

Supply Chain Segmentation Enabled

Why Focusing on Operations and Using New Technology Makes All the Difference

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A GT Nexus White Paper

Leaders Will Use Supply Chain Segmentation to Win

Today's supply chains — stretched by globalization, outsourcing, and the rapid proliferation of SKUs and product configurations — are exceedingly complex. They're also exceedingly hard to manage. Some companies may have made the supply chain an area of strategic focus (Walmart and Zara in retail; P&G and Unilever in consumer product goods; Apple in consumer electronics), but even the most successful of them are now under intense new pressure to cut costs further: to do more with even less. All the while, customers are demanding more than ever: more customization, more service, and more intimacy.

The future belongs to companies who can profitably match their supply chains to the specific needs of their customer segments. Much has been written about the merits of supply chain segmentation, and few will disagree now with the rationale for it. The supply chain behind a high-volume, low-variability market segment might be geared for efficiency, while the supply chain behind a high-volume, highly-variable market segment might be designed for agility and responsiveness.

FIGURE 1A: Areas of emphasis and focus — understanding the tradeoffs

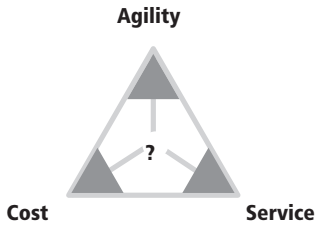
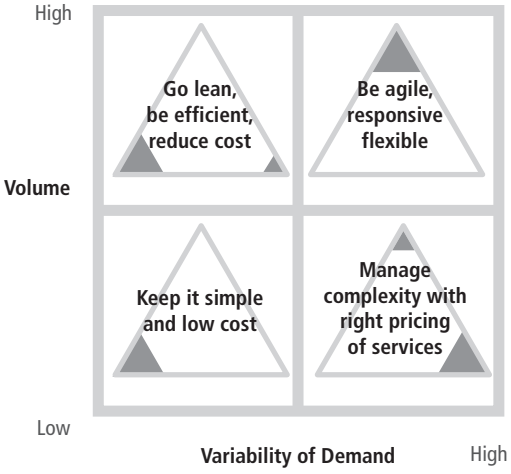


FIGURE 1B: Developing differentiated segment strategies



But most companies rely on a "one-size-fits-all" supply chain approach to meet an ever-widening spectrum of customer value needs. That approach, sufficient decades ago, is wholly insufficient today. Segmentation offers a way out.

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"Segmentation offers an effective way to tame supply chain complexity: It allows companies to understand which elements in a complex network matter most to certain customers. Armed with that knowledge, they can design differentiated supply chains that deliver results profitably."[1]

FIGURE 2A: The "One Size Fits All" strategy

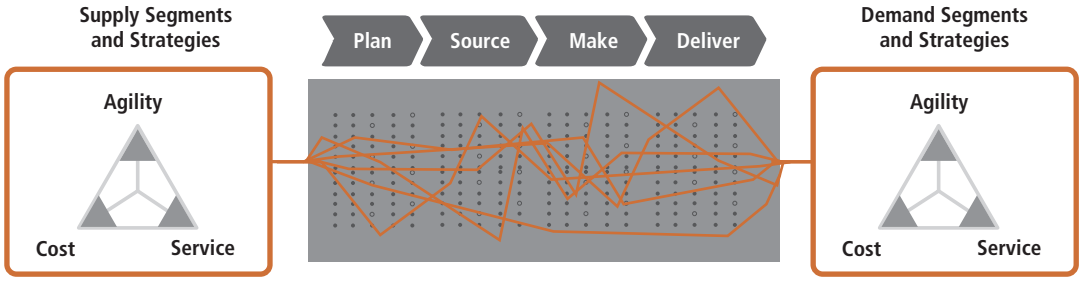
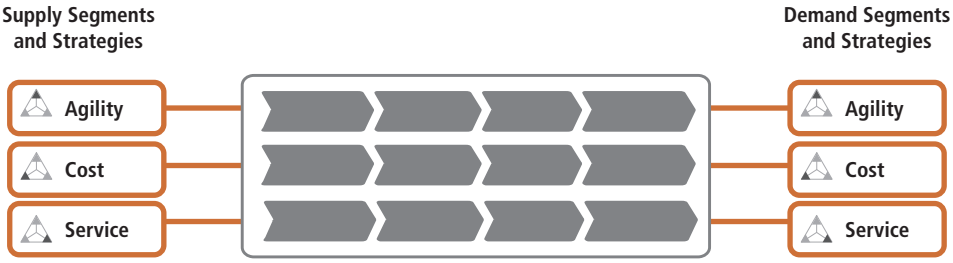


FIGURE 2B: The segmented strategy



While much of the focus has been on the "front end" of segmentation initiatives — on the analysis and segmenting of customers based on profitability and the value characteristics of the segments — many companies fall woefully short in planning for the enablement of those strategies. They underestimate the critical role that operations will need to play in executing differentiated strategies in complex modern business networks. Without highly orchestrated execution, companies will fail at their segmentation strategies.

Great orchestration in execution requires that companies overcome a number of daunting challenges, but chief among them is a technology and systems gap. The modern company is a network, not a silo. The fuel of this network, the thing that enables it — the "new oil" of the modern age — is information.

To succeed, companies must augment their IT strategies with newer "next generation" supply chain visibility and control systems that connect decision makers within and beyond the enterprise to enable smart, efficient, network-wide supply chain orchestration — in the service of customer segments.

The journey begins with a full understanding of the challenges involved.

[1] "Finding the Perfect Fit"— from the Supply Chain Quarterly Review, Quarter 4, 2009.

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Reality Check: Know the Challenges Involved

It's essential that executives have a good understanding of the scope and depth of the challenges they'll face on the journey to supply chain segmentation. Underestimating and shooting short isn't just a near term failure, it undercuts the organization's chances of success in the longer term. Some companies won't get a second chance.

The challenges run the gamut:

- **Detailed cost-to-serve data is especially hard to capture** and rationalize and it's changing all the time. Still, building a clear picture of the cost-to-serve tradeoffs is a first and foundational step in the segmentation process — so it can't be ignored. Few companies have the technical expertise or IT budgets to pull this off on their own.
- **Customer, Supplier, and Service Provider contracts may need to be overhauled** and renegotiated to include the services and terms required to support new segmentation strategies. In many cases these modifications will also require significant changes to the operational processes themselves — for example, the rules and time thresholds around order acceptance and ship window compliance for suppliers, or the protocols for handling dynamic allocation or modal shift decisions across 3PLs.
- **Organization and teaming structures**, designed around the "one size fits all" supply chain, will need to be restructured — in some cases radically restructured. Will the teams be functionally oriented (e.g., a team devoted to the "Deliver" function across all segments)? Or will they be segment-focused (e.g., responsible for a segment, but across all functions)? In some cases, companies may face serious talent deficits; hiring and training for specialized roles takes time and ongoing commitment.
- **Smart supply chain segmentation strategies still need to be implemented**, and in networked supply chains this involves change management on a scale that few companies have faced before. With hundreds, even thousands, of external trading partners and service providers involved, the work may be significantly more complex than many companies assume.
- **Operational orchestration across business networks requires newer, specialized information systems** that are radically different from the enterprise systems companies have been buying and installing for decades. Companies with deep DNA or institutional commitment to the "old" way (e.g., ERP, or other enterprise-centric software systems) may find it especially challenging to reset the IT agenda and shift to newer network-based IT systems.

The Imperative: Focus on Operations and Enable With Newer IT

Some companies, like Dell (see case study, next page), have already begun to align their supply chains to specific customer segments. The strategy is paying off. Others have begun the segmentation journey and may have a better picture of the costs and tradeoffs involved in winning specific customer segments, but have yet to design the segment strategies themselves or create the operational blueprints to execute those strategies.

But the journey doesn't end with blueprints. Blueprints must be *implemented*; the strategies must be put to *practice*. The modern supply chain is not a chain, it's a network. Putting supply chain strategies into motion across business networks requires a new level of collaboration and information exchange that traditional IT systems weren't designed to handle.

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Example: Dell Inc.

Dell has successfully made the transition to four major supply chain segments from a single, highly-configurable approach to computer manufacturing. Long known as the poster child for just-in-time, it faced the need to segment when it began taking on in-store retail, enterprise, and high-volume sales.

Dell ended up with four distinct segments based on customer needs: build-to-order, build-to-plan, build-to-stock, and build-to-spec. The company was able to provide each segment with different levels of configurability, lead times, and production strategies. This is done on single logistics network, with much of the previous manufacturing duties shifted to the supply base.

The strategy had a huge impact on the bottom line. Product availability improved by 37%, and order-to-delivery times are 33% shorter. There was a 30% reduction in freight cost for notebooks and a 30% decrease in manufacturing cost. This kind of orchestration can only be done on a cloud-based network.

Source: http://sloanreview.mit.edu/article/when-one-size-does-not-fit-all/

Modern orchestration requires radically different information systems designed to enable information sharing across business networks. For this, cloud is essential. The systems, referred to as Supply Chain Visibility (SCV) — or Control Tower — systems, are considered "must have" infrastructure now for enabling orchestration across business networks. They give planners and decision makers across the network the information picture and tools they need to manage end-to-end supply chain flow in the service of differentiated strategies — and to do it profitably, at any scale.[2]

Cloud-based visibility and control systems enable supply chain segmentation strategies in a number of critical areas:

- **They provide the framework to define and legislate the rules, thresholds, and metrics for managing differentiated supply chains.** Designing for agility and responsiveness around a segment where, for example, order volumes are high and demand variability is unpredictable requires that decision checkpoints be injected in the flow process to re-allocate, adjust volumes, or change delivery schedules. The rules in that supply chain will differ dramatically from the rules of a supply chain geared for basic replenishment at the lowest possible cost. Newer cloud-based systems allow for modeling at the segment level for scale.
- **They automate supply chain monitoring so companies can do a lot more with less.** The technology allows managers to "follow" the flows they care most about. The system does the heavy lifting to flag trouble spots and drive exception workflow. The effort is on managing the exceptions, not tracking noise. This is what enables supply chain teams to scale even as segments expand.

[2] For further research on SCV and control tower systems, read the following: Aberdeen: "Rising above the Cloud --The Integrated Transportation Multi-Party Control Tower", September 2012; Gartner: "Use Cases for Supply Chain Visibility", October 2013.

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- **They provide a detailed record of execution performance.** Visibility systems are not just for operational monitoring and alerting. They are also systems of record. They serve as the memory of intercompany process updates and changes. An estimated 80% of the data companies need for orchestration is controlled by external partners. So getting a single information base of execution data can be especially challenging. Cloud-based visibility systems deliver the data as a matter of course. They also provide many of the analytics for insight and tuning so key to continuous improvement and the tuning of segment strategies.
- **They improve the customer segmentation analysis process on the front end.** Accurate landed cost data, in particular, is one of larger stumbling blocks. Some have recommended that companies not seek precision here but aim instead to be "directionally correct" with their data and assumptions.[3] But cloud-based visibility systems are repositories for detailed landed cost data, and because that data is a byproduct of mission-critical supply chain orchestration, the information in these systems is typically of significantly higher quality than the cobbled-together information bases that managers rely on for segmentation analysis today.

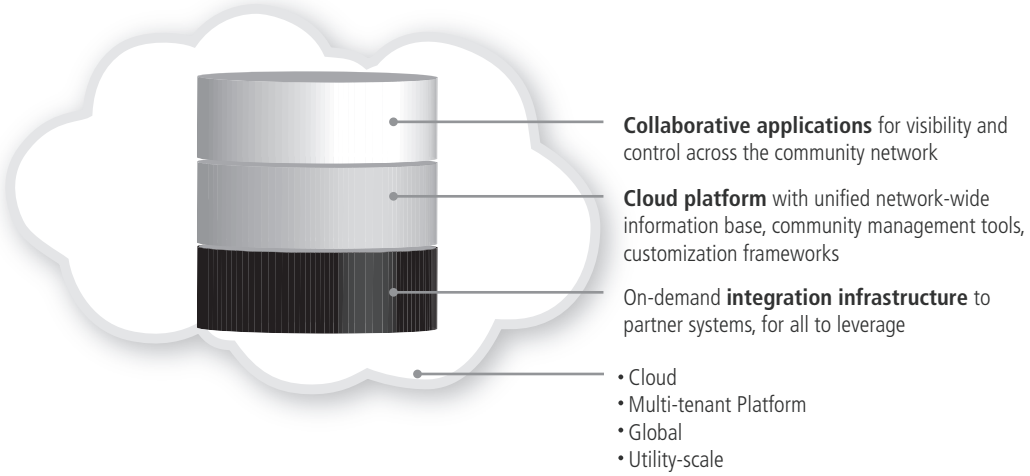
What It Takes: Anatomy of the Technology

What do these newer systems look like? How are they different from the traditional systems companies have been using for years? What should be expected of them?

Many of the IT systems companies rely on today were designed for the recording and control of internal business functions. They weren't built to connect to external partner systems, or to enable active collaboration with external partners, or to automate the dozens of mission critical supply chain processes that take place *between* companies — across companies working together as business networks.

Next generation visibility and control systems were designed for today's networked supply chains. They leverage the cloud-based information sharing models that make collaboration across networks finally possible.

FIGURE 3: The technology behind supply chain visibility (SCV)



[3] Gartner: Customer-Driven Supply Chain Through Customer Segmentation, Supply Chain Segmentation and Cost to Serve, January 2012.

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Architecturally, as fully integrated systems, they are dramatically different from traditional enterprise IT deployments. Not only are newer cloud-based visibility systems a composite of multiple critical, interlocking systems, but the entire integrated stack is delivered as a utility-scale service — an aspect of differentiation that only cloud could have enabled. The system is delivered as a service — like cable TV, or power. It isn't purchased. It isn't installed. And this distinction is crucial, since few companies could afford or sustain an asset of this scale and expense themselves.

Cloud not only enables the breakthrough information sharing models that supply chain networks require (these models resemble the sharing models we see now in social networks, which put everyone in the network "on the same page"), but they also enable breakthrough economics to make the information asset suddenly available to thousands of companies at once.

Executives must develop a good understanding of just how different supply chain execution has become, and just how limiting their current arsenal of traditional enterprise systems actually is as they embark on the transformation journey to supply chain segmentation.

Recommendations and Next Steps

Some have argued — rightfully so — that companies start with a three-step approach[4]:

1. **Uncover the underlying drivers** of operational complexity throughout the supply chain, from customers back to suppliers
2. **Design differentiated supply chains** tailored to address these unique complexities
3. **Create a customized end-to-end operational blueprint** and performance metrics for each supply chain segment

However, they must also add a fourth and critical step in this process. They must **enable operations with newer cloud-based visibility and control systems** to ensure that their well-designed strategies can be reliably and profitably executed in the context of increasingly complex global business networks.

Cloud-based visibility and control technology is must-have infrastructure for enabling operations, but because it also plays such a central role in the collection and rationalization of vital cost-to-serve data, executives should implement it early in the process to ensure that the tradeoffs and capabilities are fact-based and not speculative. These systems deliver significant and measurable value for companies in and of themselves, even if companies are just beginning their transformation journey to full segmentation.[5]

[4] "Finding the Perfect Fit"— from the Supply Chain Quarterly Review, Quarter 4, 2009.

[5] For further reference on the value that SCV systems deliver, see the following: Aberdeen: "Supply Chain Visibility in Consumer Markets — Control Tower Advantage", March 2013; Gartner: "How Caterpillar Reduced In-Transit Inventory by 15% With Improved Supply Chain Visibility", January 2012.

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In Conclusion

The best companies will win their markets because of their ability to match their supply chains with the value characteristics and needs of specific customer segments profitably — they'll win by segmenting their supply chains. But getting there won't be easy, and executives must not underestimate or undercut the commitment required since it will likely come at the cost of other strategic initiatives that matter too.

One of the biggest challenges companies will face is planning for — and enabling — the "on the ground" operations required to execute their differentiated supply chain strategies reliably and profitably. Orchestration across business networks is a complicated and complex affair. Information is now the great enabler, the new oil, so IT will be center stage. Companies will need to revisit their IT approach and resist the urge to make traditional enterprise systems their primary systems for collaboration and information sharing across business networks. Traditional systems, designed for the single enterprise and before the internet won't scale.

Newer cloud-based systems provide the ready infrastructure and services needed to support global orchestration across supply chain networks at scale — at any scale. And for companies embarking on the segmentation journey, these systems will be a prerequisite. Delivering on the supply chain segmentation dream won't happen without them.

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