



**AICARR**

Associazione Italiana Condizionamento dell'Aria Riscaldamento e Refrigerazione



**Edifici di valore storico: progettare la riqualificazione.**

Una panoramica, dalle prestazioni energetiche alla qualità dell'aria interna.

**Roma 26-27-28 febbraio 2014**

**Historical and existing buildings: designing the retrofit.**

An overview from energy performances to indoor air quality.

**Roma 2014 February 26<sup>th</sup>-28<sup>th</sup>**

**HISTORICAL AND EXISTING  
BUILDINGS. DESIGNING THE  
RETROFIT.** An overview from  
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**Roma 2014, 26<sup>th</sup> – 28<sup>th</sup> february**





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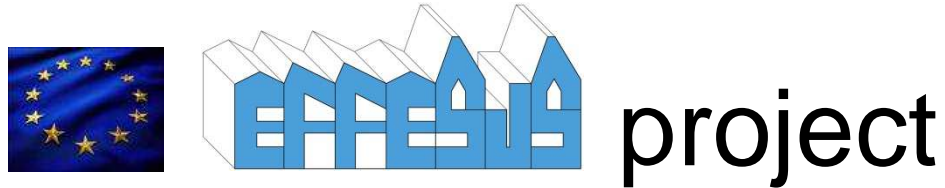
**Roma 2014 February 26<sup>th</sup>-28<sup>th</sup>**

# Energy Efficiency for EU Historic Districts' Sustainability

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**R.E.D. srl**





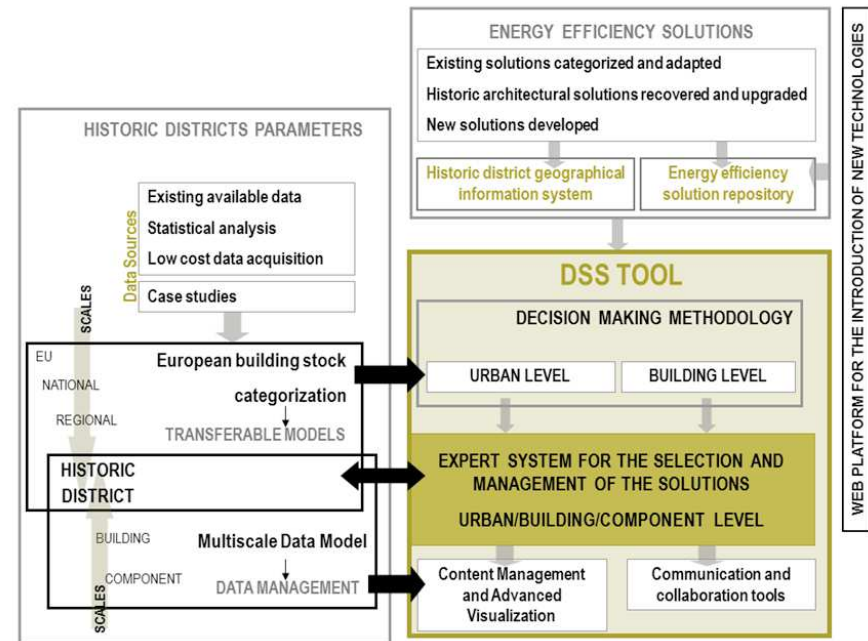
- Project Duration: 09/2012 - 08/2016
- Funding Scheme: Seventh Framework Programme
- Project Coordinator:  
TECNALIA Research & Innovation, Spain
- Scientific Coordinator:  
Fraunhofer-Institute for Building Physics IBP, Germany
- 23 partners from 12 EU countries  
and Turkey

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## Objectives

- To improve the energy efficiency of European historic buildings and urban districts\* whilst protecting the heritage value
- To develop an expert system (DSS) to support users in the identification and prioritization of interventions for improving energy efficiency in historic districts and buildings









\* "Historic urban district" built before 1945 not necessarily protected by heritage legislation

# Outputs

- Development of the Decision Support System (DSS) through:
  - multiscale spatial model
  - categorization of historic buildings and urban districts
  - repository of energy efficiency retrofit solutions
- Development and adaptation of new cost effective technologies:
  - aerogel insulation products
  - secondary window solutions
  - thermal insulating mortars
  - radiant reflective coatings
- Smart energy management systems adapted for historic buildings and energy generation systems from renewable energy sources



## Case studies

Country and City	Photo of location	Implementation	Country and City	Photo of location	Implementation
Benediktbeuern (DE)		thermal insulating mortar	Santiago de Compostela (ES)		Geographic Information System
Budapest (HU)		window upgrade and intelligent indoor climate solutions	Genova (IT) and Visby (SE)		collection of data for the structured categorization of historic buildings and districts
Glasgow (GB)		aerogel insulation			
Istanbul (TR)		radiant reflective coatings			