European Commission

**EUROPEAN PILOT PROJECT**

# INTEGRATED TECHNIQUES FOR THE SEISMIC STRENGTHENING AND ENERGY EFFICIENCY OF EXISTING BUILDINGS

## ACTION 1

## Overview and classification of technologies for seismic strengthening and energy upgrading of existing buildings

Identification of **building typologies** that require renovation

Review of technology options for the **seismic upgrading** of existing buildings

Review of technology options for the **energy upgrading** of existing buildings

Joint Research Centre

**PILOT PROJECT ACTIONS**

1. **Overview and classification of technologies for seismic strengthening and energy upgrading of existing buildings**
2. Analysis of technologies for combined upgrading of existing buildings
3. Methodologies for assessing the combined effect of upgrading
4. Regional impact assessment and proposals in support of an Action Plan
5. Stakeholders' engagement

# ENABLING THE RENOVATION WAVE

The diversity of building typologies across EU regions and construction eras drastically complicates widespread modernisation efforts hindering the selection of suitable renovation strategies. Action 1 identifies EU building typologies most needing upgrading by year of construction, structural typology, seismic and climatic exposure as a crucial step to provide an overview of renovation technologies required to launch seismic safety and energy efficiency improvements across EU regions and communities. The review and classification of technologies for seismic strengthening as well as energy upgrading will consider various factors encompassing cost, disruption time, life cycle aspects, and technological compatibility.

Action 1 provides a foundational understanding of renovation technologies essential to the European Green Deal's call for renovating in an energy and resource efficient way and to the Renovation Wave initiative to foster the modernisation of Europe's buildings. It contributes to the Sustainable Development Goal 11 for safe and resilient cities. It also supports the New Circular Economy Action Plan by integrating life cycle thinking in the classification of technologies. Additionally, it provides new insights into at-risk building typologies for disaster management activities.