Research Data Management Product Selection Guide

The University has chosen to implement two research data management systems based on the needs of the research community: Agilent OpenLAB and LabArchives. LabArchives is a cloud-based platform whose main feature is an Electronic Lab Notebook (ELN). Agilent OpenLAB is an on-site platform including both an ELN and an Enterprise Content Manager (ECM) module.

Both products offer a web-based interface to record, manage, archive, and disseminate data gathered during research projects. They provide electronic versions of paper notebooks and many other features such as history, versioning, access control, and extensive search capabilities. Though primarily aimed at research data management, these products are useful to any research group to keep track of research activities.

A researcher and their staff should carefully consider how their research workflow is organized and operates on a daily basis before choosing a product. Consultations by TTS staff are available upon request (RDMS@tufts.edu).

Quick-Select

Agilent OpenLAB

If your group’s research relies largely on instrument-based data, i.e. generating data from analytical instruments such as chromatography, mass spectrometry, optical and atomic spectroscopy, imaging instruments, or cameras, and follows a standard protocol(s) for experiments you should consider using the Agilent OpenLAB ELN & ECM. The ELN allows you to document protocols and notes associated with a given experiment through templates and forms which can be customized to fit the workflow of your research group. The ELN allows you to insert files, such as Word, PowerPoint, Excel, and image files, up to 10 MB in size. Similar to paper notebooks, it is recommended to only include processed data within the ELN.

Files which exceed 10 MB should first be stored in a research storage drive if you plan to re-analyze the data and then pushed into the OpenLAB ECM for longer-term storage. The ECM can store both raw and processed data from instruments by either manual addition or an automated sweeping process.

The OpenLAB software suite provides a powerful method of searching data, experimental protocols, reports and publications based on metadata (“data about data”). Finally, the OpenLAB ELN offers a review and signature workflow for experiments to satisfy compliance and/or intellectual property concerns.
The OpenLAB ELN is compatible with Firefox, Safari and Internet Explorer on Windows and Mac platforms. It also has an app available for iPads.

LabArchives

If your research group relies primarily on a paper notebook and has a more free form workflow, then you should consider using the LabArchives ELN, which offers easy to use customization, widgets, and offers mechanisms for sharing data with other researchers both inside and outside of Tufts.

Files up to 250 MB can be added directly to a notebook page. Files which exceed 250 MB can be linked to the notebook from a local drive or research storage drive. The Folder Monitor feature allows you to connect any folder on your computer directly to your LabArchives account and automatically upload files to your notebook.

LabArchives is compatible with Chrome, Firefox, Safari and Internet explorer on both Windows and Mac platforms. It can also be accessed via Android and iOS mobile apps.

As a best practice, both Agilent OpenLAB and LabArchives ELNs should be considered as a notebook to document information rather than as a file storage device.

Selection Guide

In addition to the details underlined above, the following questions should help you select which RDMS tool to use:

1. Does your research rely primarily on analytical instruments to collect data or do you plan to use analytical instruments in the near future?

   Consider Agilent OpenLAB

2. Does your research use standard protocols or form based data collection primarily?

   Consider Agilent OpenLAB

3. Does your research rely on notebook collections (observations, protocols, conclusions) and you have a storage solution?

   Consider LabArchives

4. Do you require storage of files larger than the limits of the ELN (>250 MB)?

   Consider Agilent OpenLAB ECM