



# 2nd European Photon & Neutron EOSC Symposium

26 October 2021

## Athena Software for photon imaging data

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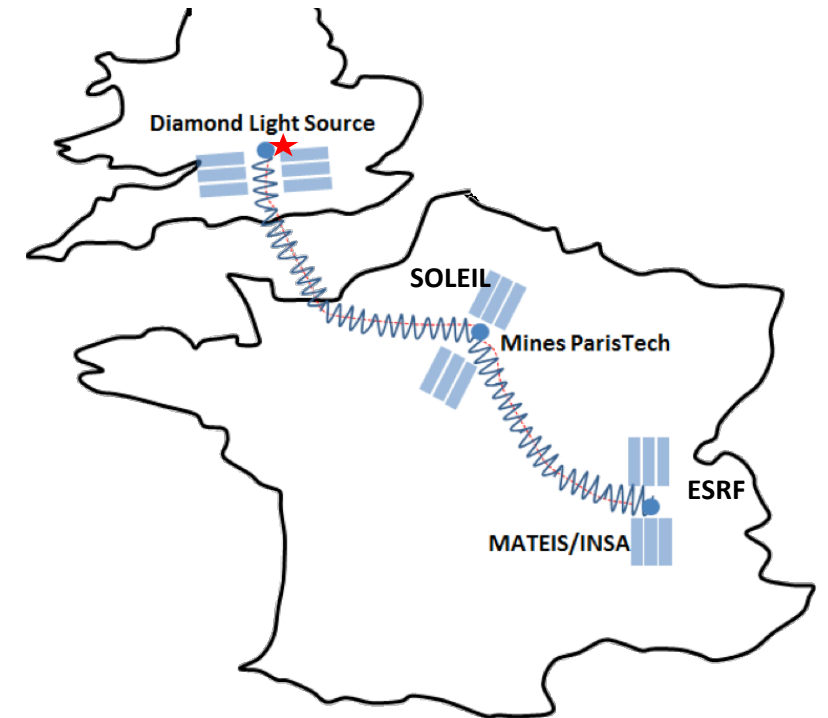
PaNOSC and ExPaNDS projects have received funding from the European Union's Horizon 2020 research and innovation programme under grant agreements 823852 and 857641, respectively.

# 3Dmagination, who are we?

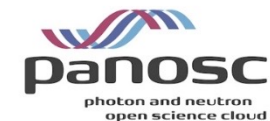
- >15 years R&D experience in 3D imaging with a core expertise in X-ray computed tomography
- Multidisciplinary academic/industrial background in materials, mechanics and manufacturing



- ★ 3Dmagination's mission:
  - ❑ Develop innovative solutions for businesses
  - ❑ Train a new generation of scientists
  - ❑ Make positive socio-economic impacts



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# What is the Athena Software ?

- Thermo Scientific Athena Software is a premium imaging data management platform that allows core imaging facilities dedicated to materials science research to simplify their scientific imaging workflows. With Athena Software, it is possible to manage, view, and share images, data, metadata, and experimental workflow results from a single platform.
- Athena Software provides a comprehensive solution for managing very large imaging data, simplifying the complexity of multi-instrument workflows and providing accessibility to the results at every step in the workflow.



Ensure traceability



Improve collaboration

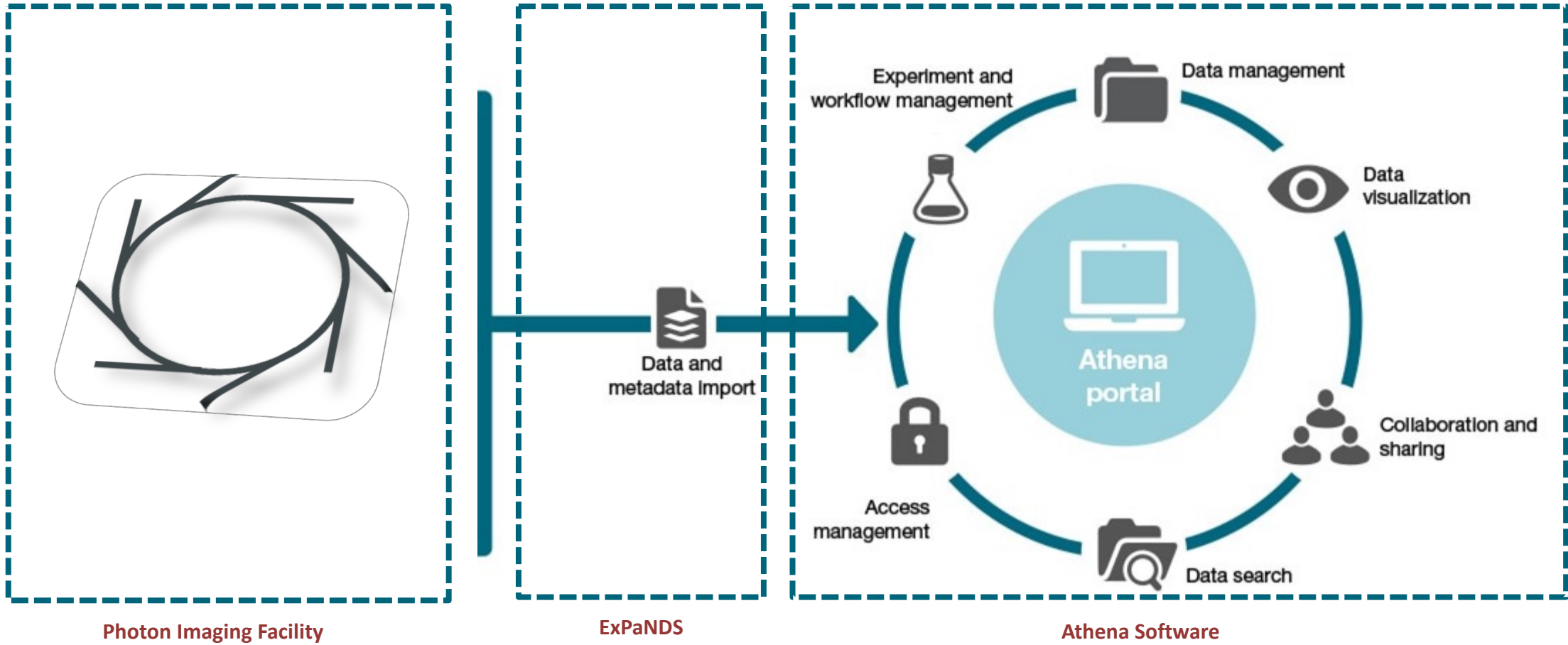


Simplify imaging data management



Secure & manage data access

# Athena & ExPaNDS

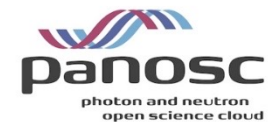


Photon Imaging Facility

ExPaNDS

Athena Software

F<sub>indable</sub> A<sub>ccessible</sub> I<sub>nteroperable</sub> R<sub>eusable</sub>



# An ExPaNDS use case

## Context

Dr Roberto Volpe and his team are working on the development of bio-chars from agricultural waste (almond and walnut shells). Such chars represent renewable and inexpensive solutions to a variety of morphology dependent challenges such as air, water, and soil treatment, catalysis, and energy storage.

Biochar can improve water quality, reduce soil emissions of greenhouse gases, reduce nutrient leaching, reduce soil acidity and reduce irrigation and fertilizer requirements.

The work undertaken by Dr Volpe and his team at Diamond Light Source on Beamline I13 is generating a large quantity of valuable *in-situ* radiography and tomography data

**3Dmagination will demonstrate how the Athena software can be used to enable remote data analysis, remote data visualisation and remote collaboration and therefore contributing to making the data for Dr Volpe FAIR.**

# Demonstration of Athena Software







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## Thank you

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