



Terabit Network for Research and Academic Big Data in Italy

2023

RESEARCH INFRASTRUCTURE

HPC infrastructure



The Italian node of European infrastructure PRACE

High-speed Network



GARR, the Italian Research & Education Network

Cloud edge for Big Data and AI



The INFN distributed computing infrastructure

In Europe

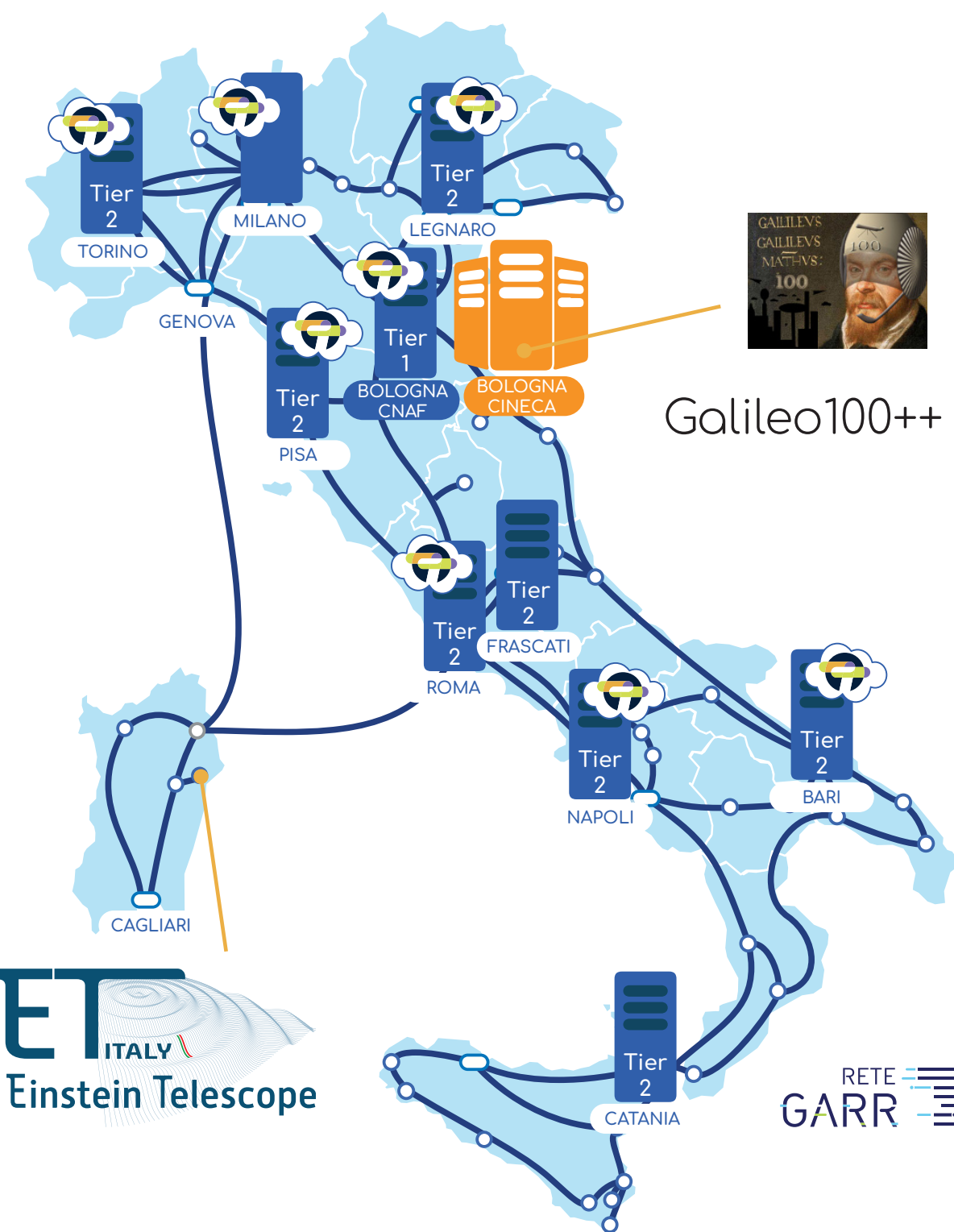
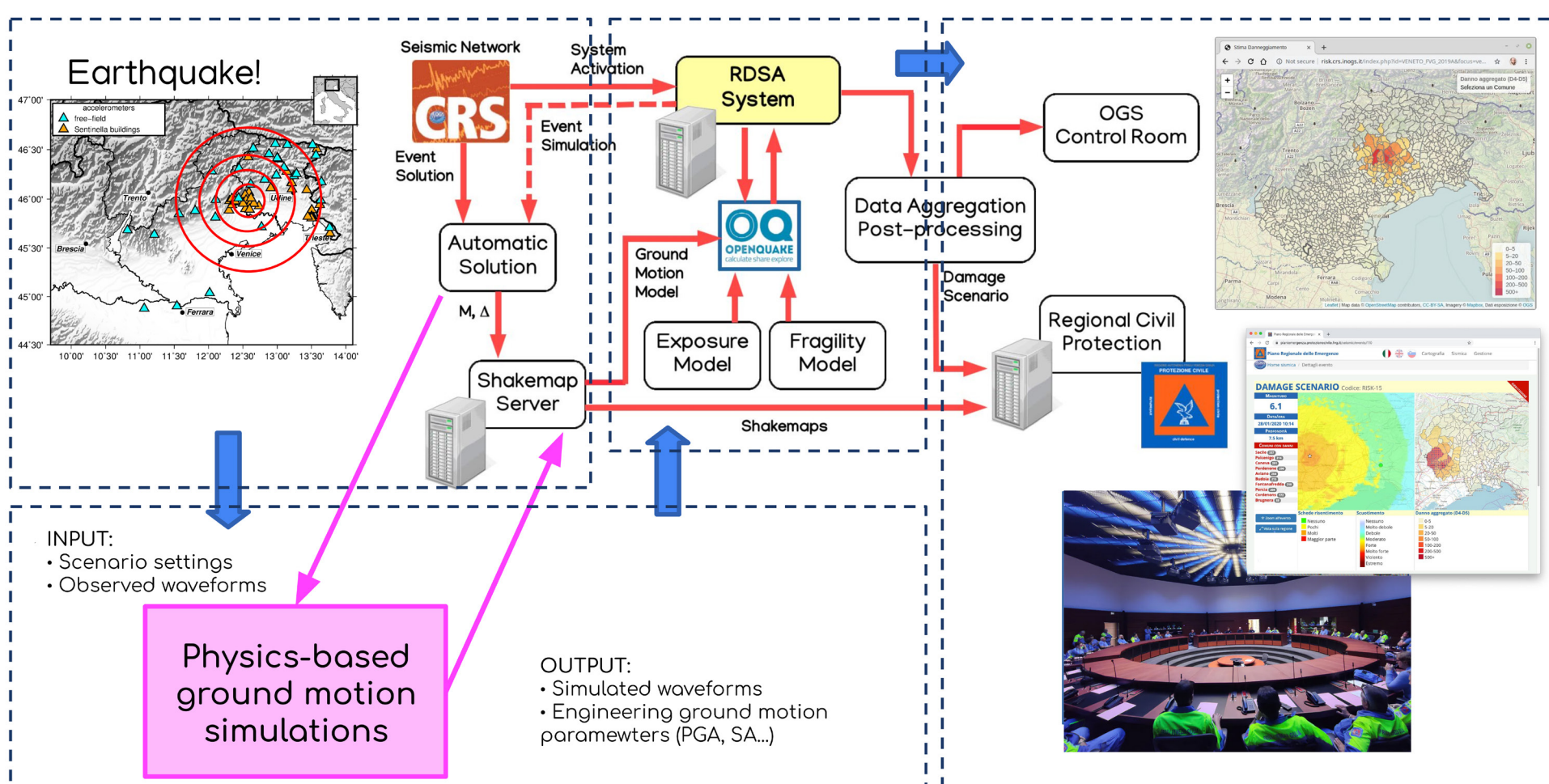


EuroHPC Joint Undertaking



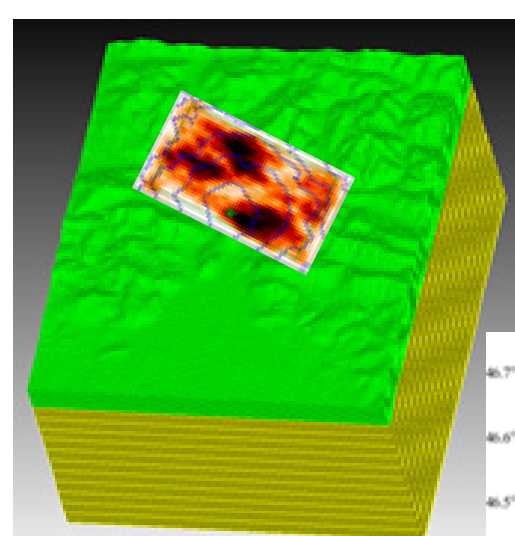
USE CASE

A near real-time earthquake physics-based ground motion simulations in northeastern Italy



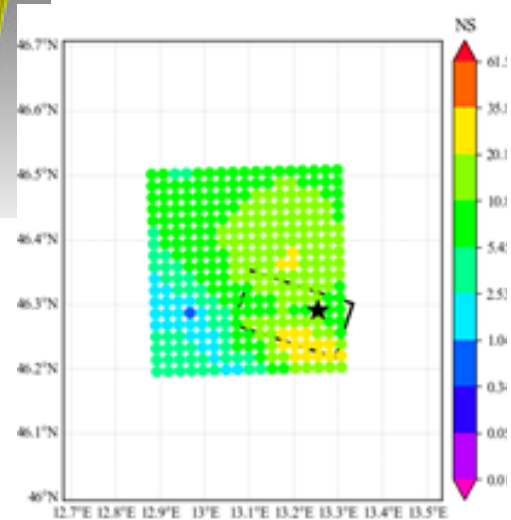
Initial results

- Definition of the calculation workflow and requirements (time, HPC resources)
- Workflow implementation within the Terabit infrastructure
- Definition of two seismic scenarios for testing
- Identification of challenges and opportunities on different Terabit services



Physics-based simulations for selected scenario (epicenter and fault)

with the support of POLITECNICO MILANO 1863



HPC enhancement



Terabit network



HPC bubble

