



FAIRWAY for FAIR Data: Implementing Electronic Lab Notebooks in Research Centres

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Abstract

Data is one of the most valuable assets in research, demanding secure, transparent, and reproducible management practices. Electronic Lab Notebooks (ELNs) provide a digital solution to record, organize, and store experimental workflows and results, offering a modern alternative to traditional paper notebooks. By safeguarding data integrity, ELNs strengthen scientific rigor while promoting openness, accessibility, and reproducibility. Their adoption is therefore not only a practical necessity but also a strategic step toward open science, collaboration, and alignment with the FAIR principles.

This poster presents the ongoing implementation of ELNs at the Interdisciplinary Centre of Marine and Environmental Research (CIIMAR). The process takes place within the scope of FAIRway, an initiative co-promoted by INESC TEC, CIIMAR, and BIOPOLIS-InBIO. The FAIRway project is dedicated to strengthening Research Data Management (RDM) and advancing Open Science by supporting the adoption of tools such as ELNs into research workflows, building a solid foundation for transparent, reproducible, and FAIR-aligned scientific practices across institutions.

The CIIMAR action plan for ELN adoption is structured in four phases: (1) Landscape Analysis of current RDM practices and researcher readiness; (2) Selection of the most suitable ELN tool, considering institutional needs, interoperability, licensing, and sustainability; (3) Pilot and Evaluation with representative groups to test usability and

gather feedback; and (4) Training and Capacity Building through tutorials, workshops, and real-time support to ensure effective use.

This action plan will also serve as the basis for drafting best practice guidelines on ELN adoption in a research institute. Developed within the scope of a Master's thesis accompanying the pilot stage, these guidelines will provide the first structured framework for ELN implementation at CIIMAR and will be openly shared with the scientific community, fostering rigorous, collaborative, and FAIR-driven data management.

Keywords: Electronic Lab Notebooks (ELNs), FAIR data, Research Data Management (RDM) , Open Science best practices

Designação do projeto/infraestrutura/iniciativa

FAIRway

Público-alvo

Data stewards, investigadores, gestores de ciência

Ligações web úteis