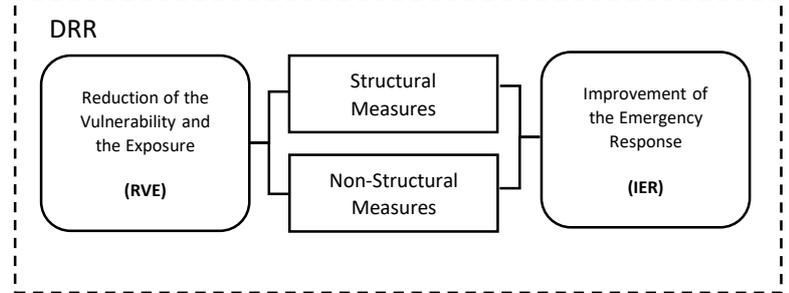
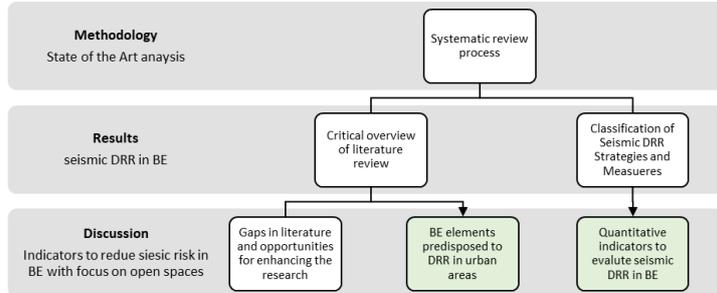


WP 1 – BE and SUOD: State of the Art (SoA), risks and human behaviour

T1.2 - SoA of earthquake (SUOD) impact on BE and related earthquake-induced modifications due to building/aggregate and aggregate/public spaces interfering conditions. Current risk-reduction strategies analysis. Definition of human behavior including crowding conditions by combining SoA data and real-world events analysis

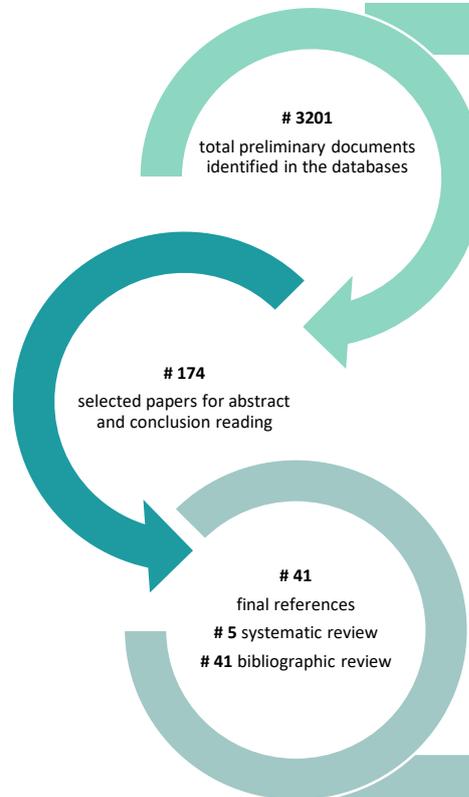
D1.2.4 – CURRENT BE EARTHQUAKE RISK MANAGEMENT AND REDUCTION STRATEGIES



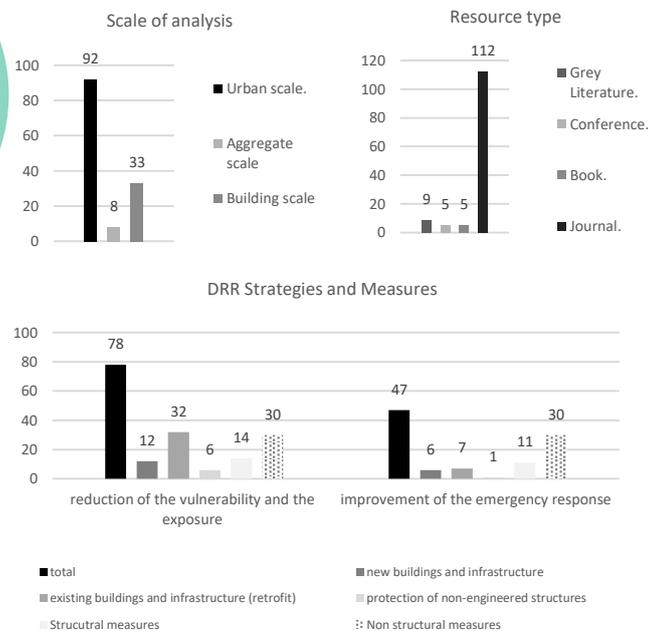
The Disaster Risk Reduction (DRR), with the objective of anticipating-reducing risk, and Disaster Risk Management (DRM), concerning the actions that aim to reduce risk, are the main areas while deepening the study of Sudden Onset Disasters (SUOD) and their impact to the Built Environment (BE). Disaster risk reduction strategies and policies define goals and objectives across different timescales and with appropriate targets, indicators, and time frames. In line with the Sendai Framework for Disaster Risk Reduction 2015-2030, these should be aimed at preventing the creation of disaster risk, the reduction of existing risk, and the strengthening of economic, social, health, and environmental resilience.

This report aims to conduct a systematic review of the literature to gain insight into how DRR can be improved in urban areas. When dealing with earthquakes, it is possible to identify two main categories of seismic risk mitigation strategies focusing on the: Reduction of the Vulnerability and/or the Exposure (RVE); or Improvement of the Emergency Response (IER). These strategies can then be applied through a series of measures distinguishable into structural and non-structural measures.

A more specific focus on documents with quantitative indicators for the DRR has been realized. From the analysis of the results, the research was mainly carried out with 4 areas of attention for the indicators: a holistic approach that combines social or management factors, the urban form, and morphology, the role of open spaces, the analysis methods of the city's paths network.



SYSTEMATIC AND BIBLIOGRAPHIC REVIEW



DRR STRATEGIES AND BE FOCUS

DRR strategy	BE focus	Keywords	Selected elements for possible research implementation
RVE	Holistic approach	Percentage of built space Risk perception Networks of paths and open spaces	Percentage of built space Risk perception Casualties of death Entry points to the buildings Population density Multiple-scenarios
	Urban form	Fragility and protection characteristics Casualties of death Entry points to the buildings	
IEV	Open spaces	Built density around the open spaces Priority scales Risk perception	
	Road networks	Economic feasibility Multiple-scenarios Population density	