The Value of Measurement

A Story of Logistics

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The Value of Measurement in Logistics

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Logistics originated in the military, where the ability to fight a battle was predicated on feeding and arming an army away from its home base. The result of a great logistics capability was an army ready and able to do battle. The alternative was a starving, ill-prepared army who could well be slaughtered. As Omar Bradly, one of the leading American military commanders in WW II stated, “Amateurs study strategy, professionals study logistics.” But professional logistics means managing a capability not just hoping it will deliver the goods!

Today the consequence of performance is the survival of a company, as only those that can satisfy their customers with the right goods at the right time and the right place (product, place and time utilities of logistics) are going to be profitable and survive. The question is how does a company ensure the delivered goods provide this utility consistently?

Lord Kelvin, the physicist who developed the Kelvin International scale of absolute temperature in the late 1800’s, said “If you cannot measure it, you cannot improve it”. This is true today, as logistics requires that we continuously improve, or our competitors will erode our current competitive advantage and the company will struggle to survive.

All this leads to the need to measure the logistics provided to the customer. Logistics is the link between the customer and the source of the goods and, if done better than anyone else, is a source of competitive advantage. Without measurement, we have no knowledge of whether our service standard is being met, falling below the standard and losing customers or so far above the standard we are losing money on the service. Measurements of logistics performance allow the company to ensure the most economically advantageous level of service is chosen and maintained. The measurement of logistics performance is not as simple as it sounds. No one delivers everything on time without exception. The question is really what is accepted as the standard we expect for the majority of the deliveries, and what is the deviation allowed from this standard? The correct way is to use both the average of the defined compliance to this standard, and the deviation (usually the standard deviation for those of you who enjoy statistics) from this average. With these measures we can determine if the average is maintained or changing, and the deviation will show the extent of the variation. The company can use these two measures to maintain the

delivery standard and perhaps improve it if economically valuable. While these are the two fundamental measurements for logistics, other measures must be part of the ability to measure and manage. Foremost in these is the order fulfillment accuracy and then the measure of any returns and the cause of the return.

Companies often suffer with limited usable data from the financial systems that the company utilizes. Logistics is a process that moves across many entities and many accounting codes. The capability to extract this information and use it timeously is not that common. Where then does a company turn for valid information? One of the most valuable sources of information is the billing invoice from the logistics service provider, which will include the order and its date, the source of the goods (warehouse or source of manufacture), the goods, the company that delivered them and to where, and the date of delivery. If the data can be extracted simply from the financial systems, this must be used. But for the majority of companies performing logistics, the simplest source for this data is the audit and pay (freight audit) function performed by third party companies. While the aim is to extract data to verify the goods were delivered and to pay the service provider, the same data can be used to measure and manage logistics processes.

Let's look at an example for the use of this information. A company warehoused and delivered consumer electronic goods to brick and mortar stores for one of the leading brands. It was a complete surprise to the brand owners that deliveries went up by 30% before sales promotions, and return volumes were up by nearly the same amount. As returns become discounted goods the brand was losing money in the value of the stock, and also paying to deliver and return the goods. The logistics service providers became aware of these peaks but realized something was not sensible. Data analysis showed the impact for extra deliveries and, with a little bit of financial data, the impact on the brand managers accounts. Rather than raise a complaint, the logistics providers provided data to show the financial impacts and the brand managers listened. It turned out the stores were significantly over ordering, so they had stock to secure the sales during the promotion. The brand managers changed the returns policy to preclude this behavior and saved significant costs. Data, not opinions, helped to define this and enabled the brand to manage the consequences with the stores.

With this understanding of the value of logistics measures we can delve into where data can be extracted and how to use it.