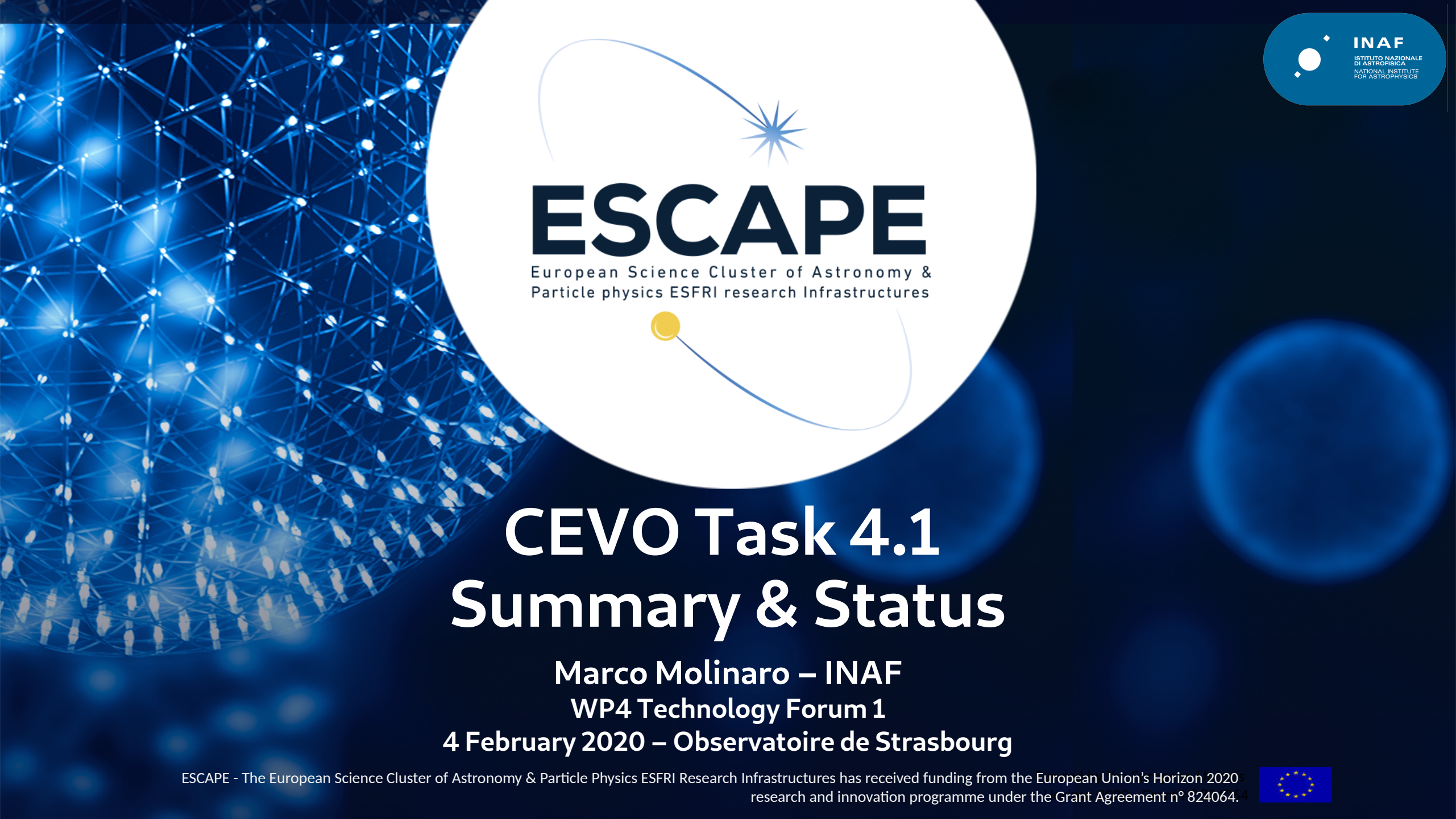

INAF
ISTITUTO NAZIONALE DI ASTROFISICA
NATIONAL INSTITUTE FOR ASTROPHYSICS

CEVO Task 4.1 Summary & Status

Marco Molinaro – INAF

WP4 Technology Forum 1

4 February 2020 – Observatoire de Strasbourg

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.

Task 4.1 – VO EOSC integration

Integration of astronomy VO data and services into the EOSC

- Assess and implement the connection of the ESFRI and other astronomy Research Infrastructures to the EOSC through the Virtual Observatory framework
- Activities involved
  - interfacing the VO framework with the EOSC
  - build an Astronomy portfolio of VO services
  - contributing to the EOSC Hybrid Cloud
  - containerising domain-specific services

Funded by the European Union's Horizon 2020 - Grant N° 824064

Activities Planning

- Inclusion of the VO Registry into the EOSC service catalogues
- Assessment of the methods for contributing an Astronomy Portfolio to the EOSC Marketplace
- Study of accessing VO-compliant data and services using science analysis platforms
  - in coordination with WP5
- Assessment of the possibility to bring existing VO standards for data sharing (VOSpace) within the EOSC services
- Identification of existing VO services or tools to serve as test-cases for containerization

Funded by the European Union's Horizon 2020 - Grant N° 824064

Status of the Activities

- VO Resource mapping against EUDAT B2-FIND metadata
  - first step on Registry inclusion in EOSC
    - try “IVOA” in the B2-FIND search at http://b2find.eudat.eu/
  - cross-domain discovery: http://vo.ari.uni-heidelberg.de/arivo/CD%20Stories (contribute!)
- Contact points have been identified for catalogue integration and service portfolio
- Started service integration investigation
  - Adding a Service to EOSC [this afternoon, André]
- Working on identifying a VOSpace backend storage solution to allow VO standard data sharing
- Started work to identify services and tools to be used in containerization tests
  - VO Client Applications in Containers [this afternoon, Margarida]

Funded by the European Union’s Horizon 2020 - Grant N° 824064

Networking & Integration on the Road

- EOSC-hub Week 2019 (April, Prague): first contacts
- IVOA (2019A) Interoperability (May, Paris): Registry integration
- IVOA (2019B) Interoperability (October, Groningen): reviewing
- RDA 14th Plenary colocated events (October, Helsinki)
  - EOSC services, collaborations, and RDA: ESCAPE & the other Cluster Projects
  - The International Research Data Community contributing to EOSC: looking at EOSC WGs
- EOSC Symposium 2019 (November, Budapest): larger view on activities

Funded by the European Union's Horizon 2020 - Grant N° 824064

Status Mapping on Deliverable Plan

4.1.a - Interfacing the VO framework with the EOSC.

Inclusion of the VO registry into the EOSC service catalogues to allow EOSC users to identify Astronomy-specific services.

Identify the relevant contacts for EOSC service catalogues and registry related aspects (including B2FIND).	✓
Assess information provided by EOSC to identify the possible pathways for service providers to enter their services into the EOSC service catalogue and determine an approach to include the VO registry.	ONGOING
Participate in the IVOA Registry WG to inform the global IVOA community about EOSC catalogues, and to identify technical aspects of IVOA registry operations relevant to their inclusion in EOSC.	ONGOING
Identify the VO Registry test-bed systems to be used in preparation for inclusion in EOSC.	✓
Establish a timeline for the inclusion of the VO registry into EOSC.	✓
Assess the use of EOSC vocabulary services for the inclusion of established astronomy vocabularies *(dependent on EOSC development)* for use in cross-disciplinary discovery services.	?
Participate in all relevant EOSC project events (EOSC-Hub, FREYA, OpenAIRE-Advance, FAIRsFAIR)	ONGOING

Funded by the European Union's Horizon 2020 - Grant N° 824064

Status Mapping on Deliverable Plan

4.1.b - Build an Astronomy Portfolio of VO services to be contributed to the EOSC Marketplace

Assess the methods for contributing VO services as an Astronomy Portfolio to the EOSC Marketplace.	ONGOING
Analyse the possibilities for operating a customized marketplace for astronomical VO services.	?
Establish a test plan for contributing selected VO services to the EOSC Marketplace *(dependent on the results of the above steps).*	TODO

Funded by the European Union's Horizon 2020 - Grant N° 824064

Status Mapping on Deliverable Plan

4.1.c - Contribution to EOSC Hybrid Cloud by federating astronomy data centres.

Assess the available solutions for federating data and computing infrastructures for compute- and data-intensive applications (for computing close to the data), e.g. DataHub.	?
Perform a study of accessing VO-compliant data and services using science analysis platforms *(in coordination with WP5).*	ONGOING
Assess the possible implementation of existing VO standards for data sharing (VOSpace) within the EOSC services.	ONGOING

Funded by the European Union's Horizon 2020 - Grant N° 824064

Status Mapping on Deliverable Plan

4.1.d - Containerised domain-specific services

Web-based remote analysis tools will be tested on the EOSC Cloud and if possible contributed to the EOSC applications and services database.

Identify existing VO services or tools to serve as test-cases for containerization.	ONGOING
Establish a timeline for the contribution of successfully tested services to be contributed to the EOSC applications and services database.	TODO
Test the harmonisation of the above mechanisms with the design and implementation of a "data lake" *(in coordination with WP2)*.	?

Funded by the European Union's Horizon 2020 - Grant N° 824064

Deliverables & Efforts

Related Deliverables and Milestones for Task 4.1:

D4.4 Intermediate analysis report on integration of VO data and services into EOSC (Report).	Month 18 July 2020
D4.7 Final analysis report on integration of VO data and services into the EOSC (Report).	Month 38 March 2022

Currently involved

- Andre Schaaf, Margarida Castro Neves, Françoise Genova, Markus Demleitner, Sara Bertocco, Dave Morris, François Bonnarel, Stelios Voutsinas,
- Mark Allen, Giuliano Taffoni, Catherine Boisson

Task 4.1 - Integration of astronomy VO data and services into the EOSC

Partner :	**INAF**	CNRS-ObAS	UHEI	UEDIN	CNRS-CPPM	CTAO	EGO-Virgo	ESO	INTA	JIVE	KIS	NWO-I-ASTRON	Obs Paris	ORB	SKAO	**Total:**
Effort (PM):	**30**	16	8	4	1	1	1	1	1	1	1	1	1	1	1	**69**

Funded by the European Union's Horizon 2020 - Grant N° 824064

Next Steps …

- Continue Registry integration
- Finalise preliminary guidelines of service integration in EOSC
- Work (with WP5 & WP2) on VOSpace cloud integration
- Continue on containerization
- … start writing down D4.4

Funded by the European Union's
Horizon 2020 - Grant N° 824064

ESCAPE
European Science Cluster of Astronomy & Particle physics ESFRI research Infrastructures

Thank you!

Funded by the European Union's Horizon 2020 - Grant N° 824064