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Evaluating ELNs for experiment documentation and how to make an informed decision

Electronic laboratory notebooks (ELNs) are essential for fair and open research, contributing to both the reproducibility and reusability of data and ensuring that research is easily accessible and retrievable. Here we dive into the importance of ELNs for large-scale photon and neutron research infrastructures and outline key specifications for successful ELN implementation. These may be features such as real-time collaboration, data integration and secure access control. Its necessary to introduce a framework for evaluating existing ELNs based on these specifications, including a formula for calculating a figure of merit to aid in the selection process. A survey of existing ELNs revealed that while many solutions are technically mature, only a smaller percentage fully meet the specific requirements of this research domain.

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