



eLabNext Makes Digitalization Seamless for Fraunhofer Institute for Cell Therapy and Immunology IZI

“eLabNext’s software helps us save time by enabling us to share our protocols with colleagues easily. It also takes care of our sample management. This reduces the time spent writing down experiments, as samples can be easily linked. It is no longer necessary to annotate sample information (e.g., batch numbers) for each sample used in each experiment.”

- Sabrina Rau, Scientist and scientific coordinator for the implementation of the ELN



Fraunhofer Institute for Cell Therapy and Immunology IZI

Established in 2005 in Leipzig, Germany, the Fraunhofer Institute for Cell Therapy and Immunology IZI is a research facility dedicated to investigating and developing solutions for problems at the interfaces of life sciences, medicine, and engineering. Its primary focus lies in conducting contract research for hospitals, companies, research institutes, and diagnostic laboratories in pharmaceuticals, medical engineering, and biotechnology.

In addition, the Fraunhofer IZI develops, validates, and optimizes products and materials in gene and cell therapy, vaccines and drugs, immunodiagnostics, molecular diagnostics, and extracorporeal therapies. Its areas of expertise include immunology, cell biology, bioanalytics, bioproduction, drug biochemistry, process automation, and development.

Research in these fields revolves around developments in infectious disease pathology and immuno-oncology. The S3 safety lab undertakes research and development activities and investigates highly pathogenic agents under biosafety level (BSL) 3 conditions.

In 2021, the company generated revenues worth 40 million Euros, 48% of which came from industrial contracts.

The institute regularly collaborates with hospitals and conducts tests besides producing investigational pharmaceutical products that comply with GMP requirements. Moreover, it supports partners in developing processes for the pharmaceutical manufacturing of biologicals and advanced therapy medicinal products (ATMPs).



Goals

Short-term: In the short run, Fraunhofer Institute for Cell Therapy and Immunology IZI aims to provide cutting-edge solutions for the research and development of novel diagnostics and therapeutics, particularly in infectious disease and immuno-oncology research.

Long-term: The facility hopes to provide solutions to widespread conditions like infectious diseases and cancer. Additionally, it aims to contribute to the scientific and technological sovereignty of Germany and the whole of the EU.

Challenges

| To quickly and easily extract specific data from old and new archives

As a research institute with over 600 employees, including technical staff, students, and research specialists, it became challenging to record their data manually and find specific details from a sea of information. The facility's archives contain decades 'worth of data, and despite having an efficient lab notebook system, it became very time-consuming to seek the desired information within a short span.

| To better organize experiments and enhance team collaboration

The institute has a total of 7 departments which are further divided into different units. It is imperative for the teams to cooperate in creating solutions and navigating complex systems. With the company's current paper lab notebooks, organizing experiments was virtually impossible. Researchers typically work on multiple projects while maintaining a single lab book, making maintaining records difficult.

Fraunhofer IZI was looking for a solution that not only tackles these issues but also promises functionality and ease of use at a reasonable cost.

Solution

| eLabNext improves institutional collaboration and organization

Eager to find a solution to these issues, Fraunhofer IZI started looking for lab digitalization options online. It was just a matter of doing a quick Google search when it came across eLabNext.

If not for the eLabNext software, the institute would have continued using paper-based lab notebooks and spent much time manually searching for data. The archives are quickly located by browsing (scrolling through) or entering a range of search queries. With the eLabNext software, it is now able to better structure its projects into different categories, which not only improves efficiency but also enhances productivity.

Another solution the software provided was the ease of collaboration within and across the lab, a feature that Fraunhofer Institute IZI eagerly searched for. It allows all members working on a project to always have access to the data at all times, thereby fostering good communication and problem-solving throughout the lab. Another benefit that comes with using an eLabJournal is increased comprehensibility. When colleagues manually record data in paper-based lab notebooks, it can sometimes create problems related to readability. Since the eLabJournal is entirely automated, there is no room for unstructured entries or lack of clarity due to poor handwriting.

Lastly, eLabNext allows seamless inventory management by providing a safe, reliable, and accessible digital environment.



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Results

eLabNext provides a comprehensive solution for better data searchability, team collaboration, and sample management

Additionally, the software is excellent at keeping track of procedures, samples, experiments, and progress. The eLabNext team always welcomes feedback and is also quite fast in implementing requests and addressing customer concerns.

Fraunhofer Institute for Cell Therapy and Immunology IZI is pleased with the software since it helps the institute manage samples. This minimizes the time spent writing down repetitive protocols and sample information for every experiment. The intuitive nature of the user interface makes it very easy to search and find samples or enter newly produced samples into the system.

The software also helps with troubleshooting and problem-solving. Since samples can be conveniently tracked, the facility could detect contamination by identifying which sample was used for all failed experiments. Taken together, eLabNext's digital lab platform has enabled Fraunhofer IZI to digitalize its operations, making data more accessible and saving the organization time, money, and effort.



About eLabJournal

eLabJournal offers an intuitive and flexible solution to manage information in your lab. The all-in-one Electronic Lab Notebook also includes sample tracking and protocol management modules. eLabJournal improves efficiency when documenting, organising, searching, and archiving data, samples and protocols. The software is suitable for any lab ranging from small academic laboratories and start-up companies to large academic institutes and globally operating companies.



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Want to learn more about how eLabNext can help elevate your lab?

Email us at enquiries@elabnext.com, or fill out our contact form.

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