

A New Approach To Laboratory Efficiency: On-site Instrument Concierge Service



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Introduction

If you are like most laboratory directors, the findings of the National Research Council (NRC) Committee on Prudent Practices in the Laboratory should come as no great surprise. “Scientists are spending an enormous amount of their time and effort simply getting instrumentation to the point that it can be used,” the NRC reports. “This wasted time can be used more productively when a well-functioning repair and maintenance system is in place.”¹

Hard to argue with that. In fact, no matter what size or type of laboratory you supervise, you could probably add some color of your own to the NRC’s conclusions. I like to call it a “Culture of Superusers.” We all know who they are. These are our colleagues—maybe even ourselves—who have come up through a system that values a hands-on approach to instrumentation, making sure it is ready, calibrated, and maintained. After all, we have all learned through experience that the keys to success in a modern laboratory environment are based on sound research and quality data from the instrumentation used. In our quest to make sure that everything is exactly the way we want it, we often end up doing it ourselves. The question is, at what price?

Beware of the hidden costs of having your scientists do it all. In one study at a major pharmaceutical research lab, it was found that close to a quarter of scientists’ time was spent on instrument maintenance. Instead of doing primary research, highly trained specialists spent hours each week calling in issues, performing basic instrument troubleshooting, tracking service warranties and parts, or simply waiting around for instruments to come back on line. That scenario is hardly unique. In another study by Advanced for Administrators of the Laboratory, “as much as 75% of technician time is spent executing tasks that don’t add value to the process or the sample...”²

Aside from the billions of dollars and thousands of hours being wasted through non-valued-added staff activities, there are other equally significant issues to consider. One obvious risk concerns the validity of research that may be compromised by equipment that is not properly monitored or maintained and only discovered, for example, through an FDA Good Manufacturing Practice (GMP) Audit. Another is improperly installed equipment that may be out of state and/or local code and regulations. Many local codes require

that the repair and calibration work on electrical equipment, for example, must be carried out by properly trained, licensed, and qualified personnel – not just the superusers who “think” they know what they are doing. As the NRC is quick to point out, the failure to establish a regular inspection and maintenance program in the lab can lead to more accidents than we care to admit, and “the most common equipment-related hazards in laboratories come from devices powered by electricity for work with compressed gases and devices for high or low pressures and temperatures.”³

The Pursuit Of Harmony

Modern laboratories are increasingly dependent on multiple platforms and progressively complex instrumentation. True to Moore’s Law, instrumentation that once filled a room now occupies no more than a scientist’s benchtop and the trend to move more hard science into the virtual world of computers is progressing at a breakneck pace. Wondrous as these technological developments are in advancing science and new discoveries, they also offer their own set of challenges to effective laboratory management. Many scientists, for instance, now sync their own equipment – from handhelds to laptops – to laboratory IT systems in order to monitor and control instrument functionality and data reporting from anywhere at any time. With literally tens of thousands of scientific applications already online, the trend for even more remote automation will pressure lab managers to seek out some sense of harmony among divergent users, projects, and even locations that rely on lab instrumentation that no longer requires the physical presence of researchers. With this complexity, it is a huge undertaking to ensure that instrumentation is operating correctly for its intended purpose. The USP chapter on analytical instrument qualification provides a scientific approach to ensure instrument reliability, but there can be multiple approaches for its implementation.

Herding Cats

One stumbling block to a more efficient and effective lab environment happens to look back at us in a mirror every day. A social scientist recently described the task of managing highly intelligent lab scientists as akin to herding cats.⁴ If you have been around labs for any length of time, you know that there is strong aversion to the word “standardization.” Our scientific rearing, which has long embraced autonomy, often caters to the egos of superusers, and traditionally allows teams of researchers to work toward their own strategic objectives at their own pace. Consequently, labs can often be very dynamic environments that are constantly evolving and refocusing as business needs and teams change. But from a management perspective, it can be like juggling water balloons as researcher staffers tap into lab resources, consumables, and commandeer instruments at a pace that is often predictable but occasionally frenetic thanks to breakthrough moments that make our lives as scientists so fulfilling. In either scenario, it is the cycle of R&D innovation where the need for reliable instrumentation is a given.

Introducing A Unique Service Offering

As a lab director, your ideal world would have your entire laboratory instrumentation in perfect working order and in a state of readiness at all times for all users—including instrument configuration, methods, and the routine running of performance checks to ensure instrument data quality and system readiness. You can then use the performance check data to trend critical instrument parameters to optimize performance and create a proactive approach to maintenance. That would require a level of personal hands-on service and expertise that you likely can only dream of for your organization.

Thanks to PerkinElmer’s OneSource® Laboratory Services, that dream is now a reality called OneSource Instrument Concierge™. This new level of hyper-care client service, embeds an experienced scientist at your location that is dedicated to managing your lab’s instrumentation no matter what make or model. As a single source of multi-vendor instrument support, OneSource Instrument Concierge streamlines equipment service and accountability to free up staff time currently spent in a series of non-core tasks from simple equipment downtime to the multiple hours devoted each week to troubleshooting and fine tuning equipment. This includes the OneSource Instrument Check™, run routinely, with specific accountability to maintain lab instruments at peak performance levels. Simply put, OneSource Instrument Concierge provides a distinct value proposition that is hard to overlook:

- Integrated instrument management program,
- Single-source accountability,
- Performing routine OneSource Instrument Checks,
- Significantly reduced unplanned downtime,
- Improved lab performance and productivity,
- Streamlined workflows and procedures,
- Improved instrument data integrity,
- Ensure instrument compliance,
- Extended instrument lifespan,
- Lowered overall lab costs,
- Improved lab safety.

Building A Culture Of Success

OneSource Instrument Concierge offers the ultimate level of customer service that is tailored to each specific lab’s needs, requirements, and users. Because OneSource Instrument Concierge personnel are highly skilled, on site, and always at your service, they provide a deep level of instrumentation expertise that will enhance your lab’s daily workflow and overall process improvement model. And because they are embedded members of your team, OneSource Instrument Concierge specialists can provide your lab staff with a wide variety of laboratory capabilities, the ability to tailor instrumentation to the customized specifications of individual users, as well as provide a level of support, responsiveness, and knowledge designed to meet your needs, your lab, and your success.

Reference

1. National Research Council (US) Committee on Prudent Practices in the Laboratory. Washington (DC): National Academies Press, Chapter 7.
2. Ron Wince, “Improving Lab Efficiency: It All Boils Down To Process, Process, Process,” *Advanced for Administrators of the Laboratory* (February 25, 2010). See also, “Consolidated Approach to Equipment Maintenance,” Boehringer Ingelheim PowerPoint presentation, 2010.
3. National Research Council (US) Committee on Prudent Practices in the Laboratory. Washington (DC): National Academies Press, Chapter 7.
4. Edyta Zielinska, “Motivate Your Lab: How to Run an Efficient and Creative Lab Without Micromanaging,” *The Scientist Magazine* (June 1, 2012), p. 2.

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