



Photo by Joanna Kosinska
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The power of procurement to shape next-generation products

KEARNEY

Giving procurement a seat at the table throughout a product's life cycle can unlock a wealth of value now and in the future.

In today's volatile business environment with technology advancing at an unprecedented pace, leading companies reinvent their products to hold on to their competitive advantage. For many industrial and consumer products companies, engineering and R&D have been at the forefront of developing the next-generation products to win in this dynamic market, such as the push for electric vehicles, faster processing speeds for technology, and more efficient industrial products.

Having the most advanced technology and the most innovative products is crucial to capturing a leadership position, but holding on to that advantage requires having a reasonable cost structure backed by a stable supply chain and sustained margins throughout the product's life cycle. Unfortunately, many companies focus on creating innovative products but struggle with escalating costs and suboptimal supply chains. Saddled with overly optimistic costs, outdated pricing for purchased components, and design approaches that are not focused on expenses, many companies see costs skyrocket beyond their budgets.

A poorly set-up supply base can create an array of supply chain challenges, including a lock-in effect for key components and problems with localization. And yet, the most obvious compromise can be a double-edged sword: raise the price of the product to recoup the higher costs or go back to the drawing board to design a lower-cost product—both of which are less than ideal solutions.

We see another way: make procurement a core part of the solution. In this paper, we shed light on how procurement can help mitigate the risks and create advantages throughout a product's entire life cycle.

Procurement's seat at the table

Procurement is at the core of mitigating these risks and creating cost advantages. However, this is often not the case. More often than not, procurement gets sidelined and struggles to add more value beyond negotiating with suppliers to lower the cost of components. Several factors can create obstacles to procurement playing a larger role throughout the product's life cycle:

- Procurement is only involved in the process after the product is launched into series production. At that point, the design decisions have already been made, and there are few opportunities to have an impact on costs.
- The product development process is too rigid, with engineering and R&D making design decisions in functional silos. The focus is often on embedding advanced technology without enough input from sales and marketing about what customers and consumers actually want or from procurement about what the supply market and supply chain have to offer.
- The company lacks the ability to collaborate across functions. As a result, product optimization is based on individual function needs and objectives instead of a well-balanced optimal scenario.
- Procurement lacks the ability or is not given an opportunity to drive cross-functional collaboration and deliver additional value. For instance, procurement's scope is often limited to negotiating buying costs and not questioning the product's design.

To become a valued partner throughout the product life cycle, procurement must redefine its role. Done right, this can create powerful benefits. For example, product decisions can be made with supply partners in mind, a simplified portfolio can create scale advantages, products can be optimized for manufacturing, and potential supply chain risk can be considered along with a mitigation plan if the supply is interrupted.

Procurement can play a larger role throughout the product life cycle. For example, early in a product’s development, procurement can help enhance the design with structural changes. The objective here is to provide a supply chain perspective and ensure the product is equipped with optimized manufacturing processes, materials, and specifications to facilitate a robust and flexible supply chain when it goes into mass production. As the design solidifies and the product enters mass production, procurement’s role can transition to ensure that competitive costs are sustained until the end of the product’s life cycle—and then the cycle repeats.

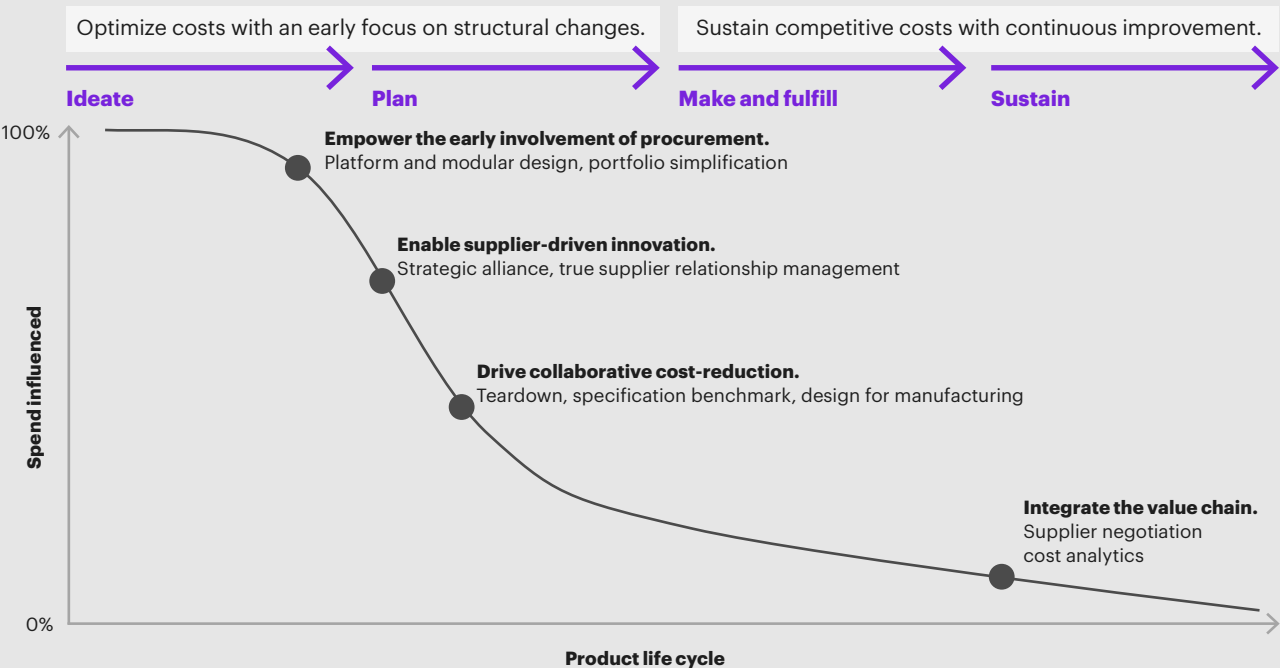
Procurement can add value throughout all four stages of the product life cycle (see figure 1):

Ideate: empower the early involvement of procurement

In this stage, procurement can help optimize the product portfolio and the product’s design.

Getting a seat at the table early enough in the product development process is the single biggest lever for procurement to deliver more value. In fact, this doesn’t apply only to procurement. Ideally, a cross-functional team with marketing and sales, R&D, engineering, and procurement all have seats at the table during early product development to create a balanced view of the product portfolio, innovation, costs, and supply base.

Figure 1
Procurement can create value across a product’s life cycle



Sources: Kearney analysis

During the early stages of the product's life cycle, there is more freedom in the design and the technology, and most of the costs can be influenced, which gives procurement room to tackle structural costs. Supplier transition and opportunity costs are much lower or non-existent at the early design stages to enable broader supply base and technology options, boosting the negotiating power to strike a good deal with suppliers. Multiple tools can be applied to drive product innovation and address customer needs while also optimizing costs, including portfolio simplification, platform and modular design, specs optimization, and design to cost. Any cost savings achieved during these early stages will also be applicable later in the product's life cycle, maximizing the return on investment (ROI) across the lifetime of the product.

Leading companies have cross-functional teams that run design-to-value activities early in the product design stage with aggressive cost targets. For example, Dell involves its procurement team during the ideate stage to conduct design-to-value activities that address costs and consumers' needs. Walmart is another good example. The retailer involves its global sourcing team early in its private-brand portfolio discussions to work alongside the merchant team, optimizing supply-base manufacturing and capitalizing on consumer insights during the product decision-making process.

This "one team, one approach" methodology removes the boundaries between functions and allows the team to work toward one goal: maximizing the value to customers with optimized costs. Key suppliers of critical components or strategic contract manufacturing partners are brought in early to co-design products and optimize the manufacturing design for all parties.

As the product matures along its development life cycle, the boundaries of structural changes are higher in terms of the execution effort and the opportunity costs. Proper engineering due diligence and testing needs to be done to ensure that any changes don't affect the product's functionality, quality, or the customer experience. Once the product design is locked in, the areas where costs can be improved are dramatically reduced. Procurement's focus will then gradually shift to optimization and enabling value with fewer structural changes to the product.

Plan: enable supplier-driven innovation

During this stage, procurement can bring in supplier-driven innovation and capitalize on the suppliers' expertise to enhance product features and improve manufacturability.

A strong supply chain support system is crucial to any successful product, and a strategic group of supplier partners is essential. Procurement, often the link between internal stakeholders and external suppliers, can play a vital role here. While R&D and engineering teams are focused on developing internal innovations and technological capabilities to meet customers' demands, procurement can focus on forming long-term strategic relationships and harnessing suppliers' capabilities to create a lasting competitive advantage.

Kearney's [Assessment of Excellence in Procurement](#) study reveals that companies expect to capture more value from supplier relationship management (SRM)—from a 20 percent SRM share of strategic sourcing value to more than 40 percent in two to three years. The leaders in procurement use strategic alliances to co-invest and innovate products and costs, gaining exclusive rights to key components and keeping competitors at bay. For instance, Tesla worked with Panasonic to develop its lithium-ion battery via a joint venture that gave the automaker a head-start in the electric vehicles market. Apple invested more than \$500 million in Corning's R&D and manufacturing facilities to co-develop Gorilla Glass, which has helped the tech giant lead the smartphone device industry for almost half a decade. Major companies such as Samsung and Taiwan Semiconductor Manufacturing Company are investing heavily in equipment manufacturer ASML's R&D effort on its extreme ultraviolet lithography technology to capture a leading position in the chipmaking semiconductor industry race to move beyond the limits of 5nm and 3nm processing.

True strategic SRM focuses on three core activities:

- **Create a common understanding of cross-enterprise needs and objectives.** Only with aligned targets can an enterprise form strong alliances to mutually win in the market.
- **Focus on developing and nurturing partnerships with key strategic suppliers.** Segment suppliers into interaction models based on strategic importance, differentiating capabilities, and historical performance.
- **Integrate suppliers as part of the company's road map and processes.** Co-deliver value beyond costs to build partnerships that shape the market.

Of course, this is not a feat that procurement can pull off alone. It often involves R&D on the technical front as well as executive management to oversee the C-suite interactions. A real strategic relationship involves multiyear partnerships with suppliers—bringing game-changing innovation for mutual success. On the flip side, procurement is also responsible for managing supply risk and preventing being overpowered or losing control of the partnership. This includes protecting intellectual property, creating exclusive supply arrangements, managing suppliers' performance, and collaborating while also keeping the options open. For example, Tesla plans to move its battery production to a cheaper in-house source in its bid to prevent lock-in effects and find new ways to innovate.

Make and fulfill: drive collaborative cost-reduction

In this stage of a product's life cycle, procurement can collaborate with the supply base to optimize costs and make pricing more competitive.

As products move into series production, any changes in suppliers or components require major efforts from R&D, product sustainment, and quality teams to requalify specific parts. However, this doesn't mean the product design can't be changed or optimized. In fact, a structured process is required to evaluate the ROI of the potential cost benefits versus the engineering effort to change alongside other strategic and risk considerations.

The best source of ideas is often the supply base. And procurement is well-positioned to drive collaborative cost-reduction (CCR) activities, an approach to work with suppliers to develop and implement ways to lower costs. This can be used in a variety of circumstances: where supply power is strong with strategic suppliers and high transition efforts and lock-in effects or where supply power is relatively low with a competitive supply base as part of the quoting process. CCR ideas are unconstrained—from alternate materials and spec optimizations to manufacturing processes and supply chain improvements to bring down costs (see figure 2 on page 5).

To implement CCR activities and deliver cost benefits, procurement will need to step out of its comfort zone—creating a structured end-to-end process with cross-functional alignment. Engineering and R&D resources need to be planned and committed both internally and on the supplier side to ensure a smooth execution, with top leadership visibility to enhance supplier participation and encourage collaboration.

Figure 2

Collaborative cost-reduction with procurement and suppliers can lower costs while also making processes more efficient

Product	Process
Change materials — Substitute with an alternate material. — Reduce material waste costs. Eliminate parts or process steps — Eliminate parts that don't have a function. — Eliminate parts by integrating them into other parts. — Eliminate process steps. Change specifications — Adapt the testing requirements. — Modify tolerance. — Change the design. — Take advantage of production technology. Standardize and modularize — Use modular designs. — Reduce complexity. — Foster commonalities. — Use a client standard.	Improve manufacturing — Minimize the number or duration of non-value-adding tasks. — Enhance productivity. — Change manufacturing locations. Simplify logistics — Optimize stock-keeping. — Bundle transactions. — Optimize packaging. — Optimize internal handling. Improve integration, and form partnerships — Improve forecasting. — Intensify cooperation. Other — Find alternate sources. — Relocate to low-cost countries.

Sources: Kearney analysis

Procurement leaders orchestrate CCR activities in a structured manner:

- Gain suppliers’ buy-in and involvement to access their innovation and expertise.
- Obtain a mandate from senior leadership with buy-in to drive cross-functional progress.
- Collaborate with R&D and engineering to evaluate ideas and estimate the effort needed for the implementation.
- Create a clear ROI-driven business case for go/ no-go decision-making.
- Chart a clear implementation plan, and ensure cross-functional collaboration during execution.

Done right, CCR is a powerful tool to tap into suppliers’ expertise and build mutually beneficial strategic relationships. The outcome will be well-worth the effort, even for business cases that are evaluated as non-feasible because of poor ROI; even these “bad” ideas can be good input and lessons for designing future products. For instance, in our work with a global industrial manufacturer, we used CCR with key suppliers as part of a comprehensive procurement transformation program. Our approach resulted in 15 to 20 percent lower costs and helped the company meet its target costs for a next-generation product. The structured CCR approach is also integrated as part of the company’s standard procurement process to capture value moving forward.

Sustain: integrate the value chain

During this stage, procurement can work to continuously improve costs and reinvest for a more innovative product.

Given the intense competition and consumers' high expectations for lower costs or upgrades as a product ages, leading companies continuously strive for cost excellence and added value. Procurement is often center stage in the effort to reduce costs and retain margins as external spending can be a big part of the final product cost. Procurement must also manage the supply risks and balance the trade-offs between lowest cost, a secure supply, and product quality.

The main goal is to maintain strong buying and negotiating power and keep control over suppliers' pricing. This requires remaining unconstrained in the supply market as much as possible and maintaining a competitive supply base with a credible threat. Although this might mean sacrificing some gains or economies of scale in the short term, it keeps the options open and avoids lock-in effects with suppliers in the long term. When a lock-in effect cannot be avoided because of specific engineering or technology requirements, procurement can negotiate a smart contract that protects the design and intellectual property while also guaranteeing long-term benefits, such as volume rebates and year-on-year productivity improvements.

Procurement leaders extend their capabilities to give R&D and engineering supply market insights, attain stronger negotiating powers, and maintain a collaborative supply base that is willing to support the R&D efforts of new generation products.

Although traditional methods of building supplier relationships and negotiating prices still work, there is a growing need for procurement to capitalize on more advanced ways of strengthening their buying power:

- **Use analytics to create cost transparency.** Build a should-cost analysis in collaboration with the engineering team, understand what drives costs, and conduct fact-based negotiations with suppliers.
- **Monitor raw material trends and the potential effects on the product.** For companies with a scale advantage, consider moving upstream to directly manage or control raw material pricing and availability.
- **Explore and develop a supply base in low-cost countries.** For example, move labor-intensive items to Central and Eastern Europe or Southeast Asia, where labor costs are much lower.
- **Run a supplier fitness program with key suppliers and contract manufacturers.** Improve productivity and efficiency in suppliers' manufacturing facilities.
- **Support systematic product teardowns.** Learn from competitors' product design advantages, connecting the engineering team with suppliers to understand the cost implications of changing the design, test prototypes, and provide supply market alternatives.
- **Take full advantage of a next-generation product.** Bundle existing and future product demands to negotiate maximum leverage, focusing on the benefits of business continuity with suppliers.

Realizing procurement's value across the entire product life cycle

Amplifying the value of procurement across a product's life cycle will create a competitive advantage in today's volatile market. Gone are the days when procurement could work in a silo, focusing solely on negotiating component pricing late in a product's life cycle. Procurement now has a central role to play at every stage of a product's development—putting a spotlight on costs and controlling supply chain efficiencies in a sustainable way.

As companies move into more agile ways of working to rapidly respond to market trends, procurement can collaborate more and be embedded across functions to understand stakeholders and support the broader business and product objectives by capitalizing on the function's supply management expertise.

A strong procurement team can help shape the next-generation product in collaboration with R&D, engineering, and other relevant stakeholders. Gaining a seat at the table early in the product development process is a crucial first step toward expanding procurement's strategic influence alongside the technology-focused functions. It will be up to individual procurement leaders to steer the strategy and reinvent capabilities to establish the function as a strategic partner throughout the product life cycle, delivering unparalleled value to the business.

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