

Organisation name and website: Università degli Studi di Napoli Federico II (UNINA), http://www.unina.it	
General Description	UNINA, founded in 1224, is one of the most ancient Academic Institutions in the world and ranks third among Italian Universities by number of students. UNINA has nearly 5000 employees, including more than 3500 professors and researchers distributed in 26 Departments. Post-graduate formation is organized into 38 PhD Schools, with >400 students per year. UNINA has participated in 144 H2020 projects, including 37 MSCA (15 MSCA ITN). The three Departments involved in this proposal (DiSTAR, DiB and DiCMAPI) have a record of scientific leadership and impact at a global level and of educational and research networking with top international institutions.
Scientific group of reference	Prof. David Iacopini (20%): expert in subsurface geophysical imaging and geological modelling; In his career he has been advisor of 6 PhD thesis and more than 20 MSc students. He is currently advising another 2 PhD. He is the Coordinator of the SHINE project, he will supervise one ESRs and contribute to training in the second Winter School and organising conference sessions. Prof. Donato Giovannelli (10%): expert in subsurface microbiology and extremophilic metabolisms. ERC scientist, he has been advisor of 3 PhD thesis and 13 MSc students. He will supervise one ESRs and contribute to training in the second Winter School and organising conference sessions. Prof. Almerinda Di Benedetto: expert in explosions, catalysis and CFD simulations of reactive flows. She has been involved in Schools for Fire fighters, in Masters in industrial safety. She will contribute to training in the second Winter School and organising conference sessions. Prof Mariano Parente
Key Research Facilities, Infrastructure and Equipment	The UNINA Departments involved in this proposal counts with high-performance computers for subsurface imaging and numerical simulations and with laboratory facilities for performing experiments with gas under high pressure and temperatur: anaerobic hydrogenotrophic metabolisms, microbial physiology of extremophiles, genomic and metagenomic sequencing and a large bioinformatic cluster; analysing the geochemical composition of water and rock samples;.
Involvement in Research and Training Programmes	1.GEORES, MSCA-RISE under project no.: 847593 2.PANORAMA, MSCA-ITN under project no.: 857989 3.CRESCENDO, H2020-MSCA-COFUND- GA No. 101034245
Publications/datasets/softwares/ Innovation Products/ other achievements	1.Bitrus, P.R., Iacopini, D., Bond,C.E. (2016). Defining the 3D geometry of thin shale units in the Sleipner reservoir using seismic attributes. <i>Marine and Petroleum Geology</i> 78: 405-425. 2. Grippa,A. Hurst,A, Palladino,G., Iacopini,D. Lecomte,I., Huuse,M (2019). Seismic imaging of complex geometry: Forward modeling of sandstone intrusions, <i>Earth and Planetary Science Letters</i> , 513,2019,51-63, 3. Fullerton, K. M., Schrenk, M. O., Yücel, M., Manini, E., Basili, M., Rogers, T. J., et al. (2021). Effect of tectonic processes on biosphere–geosphere feedbacks across a convergent margin. <i>Nature Geoscience</i> 14, 301–306. doi:10.1038/s41561-021-00725-0. 4. Vitale Brovarone, A., Sverjensky, D. A., Piccoli, F., Ressico, F., Giovannelli, D., and Daniel, I. (2020). Subduction hides high-pressure sources of energy that may feed the deep subsurface biosphere. <i>Nature Communications</i> 11, 3880. doi:10.1038/s41467-020-17342-5.: L. Centrella, M. Portarapillo,,G. Luciani, A. Di Benedetto, Synergistic behavior of flammable dust mixtures: A novel classification, <i>Journal of Hazardous Materials</i> , Volume 397, 5 October 2020, 122784