

Coordinated By University Of Padova



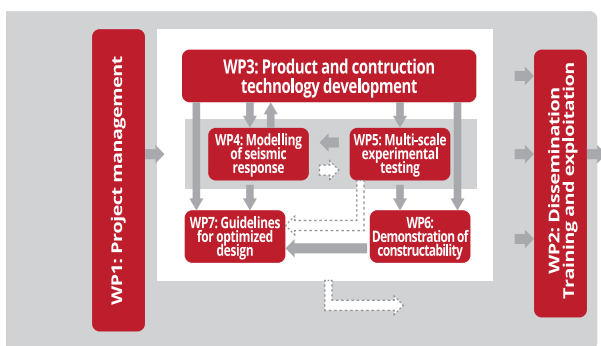
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# INSYSME

Innovative Systems for Earthquake Resistant Masonry Enclosures in R.C. Buildings

[www.insysme.eu](http://www.insysme.eu)

Graphic project + [www.emistero-destro.it](http://www.emistero-destro.it)



## PROJECT FRAMEWORK

INSYSME is a Research Project for the benefit of **SME Associations** with a budget close to 2,7 million Euros, co-funded for about 1,8 million Euros by the European Commission under the 7<sup>th</sup> Framework Programme "Capacities". The research will offer **novel solutions** to scientific and technological problems that have a broad-spectrum impact, creating new opportunities **for the masonry industry** and the construction sector in Europe.

## THE CHALLENGE

**Masonry enclosure systems** have excellent performance with respect to healthy indoor environment, thermal and acoustic insulation, moisture control, fire resistance and durability. Without a proper design, when enclosure walls (as other "non-structural" elements) are subjected to seismic actions, they may affect strongly the global behaviour of the structure, hence increasing repair costs and casualties. In this context, sound and efficient design procedures for non-structural elements do not exist yet.

The INSYSME project will tackle the aforementioned shortcomings reconsidering the structural role of masonry enclosure walls:

- Developing **innovative and diversified materials, technologies and building process** for masonry enclosure systems;
- Defining **structural performances and design methods** that take into account the mutual influence of RC frame and masonry enclosures behaviour;
- **Implementing design procedures and construction process** of masonry enclosure systems into software, guidelines and codes.

## PROJECT STRUCTURE

The technical program is organized in **7 interactive Work Packages (WP)** over a three-year duration.

The proposed solutions are sustainable and improve safety and quality of life of European citizens. The INSYSME project clusters **16 Partners**, representatives of Universities, Research Centres, Industrial Associations and SMEs from 7 Countries. The Project Coordinator is the Department of Civil, Environmental and Architectural Engineering of the **University of Padova, Italy**.



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