

A C K E R M A N
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The industry publication dedicated to helping warehouse managers and their bosses improve productivity and manage more profitably with tips, comments and articles written by practicing professionals.

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Fulfillment

By Scott Dockter, President/Chief Executive Officer, PBD Worldwide Fulfillment Services

*Editor's Note: PBD was founded more than three decades ago in Columbus, Ohio by Jim Dockter, the father of our author. During most of that time, Jim and Scott have been my primary sources of advice about fulfillment warehousing. In 2009, PBD was recognized by the Atlanta Business Chronicle as one of the "best places to work." Company details, including customer service metrics, are provided at www.pbd.com. This article is included in the text of the third edition of *Warehousing Profitably*, to be published later this year. KBA*

The dot com craze of the 1990s created a significant amount of misinformation about fulfillment. One thing is true — it may be the fastest growing type of specialized warehousing. The handling of e-commerce transactions to move products directly from source to consumer creates excitement.

An Unusual History

Respectable journalists have often misinformed their readers by claiming that fulfillment was one of the great inventions of the 1990s. They either ignored, or were ignorant of, the facts about Sears and other mail-order companies, who were engaged in fulfillment operations at the beginning of the 20th century. The warehousing processes were remarkably similar to those used today, although communications and transportation were different.

Orders arrived by US mail, addressed simply to: "Sears Roebuck and Co., Chicago, Illinois." There were no zip codes, and the postal people knew how to find Sears. Customer delivery usually was accomplished by parcel post. When Sears opened a giant mail-order plant on the west side of Chicago in 1906, it was the largest commercial building in the world. The fulfillment process inside that building differed only slightly from the methods that are used today. When Henry Ford was looking for fresh ideas to establish his automobile assembly line, the Sears mail-order plant was one of the places that he visited.

What Is It?

What features make fulfillment different from other warehousing? Unlike most operations, the warehousing people have direct contact with the consumers who order merchandise. Orders usually are much smaller than those handled by other warehouse operations. Information nearly always is transmitted electronically.

Because consumers are looking for high quality service and fast delivery of products, customer service requirements can be particularly challenging. Order complexity often is very high, and precise inventory management is necessary to fill orders effectively.

Orders may be placed by e-commerce websites, e-mail, fax and telephone. Technology is employed to report receipt of the orders, as well as carrier tracking information that is needed to provide immediate information and assistance for the customers.

Information Technology

Most fulfillment centers spend more money on communications equipment than shipping equipment. They handle toll free lines as well as credit cards. Order volume is much higher than other types of warehousing, making information technology critical. Many warehouse operators exchange data with customers every day, but leading fulfillment centers exchange data on the web, in real time, and around the clock. Data may be exchanged between fulfillment center and the client, and sometimes with the consumer who placed the order. Easy access to reports and user driven sales analysis is important.

Warehouse management systems (WMS) are a critical element. They support inventory control, maintenance of "quick-pick" areas, organization of orders for picking, scanning of orders for accuracy, and carrier selection. Since a growing amount of volume involves international shipping, understanding of import documentation and customs clearance procedures become vital.

The information system should enable the fulfillment operator to enhance productivity and improve overall warehouse efficiency in each of these areas:

- Optimizing pick, put-away, and replenishment.
- Establishing rules for each type of material movement based on factors such as unit of measure, or minimum/maximum levels.
- Setting up zones that reflect storage areas, such as bulk, high rack, flow pick, and returns.
- Integrating with data collection devices to enable accurate, tracking of goods through the facility.
- Integrating with all manifest applications to track shipping information at the package level.

The system should provide a foundation to run a fast-paced, high-volume warehouse operation efficiently. It also should enable the fulfillment operator to enhance productivity and improve overall warehouse efficiency.

Materials Handling

Receiving often differs from conventional warehousing. Back-orders are common, requiring the receiver to isolate and expedite those SKUs that are needed to fulfill orders. The volume of customer returns is much higher than in most other kinds of warehousing. The WMS is a key part of the receiving process, since it is used to control the put-away and storage of inbound materials. The system should optimize bin utilization and adapt to real time information about inventory status.

Storage and handling functions are quite different, since fulfillment warehousing involves low volume and fast turns. Because most of the product is shipped via parcel services, handling operations must include metering of parcel shipments. Scales and meters are critical elements in the outbound movement.

Operational Issues

Paper flow is more complex than for other types of warehousing. Some fulfillment centers are asked to create invoices. They also may handle some credit functions, including collections. The best centers create accounts receivable aging reports as part of the WMS.

Handling credit cards usually is required, and some fulfillment centers also handle banking for their customers. Currently, it is essential for fulfillment centers to be certified by Visa under Payment Card Industry Data Security Standard (PCI-DSS) in order to handle the complex risk of identity theft. Familiarity with banking and credit card transactions obviously is a necessity.

Quality staffing is of major importance. While many of the workplace jobs are repetitive, the workers need to be well motivated. The best fulfillment operators demonstrate their ability to staff a fulfillment center effectively.

Customer Service

Reporting must be timely and accurate, since most fulfillment centers are working for their own company, or as a service provider. Those reports include inventory, freight management, sales, customer service and accounting. Often they are reported on line and in real time.

Because prompt service offers a competitive advantage, many fulfillment centers are staffed on a multi-shift basis. Flexibility and scalability are critical, so the best fulfillment operators maintain a pool of part-time workers who can be quickly recruited, as necessary.

Metrics should be maintained in order to inform customers about service standards, as well as to maintain an emphasis on continuous improvement. Here are seven measurements that are published on our website:

- Inventory accuracy: 99%
- Fulfillment accuracy: 99.84%
- Orders shipped in 24 hours: 99%
- Dock to stock average: 12 hours
- 100% orders keyed same day
- 90% of calls answered within 20 seconds
- 95% call quality average

The hardest measurement to calculate is how well the fulfillment operator is serving the customers. The only way to learn this is to ask those customers, and one way to encourage responses is to offer a reward to those who complete the survey. Preparation of the survey is not a simple task. If the survey is too long, people will not devote the time to answer it. If the questions are not well designed, the answers will have little value. A good survey should measure overall satisfaction with the service provider, as well as the degree of satisfaction with account managers, distribution services, and information technology. If special services are provided for certain clients, the quality of these also should be measured. One of the most important questions is, "would you recommend our company to a colleague?" In addition to questions that can be answered by checking a box, a well-designed survey will probe for additional narrative comments that display the attitude of the customer. Among these are:

- Why do you do business with us?
- If you could choose three things for us to focus on to improve the experience, what would they be?
- Would you be willing to provide a written testimonial about our company?
- If your contract were up for renewal today, what would you do?
- How likely are you to use these services?

These surveys provide an early warning of trouble with a client, and they also offer clues about opportunities to expand services to those clients who are pleased with current performance.

Liability Issues

Fulfillment operations are exposed to theft and customer claims. Theft can involve fraudulent orders. Many fulfillment operators negotiate the allowable inventory variance, based on the customer's own experience with errors and shrinkage.

The liability problem can be significant. A fulfillment center operator is expected to absorb the financial consequences of mistakes. The liability limitations that exist in conventional public warehousing do not apply in fulfillment. To compensate for the added risk, pricing of fulfillment services must produce sufficient margins.

Success Factors

A fulfillment operator must justify the faith that clients place with him by acting with integrity and professionalism. Financial responsibility is a necessary ingredient. A teamwork approach is essential. Employees must be empowered to do whatever it takes to serve clients. Finally, we must be innovative. The latest technology should be employed to enhance our ability to help the customer.



Scott Dockter serves as President/CEO of PBD Worldwide Fulfillment Services. He is responsible for the overall operations and management of PBD. Scott joined PBD in 1993 and has served in various positions, including Senior VP and VP of Operations. Scott earned a bachelor's degree in economics from the University of Virginia.

KEN'S COMMENTS

When Does Animosity Become Destructive?



The Economist, in its March 20 “Schumpeter” column describes personal animosity as a force in business. Most of the examples concern Silicon Valley and the feud between the chief executives of Apple and Google. A lengthy internal battle between Andersen Consulting and Arthur Andersen during the 1990s was eased as Anderson Consulting changed its name to Accenture. The name change probably saved the consulting organization after the Enron scandal resulted in the collapse of the accounting firm.

One observation caught our attention: “Family companies are forever being destroyed by internal squabbles.” The warehousing industry has more than its share of family-owned and family managed businesses. Animosity among families has caused more than its share of grief, even in some of the large and well-known warehousing organizations. There is ample evidence that family owned enterprises can enjoy success and longevity — DuPont and Ford Motor are two examples. Those that are successful always find a way to submerge family considerations in the interest of corporate stability.

WAREHOUSING TIPS

Dealing With The Threat Of Unionization

Union campaigns are likely to increase because Washington has more ties to organized labor than any government in the past half-century. To avoid breaking the law, companies must follow a long list of do’s and don’ts. Questioning workers about union involvement is forbidden, and threats can be extremely dangerous.

Union organizers normally promise your employees the very things you should already be providing. Here is a list of things that should be reviewed as you consider the threat of an organizing campaign:

- Competitive compensation
- Benefits
- Job security
- Work environment
- Safety and security
- Respect
- Cameraderie

In essence, a great place to work is unlikely to be the target of any union campaign.

What Is The #1 Hiring Mistake?

To answer the question with one sentence, it is hiring for experience and skills rather than attitude. Many are impressed by the possibility of bringing in a new person with substantial experience working for a competitor or another company with warehousing operations. That experience is valuable, but it is no substitute for attitude. Skills can be acquired, but attitudes are very difficult to change. Some people are natural leaders, and others have a significant drive to be successful. This is far more important than previous experience.

Simplifying Productivity Measurement

We lament the tendency to make productivity metrics complicated. Of course a more complex system will yield a greater variety of information, but some simple steps will allow you to collect data showing units per hour, abbreviated as UPH. The process begins by adding up the total number of units received plus the total number of units shipped in a single day to determine the number of units handled. Then total the number of hours spent that day by everyone involved in the warehousing operation, and that includes janitors and clerks as well as freight handlers. Divide the total number of units handled by the total number of hours, and the result is UPH. This ratio does not become meaningful until or unless it has been maintained for many weeks and months, possibly posting the results in a graph.

If a new procedure or new equipment is introduced, that change is justified only by an improvement in UPH.

Seven Types Of Supply Chain Waste

Consultant Tom Craig identified these seven sources of waste:

- Oversupply -- producing more product than anyone requires
- Over processing -- doing more than is necessary
- Ineffective transportation -- unnecessary or unacceptably slow movement of product
- Flabby inventory -- failure to liquidate obsolete or in active stock
- Wasteful movement -- unnecessary movement of people or material
- Waiting
- Defective service or products

Improvement In Small Doses

Consultant Sam Flanders observes that many baby steps are better than a “big bang” solution in developing warehousing improvements. When you identify one or two small steps that will yield beneficial results, the risks are lower and resistance to change is reduced. When you continue to take baby steps and then publicize the successes, continued change is easier to implement.

Re-Slotting Revisited

By N. Saenz Jr, E. Frazelle, A. Taliaferro, D. Savage, WERCsheet, March-April 2010, pg. 1.

Attention to location of each SKU, also known as slotting, is a common feature of every warehouse startup. Improvements in slotting typically increase picker productivity more than 20%, simply because travel is reduced. However, it is equally common for the process to be neglected as the operation matures. Some managers consider slotting to be a one-shot project. As the company grows and ships more volume, the slotting tends to get progressively worse. A starting point is the establishment of rules to govern both slotting and re-slotting. For example, an emphasis on productivity may produce a different slotting rule than a priority for eliminating shipping errors. There are three main decisions in slotting each SKU:

- What is the storage mode — free stacking, racked pallets, bins, etc.?
- How much space is allocated for each SKU?
- Where should each SKU be placed?

The best operators practice continuous slotting, making adjustments whenever there is a change in product velocity or order patterns.

Making WMS Decisions

By Jim Burleigh, *Material Handling Management*, March 2010, pg. 38.

This author considers the options in managing warehouse management systems. He estimates that a paper based inventory system achieves 90% accuracy, while an automated WMS raises the bar to 99%. The first option considered is whether to upgrade an existing system or install a new one. The next option is the choice between on premise software or an on demand web-based system. While the on premise WMS is more robust and able to handle more complex requirements, the simpler web-based system can be up and running within a few weeks. Some systems are designed to maximize storage space. Others are designed to achieve real-time inventory information.

What Really Motivates Workers?

By T.M. Amabile and S. J. Kramer, *Harvard Business Review*, Jan.-Feb. 2010, pg. 44.

This is part of HBR's annual ideas collection. The single most important motivator is a feeling that one is making progress.

Managers have powerful influence over events that facilitate or undermine progress. They can provide meaningful encouragement, or they can fail to do so. Avoid impeding progress by changing goals, being indecisive, or holding up resources. You can proactively create both the perception and the reality of progress. Recognition is important, and it should be a form of celebrating progress.

One At A Time

By S. Lacefield, *DC Velocity*, March 2010, pg. 55.

Many distribution centers are doing more piece picking today than they did a decade ago. The author describes steps that make the process more effective. The first is proper slotting. Effective placement of items will shorten travel time and use space more efficiently. It is equally important to re-slot early and often. Keeping the process simple is easy to overlook. Hiring practices should reflect the new realities of the operation. Arm and finger dexterity are more important in piece picking than in case picking.

Today's Warehouse Plays A New Role

By Cliff Otto, *Inbound Logistics*, Feb. '10, pg. 20.

The author is president of Saddle Creek, a multicity logistics service provider. He observes that three services currently draw considerable interest.

- First, a shared space environment contrasts with the typical contract warehouse operation. Two companies products are stored at opposite ends of the building and flow toward the middle as more space is required. Each only pays for space as they need it.
- Secondary packaging is frequently outsourced to a contractor, and Saddle Creek is prepared to handle this service.
- Cross docking is an economical alternative to traditional warehousing services, and it is a way to take costs out of the supply chain. In each of these three situations, the logistics service provider is often better positioned than a private warehouse to provide these services.

LSPs In A Down Economy

By RJ Bowman, *Supply Chain Brain*, Mar `10, pg. 50.

Based on early winter interviews with executives at seven large logistics service providers, the author develops an interesting forecast. Many respondents feel that sustainable recovery is hard to see. Shippers are obsessed with cost and continue to hunt for bargains. One respondent feels that the time is right for rolling out innovative systems and "lean" initiatives. A capacity crunch in the truckload market could appear before the end of this year. In contrast, supply continues to exceed demand in the less than truckload (LTL) marketplace. Shippers should expect to pay a lot more for ocean transit this year. Production of bulkier products is likely to shift from Asia to Mexico and Central America. One respondent indicated that there are growing opportunities to become the lead logistics provider (LLP). A steady but modest rise in freight volumes is anticipated for the remainder of this year. The best of the logistics service providers hope to be ready for whatever happens.