



Case Study – March 2024

eLabNext Makes Automated Inventory and Data Management Easy for Terminus Bio

“Other systems are either too broad in scope or too rigid in their setup. ELabNext offers a healthy balance of flexible functionality and the ability to customize certain aspects of our workflow without getting overly bogged down in features. Since we have a unique workflow, the ability to customize certain aspects of our data tracking methods was key to our ability to successfully incorporate a LIMS.”



Joshua Paster
Founder

Terminus Bio

[Terminus Bio](#), founded in 2020 by [Joshua Paster](#), provides innovative plant biotechnological services to the agriculture and agri-technologies sectors. Their TerraCulture service platform offers a comprehensive suite of plant tissue culture services that are focused towards addressing the new and existing challenges in high value crop production, food security, climate resilience, and novel plant breeding programs. These services include plant diagnostics, phytopathogen remediation, genetic augmentation, safe cryogenic storage, contract propagation and logistical transportation of precious plant germplasms through an all-inclusive biorepository program. From clean stock asset management to contract manufacturing, they offer a complete platform of solutions catered to the modern-day plant commercial and biotechnology landscape.

VISIT TERMINUS BIO

Goals

Short-term: In the short run, Terminus Bio aims to provide top-quality, transparent, and cost-effective contracted plant tissue culture and cryogenic services to agricultural production programs, conservation efforts, and technology development initiatives.

Long-term: The company hopes to build a comprehensive plant biotechnology development and service platform capable of delivering new and innovative plant cryogenic and cellular agriculture manufacturing methods that will change how we think about growing and preserving our critical plants across our changing planet.

Challenges

| To efficiently and flexibly manage a large collection of samples

At Terminus Bio, processes such as cell line management, lineage tracing from source tissues, and reporting have all been done manually. The team has used piecemeal markers and spreadsheet solutions, which were cumbersome and open to clerical errors. Per-sample data entry was around 2 minutes, and the company wanted to reduce this time to streamline their operations.

Terminus Bio needed a software solution to perform automated end-to-end sample lineage tracking and cell line inventory management. Because they are a service provider for customers who require tailored solutions, they also needed customizable software that could adapt to the unique nature of their clients' procedures, not too broad or rigid, but offering a healthy balance of audit traceability and customization.

Solution

| eLabNext's platform offers a trusted, customizable LIMS solution

During his previous work with another organization, Terminus Bio's founder began using the eLabNext platform in 2017. Over the years, he noticed the consistent improvements and meaningful modifications made to the platform.

While looking for a LIMS solution, the Terminus Bio team evaluated several potential software options, but it was business stability, partnership with Eppendorf, and proven successes that made choosing eLabNext easy. On top of that, eLabNext offered improved cloud storage systems, updated graphical user interfaces (GUIs), and impressive customer service, which provided confidence that the two companies could continue their partnership long-term.

If they had been unable to identify a solution, it would have left them open to errors in their service offerings. This risk would have prevented them from scaling their platform and jeopardizing their mission of providing top-quality, consistent services to their customer base. A robust inventory and quality management system was integral to achieving the company's goals.





Results

| eLabNext enables automated and scalable sample tracking

By incorporating the [eLabInventory](#) system into its workflow, Terminus Bio has automated its sample tracking methods, making them robust, efficient, and scalable. The [barcode automation add-on](#) available through the [eLabMarketplace](#) enabled a scan-based workflow that technicians could follow to record their samples and work. This helps mitigate the risk of mistakes or inaccuracies, streamlines workflows, and allows the delivery of cost-effective services to customers.

eLabNext's inventory tracking system has been instrumental in increasing Terminus Bio's productivity. Its simple and straightforward cloning feature paired with the flexibility of customizable QR codes enable protocols that reduced per-sample data entry from 2 minutes to 10 seconds for subcultured cell-lines.. This level of data resolution allows us to track each cell line from cradle to grave and gives us confidence in the accuracy and quality of our service.

| eLabNext provides flexible data management solutions

eLabNext has also changed how Terminus Bio handles data, providing a more efficient process that reduces data management time by over 90%. With the API features, the team can rapidly pull global data from the database to assess overall performance across our service offerings and has developed custom Python scripts that automatically generate internal audits and customer account reports.

“eLabAPI also allows us to pull real-time inventory data from our thousands of samples to rapidly analyze repository health and deliver real-time status updates to our customer base. This process initially took several hours to review each record manually. Now, we can automatically analyze it quickly and in real-time, allowing us rapid responses to technical issues and customer requests.”



Joshua Paster
Founder

| eLabNext promotes the growth of Terminus Bio’s customer base

The team has reduced their sample and data management time, enabling them to spend time on business development, expanding their customer base, and scaling their business. Time spent doing data entry in front of a computer is now spent on growing and improving the business on all fronts. As a small, self-funded company, this extra time is invaluable and allows more streamlined operations and improved capacity without additional labor.



Europe, Africa and Asia

Kieler Bocht 9E
9723 JA Groningen
The Netherlands

☎ +31 50 720 00 55

UK and Ire

9 Hills Rd
Cambridge CB2 1GE
United Kingdom

☎ +44 122 362 2422

Australia/Oceania

c/o The Commons
Level 1, 285A Crown St
Surry Hills, NSW 2010

☎ +61 2 9466 9190

North America and South America

1208 Massachusetts Ave, Suite 3
Cambridge, MA 02138
USA

☎ +1 617 665 5391

100 Crossing Blvd, Suite 110
Framingham, MA 01702
USA

☎ +1 617 665 5391

326 Mira Loma Ave
Glendale, CA 91204
USA

☎ +1 617 665 5391

✉ enquiries@elabnext.com

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