Element LIMS™
LABORATORY INFORMATION MANAGEMENT
for Analytical Testing Laboratories
As analytical laboratories respond to growing sensitivity about the safety and sustainability of our environment, and a more complex regulatory climate, real-time measurement, monitoring and reporting are becoming more critical than ever. The key to success is a robust and flexible information infrastructure that efficiently produces highly reliable, legally defensible, and easily accessible data.

To address this dynamic situation, Promium has developed a configurable off-the-shelf (COTS) laboratory information management system (LIMS) purpose-built for laboratories that focus on testing soil, water, air, and food.

From sample planning to the final report, Element LIMS™ provides a seamless process to manage samples, analyze data and report results. An intuitive task-based workflow closely matches the steps followed in your laboratory. And a rich and relevant feature set is finely tuned for laboratories that test environmental related matrices.

By automating and streamlining sample management and analysis, and providing broader access to essential information, Element forms the backbone of your information management system, serving as a platform for improving and sustaining productivity and quality.
Increase Efficiency, Access and Quality

**Efficiency**
Automate and streamline sample management and reporting workflow to create an operational advantage and improve efficiency.

**Access**
Leverage a cascading data model and centralized storage to gain greater access to operational and analytical data.

**Quality**
Embedded quality protocols increase data integrity, and strengthen quality management and regulatory compliance.

**Configurability to meet your needs.**
Core functionality in Element is based on industry standards and best practices such as NELAC, ELAP and GALP requirements, and with consideration for standards such as ISO 17025 and 21 CFR Part 11, and other state and municipal regulatory frameworks. This approach creates a solid and proven baseline of operations for your lab, but we understand that you also have unique business needs. To address those needs, Element offers a high level of configurability and through a broad array of optional settings, Element can be easily configured to address your specific business policies and operations practices.

Integration with Third-party applications such as accounting systems eliminates manual data transfer and facilitates improved productivity.

A variety of changes can be made to the system without requiring development resources including:
- changing nomenclature
- editing and adding data fields
- modifying equations
- configuring menus
- establishing alerts and flags
- modifying report formats and distributions
- modifying program settings and default values
Project Management

Project Templates
Templates manage sampling activity including test profiles, permit levels, and QC limits.

Bid to Project Conversion
Element converts bids into projects without additional data entry and offers various options for work scheduling and defining invoicing parameters.

Sample Control

Flexible Sample Login
Element provides a variety of login options including Quick Login and Pre-log. Unique identifiers for coolers, containers, work orders, samples, quality controls, parent/child relationships, and batches provide granular tracking.

Real-time Emil Alerts
Real-time alerts and system-generated messages notify you of critical operational or analytical conditions such as consumable levels, hold times, QC excursions, maintenance schedules, thermocouple monitoring, and professional certification expiration.

Bar Coding Integration
Element supports bar coding labeling, tracking and reporting of samples by utilizing Code 128, 39, and 2D bar codes for sample bottles, consumables, as well as reagents and standards.

Online Chain of Custody with EnviroChain™
Element is integrated with the Promium EnviroChain online chain of custody (CoC) service. CoC documents and data flow directly into Element, eliminating data entry and improving quality.

Laboratory Analysis

Batch Oriented
Element includes robust batching capabilities. Batches are created based on preparation method, and/or matrix. Batches can be reviewed by preparation, department analyst, package, work order, or for all analyses.

 Automated Bench Sheets
Electronic bench sheets store sample preparation information and embedded equations perform calculations to produce results. Batch-centric QC processing optimizes workflow. Online analytical standards log eliminates manual data entry of concentrations.

 Instrument Interfacing with Element DataTool
The Element DataTool feature directly uploads result data from instruments, as well as enabling automated updates of analysis detection limits. Element includes interpreters for hundreds of instruments and new interpreters are provided at no additional charge to customers with maintenance agreements.
**Element is a Unified Solution**

The Element architecture forms a unified application with all core LIMS components in one solution. From project planning to final report—a seamless flow of information and no additional modules to purchase, integrate, or maintain. The end result is a more robust, economical and efficient system that provides a quicker return on your investment.

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**Quality Assurance**

**Interactive Control Charts**
Create control charts and update analytical method control limits from within the control charts.

**Audit Trails**
Three-tiered global audit trails include tracking changes to 1) analytical data, 2) non-analytical data, and 3) qualifiers.

**Visual Cues**
Color coding is used to automatically highlight specified conditions such as out of range holding time, control limits, detection limits, and reporting limits.

**Quality Control Calculations**
Quality control calculations are incorporated into the electronic bench sheet to provide real-time assessment of quality control criteria.

**Quality Control Sample Frequency**
Quality control samples are automatically included incrementally as client samples are added to the electronic bench sheet.

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**Reporting & Web Access**

**Automated Report Packaging**
Packaging automatically integrates test results, QC results, raw data, chain of custody, and case narratives, and generates and distributes a final formatted report. Multiple reports can be generated simultaneously.

**Custom Project Analysis**
Customize an existing analysis for a particular project instead of having to build a new analysis each time.

**Simplified EDD Creation**
Use pre-loaded EDD formats (including SEDDs), and an EDD builder to create custom EDDs. Create EDDs concurrently with analytical reports.

**Subcontractor Data Exchange**
Pre-schedule samples for subcontract labs and automate upload of subcontract data into final reports.

**Specialized Reporting**
Element includes automated reporting templates for Contract Laboratory Program (CLP) and other Level 4 type complex reports.

**Operational Reporting**
Utilize a variety of operational reports such as turn-around time, quality control charts, project tracking, and work order tracking, to enable more pro-active oversight.

**Web-Based Client Access with Element ClientConnect**
Give your clients quick, secure and easy access to work order status and test results via the Internet.
Cascading Data Model

The Element cascading data model provides distributed data entry and centralized storage for enter-once and access-anywhere capability. Data flow is seamless from project initiation to final report. A highly granular approach to sample management includes tracking and monitoring down to the analyte level while maintaining association with the appropriate batch.

Regulatory Compliance

Element features and functionality are developed to meet the stringent requirements and regulatory standards including the U.S. Environmental Protection Agency (EPA) as well as other federal, state, provincial, territorial, and local organizations. Specific features that enhance data integrity include:

- Automated and secure audit trails
- Chain-of-custody integration
- Embedded quality control monitoring
- Calibration and maintenance scheduling
- Upload of process documentation
- Reagent and standards tracking

Flexible and Reliable Platform

Element is built on a Microsoft® platform and utilizes proven and stable technology including interaction with Microsoft Word and Excel applications. The system is highly scalable with the number of concurrent users broadly expandable. Element may be used with either Microsoft SQL or Oracle® to best meet your specific requirements.

Element also incorporates industry-standard SAP Crystal Reports as the report writing platform. Reports and data can also be saved in native Microsoft Excel, Microsoft Access, DBASE, FoxPro, XML, and ASCII formats, and can be exported to Microsoft Word and other word processor software.

The system can be configured as a local desktop application with access to a centralized database, or hosted remotely with a SaaS (software as a service) delivery model.
Implementation

Project Management

A dedicated implementation engineer is assigned to your laboratory as project manager and will follow a four-phase process to implement Element:

- **Determination:** Focus is on workflow analysis and requirements definition.
- **Build:** Installation of the software, and setup of the database.
- **Training:** Formal classroom and hands-on exercises.
- **Testing and Validation:** Testing of all aspects of sample management, data entry and review, and reporting of final results.

Additional modification services are available for items outside of core Element functionality.

Follow-On Support Services

Once the project implementation is complete, responsibility for your account is transitioned to our Customer Support group. Customers with maintenance agreements benefit from technical support and upgrades including:

- Phone support during business hours with after-hours alternatives from technicians with hands-on laboratory experience.
- Regular availability for download of software upgrades.
- Convenient online customer forum providing opportunities to share information with other users.
- Video tutorials on selected topics.

Additional training courses for advanced learning, new employee training, or refresher classes.

About Promium

Since 1998, Promium has been serving the analytical laboratory community with a focus on meeting the needs of organizations involved in testing environmental related matrices. Our LIMS solutions have been implemented by commercial and public sector laboratories of all sizes including ones with a single instance to others with hundreds of users. Our mission is to develop, implement, and maintain LIMS solutions that improve the operational performance of your laboratory.

For more information on Element LIMS and other Promium products and services please visit www.promium.com.