

Industry Article:

Beyond Fill Rate: Perfecting the Perfect Order

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Introduction

Your company is achieving a 99% fill rate from its distribution center. Is this good? Leading companies like Intuit are starting to ask themselves this question and are learning the answer more often than not is “no.” Distribution centers have worked hard to get their fill rates up - often into the high 90th percentile – only to find that customers are still not happy. How can this be?

The answer is simple: Just because a distribution center shipped product on time does not mean that it got to the customer on time to their expectations. Nor does it necessarily mean the customer got the product they ordered, in the quantity they ordered. In addition, it does not take into consideration the softer aspects of customer satisfaction such as damage free or being correctly invoiced. As companies dig deeper in their efforts to increase customer satisfaction, more are learning that pleasing the customer requires much more than simply having high fill rates.

What really matters in today's customer driven economy is, “Did the customer get what they want, when they wanted it, how they wanted it?” In essence, fill rate is just one part of the overall customer satisfaction equation. Companies now have a new, superior option, adopting a, “Perfect Order” philosophy. This article seeks to describe the perfect order, define its components,

and suggest improvements to an already powerful metric. A look to the past – and the emphasis placed on fill rate – will help set the foundation for the genesis of the perfect order.

What Is a Perfect Order?

A perfect order has typically been defined as on time, complete, damage free, and having the correct invoice. While there are certainly variations on this theme, one of the benefits of this definition is its simplicity and the intuitive approach of measuring what is important to the customer.

The perfect order is calculated

Example Perfect Order Index

On Time	Complete	Damage Free	Invoice Correct	POI
95%	95%	95%	95%	81.4%

by multiplying the metrics. For example, if a firm were experiencing 95% on time delivery, fill rate, correct invoice and damage free shipments, the resulting perfect order index would be 81.4% (95% x 95% x 95% x 95%). Had each of the measures been 90%, the perfect order index would drop significantly – to 65.6%.

Have You Fallen Into the Fill Rate Trap?

Successful businesses, by definition, continually strive to meet the needs of customers. This fact will not change and has led many companies to try to increase cus-

tomers satisfaction in an effort to retain existing customers. As companies drill down into their customer satisfaction, they are discovering that they lack sound operational measures to gauge customer satisfaction. Many companies use customer satisfaction surveys – often done annually or, at best, quarterly. However, they lack a true connection to hard, quantifiable, operational measures that more accurately reflect customer satisfaction. Worse, many companies have fallen into the fill rate trap and may find themselves erring in linking operational measures to customer satisfaction. Below are just a few of the real examples of how some companies have looked at their performance only to discover a bleaker reality than thought.

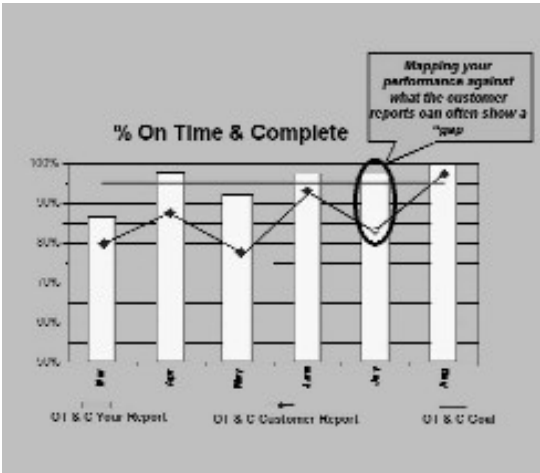
On Time to in Stock

Company A receives an order on Monday. They do not have the ordered product in stock. They don't drop the order to their distribution center unless they have product in stock. Company A gets product in stock on Thursday and they drop the order to be filled on

Friday. Company A has a 100% fill rate because they measure fill rate by when the order drops to their distribution center – not by when they got the order. However, the customer had to wait five additional days due to stocking issues. It is hard to believe, but we have seen more than one company define their fill rate metric by whether or not they have product in stock to ship. How can a company not achieve 99% plus fill rates when they only measure when they know they have product in stock? We found that measuring fill rate by in stock is especially true when companies involve outsource providers to do their distribution or fulfillment.

On Time to Commit vs. Request

Company B gets an order for a product on Monday. Their normal



cycle time is three days from order to shipment and the customer has asked for the standard delivery of Wednesday. However, Company B is experiencing high end-of-quarter orders and does not have capacity to meet their usual three day service level so they quote the customer a five day order cycle time with expected shipment on Friday. Thus, when they ship the product, they report a 100% fill rate because the shipment took place when the company said it would but not when the customer wanted or needed it.

On Time "Shipped" vs. "Left the Dock"

Company C is an outsourced manufacturer that runs 24 hours a day. They use a variety of LTL and TL carriers to ship product to major regional distribution centers nationwide. Cutoff for trucks leaving is usually between 6pm and 9pm. Production is behind and does not make the cutoff for the truck to leave. However, they continue their efforts to make product for shipment and it gets down to the shipping department. Shipping fills the manifests and the product goes on a truck or on the dock only to sit until the next day because the truck already left the dock. The flaw? Company C's computer system shows the product as "shipped" even though the product never left the dock and they give themselves a 100% fill rate. Likewise, this same thing happens

when a company loads a truck but suffers driver issues. We have found many such instances where companies show that they have shipped the product, yet the product has not left the dock.

On Time Shipment vs. Delivered?

Company D was reporting great fill rates of their distribution center to their major retail customers. However, customers were constantly complaining to upper management about the bad service they were getting. The Distribution Center kept saying, "It can't be – we have a 98.5% fill rate of product to the retail customers". The problem? Even though the product left the distribution center on time, it often did not get to the customer on their expected delivery date to meet their delivery window. When this happened they had to reschedule their delivery appointment, pushing out product delivery one to three days. Company D later began measuring on time by expected delivery date and customer satisfaction went up significantly.

On Time (with expedited costs)

Company E has fill rates up from the low 70th percentile. Warehouse personnel were charged with a "99% fill rate goal." Bonuses would be given for the achievement of this miraculous feat. The problem? Expedited shipments went up – costing the company over \$1 million.

The above are only a few examples of how companies can easily fall into the fill rate trap. That is, thinking they are performing well when in fact they are failing to meet customer expectations. We propose companies expand their thinking, focusing more on customer and process when selecting their measurements. The Perfect Order Index philosophy represents the ideal means to achieve this end.

Measuring Fill Rate vs. the Perfect Order

Fill rate has typically been defined as a percentage of orders or lines filled relative to the total ordered. While this reflects a distribution center's effectiveness, it does not capture the complete perspective of customer satisfaction with the order. The Perfect Order Index strives to close this gap. A perfect order expands the view of the order to include such things as on time delivery, complete orders, arriving damage free, and having the correct invoice associated with the shipment.

As a metric, the Perfect Order Index boasts several benefits: First and foremost, it strives to capture the feelings of the customer – from their perspective. Misjudging even one aspect of the customer experience can cause significant losses. Second, it is easy to understand; executives can see if the order was perfect or not. Third, it is based on metrics that most companies should already be measuring.

The Supply Chain Council defines perfect order fulfillment as: "The performance of the supply chain in delivering: the correct product, to the correct place, at the correct time, in the correct condition and packaging, in the correct quantity, with the correct documentation, to the correct customer." While there are certainly variations on this theme, the central tenet is that satisfaction of the customer comes before all else. While expansive, the Supply Chain Council's definition does contain some overlapping metrics. For example, if a product was shipped to the wrong customer, it is conceivable (and probable) that it will not be in the correct place or at the correct time, or with the correct documentation.

Our experience shows that companies that have successfully adopted the Perfect Order philosophy have chosen to customize their perfect order index to align with their thinking of how they can

best maximize customer satisfaction. We suggest that a company not necessarily adopt all elements of the perfect order, but rather only those most germane to their business. While some firms have reported having over fifty components in their perfect order, we recommend keeping the components relatively simple.

A Closer Look at Typical Components of the Perfect Order

At first glance, using the Perfect Order would seem straight forward. And, for the most part, it is. Yet, before implementing this metric, it would be wise to fully define each of the components to avoid confusion. As “on time delivery” contains the greatest potential for improvement, we will define it last.

Delivered Damage Free

Defects or damage can happen in various areas including manufacturing, the distribution center, or the carrier. Often each area focuses only on quality within their walls and does not extend its view of defective or damaged product to include what happens once it has left the dock. The customer does not care if the product was damaged by the distribution center or the carrier – it is damaged and it causes them an inconvenience or worse, an out-of-stock situation.

By extending the measurements of damage free product through the carrier, it helps the company see damage from their customer's vantage point. Tracking damage throughout the process helps companies work with the different areas where quality can be affected – be it in manufacturing, distribution or the carrier. It also helps a company coordinate its various limbs to achieve a higher overall quality level from a broad, customer point of view. The various departments can analyze root causes of error and work internally to remedy them, increasing overall quality. Tracking down the root

cause of the damage is imperative to making actionable improvements.

Delivered Complete

Orders should be shipped complete. This represents 100% fill rate for all products and all lines; no items shall be left behind. While a complete order may at first glance appear to be straightforward, substitutions should be addressed.

For instance, a customer may order an item, only to find that it is out of stock. Instead of back ordering the item, they request a substitute. The order could be defined as being complete, since the shipment includes all of the products that the customer ordered. Yet, it doesn't capture the original intent and desire of the customer. Nor does it capture the lost sale for the original item. This tends to skew the demand pattern for the substituted item, potentially leading to more inventory being held for this product, further compounding the problem. For these reasons, we believe that shipments containing substituted products should not be considered “complete.”

Unfortunately, not all situations are as clear cut as the one above. All of us have had customers who will call to inquire what is on hand, and then order accordingly. Inquiries about what is in stock are different than placing an order. If customers can access inventory levels over the Internet, it may become impossible to efficiently ascertain their initial intent and desire. Managers will have to determine how to define an inquiry about inventory levels, and whether these inquiries lead to a substitution.

Accurate Invoice

Defining this metric is fairly straightforward. Either the invoice accurately reflects the shipment or it does not. The invoice should reflect the items ordered, the correct quantity, correct terms, and

the correct price. If substitutions were made and agreed to by the customer, the invoice should show the substituted products, not the originally requested items. If an invoice is correct and accurate in all details, it can be easily processed and paid.

The ambiguity in defining an “accurate invoice” arises in defining “shipment.” If a product has to be back-ordered, does the invoice reflect this? It is our contention that the invoice should reflect the actual shipment. That is, an accurate invoice should not bill the customer for the back ordered units on that invoice.

On Time Delivery to Requested Date Without Expedites

One of the hardest measures on which to gain agreement is “on-time delivery.” The reason is clear: there are too many variations on how we define “on time.” We recommend that companies track their on time delivery to the date requested by the customer without expedited processes (pick and pack or shipment).

This measures that product shipped when the customer asked – not when a company can ship. For companies that do not have sophisticated systems or links into the carriers, it may prove quite difficult for them to measure on time delivery. For many customers, the gap between on time shipment and delivery is very important. This holds true especially in the retail sector where retailers schedule delivery appointments to ease their backend operations. Carriers – especially the larger and more sophisticated ones – are offering delivery time information making this more feasible. And parcel shipment carriers such as FedEx and UPS have been offering proof of on time delivery for years.

As with complete orders, a company faces the dilemma of its definition differing from the customer's understanding. For instance, what does “on time” really mean? Each customer may

