

## Organizational Changes for Effective Supply Chain Management

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Supply chain management is really about getting people to work together better. Whether the problem is people in different functional areas within a company who are working at cross-purposes to each other, or people in different companies along the supply chain who don't coordinate well with each other, the underlying point is the same. How people are organized, how their performance is measured, and how they are rewarded are *major* factors in overall supply chain performance. Behind all the benchmarking, process mapping, reengineering, scenario planning, software design, and related activities that receive so much attention today in supply chain management is a more fundamental issue:

How should all of us who are part of a supply chain be organized to best support achieving the lofty goals of lower costs, faster cycle times, and higher levels of customer service?

This article discusses five case studies in which organizational issues contributed to, or even were primary causes of, unsatisfactory supply chain performance. These examples are drawn from my experience as a consultant in supply chain management-related issues over the past 12 years, and cover a wide range of specific issues, industries, functional areas, competitive environments, and company cultures. The situations have been disguised somewhat to protect the confidentiality of the companies. Nonetheless, there is a common theme throughout: changing the way people work on a day-to-day basis, and applying a combination of common sense and innovative approaches to organizing and managing the wide range of activities that occurs along the supply chain, can make a major difference in overall performance.

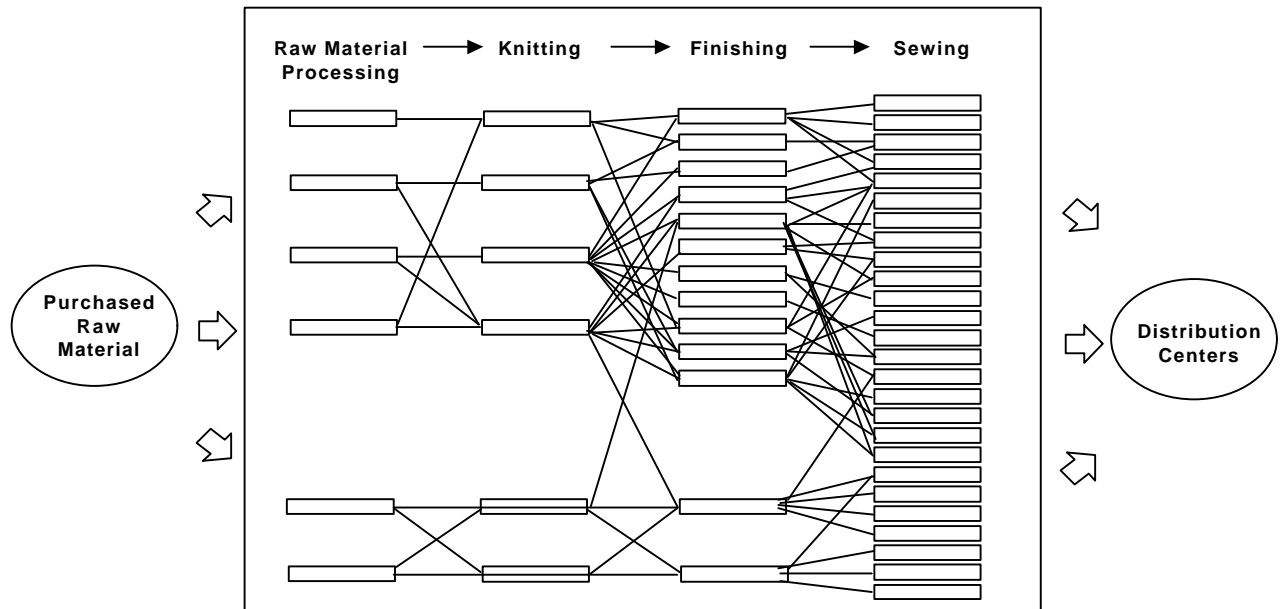
### **Case #1: Organizing manufacturing and distribution to optimize overall supply chain performance**

This successful textile and apparel manufacturing company had been enjoying substantial growth, doubling over the prior four years, acquiring several smaller players in its industry, and adding new channels of distribution such as warehouse clubs, mail order outlets, Internet sales, and international brand expansion. However, manufacturing and distribution operations had also become much more complex, with a proliferation of new products, features, and variations for each class of trade; shorter product lifecycles; moves toward more global purchasing and manufacturing; and increased automation that had made manufacturing more asset-intensive. How should manufacturing operations be organized to meet these challenges and support continued profitable growth?

In an attempt to maximize the use of the company's more than fifty separate plants and to respond quickly to changing customer needs, the company had developed an extremely complex manufacturing network, as shown below in Figure 1. Plants that made the basic

fabrics sent their output to virtually every plant that could potentially dye and color it, the next steps in the production process. In turn, colored fabric was shipped out to just about every plant that could conceivably handle the sewing and assembly of finished products, Finally, completed garments were sent to central distribution centers that had to sort it all out.

Figure 1



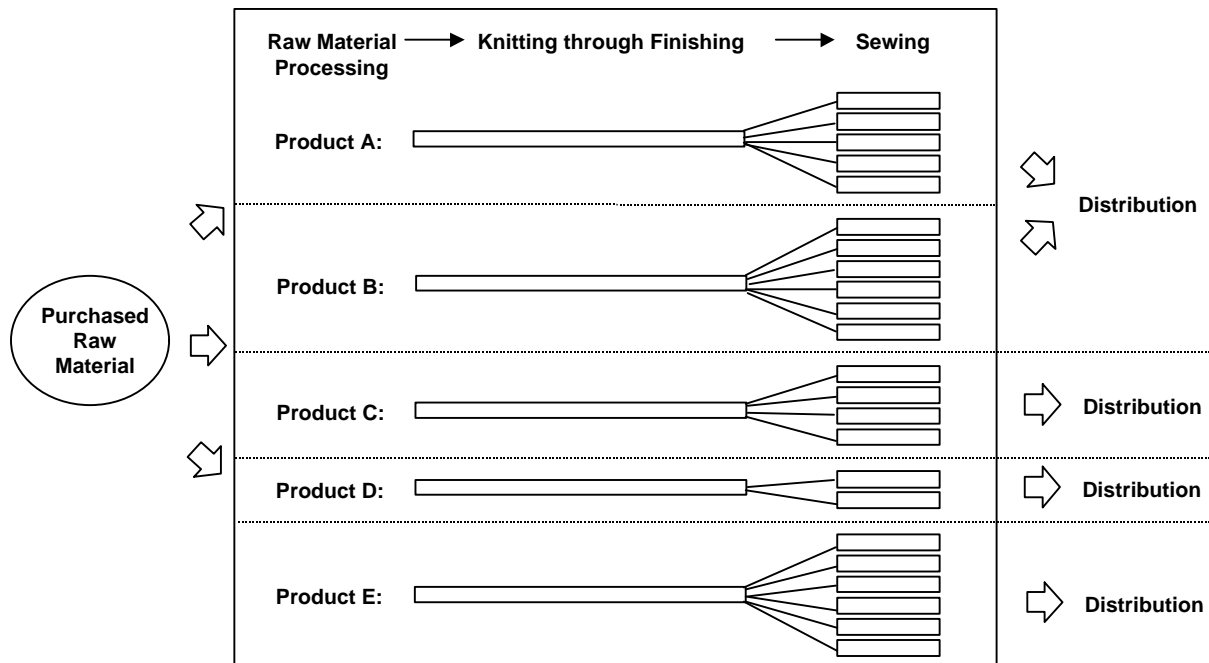
Managers at each plant were measured on their output and use of available capacity, and business was booming, so everyone sought to get incoming work-in-process from wherever they could, made as much as their plant possibly could produce, and shipped it out to whatever plant would take it next. In short, it was a mad scramble, with basic menswear, high fashion women’s apparel, kids clothes, coats, you name it, all going in every which direction.

While everyone was always busy, the overall supply chain results were clearly unsatisfactory: work-in-process inventory up 25% within a year, a majority of production lots labeled as “expedites,” a 50% increase in inter-plant transportation costs, extensive rework and quality issues, no real reduction in manufacturing unit costs, and on-time complete customer order fill rates that remained below 50%. By seeking to *optimize* each individual manufacturing step, the company had actually *suboptimized* overall output of finished product and unknowingly added costs and cycle time. As the company’s President stated, “our product flows look like a big mess of spaghetti ... with all this

shuffling around, we're probably losing the equivalent of a full plant's worth of production in there."

What changes in organizational structure, incentives, and manufacturing roles-and-missions were appropriate here? In this case, the answer was to reorganize manufacturing and distribution on the basis of major product lines, e.g., menswear, fashion, sweatsuits, towels, etc. and to establish specific roles and responsibilities for each manufacturing plant, as shown in Figure 2 below. For example, Roanoke will only make denim fabric, and will send it all to Spartanburg, which will be the only plant to color it. All jeans will then be sewn in Columbia, and then sent to Charlotte for distribution to customers.

**Figure 2**



By focusing each manufacturing plant on a narrower set of duties and aligning them with the other manufacturing plants that helped produce the same products, substantial improvements were achieved in nearly every aspect of supply chain performance: manufacturing cost, quality, cycle time, and customer satisfaction. Plants were now responsible, and rewarded, for producing only what was actually needed to meet customer demand, and were not penalized for failing to use their full capacity to make "something."

For example, with Roanoke focused on denim, rather than also making wool suit fabric, fleece for towels, and women's silks, Roanoke could now concentrate on continuous improvement programs to reduce denim costs and improve denim quality -- which led to gains as high as 20%. Since Roanoke was now directly accountable to Spartanburg, and vice-versa, feedback between the plants improved dramatically and Roanoke now made what Spartanburg and then Columbia needed, which in turn was based on what the Charlotte distribution center indicated was in short supply.

Most importantly, breakthroughs in the level of on-time complete shipments and overall customer satisfaction occurred, and allowed manufacturing to enhance, rather than limit, the company's growth and profitability.

Ironically, simpler and more predictable transportation and logistics flows also helped reduce cycle times and actually *increased* effective utilization of manufacturing capacity. No longer were products moving helter-skelter through the manufacturing system; everyone knew what needed to be produced, who was responsible for it, and The President was right: there was the equivalent of a full plant's production lost in the old organizational structure and operating procedures ... and reorganizing manufacturing and distribution within the supply chain helped to find it.

## **Case #2: Organizing effectively for international expansion**

The North American Free Trade Agreement brought substantially increased interest in developing Mexican manufacturing operations for many companies, including this consumer goods manufacturer that was looking to achieve lower overall production costs for everything from toasters to lawn and garden equipment to industrial machine parts. How should efforts to establish new manufacturing operations in another country be organized in a large, diverse company, so that duplication of effort is minimized and the best overall supply chain results are achieved?

Expanding into Mexico, or any other country, requires attention to a very broad range of activities. Relationships with national and local governments need to be established. Legal structures need to be put in place. Plant sites need to be selected, taking into account labor, utilities, transportation, environmental issues, and many other factors. Facilities need to be built or renovated consistent with company specifications. Staff at all levels need to be recruited and hired using compensation packages appropriate for local laws, customs, and market conditions. Training and detailed work procedures need to be developed. Performance measurement and communication systems need to be established. And other participants in the supply chain need to be selected, including raw material suppliers and transportation and logistics service providers -- all before a single product is actually produced.

In this case, a product-based organizational structure may *not* be the best solution. A quick review of initial expansion-related activities that were being pursued independently by people in each product division revealed some major problems:

“We’re competing against each other for the same resources, both within the company and in our new Mexican locations.”

“We don’t know what legwork and analysis have already been done by other product divisions in the company, so we’re all flying around doing it ourselves from scratch.”

“The truth is that none of us really knows the local cultural and business idiosyncrasies well enough to be effective.”

“We’re not leveraging the fact that we’re a big company planning to make sizable expansion-related investments, and as a result we’re probably not going to get superior results.”

Clearly, the duplication of effort and lack of expertise highlighted by these comments required that a much more focused, organized effort was required for Mexican expansion to be successfully achieved.

By analyzing the requirements and critical success factors for each of the specific activities associated with international expansion of the supply chain, it became clear that a “tiered” approach to managing the expansion effort was most appropriate. Some activities needed to be the direct responsibility of people within a specific product division: only the staff in lawn and garden equipment could establish the training, production methods, and performance measurement systems, for their products, which were substantially different from industrial product lines.

For some other activities, however, there was substantial benefit to having a more centralized approach on behalf of all product divisions. Each division needed basically the same support for human resources, environmental engineering, government relations, and legal issues, for example. In these situations, using a country manager as a local “point person” and relying on central staff departments within the company to meet multiple division needs in a coordinated way proved to be an efficient solution.

Naturally, it also made sense to take advantage of the work that had already been done by one or more of the product divisions. For some activities, the best way to organize was through the use of a teaming structure where the division that had developed the greatest level of expertise, or had the greatest interest in, a specific activity became the designated “lead” on behalf of all the other divisions. For example, the people who made appliances such as toasters and coffee pots had already begun working on transportation and logistics services that were especially important in their business, so they were given the lead responsibility to develop the Mexican transportation and logistics infrastructure for *all* the divisions that were moving into Mexico. In areas such as designing the physical supply chain network, recruiting local management, engineers, and hourly workers, and related activities this teaming approach helped achieve a coordinated expansion program.

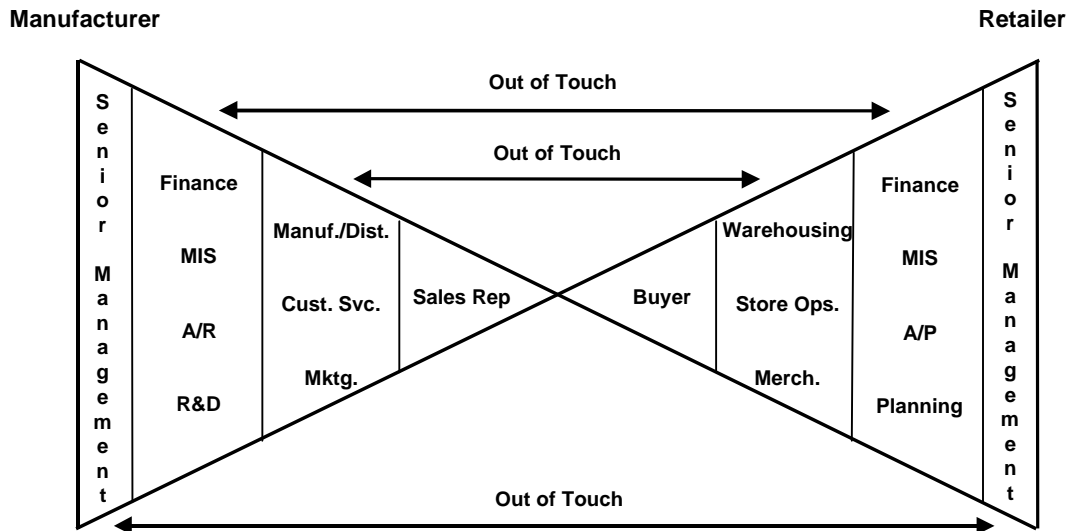
In this case, organizing the specific activities required to expand or redesign the supply chain around the key requirements and types of expertise that were needed was an important aspect of the eventual success of the company's program. Several years later, nearly 30% of production was based in Mexico and was helping the company achieve its objective of lower cost manufacturing. As one product division manager put it, "none of us would say that operations down here are as smooth as they were back in Ohio, but we are getting a good quality product out at a lower cost. If we hadn't had an organized expansion plan with a clear set of responsibilities split up among each of us, we'd probably still just be in a planning stage."

### **Case #3: Reorganizing the retail supply chain to achieve mutual improvements for both customers and suppliers**

Most companies have long followed a traditional approach for selling products to customers and for buying from suppliers. Retailers have traditionally organized around a staff of product buyers who are responsible for establishing and leading the company's relationships with suppliers of products within each specific category -- small appliances, toys and games, frozen desserts, and dozens of others. Among manufacturing companies who make the products that retailers put on their shelves, organizations are normally set up to support field sales representatives who are responsible for selling the company's toasters, hula-hoops, and ice cream to the retailers' product buyers. While this approach certainly provides a strong focus on the buyer-seller relationship, it can make it very difficult to achieve improvements across the wide range of complex activities associated with the full supply chain.

As shown in Figure 3 below, this traditional approach can result in ineffective, out-of-touch supply chain relationships. The impact of the retailer's order patterns and lead time requirements on the manufacturer's operating costs and inventory levels is often not well understood by the retailer's buying staff. Similarly, the effect of the manufacturers' production scheduling, packaging and distribution practices on the retailer's warehousing, merchandising and store operations is often far removed from the purview of the supplier's field sales representatives.

Figure 3

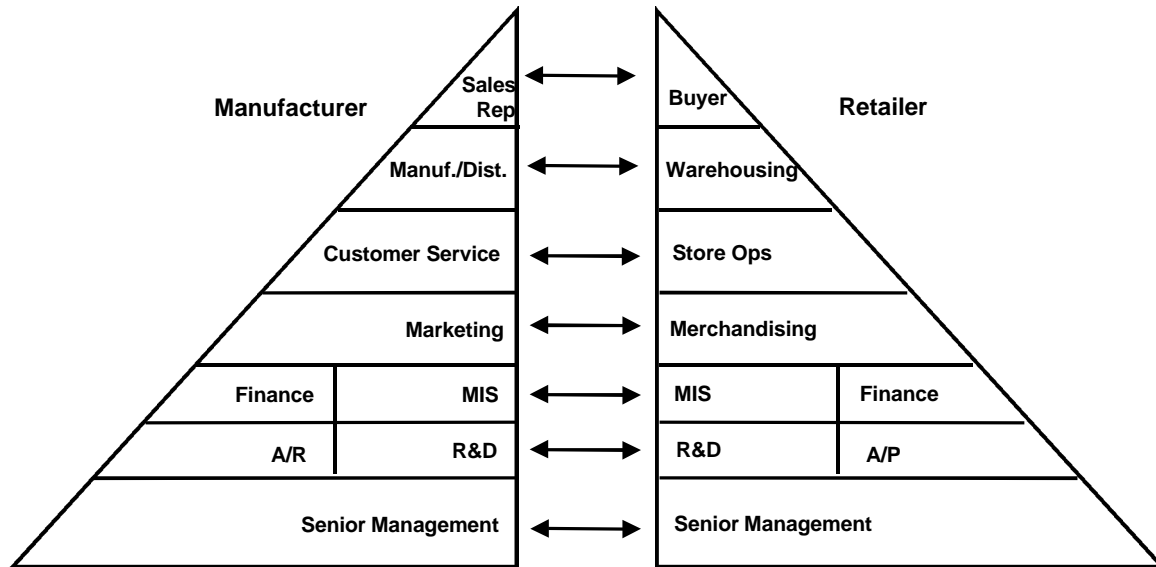


While the demand for toasters, hula-hoops, and ice cream by consumers is actually quite steady and predictable (with some seasonal fluctuations, of course), most manufacturer-retailer supply chains still suffer from excessive out of stock situations, high markdowns or returns of unneeded merchandise, substantial overtime, rework, repackaging, expediting, and rerouting of manufactured products. Why? At least in part because it is simply impossible for this single buyer-sales representative point of contact, around which everyone is organized cannot *possibly* manage the wide range of activities that occur along the entire supply chain. Let's face it, the sales rep's overwhelming priority is meeting this month's sales target, and the retailers' product buyers are often focused almost exclusively on whether consumers bought the product that was ordered and put on the shelves this month. How can opportunities for mutual long-run supply chain benefit be effectively pursued in this environment?

Some companies have begun to change how the manufacturer-retailer supply chain is organized, in order to pursue a broader range of cost reduction, service improvement, and cycle time reduction objectives. Especially with the increasing concentration of "power" in the hands of major retailers -- Wal\*Mart, Kmart and Target in mass merchandising, of course, but also the growing importance of category killers in everything from office supplies to housewares to pet care -- leading companies are recognizing that the traditional buyer-seller relationship needs to change.

A new organizational approach that helps meet these objectives is shown in Figure 4 below. It literally tilts the traditional chart on its side, and uses a multi-functional team model to help more effectively manage the overall supply chain. Popularized several years ago by Proctor & Gamble and Wal\*Mart, this type of approach is being used in a broader range of situations, with some very positive results.

**Figure 4**



In this approach, dedicated teams from both the manufacturer and the retailer are assigned to work together on the areas that they each know best, in order to improve communication, eliminate inefficiencies, and pursue improvements in overall supply chain performance. While the buyer and the sales representative still play a lead role in determining which products will be purchased and at what cost, other specialists are more directly involved to handle issues associated with planning, forecasting, and scheduling; product specifications and packaging; merchandise flows; information requirements; and so forth. Importantly, senior executives from both the retailers and the suppliers are more directly involved in improving the overall business relationship and increasing profitability for both sides.

Naturally, this type of structure needs to be used judiciously, as it requires a substantial level of effort on both sides. In addition, this new supply chain organizational model can only be effective in situations where there is mutual trust, open sharing of information, and an interest in maximizing the long run benefit for both parties -- a stringent set of conditions that may not often be met, but that can provide substantial supply chain improvements if they can be achieved.

**Case #4: Reorganizing internal processes to increase the focus on key supply chain related issues**

Go into most big companies today and look at the daily calendar for senior executives in manufacturing, distribution, purchasing, sales and marketing, finance, and other key functions and you will quickly conclude that internal processes and meetings are basically out of control. Everybody is nearly always in a meeting -- and time outside of meetings seems to be spent setting up meetings, rescheduling meetings, resolving time conflicts for competing meetings, or catching up on developments from missed meetings. In one recent client, a quick survey found that over 80% of senior and mid level staff time was spent in meetings, and that the top two reasons for attending specific meetings were “to represent our department” and “to keep up with what others are doing” -- rather than strategic thinking, problem solving, or other higher-value activities. While this situation may just be an artifact of modern life in the fast lane, the result can be very detrimental to effective supply chain management:

- A frustrating inability to get a timely decision on anything
- Strategic thinking repeatedly taking a back seat to “firefighting” and “running the numbers”
- Increasing difficulty in pinpointing why a specific action was taken and who had real responsibility for it: “the system said that’s what we were supposed to do”

The results, of course, can be delays in reacting to changing customer needs, inadequate flexibility and responsiveness, failure to keep abreast of -- not to mention ahead of -- developments in the marketplace, and loss of profits and market share to faster, more nimble competitors. Can’t *something* be done to reorganize how we work within the supply chain -- both to help address this undesirable situation and to give us back our sanity?

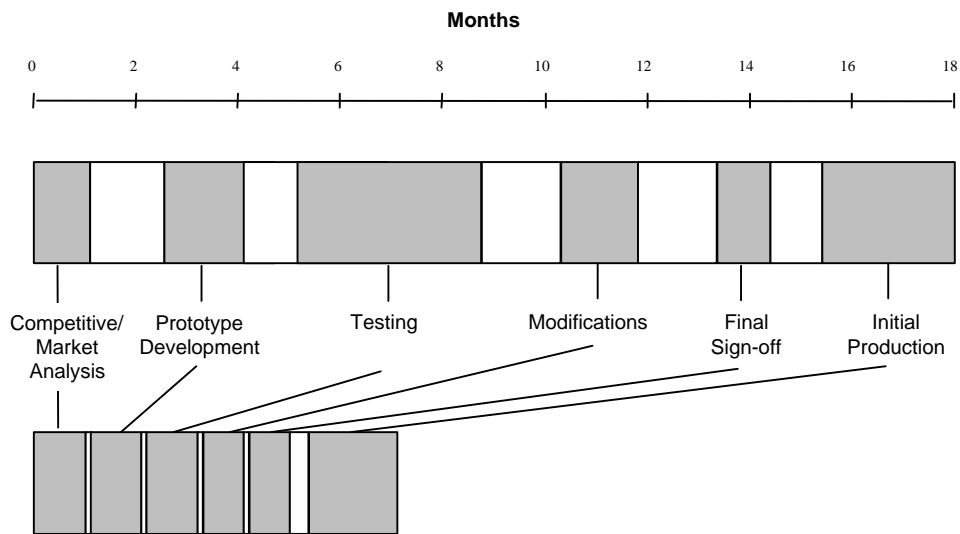
Yes, perhaps there is. One company facing the problems noted above developed an innovative approach to organizing its supply chain-related activities: a “business team” concept that was specifically chartered to (1) replace and consolidate existing, overlapping meetings, and (2) drive improved supply chain performance in key areas that required cross-functional involvement:

- new product development cycle time reduction
- increased effectiveness of inventory and capacity allocations, and
- topline sales growth through superior product availability, delivery, and responsiveness.

While there are a number of supply chain related activities for which the responsibilities of operations, sales and marketing, and other areas are fairly clear, the three items noted above require use of a wide range of expertise -- as well as a disciplined approach to making decisions that involve difficult tradeoffs.

Through this “business team” approach, total meeting time was reduced by about 30% and the speed and quality of decision-making improved dramatically. For example, the total cycle time for new product development and introduction decreased by nearly two-thirds, as shown in Figure 5 below.

**Figure 5**



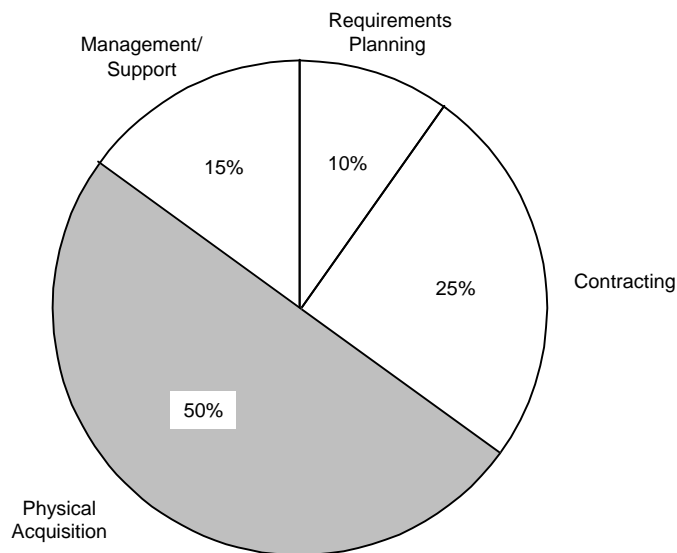
It is important to note that the reduction in cycle time came in part from reduced testing and modifications of prototypes -- since the business team made early and final decisions on the direction to proceed. However, the reduction in time spent *waiting* for decisions to be made was an equally important component -- since the “everybody’s-always-in-a-meeting” syndrome was alleviated through the business team concept.

For companies interested in adopting this approach, there were four critical success factors that need to be understood: (1) the team needs to be limited to senior level decisionmakers, and needs to include all the relevant ones, (2) the team needs to have the sole authority to make decisions in the areas of its charter, (3) business team meetings need to aggressively *replace* other meetings that are currently occurring, and (4) keeping score of supply chain improvement results achieved is vital.

**Case #5: Organizing procurement functions to add superior value to supply chain activities**

Purchases of goods and services from outside suppliers represent 75% or more of the overall cost structure for manufacturing companies today, and downsizing and outsourcing initiatives are steadily increasing this figure. The purchasing department in many companies, however, is often not viewed as a key player in achieving superior overall supply chain performance, but is seen instead as focused on enforcing company bidding and contracting policies and processing purchase order transactions. In an ongoing survey of corporate procurement activities in major U.S. manufacturing companies, administered by my firm, companies report that nearly half of purchasing's time is spent on physical acquisition-related activities -- writing and processing purchase orders, checking on receipt status, and other "transactional" activities, rather than on highest-value activities such as planning future requirements and establishing strategic relationships with key suppliers, as shown in Figure 6 below.

**Figure 6**



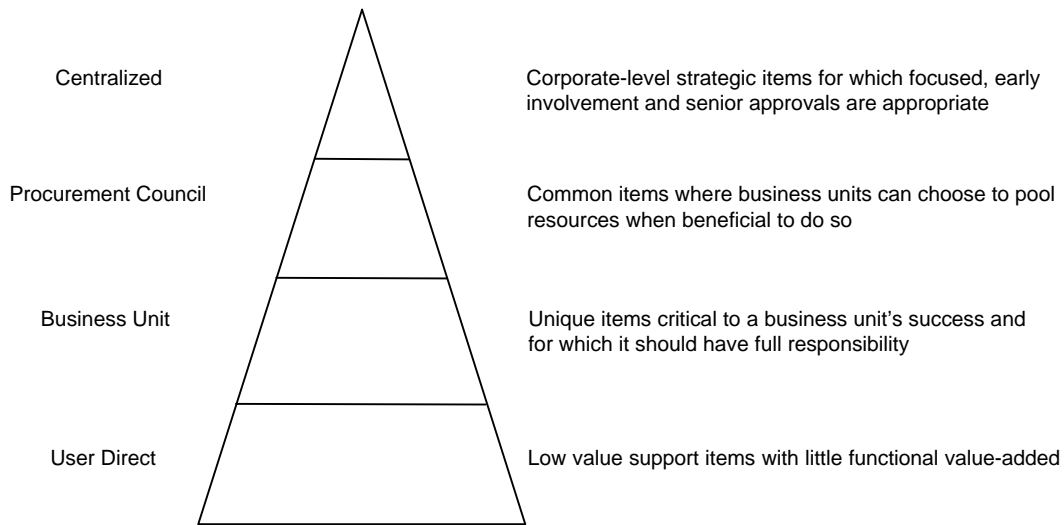
Source: Capital Consulting & Management, Inc. Survey of Corporate Purchasing Practices

What organizational changes can be made to help get more value from the purchasing function -- while at the same time appropriately balancing the need for common company processes with the desire to give individual business units full accountability for their operations and profitability?

A key technique used by a number of companies across a range of industries has been to establish different organizational structures for different types of purchases. The answer is

not as simple as centralizing to get more volume leverage or decentralizing to get closer to the customer and increase accountability. Rather, the solution is a hybrid approach that takes into account the specific characteristics of different types of purchased goods and services, and the unique requirements of different business units who are the users of the purchased materials and services.

**Figure 7**



As shown in Figure 7 above, an organizational model that splits purchases into four primary categories has proven to be an effective organizational approach. For items that are integral to the company's overall strategy and that need both senior executive involvement and significant early involvement of design, engineering, and procurement to establish important technical specifications and supplier requirements, a centralized approach is critical. For a high tech manufacturing company, this category might include components from suppliers of proprietary new technology, or items critical to the next generation of planned products.

For goods and services that multiple business units use and that would benefit from a coordinated approach to the supplier marketplace, a purchasing council may be appropriate. Business units can choose to participate if they believe that the added value from pooling their volume with the purchases of other business units more than offsets the commonality and standardization that likely results from the council's decisionmaking. For these items, purchasing pools the full council's volume and concentrates on obtaining

supplier agreements that meet the needs of the full council membership. In high tech, this category might include common items such as plastic, commodity chemicals, and other raw materials, plus purchased services such as transportation and temporary labor.

For items that are unique to an individual business unit, or that represent a significant share of the total cost structure of a single business unit, a decentralized approach may be most useful, with the responsibilities for selecting and managing the supply base vested exclusively in the business unit that has a critical stake in the supplier's performance in the supply chain. Procurement's role here is to directly support and execute the business unit's judgment about what the unit needs to do to meet competitive requirements.

For items that represent relatively low value-added for the company and for which there is little volume leverage to be gained by centralizing activities, a user-direct approach may be appropriate. This area commonly includes small dollar purchases and miscellaneous support items, in which purchasing's focus is to make the user's purchasing transactions as easy as possible, using simplified methods for charging and billing expenditures.

By using this segmented approach to organizing procurement activities, companies can have it both ways. They achieve the benefits of volume leverage in situations where it makes sense. And they get the advantages of putting direct accountability with the specific parts of the company that have the greatest stake in both the overall performance of the supply chain and in the role of the suppliers in supporting the company's objectives.

### **Summary and conclusions**

In each of the five case studies outlined above, how companies organized their supply chain related activities was a significant factor in achieving improved overall supply chain performance. There are no simple answers. A product-focused organization for manufacturing is appropriate in one instance but detrimental in another. Changing relationships among functional areas both internally and in conjunction with other companies in the supply chain requires new and different ways of working together across traditional boundaries that may not be compatible with a company's culture. Centralization is desirable in some cases but is not appropriate in others. Each company is unique and each situation involves its own special challenges that must be taken into account in developing the "right" solution.

The key message here is not that companies seeking to improve supply chain costs, service levels, or cycle times should necessarily adopt the particular solutions outlined here, but rather that addressing organizational issues needs to be a critical component of initiatives to achieve superior supply chain management. At the most basic level, supply chain management is about getting people to work together better. As Yogi Berra correctly observed, "If people don't want to come out to the ballpark, nobody's gonna stop 'em." To achieve success in supply chain management, you've got to get the people to come to the ballpark -- and then organize 'em into an effective team that can hit some home runs for your company's costs, customer service levels, and cycle times.

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