

SERIES- Seismic engineering research infrastructures for European synergies

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European seismic engineering research suffers from extreme fragmentation of research infrastructures (RI) between countries and limited access to them by the S/T community of earthquake engineering, especially that of Europe's most seismic regions. A 23-strong Consortium of the key actors in Europe's seismic engineering research (including 3 industrial partners) addresses these problems in a sustainable way via a 4-year programme of activities at an annual cost to the Commission less than 1.35% of the total present value (190m) of the RIs material resources. The scope covers all aspects of seismic engineering testing, from eight Reaction Wall Pseudodynamic (PsD) facilities and ten Shake Table labs, to EU's unique Tester of Bearings or Isolators, its two major Centrifuges and an instrumented Site for wave propagation studies.

Transnational Access is offered to a portfolio of world class RIs: EU's largest PsD facility, four diverse Shake Tables and the two Centrifuges. Networking sets up a public distributed database of past, present and future test results, installs distributed testing capabilities at all PsD labs, fostering development of up-and-coming ones at Europe's most seismic regions, drafts and applies protocols for qualification of RIs and engages the entire European community of earthquake engineering via the best possible instances: the European Association of Earthquake Engineering, EU's seismic code makers and their national groups, the European Construction Industry, as well as all relevant S/T associations or networks. Joint research engages all labs, exploring and prototyping novel actuators (combination of electro-dynamic and hydraulic ones) for better control of fast tests or special applications, new sensing and instrumentation systems, data assimilation in equipment-specimen models for better test control and optimisation of testing campaigns, as well as experimental studies of soil-structure interaction at all types of testing.

Coordinator

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Subprogramme Area Targeted approach: Integrated Activities to support the specific needs of thematic priority areas

Contract type -