

# European Early Warning System

Acronym: **EVE**

Grant Agreement: **826292 - EVE**

<http://www.eevolcanoearlywarning.eu>



# EVE-Basic project data



*Total eligible cost:* **1,539,227 euros**

*EC co-financing:* **718,300 euros**

*Duration:* **24 months**

*Area of activity:* **Prevention, volcanic risk, early warning**

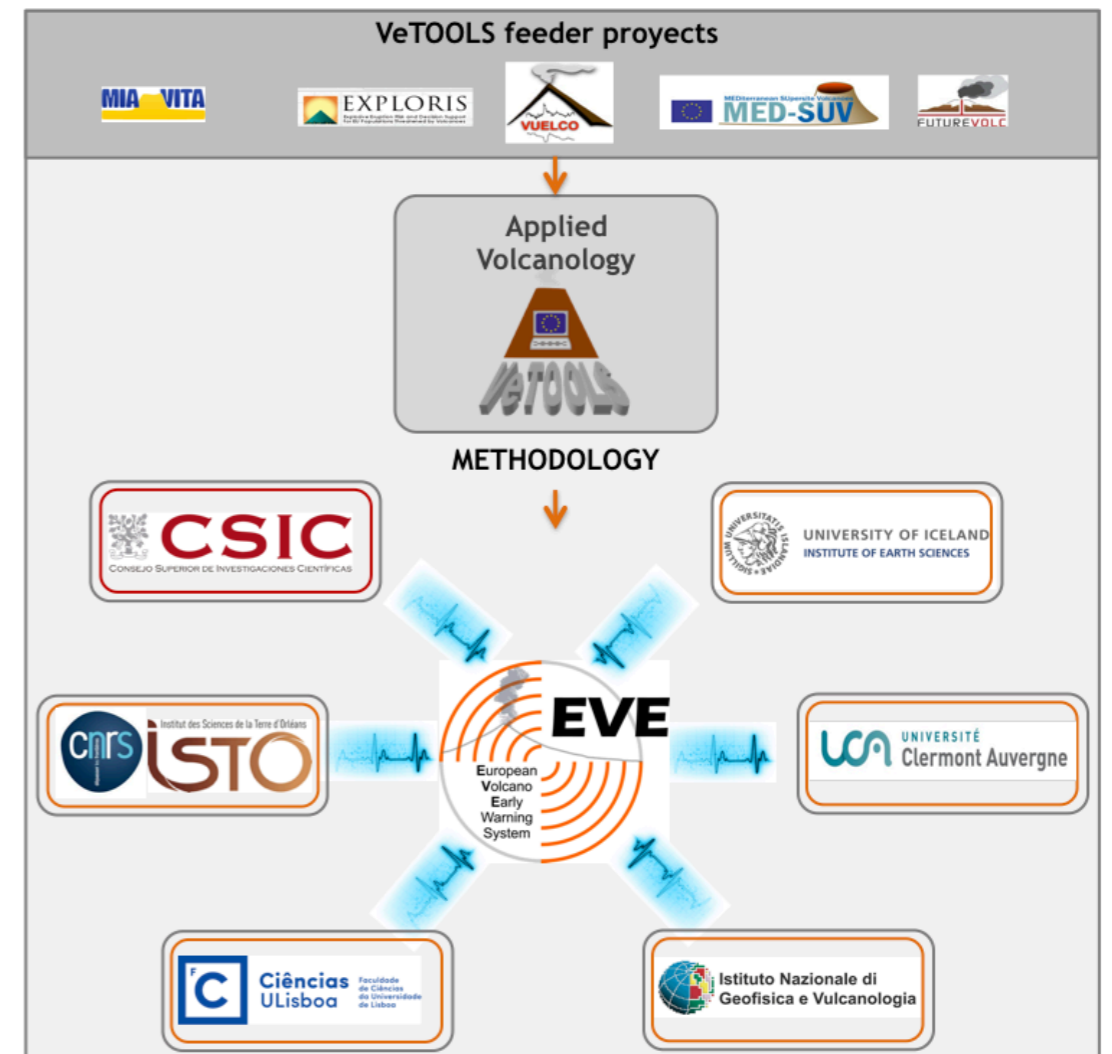
*Working groups:* *Institute of Earth Sciences Jaume Almera, **CSIC, Spain**; Institute of Earth Sciences, **University of Iceland**; ISTO Orleans, **CNRS, France**; Laboratoire Magmas et Volcans, **Université Clermont Auvergne, France**; Osservatorio Vesuviano, Osservatorio Etneo, **INGV, Italy**; Faculdade de Ciências, **Universidade de Lisboa, Portugal***

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# Motivation and objective

- Volcanoes are multihazard systems that may impact beyond geographical and political borders (e.g., Eyjafjallajökull 2010)
- Volcanic eruptions are generally preceded by a period of unrest marked by an increase in seismicity, ground deformation, and gas emissions. So, we have time before the eruption starts
- Early warning is a major element of disaster risk reduction.



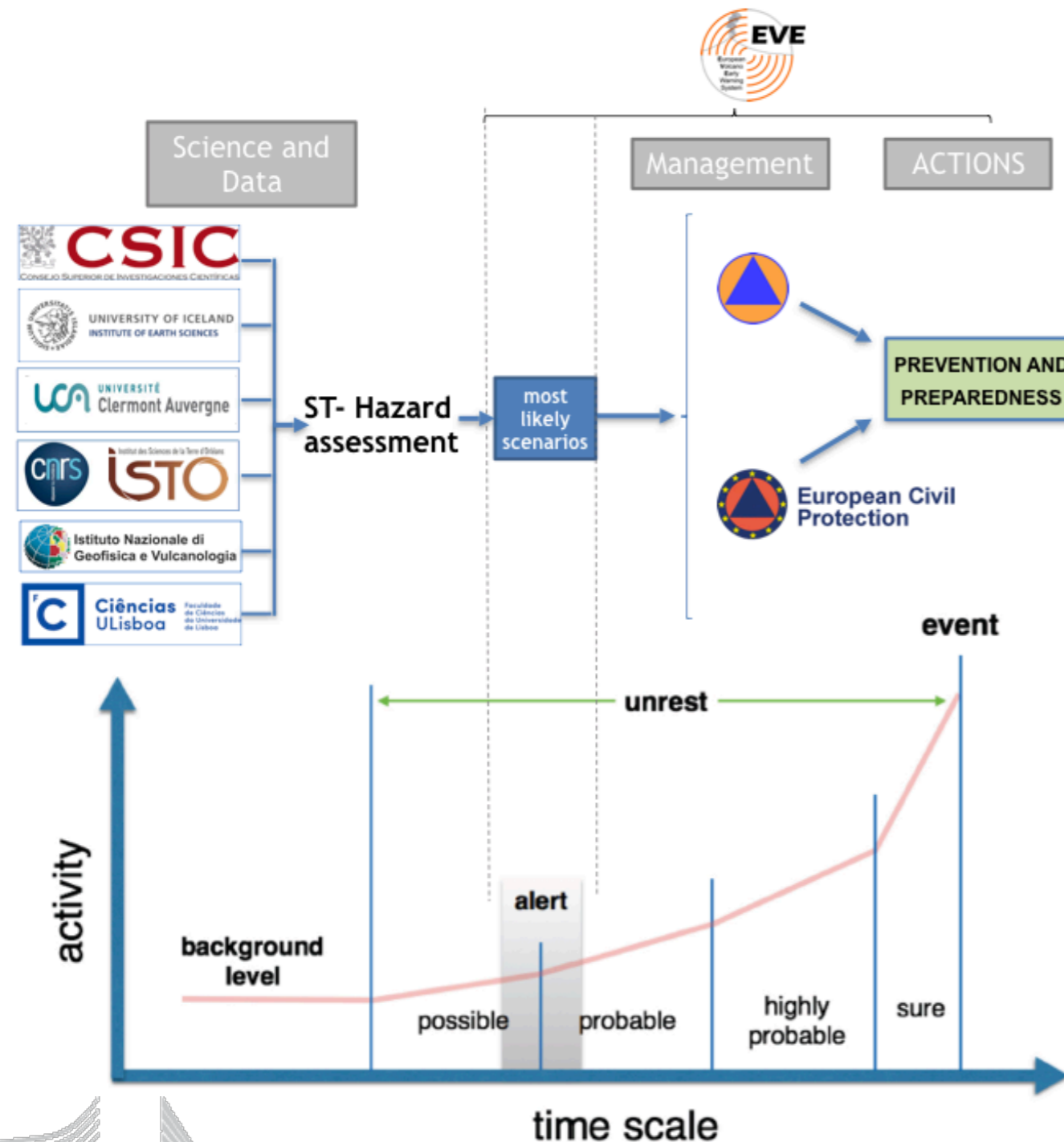
**Objective:** to provide an easy and rapid way to forecast in real time how, when and where a new eruption may occur, thus helping to predict the most probable eruption scenarios and their potential impacts, so allowing the European Civil protection entities and the European Emergency Response Coordination Centre to react with sufficient time ahead of the potential impact of a volcanic eruption



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# EVE: how it works



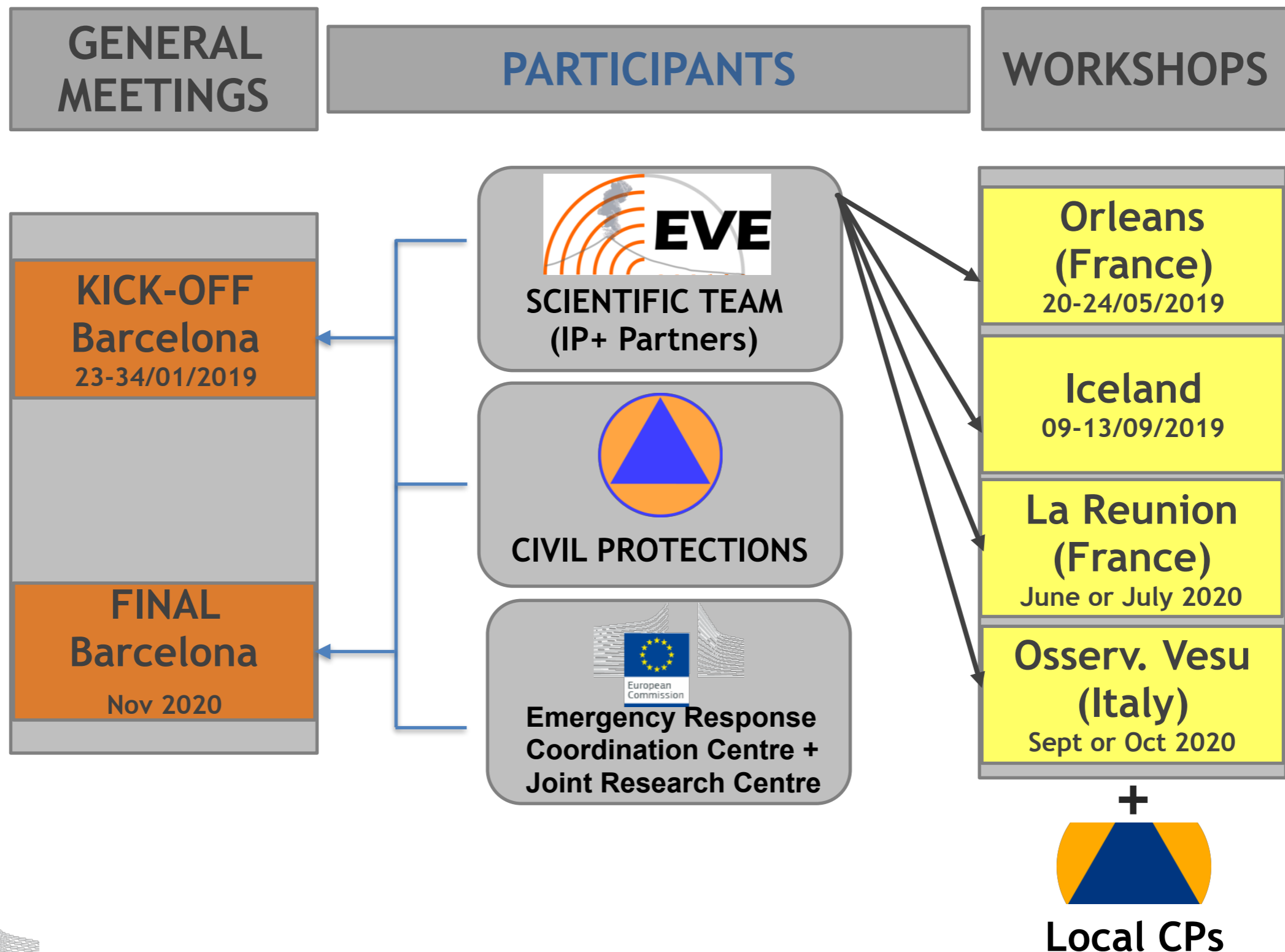
## Tasks:

- 1) To analyse pre- and eruptive monitoring patterns and eruption characteristics of a series of eruptions of European volcanoes and similar ones from other regions.
- 2) To apply retrospective short term analysis to all cases selected, identifying and characterising common trends of behaviour in different eruptions (and failed eruptions) of the same volcanoes and among volcanoes of similar characteristics
- 3) To determine time scale and eruption scenarios relationships among the different cases studied
- 4) To define coordination actions and protocols to implement the volcano EWS at European level and to facilitate communication and dissemination of alerts
- 5) To identify regional and national capabilities to respond to the early warnings received.

## Expected outcomes

- 1) a communication operator to inform CPs in a standardised way on any new alert, current unrest situation, eruption forecast and probable eruption scenarios, and evolution of the potential hazards (e.g: ash eruption cloud),
- 2) a probabilistic time evolution forecast of unrest and its possible outcomes,
- 3) a visualisation system to represent probable eruption scenarios and the extend of possible derived hazards.

# EVE: main events



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