

City of Naples Sees Many Benefits from SaaS Deployment of Sample Master® LIMS

Running a cloud-based LIMS means elimination of IT management issues, faster deployment and a lower cost of ownership

Organization Profile

The City of Naples is located on the Gulf of Mexico in southwestern Florida and has a population of approximately 21,000. The city was founded in the late 1880s, and named after Naples, Italy. Over the years, Naples has evolved from an economy based on agriculture and real estate development to one focused on tourism and recreational activities including the beaches, golf and fishing.

The City of Naples Utilities Department provides a number of critical services to its residents that include ensuring a clean drinking water supply and effective wastewater treatment. The water reclamation facility (WRF) handles 30 million gallons of water a day (MGD) and actually has a service area that extends beyond the city limits, serving 18,000 water accounts and an estimated population of 62,000. The wastewater treatment plant (WWTP) treats 10 MGD and produces a high quality effluent of reclaimed water that is used primarily for irrigation of golf courses, parks and roadway medians.

Their Challenge

The Utilities Department manages the Central Laboratory, which is responsible for conducting environmental water quality testing for the City of Naples. Primary testing is for water samples collected at the WRF and WWTP along with ad-hoc testing due to residential and commercial customer requests. The laboratory staff consists of a Laboratory Supervisor, two lab technicians (who also do work in the field) and an industrial waste technician.



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The City of Naples Utilities Department is responsible for protecting the public welfare and providing basic services for its citizens. This includes an environmental laboratory that conducts testing services for its drinking water treatment facility and wastewater treatment plant.



The Lab Supervisor also performs the duties of the QA/QC Manager and Technical Director. The lab is a NELAP-accredited (National Environmental Laboratory Accreditation Program) laboratory, which requires accredited environmental laboratories to maintain defined management and technical requirements in order to perform approved environmental testing. The lab is also responsible for a number of other tasks including NPDES discharge reporting and lead and copper testing of public facilities.

In 2013, the laboratory implemented a commercial LIMS product to provide the data management, analysis and reporting needed for the lab to meet its operational and compliance goals. While the LIMS provided basic capabilities to help the laboratory, there were shortcomings that soon became apparent including the following:

- Reports could not be created in the LIMS so the lab created the reports manually in Microsoft Word or Excel.
- Data from bench sheets or the Chain of Custody was manually transcribed into reports – this was time-consuming and prone to errors.
- The lab staff wanted to create control charts in the LIMS but this was not possible due to difficulty in getting QC data from the LIMS. Generating control charts is a requirement for NELAP-certified laboratories so the solution was to manually enter the data in Excel to create a rudimentary control chart – a very inefficient process.
- Because the LIMS did not support data qualifiers, there was no way to immediately alert LIMS users if a sample result were below or above a certain control limit.
- User access of the LIMS was becoming a frustrating situation for the lab; there was an ongoing debate between the LIMS provider and the city's IT department regarding the source of the access issues.
- The LIMS provider had a small staff supporting the LIMS; as the need for LIMS support grew, it became apparent that getting prompt response was becoming an issue.

Our Solution

The challenges faced by the Central Laboratory were impacting staff productivity, data quality and the ability to meet the organization's regulatory reporting requirements. As a result, the Laboratory Supervisor and the IT Administrator agreed that they needed to re-evaluate LIMS options and select one that not only could provide the functionality lacking in their current system but could also grow with the laboratory.



The IT Administrator also had determined that the LIMS application was an ideal scenario where a cloud-based (also known as Software-as-a-Service or SaaS) solution would offer some significant benefits over a traditional premise-based implementation. These benefits include the following:

- LIMS is hosted by the LIMS provider so the City of Naples would no longer be responsible for typical IT functions like security, service packs, upgrades, backups and storage management.
- Budgeting for the LIMS is made easier since the City would pay for the use of the LIMS by paying a monthly subscription fee that includes use of the software, technical support and software upgrades.
- Since the LIMS provider is hosting the LIMS, this encourages prompt deployment for the City of Naples since there is no need to plan for installation of server hardware and LIMS/database/backup software.
- SaaS has become a proven method of enterprise application deployment from a security and availability standpoint; adding a lower cost of ownership vs. a premise-based implementation can complete a very compelling business case for SaaS.
- SaaS offers the availability to scale rapidly as laboratory needs change.
- Multiple redundancies are in place in the event of a natural disaster.

The Laboratory Supervisor and staff put together a list of their requirements for the new LIMS. These included:

- Ensuring that the laboratory would continue to maintain their requirements for NELAP accreditation.
- Allow any user to access the LIMS from any workstation at any time.
- LIMS should have the ability to analyze QC data and create control charts.
- LIMS software should be designed for ease of use and run faster and smoother than the previous solution.
- Ability to easily create and modify professional-looking reports in the LIMS.
- The laboratory would like to easily import results from testing conducted by contract laboratories, eliminating the need to re-key in data.
- LIMS provider should offer outstanding and prompt technical support during normal working hours.



The City of Naples evaluated several LIMS providers before selecting ATL Sample Master® LIMS. In addition to meeting the above requirements, the evaluation team selected ATL due to its understanding of water/wastewater/environmental laboratories, ISO certification, ability to provide cloud-based options, excellent support and its large installed base of LIMS solutions in the state of Florida.

Since going live with Sample Master®, the Central Laboratory has been very happy for a number of reasons. First, the SaaS deployment has eliminated many of the IT-related challenges since ATL is hosting the LIMS for the City of Naples. Sample Master has also allowed the lab staff to go into the LIMS and more easily view data to track the history of a sample – comprehensive traceability. There has also been an improvement in the validation of data in result entry due to the ability to add data qualifiers in Sample Master. The powerful configurability has allowed the lab staff to log in a wider array of data that was not possible in the previous LIMS, easily generate and email reports, as well as create control charts.

“The decision to implement ATL Sample Master® LIMS has been very positive and provided our staff with new data analysis and reporting capabilities that were not available to us with our previous LIMS. In addition, having ATL host the LIMS in the cloud has eliminated many of the IT-related challenges and allows us to focus on the many benefit the LIMS provides. Both during and after implementation, the ATL technical support staff has been responsive, attentive, and patient. They continue to go above and beyond to assist us in anyway possible.”

- Janelle McClure , Laboratory Supervisor



City of Naples Utilities Department Laboratory

Accelerated Technology Laboratories (ATL), headquartered in West End, NC, provides laboratory automation solutions to a variety of industries from analytical, environmental, food & beverage, water and wastewater, agriculture, cannabis, chemical, government, public health, biotechnology, clinical testing and manufacturing. ATL's LIMS products are installed in over 600 laboratories around the world and supported by a steadfast commitment to excellence in product quality, support and training. ATL is one of the few LIMS providers that is ISO 9001:2015 certified. For additional information, visit: www.atlab.com.