

# Implementation Services

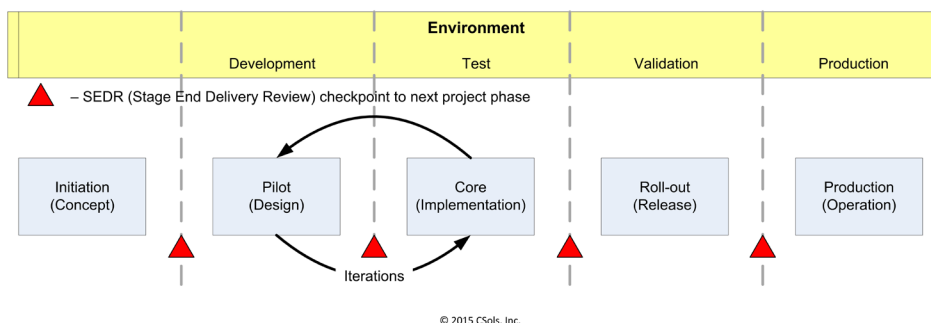
## Premier Laboratory Informatics Expertise

CSols has been implementing laboratory informatics solutions Right the First Time for over two decades.

### Full System Implementation

CSols has expertise and experience in a broad range of implementation methodologies from the classic waterfall methodologies to the agile methodology. Many of our customers require that their particular implementation methodology be followed, and we are happy to comply. CSols has, however, leveraged our experience to develop our own best practices, value-added implementation methodology, LASER™: Laboratory Automation Services Execution Routes.

CSols LASER™ System Implementation Methodology



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As shown in the graphic representation above, the LASER implementation methodology combines the best of sequential design methodologies and the speed and effectiveness of incremental and iterative methodologies. LASER is completely scalable and can be used in both regulated and non-regulated environments.

### Project Management

The CSols informatics project management methodology is based on the Project Management Institute (PMI) framework of Initiating, Planning, Executing, Monitoring and Controlling, and Closing. Our project managers are Project Management Professional (PMP) certified, and more important; they have the industry, laboratory, and informatics expertise that are the extra ingredients that will make your informatics project successful.

**Deliverables include:** Project Charter, Project Plan, Risk Analysis, Resource Plan, Governance Model, Monthly status reports, Issue Tracking and Resolution, and Project Closeout

By the way,

at CSols, we define success as being on time and on budget, meeting your requirements, and attaining high levels of system adoption. **Our customer satisfaction rating consistently remains above 95%.**

We not only help you implement your informatics system, we also work with you to manage the change it drives. We believe that it is critical to involve all the system stakeholders (managers, supervisors, scientists, technicians, IT) throughout the project and actively manage how they perceive and receive your informatics system. An implementation is not "successful" if no one uses it! Our process ensures that you will realize true project success.



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## Configuration and Customization

Configuration is generally defined as tailoring the informatics solution using the COTS vendor's tools that do not require any programming. Customization, on the other hand, is modifying the COTS solution through programming. For long-term supportability, best practices indicate that configuration is preferable over customization, but CSols feels that this needs to be balanced to account for and respect your work practices. The informatics system must adapt to your processes, not the other way around.

The configuration or customization of your informatics systems should be accomplished in the most efficient, scalable and supportable way to satisfy both your current and future needs. CSols has expertise in and knowledge of the leading informatics systems and, as an independent informatics consultancy, we'll always advise you as to the best way to satisfy your requirements, either through configuration or customization. We will accomplish this without forcing large-scale reengineering of your processes.

**Deliverables:** Enhanced informatics system, Requirements Definition, Design Documents, Configuration Documents, Unit test scripts, Integration Test scripts, Code

## Systems Integration

CSols has unparalleled experience in integrating laboratory data systems with other information systems. We have used a variety of APIs, middleware, database integration tools, web services, and custom programs to accomplish our clients' integration goals. Knowledge and experience in using integration tools are essential, but even more important to success are CSols' understanding and knowledge of the informatics systems and how laboratory data is used.

**Deliverables:** Requirements Definition, Design Documents, Configuration Documents, System integration code and configuration, Unit test scripts, Integration test scripts

## Instrument Integration

Instrument interfaces that CSols has developed and implemented have run the gamut from a simple one-way data transfer to sophisticated, workflow-driven, multi-step programmatic interfaces. We have interfaced almost every type/brand of instrument and instrument system to a variety of informatics systems. CSols has expertise with a variety of commercial instrument integration systems including Integration Manager, Instrument Manager, and LabStation.

**Deliverables:** Instrument interface program/code, Requirements Definition, Design and Configuration Documentation, Test scripts

## Data Migration

CSols has developed a hybrid data migration methodology that uses both manual and programmatic processes. There are a number of standard Extract, Transform, Load (ETL) tools available that often can be used in the programmatic process. Additionally, CSols has developed a more robust, informatics-oriented data transfer tool, the Automated LIMS Loader (ALL), which facilitates analytical data migration and load processes.

**Deliverables:** Requirements Definition, Design and Configuration Documents, Data Transfer Program/Map and Test Scripts (for Programmatic Processes), Full Documentation of Process and Data Map (for Manual Processes)

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### Enhancements and Extensions

Your needs and requirements invariably expand and change. These types of changes and additions are referred to as Enhancements and Extensions. It's important that the enhancement and extension of your informatics system is accomplished in the most efficient, scalable, and supportable way. - a top focus for CSols consultants. They have successfully enhanced and extended informatics systems in QA/QC, R&D, and service/contract labs within the pharmaceutical, biotech, chemical, petrochemical, energy, food & beverage, forensic, agriculture, and environmental industries.

#### Some Examples that CSols has developed and delivered include:

- Requirements gathering and documentation of enhancements and extensions
- LIMS integration to other information systems (ERP, MES, business systems, etc.)
- Adding Instrument Interfaces
- Mobile Device Support
- Data Visualization and Analysis
- Implement new or old modules that have not previously been used in system
- Real-time Out of Compliance indicators
- Configurable integrated e-mail notifications
- Additional reports to support business
- Web-based dashboards
- User issue list fixes

### Training

The informatics training experts at CSols have a long, successful track record in the preparation of customized, role-based (technician, researcher, supervisor, system administrator) training materials and classes. Our customized training is designed to complement the vendor training. Training materials and classes can be delivered in a classroom setting, as computer-based training modules, or as train the trainer events.

We want your end-users to walk out of the training feeling comfortable and confident to use their new lab informatics system so we will apply our industry, domain, and laboratory knowledge to ensure that your training materials and classes will be designed, developed, and delivered to optimize your informatics systems adoption.

**Deliverables:** Role-based training courses, Customized training materials, Training workbooks

### Hyper-Care Support

When you get close to go-live with your new informatics system, training must be developed and delivered, but no earlier than two weeks prior to the go-live date. But even after all the training, there will inevitably be questions and hiccups when you officially go live. **How the hiccups are handled is the true make or break test of your project.** All the questions and issues must be handled professionally, fully, and rapidly or frustration will set in and your adoption rate will plummet.

CSols Hyper-Care Support will take care of your training needs (formal and informal) and will provide an expert on-site for a minimum of two (2) weeks after go-live to answer any questions and handle any glitches before they become a real issue.

**Deliverables:** Role-Based Training Courses, Customized Training Materials, Training Workbooks; On-site support including End User Support, System Manager Support, IT Support, Knowledge Transfer; and Remote Support.