Maximizing Lab Efficiency Via On-Site Stocking

Today’s labs need to meet business objectives in addition to research objectives. Financial support for life science research continues to dwindle, and most labs have to contain costs to keep pace and remain operational. Uncovering new efficiencies can mean the difference between long-term success and failure. Automated on-site stocking solutions can immediately and significantly reduce overhead costs while also offering some attractive benefits to lab and procurement professionals alike.

Why On-Site Stocking?

Using on-site storage units with RFID-enabled technology offers many benefits that are difficult or costly to achieve via traditional purchasing methods, including:

- 24/7 secure access
- Zero shipping costs
- Automated inventory management
- Automated invoicing
- Lot control
- Procurement integration
- Simplified supply management

With the right system, there will be no hidden fees. In essence, on-site stocking solutions remove all the extraneous costs (see below) of securing product except the cost of the product itself. It is typically a value-added solution offered by manufacturers to better serve their customers.

Cost Benefit Analysis

When evaluating a new technology or process from a financial perspective, remember to calculate the indirect and direct costs. Keep in mind that a portion of every grant dollar you receive is allocated to overhead costs. Personnel costs consume most of the money dedicated to research activities.
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Your procurement department is tasked with reducing costs and streamlining processes while providing excellent internal customer service. Any system that reduces the time personnel spend on non-essential activities (seeking product solutions, ordering, inventory management, reordering, etc.) allowing them to focus on their core research work in a more efficient and timely manner is a clear benefit to the organization. When you consider costs of the average reagent via direct purchase versus via an on-site stocking solution, the financial impact becomes crystal clear:

<table>
<thead>
<tr>
<th></th>
<th>Direct Purchase</th>
<th>On-Site Stocking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Value</td>
<td>$3,000.00</td>
<td>$3,000.00</td>
</tr>
<tr>
<td>Personnel: Ordering</td>
<td>$46.25</td>
<td>$0.00</td>
</tr>
<tr>
<td>Personnel: Inventory</td>
<td>$600.00</td>
<td>$50.00</td>
</tr>
<tr>
<td>Management</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opportunity Cost</td>
<td>$600.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Carrying Cost</td>
<td>$450.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Waste Cost</td>
<td>$150.00</td>
<td>$0.00</td>
</tr>
<tr>
<td><strong>Total per Order</strong></td>
<td>$4,846.25</td>
<td>$3,050.00</td>
</tr>
<tr>
<td><strong>Savings per Order</strong></td>
<td>$1,796.25</td>
<td></td>
</tr>
<tr>
<td><strong>Savings per Year</strong></td>
<td>$59,276.25</td>
<td></td>
</tr>
</tbody>
</table>

In this example, a researcher places a $3,000 order for reagents. The Direct Purchase column represents the extra costs associated with ordering these reagents via traditional modes. On-site stocking eliminates most of these costs.

Instead of spending time searching catalogs, documenting order numbers, placing orders, managing inventory or reordering in a timely way, by using an on-site stocking solution you eliminate all costs except the product value.

Reducing Red Tape

It’s a good bet your organization has devoted more and more resources to funding compliance. In addition to complying with the procurement policies and controls your institution imposes, funding institutions require specific cost reporting and allocation. Collaborations with procurement and internal grant management teams help labs reduce the administrative burden of compliance.

Labs can use on-site stocking systems to simplify supply tracking and purchase allocation. For example, a lab that has two separate funding sources may have two codes or passes to access an on-site system—one for each funding source. When reporting to the funding agencies, it is easy for the lab to account for reagent purchases from each budget.

Make Your Final Case

As a lab manager, you can see the benefits of easy, immediate access to the tools you need to do your job: no more weekend runs around the campus searching for what you need or panicked calls to a sales representative; automatic reordering and stocking; real-time inventory. It all looks good. You’ve done your research; you know what you want and need. Now it’s time to present your case to your purchasing contacts.

One thing to remember when pitching any new technology or process is a simple marketing and sales strategy: Think like your target audience. What is important to this group? What benefits would they reap from the solution you’re proposing? What words do they use that would resonate?

Here are a few terms that can help:

- **Carrying Cost**: Percent of product cost required to hold inventory on your company's books.
- **Waste Cost**: Percent of reagents wasted due to expiration or spoilage.
- **Opportunity Cost**: Approximation of the financial impact of delays associated with mismanaged inventory and traditional ordering.
- **eProcurement**: A web application that allows users to complete orders electronically.

We also find that it helps to take a few recent invoices and run the numbers. For example, you ordered $3,000 in reagents from Company A and had to rush order it to meet the deadline for a particular time-series. Not only did you incur the cost of expedited shipping, but lab personnel lost time tracking down what was needed, determining that they did not have enough in stock, obtaining authorization to make the purchase and completing the ordering process.
Helix® On-Site Stocking Solutions Case Studies

Now that you have the numbers and list of benefits for your procurement department, here are a few case studies to demonstrate the effectiveness of on-site stocking solutions.

On-Site Inventory Management for Storerooms

MedStore, a large research supply company, faces the challenge of keeping operating costs low while seeking innovative ways to manage and maintain inventory and eliminate errors. They are continually looking for better ways to track receipt and storage of products, minimize the need for manual data entry to their eProcurement system, and make it easier for their staff to deliver the right products to their customers in a timely manner. The Helix® team provided them with seamless eProcurement integration, easier product access and tracking, and reduced their administrative burden.

High-Volume Lab Can Focus on Making the Right Diagnosis

Running a diagnostics lab that conducts 15,000 annual HPV tests with 31 technicians can be hectic. The director realized the automation he wanted for the testing process by using the Helix® System plus the Maxwell® 16 Instrument. Using the Helix® on-site stocking solution reduced experimental error and waste reduction due to eliminating outdated, mishandled or spoiled reagents; running out of reagents; or experiencing lot issues. Now the lab can concentrate on improving patient diagnosis and outcome, which is a “win” for all!

24/7 Availability and Automated Inventory Management

Researchers at a large bio campus needed instant access to the reagents with little administrative work. The Helix® on-site stocking solution easily solved this challenge and provided significant cost savings of hundreds of thousands of dollars over three years by eliminating purchase order and procurement hassles. The bio campus saved additional money in free shipping costs and unallocated supply charges.

The Helix® line demonstrates that Promega is taking automated solutions one step further. In addition to RFID-enabled storage units with touch screen access at the machine, we just introduced the Helix® app for Android and iOS users. The app allows customers to access on-site stocking units at their institutions, search available products, view reagent information and make purchases from their smart phones. This helps lab staff easily find the reagents they need with ease. Instead of physically visiting multiple storage units to view inventory, customers can simply log in and see in real time where the products they need are available and immediately purchase. When working on the weekend or after hours, or perhaps rushing to finish something critical before an important meeting or grant update, it can be quite frustrating to go to a lab freezer only to find that an item wasn’t reordered after the stock was depleted. The app allows users to search the storage units for the entire institution and verify inventory availability. In big organizations or universities, this can save countless trips across the campus as well as preserve an experiment’s integrity when timing is critical.

Conclusion

When it comes to communicating the benefits of new technology, on-site stocking solutions are easier than most, because the numbers look good. Still, taking time to vet your options, know the direct and indirect benefits and even crunch a few sample numbers can help speed your request and ultimate implementation.
About Jen Makovec

Jen has been a business partner for technology and life science professionals for more than 10 years. In her current role at Promega Corporation, Jen focuses on providing information, resources, support and supplies to life science labs across industries in North America.

About Promega

Promega Corporation is a leader in providing innovative solutions and technical support to the life sciences industry. The company’s 3,500 products enable scientists worldwide to advance their knowledge in genomics, proteomics, cellular analysis, drug discovery and human identification. Founded in 1978, the company is headquartered in Madison, WI, USA, with branches in 16 countries and over 50 global distributors. For more information about Promega, visit: www.promega.com

About Helix® On-Site Stocking System

Helix® On-Site Stocking System is an easy-to-use, intelligent line of laboratory freezers and cabinets produced by Promega. Helix® freezers, refrigerators and cabinets provide reliable 24/7 touch screen access to lab products with the swipe of a card. The Helix® System uses RFID-enabled technology to automatically detect product removal and reorder when inventory is low. The product reduces paperwork, minimizes waste, eliminates shipping fees and avoids costly product delays—saving time and money. Key reagents are always available, and inventory management is simplified, providing a win-win situation for lab managers and procurement professionals alike. The Helix® System can be configured to suit the requirements of any eProcurement system, providing seamless automated integration. For more information about the Helix® System, visit: www.promega.com/products/helix