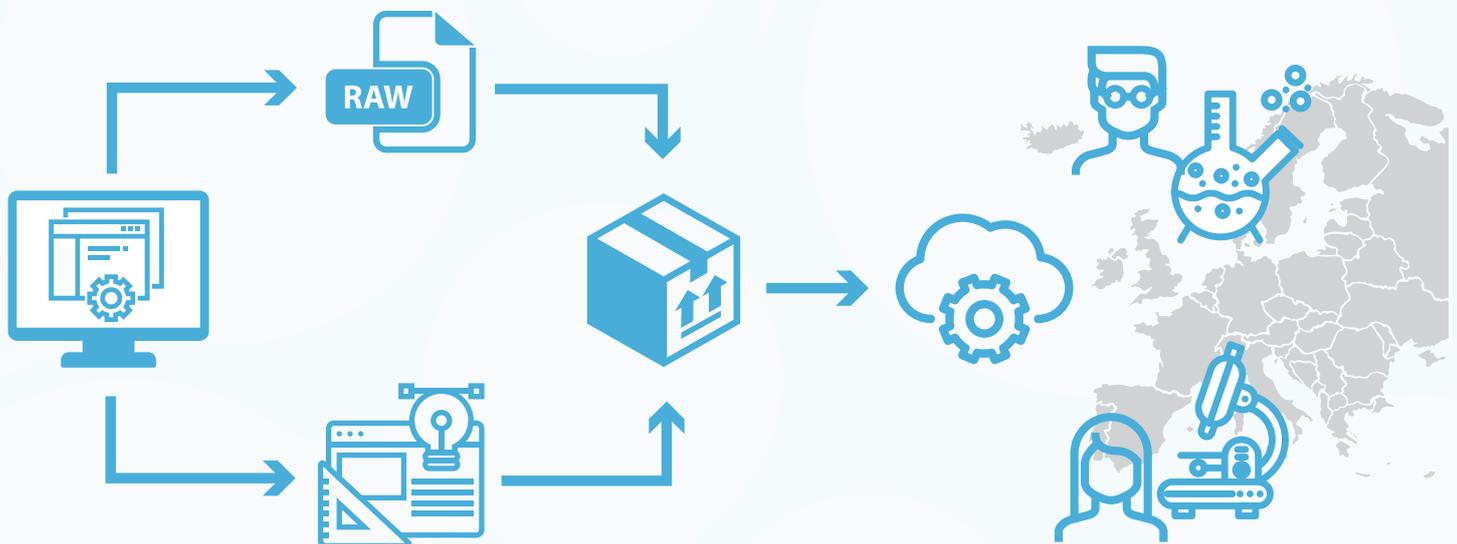


## Brief overview

CryoEM aims to improve reproducibility of their work using image processing workflows through the production of a Scipion workflow file that describes their image processing steps. This allows full reproduction of the same results when this data is deposited in public databases. In this way, cryoEM research becomes more transparent and traceable pursuing the spirit of public Open Science.



## Objectives

- » Enable users of a representative subset of major CryoEM Facilities in Europe to bring back raw and preprocessed data, and a file linking to the acquired data and the analysis workflows.
- » The file will contain detailed information enabling the reproducibility of processing steps, be ready and accepted to be deposited in CryoEM major databases, and be easy to browse and analyze over the Web.



# EOSC pilot

The European Open Science  
Cloud for Research Pilot Project

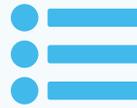
## Main achievements

Findable   
Accessible   
Interoperable   
Reusable

Compliant with  
CryoEM community  
FAIR standard



Easier automation  
of image processing  
initial steps



Versatile Json-  
based workflows  
allowing readability  
for Scipion and  
web browsers



Large-scale  
dissemination  
to structural  
biologists through  
EMDB and EMPIAR  
databases



Automatic  
submission tool

## Recommendations for the implementation

- » Create a public repository of acquisition metadata and image processing workflows for new acquisitions, as a temporary repository until the data is finally analyzed and deposited in the standard public databases (EMDB and EMPIAR).
- » Create an authentication policy such that biologists coming out from an EM facility could continue the image processing in some of the EOSC cloud machines.

## Partners of the SD

European Bioinformatics Institute (maintainer of the public databases EMPIAR and EMDB).



// *With this project we have increased the level of FAIR principles (Findability, Accessibility, Interoperability, and Reusability) of the data generated at Electron Microscopy facilities. The data is now generated along with a workflow description that allows the exact reproduction of the same results at the early stages of the processing. This workflow description can be submitted to public databases such as EMPIAR ([www.ebi.ac.uk/pdbe/emdb/empiar](http://www.ebi.ac.uk/pdbe/emdb/empiar)) or EMDB ([www.ebi.ac.uk/pdbe/emdb](http://www.ebi.ac.uk/pdbe/emdb)). This workflow can be visualized by any user through a web widget that can be incorporated at these two public databases.* //

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## Contacts & Social Media Channels

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