



Athena Software for Core Imaging Facilities

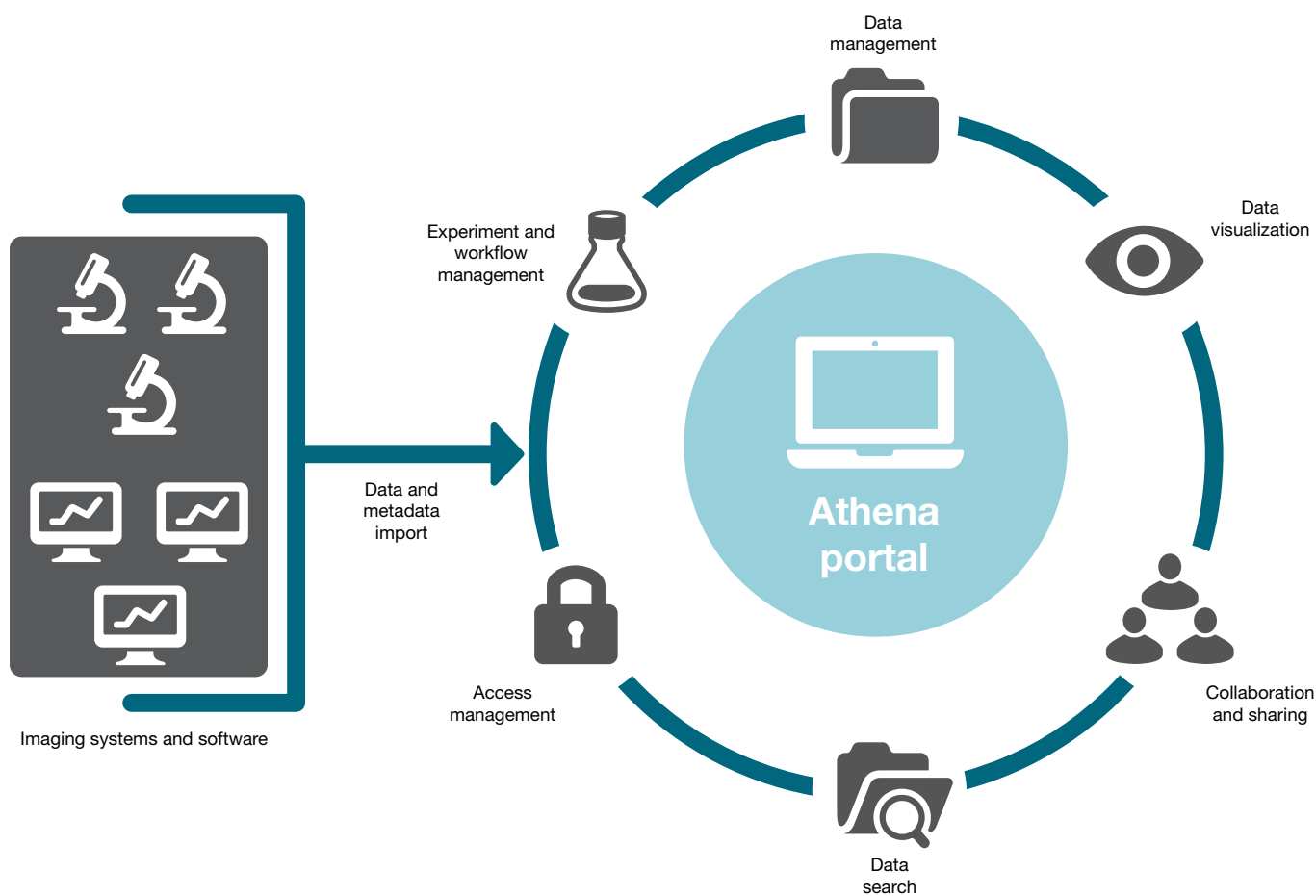
Imaging data management platform

Easily centralize, organize, view, and share imaging data and experimental workflows through an intuitive, collaborative web interface

Managing and sharing experiments, workflows, data, and metadata has proved to be one of today's most crucial issues in scientific research. The development of research infrastructures, also known as core imaging facilities, has allowed large numbers of researchers to gain access to cutting-edge technologies and advanced imaging expertise. Every day, multitudes of different types of instruments and software, in various locations, produce significant amounts of scientific data, all of which needs to be shared among collaborators. More importantly, we are trending toward the traceability and accessibility of data, knowledge, and expertise. An exponential number of government agencies require data to be findable, accessible, interoperable, and reusable (FAIR principles) and that digital data management plans be drawn up.

Thermo Scientific™ Athena™ Software is a premium imaging data management platform that allows core imaging facilities 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 to ensure traceability, improve collaboration, simplify imaging data management, and secure and manage data access.



Data and Metadata Import

Athena Software makes it possible to collect data and metadata recorded by an instrument, originating from processing software, or added directly by a user. Any type of file can be imported into Athena (images, PDFs, Office documents, etc.).

Data and metadata can be imported in three ways:

- Manual import by direct upload from the Athena web interface
- Automatic import of data and metadata from any imaging system
- Automatic synchronization of data with any offline image analysis software

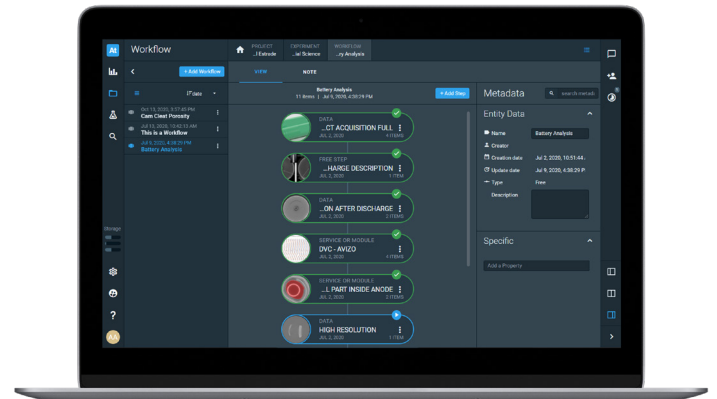
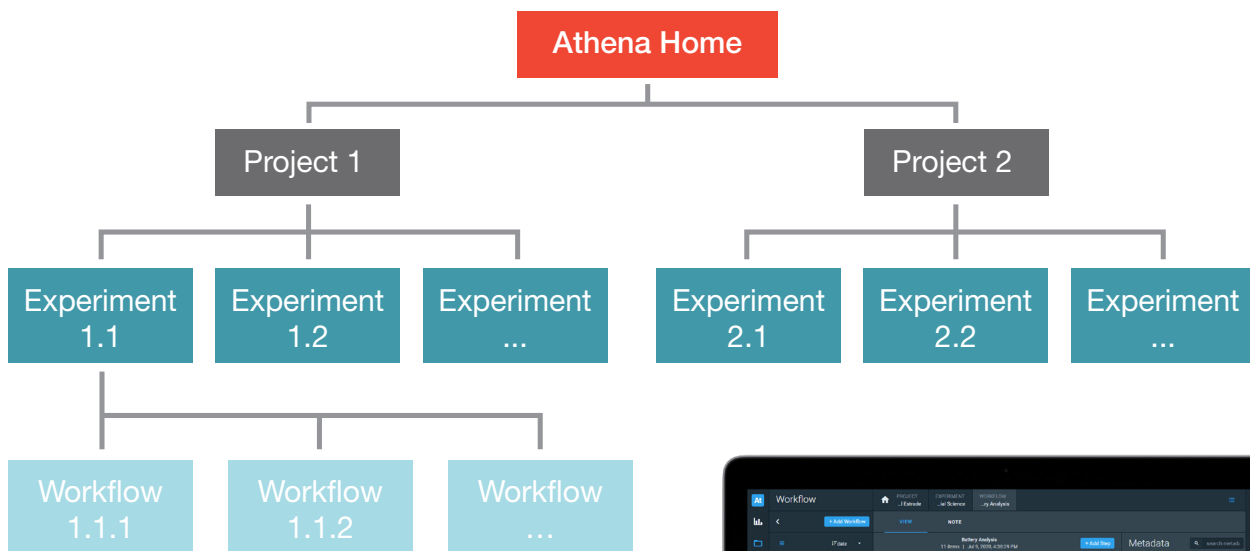
Automatic import and synchronization are performed using the Athena Drive configurable service. This allows data acquired by an instrument to be automatically imported in a specific step in a workflow of the Athena workspace. This also allows users to easily access data from the Athena server and to save the results in Athena Software after analysis.



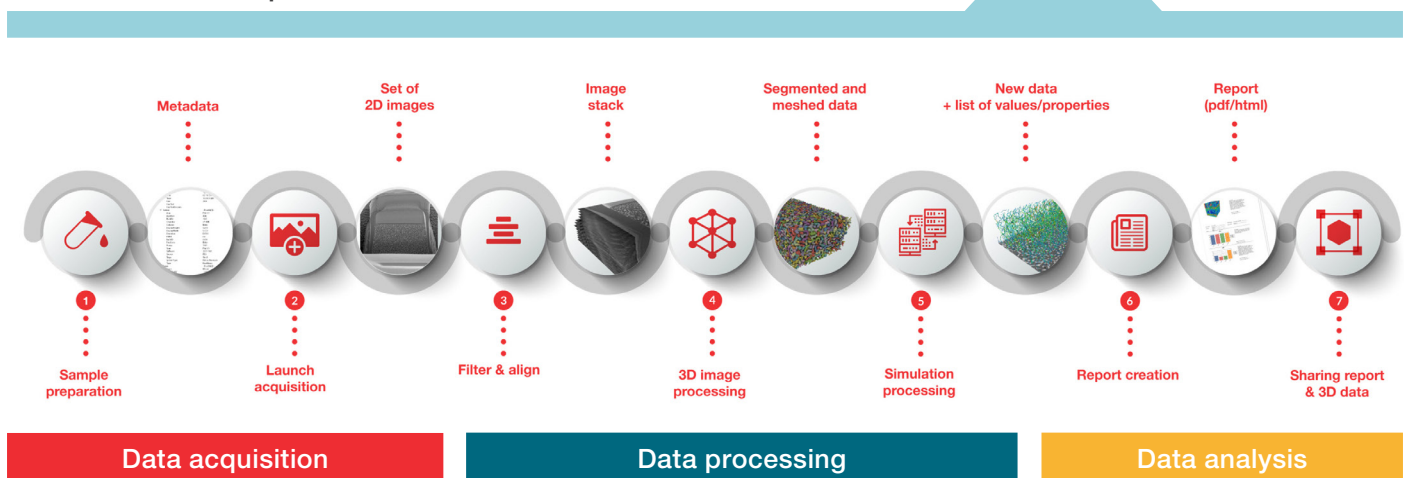
Experiment and Workflow Management

Designed for the digitization of projects, experiments, and workflows, Athena Software significantly increases productivity and traceability through:

- Organization of all recorded data using a logical and intuitive structure
- Fully editable structure
- Status updates of each step in the workflow

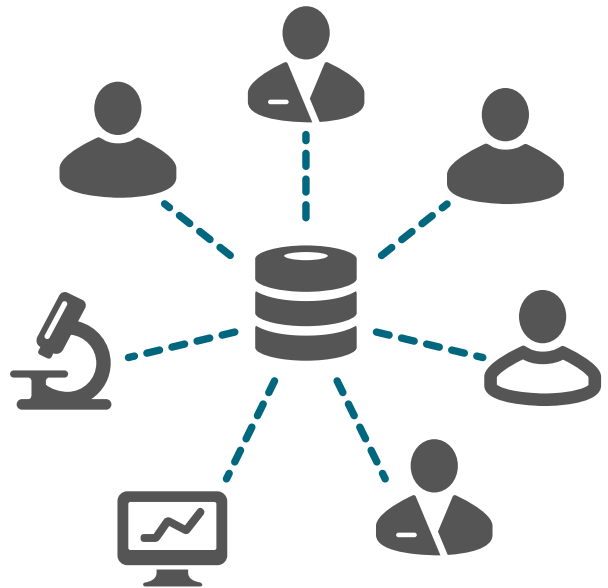


Workflow example



Data Management

The amount of research data generated is swelling to a point where conventional data management systems struggle to keep pace. Athena Software allows users to explore and share large data without duplicating it. Data are stored in a central location and are accessible from everywhere using a simple web browser. In order to free up space on hot storage when needed, it is possible to archive data to cold storage directly from the web interface. Data export and download are also available.

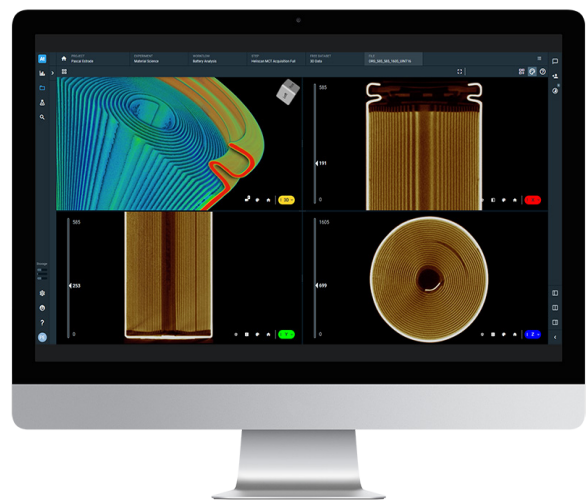


Data Visualization

Athena Software offers advanced capabilities for viewing images, data, and metadata remotely and in real time. The main 2D and 3D formats, including Thermo Scientific [Amira™](#), [Avizo™](#) and [PerGeos™](#) Software, can be automatically displayed in high-performance, dedicated viewers directly from the Athena web interface.

Users can view very large datasets from a web browser, including out-of-core datasets, thanks to proprietary LDM (Large Data Management) technology, without the need for dedicated hardware and without the need to download a tool or plug-in. To ensure confidentiality, the data remain on the secure remote server.

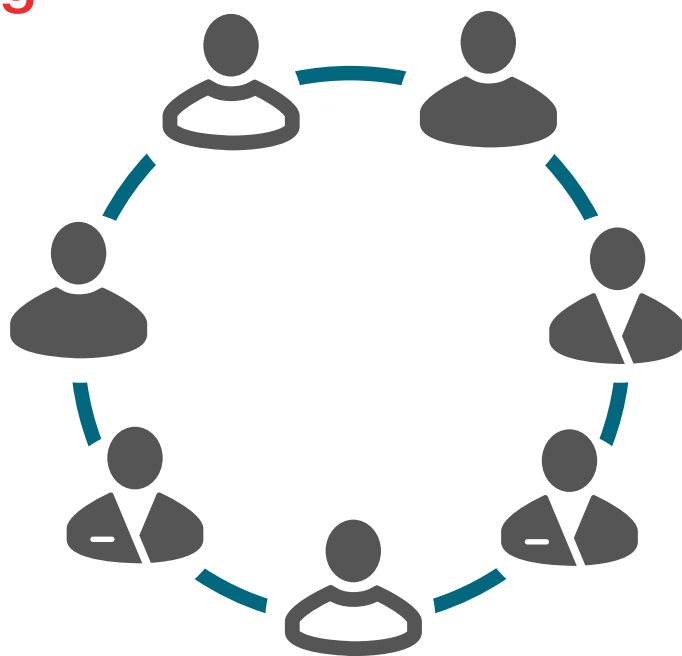
It is also possible to view PDF files directly in Athena Software, making it easier to read information and reports required for research projects. Adding, editing, and viewing metadata is made easier via the highly intuitive and ergonomic interface of the Athena portal.



Collaboration and Sharing

From the preparation of samples to publication, sharing methodologies and knowledge between researchers is essential for optimizing research projects. Athena Software provides a set of tools that facilitate interaction between the different users.

For example, Athena Software makes it possible to instantly and remotely share any type of data from a portal. The presence of 2D and 3D viewers allows users to simultaneously visualize very large data from anywhere. Advanced notes can be created at each step in the workflow, making it easier to compile reports and share specific information and expertise. Tools for adding and editing annotations to images are also available. Additionally, its instant messaging capabilities allow collaborators to have discussions in real time.



Data Search

An integrated search engine allows users to easily find the information they need when they need it. A quick search can be carried out by name, metadata, and note, refined by search criteria filters. An advanced search tool allows users to search datasets and files by more criteria, including date range.



Access Management

With Athena Software, information is secured and centralized, and it can be accessed by multiple users with different roles and different permission parameters.

Users can confidently share and access projects, experiments, workflows, data, and metadata anywhere in the world, 24/7.

To simplify user administration and authentication, Athena Software supports LDAP, allowing users to connect to existing user directories.

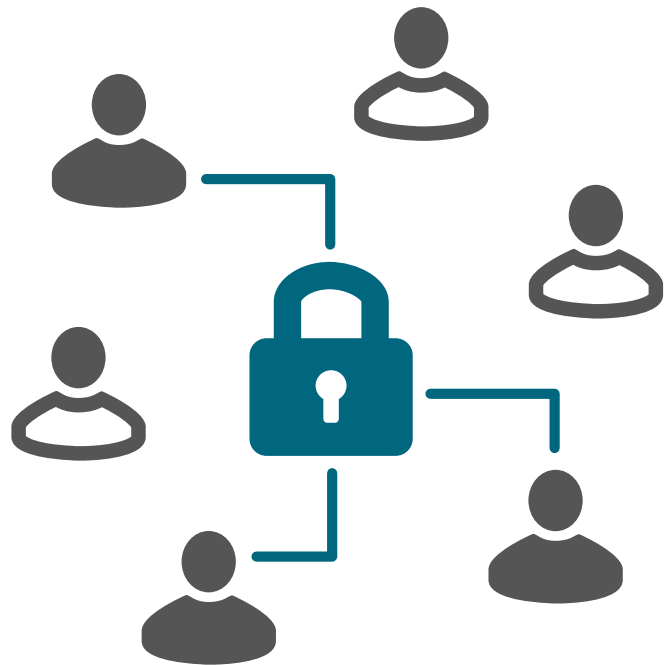
Administration and user profiles:

Administrator:

Platform and user manager

Users:

- **Owner:** Owners can create projects, experiments, workflows, and use all the functions of the platform. Owners can also delete entities, add or remove users, and modify permissions.
- **Collaborator:** Collaborators can create experiments, workflows, and use most of the functions of the platform. Unlike Owners, Collaborators cannot delete entities, add or remove users, or modify permissions.
- **Viewer:** Viewers can view data, metadata, notes, and annotations inside an experiment. Viewers can also converse with other users via instant messaging.



Service and Technical Support

Our Service and Technical support team is ready to implement and optimize our solutions to allow you to get the most out of your investment in imaging data management.

Deployment

We ensure seamless integration of Athena Software into your own on-premises environment, allowing you to optimize your infrastructure investments.

Training

Our experts are dedicated to helping you shorten your learning curve and be your most productive with Athena Software.

Support

Our worldwide customer support team is ready to assist you and answer all your questions about Athena Software—any time you need it.

Learn more at thermofisher.com/athena

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