

Scope of Work – Overview

The City of Ann Arbor has issued a Request for Proposal to procure a Laboratory Information Management Software solution (LIMS) as well as related professional, training, maintenance, and support services. The LIMS and associated solutions will enable the City to perform its laboratory testing business processes effectively and efficiently in accordance with the applicable State of Michigan Regulations. Accelerated Technology Laboratories, Inc. is proposing the following solution to the City of Ann Arbor, as a SaaS (Standard) deployment. Sample Master® Web LIMS with the following Modules and Enhancements:

- ✓ Sample Tracking
- ✓ Data Entry
- ✓ Sample Scheduling
- ✓ QA/QC
- ✓ Electronic Data Transfer
- ✓ Chemical Inventory
- ✓ Resource Management
- ✓ Customer Relationship Management (CRM)
- ✓ LIMS Maintenance Module
- ✓ Test/Development Environment
- ✓ ExcelExpress
- ✓ iMobile®
- ✓ DB Audit & Security 360

Kick off the Project: City of Ann Arbor will assemble all key stakeholders and ATL will schedule a conference call. Both ATL and the City will introduce team members and their roles in the project. ATL and the City will hold a Kick-off Meeting to discuss the project, the plan in terms of ATL's processes and procedures along with some of the tools (checklists, templates, forms) that are used and our expectations in working with our partners. ATL will send a copy of the presentation along with meeting notes.

(ATL Advantage Plan) Checklists, Templates and Forms: Following the Kick-off Meeting, ATL will deliver the following to the City of Ann Arbor: Pre-installation New Customer Checklist, the Static Data Table Template, Dashboard, Change Order Form, Training Forms, and Meeting Notes (if applicable).

Software Manuals: ATL will provide the City with the ATL Sample Master® LIMS User Manual, Sample Master® LIMS Training Manual, and Sample Master® LIMS Administrator Guide in electronic PDF format, and, upon request, in hard copy.

Needs Assessment & Report: ATL's Needs Assessment includes 2 day(s) on-site and 4 days off-site. The needs assessment process is crucial to long term success. Our experts assist with defining the business and technical requirements, which serves as a valuable road map to successful implementation, and helps avoid potential pitfalls. This will include a review of the current laboratory operations, workflows, conduct a pre-assessment survey, assess any changes since the RFP issued and create a final report of the finding to the City team.

Updated Project Schedule and Dashboard: ATL will schedule a call with the City team to review the pre-installation checklist, templates and any changes so that an updated Project Schedule/Project Dashboard can be provided.

Requirements Gathering: ATL utilizes our Requirements Gathering process to assess the scope of the client's configuration and customization requirements. This process is designed to mitigate risk, facilitate efficient deployment of the LIMS, evaluate workflows, gather Instrument output files, discuss required reports and ensure long-term success for the implementation. ATL has allocated two (2) days for this process.

ATL Cloud Services – LIMS On Demand (STANDARD PLAN): ATL and partners maintain servers, apply all updates and service packs, and buy all necessary Windows OS, Microsoft SQL Server, and VMware licenses. This includes daily backup and holding backups. ATL will also provide ATL Gold Support – LIMS Account Manager, Unlimited

Technical Support via a toll-free number, Dial-in Remote Support, Access to Website User Support Area, Software Service Packs, Product Upgrades, LIMS Solutions Newsletter and more.

In addition, ATL will provide access to the following modules and enhancement tools: Sample Tracking Module, Data Entry, Sample Scheduling, QA/QC, Electronic Data Transfer, Chemical Inventory, Resource Management, Customer Relationship Management (CRM) & LIMS Maintenance Module, iMobile® (3 concurrent licenses), ExcelExpress, DB Audit & 360 Security. Also, Test/Dev Environment + Licenses - Separate Test/Development System for Sample Master® LIMS. Includes two (2) named user licenses. This is strongly recommended for clients with ISO17025/NELAC certification, or those pursuing these certifications.

ExcelExpress: ExcelExpress is a Microsoft Excel add-in that allows users to retrieve information from and import data into Sample Master®, on demand. ATL will provide an Annual Subscription Site License for ExcelExpress. Year 1 included at No Charge.

OPTIONAL ITEM - NPDES DMR Package: The DMR package allows users to generate the NPDES from data that is already stored in the LIMS and exported from Sample Master®. The ATL reporting package includes functions to collect and collate all data associated with the NPDES permit number into a final report format that is ready to send via hardcopy, fax or e-mail. These reports can be converted to a PDF and sent out electronically. The package includes a blank DMR template and four (4) hours of remote DMR template configuration assistance and training for users.

DB Audit: DB Audit and Security 360 is a professional database security and auditing solution for MS SQL Server. It allows database and system administrators, security administrators, auditors and operators to track and analyze any database activity including database access and usage, data creation, change or deletion. ATL will install and provide access to a server license for the DB Audit product on City owned hardware.

Workflow Creation: Because no two laboratories are identical, workflow creation is the critical task to a successful LIMS deployment. The workflow creation exercise directs all stakeholders to actively participate in understanding the current operational processes. Once workflows have been created for each section of the laboratory, it is much easier to understand the entire process and look for areas of improvement. ATL's engineers have extensive expertise in migrating data from legacy systems and successfully migrating data, workflows, as well as static table data.

Static Table Data Population: ATL engineers will work with the City LIMS team to populate a template of static table data from their legacy system so that you will not have to re-enter any data that is currently stored electronically. ATL engineers will work with the City to help the place all of their static table data into the ATL Excel template for import into the LIMS and will ask the City team to review for correctness before the static table data (tests, methods, parameters) are imported into Sample Master®. Once the data is imported, a remote training session is scheduled with key City team leads to review the import and installation on the production server VM in the Cloud. Once completed, on-site training dates are discussed and selected. ATL has extensive expertise in migrating data from numerous legacy systems and importing that information into ATL's data management systems.

Static Table Data Population QC (Quality Control): Once all the data is populated into a template, our engineers ask our clients to review the data (Quality Control).

OPTIONAL ITEM - Instrument Integration Requirements Documents (RD)/Parser Creation: ATL Engineers will deliver RD's for each of the instruments to be interfaced for review and approval, prior to work initiation. ATL engineers will require a copy of the instrument output file that clients wish to have imported electronically (this is typically the raw file from the instrument). The instrument output file provided will serve as the test file to QC the software, so it is critical that the output file format does not change after it has been sent to ATL. The requirements for system integration will be clearly defined in terms of what data is required to be integrated, how frequently and if uni or bi-directional. The instruments that will be interfaced include the following:

- Hach DR6000
- Shimadzu UV1800

- Dionex ICS2000

Requirements Document (RD): We work with your team to provide definition and testing of the functional and technical requirements for potential custom solutions. This task provides the baseline for the development and configuration of a tailored solution to meet the client's unique needs. Users will see firsthand how the LIMS can help them achieve their individual and workgroup goals. ATL will create a detailed Requirement Document (RD) for each customization that is included in the cost proposal of the project. These documents are emailed from ATL to the Client for approval and signature. Once approved they will be placed into the development queue. Once customizations have been developed, they will be implemented for the Client by ATL.

Enterprise Integration Requirements Documents (RD): ATL engineers will forward completed RD's for review and sign-off before development begins. ATL Engineers will work with the City of Ann Arbor team to integrate the following external databases. Sixty-four (64) hours have been estimated for the technical requirements documents and integration to be completed. If less time is required for any interface, a credit will be issued. If more time is required, the City of Ann Arbor Project Manager will be notified and a Change Order may be required to compensate the Level of Effort required. Systems to be integrated include:

- Yellowfin Platform – Estimated at 40 Hours
- FactoryTalk SE – Estimated at 24 Hours
- **OPTIONAL ITEM** – Bi-directional Interface to SCADA – Estimated at 40 Hours

Report Development RD's: ATL engineers will provide detailed requirement documents for each report that is to be developed and a unique ID will be assigned to each report. The RDs will be emailed to the City of Ann Arbor Project Manager for review and approval (signoff). Once this is returned to ATL, ATL engineers will create the report. Completed reports will be tested on the test/development server, once they pass testing they will be deployed on the production server. Forty (40) hours of report development are estimated for creation of custom reports from Sample Master® and ExcelExpress.

OPTIONAL ITEM: Forty (40) additional Report Development hours are estimated for modification of worksheets/reports, as needed.

ATL Per-Diem Off-site Consulting Services: ATL engineers will perform the following offsite consulting services: Thirty-one (31) hours have been allocated to this task.

- Static Data Migration – Estimated at 24 Hours
- ExcelExpress Configuration – Estimated at 4 Hours
- DB Audit Configuration – Estimated at 3 Hours

ATL Per-Diem Off-site Testing & Documentation: ATL engineers will perform the following offsite customizations: Thirty-two (32) hours have been allocated to this task.

- Data Migration from Current LIMS - Estimated at 24 Hours
- SubContract Laboratory Template - Estimated at 8 Hours .

LIMS Tailoring to Each Area: The information from the Requirements Document (RD) and workflows can be incorporated into the configuration of the workflow for each department. System configuration also includes custom form captions to mirror the terminology that is utilized in the laboratory to facilitate acceptance and reduce confusion for end users.

LIMS Configuration: Once the templates and checklists are completed, the team can work to create a system that will accommodate the needs of the Laboratory with a few typical use case scenarios for each Laboratory Section. This allows the team to envision how various test cases will be handled and to know if any adjustments need to be made to the configuration. Once the team is satisfied with the use case scenarios, the system is ready to be installed.

Deployment: ATL follows a proven methodology for installing and configuring LIMS systems that are easy to maintain and have the flexibility to accommodate variations in each department. This methodology comes from over 25 years of experience.

LIMS Optimization: ATL's systems team will work with you to make sure that the computing environment has been optimized for maximum performance. Your systems, networks, and database environments are designed to deliver maximum performance.

Testing: Testing is critical to a successful LIMS implementation. The ATL Team subscribes to a multi-tier test strategy designed to identify and fix issues during the entire configuration and implementation process. The ATL test strategy includes a collaboration of ATL engineers and client personnel to perform unit testing during the population and configuration of the LIMS. Prior to putting a new LIMS into place, it is important to perform parallel testing to ensure that both systems are providing acceptable data outputs. Our engineers can assist with developing a plan for this testing (upon request).

Training Services: Our certified trainers provide custom tailored on-site End-user and LIMS Database Administrator training as well as classroom style training and on-the-job training in smaller groups. Because not all people learn the same way, our certified trainers utilize a combination of training methods and offer video tutorials. In addition, ATL also offers the following: 3-day Intermediate LIMS Boot Camp, 2-day Advanced LIMS Boot Camp, and virtual, instructor-led training sessions. ATL proposes 3 days on-site of Administrator training, 6 days of End-user training, and .5 days of iMobile training.

Additionally, ATL will hold supplemental Web-Based training sessions for System Administrators and End Users. Sixteen (16) hours have been allocated for this training. Training will be provided in multiple 1-2 hour sessions, and recorded for future access.

System Administration Training Records: ATL will conduct LIMS Administrator training throughout implementation, and recommends that a LIMS Administrator and a back-up LIMS Administrator participate in all training sessions. Training records will be given to the City PM.

End User Training Records: ATL will conduct several sessions of Sample Master® end-user training for each module throughout implementation. Training records will be given to the City PM.

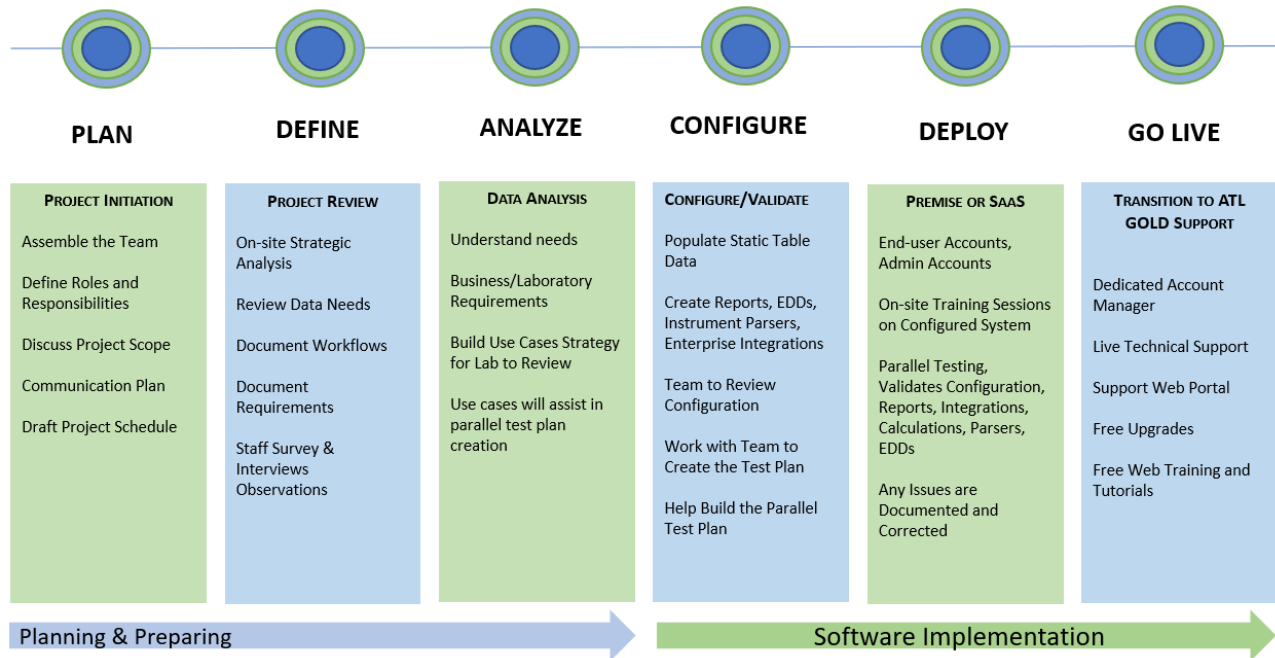
OPTIONAL ITEM - Intermediate Boot Camp: A 3-day course that covers all the features and functions of Sample Master®. This was designed to be an intermediate class with a follow-up course on-site training.

OPTIONAL ITEM - Advanced Boot Camp: A 2-day course that covers all the database coding and configuration of Sample Master®. This was designed to be an advanced class after exposure to Sample Master®, MS Access Databases, and SQL Databases.

Go-Live Support: ATL will provide support during Go-Live, with two (2) ATL Engineers on-site for two (2) days, one (1) day each for Water and Wastewater.

Post Go-Live Support: After the system is put into production, ATL will offer comprehensive GOLD Support of Sample Master® LIMS. This includes support during implementation and after go-live. With ATL Cloud Services (SaaS Standard), ATL maintains servers, applies all updates and service packs, and buys all necessary Windows OS, Microsoft SQL Server and VMWare licenses. Subscription includes: 1) daily backup and holding backups from the last 7 days. 2) Unlimited ATL Technical Support. 3) Access to Website User Support Area, 4) Software Service Packs, 5) Product Upgrades, and 6) LIMS Solutions Newsletter.

Sample Master® LIMS Implementation Plan



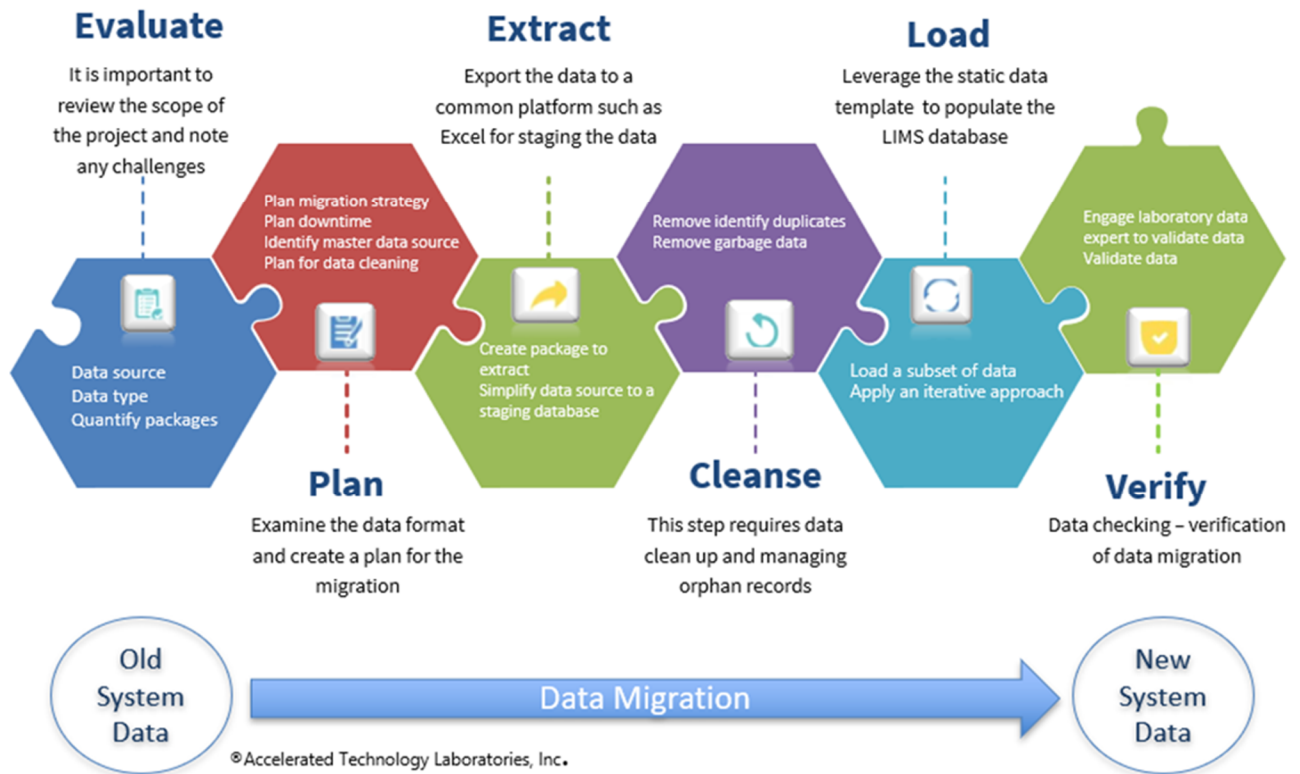
Data Migration Plan

The ATL Team will follow a proven methodology to migrate the data from the current data system (LABWORKS) into Sample Master® LIMS. The Sample Master® LIMS. data structure contains tables to store legacy data and was specifically designed to allow organizations to easily access current and historical data from the same interface. The Sample Master® LIMS. design combined with the migration methodology, assures that data migration portion of the project is completed correctly and according to the project schedule.

The data migration methodology is a multiple phase process. Each phase will contribute to a successful data migration and allow the migrated data to be properly maintained. The phases are as follows:

- ✓ Evaluate
- ✓ Plan
- ✓ Extract
- ✓ Cleanse
- ✓ Load
- ✓ Verify

ATL's Approach to Migrating Historical Data



Training Plan

Sample Master® Introduction and Project Kickoff

This is an introduction to Sample Master® LIMS, providing an overview of onsite activities. A review of Sample Master® basic use, modules purchased and their functions.

Recommended Attendees: Everyone

Installation

Initial installation of Sample Master®.

Recommended Attendees: Database Administrator and Sample Master® LIMS Administrator

Description: Remote installation of Sample Master® (unless on-site installation required)

Sample Master® LIMS Administrator Training (3 Day On-site)

Introduction

The following is an outline of Sample Master® Administrator training for the City of Ann Arbor. The courses described under this section cover the initial setup and configuration within the LIMS Maintenance module. Each course description includes an estimated length of time, the type of user recommended to attend, and a brief overview of the subject matter covered. Multiple sessions will be provided for each course.

Basic LIMS Administration

Estimated Course Length: 2 hrs.

Recommended Attendees: Sample Master® Administrator

Course Overview:

- Overview of Sample Master® Structure
- Brief Overview of the Modules in Sample Master®
- Flow of Samples in the System
 - Sample Login, New Order
 - Add Samples and Tests
 - Sample Conditions, attached documents, reports
 - Sign-off Order
 - Worklist or QCBatch Creation
 - Discussion of Importing Results from Instruments and Sub-contract Labs
 - Results Entry, Validation and Approval
 - Custom Reporting, Dynamic EDD, Trend Analysis
 - Invoicing
- Employee Setup and Permissions
 - Create Employee
 - LIMS Access
 - Permissions
- Preparation of the Frontend for Distribution
- Use of the ClientUpdates Folder
- Overview of Sample Master® Support Services

Setup of Basic Tracking Items

Estimated Course Length: 1.5 hrs.

Recommended Attendees: Sample Master® Administrator

Course Overview:

- Setup Instruments
- Setup Priorities
- Setup Custom Form Captions
- Setup Laboratory Information

- Setup Sample Types
- Setup Preparation Requirements
- Setup Sample Conditions
- Setup Sample Storage Locations
- Setup Customer Types
- Setup Defaults
- Discussions of Auto-Report, Auto-Invoice, Auto-Report Internal Setup
- Training on Archiving Samples

Customer Setup

Estimated Course Length: 1 hr.

Recommended Attendees: Sample Master® Administrator

Course Overview:

- Introduction to Customers Form
- Adding and Editing Customers
- Adding addresses for Reporting and Invoicing
- Adding CustomerContacts
- Adding Projects

Test Setup I, Tests

Estimated Course Length: 1.5 hrs.

Recommended Attendees: Sample Master® Administrator

Course Overview:

- Introduction to Sample Master® Test Setup
 - Relationship of Test Groups, Matrix, Test, Method, Parameter
 - Prep Methods
 - Departments and Department Order
 - Pricing: Test, Test Group, Project, TAT and Priorities
 - Benefits of Test Group vs. Test vs. Project
- Discussion of the Best Setup for Client's Needs
- Working with Tests and Methods

Test Setup II, Parameters

Estimated Course Length: 1.5 hrs.

Recommended Attendees: Sample Master® Administrator

Course Overview:

- Setup Parameters
- Setup Parameter Limits, with Discussion of Customer Limits

Sample Master® LIMS Dashboard

Estimated Course Length: 1 hr.

Recommended Attendees: Sample Master® Administrator

Course Overview:

- Installation of Sample Master® LIMS Dashboard
- Dashboard Configuration
- Dashboard Use

Sample Master® End User Training (6 Days On-site)

The following is an outline for Sample Master® End User training, designed to maximize the user's experience. The course subjects are designed around each of the Sample Master® modules. Each course description includes an estimated length of time, the type of user recommended to attend, and a brief description with an overview of subject matter covered. Multiple sessions will be provided for each course.

Sample Tracking

Estimated Course Length: 2 hrs.

Recommended Attendees: Sample Master® Administrator, Sample Collectors, Sample Receiving Personnel, Lab Analysts, Lab Management, and Invoicing Personnel

Description: The Sample Tracking module is used for Sample Login, Invoicing, Quotes, Chain of Custody, Sample Preparation, Sample Status, and Worklists.

Course Overview:

- Changing the User's Password and Personalizing the Appearance with Custom Colors
- Sample Login, Logging in Samples, Login tricks and Shortcuts, Printing Labels and Reports, Attaching Documents and Scans
- Creating Worklist and using the "Master Query" Search for Anything
- Viewing Sample Status, Backlog Reports and Production Reports
- Creating Sample Prep Batches and Entering Volumes and Dilution
- Creating Quotes and Invoices
- Exporting Invoices to Accounting Software

Data Entry

Estimated Course Length: 2 hrs.

Recommended Attendees: Sample Master® Administrator, Lab Analysts, Lab Management, and Reporting Personnel

Description: The Data Entry module is where users will enter test results, create certificates of analysis, create trend charts, review audit trail information, create EDDs, and create QC Batches (requires QA/QC module).

Course Overview:

- Creating and Working with QC Batches
- Entering Results, QC Results and Features within Results Entry
- Creating a Manual Report for Test Results
- Reviewing an Audit Trail
- Trend Analysis
- Using One Step
- Setting up an Electronic Deliverable Template
- Exporting Data to a Custom Electronic Deliverable

Sample Scheduling

Estimated Course Length: 1 hr.

Recommended Attendees: Sample Master® Administrator and Sample Scheduling Personnel

Description: The Sample Scheduling module allows users to schedule projects to enhance sample receiving with automation.

Course Overview:

- Scheduling Monthly, Weekly and Daily Projects
- Creating a Shelf Life Study Project
- Generating Monthly Calendars to Display all Scheduled Projects
- Configuring Schedule Projects to be Automatically Logged In

QA\QC

Estimated Course Length: 2 hr.

Recommended Attendees: Sample Master® Administrator and the Quality Director

Description: The QA\QC module is where basic QC information is defined to be used with a QC Batch. Control Charts can be generated to provide % recovery and % RPD ranges for users to compare accuracy within the Results Entry screen.

Course Overview:

- Setting up QC Samples for the Laboratory
- Generating Upper and Lower Control Limits to Compare Against QC Results
- Manually Adjusting Control Limits

Electronic Data Transfer (EDT)

Estimated Course Length: 1 hr.

Recommended Attendees: Sample Master® Administrator and Lab Analysts

Description: The EDT module allows users to automatically and manually import test results from an instrument output file.

Course Overview:

- Configuring an Automatic Import Functions
- Manually Importing Data

Chemical Inventory

Estimated Course Length: 1 hr.

Recommended Attendees: Sample Master® Administrator and Lab Analysts

Description: The Chemical Inventory module provides quick access supply information and reports to manage your laboratory supplies.

Course Overview:

- Configuration of Suppliers, Vendors and the Tests associated with each Supply
- Entering supplies when they are received in the Lab and Reconciling Inventory
- Configuration of Supply Standards for Traceability of QC Reagents
- Viewing Reports to Determine Expiring Supplies and what Needs to be Ordered

Resource Management

Estimated Course Length: 1 hr.

Recommended Attendees: Sample Master® Administrator and Quality Director

Description: The Resource Management module tracks your instrument and employee certifications defined for the Laboratory. Workload charts can also be generated by Department, Test, Instrument or Analyst employee to view performance.

Course Overview:

- Creating Instrument and Personnel Certificates
- Assigning Certificates to Employees and Instruments
- Defining Laboratory Capacity
- Viewing Capacity Performance of Real Time Workloads
- Generating Reports to View which Certificates are Expiring and Need to be Recertified

Customer Relationship Management (CRM)

Estimated Course Length: 1 hr.

Recommended Attendees: Sample Master® Administrator and Laboratory Manager

Description: The CRM module allows users to create and track customer inquiries coming into the Laboratory. It also manages and tracks correspondence of each event until resolved.

Course Overview:

- Configuring Complaint Types and Severities
- Entering Customer Inquiries and Tracking Correspondences to Close the Issue
- Generating Samples for Collection based on the Inquiry
- Viewing Various Comprehensive Reports and Charts to see Open Incidents, Summary of Incident Types and Resolution Goals

Sample Master® iMobile Training: (.5 day on-site)

Sample Master® iMobile Training is designed to provide Administrators with the knowledge to manage the security and configuration of the iMobile Application, and to ensure users develop an understanding of the functionality included in the iMobile Application. Multiple sessions will be provided.

Recommended Attendees: Administration & Technicians

Optional: Management

Transition Plan

During implementation, and post go-live, ATL offers comprehensive support of Sample Master® LIMS. The major aspects of the transition from System Implementation to System Support are identified below.

- ✓ Hold a meeting to introduce ATL Support to City of Ann Arbor. This is designed to provide an overview of the ATL's Support Team and how it works:
 - When to transition from reporting incidents to ATL's Implementation Team and begin reporting them to ATL's Support Team
 - Hours of service for live support
 - Routes for reaching support
 - System for logging and assignment of tickets
 - Handling of incidents and prioritization of critical issues
 - Escalation process
- ✓ Ensure the City has identified adequate resources for this phase of the LIMS project.
- ✓ Establish a plan for meeting with the City System Support Team. These meetings will focus on any issues that may arise during this phase of the project.
- ✓ Establish a protocol for addressing urgent production issues, such as bugs that need immediate action.
- ✓ Ensure the City has access to ATL's secure, support website with a Knowledge Base, White Papers, Training Videos and the ability to submit incidents. Additionally, ATL's support website includes a user-group forum, with other Sample Master® LIMS. users who may provide peer group ideas on customizations and other technical features.
- ✓ Ensure all system documentation has been provided to the City System Support Team, including:
 - Database Design
 - Entity Relation Diagrams
 - Application Specifications
 - User Manual
 - Online Help
 - Administration Manual