



# CUTTING PRODUCT COSTS AT THEIR ROOTS

A NEW FOCUS CAN SLASH  
COSTS AND PRESERVE VALUE

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For years, manufacturers attempted to cut the cost of making a product by taking aim at individual parts or raw materials and the companies that supplied them. Cut the price of the things that go into making a product and a company could lower the manufacturing costs and increase profitability. But those fixes are temporary, and need to be constantly renegotiated.

More importantly, they do not lead to a better product; in fact, quite the opposite at times. Despite decades of cost-cutting efforts across all industries, as much as 25 percent to 45 percent of all costs in engineered products add no value to the product or customer, according to our research. Those findings would indicate that manufacturers are not only looking at cost-cutting incorrectly, they are wasting a lot of time and effort doing it.

What would be a more productive way to cut costs? Look at the product itself, the function it is expected to perform, and ways it could do it more efficiently. Take, for instance, controlling temperature on train cars. A passenger train car manufacturer could attack the problem by simply asking the maker of the insulation panels to cut the price they charge. But in the new environment, the more effective way to reduce costs would be to rethink the entire thermal control function and how cars are heated or cooled. Is there a way to insulate more efficiently? At the end of that question may be a solution that allows a manufacturer to not only cut costs, but also increase prices on a more competitive product.

The focus in next-generation cost reduction is the consumers of the product, whether in a business-to-consumer or business-to-business environment. Understanding customer needs can result in not just a cheaper product, but a better, more effective product when it comes to fulfilling customer expectations.

#### Exhibit 1: The next generation of product cost reduction will address non-value-added costs



Does a product do more than customers actually see and appreciate? Instead of traditional, component-based savings, manufacturers are taking aim at functions and components that increase costs but add little value and are irrelevant to the customer. Technical specifications and customer requirements should correlate, and where they do not manufacturers may find potential areas of over-specification and costs that do not add value. For instance, there is no need to design a train car body to function properly at 120 kilometers per hour if the train will only run at 90.

## THE OLD WAY

Cost cutting has been a priority for decades in industries subject to global competition, such as consumer electronics and the automotive industry. Traditionally, efforts followed a company's organizational structure: The purchasing department was instructed to cut prices on materials; production was asked to reduce production costs; and engineering was told to "design to cost." Setting targets for each organizational function was an easy approach, as managers could be instructed to meet targets for their departments.

Not surprisingly, many of these efforts produce sub-optimal results. For example, an automaker's purchasing manager may be able to obtain a 2 percent price reduction on wiring harnesses if a supplier does not pack them in the correct assembly sequence. But this gain translates into a burden for production, which then has to pay for someone to unpack and sequence the harnesses for assembly. In this case, savings in one department led to higher costs in another.

Even when manufacturers create cross-functional initiatives, in which teams from procurement, engineering, production, and quality-control tackle the costs of wider systems, modules, or product groups, they are apt to come up with short-term solutions if managers are only asked to focus narrowly on simply cutting costs.

Both of these approaches lead teams to neglect potential quality and assembly readiness issues. Suppliers are often brought into the process too late and thus have little impact on design choices. For instance, a supplier may be developing a manufacturing process that reduces the number of parts and material needed. But cost-cutting efforts by the manufacturer will not take that work into account if the supplier is not involved early on in the process. Worse still, suppliers are chosen based solely on cost and not capabilities and quality.

Additionally, cost reduction is traditionally limited to a specific project. Thus, an action that reduces the cost of one product may be left out of another product line or the next version of the product. Plus, this approach risks cutting out features that customer's value.

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# ASK THE RIGHT QUESTION

The key is often whether the efforts are asking the right questions to begin with. Take, for instance, an automotive drum-brake supplier who faced problems several years ago with glued brake pads. The initial solution, which was approved during the car's launch phase, involved the addition of rivets to help secure the pads. The solution was taken into the Failure Modes and Effects Analysis (FMEA) and slated to be implemented in all future drum brakes. But the problem in the end was not the glue; it was the surface of the pads in combination with the specific adhesive.

Uncovering the root cause was not as easy as adding the rivets, but tracking back to determine the underlying cause made the prices on the brakes competitive again for all models on which the pads were used. Nowadays this solution is almost industry standard and the rivets have been eliminated entirely.

The next-generation approach is liberated from organizational structures, and its focus on such root causes achieves a long-term impact, affecting future products. Our consultants have determined that there are more than 20 areas that can be studied that will help attack causes of costs in manufacturing, including specification flow down, functionality interference, advanced test simplification and technical-margin rationalization. For automakers and consumer-electronics manufacturers who face increased cost pressures because of a rapidly changing business environment, increased competition, and disruptive technologies, this new approach allows them to go far beyond the cost-cutting approaches they currently have in place.

Next-generation cost reduction will also help medical equipment and precision equipment manufacturers. These firms have been reluctant until now to attack costs, equating cost reduction with quality risks. With the new approach, features that add substance to a product will be exempted, and the focus will instead be on those that add to cost but not the ultimate value.

In this new world, cost cutting will lose its negative implications and become an exercise to make products more efficient and customers happier.

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