 €  
% EC Co-funding: 60%

**DURATION:** Start: 01/08/2015-End: 31/01/2019

**PROJECT'S IMPLEMENTORS:**

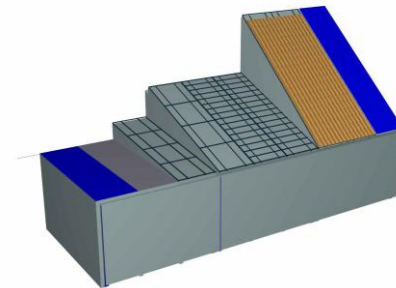
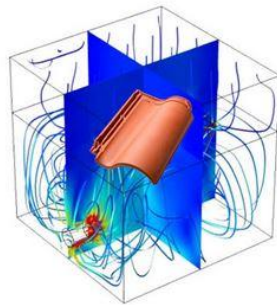
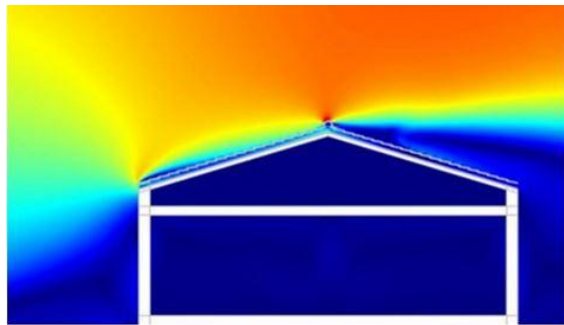
**Coordinating Beneficiary:** Industrie Cotto Possagno S.p.A.

**Associated Beneficiaries:** Azienda Casa Emilia Romagna di Reggio Emilia, Associazione Nazionale degli Industriali dei Laterizi, Monier Technical Centre GmbH, TerrealS.A.S., Università degli Studi di Ferrara



## OBJECTIVES & SCOPE

- 1) Realize two pilot plants to produce two new types of roof tiles (**Marseillaise** and **Portuguese** tiles).
- 2) Realize two real scale test buildings, with different roofs each, to test new tile performances in two different locations (Italy and Israel) and two demonstrator buildings located in Mediterranean regions (Italy and Spain).
- 3) Realize in addition a practical and simplified free-license software for architects and technicians – SENSAPIRO Software ENergy SAVings Pitched ROofs, able to predict the energy performance of the same building in changing only the roof configuration.



## EXPECTED IMPACTS

Considering that the tiles types to re-design and produce in the pilot plants cover more than 60% of European roofs, LIFE HEROTILE will cover a good market share, above all in the Mediterranean basin Countries with **130 million of population in South Europe** correspond to almost **5.2 billion of square meters of house floor space**.

**Reduction targets** (South Europe) :

- **10% Greenhouse gas emissions**
- **50% Carbon footprint** of building space cooling (in comparison with standard pitched roof )
- **5% Air pollution**
- **5% Electrical power for air conditioning** in urban area
- **25% Maximum** under-tile air **temperature**
- **50% Specific cooling power**

## POLICY IMPLICATION

The project is compliant with the European energy policies towards a low-carbon technologies, because it allow **energy savings for air conditioning, that represents the 40% of overall energy demand**. The project proposal acts to control and reduce the energy requirement for cooling, that is the major energy demand in air-conditioning, not yet regulated by law in several European countries, most of them in South Europe where it should be more important.

The roof becomes one of the most critical element to reach **2050 decarbonisation goals**. LIFE HEROTILE will substantially help the EU construction sector (refurbishment and new constructions) to achieve its energy efficiency targets and related CO2 emissions, moreover facilitating the global market uptake of an eco-innovative EU product with sustainable energy efficiency and related CO2 emissions.