ESCAPE

European Science Cluster of Astronomy & Particle physics ESFRI research infrastructures - ESCAPE

Tipologia Progetto:	**EU**
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Call for Proposal:	**H2020-INFRAEOSC-2018-2**
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Coordinatore:	**CNRS - CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE**
	INFN – Sezione di Pisa
Responsabile INFN:	**Tommaso Boccali**
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Sito web:	**https://projectescape.eu/**

Descrizione: ESCAPE (European Science Cluster of Astronomy & Particle physics ESFRI research infrastructures) aims to address the Open Science challenges shared by ESFRI facilities (SKA, CTA, KM3Net, EST, ELT, HL- LHC, FAIR) as well as other pan-European research infrastructures (CERN, ESO, JIVE) in astronomy and particle physics. ESCAPE actions will be focused on developing solutions for the large data sets handled by the ESFRI facilities. These solutions shall: i) connect ESFRI projects to EOSC ensuring integration of data and tools; ii) foster common approaches to implement open-data stewardship; iii) establish interoperability within EOSC as an integrated multi-messenger facility for fundamental science. To accomplish these objectives ESCAPE will unite astrophysics and particle physics communities with proven expertise in computing and data management by setting up a data infrastructure beyond the current state-of-the-art in support of the FAIR principles. These joint efforts are expected result into a data-lake infrastructure as cloud open-science analysis facility linked with the EOSC. ESCAPE supports already existing infrastructure such as astronomy Virtual Observatory to connect with the EOSC. With the commitment from various ESFRI projects in the cluster, ESCAPE will develop and integrate the EOSC catalogue with a dedicated catalogue of open source analysis software. This catalogue will provide researchers across the disciplines with new software tools and services developed by astronomy and particle physics community. Through this catalogue ESCAPE will strive to cater researchers with consistent access to an integrated open-science platform for data-analysis workflows. As a result, a large community "foundation" approach for cross-fertilisation and continuous development will be strengthened. ESCAPE has the ambition to be a flagship for scientific and societal impact that the EOSC can deliver.