

# Cultural Heritage at risk and the H2020 specific calls

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## SU-DRS01-2018-2019-2020

focus on: (flash) flooding and climate-change disasters (multi-scenario in terms of European Country and disaster), as well as on sudden-onset disasters like earthquakes, and multi-risk approach

our skills: **tools for increasing risk awareness** (disaster management) including communication aspects should include simulators and real-time management tools. Developing existing and new **simulation software** to assess how to manage the emergency process in urban areas by considering the human factor will be a suitable strategy for evaluating which solutions could enhance community's resilience. Different risks could be jointly considered by firstly proposing specific risk assessment models (according to this approach to the human-factor inclusion in analysis and planning) and then combining them in a unique toolkit. According to our previous research, scenarios creation procedures (based on quick risk assessment strategies that could be easily applied to the large urban scale) and indexes for the assessment of emergency scenario risks in built historical environment will be included to compare different Heritage conditions input and evaluated the related models output. Comparisons of effectiveness of existing and innovative disaster management strategies will be allowed by including **behavioural-based solutions** (including training actions) point of view, since models will also be able to represent human responses and actions in disasters emergencies. Tools for population-rescuers' coordination and communication are requested.

## SU-DRS02-2018-2019-2020:

focus on: earthquakes, flooding, terrorist acts in Cultural Heritage

our skills (applicable to Sub-topic 1 and 4): **tools for individuals self-help** (e.g.: guiding autonomous people) also in terrorist actions (e.g.: similarly to calls on terrorism, i.e. FCT02/sub-topic open), by promoting **guidance elements for population support** (including both building components and robots/apps), by linking rescuers' and population information and requests. Such guidance and communication tools will be able to take advantages of risk assessment models and indexes concerning risk assessment for historical built environment characterization (i.e. risk of paths and assembly points in emergency conditions, which could be defined according to pre-disaster assessment activities) and of an Internet of Things approach (i.e. sensors placed within the historical environment could provide additional data in real-time communication scenarios, to modify paths risk and support people while moving towards assembly points; in offline conditions, local storage paths risk data will be used).

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