

Supply Chain Segmentation for Manufacturers: Scrapping the One-Size-Fits-All Approach



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By Brian Nolf & Gerhard Plenert

When it comes to supply chains, one size rarely fits all. Different products have different characteristics, lifecycles, and customers that can't easily be shoehorned into a single planning and scheduling methodology. Yet, for generations that's exactly how supply chains were managed—until multiproduct retailers realized that a more customized approach improved their bottom line.

You would think manufacturers would jump in too. After all, their world is even more complicated, with supply chains on both the demand and the supply side, and completely different SKUs, since what is bought on the supply end is a different product than what is sold on the demand end. Indeed, often the customer requirements on the demand side place stress on the supply side, which is dependent on parts and components, adding an additional dimension of complexity.

Too many manufacturers, especially those with multiple products and a wide range of customers, have stuck with passé one-size-fits-all planning models. And by lagging, they're missing out on an approach that facilitates customized responses to managing inventory, and, in turn, increases profits and improves competitiveness.

The SCS Framework

There are three main supply chain models, two of which are traditional one-size-fits-all models. The newer, third model embraces customization that segments unique requirements that are specific to the product, customer, or

market dynamics, and optimizes the needs of various supply chain management elements.

Many multi-product retailers use this customized Supply Chain Segmentation model (SCS) to optimize margins and improve profitability by dividing products by rate of sale, country of origin, customer tiers, variety, and other criteria. The SCS framework has three main components that together equal a return on availability:

Lifecycle: The lifecycle stage of any given product is a key driver in manufacturing segmentation. At launch, for example, you don't yet know demand trends, pricing, competition, and other key factors, which means you require analytics to build the supply chain. In a product's active stage you have more stability and can use ERP and similar applications to manage the supply chain for efficiency and the lowest cost of service. By the end of a product's life, you face declining demand and must be able to respond by quickly repurposing and redeploying capacity and inventory.

Cost of Availability: This involves making estimates based on supply chain parameters that directly affect the cost of making the product and services available to your customer. So, you'd

look at lifecycle length and stage, volatility, customization, criticality to the customer, source geography, the rate of sale, the cost of transportation, and gross margins. There are also issues specific to your business, such as seasonality, temperature, hazardous materials, and the like.

Customer Segmentation: Customers have different levels of value, so we use customer segmentation to tailor the level of responsiveness and performance. Customers are assigned to one of three tiers, as the value of supporting each tier is different. Tier 1 customers are strategically important businesses that are given a high priority. Tier 2 customers are given medium priority, and Tier 3 customers are given the lowest priority in the hierarchy.

By segmenting the customer base we can collect and analyze data derived from each of the groups to determine the return on availability and cluster the products into supply chain segments. Then we combine segments that have similar characteristics to come up with a manageable number of unique segments. Organizations, whether in retailing or manufacturing, typically have four to eight segment groups, each of which has customized customer service levels, risk levels, customer response levels, and inventory management strategies. With SCS you define the structure of the segments and use analytics to test the strategies.

The Benefits of SCS

Retailers were quick to embrace segmentation because retail is completely demand driven. As a retailer, the product you buy is the product you sell. So, it is often based on just three factors: the type of customer, the size of the customer, and the location of the customer:

But, as we already noted, manufacturing supply chains are more complex. As a manufacturer, the products you buy are

transformed into something different to sell. Your two sets of SKUs must be managed differently, and you have to do segmentation twice and link the two together because demand-side segmentation will directly affect supply-side segmentation.

If you do poor demand segmentation, you can end up making the produced product availability worse, which could have a negative impact on inventory and operation costs. But if you do it right, you potentially gain a host of wins, including gains in customer service reliability and a better alignment of supply chain policies to customer and product value propositions.

You'll be able to simplify your systems, since segmentation facilitates automating where appropriate and applying analytics and planning expertise where they'll offer the best results. With a clearer understanding of where inventory distress is likely to occur, and the ability to apply segmentation expertise, you can cut in half current stock write-offs and discount reductions. And, you'll enjoy greater supply chain talent retention and recruitment because your focus will be on more interesting analytics and retention as opposed to firefighting.

Getting Started with SCS

For manufacturers, transitioning from a one-size-fits-all approach to SCS can take from six to 12 months, depending on the complexity of the analysis. But, a pilot program is an excellent way to initiate the process.

It starts with data analysis utilizing a segmentation expert. Here you'll develop several distinct segments for both sets of SKUs that will maximize value, and you'll conduct an ROI analysis that can make the case for change and garner support, both internally and among your suppliers and customers.

IT change will also come into play. For example, segmentation capabilities will need to be integrated into your ERP software.

But the good news is that the outcome is simplification, and that simplification will cost less over time.

As you begin to make the transition from simple supply chain management to SCS you must consider these issues and how they relate to your organization:

1. Does your organization differentiate in the planning process between supply and demand side planning, or does demand drive the planning for supply?
2. Is the service level for your prime customers different from the service level for second- or third-tier customers? How is that integrated into the planning process?
3. How much of your inventory is dead or dying? A high level of obsolescence in your inventory suggests poor segmented inventory management. Do you measure end of product life inventory turns and differentiate them from the remainder of your inventory items?
4. Do stock-outs occur during more than 1 percent of the product-weeks?
5. Do you carry an excessive amount of inventory, especially in safety stock, for stable, low-variability products?

Let's look at a manufacturer that recently undertook this transition. The company was facing increased competition that forced it to look for ways to reduce inventory carrying costs. Additionally, since their product was seasonal, stock-outs meant lost sales. By switching to SCS they felt they would gain more product supply control and reduce costs.

With SCS in place, the manufacturer developed a higher level of collaboration with its vendors, resulting in a lower need for inventory buffering that reduced costs. The IT department,

of course, was very involved. They revised their planning and scheduling systems, and made changes to promote increased data accuracy. With a one-size-fits-all model, the same level of data accuracy and utilization wasn't required, but now it was critical.

The manufacturer reorganized its planning and scheduling department along with the roles of the planners. With many products now managed automatically through the production scheduling system, planners were given more flexibility and responsibility with the products they manage.

As a result of their move to SCS, the company reduced inventory for their high-demand, low-variability product lines by 40 percent while simultaneously reducing the touch time for their planners to nearly zero touches. Altogether this transition gave them the competitive edge they needed, with greater control of the process and lower costs.



More Competitive Approach to Supply Chain

Since segmentation has become a strategic competitive differentiator used by many businesses around the world, it's past time for manufacturers to adopt it. We've already seen those that have adopted segmentation analytics build responsiveness to customer demands by reducing stock-outs and increasing on-time deliveries. And, because your retail partners will gain by always having what customers want on the shelves when they walk into the store, as a manufacturer you're more likely to keep their business. That's the power segmentation brings to your organization.

By breaking your mammoth supply chain into more manageable chunks, your business will gain the agility and control it needs in a competitive marketplace—and you can focus more on getting products to market rather than putting out fires. Manufacturers who have been stuck in the one-size-fits-all supply chain rut need to step out and take advantage of a more competitive approach with segmentation.

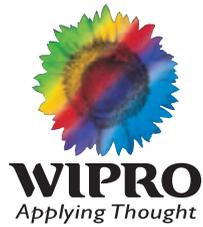
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