unity lab services

CUSTOMER PROFILE

Remote Services Solutions

University of Michigan's Biological Station Leverages Unity Remote Services to Capitalize on System Investments and Lower Maintenance Costs

The Challenge

The University of Michigan's Biological Station (UMBS) is situated in the heart of the Great Lakes Basin, a perfect location for its study of the impact of climate change on land, water, and atmospheric ecosystems. However, the team faced three main challenges. First, the remote location presented a significant issue in terms of servicing equipment. When a major instrument breakdown occurred, not only did the time it took for repairs cause unacceptable downtime, the $10,000 service call wreaked havoc with the lab's slim budget.

The lab provides contract sample analysis for University projects as well as for external customers. Although the lab operates on a breakeven basis, the annual budgeting process was also very difficult. Balancing consumable spend projections against sample volume and establishing a per method/sample fee structure to maintain break-even/revenue neutral status was a challenge.

In addition, the segmented flow analysis methods on which the lab relied made it difficult to manage the many different types of contract work the lab undertakes. Constantly changing reagents, restarting, and recalibrating equipment for the 650+ samples handled each month could take up to three hours each day and seriously undermined equipment utilization.

The Solution

The UMBS made an important decision to change its basic methodology, switching to ion chromatography and purchasing a Thermo Scientific™ Dionex™ Integrion™ HPIC™ system. This state-of-the-art system provides greater flexibility, improved uptime and more environmentally friendly chemistry techniques.

Just as important for the UMBS was the remote monitoring feature now available to them. By enabling Unity™ Remote Services, Tim Veverica, Manager, UMBS, is now able to monitor both instrument health and consumables usage. The new system, in combination with remote service, is easy to use and improves lab efficiency.

Consumables dashboard—Unity Remote Services provides a dashboard that illustrates monthly data and month-over-month comparisons on the number of injections per consumable, consumption pace and eluent volume.

Instrument health dashboard—A separate dashboard tracks instrument usage by such measures as number of injections. It also provides information remotely on specific metrics, like pump pressure and flow.

Consumption trend data—For the first time, Veverica is able to see trending information, not just data points, enabling him to manage inventory more efficiently and predict consumables consumption.

Boost Uptime

Consumables tracking and instrument health monitoring minimizes downtime

Reduce Costs

Remote diagnostics and troubleshooting reduced service related costs

Drive Decisions

Data provides intelligence to set the budget, fee structure, and break-even point

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The Results

When the UMBS switched to the Dionex Integrion HPIC system, it expected—and did—realize important benefits.

- The lab is now noticeably more efficient. With less hands-on technician time required, staff is able to undertake other jobs.
- Cost savings—as much as 50 percent on one method—can be passed on to contract customers.
- The Dionex Integrion HPIC system does not use mercury, eliminating from its waste stream the 30 pounds a year the former system required.

What the lab did not anticipate were the benefits directly attributable to enabling Unity Remote Services.

- Veverica is able to forecast his consumables spending and identify likely maintenance expenses, both of which have resulted in a more accurate annual budget.
- The ability to identify consumables usage by method and type of sample has also enabled the lab to project, by method, the number of analyses the lab can handle and, in turn, to boost its projected annual capacity.
- The data, in combination with the efficiency of the Dionex Integrion HPIC system, has led the lab to recalculate its fee structure and lower costs by up to 50 percent for some methods.
- Automated consumables monitoring ensures that the lab does not run out of needed eluents, suppressors, guard and separator columns, thus both improving inventory management and minimizing unnecessary downtime.
- Data on the instrument health dashboard allowed the lab to isolate the specific method/assay that had caused a damaging pressure spike and then modify the assay to prevent future spikes.
- By monitoring instrument health the lab has not only reduced the possibility expensive emergency services calls to this remote location, but also identified upcoming preventive maintenance needs and established a PM schedule that takes advantage of months when the lab's workload is at its lowest.
- Last but not least, faster reporting means the lab is able to respond more quickly to its customers.

"Enabling Unity Remote Services provided our lab with enhanced technical support and access to critical data dashboards for instrument performance and consumable usage. We now have the data needed drive budgeting decisions, protect our equipment and improve customer service."

– Tim Veverica, Manager,
University of Michigan Biological Station

Find out more at **unitylabservices.com**

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