warehouse ROI

Investing in Warehouse Management and Fulfillment

3 Studies in Scalable Solutions

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Not too long ago, warehousing and fulfillment was an "enterprise or nothing" game. Large companies with large distribution centers would invest in enterprise-level warehouse management systems, and the other technologies (RFID guns and barcode system, for example) to go with them.

...and if a small-to-medium-sized business could not afford these larger systems, they simply had to make do with something else: Excel spreadsheets, manual forms, stand-alone shipping stations, home-grown programs, and whatever else could be used in a pinch. According to a recent *State of Small Business Report* for 2016, a full 46% of small-to-medium businesses still don't track inventory at all, or else use a manual method. No wonder fewer than 30% of all warehouses are considered "efficient" these days.

A decade ago, such piecemeal solutions might have been understandable: Smaller merchants worked through tighter local networks and rarely shipped anything—and if they did ship, it was usually not across the country. Smaller warehouses, which did move product this way, still could not justify the costs of full automation. But they didn't need to, given that consumers rarely expected things like two-day shipping.

All of that has changed. There are now more than 800,000 online stores and eCommerce sites in the U.S. alone; while most of these are small, they ship across the nation and need to keep tabs on a constant flow of goods. Customers expect fast service, including two-day shipping. They also want the ability to track packages, manage returns, and otherwise engage with customer service. While many eCommerce sites have invested heavily in their front-end stores and marketing technologies, there is a mismatch when it comes to warehousing and fulfillment. *Many companies are simply unaware of their options and afraid of the expense* of full-blown enterprise solutions.

This is why it is important to look at cases where flexible, scalable software solutions work. All kinds of businesses, of different sizes and models, can benefit from the right kind of solution—and do so within their budgets. But while a general statement like that sounds good in principle, it helps to actually see, in a detailed way, how "real-world" business problems can be solved with the right kinds of data and automation tools.

The following three use cases do just that: Illustrate how three very different companies overcome their specific challenges by using more modern kinds of warehouse management and fulfillment software. Each case illustrates how companies of different sizes, with different markets and different challenges, find solutions outside of older enterprise solutions.

Case #1: Online retailer of coffee and espresso products
Small warehouse for coffee with ~250 SKUs

Challenges:

- Indistinguishable inventory stored close together
- Lack of signage and shelves
- No areas for dead stock or returns
- No forward locations

Solved by:

- ✓ More thoughtful warehouse layout
- ✓ Low-cost, modern barcode reader system
- ✓ WMS that can highlight pick paths and manage forward staging

Use Case #1:
Online coffee and coffee machine retailer

An online retailer of coffee, espresso, and espresso machines has a small warehouse where it stores its perishable goods—specifically, coffee beans from their boutique coffee roaster. The company is currently storing around 250 SKUs. The retailer has been in business since the ’90s, and their warehouse operations reflect this fact. At the time, investing in barcode reader systems and warehouse management software would have been costly—indeed, it would have been overkill, given the small number of SKUs and size of the warehouse. Thus, the warehouse has not had significant updates for almost two decades.

This does not mean their operations were perfect, however. Warehouse workers still faced many challenges:

Many of the SKUs look similar, especially when it comes to the coffee section of the warehouse. While the taste and smell of coffee beans differ, they look largely the same—as does the plain-brown-bag packaging that is common in coffee wholesale. Because these coffees all look similar, picking mistakes were common. A lack of well-labeled shelves and bins only added to the problem.

There were no areas for "dead stock" or returns. "Dead stock" happens for many reasons: Product recalls, customer returns, products that have expired, and so on. There was no separate labeled storage area for these, so they were constantly getting lost or mixed in with other products, or else just left to take up valuable warehouse space.

Forward staging was not used. Forward staging is simply the practice of having a set amount of stock in forward locations close to where packing and shipping will occur. Forward locations can be a huge time saver with more popular or high-volume items, because it minimizes trips to more remote locations in the warehouse. The warehouse in question here could have saved time and increased picking accuracy, especially for popular seasonal items. (When Pumpkin Spiced Latte Roast moves, it moves!)

> This company needed to:
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> - Verify that the correct SKU was being picked, every time.
> - Distinguish similar-looking items and track them through the warehouse.
> - Get a grip on better warehouse layout.

These challenges are now being solved with better technology, including:

A more thoughtful warehouse layout, made possible with software that analyzes current and anticipated inventory and suggests optimal layouts based on that data. Optimizing layout can go a long way to achieving lean practices in the warehouse.

A low-cost, modern barcode reader system. Barcode scanners are essential for distinguishing similar-looking items and tracking their movement through the warehouse. The decision to move to such a system is a no-brainer these days: Smartphones, iPads, and other tablets, as well as specialty devices, are being modified and used in warehouse environments; inexpensive and reliable networking equipment and routers are making wifi access ubiquitous; cloud software is enabling faster and better integration and updates. All of this made a new barcode reader system much more affordable and much easier to implement—and it made picking each SKU easier.

A warehouse management system that can highlight optimal pick paths and manage forward staging. Inventory storage efficiency and forward staging often go hand-in-hand, but making optimal decisions requires the right kinds of data, updated frequently.

Case #2: Startup boutique wood crafter

Small business needing better inventory management

Challenges:

- Better inventory management needed
- Needed to predict seasonal variation
- Needed faster and more accurate picking, packing, and shipping
- Looking for a solution that fit budget

Solved by:

- ✓ Better, more automated inventory management
- ✓ Integration with shipping systems
- ✓ WMS that could start small and scale with business

Use Case #2
Startup boutique wood crafter

A small maker of artisanal wood ornaments set up shop and is now supplying several small stores across the state. The company was clearly too small for an enterprise-level inventory management system. But some sort of system was needed, as the company was having difficulty keeping up with orders and ensuring accuracy with shipping. Indeed, this 10,000-square-foot shop had started out literally storing and shipping inventory out of one of the owners' garage.

The challenges this business faced would be familiar to many small manufacturers and online sellers:

Better inventory management was needed, as the company had trouble keeping track of what it had on hand, what was about to run out, and what was fully Out of Stock. This created unnecessary backorders and delays. Accuracy was also a problem, as human error sometimes lead to wrong shipments.

Variation could not be predicted. Demand for items changes with season (and fashion). This company needed to know when demand would spike, when it would slow, and what items were likely to be affected.

Packing and shipping were time-consuming. Because there was no way to pass data from an inventory system to a shipping station automatically, the process of packing, creating shipping labels, and double-checking their accuracy took a lot of time. Even then, errors occurred and money was wasted.

Many solutions were too "high budget." Of course, price isn't everything. But if your sales are only $500,000 a year, spending $200,000 or more on an enterprise system just isn't feasible (not to mention overkill). Still, the company had grown past the point where a small inventory app or spreadsheet could do the trick.

> This company needed to:
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> - **Better automate inventory management.**
> - **Link inventory system with shipping system.**
> - **Optimize packing and shipping procedures.**

These challenges are now being solved with better technology, including:

An inventory management system that can better track items and report on problems in real time. Seasonal variation can be better predicted as well.

Automated integration between the inventory management system and shipping systems. By integrating warehouse, shipping, and ordering systems, the company is now able to automatically generate correct labels and cross-check package contents for a better customer experience.

Software that can start small and scale with the business. This is a key feature that many modern software systems need: The ability to start small and scale as the business grows. If there are too many features and too much set-up needed, small businesses like this one would not be able to start their journey toward better practices. But, if there are too few features, companies will quickly outgrow the software. In this case, the right balance was struck.

Case #3: Large manufacturer

Specialty products shipped worldwide -140,000 sq. ft. warehouse space

Challenges:

- Accuracy vs. ease of use
- Labor expenses
- Disorganized receiving
- Constant small problems needing management attention

Solved by:

- ✓ Better interface and device compatibility
- ✓ Better integrations
- ✓ Labor allocation management
- ✓ Proper receiving based on technology

Use Case #3:
Large manufacturer of specialized packaging for goods

A large manufacturer had found its niche in producing plastic packaging for goods—mainly, small plastic bags and wrappers. These are in high demand in many industries, and the company's main plant specialized in creating these bags in large volume. The warehouse itself was more than 140,000 square feet.

Because the company sold such specialty items in bulk, it was shipping packages across the nation and around the world. Shipments ranged in size from a few small boxes to many pallets. Although their manufacturing processes had been finely honed, shipping and receiving often struggled to keep up with demand.

The challenges this warehouse faced were of a different flavor from most retailers, but were real enough to them:

Accuracy and ease-of-use were *both* needed. Like the coffee seller in the first use case, there were many similar products that needed to be kept track of, and order accuracy was important. But unlike the coffee seller, the issue was not one of automation or labeling—indeed, those systems were already in place. What was needed was a simpler system that new employees could be trained on easily, as well as appropriate integration with accounting and ordering systems. Training was particularly important, given that…

Labor was a *huge* expense Not surprising, as labor is a huge expense in almost any operation. But given the thin margins on this company's products, any ways they could find to control costs meant keeping the doors open that much longer. The ideal way to go about this was not to blindly cut workers or hours, but rather to find more efficient ways of allocating labor.

Receiving needed an overhaul. Good fulfillment starts with great receiving. Downstream processes were consistently running into problems, because receiving never got the attention it should. Systems were needed to help anticipate shipments, ensure inbound order accuracy, perform the right quality control steps, and find (and deploy) efficient storage solutions.

Managers were constantly "putting out fires." Between manual updates, ordering errors, misplaced inventory, and labor issues, the managers at this warehouse were *constantly* putting out fires—dealing with small, everyday problems that popped up. Outside of actual emergencies (fires, natural disasters, and the like), small problems like these put the biggest dent in uptime for warehouse operations.

> This company needed to:
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> - **Invest in an easier, more intuitive system.**
> - **Integrate with existing accounting and ordering systems.**
> - **Overhaul how receiving, storage, and labor allocation were done.**

These challenges are now being solved with better technology, including:

More accessible software with a better interface. New inventory software has a simpler interface, which (together with automation) makes routine tasks easier and simplifies training. The software is compatible with android systems and PCs, meaning that employees can access it on whatever device they feel most comfortable with.

Better integrations. The new system integrates easily with existing accounting and order systems, as well as shipping. This reduces errors and speeds up the shipping process.

Better labor allocation. The same inventory software also has several options for allocating labor, and doing so based on real-time data. This helps optimize the warehouse's labor force, ramping up available workers when needed and finding efficiencies during slower times.

Proper receiving and storage practices based on technology. Just as labor and shipping can be optimized to cut costs, receiving can be optimized to create more efficiency in downstream operations. With its new software, the warehouse is able to anticipate shipments, freeing up time to ensure accuracy, perform quality control, and find the most efficient storage options.

Most importantly, providing better training and automating the system mean managers have fewer problems to deal with on a daily basis. This removed one of the largest "time sucks" in the warehouse, freeing them to look ahead and engage in more important strategic activities needed to grow the business.