

Positioning Your Food and Beverage Testing Lab for Success



FROM THE EXPERTS

According to Michael Shanler, Analyst, Gartner, “If the situation presents itself, take the opportunity to reduce the footprint of legacy ELN and LIMS systems, consolidate them into one system that is more suitable for expansion with the enterprise, and extend it to collaborators and supply chain partners.”¹

– Gartner

WHY A PURPOSE-BUILT LIMS?

The Data Management Challenge

A successful lab is more than a scientific hub. In today’s age, it’s a digital data enterprise. An oil and gas lab managing hundreds of concurrent tests, a food and beverage lab tracking incubation in real time, a biobanking lab with a vast and complex inventory of samples – it’s all data. And it grows exponentially day by day, week by week, creating an urgent need for an integrated informatics platform where that data can be securely and efficiently stored, retrieved, and analyzed.

But should that platform be one-size-fits-all across industries? A pharma lab needs regulatory documentation, while a diagnostics lab requires advanced tracking of biospecimens. Traditionally, each would begin with the same basic building blocks: a Laboratory Information Management System (LIMS) with standalone point solutions such as an Electronic Laboratory Notebook (ELN) or a Laboratory Execution System (LES) daisy-chained together to approximate an end-to-end solution. Then, through a complex à-la-carte development and validation process, each of these labs would customize their platform in response to their divergent needs. Repeated for every organization, across every industry, this bulky deployment process represents an enormous amount of cost and effort, and a considerable degree of risk.

Until now.

.....

The Case for a Pre-Configured, Fully Integrated Solution

A purpose-built LIMS, with the option to embed ELN, LES, and other modules, leapfrogs the lengthy customization process. Because your industry’s best-established workflows and operating procedures determine its functionality, your platform is configured to meet your needs before you’ve even begun. The advantages of this accelerated start are numerous and notable.

1. Save Time

A pre-configured LIMS can deploy up to 75% faster than a more typical LIMS system. Its purposeful functionality reinforces a consistent, industry-standard workflow to help your lab achieve greater efficiency and productivity.

2. Save Money

Faster deployment and improved functional efficiencies translate to significant cost savings. Abandoning stand-alone ELN and LES products and other point solutions in favor of pre-packaged, fully embedded modular capabilities in one streamlined platform will help you maximize your return over time.

3. Reduce Risk

A purpose-built LIMS reflects industry best practices and the latest regulatory and compliance developments within your industry. As a result, it eliminates the need for custom code and reduces the overall configuration effort, thereby lowering the risk inherent with other LIMS projects.

4. Stay Focused

Lab managers can conceal or disable non-essential functionality in the purpose-built LIMS. The result is a user experience that's responsive not just to your industry, but also to the specific needs and use cases of your front-line staff. That means less training time, greater productivity, and better quality overall.

5. Future-Proof Your Business

Industry regulations and conditions change over time, and your lab will likely change too – you may add new service areas, new tests, or new users as you grow. A modular, purpose-built LIMS that makes use of industry-standard web technology can expand with you, from startup labs through global operations, without the prohibitive time, cost, and compliance issues of specialized coding.

Built Better for the Food and Beverage Industry

Food and beverage labs ensure the safety of our global food supply chain. They test a wider variety of products, using a more diverse set of test methods, than almost any other kind of lab. To keep pace, they need an informatics platform that operates just as uniquely and as consistently as they do.

This industry is defined by a triad of exceptional challenges.

The first is one of breadth and variety. Food and beverage labs must monitor a vast range of samples throughout their lifecycle, from unprocessed ingredients to final products already released into the global market.

Secondly, the testing itself varies widely from safety-related quantitative queries (“Is this product free of contaminants?”) to commercially significant qualitative checks (“Does this product look and taste the way it should?”).

And finally, these labs must evolve alongside ever-intensifying regulations. The U.S. FDA's 2011 Food Safety Modernization Act (FSMA) introduced closer, more frequent inspections, necessitating better data tracking and monitoring. Other organizations, like the U.S. Centers for Disease Control and Prevention (CDC), the U.S. Department of Agriculture, and the World Health Organization (WHO), also contribute to a network of stringent regulations. In this environment, food and beverage labs have more responsibility than ever to tightly manage ingredient, intermediate, and finished product quality from end to end.

BUILT TO WORK THE WAY FOOD AND BEVERAGE ANALYSTS WORK

Because this platform is pre-configured for industry-specific scenarios, its implementation takes a fraction of the time required for traditional LIMS systems. It connects analysts to food and beverage test methods through an easy-to-use, intuitive interface—all while maintaining compliance with regulations.

A few of the platform's pre-populated test methods include:

- Moisture content
- Acid Value
- Total solids
- Ascorbic acid

These three broad challenges create immense complexity. LabVantage Food and Beverage helps to mitigate that complexity. This purpose-built LIMS provides for every need of a food and beverage lab, from initial product intake through distribution and post-release testing and compliance.

Schedule and Monitor Microbial Testing

The platform includes a Manage Incubation module, configured to track incubation datasets and alert analysts when a sample is ready for testing.

Trace Batch Genealogy in Case of a Recall

The Sample and Batch Genealogy Viewer tracks which sub-lots have contributed to a composite product. If a food production facility has combined multiple vats of butter in a single package run, for example, this feature tracks which vats were involved, giving analysts and managers precise visibility into product lineage.

Test for Product Shelf Life

A built-in stability module helps the labs plan, monitor, and analyze product quality on a pre-determined schedule in multiple environmental chambers. To give analysts added assistance and ensure consistency, the LIMS automatically issues an alert when it's time to pull samples for testing.

Efficient and Accurate Way to Capture Results from Instruments

The platform integrates with every common food and beverage testing instrument, including chromatography systems, pH meters, and balances. An automatic bidirectional data flow frees analysts from manual entry and reduces the risk of human error, while ongoing monitoring alerts managers when an instrument requires maintenance, re-certification, or calibration.

Maintain Regulatory Compliance

Through automated data capture, the platform dynamically builds detailed audit trails required by the FSMA and other regulatory agencies, ensuring ongoing compliance.

Minimize Product Loss

Detailed traceability and real-time reporting functions give managers clear visibility into each product's lifecycle, helping them identify and correct deviations that contribute to expensive waste and loss of time and materials.

Maintain Consistent Environmental Monitoring

The platform includes graphical views of sample collection sites, and helps to schedule and monitor samples across multiple locations and surfaces.

The Accelerated Implementation Experience

Choosing a purpose-built LIMS is like strapping a rocket booster to the implementation process. It means much of the background work is complete before you even begin, giving you a head start without sacrificing consistency, compliance, or performance.

Here's how the LabVantage implementation process compares to a typical implementation experience.

| A Typical LIMS Implementation | LabVantage LIMS Implementation |
|--|--|
| <i>Minimum 12 months to deploy</i> | <i>Deploys in as few as three months</i> |
| <p>A massive up-front investment drives this deployment process, which begins with a detailed discovery and documentation of user needs and progresses through multiple design iterations and testing phases. Heavily customized and configured systems introduce risk and its corresponding compliance requirements, necessitating a significant investment in validation and test planning.</p> <p>Once fully customized and compliant, the system is ready for use – but only after a significant investment in training for all users and administrators. Training timelines are contingent on the complexity of customization and are often a significant factor in typical deployment costs. When updates are required after deployment, the vendor must be involved for specialized customization and/or installation, further adding to the costs and time required to maintain performance.</p> | <p>Because this system is already configured for your industry using established industry best practices, the implementation process is much more efficient. Data templates are integrated and the products and functions most commonly relied upon by industry-specific users are engaged and ready. If further configuration is required, the system's modular design is easily adaptable without code; ongoing updates and enhancements require no specialized skill or outside management.</p> |

Run Your Digital Enterprise with LabVantage

Across industries, every successful laboratory functions at the nexus of talent and technology: the right people using the best, most streamlined tools. And as the market's leader in modern and efficient LIMS solutions, LabVantage is essential to that winning formula. Here's why.

The Best and Most Secure Technology in the Industry

Our feature-rich LIMS is completely web-hosted, giving networked users access to the same information from one secure, easy-to-use system – whether they are in the same lab or across the world. Hosted on-premise or in the cloud, the system also connects labs with third-party contributors outside of their firewall, like manufacturing partners or research organizations, allowing for harmonized data input through a single platform.

A System That Adapts to Your Needs – Without Code

Our purpose-built LIMS features a modular design that invites further configuration and adaptation without specialized coding skills. Users can configure their platform themselves or rely on our global professional services team to do it; both scenarios reduce the cost, effort, and complexity of additional testing and compliance.

A Fully Interoperable Experience From Start to Finish

No more siloed informatics systems for individual use cases within a product life cycle. Our system interconnects your processes within a single, central hub, meaning that documentation generated during early R&D explorations is consistent throughout manufacturing and final quality assurance testing. The result is a more efficient lab with fewer opportunities for risk, leading to a stronger business performance overall.

A Professional Support Team in Lockstep With Your Needs

From deployment through validation and ongoing monitoring, our global professional services team of solution engineers, business analysts, and project managers offer consistent and top-rated support services. We seek to become more *partner* than *vendor* through our managed services offering; for example, our team will regularly monitor, optimize, administrate, and enhance your system, giving you greater confidence and more control over your IT and labor costs.

Conclusion

LabVantage Food and Beverage helps labs maintain efficient testing and compliance throughout the global food chain.

Enhance your food and beverage testing lab with the full-featured, entirely web-based informatics platform designed specifically for success in your industry.

TAKE ADVANTAGE of LabVantage Food and Beverage at [LabVantage.com/foodandbeverage](https://www.labvantage.com/foodandbeverage)

REFERENCES

¹ Gartner, "Hype Cycle for Life Sciences, 2018", Published 25 July 2018, Analyst(s): Stephen Davies, Michael Shanler, Jeff Smith



LabVantage Solutions, Inc.
265 Davidson Avenue, Suite 220
Somerset, NJ 08873
Phone: +1 (908) 707-4100

www.labvantage.com

ABOUT LABVANTAGE SOLUTIONS

LabVantage is the recognized leader of enterprise laboratory software solutions with over 35 years of experience. We deliver an integrated laboratory informatics platform including laboratory information management systems (LIMS), electronic laboratory notebooks (ELN), and laboratory execution systems (LES). We support more than 1500 customer sites in the life science, pharmaceutical, medical device, biobank, food & beverage, consumer packaged goods, oil & gas, genetics/diagnostics, and healthcare industries. Headquartered in Somerset, N.J., LabVantage offers a comprehensive portfolio of products and services that enable companies to innovate faster in the R&D cycle, improve manufactured product quality, achieve accurate record-keeping, and comply with regulatory requirements. The LabVantage integrated LIMS/ELN/LES platform is highly configurable, purpose-built, and 100% web browser-based to support hundreds of concurrent users and seamlessly interface with instruments and other enterprise systems.

For more information, visit www.labvantage.com.