Quick Response – It's Elemental

In today's world, much is made of everything being faster. Getting answers for customers, the supply chain and other facets of business are all requiring greater speed. However, we can break down and analyze an organization's ability to enable Quick Response (QR) initiatives by looking at the fundamental elements of the total demand / supply cycle. It starts with product marketing and ends with logistics. An analysis of speed starts with a benchmark and ends with the attainment of Key Performance Indicators (KPI).

Product Research & Definition

The ability to quickly respond to customer demand starts with the analysis of what the end consumer is going to want, when they're likely to want it, how much they are willing to pay, the quality expectation and where they want it. Unfortunately, this function requires the use of both qualitative and quantitative information. Even more unfortunate is the amount of human bias and lack of concurrent analysis that goes into many of the market plans that I have seen.

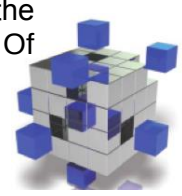
We can count on the fact that organizations that are slow to market are not going to survive. Therefore, organizations need to create their market plan with representation from: design engineering; process engineering; sales; finance; materials; purchasing; logistics and, in some cases, suppliers and important customers. What this inclusion of other parties enables is validation of: market volume forecasts; product life cycle; costing assumptions; manufacturability; transportability; and, outside input into material use (suppliers) and customer expectations.

KPI: Time to Market; Market Volume Forecast Deviance; and, Product Life Cycle.

Sales Forecasts

The level of dependency an organization has on the accuracy of a sales forecast is dependent upon what's known as the P/D ratio. This is a ratio that takes the total supply time (P) and divides it by the time that customers expect to receive product after order (D). If the result of the equation is greater than 1, then forecasting becomes critical to customer service and quick response. For instance, if your customer expects shipment from stock within one day and your total supply time is three days, then your P/D ratio is 3 and sales forecasting is critical to your ability to service customers.

What we know is that all sales forecasts will be inaccurate. It is the amount of deviation and the level at which measurement is taken that determine the impact that QR strategies will have. In a single location environment, it's fairly easy to determine the amount of safety stock to maintain to deal with these deviations from forecast. Of



course, that safety stock costs money so a balance must be maintained. However, in a multi-facility environment this becomes harder and potentially much more costly than simply multiplying a single environment times the number of facilities. A QR methodology to employ would be to maintain the majority of safety stock at a central facility and have a quick replenishment methodology in place based on the consumption points hitting a reorder point. This will reduce overall inventory investment and increase customer service.

KPI: Customer Service Level and Mean Absolute Deviation from Forecast.

Supply Planning & Acquisition

Once a forecast of, or actual, demand is known the supply planning must be executed in a timely manner. Since most organizations use computer systems to calculate a suggested plan, one would expect that supply planning should be able to take place within one business day of the forecast being delivered or actual demand is received. Where this function falls down is on the accuracy of data in the computer system to begin with. Since I have written about this in previous articles, I'm not going to rehash the point here. Suffice to say: Garbage In – Garbage Out.

Planning is all about lead times. How long will it take to get a purchase order, transfer order or manufacturing order executed? How long will it take for a supplier to ship product or raw material in? How long does it take to manufacture? How long does it take to pick an order and ship it? How long does it take to replenish inventory at a warehouse in Vancouver when the production takes place in Winnipeg? Secondarily, have the costs associated with acquisition changed or has the method of acquisition changed? If all elements of planning and acquisition are being met, then implementation of QR initiatives will be worthwhile.

KPI: Supplier/Vendor Performance (lead time and quality); Dock-To-Stock lead time; Actual versus Planned manufacturing lead time; Warehouse Performances (several); and, Actual versus Planned transportation time.

Demand Satisfaction

The last element is to measure the satisfaction level of the customer. There are a number of key performance indicators (KPI) for customer satisfaction. Most are quantitative but there are qualitative indicators that are harder to measure and gain control of. Customers perceive value for the money they paid. To measure qualitative indicators requires "soft" tactics such as the use of focus groups or customer surveys. These indicators can be quantified but must be used in context of their source: perception or feelings.

QR initiatives at this stage are normally along the line of shutting the door quickly after the horse has fled.

Quantitative KPI: On-time shipment/delivery; Returned Products, Failure Rates or Service Calls; Disputed Invoices; and, Stock-Outs.

Summary

The lists of KPI that are included here are only a representative group. There are many more and several measurements will change based on the industry. However, a benchmark must be taken for each KPI that you identify as critical to your organization. Only then can you develop the gap analysis required to determine where QR initiatives will enhance the performance of the organization.

About the Author

Ken Cowman's career has spanned over 43 years with 11 of those in operations management followed by more than 30 years as an enterprise solutions and continuous improvement project manager, educator, seminar leader and management coach. He has had over 70 articles published in various magazines.

A founding executive of the APICS Peel Chapter, Ken was part of the OMERIC team that wrote the Fundamentals of Operations Management courses for APICS. He is also the past Chair of the Business Operations Management Program Advisory Committee at the School of Business at Centennial College.

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