OSCARS
Open Science Clusters' Action for Research & Society

Funded Project

FAIR image analysis across sciences (FIESTA)

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Implemented by

EURO BIOIMAGING | simula | EPFL | UNIVERSITY OF BERGEN | LifeWatch ERIC

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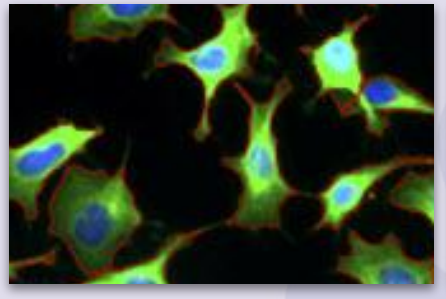
CHALLENGE ADDRESSED

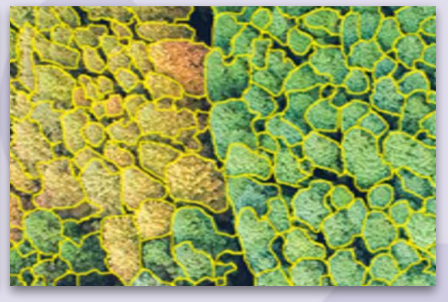
What problem did you plan to solve?

Communities with similar image analysis needs



MICROSCOPY

ASTRONOMY



ENVIRONMENTAL SCIENCES

FAIR-enabling **resources**

FIP Wizard

ASCL .net

CONDA-FORGE

ESCAPE OSSR Open-source Scientific Software and Service Repository

Biii BioImage Informatics Index

EDAM

BioImage.IO

Galaxy Tool Shed

elixir bio.tools

BIOCONDA

Workflows as a service

useGalaxy.eu

WorkflowHub

Workflow RO-Crate

Resource listed in the EOSC EU Node

- **Fragmented methods** used to extract quantitative data from images across disciplines
- **Limited reusability** of workflows across domains, focusing on **Microscopy**, **Astrophysics**, and **Earth Observation**.

What have you done to solve the problem?

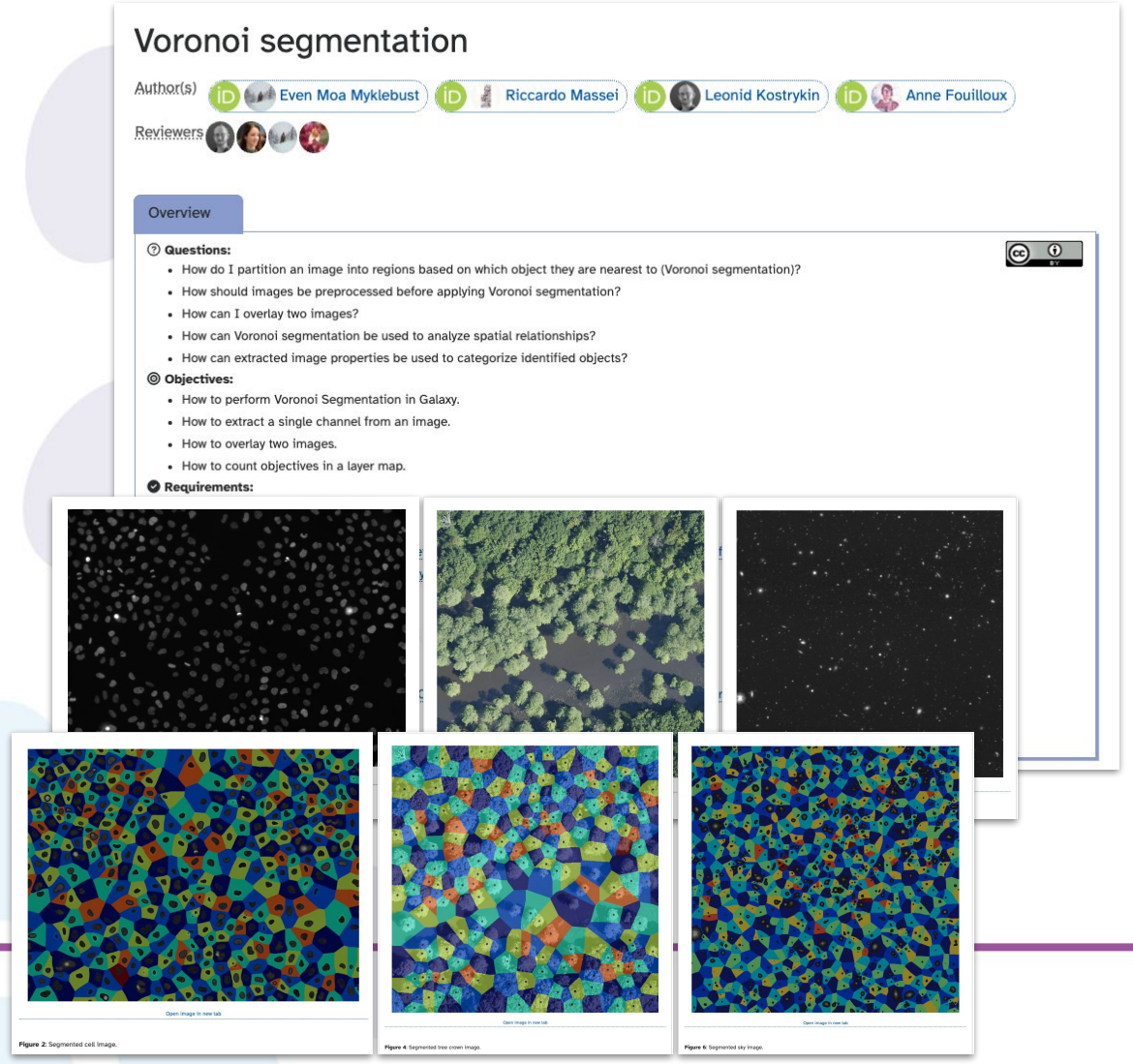
How similar is our data?

- **FIP** to assess similarities between popular data repositories for each community
- Collected **example data**

+

How similar are our analyses?

- Identified common image analysis **tasks**
- Collected **exemplary pipelines**
- Developed first cross-disciplinary workflow and tutorial



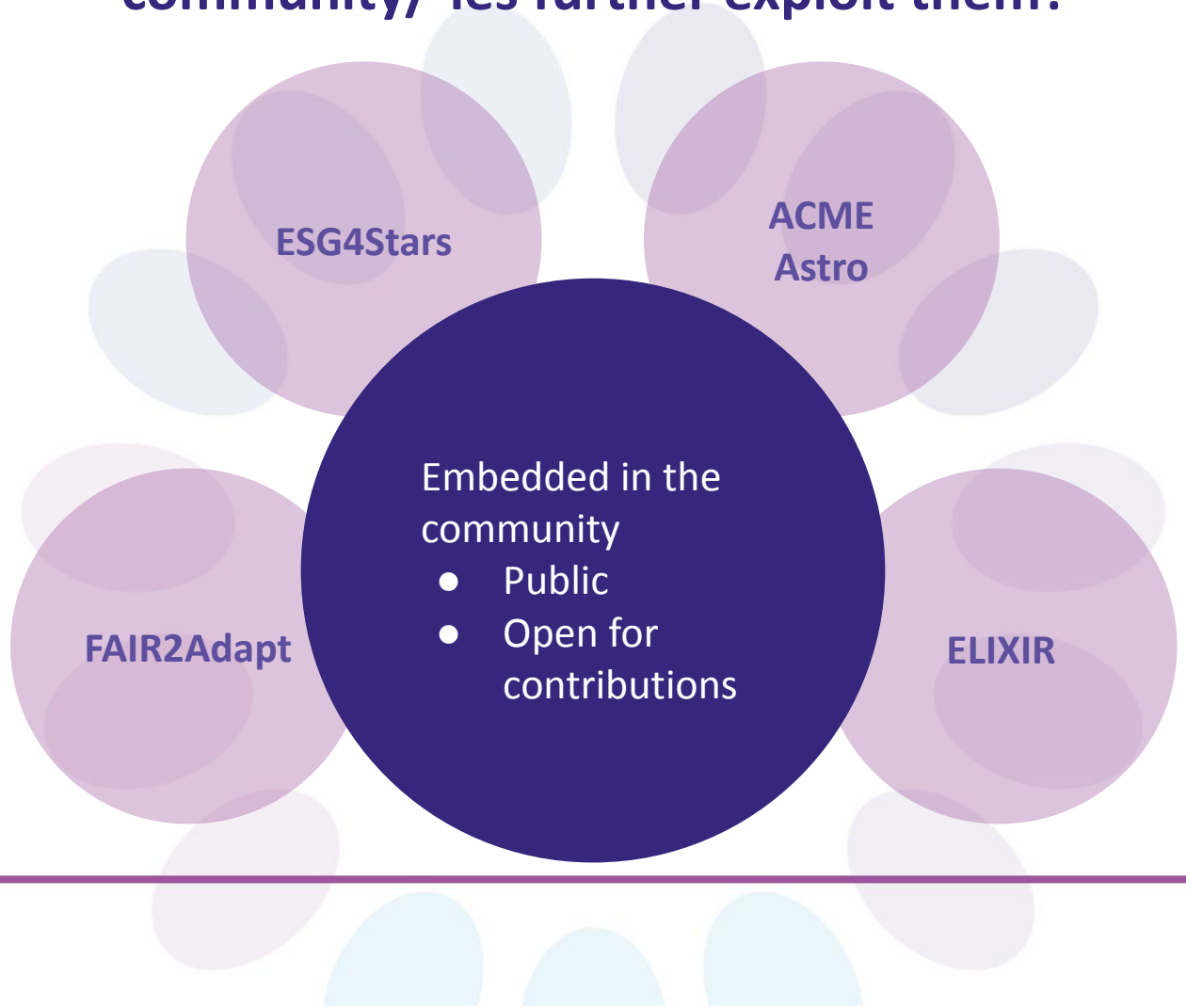
Problems encountered so far

- Different levels of adoption of EDAM Ontology
- Different scientific domains adopt different metadata standards, and there is no easy way to create crosswalks between them

What are the key results achieved to date and how have you made them available to the broader community?

Resource	Availability
FIPs by community	Nanopublications at nanodash by community
Galaxy tools for image analysis	Galaxy ToolShed, bio.tools
Workflows	FDO (RO-Crates) in WorkflowHub
Galaxy Training Network tutorials	GitHub repository and website (incl. metadata annotations)
Dissemination	FAIR-EASE, video + talk at EOSC Symposium, courses, BioHackathon, AstroORDAS, Euro-Bioimaging Data Days, foundingGIDE Community event, ELIXIR All Hands…

How will make your results sustainable over time - How will the scientific community/-ies further exploit them?



Who has been doing it?

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Microscopy community

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Environmental sciences community

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Astronomy community

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EDAM ontology