HOW TO CUT YOUR SUPPLY CHAIN COSTS IN HALF

LOGISTICS BUREAU FREE REPORT

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How to Cut Your Supply Chain Costs In Half

Well that sounds like a pretty bold claim – reducing your supply chain cost by half. This is not just incremental cost reduction “at the fringes” but significant and sustainable reductions in your overall supply chain costs. Is this a reality? Is this really achievable? And, if it is, how can it be achieved? That is, are there companies that have achieved this objective?

The answer to all these questions is an emphatic ‘yes’. In fact, while this may seem even more miraculous, companies and organisations for many years have been achieving this objective – i.e. halving their supply chain cost, and, improving their service to best-in-class levels, at the same time!

Let’s take a typical scenario. An organisation is looking to reduce its overall operating costs in the supply chain area. Perhaps the supply chain team has been tasked with generating significant cost savings. Typically, the most commonly used approach to achieve this is to focus on cost reductions themselves. In the first instance, areas of “low hanging fruit” are identified and very often this involves simply reducing headcount and associated labour costs. Whilst this, in most cases, delivers short term results and is relatively quick to implement, it invariably has an impact on the service levels that the organisation provides. This is due to the fact that overall morale within the organisation may decrease, and the absolute focus on the customer and excelling in the customer service area is reduced.

There is a counter-intuitive response to this challenge to reduce cost however that involves not focusing on the costs, but rather but on the service. This is counter-intuitive because our life-experience tells us that in order to get a better quality of service, costs increase. So many of the experiences that we encounter on a day to day basis validate this proposition i.e. that increased service equals increased costs. Think for example of flying on an airplane. If we want a better level service during the flight, then a different class of seat and travel is required which invariably involves an additional cost. The same is true of almost any service industry. Think of restaurants, those restaurants providing a high level of service will typically be charging more for that service. The same is true of hotels, where again a better level of service invariably attracts a higher cost per night for the room.
This is not the case with supply chains which are counter intuitive and this requires quite a significant paradigm shift to be able to comprehend and digest. What this means is, that organisations that provide a noticeable and demonstrable best-in-class level of service are found to achieve this objective at around half the costs of their competitors and peers i.e. similar supply chains. The Benchmarking Success (BMS) database of nearly 900 organisations validates this assertion. Every two years, the database is interrogated to determine those organisations that clearly provide a best-in-class service. This measure of best-in-class service is measured by aggregating a number of service measures. Effectively a “basket of measures”, not dissimilar to the Consumer Price Index calculation methodology. The ‘basket of measures used by Benchmarking Success includes a whole series of customer service metrics that involve those things which are valued by customers. One of these of course is DIFOT, but other measures may include inventory availability, level of damages, shortages, invoice accuracy etc. The BMS methodology applies a weighting to each of these customer service metrics and creates a raw score result which has been used for 19 years now since the creation of the BMS supply chain database. This allows for a true “apples to apples” comparison of not only service, but also costs across different companies, organisations and supply chains.

From this ranking within the database, only those organisations that are in the top 10% i.e. those demonstrably providing a better service than the others are identified and a correlation analysis undertaken to compare their supply chain costs compared to their peers and competitors. This cost is done at an aggregate level, where the total supply chain cost of the business is divided by the total revenue of the business. Whilst this is a high level measure, it nonetheless permits a proper comparison across companies and organisations.

What this analysis has clearly demonstrated for many years now, is that organisations that fit within this top 10% grouping have a total supply chain cost as a percentage of their revenue which is typically a half the costs of their peers and competitors with similar supply chains. When further analysis is undertaken, and this is broken down by industry sector, the same relationship is found to exist. This then is the “double edged sword”. This is clearly demonstrated in the graph below for a sample of six industry sectors.
Since this result is counter-intuitive it therefore begs the question how can this be achieved and why does an increase in service not mean an increase in cost when it comes to supply chain performance? A recent survey of those organisations achieving these kinds of results i.e. the top 10% of organisations revealed that these companies reported that there were three critical factors that were fundamental in delivering this result. These are as follows and are ranked in order of importance.

1. “Because we get it Rate the first time every time, we don't incur wasted cost for things such as rework, returns, expediting etc.”

This response occurred in each of the respondents response to the question – “How can you deliver best-in-class service at half the cost?” What was uncovered was an absolute passion and determination within these organisations to “Get it Rate the first time, every time”. What that meant was that the drive in the business was to have every single order 100% perfect, not only at the time the order was dispatched from the warehouse but when it arrived at their customers’ door. These organisations had, in a lot of cases implemented the ultimate customer service measure - that of a “Perfect Order”.
It composes all of the metrics that cumulatively deliver absolute customer satisfaction. A more detailed discussion about the Perfect Order concept follows.

The chart presented above sets out the six areas in a business that, in combination, delivers what is known as a Perfect or Error Free Order. An Error Free Order is what customers ultimately expect. And, they expected it for each and every order.

Typically when we measure customer satisfaction from a logistics point of view, a fill rate metric is used. This is the “delivered in full” component of DIFOT measure, which consists of two compounding metrics i.e. delivery in full, and, delivery on time. The first half of this equation can be measured in several different ways. What we are trying to measure here is how well did we as a business to satisfy a customer’s order as measured by the inventory ordered being available, and in the quantities required, at the time the customer placed the order. Three measures are typically used:
A. Case Fill Rate

Case Fill Rate or Unit Fill Rate as it is also commonly known, calculates the total number of cases that were supplied against customer’s orders on an aggregate basis. For example in a simple case, if the total aggregate number of cases or units ordered across all orders over a given time period was a hundred cases/units, and 90 of these were provided and dispatched to the customer and received by them in full, then the Case Fill Rate would be 90%. This metric is the easiest of the three to achieve a high result in. This is because it does not take into consideration individual SKUs or line items ordered, nor does it consider performance against a complete order, but aggregates the total number of items ordered only.

B. Line Item Fill Rate (LIFR)

The Line Item Fill Rate (LIFR) is the most commonly used measure of customer satisfaction. This measure calculates the number of lines across all orders where the line or SKU was completely filled. If an order therefore had 10 lines on it and 9 of those were completely satisfied then the LIFR performance would be 90%. The number of cases or items ordered is not taken into consideration, but how many lines were completely satisfied. A high level of performance using this metric is harder to achieve than the Item Fill Rate discussed in section A above.

C. Order Fill Rate (OFR)

The Order Fill Rate (OFR) is the hardest to achieve. The Order Fill Rate calculates the total number of orders placed by customers for which all items were available and picked in full. If therefore, there were only two orders placed over a given period and one order was completely filled, but the other experienced a shortage in one form or another, then the OFR performance for this business for this period would be 50%. This of course is the harshest measure of customer satisfaction. From a customer’s perspective however, it is a measure by which they would prefer performance be calculated. This then leads to satisfying customer expectation that all orders are “Perfect” or “Error Free”.

Again, referring back to the chart, there are six functions within a business that need to work together to be able to deliver this Error Free Order based on an FOR metric. Each of these is discussed below.
i. **Order Entry Accuracy**

This function is all about proper and timely capture of the customer’s order. It is therefore about entering orders correctly. Given that orders may be received either through EDI or via fax or verbally (over the phone), the majority of issues primarily relate to data input and/or data transposition or keying errors.

The second however relates to what is referred to as a “customer’s first request”. Best-in-class organisations capture a customer’s first request as part of the order capture process. The reason that this is essential is that traditionally demand planning/forecasting is based on actual historical demand i.e. orders placed. The reason that this is less than perfect is that actual demand or orders placed does not represent what a customer may have in fact really wanted. That is, it does not typically incorporate unfulfilled demand.

For example, a customer may want to place an order for Product A of ten units. They may be advised however, on placing the order, that only five are available in stock. In this scenario then, the customer of has a number of options available to them including:

i. Cancel or do not place the order.

ii. Order five and put five on back order.

iii. Accept only five and only order five.

The implications for demand planning vary depending on which option the customer takes. In the first instance above, no details are captured since the order was not placed and therefore the unfulfilled demand is never going to be incorporated into the future demand plan. In many cases, this explains the saying “history repeats itself”. In the second scenario, the total demand of ten might have been met but spread over possibly two orders in two different periods and therefore again the data from which the demand plan may base its assumptions is incomplete and inaccurate. In scenario three of course, simplistically, the demand of five units will be used to project future procurement which would never meet the customer’s actual demand for ten units. It can be seen therefore that, without capturing the customer’s first request all three scenarios are deficient.

A potentially worse scenario however occurs if substitution is used. In other words the customer is looking to place an order for ten items of product A but is convinced to accept the substitution, and instead orders ten items product B. What will be recorded will be the historical demand of ten item of product B. This will then be used to forecast
and procure volumes of Product B into the future for which there is no real demand. What typically occurs in this scenario then is that going forward Product A continues to be out of stock and suffer from lost sales, and Product B, which is procured but for which there is no demand, typically ends up as obsolescent. On the chart, company X shows a 98% performance in this measure of ordering entry accuracy. The probability therefore of a customers’ orders being perfect, assuming that every other step of the process is completed perfectly following this activity, is limited now to 98%. That is, 2% of orders will incur some form of error.

ii. Inventory Availability

Assume for one moment, that there are no errors in the order entry process and that to that point in time, the order is a 100% correct. The next step is having the inventory available to match the customer’s order. This is the inventory availability measure. The factors that impact and influence this area include:

i. Forecast Accuracy

ii. Inventory Accuracy

iii. Supplier Performance

Forecast Accuracy in that a high degree of accuracy in forecasting customers’ demand will enable inventory to be procured within appropriate lead times and to have it available at the time that orders are placed.

Inventory Accuracy in the sense that even if inventory is ordered and procured and arrives into a warehouse or a distribution centre, it can be affected by Inventory Accuracy measures used within the warehouse. In other words, there is no value in having inventory available i.e. in the warehouse, if it’s in the wrong location. The primary measure of Inventory Accuracy is what is known as an IRA (Inventory Record Accuracy) metric. IRA measures having the right product in exactly the right quantity in the right location in the warehouse when a cycle count compares actual stock to ‘system stock’, i.e. what is recorded in the Warehouse Management System.

And finally, Supplier Performance. Even though the demand forecast may be very accurate, if suppliers fail to deliver in full and on time, then, subject to the level of inventory, the stock on hand may in fact not be adequate to meet a customer’s order.
Referring back to the chart, company X has a performance of 80%. If this performance level is then multiplied by the performance of 98% order entry accuracy, then the Perfect Order Probability to this point is the multiplication of the two i.e. 98% x 80% which is 78%.

iii. Warehouse DIFOT (Dispatched In Full and On Time)

Continuing along the sequence of events, the next step relates to warehouse performance. Ostensibly, and simplistically, the warehouse operation needs to achieve only the following things:

i. Dispatch In Full
ii. Dispatch In Time
iii. Dispatch In Damage
iv. Dispatch to the Right Destination

Each of the above requirements represents possible points in the process within the DC where an error can occur. In the chart, the performance level for Company X was 90%, i.e. 10% of orders had a failure of some sort. With this level of performance then, prior to the order being dispatched, the Perfect Order Probability for this organisation is 71%, that is 98% x 80% x 90%, and, it delivery hasn’t even been attempted yet.

iv. Carrier Delivers IFOT (In Full and On Time)

Stages 4 and 5 in this process are within the domain of the transport carriers. Item 4 relates to the carrier delivering the product as it received it, i.e. In Full and On Time. The On Time component of this measure relates to the time that they were “promised”. The most accurate measure therefore of this metric is referred to as “Delivery to Promise”. In some cases this may be next day, in other cases a few days, in other cases some weeks, and in some extreme cases within a few hours. The actual duration or lead time is inconsequential, but what is important to be measured is what was achieved relative to what the customer expected, and what was agreed to or “promised” by the company.
v. Customer Accepts Order

The fifth component relates to the transport company delivering the order in a condition that is satisfactory to the customer to the extent that they are prepared to sign the POD (Proof of Delivery). This measure then is not so much about being complete i.e. no shortages or on time, but about the quality of the product being delivered and being in a condition that is acceptable to the customer.

vi. Payment of Accurate Invoice

The final stage then in ensuring that an order is ‘perfect’ or ‘error free’ is to ensure that the paperwork that accompanies the goods – the invoice or the consignment note - does not contain any errors. That is, that the invoice is correct and consistent with what the customer might be expecting. In order to be perfect, there need to be no errors relating to improper counts, improper product codes, incorrect trading terms, incorrect promotional codes or such things as incorrect bundling etc.

For the organisation sample in the chart above, the Perfect Order Probability when multiplied together across all 6 of these processes within a business was 64%. On the surface of it, it is reasonable to draw the conclusion that this is a very poor level of performance. The value of benchmarking performance against other similar operations however, demonstrates that this level of performance is only marginally below that of “parity” or average of the comparative group. Whilst this is not very encouraging to know, what is fascinating and intriguing is that the “Advantage” group i.e. the top 20% will manage to achieve a Perfect Order Probability in excess of 93%.

So, having implemented a Perfect Order measurement system our best-in-class businesses went about understanding where their errors and failures occurred, and applied a rigorous thorough root cause analysis process on every single customer service failure. This was necessary to understand whether events that had occurred were systemic i.e. were entrenched in a process within the business, or whether they were legitimate “one off” events and not related to systemic and therefore recurrent failures. Even in the latter cases though, a thorough analysis and understanding was completed to remove instances of one off events so that the probability of them occurring again was minimised.
Along with implementing the above measurement system, appropriate goals and targets were set, not only for an overall Perfect Order Probability performance, but also for each of the six components that make up a Perfect Order. These targets were not set arbitrarily without a reference point. Benchmarking of the particular organisation’s supply chain was conducted against similar supply chains and the targets set for the business were those achieved by the best-in-class organisations against which they were being measured. This then cascaded down through each of the six Perfect Order components with appropriate targets and reward structures in place for different individuals and departments that were tasked with achieving the best-in-class metrics. For example, if warehouse despatched in full and on time performance needed to be raised from 71% to 90% then this goal and target was allocated to the Warehouse Manager to accomplish.

The application of Six Sigma methodologies were often used to properly complete the root cause analysis and to reconfigure or redesign a process to deliver a best-in-class outcome. In some cases additional technologies were applied and implemented, however, in most cases the high leverage activity was in fact the reconfiguring of a process and aligning the people within that process to deliver excellence. What was achieved therefore was in reality an integrated process to deliver the result of “Getting it Right the first time, every time”. And, in the rare instance when perfection was not achieved, these organisations typically would know before the customer experienced a service failure and were therefore able to either rectify the error, or advise the customer before it occurred e.g. an order arriving late or incomplete. This pro-active approach to customer service is always greatly appreciated by customers.

2. ‘Focus on the Detail’

From a quote received from one our clients - “Costs become readily apparent when you have a passion for service excellence. You can't look it one without unavoidably looking at the other” the second explanation for service excellence at half the cost is derived.

What best-in-class organisations experience is that as they focus on achieving unequalled service performance, they realise that attention to detail is essential, and as the attention is focused on the detail of delivering this service expectation the costs
become readily apparent. Hence the statement “you can't look at one without the other being readily apparent”. Examples of this are found throughout the supply chain as this approach is adopted. For example when root cause analysis is completed on a service failure cost of the failure, it quickly surfaces in terms of either the loss in revenue or the remediation costs associated with rectifying the service failure e.g. replacing product or expediting stock or handling returns etc. Different service options are also properly understood and the cost of delivering those different service expectations is also made known and very visible to the business.

3. Price/Service Relationship

Again a quote from best-in-class organisations – “Because our service is consistently superior and our customers know it and rely on it, we both increased our market share, and also could afford to charge more than our competitors”. When an organisation consistently provides service excellence, there is an opportunity to charge for these services - either through a service fee or embedded in the charge for the product sold. Many organisations have relied on this formula and their reputation is linked to providing a quality product or service with a premium charge. This of course improves overall profitability.

What can be learned from the above then, is that if the metric used is an equation of total cost of the supply chain divided by the total revenue of the business expressed as a percentage, then items number 1 and 2 above influenced the numerator, i.e. impact on the reduction in cost in a supply chain. Item 3 however affects the denominator whereby revenue is increased by both improved market share and also improved gross margins in the business. A combination and of all three continues to widen the gap between best-in-class organisations and those that are average and that do not or have not adopted the strategy outlined above. This is how you can half your supply chain cost.