

**TRUE INTEGRATION**

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**A Challenge of Diversity**

Similar goals. Different approaches. While there's similarity in the work done in healthcare labs throughout the world, there are also diverse approaches to workflow and procedures related to pathology, microbiology, diagnostics, genomics, and other types of science.

As a result, different types of labs use various means to record, track, and analyze data. For organizations that have switched from paper-based approaches to software as part of their overall digital transformation, the solution has either been to deploy separate products or use a one-size-fits-all software.

Neither are ideal fits, leaving labs with either multiple, noncomplementary systems or a single system that does not reflect the distinct nature of each discipline.

The obvious alternative is an integrated system with discipline-specific workflows.

Obvious, perhaps, but what about price? Sure, it makes business sense to leverage the synergies between the different branches of science, but doesn't the cost outweigh the benefits?

**Getting to True Integration**

While the upfront investment may seem like a disincentive, the benefits that can be derived from using a modern digital architecture can far outweigh initial costs.

LabVantage Medical Suite is an advanced laboratory information system (LIS) that integrates all medical lab disciplines—including diagnostics, microbiology, pathology, genetics and blood bank<sup>1</sup>—in a single platform with a common architecture and user interface. Not only does it give each discipline the workflows and tools required, but Medical Suite also enables effective data sharing and collaboration across the entire organization. What's more, by eliminating multiple vendors and all that entails in terms of maintenance, knowledge transfer, and scalability, Medical Suite can ensure you have a much better return on investment and total cost of ownership (TCO) (see "Totaling the Cost" on page 2).

The key is effective integration: a single interface, built on a common digital architecture, to link the various disciplines. Some vendors promise integration, but instead deliver a LIS that uses an interface engine to connect the various disciplines.

LabVantage Medical Suite delivers true integration, enabling labs to move data smoothly and providing a harmonized, searchable database. As a result, your organization will have fewer points of transition and faster outcomes.

Medical Suite also integrates seamlessly with any lab equipment, system, or outside organization. Integrations are implemented on open standards and interfaces, through HL7, XML, or any proprietary protocol. Its common database allows total information access without interfaces or multiple system logins, letting you simplify lab functions and reduce costs, spend less time searching for patient data and managing interfaces.

Compatible with patient-focused systems in healthcare settings, as proven through dozens of successful implementations, Medical Suite can be configured for specific needs, and remains at the forefront of the industry through regular updates. Compliance with auditing authorities, regulatory bodies, and industry regulations is assured, and its comprehensive, end-to-end audit trail functionality simplifies and enhances auditing and quality control.

## Totaling the Cost



At its simplest, the total cost of ownership (TCO) for a software project can be defined as the sum of all direct and indirect costs incurred by the software. But just what those costs include can be subject to debate. For example, CIO.com, which bills itself as “the voice of IT leadership,” cites 20 components that should be considered in analyzing TCO as part of an overall return on investment, including items such as user licenses, customization, downtime, and upgrades.

To those types of costs, Gartner advises clients to also consider non-IT costs, like human resources, facilities, and other operational costs not directly associated with the software itself. It defines TCO as “a holistic view of costs across enterprise boundaries over time.”

However you look at TCO, LabVantage Medical Suite scores extremely well—predictably so, given that it emphasizes integration across scientific disciplines in the lab and eliminates the costly need for discipline-specific training, lengthy upgrades, and ongoing customization. By delivering a single platform, many of the standard elements that lead to ballooning TCO are avoided, adding to the direct benefits associated with less data handling.

On upgrades alone, Medical Suite has an approach that slashes ongoing costs associated with downtime. While it’s typical for a medical LIS to require updates that require up to two weeks of downtime, Medical Suite’s upgrades take an average of 30 minutes. Blow that comparison out over 15 years—a period that would typically entail 5 updates—and the numbers speak volumes: 2.5 hours for Medical Suite versus an estimated 70 days for a typical non-integrated legacy system.

The differentiator is in the design. Rather than customizing a pre-determined, one-size-fits-all system, Medical Suite is designed from the ground up, using customers’ specific requirements.

Customer-driven, fully integrated, Medical Suite offers TCO that is lower than that associated with traditional solutions.



## Multi-discipline Benefits

LabVantage Medical Suite is a pure HTML5-compliant, browser-based system with zero footprint. There are no client programs to install and maintain; no applets or plugins to be managed. In addition to significantly reducing IT maintenance costs, the web-based UI enables authorized users to access laboratory information from any device through a standard browser. In addition, Medical Suite can be hosted anywhere, including on-premises in your data center, with your cloud provider, or on the LabVantage Cloud.

Medical Suite also lets you optimize lab efficiency while still maximizing safety. Configurable safeguards and automatic alerts ensure that higher testing volumes and workflow pressures will not increase testing errors or affect patient safety. Every test performed can be monitored for accuracy and quality control, preventing costly patient safety errors and identifying problems before reporting out results. Through effective quality and process management, as well as support for interfacing and automation, Medical Suite helps guarantee quality results and ensures these results are delivered in a timely manner to support informed patient care.

Whatever scientific disciplines you pursue, Medical Suite can deliver benefits that simply are not possible without true integration.

## Diagnostics

Ideal for chemistry, hematology, coagulation, virology, urinalysis, and much more, Medical Suite manages operations in all testing areas of diagnostic labs, where efficiency, testing accuracy and quality control are of utmost importance.

To facilitate efficient laboratory testing and maximize speed and overall performance, Medical Suite supports LEAN workflow, enabling you to automate routine tasks and incorporate your desired level of process automation.

It offers seamless integration with laboratory instruments, robotic sub-systems, and Health Information System/Electronic Patient Record, which enables highly automated laboratory operations and full management and supervision of the entire laboratory process.

### Microbiology

Medical Suite meets the complex requirements of a modern microbiology laboratory, and provides a user-friendly and flexible solution for complete workflow and data management of all fields of infection medicine.

Microbiologists can quickly and easily record observations, add tests as needed, create reports, validate and approve results. The system allows for workflow automation within microbiology, such as test addition or susceptibility testing based on earlier findings. It also enables management by exception, meaning only certain specified samples need to be reviewed in medical validation—where the doctor can write the diagnosis or order additional tests. At any stage in the workflow, the user can pull up a full multidiscipline history of the patient, enabling highly informed decisions.

Data flows electronically between analyzers in the lab and the LIS, saving time and eliminating transcription errors. Users can automate many work tasks, such as monitoring blood cultures and running pre-defined panels of antibiotics to determine the most effective treatment.

### INTEGRATED BENEFITS

- Discipline-specific workflows
- Full support for digital pathology processes
- A decade of continuous product development and innovation
- Plug and play drivers for 700 most commonly used instruments
- Most modern LIS platform on the market
- Proven in laboratories at dozens of large healthcare institutions

## DISCIPLINE-SPECIFIC WORKFLOWS

Whatever scientific disciplines you pursue, Medical Suite can deliver benefits that simply are not possible without true integration.

- Diagnostics
- Pathology
- Genetics/Molecular
- Blood Bank<sup>2</sup>

### Pathology

Medical Suite's pathology module provides advanced workflow management capabilities for histology, cytology, autopsies, and molecular pathology.

In addition to advanced workflow management capabilities, it offers embedded storage management, consent management, and versatile reporting tools via integrated digital dictation and speech recognition solutions to create seamless digital pathology workflows.

All objects, such as blocks and slides, are identified with a unique ID so they can be read using a bar code reader at any step of the laboratory process to enable automatic tracking, routing, and resulting of specimens. This facilitates workplace and phase-specific work lists and effective progress of samples through the laboratory, preventing errors in identification and location.

### Genetics/Molecular

Medical Suite meets the complex requirements of a modern genetic or molecular laboratory, providing a user-friendly, efficient, and flexible solution for improved workflow.

Using the LIS, geneticists and laboratory personnel can quickly and easily reach relevant information for the case or patient, order new tests, add longer texts (pre-defined or manually added), add results and observations. The system is designed to support complex workflows that can be automated and pre-defined. Users can also manually add steps and tests when needed. The system supports inquiries (Proband/Familial investigations), due dates, alerts and multiple approval steps.

In addition, Medical Suite supports multidisciplinary work, meeting the growing need for coordinating workflows between pathology labs and genetic labs. With Medical Suite, a genetic laboratory can be a subcontractor to a pathology laboratory and handle tests ordered directly from the pathology module within the LIS.

Medical Suite also offers embedded storage management, which includes functionality to create storage units and register an object that is added into a storage unit (manually or automatically), as well as advanced tools for finding items in the storage based on specific data or results.

### Blood Bank<sup>2</sup>

Medical Suite ensures that the right blood products are delivered to the right patient reliably, securely, and in a timely manner.

The solution manages blood transfusion and blood product manufacturing, order management, forecasting and planning. In addition, the suite will eventually include advanced web tools for donor engagement and management.



## Overcoming Legacy Issues

Legacy systems may breed familiarity and comfort, but they can also engender a false sense of affordability. A truly comprehensive system that integrates every type of healthcare lab can deliver benefits that far outweigh the initial price and result in a much lower TCO.

A fully integrated system like LabVantage Medical Suite can help multidiscipline healthcare labs overcome:

- The loss of time associated with translating data between interfaces
- Quality and compliance issues that come with human error
- The cost related to growing a system that isn't designed to scale easily

Designed using feedback from LabVantage's customers, Medical Suite allows organizations to overcome the specific issues associated with operating multiple labs, and provides a lower TCO based on a power value proposition: one vendor, one platform, one fee.

To request a demo or learn more about the total cost of LIS, visit:  
<https://www.labvantageclinical.com/request-a-demo/>

<sup>1</sup> Blood bank is not available in all global regions.

<sup>2</sup> Where available.



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### ABOUT LABVANTAGE SOLUTIONS

A recognized leader in enterprise laboratory software solutions, LabVantage Solutions dedicates itself to improving customer outcomes by transforming data into knowledge. The LabVantage informatics platform is highly configurable, integrated across a common architecture, and 100% browser-based to support hundreds of concurrent users. Deployed on-premise, via the cloud, or SaaS, it seamlessly interfaces with instruments and other enterprise systems – enabling true digital transformation. The platform consists of the most modern laboratory information management system (LIMS) available, integrated electronic laboratory notebook (ELN), laboratory execution system (LES), scientific data management system (SDMS), and our advanced analytics solution (LabVantage Analytics); and for healthcare settings, a laboratory information system (LIS). We support more than 1500 global customer sites in the life sciences, pharmaceutical, medical device, biobank, food & beverage, consumer packaged goods, oil & gas, genetics/diagnostics, and healthcare industries. Headquartered in Somerset, NJ., with global offices, LabVantage has, for four decades, offered its comprehensive portfolio of products and services to enable customers to innovate faster in the R&D cycle, improve manufactured product quality, achieve accurate record-keeping, and comply with regulatory requirements. For more information, visit [labvantage.com](http://labvantage.com).

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