



The chemical industry's next engine for profitable growth

# Customer-led supply chain management

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## The chemical industry's next engine for profitable growth

Faced with seemingly contradictory demands for lower prices and higher service levels, chemical executives are increasingly rethinking the “one-size-fits-all” supply chain model. Having tapped out most traditional sources of savings, they now recognize that future profitability and growth will require a more creative approach. That approach will start with the customer and call for segment-specific supply chains that deliver exactly what the customer wants - nothing more and nothing less. While recent Bain & Company research in the chemical industry reveals that some organizations have taken initial steps in this direction, all would benefit from a more structured and comprehensive approach, one we call the “customer-led supply chain.” This approach will become even more relevant in the industry’s next cyclical downturn.

### A challenging strategic and operating environment

A number of marketplace and operational factors are driving the shift toward greater customer focus. First, many customers served by the chemical industry, such as companies in the fast-moving consumer goods and nutrition industries, are on the leading edge of supply chain innovation. As conditions of doing business, these firms often set strict vendor performance requirements that cannot readily be met within existing supply chains. Second, even with their less demanding customers, chemical firms frequently find themselves trying to serve conflicting priorities with a single, relatively inflexible supply chain.

In general, customers are looking for three things:

- *Low prices.* Customers are increasingly channeling business to countries like China and India, where lower labor and regulatory costs enable rock-bottom prices.

This trend is particularly strong for most commodity products and among customers with flexible requirements for service and delivery. The emergence of low-cost Asian providers has, however, created expectations for reduced prices across all products and customer segments. Moreover, these offshore competitors will inevitably move to capture some of the higher margins in the specialty sector.

- *Uncompromised quality.* Customers are unwilling to trade away quality for lower prices, putting pressure on vendors to either sacrifice margins or redesign processes to meet required pricing levels.
- *Value-added services.* Customers are also seeking and getting new services from their chemical suppliers, such as vendor-managed inventories, express delivery and dedicated stock - all of which ultimately shift costs from the customer to the vendor.

In response, chemical producers have cut prices and added differentiated services to retain existing customers and win new ones. But they have not, to date, systematically addressed the increase in costs required to capture and fulfill these orders. Inevitably, the drive to please customers has squeezed margins.

But what big opportunities remain to reduce costs? When we interviewed supply chain executives as part of a recent study, there was a clear sense among them that their firms had already reaped the lion’s share of savings from traditional techniques, such as sourcing, outsourcing, logistics management and inventory management. Going forward, they expected only incremental performance improvements in those areas.

Executives increasingly realize that they need to radically rethink the supply chain. As one commented: “Our one-size-fits-all approach leads to high costs and, even worse, to a very high number of exceptions in the daily order-to-delivery process for rush orders and change orders.”

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Companies have begun to focus on the “front end” of the supply chain in search of the next wave of performance improvement. In particular, we see companies beginning to explore the move from a single supply chain to a portfolio of supply chains that each target a separate customer segment. This approach will likely enhance customer satisfaction and loyalty while better matching the cost of delivery with the customer’s willingness to pay.

So far, major initiatives have centered on satisfying the “no frills” segment with a separate low-cost channel. Most initiatives to date have focused on a particular product area: for example, Dow Corning’s Xiameter in silicones and Basell’s Alastian in polyolefins.

We acknowledge these developments but suggest that while low-cost channels will be essential for many firms, they should not be the sole focus of supply chain reinvention. Low cost, after all, is not the sole customer priority. It will be equally important for companies to develop specialized service offerings and the adaptive and supple supply chains needed to deliver them profitably.

How can executives identify the best portfolio of customer offerings and supply systems for their companies? We propose a process called customer-led supply chain.

**The discipline of customer-led supply chain management**

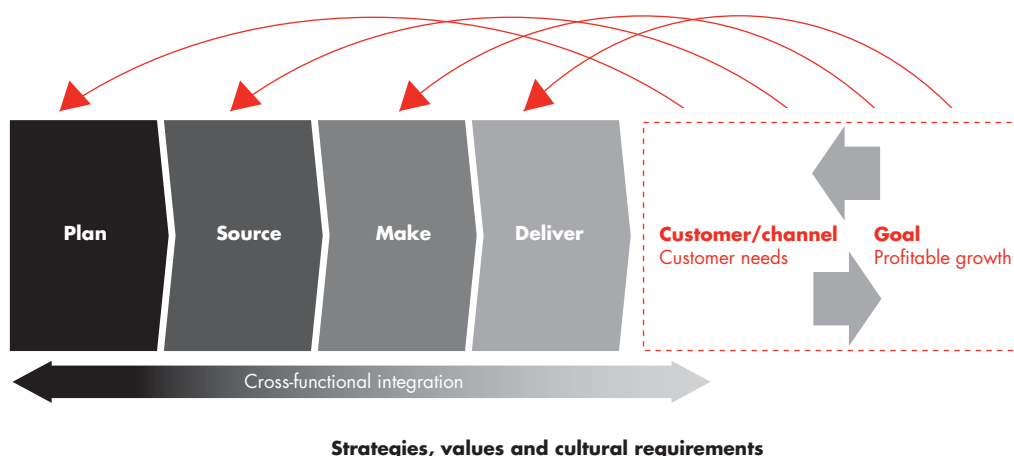
The traditional view of chemicals as a scale-driven industry has led to the development of rigid product-focused supply chains. Historically, chemical companies have approached innovation from the product outward and concentrated on minimizing the costs associated with production and throughput.

The customer-led supply chain turns that approach on its head. It starts with “true” external customer requirements, and it finds the best approach to satisfying customers completely, profitably and at the lowest cost. (See Figure 1.) Paradoxically, it strips away costs and strengthens competitive position.

Bain’s research into customer-led growth<sup>1</sup> has shown that leading firms excel in three areas. They **design** the right propositions for the right customers. They **deliver** those propositions flawlessly across all customer touchpoints. And they **develop** their capabilities to delight customers over and over. In the discipline of the customer-led supply chain, these insights are no less true.

**Design.** When an organization wants to build a family of differentiated supply chains to replace or to complement its existing one, the first question is, Who

Figure 1: The principle of customer-led supply chain



Source: Bain SCM Practice

<sup>1</sup> James Allen, Barney Hamilton and Fred Reichheld, “Achieving True Customer-Led Growth,” *Bain Brief*, July 2005.

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will they serve? The process, therefore, begins by identifying all relevant customer segments and then designing a distinct and compelling proposition for each.

Segmentation starts with a thorough understanding of the customer base. While a company’s hypotheses about its customers can play an important role in the process, they must be tested through a structured survey of a representative sample of customers. A chemical supplier might define its segments by the characteristics of the industries it serves, such as regulatory requirements, type of end-customer applications and volatility of demand. Or it may delineate them by customer traits, such as size, location, importance of chemicals to overall economics and price sensitivity.

To define customer segments, companies should take into account both customers’ stated requirements and the costs that such requirements imply. Figuring out just how many segments a supplier can profitably serve requires calculating not only the cost of delivering each differentiated service but also the overall costs of complexity that incremental services will add to a company’s business systems, such as accounting, inventory management, purchasing and the like. Too often such costs accumulate invisibly and erode profits.

Once it has defined the characteristics of its customer segments, the organization needs to develop a tailored supply chain performance package for each as well as a clear understanding of what’s required to deliver it. These packages typically consist of elements grouped along three dimensions (see Figure 2):

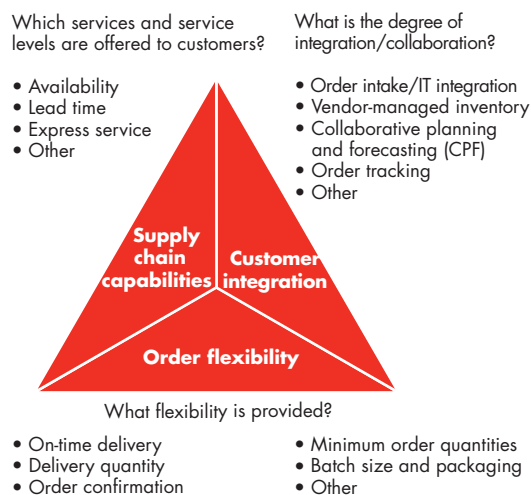
- *Supply chain capabilities.* The goal is to find the best match between the level of service the segment desires and that segment’s willingness to pay for it. Requirements for availability typically are high across all segments - in one recent survey they ranged from 95%

to 100% - while desired lead times can vary substantially, from a few days to several weeks.

- *Order flexibility.* Developing a clear set of rules for customer orders that achieve the best fit between a segment’s priorities and the economics of meeting them is essential. This is particularly true for “no frills” segments, where streamlined and automated processes are essential for lower pricing.

Xiameter, for example, clearly lists its rules for order pricing, processing and payment, including its policies on freight terms, cancellations, rush orders and returns, in nine languages on its Web site. Customers willing and able to play by these rules get a discount of approximately 15% off Dow Corning’s regular pricing. Similarly, Alastian offers relatively strict terms with clear “penalty” fees for violations and adjustments. But it also has an *à la carte* menu of additional services, offering, for example, on-site consulting services at a daily rate of €1,000 plus VAT and expenses. The enforced rigidity of these two companies’ offerings is essential to their economics.

Figure 2: Dimensions of supply chain performance customization



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Organizations must stick to their guns and not dilute their propositions by making customer- or order-specific exceptions. To do so risks ceding to their customers the financial benefits they had hoped to retain for themselves.

- *Customer integration.* A company must also determine how it will interact with customers in each segment. Options range from traditional ordering by fax or phone, to email, proprietary e-commerce applications, system-to-system integrations and platform applications such as Elemica or CC-chemplorer. For “high-touch” segments, which require particularly attentive service, companies should consider vendor-managed inventory as a tool to reduce system costs and lock in customers.

The design phase concludes with the creation of a detailed blueprint of the supply chain and a detailed pricing strategy for each segment. Typically, the pricing strategy starts with a base price that covers all standard elements for a particular performance package and then complements it with a menu of add-on services. Supplementary fees might be charged for rush orders, small orders or nonstandard lead times. Such an approach enables the unbundling of the product from related value-added services and ensures that customers receive *and pay for* exactly the services they want.

**Deliver.** With propositions and segment-specific supply chains defined, the task shifts to building them and rolling out the new product and service offerings to customers. This phase demands strong commitment and rigorous attention to detail.

Bringing the new supply chain models to life requires both process-design and change-management skills. Organizations will need to:

- Adjust their order-to-delivery processes by segment to ensure that only those activities and costs that are valued by customers remain.
- Develop any new capabilities required by any of the propositions. For example, a company might need activity-based costing to support vendor-managed inventory, or e-business capabilities to support a no-frills channel.
- Adjust the organizational structure<sup>2</sup> and staff levels to fit each model’s performance and economic requirements as well as to ensure seamless cross-functional cooperation.
- Enhance their forecasting abilities and adapt current processes for inventory and safety stock management, to ensure that performance guarantees can be met economically.
- Update their performance measures and incentive systems.

This exercise calls for two supporting activities: First, organizations should seek cost-saving opportunities by identifying possible areas for late-stage customization of “platform” products. These could be, for example, standard products that have customer-specific formulations, or commodity products that have highly varied packaging requirements. Second, organizations should protect their revenue streams by developing contingency plans for unforeseen disruptions in outsourced distribution and other core processes.

Once companies clarify their systems and policies, it’s time to reach out to customers. Firms should market packages proactively, emphasizing the relevant service and cost benefits. External rollouts also offer an excellent opportunity to increase market penetration, either by growing the share-of-wallet of existing customers or by attracting new ones.

While the mapping of customers into segments initially assigns them to the offering that’s most appropriate for their needs, it’s not

<sup>2</sup> For an in-depth discussion of organizational structures, please refer to our 2003 study “Supply Chain Management in the European Chemical Industry.” It can be downloaded from [www.bain.com](http://www.bain.com).

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Figure 3: Matching customers with supply chain offers

Supply chain customer segment/service package		
Supply chain model	Highly price-sensitive customer	Smaller customer with undermanaged supply chain
Model 1 (e.g. Premium)	Option	Option
Model 2 (e.g. Standard)	Option	<b>Default</b>
Model n (e.g. "no frills")	<b>Default</b>	Option

**Customer's articulated needs, e.g.:**

- Availability: 95%
- Lead time: +/- 5 days
- Confirmations: ≤ 48 hours

**Model's capabilities, e.g.:**

- Availability: 95%
- Lead time: ≥ 4 days
- Confirmations: 1 day

meant to be restrictive. (See Figure 3.) If customers wish to pay more for a different level of service or to trade away flexibility for price, they can. What should never be allowed are changes that confound the *raison d'être* of an offering by, for example, providing high-end services at a "no frills" price.

**Develop capabilities.** A customer-led supply chain isn't static. It needs to respond both to changing customer priorities and to shifts in the competitive landscape. Organizations will need to review their offerings on a regular basis. They must ask: Are new segments emerging? Are the economics of one or more of our segment-specific supply chains deteriorating? What new offerings or capabilities will we need to develop to sustain superior performance?

**Early adopters can expect significant benefits**

Many companies believe in letting customers lead their growth. Indeed, recent Bain research<sup>3</sup> across 47 industries found that 80% of executives saw their companies as "customer focused." But achieving customer-led growth is hard. The companion Bain survey of customers found them reporting that only 8% of companies deliver a "superior experience."

The gap between "believers" and "achievers" was a stark 10 to 1.

The challenge of achieving true customer focus across every facet of your organization is no different in supply chains, but the rewards are clear. Our experience suggests that currently the supply chain represents from 6% to 10% of total costs for companies in the chemical industry. We believe that by implementing a customer-led model, it should be possible to lower that number to 5%. Companies can generate those savings through an improved cost base, reduced complexity and decreased contracting costs. This target also assumes peak performance in logistics, inventory and warehousing across all supply chain partners.

First movers can expect the best results. Superior performance will increase the satisfaction and loyalty of existing customers and capture a greater share of their business. It will also win new customers. New high-end offerings will lock in relationships. In short, the customer-led supply chain has the potential both to protect an organization's current position and to serve as a sound platform for profitable growth.

<sup>3</sup> James Allen, Barney Hamilton and Fred Reichheld, "Achieving True Customer-Led Growth," *Bain Brief*, July 2005.

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**The European chemical supply chain: Self-assessment and priorities**

Bain recently completed a comprehensive study of the supply chain approaches and concerns of leading European chemical companies. This effort comprised both extensive independent research and in-depth executive interviews. In the interviews, we were particularly interested in three things: (1) executives' candid assessment of their current supply chain practices, (2) their supply chain performance measures and (3) their highest-priority initiatives for supply chain performance improvement.

**Self-assessment**

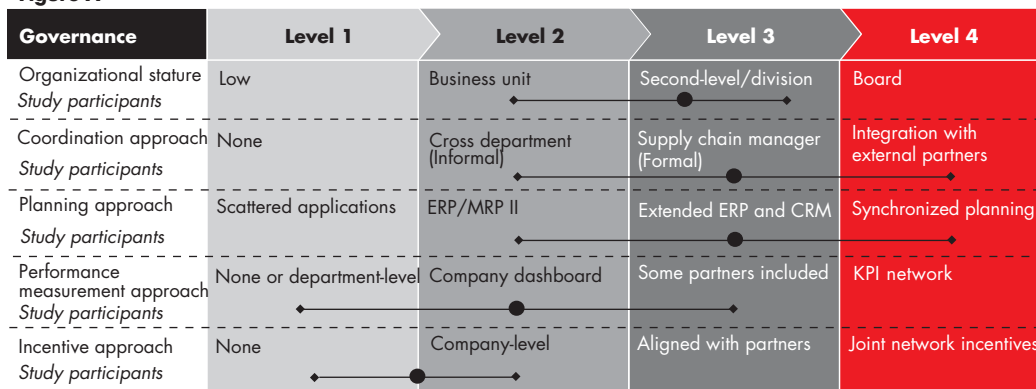
The self-assessment portion of these discussions focused on four broad areas of supply chain practice: governance, margin improvement, fulfillment efficiency and working capital optimization. We were curious to learn where large incumbents fell on a four-part evolutionary scale of supply chain practice and sophistication.

The exercise revealed no clear leader across all areas. Instead, we saw that most firms combine isolated islands of great sophistication with other less leading-edge practices. Of the group, none had yet achieved an end-to-end integration of its supply chain. Notably, respondents reported themselves least well developed in outwardly directed initiatives such as operational partnerships with vendors or the development of customer-led supply chains.

*Governance.* What is the organizational stature of the supply chain in firms and how do they manage performance? Figure A shows that supply chain is not represented at the board level of any of the firms. More typically, it has a home at the division level, often as a corporate staff function that offers guidance and support to "line" supply chain executives in the business units. In addition, while some companies have begun to incorporate partners in their operational coordination and planning activities, none has yet coordinated incentives with its partners. Further, many respondents believed that their own internal measurement systems do not yet adequately capture supply chain performance from a customer point of view.

*Margin optimization.* (See Figure B.) Where do companies stand on initiatives to increase the margins of their product sales? Most have done their best to get the most from a one-size-fits-all supply chain where exceptions are made to accommodate customers seeking nonstandard services. Some tailor their standard service levels to the requirements of their most important customer segments. But none are currently enjoying the margin enhancement that can come from offering a variety of service levels by segment, in a way that eliminates overdelivery of standard services, and charges for optional ones. Certain firms are experimenting with bundling and upselling services to boost transaction margins, but rarely with value-added services. Most have developed an e-channel, but only a few are currently managing successful ones.

Figure A



Source: Interviews, Bain analysis

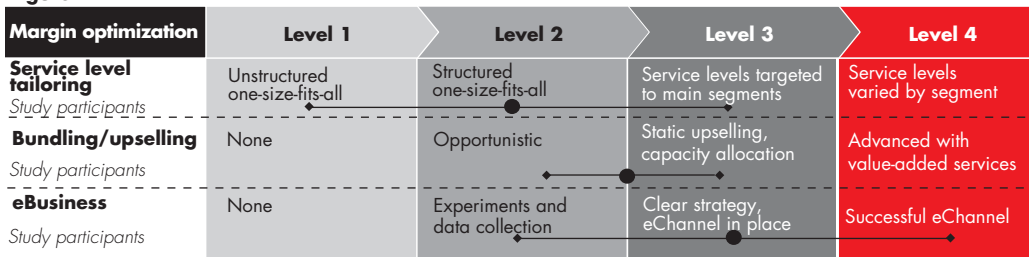
● Average respondent

◆ Range of respondents



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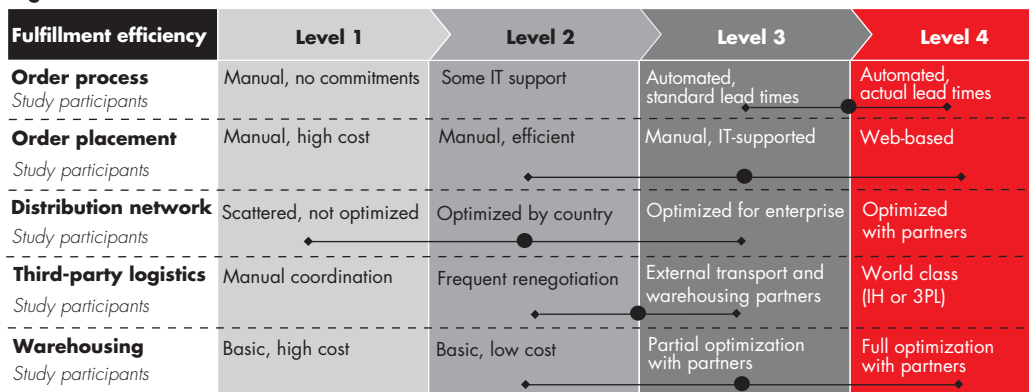
Figure B



Source: Interviews, Bain analysis

● Average respondent      ◆ Range of respondents

Figure C



Source: Interviews, Bain analysis

● Average respondent      ◆ Range of respondents

**Fulfillment efficiency.** (See Figure C.) How do the companies stack up on enhancing the efficiency and reliability of their fulfillment activities? All respondents have an automated internal process to manage orders, but in most cases, the placement of orders by customers is handled manually. Across respondents, the percentage of orders placed online today ranges from 5% to 40%. By 2008, it will range as high as 50%, according to our survey. While most companies have made their distribution network as effective as possible on a country-by-country basis, some have taken advantage of outsourcing opportunities and are managing a global network. Most harness their global purchasing power to build partnerships with third parties for distribution, logistics and warehousing, yet none report seamless management integration with partners.

**Working-capital optimization.** (See Figure D.) How are companies doing in their efforts to minimize cash tied up in inventory and receivables and to manage payables? The survey respondents cited the challenge of generating accurate forecasts in the face of volatile demand levels

as a major hindrance to managing their working capital. In addition, they displayed a strong sense that more needs to be done to manage receivables and payables.

**Performance measures**

The interviews revealed a broad variation in the type and comprehensiveness of supply chain performance measures monitored by respondents. (See Figure E.) Inventory, lead times and customer-satisfaction statistics were the only measures tracked by all.

**Priority initiatives**

Executives reported that past initiatives had been largely focused on internal and supply-side improvements. They conveyed a sense that the major supply-side operational and cost benefits had been achieved and that going forward only incremental improvements could be expected. Nonetheless, respondents planned to continue working on “evergreen” topics such as logistics improvement and inventory reductions. Some were also experimenting with radio frequency identification (RFID) tags and bar-coding technologies.

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Figure D

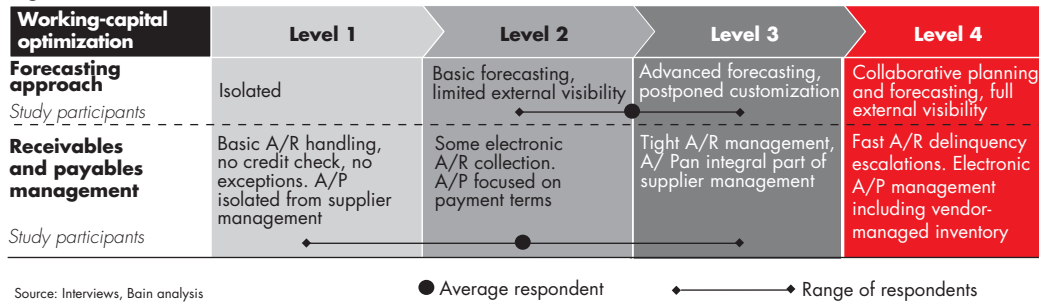


Figure E

Performance measure	Overall level of implementation	Variance among respondents
Forecasting • Accuracy • Volatility	Medium Low to medium	High High
Supplier reliability	Medium	High
Product availability • Production adherence • Production lead time • Replenishment reliability	Medium Low to medium Medium	High High Medium to high
Inventory management • Inventory level • Days supply	Fully Fully	Low Low
Outbound logistics • Lead time • Delivery reliability	Medium Medium	Medium to high High
Customer satisfaction • Complaint rate	Medium to fully	Low to medium
Supply chain cost	Medium to fully	Medium to high
<b>Status KPI implementation</b>	Medium	Low

Their current priorities, however, were largely geared toward the demand side. Of the current initiatives, four emerged as having the highest priority across firms:

- *Creating service-level differentiation.* Organizations are trying to move from a one-size-fits-all supply chain to more efficient segment-specific ones.
- *Developing vendor-managed inventory offerings for customers.* These projects require substantial effort to develop work processes and to integrate vendor and customer systems, but they can lock in relationships and help provide valuable input for forecasting as well as cross-selling.
- *Enhancing forecasting techniques.* Current techniques yield a forecasting error rate of 20% to 60%, leading to a high level of respondent dissatisfaction. Chemical companies are working to

improve data collection and workflow, to harness automated statistical techniques and to explore collaborative forecasting with customers.

- *Pursuing the global upstream supply initiative (GUSI).* This industry-wide initiative focuses on the development of global electronic-data-interchange standards that will facilitate commerce with both customers and suppliers. Chemical companies see GUSI as critical to integrating their systems with suppliers and customers.

Chemical executives clearly recognize the benefits of customer-led supply chains for both cost management and revenue growth. And some companies have begun to implement aspects of the approach. Based on our research and experience, however, true advantage awaits the first organization to realize the *full potential* of a customer-led supply chain. 🔄

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