



ESCAPE

European Science Cluster of Astronomy &
Particle physics ESFRI research Infrastructures

ESCAPE OSSR Final Workshop Prospects for Future Collaboration

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ESCAPE - The European Science Cluster of Astronomy & Particle Physics ESFRI Research Infrastructures has received funding from the European Union's Horizon 2020 research and innovation programme under the Grant Agreement n° 824064.



- ESCAPE transforms into the **ESCAPE Open Collaboration**
 - Partners use reasonable endeavours to achieve the objectives
 - Work will be managed workplan and current organisational structure
 - Partner contribute the time and effort necessary to complete the work
- Work Plan (currently) with 12 points
 - Common infrastructure, **repository and catalogue for software**, VRE, collaborative operations, citizen science, advanced technologies, HPC community, **virtual software institute**, career development, science projects, European Strategy for Data
- Strive to include new partners (e.g. for onboarding following “train the trainers”)



Current ESCAPE EOSC cell

ESCAPE OSSR
 Catalogue & Repository of resources

- Datasets
- Software & services
- Tutorials
- Training
- Publications

TSP's

RI-Specific Science Platforms

ESCAPE VO Virtual Observatory

Astronomy Data centres | VO Registry | VO Services

VO Registry | Analysis Tools | VO Services

ESCAPE SAP Science Platforms

Workflows, notebooks, deployment platforms, packaging

ESCAPE CS Citizen Science

ESCAPE DIOS Data Lake

FAIR data management
 Content discovery and delivery

HPC

HTC

Grid clusters, etc

Private/public clouds

Commercial clouds

GÉANT





The new ESCAPE Collaboration work programme

ESCAPE CC
Operating the community-based "Competence Center" for EOSC-alignment, train and support, extended outreach, financial model for services and networking with other SCL-CCs

ESCAPE EVSI
R&I for an "European Virtual Institute for Research Software" for advanced technologies



Instances

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VRE services

ESCAPE DIOS Data Infrastructure for Open Science
Access physical & e-infrastructure
Processing & Analysis
Security & Operations



ESCAPE OSSR Open-source Scientific Software and Service Repository
Aggregator & Integrators
Sharing and Discover
Training & Support

ESCAPE ESAP ESFRI Science Analysis Platform
Processing & Analysis
Sharing and Discovery
Training & Support

ESCAPE CS Citizen Science
Sharing and Discovery

ESCAPE VO Virtual Observatory
Processing & Analysis
Sharing and Discovery
Training & Support

Programmes

ESCAPE COSO
Challenging "Open Science Objectives" by RI commitments in Open Science Projects (OSP) as well as Cross-Cluster Open Science Projects (COSP)

ESCAPE TECH
Bring the FAIRness within technology, R&D and innovation projects as well as explore new "close-to-sensors" low-latency open-data science

ESCAPE CARS
Career development and rewarding for researcher committing in Open Science. Planning, tracking, and assessing scientific knowledge production

ESCAPE SDSS
Building synergies on "Sector Data Spaces" for Society: Green deal, Health, Manufacturing, Education and Skills





Inter-cluster ESCAPE “instance”

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One of the announced goals within the new ESCAPE collaboration agreement work programme is the establishment of a:

“European Virtual Institute for Research Software”
an inter-cluster Competence Centre for Research Software and Skills

In this context the term Research Software encompasses the software and tools used for scientific data processing and analysis, and also the software and tools associated with building and supporting the computing and data environment within which that processing and analysis is performed.





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- Developed in collaboration across the Science Clusters and existing national competence centres
- Providing a framework to train and to cross-fertilize knowledge between different science domains and available across domains.
- A scalable approach to the stewardship of reusable scientific software for Open Science.
- The activity should build on work in national projects as well as international cooperative frameworks such as the “foundation ones”, namely the existing High Energy Physics Software Foundation (HSF) and the ESCAPE software innovation foundation group.
- It will be part of the ESCAPE “Instances”,
 - ✓ raising also **awareness** of software and computing as a **key enabler in science**;
 - ✓ ensuring that software development and scientific computing is regarded as a **first-class activity** of performing science.

