

White Paper

How to Deliver the “Perfect Order”





Striving for balance in competition

For some organizations, getting the right part to the right place and at the right time is a mission-critical goal. A manufacturer picking maintenance part orders for aircraft repair, for example, better make sure the right parts are picked. The same goes for the medical device manufacturer or distributor tasked with sending the right knee implant to the operating room doctor. There's literally no room for error in either of these applications; these organizations will go to great lengths and spare no expense to achieve the perfect order – as they should.

Here's another example; does the large distribution center (DC) sending a pallet of 10 red dresses and 20 yellow dresses instead of 10 yellow dresses and 20 red dresses to a retail store really suffer a great impact from this error? In a somewhat similar situation, does the manufacturer whose assembly line pauses for workers to either repick items or fix mispicks truly need 100 percent order accuracy or the "perfect order" every single time? Many warehouse and distribution professionals are asking themselves these types of questions as the focus on the perfect order seems to increase in importance, and as companies strive to achieve acceptable accuracy levels in an increasingly competitive, timeconscious business environment. The idea of the perfect order is a little different for everyone.

In this white paper we'll explore the concept of the perfect order, review factors that can help determine what that might be for your facility, share strategies companies are using to attain the perfect order and provide solutions that allow companies to increase order accuracy without having to make the cost and time investment typically associated with reaching perfect order status.

What is a perfect order?

Achieving the balance between customer satisfaction and profitability has become somewhat elusive for organizations in today's business world.

Distributors are grappling with razor-thin margins and an increasingly picky consumer, and manufacturers are focused on improving efficiencies and process flow in a way that reduces repicks and mispicks that can disrupt their entire process.

With this in mind, it's no secret that buzzwords like "perfect order" have come into focus over the last couple of years. Defined by the Warehouse Education and Research Council (WERC) as a shipment that's accurate, delivered on-time, in damage-free condition with the correct documentation and invoicing, the perfect order has become somewhat of a Holy Grail for distribution operations.¹

A perfect order relies on four simple facts:



Accurate



On-time



Damage free



Documented

Assessing the financial feasibility of the perfect order

In some cases, companies work very hard to reach levels of customer service that are financially feasible for their own operations – all with an eye on cultivating higher market shares and long-term customer satisfaction.

But there are trade-offs to consider in these scenarios. And while few would argue the importance of order accuracy to customer satisfaction, is it the only factor? The company that takes the time to analyze its order accuracy requirements, and then leverages the right balance of good business strategies, technology and automation to achieve these goals, will come out the winner.

A good starting point for achieving the desired balance is to consider the consequences of a mispick within your own operations. If a part is mispicked, what are the repercussions? Is it going to be a big deal and if so, how do you quantify this impact and mitigate it?

In defining perfect order measurement, Supply Chain Metric points out, as with most other supply chain metrics, there are many.²

For example, say your warehouse picks and ships the wrong item. Once the customer receives the order and notices the error, they contact the manufacturer and notifies them of the mistake. The manufacturer then enters a credit for the item not shipped and an invoice for the item shipped in its place. For almost all errors that occur, a corrective credit is issued. It is through an analysis of these credits that you derive your metric.

It's important to note a perfect order index is a compilation score that measures the result of each of the four major components of a perfect order, including: accurate shipment, on-time delivery, damage-free shipment and correct documentation.

According to the industry groups that developed this definition, the perfect order index is calculated by multiplying each component to one another. If a company has a 95 percent score for each of the four components, for example, then the perfect order index would be 81.4 percent.

An example

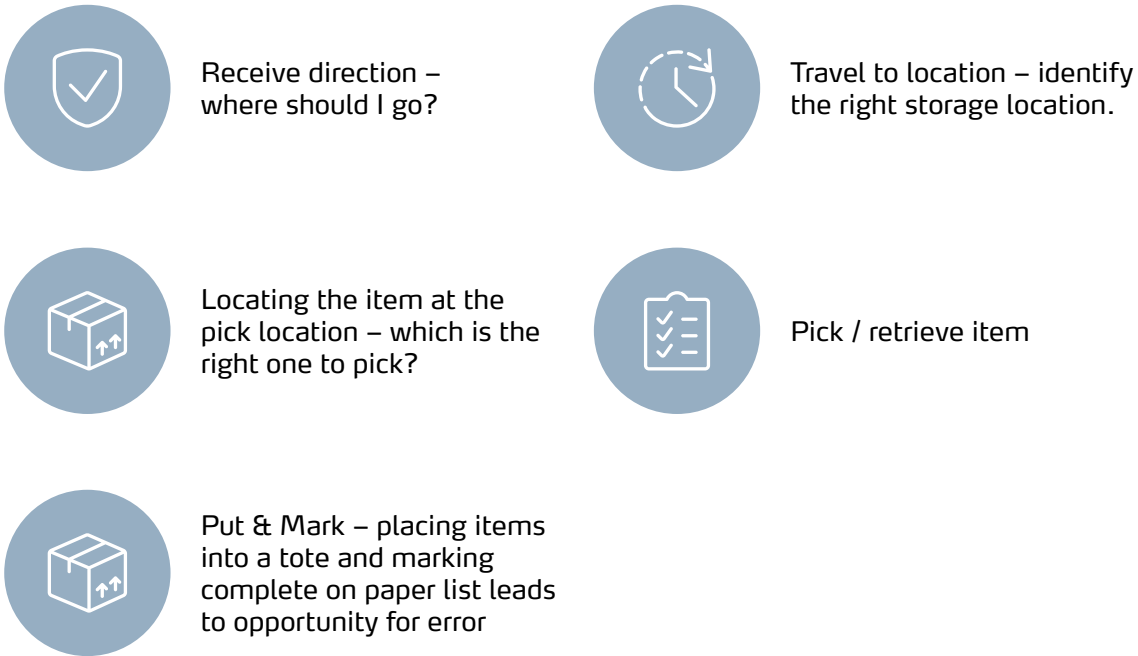
Pick Accuracy: 99.2%
Delivered on Time: 96%
Shipped without Damage: 99%
Invoiced Correctly: 99.8%

Therefore, the Perfect Order Measure is $99.2\% \times 96\% \times 99\% \times 99.8\% = 94.09\%$

Taking this perfect order index out onto the manufacturing floor or into the DC, and by applying it to individual operations, managers can begin to get a clearer picture of what it actually means to deliver a perfect order to a customer. From there, the organization will be better equipped to determine the lengths it will go to when trying to achieve perfect order status.

Technology: the great facilitator

As companies define their perfect orders and goals in order fulfillment, many of them are turning to automated technology to streamline and automate their warehouse and DC operations. Specifically the order picking portion of the fulfillment process. This brings five different areas of potential problems to the mix.



Many companies are implementing low risk, easily cost justifiable automated storage and retrieval systems to increase the pick accuracy within the order fulfillment process. Automated storage and retrieval systems (ASRS), such as Horizontal Carousel Modules (HCMs), Vertical Carousel Modules (VCMs), Vertical Lift Modules (VLMs) and Vertical Buffer Modules (VBMs) optimize manual picking processes and help boost profits. From this level of automation, manufacturing or distribution facilities can gain improved inventory accessibility, better use of floor space, time savings and improved ergonomics; all resulting in higher pick accuracy without making an outrageous investment.

This “goods-to-person” method eliminates time spent walking from one pick location to another within a warehouse. Equipped with pick-to-light technology which illuminate the item’s location and pick quantity required, automated solutions reduce the time spent searching for a specific stock-keeping unit (SKU) upon arrival at the pick face.

These solutions interface with both inventory management and order management software to sequence the picks in a way that optimizes the machine’s movement. All items can be picked in one rotation, or cycle, of the machine’s storage bins or trays, further maximizing pick time.

Combined, these factors all boost pick accuracy and get distribution organizations that much closer to the perfect order they seek. Further, increasing pick accuracy even by less than one percent will not only contribute to a dramatic reduction in picking mistakes, but it will also result in tremendous cost savings. Concurrently, your own company’s vision of the “perfect order” will come into clearer view.





Asking all the right questions

To achieve the highest degree of picking accuracy, integrating inventory management software with ASRS enables smart functionality such as inventory monitoring – yet another step in the direction of your ideal order accuracy metric.

In addition to keeping track of the contents stored within the machine, for example, the software also interfaces with a facility's warehouse management system (WMS) and enterprise resource planning (ERP) systems. This function allows managers to closely monitor stock levels in real time – reducing part shortages and potentially eliminating physical counts – for better inventory control.

In systems equipped with RF barcode scanners, for instance, the operator can be required to scan each picked item. The data captured by the scanner is then relayed to the inventory control software, which in turn verifies that the picked part is the same one required by the order.

This barcode recognition feature can also be used for system inventory replenishment. During restocking, the operator scans both the item and its destination to verify placement into the correct storage location.

Adding scanning to an ASRS ensures additional accuracy in order picking and SKU replenishment, significantly reducing mispicks. All of these “wins” can help push manufacturers and distributors further down the path of the perfect order while ensuring continued improvements in both profitability and productivity.

As they strive to balance high customer service levels with efficiency and profitability, the question all managers should be asking themselves in today's perfect order-oriented fulfillment environment is: Do we really need to achieve the “perfect” order and, if so, then what does the word “perfect” actually translate into for our specific operation?

With the answers to these questions in hand, managers can assess the most tolerable levels of order accuracy while at the same time increasing both customer satisfaction and cost savings.

About Kardex

Kardex is a global industry partner for intralogistics solutions and a leading supplier of automated storage solutions and material handling systems. The Group consists of two entrepreneurially managed divisions, Kardex Remstar and Kardex Mlog.

Kardex Remstar develops, produces and maintains dynamic storage and retrieval systems and Kardex Mlog offers integrated materials handling systems and automated high-bay warehouses.

The two divisions are partners for their customers over the entire life cycle of a product or solution. This begins with the assessment of customer requirements and continues through planning, realization and maintenance of customer-specific systems. It ensures a high level of availability combined with low total cost of ownership and operation.

Bibliographical references

- ¹. Vitasek, Kate, Perfecting the Perfect Order, WERC.
- ². Supply Chain Metric, Perfect Order Measurement, accessed January 15, 2015, www.supplychainmetric.com/perfect.htm