

## **The "ELN Finder" – a new service around Electronic Lab Notebooks**

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Informationszentrum  
Lebenswissenschaften

# Motivation for the ELN Finder

- ▶ "What ELN software is there that suits my purposes?"
- ▶ "How do I find all the appropriate ELNs for materials science?"
- ▶ "Which ELN systems support standard XYZ and are open source?"
- ▶ "How do I find reliable information on different ELNs?"
- ▶ „How do I compare different ELNs"?"

**Until the launch of the ELN finder, there was no**

- **reliable**
- **independent**
- **up-to-date**
- **complete**

**basis (even internationally!) for answering such questions.**

# Aims and Target Groups

- ▶ **Aims** of the ELN Finder as a permanently maintained **web application**:
  - Possibility to **search and filter records** for electronic laboratory notebook software (ELNs) according to criteria or keywords (user perspective)
  - **Authorised editing of ELN records** for the purpose of updating and maintenance (provider perspective)
  
- ▶ **Target groups**:
  - **Research data managers** and officers
  - Persons entrusted with the introduction of an ELN, e.g. **infrastructure staff** (library staff, IT staff, lab staff)
  - **Researchers** who want to find a suitable ELN

# Background & History

- ▶ The project behind the ELN Finder has been "side-tracked" since 2019 in cooperation between **ZB MED Information Centre for Life Sciences (Cologne)**, and the **University and State Library (ULB) Darmstadt**
- ▶ January 2022: Call for cooperation and formation of an editorial team as well as implementation of the web portal
- ▶ Since April 2022: Further development by a 10+ member editorial team from 8 institutions
- ▶ February 2023: Official launch
- ▶ March 2023: Increased public relations work and expansion of the editorial team

## Current status

- ▶ Detailed **hierarchical criteria catalogue** defining and describing the metadata structure for the ELNs
  - **43 criteria** and associated values, **12 attributes**
  - Summary of the criteria in 7 categories:
    - General
    - Usability
    - Core functions (containing functionalities that are used for the documentation on a daily basis)
    - Extended functions (Daily work)
    - Compliance with legal requirements
    - Integration in RDM
    - IT environment
  - **Metadata schema published:** <https://doi.org/10.4126/FRL01-006452815>

## Current status

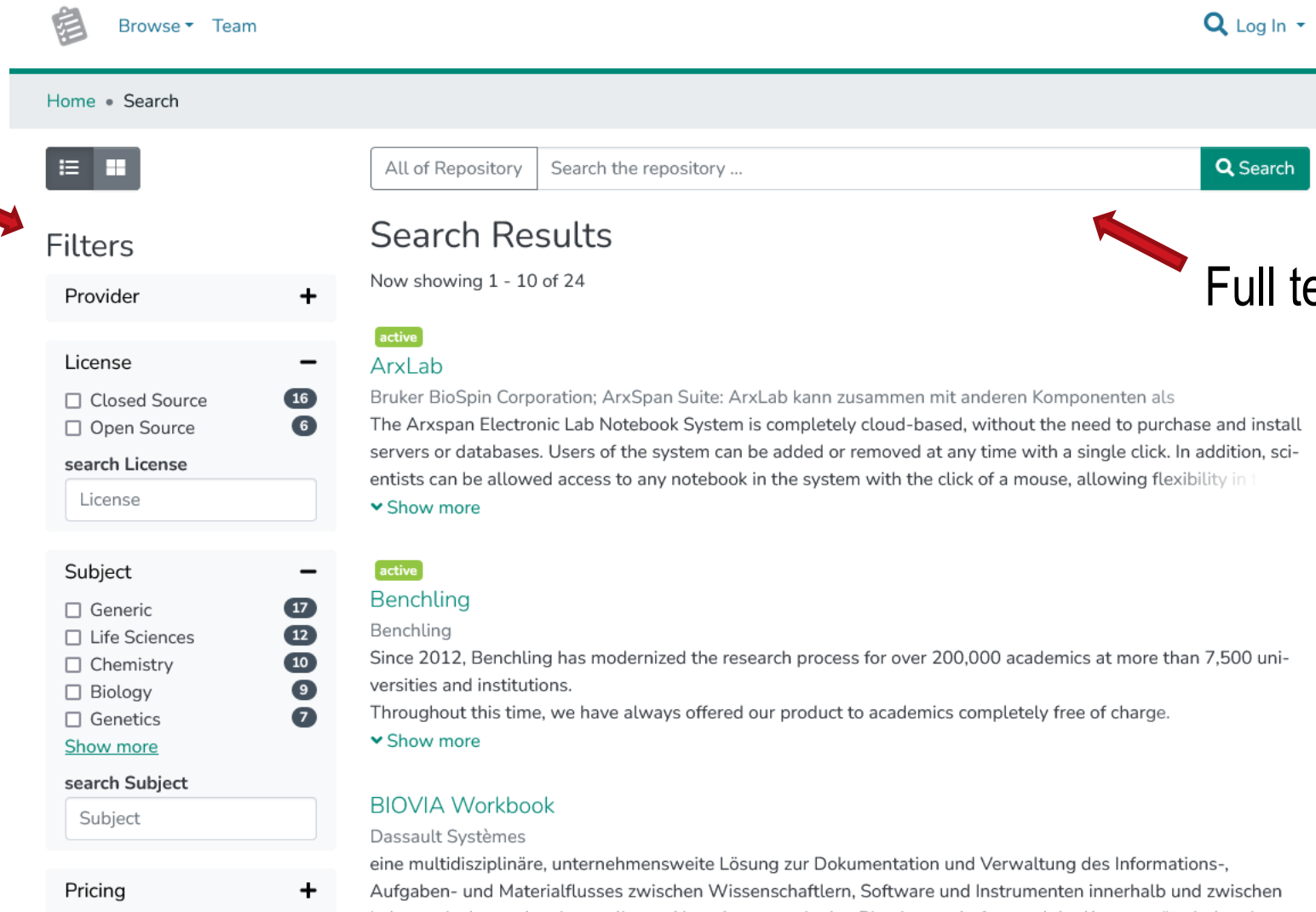
- ▶ **Web portal** on the basis of the open source software DSpace 7
  - English language interface
  - Comprehensive compilation of FAQs
- ▶ External ELN information collection created for individual ELNs
- ▶ **Data entered** from the information collection **for 30+ ELNs**
- ▶ **User manual** for contributors

► <https://eln-finder.ulb.tu-darmstadt.de>



# Use case: List, filter and search ELNs

Filter by values



The screenshot displays the ELN Finder web application interface. At the top, there is a navigation bar with 'Browse' and 'Team' links, and a 'Log In' button. Below this is a breadcrumb trail showing 'Home' and 'Search'. The main content area is divided into two sections: 'Filters' on the left and 'Search Results' on the right. The 'Filters' section includes a sidebar with expandable categories: 'Provider' (expanded), 'License' (collapsed), 'Subject' (collapsed), and 'Pricing' (collapsed). Each category has a list of options with counts. For example, under 'License', there are 'Closed Source' (16) and 'Open Source' (6). Under 'Subject', there are 'Generic' (17), 'Life Sciences' (12), 'Chemistry' (10), 'Biology' (9), and 'Genetics' (7). The 'Search Results' section shows a search bar with the text 'All of Repository' and 'Search the repository ...'. Below the search bar, it says 'Now showing 1 - 10 of 24'. The first result is 'ArxLab', marked as 'active'. The description for ArxLab states: 'Bruker BioSpin Corporation; ArxSpan Suite: ArxLab kann zusammen mit anderen Komponenten als The Arxspan Electronic Lab Notebook System is completely cloud-based, without the need to purchase and install servers or databases. Users of the system can be added or removed at any time with a single click. In addition, scientists can be allowed access to any notebook in the system with the click of a mouse, allowing flexibility in ...'. Below the description is a 'Show more' link. The second result is 'Benchling', also marked as 'active'. The description for Benchling states: 'Benchling Since 2012, Benchling has modernized the research process for over 200,000 academics at more than 7,500 universities and institutions. Throughout this time, we have always offered our product to academics completely free of charge.' Below the description is a 'Show more' link. The third result is 'BIOVIA Workbook', with the description: 'Dassault Systèmes eine multidisziplinäre, unternehmensweite Lösung zur Dokumentation und Verwaltung des Informations-, Aufgaben- und Materialflusses zwischen Wissenschaftlern, Software und Instrumenten innerhalb und zwischen Laboren, insbesondere in regulierten Umgebungen wie den Biowissenschaften und der Konsumgüterindustrie.'

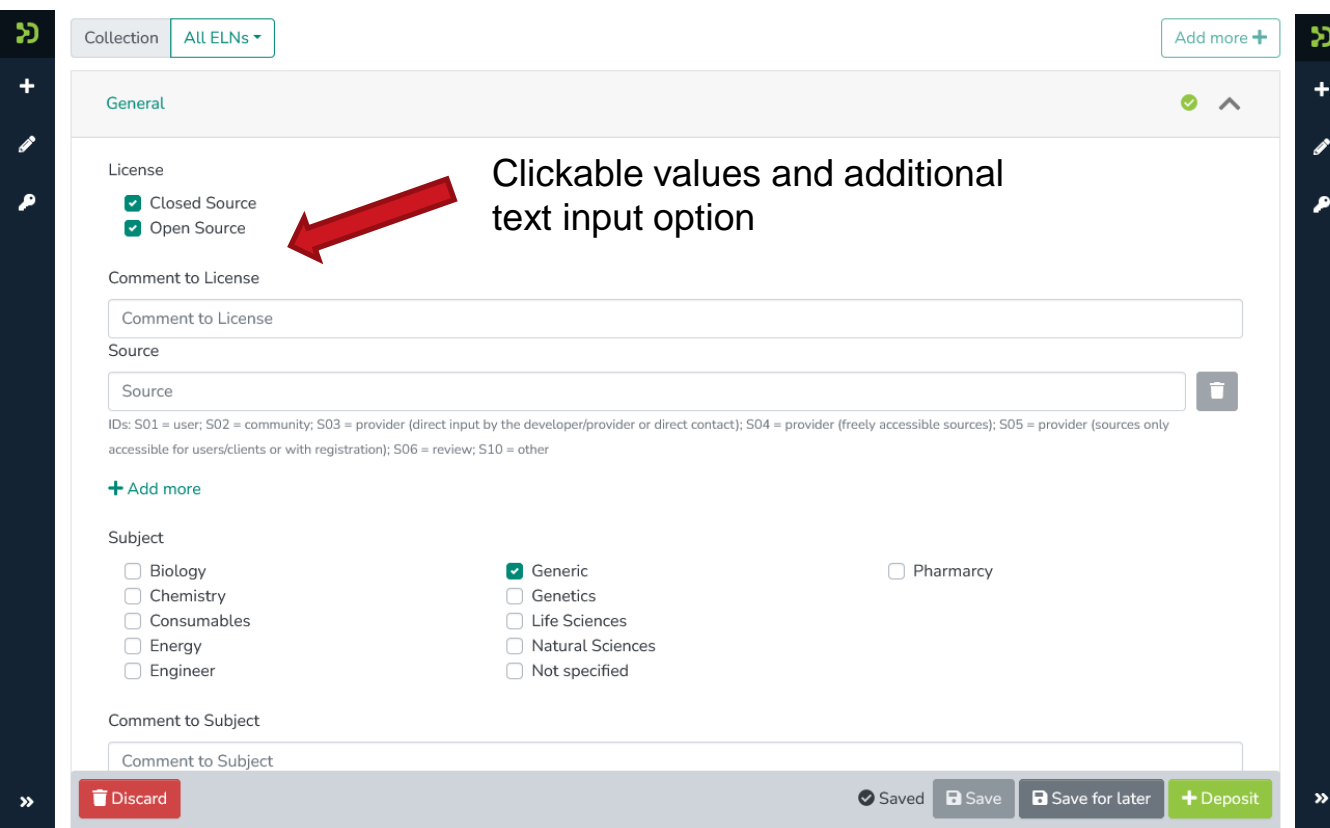
Full text search





# Use case: Enter ELN software

## ► Input criteria for an ELN software (variable values)



Collection: All ELNs

**General**

License

☒ Closed Source

☒ Open Source

Comment to License

Source

IDs: S01 = user; S02 = community; S03 = provider (direct input by the developer/provider or direct contact); S04 = provider (freely accessible sources); S05 = provider (sources only accessible for users/clients or with registration); S06 = review; S10 = other

+ Add more

Subject

☐ Biology

☐ Chemistry

☐ Consumables

☐ Energy

☐ Engineer

☒ Generic

☐ Genetics

☐ Life Sciences

☐ Natural Sciences

☐ Not specified

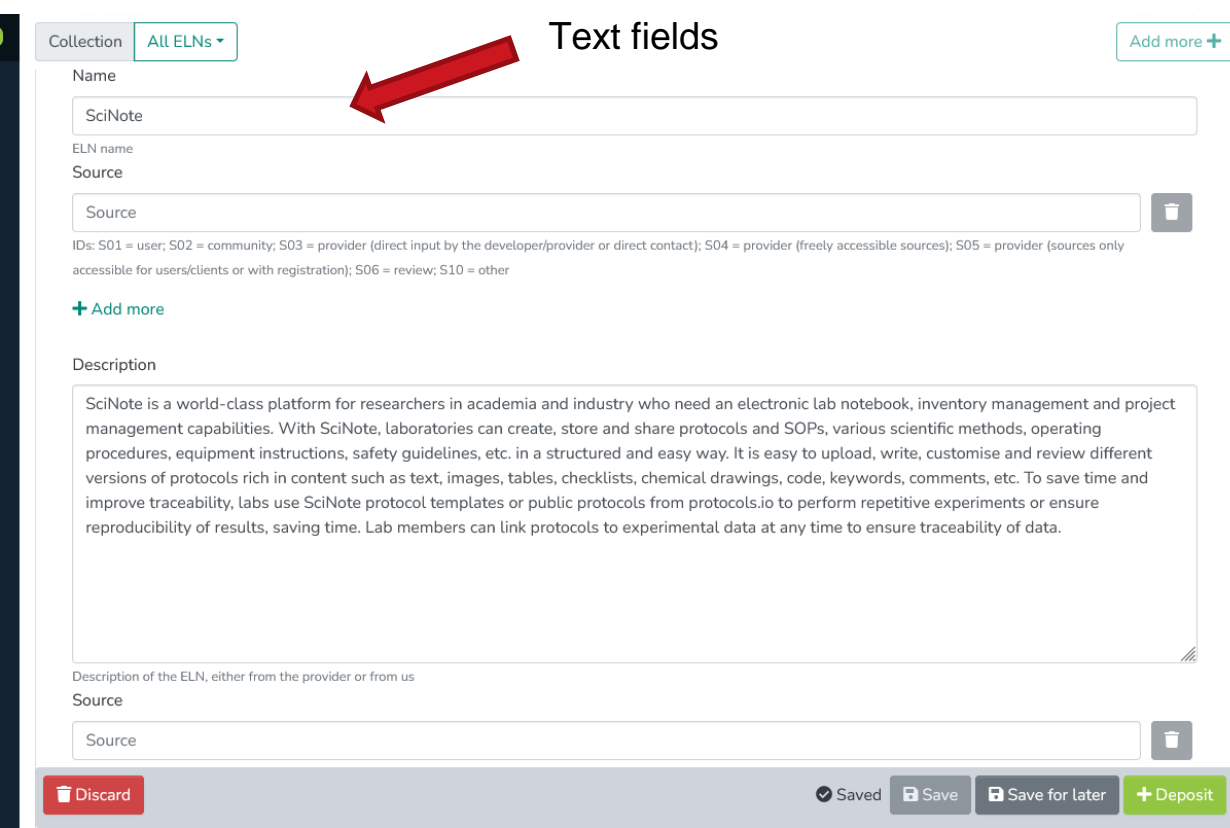
☐ Pharmacy

Comment to Subject

Comment to Subject

Discard Saved Save Save for later Deposit

## ► Input attributes for an ELN software (fixed description)



Collection: All ELNs

**Text fields**

Name

SciNote

ELN name

Source

Source

IDs: S01 = user; S02 = community; S03 = provider (direct input by the developer/provider or direct contact); S04 = provider (freely accessible sources); S05 = provider (sources only accessible for users/clients or with registration); S06 = review; S10 = other

+ Add more

Description

SciNote is a world-class platform for researchers in academia and industry who need an electronic lab notebook, inventory management and project management capabilities. With SciNote, laboratories can create, store and share protocols and SOPs, various scientific methods, operating procedures, equipment instructions, safety guidelines, etc. in a structured and easy way. It is easy to upload, write, customise and review different versions of protocols rich in content such as text, images, tables, checklists, chemical drawings, code, keywords, comments, etc. To save time and improve traceability, labs use SciNote protocol templates or public protocols from protocols.io to perform repetitive experiments or ensure reproducibility of results, saving time. Lab members can link protocols to experimental data at any time to ensure traceability of data.

Description of the ELN, either from the provider or from us

Source

Source

Discard Saved Save Save for later Deposit

The "Source" field is only visible in the backend. It makes it easier for the editors to trace the entries during the review.

## Current developments

- ▶ **Gaining international participation** in the editorial team / as a contributor (= ELN editor)
- ▶ **Winning the vendors of ELNs** as contributors (ELN editors)
  - Time-consuming maintenance is taken over by the providers themselves = higher topicality of the content
- ▶ Improvement of **help texts**
- ▶ **Adding more tools** and **maintaining** the existing content
- ▶ Further development of the ELN Finder software, e.g. offering export of filtered data sets
- ▶ Offering **networking possibilities** between users of the same ELN system and thus **enabling exchange of experience**, inclusion of **reference users**

# Join the team!

- Can you serve as a reference user for an ELN software?
- Can you be contributor for the record of an ELN software?
- Would you like to be part of the editorial team?

**We would be happy to hear from you!**

General contact: [eln\\_finder\\_mailingliste@listserv.dfn.de](mailto:eln_finder_mailingliste@listserv.dfn.de)

Editorial office (monthly editorial meetings): Birte Lindstädt, ZB MED,  
[lindstaedt@zbmed.de](mailto:lindstaedt@zbmed.de)

## Thank you for your attention.



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