OSCARS
Open Science Clusters' Action for Research & Society

Cascading grant call for Open Science projects and services

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CNRS-IN2P3-LAPP

OSCARS kick-off meeting - 15 March 2024

The Science Clusters address a warm welcome to:

- OSCARS consortium partners.
- Research Infrastructures composing the five Science Clusters and their corresponding scientific communities (including all representatives of Universities and National Institutes).
- The EOSC–Association, the board, representatives and all concerned collaborative project members.
- The ESFRI and EC boards members.
- All interested colleagues.

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The Science Clusters are really happy to announce the official launch of the first cascading grant call for Open Science projects and services.

OSCARS
Open Science Clusters' Action for Research & Society

1st OSCARS Open Call for Open Science Projects & Services

Launch event, 15 March 2024 - FIGURES

+400
REGISTERED PARTICIPANTS

~300
INSTITUTIONS

77%
of attendees from institutions BEYOND THE SCIENCE CLUSTERS

23%
of attendees from EOSC-related projects/initiatives or TFs

OSCARS OVERVIEW

In response to the EU call on EOSC
HORIZON-INFRA-2023-EOSC-01-01

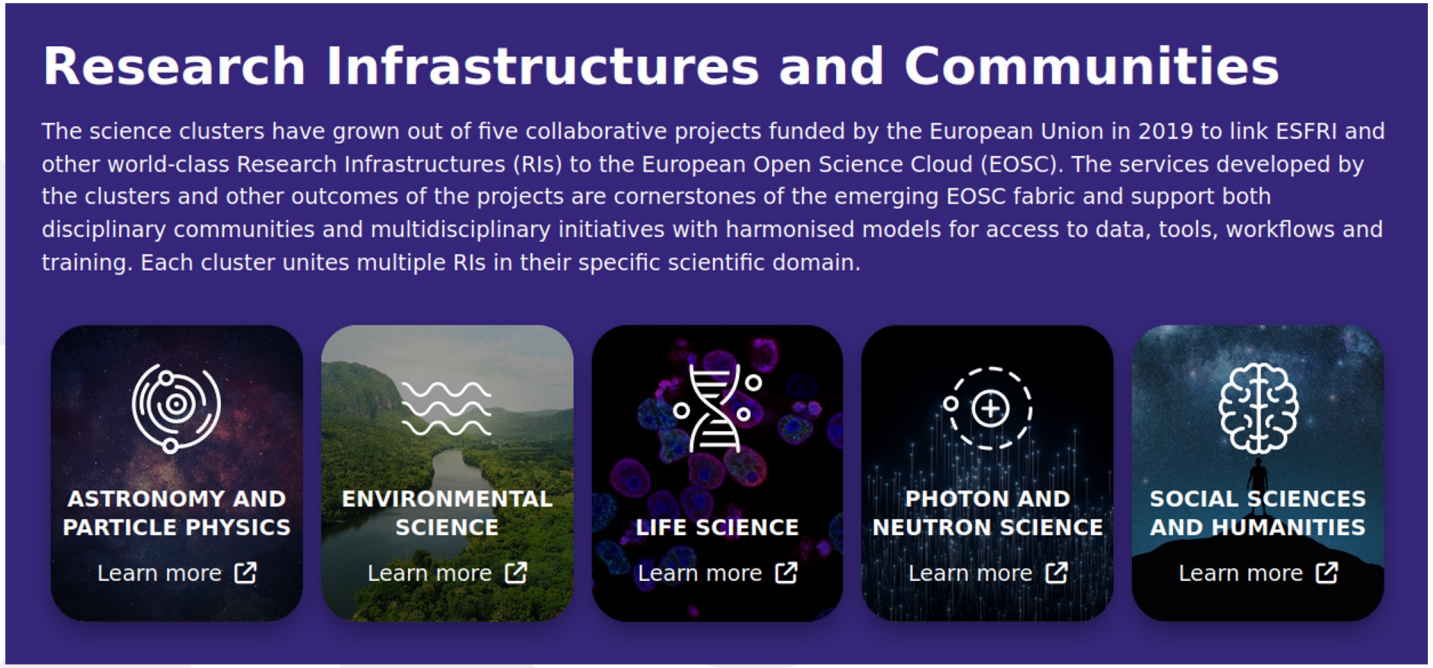
- Building on the **Science Cluster approach** (since 2019)
- to ensure the **uptake of EOSC by research communities**

Partners

- Coordinator: **CNRS**-LAPP
- **15** partners, **2-3** representing each Science Cluster community

Budget and timeline

- Starting date: **1 January 2024**
- Duration: **4 years**
- EC funding: **25 M€** (100%)

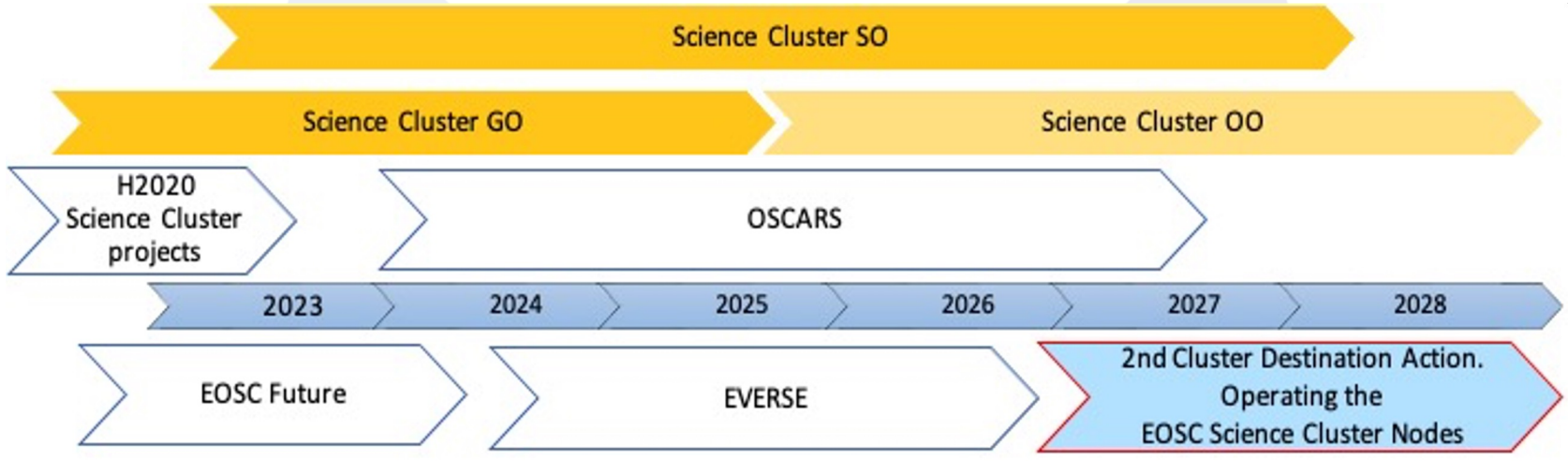


https://science-clusters.eu/

SCIENCE-CLUSTERS.eu
Research Infrastructures for Open Science

OSCARS as a main step forward

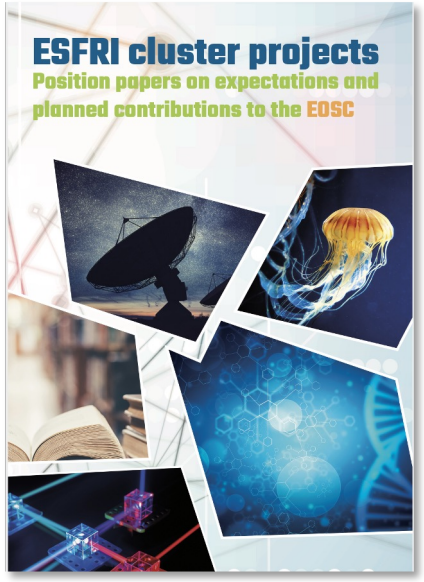
- **OSCARS as a “relevant phase” of the overall Science Clusters’ workplan.**
- **OSCARS is an inter-cluster “cooperative framework open to all”.**
- **With OSCARS the Science Clusters integrate the EOSC long-term programme and strengthen the EOSC scientific ambitions.**



The Science Clusters’ workplan addresses General, Specific and Operational Objectives (GO, SO & OO).

ESFRI SCIENCE CLUSTERS

The Science Cluster concept was aimed at supporting "**Open-science data-intensive research**" in order to "**raise productivity of researchers and to lead to new insights and innovation**" and has enabled broader synergies and **shared visions**



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https://zenodo.org/record/4889503

https://indico.in2p3.fr/event/24327/

EOSC Future

A small but impactful participation and a step forward in shaping the SCL work plan.

- Supporting Open Research Test Science Projects
- Fostering the domain based EOSC exchange services for RIs
- Integrating them with EOSC core functionalities

After H2020 grants, the five Science Clusters are putting long-term structures in place (through MoU or Collaboration Agreements).

Definition of more structuring inter-Cluster objectives.

SCIENCE-CLUSTERS.eu
Research Infrastructures for Open Science

The Science Clusters in Horizon Europe : OSCARS and EVERSE

- Acknowledge software achievements, raise awareness of the foundation approach (virtual institute), promote careers and skills
- Implement EOSC through highly composable platforms (VRE), including software
- Consolidate SCL services and support the goals of Open Research.

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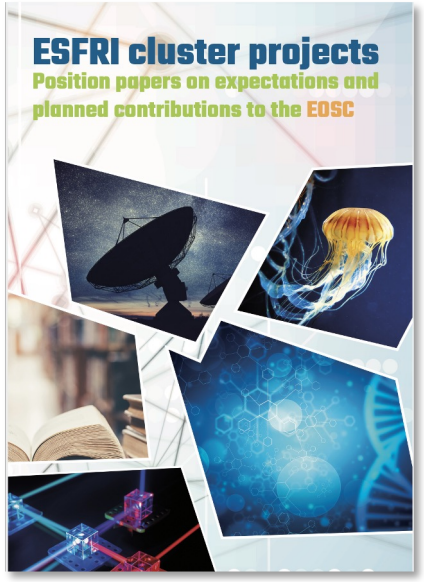

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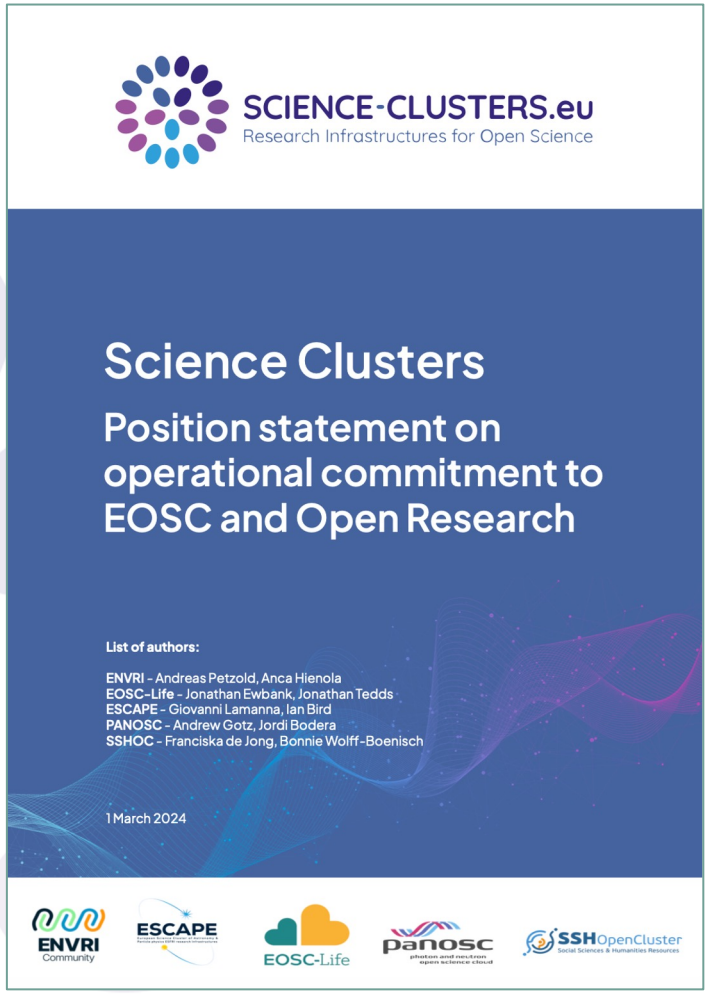


https://doi.org/10.5281/zenodo.10732049

CASCADING-GRANT CALLS FOR OPEN SCIENCE PROJECTS

GOAL:

Build on the science cluster approach to ensure the uptake of EOSC, i.e., consolidate FAIR services of the five Science Clusters and, more broadly, perform excellent science and pursue societal benefits by leveraging an Open Research approach.

TARGET USER COMMUNITIES:

Science Clusters and wider community (RIs, Universities, Institutes, either consortia, or individual researchers)

- Opens: ~ **March 2024 / Nov. 2024**
- Submission within **60 days**
- Project start: **Sept-Dec. 2024 / Aug-Oct. 2025**
- Budget: **100 - 250 k€** / project
- Duration: **1 - 2 years**

Evaluation criteria for the independent expert panel

- Project description: clear objectives, towards **FAIRness** and/or **openness**
- Scientific impacts: excellent science per **domain RI, multiple RIs / cross-cluster**
- Digital resources: "data", **SCL and EOSC** services / new service
- Implementation: **realistic** within budget

OSCARS CALL OBJECTIVES

Leading the involvement of a broad range of research communities in Open Research (EOSC) via the development of new **Open Science projects/services** to drive the uptake of FAIR-data-intensive research throughout the ERA by:

- Contributing to a **data space for science, research and innovation**, integrated into the other data spaces described in the European Strategy for Data.
- Pursuing the creation of **pan-European research-enabling value-added services**;
- Fostering the **coordination** of national activities, European RIs and the scientific community at large, including the long tail of science;
- Fostering **interdisciplinarity** for achieving challenging new science pathways.

€16 million

IN OPEN CALLS FOR OPEN SCIENCE PROJECTS

EXPECTED RESULTS

- The aim of the call is **to support researchers** engaging in or developing **Open Data Research** by conducting **Science Projects** that facilitate and foster sharing research data and results based on FAIR principles.

- Proposals that develop and/or make available services or tools (software; hardware; middleware; protocols; standards; benchmarks; documentation and training/mentoring materials; activities and resources), which enable **Open Research in a field** and encourage **open science practice** based on FAIR principles, are also eligible.

ALL DOMAINS

	Astrophysics, Cosmology, Particle or Nuclear Physics	Social Science and Humanities	Photon/neutron sources-based experimental research	Life sciences	Earth and environmental sciences	Other (specify)
Open Science Project						
Open Science Service						
Industry cooperation						
Citizen science						
Main RI concerned						
Cross-domain/ Cross-RI						
Other (specify)						

The calls are open to proposals responding to Open Science / Data FAIRNESS challenge(s) in all domains (as shown in the table)

EXPECTED RESULTS

- Open Science Projects or Open Science Services are **research activities** that exploit or foster the adoption of FAIR data, strengthen FAIR competences, practices and technologies.

- They are expected to **leverage and/or exploit** the Science Clusters' services aimed at **demonstrating and piloting** the use of EOSC resources. They can be cross-RI and/or cross-domain as well as projects with a high societal relevance (potentially multidisciplinary and/or cross-cluster).

- These projects can be proposed over a **large spectrum of scientific domains**, including industrial sectors. Therefore, they c**an be submitted by organisations/researchers beyond the current group of RIs** that are partners within the Science Clusters, **emerging RIs** or recently included in the updated **ESFRI Road map**. They can involve engagement with academic groups and industry, University Associations/Learned Societies, citizen scientists and the long tail of science.

EXPECTED RESULTS

- The **Principal Investigators** of these activities have **to commit** to the FAIR management of the achieved scientific results and all associated digital objects.

- A particular attention will be reserved for **relevant datasets from RIs, the innovative software and services for interoperability and legacy of data**.

- Projects must deposit the digital research data generated in the Science Clusters' trusted catalogues or other trusted repositories federated in the EOSC. **The projects should aim at enhancing the involvement of researchers in Open Science.**

Funding and conditions

Who can receive financial support?

- The financial support provided through OSCARS is open to Research Infrastructures, Universities, Institutes, consortia as well as individual researchers. Third parties receiving financial support are not subject to the rules on eligibility for funding provided for in Article 23 “Legal entities eligible for funding” of Regulation 2021/695 of the European Parliament and of the Council of the 28th of April 2021 establishing Horizon Europe.

Type of contribution

- Each application can apply for funding from a minimum of €100,000 (one hundred thousand Euro) to a maximum of €250,000 (two hundred and fifty thousand Euro) with a duration from 12 to 24 months.

Eligible Costs

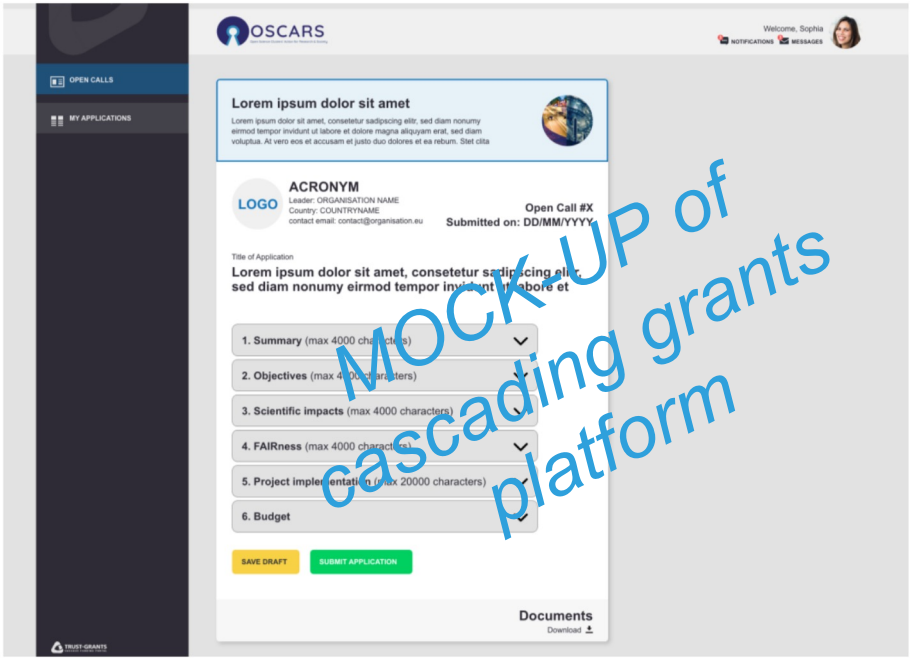
- Costs should meet the eligibility criteria for funding by the European Commission as set out in Chapter 3, Article 6 of the EU Model Grant Agreement - general-mga_horizon-euratom_en.pdf (europa.eu)

CASCADING-GRANT CALLS FOR OPEN SCIENCE PROJECTS

- 10 pages max
- Language: English

PROPOSAL'S STRUCTURE

- Proposal Title and Acronym
- Open Science/Data FAIRNESS challenge(s)
- Domain
- Consortium composition
- Duration and financial support
- Summary
- Project description
- Scientific impacts
- Digital resources
- Project Implementation and Final Deliverables



Deliverables for public dissemination:

- A final project summary in PDF format of maximum 5000 characters, including spaces.
- A presentation
- A "scientific journal or journal-type" article summarising the main project results and methodology used to achieve them.

Evaluation criteria

Project description

1. Are the Open Science aims and objectives of the proposed scientific project or service adequately and clearly explained?
2. Are the scientific objectives and expected outcomes of the proposal adequately and clearly defined?
3. Is the proposed project's engagement with a community or the contribution to Open Data Research adequately and clearly explained?
4. Is the contribution to or the leverage of the Science Cluster work programme clearly explained?
5. Is the relevance to ESFRI and other RIs of the proposed scientific project or service adequately addressed?

Scientific impacts

1. Is the scientific project and/or the service development proposed clearly going beyond the state of the art?
2. Is the potential large scientific impact adequately explained?
3. Is the expected impact of the proposed project on an ESFRI RI or on multiple RIs, or its capacity to engage through the Science Clusters with multiple RIs clearly illustrated?

Evaluation criteria

Digital resources

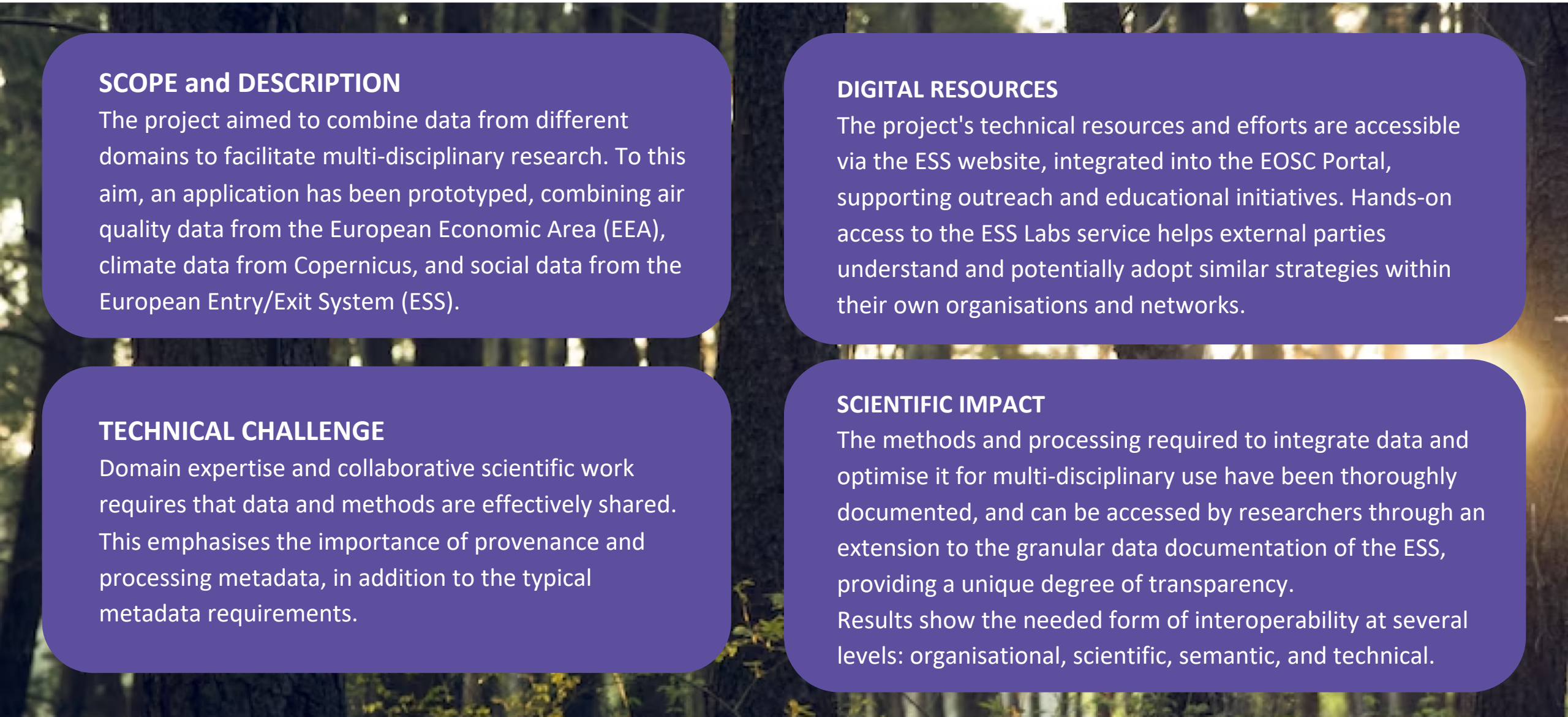
1. Is the proposed project adequately referencing the Science Clusters' platforms?
2. Are the digital resources required, and/or the connection to EOSC services envisaged, clearly identified?

Project Implementation and Final Deliverables

1. Are the project implementation steps concrete and well explained?
2. Are the anticipated results achievable with the implementation steps put in place and in the suggested timeframe?
3. Does the budget breakdown correspond to the presented implementation steps and is it reasonable?
4. Does the proposal adequately commit to EOSC compliance and openness of its results?

Climate-Neutral and Smart Cities project

Clusters: SSHOC, ENVRI-FAIR | https://www.oscars-project.eu/open-science-projects/climate-neutral-and-smart-cities



SCOPE and DESCRIPTION

The project aimed to combine data from different domains to facilitate multi-disciplinary research. To this aim, an application has been prototyped, combining air quality data from the European Economic Area (EEA), climate data from Copernicus, and social data from the European Entry/Exit System (ESS).

TECHNICAL CHALLENGE

Domain expertise and collaborative scientific work requires that data and methods are effectively shared. This emphasises the importance of provenance and processing metadata, in addition to the typical metadata requirements.

DIGITAL RESOURCES

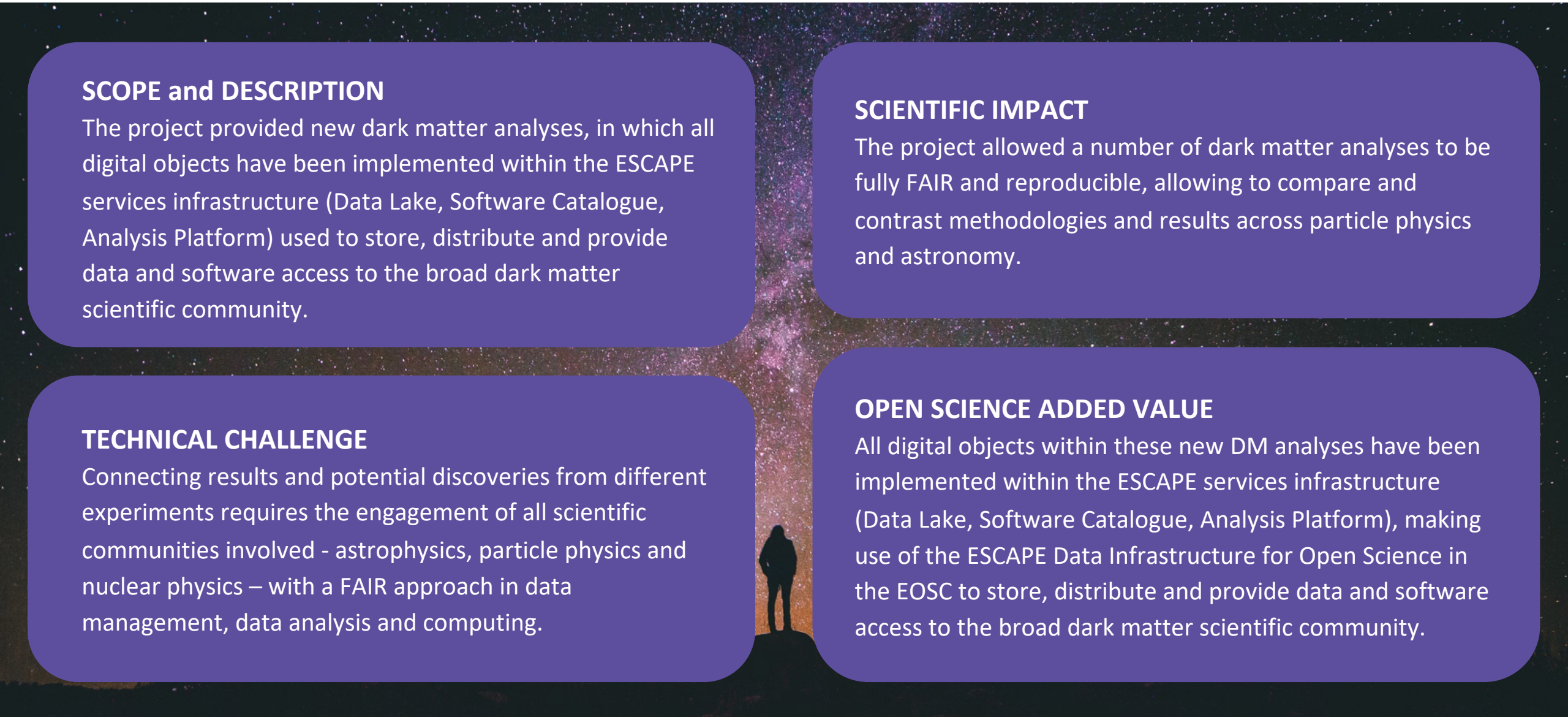
The project's technical resources and efforts are accessible via the ESS website, integrated into the EOSC Portal, supporting outreach and educational initiatives. Hands-on access to the ESS Labs service helps external parties understand and potentially adopt similar strategies within their own organisations and networks.

SCIENTIFIC IMPACT

The methods and processing required to integrate data and optimise it for multi-disciplinary use have been thoroughly documented, and can be accessed by researchers through an extension to the granular data documentation of the ESS, providing a unique degree of transparency.
Results show the needed form of interoperability at several levels: organisational, scientific, semantic, and technical.

Dark Matter Test Science Project

Cluster: ESCAPE | https://www.oscars-project.eu/open-science-projects/dark-matter



SCOPE and DESCRIPTION

The project provided new dark matter analyses, in which all digital objects have been implemented within the ESCAPE services infrastructure (Data Lake, Software Catalogue, Analysis Platform) used to store, distribute and provide data and software access to the broad dark matter scientific community.

SCIENTIFIC IMPACT

The project allowed a number of dark matter analyses to be fully FAIR and reproducible, allowing to compare and contrast methodologies and results across particle physics and astronomy.

TECHNICAL CHALLENGE

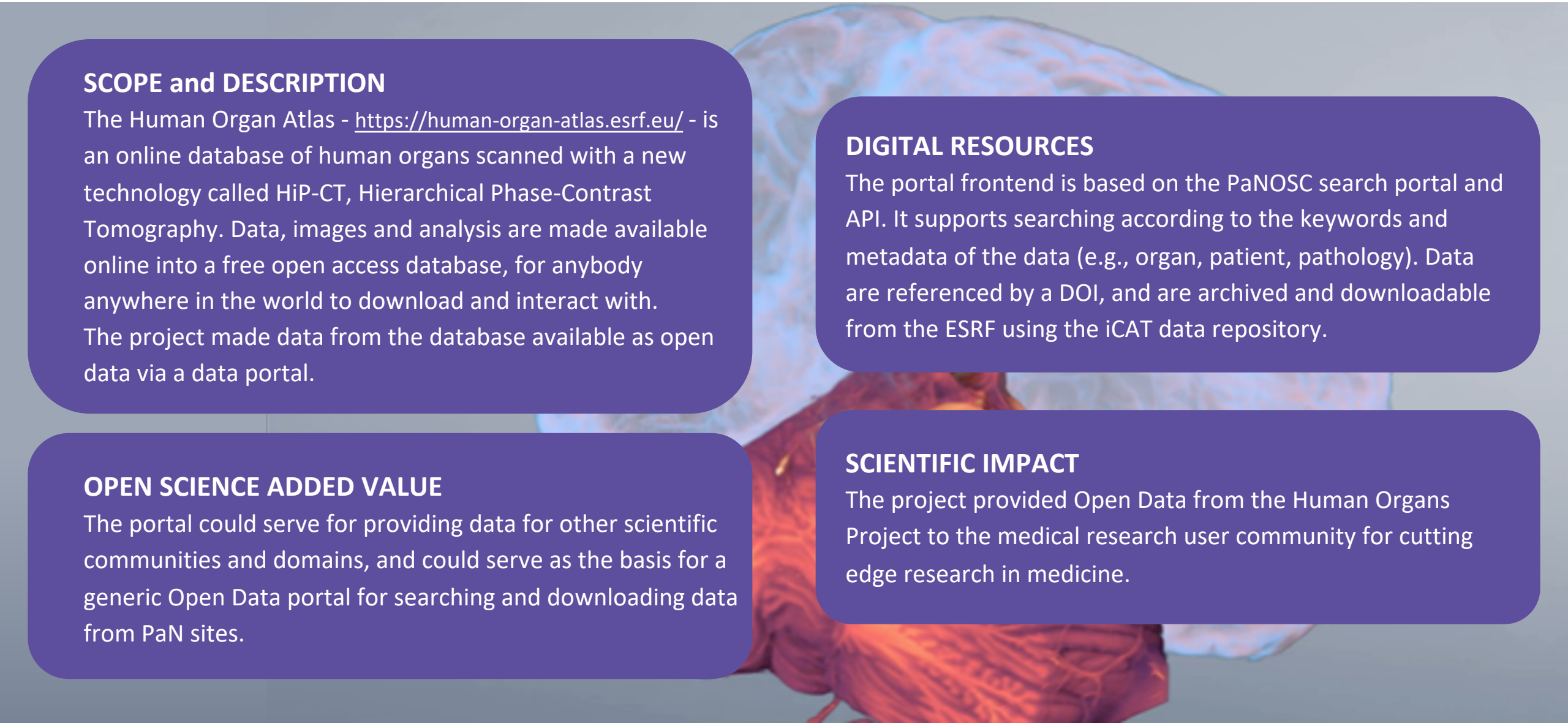
Connecting results and potential discoveries from different experiments requires the engagement of all scientific communities involved - astrophysics, particle physics and nuclear physics – with a FAIR approach in data management, data analysis and computing.

OPEN SCIENCE ADDED VALUE

All digital objects within these new DM analyses have been implemented within the ESCAPE services infrastructure (Data Lake, Software Catalogue, Analysis Platform), making use of the ESCAPE Data Infrastructure for Open Science in the EOSC to store, distribute and provide data and software access to the broad dark matter scientific community.

Human Organ Atlas Project

Cluster: PaNOSC | https://www.oscars-project.eu/open-science-projects/human-organ-atlas-search-portal



SCOPE and DESCRIPTION

The Human Organ Atlas - https://human-organ-atlas.esrf.eu/ - is an online database of human organs scanned with a new technology called HiP-CT, Hierarchical Phase-Contrast Tomography. Data, images and analysis are made available online into a free open access database, for anybody anywhere in the world to download and interact with.
The project made data from the database available as open data via a data portal.

DIGITAL RESOURCES

The portal frontend is based on the PaNOSC search portal and API. It supports searching according to the keywords and metadata of the data (e.g., organ, patient, pathology). Data are referenced by a DOI, and are archived and downloadable from the ESRF using the iCAT data repository.

OPEN SCIENCE ADDED VALUE

The portal could serve for providing data for other scientific communities and domains, and could serve as the basis for a generic Open Data portal for searching and downloading data from PaN sites.

SCIENTIFIC IMPACT

The project provided Open Data from the Human Organs Project to the medical research user community for cutting edge research in medicine.

FAIR Phytoliths Project

Cluster: LS RI | https://www.oscars-project.eu/open-science-projects/fair-phytoliths-increasing-fairness-phytoliths-data

SCOPE and DESCRIPTION

Phytoliths are used to address questions of past plant exploitation and long-term environmental and biodiversity changes. The Project aimed to increase the knowledge of and the use of the FAIR data principles in phytolith research to improve communication of methods, data sharing and archiving practices within the discipline.

TECHNICAL CHALLENGE

Standardisation of phytolith research and data publication is still far from being achieved. Only half of the publications share some form of data and the majority do not provide reusable data.

OPEN SCIENCE ADDED VALUE

Increased FAIRness of phytolith data, data sharing and archiving practices.

SCIENTIFIC IMPACT

The project has conducted an evaluation of sharing practices in phytolith research; has created a GitHub repository for collaborative use and initiated the FAIRification project; and developed a webpage to provide the community with information on the project's results.

DIGITAL RESOURCES

- FAIR recommendations for the phytolith community to produce FAIR phytolith.
- Training workshops on standardised vocabularies and FAIR data.
- Future plans: creation of a phytolith ontology to aid interoperability of phytolith data and an online open repository for phytolith data.


OSCARS
Thank you