

# Value Engineering: Five Keys to Cost-saving in Manufacturing

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When it comes to manufacturing at the lowest cost possible, the tried and true models of off-shoring and competitive bidding just aren't cutting it anymore. Why? Because virtually everyone is doing the same thing. The same models to drive down costs are being applied with very little to show in terms of true competitive value.

Price, however, still matters in the end. So how do you compete on price, quality, and innovation? Value engineering through a partnership with a contract manufacturer (CM) offers a path.

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Companies that design and sell everything from consumer products, to medical devices, to complex assembled components are gaining an edge by working in partnership with CMs to not only outsource their manufacturing, but to optimize that process and reduce costs every step of the way.

A true partnership needs to be more than just words on a page. Here are five ways to create a CM partnership that will work to reduce costs in the short and long term:

### **1.) Create Early Relationships**

In designing a product or component, manufacturing often comes at the tail end of the process. In other words, manufacturability of a design is an after-thought. This is a major missed opportunity because simple changes with a knowledge of how something is built can bring about dramatic cost savings. In addition, many designs contain specifications that move beyond the needs of a design. An over-built design is just a more expensive design. Manufacturing should go beyond executing a design: a good design/manufacturing partnership achieves design goals with the most efficient means possible. But in order to achieve this level of efficiency, design and manufacturing need to work early in the process. Establishing a reliable partner can bring manufacturability to the forefront, lead to better designed products, and save significantly. For example, Barth Industries has worked with several large clients and, through relatively small design changes, have been able to shave millions of dollars off our customers' bottom line. The earlier we can work with a partner, the more we can do to save money in just the design of a product.

## 2. ) Create Designs that can be Made

It sounds obvious, but products, machinery, devices, as well as parts and components, need to be more than functional--they need to be made. Too often design is only evaluated by its end-use functionality. In reality, design impacts manufacturing. When manufacturing is brought into consideration within the design, costs can be reduced dramatically. As discussed above, an earlier relationship can help, but that is only part of the picture. A CM can work with designers to reduce costs in a myriad of ways. From material supplier relationship, to adjustments in timing, to simply heading off designs that will exceed budgets, a CM partnership helps create a product to satisfy end use needs as well as manufacturing efficiency.

## 3.) Share Books

Finding the right design/manufacturing partnership is often about working together on cost targets. Typically, 60 to 70 percent of costs are more or less already determined by materials. Working on the remaining 30 percent to either hit a pricing target or determine a pricing target is the foundation of a true partnership. This kind of open book strategy may seem counterintuitive in a day and age of cut-throat pricing, but it's essential to truly achieving the best price and performance balance.

## 4.) Working with Right Team

In order to truly save time and money with a partner manufacturer, you have to have the right team in place. Design engineers and project managers are essential resources in ensuring that a product comes to market at the lowest cost possible. For example, Barth has a team of

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manufacturing engineers and project managers that work closely with our customers as well as our manufacturing teams. Some have 30+ years of experience in manufacturing. In addition, these teams have the benefit of working together on a myriad of projects and have literally seen it all.

Again, these kinds of resources may seem like an extra layer of cost, but they are, in fact, essential to finding space to reduce cost in the process and insurance against costly overruns in the middle of manufacturing.

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**5.) Save Time / Save Money**

In an effort to find the lowest cost possible, companies have become addicted to the bidding process. There is nothing wrong with this process inherently. For some projects, competitive bidding can foster innovation and new relationships. But it is also a time consuming and costly process. In fact, it is a costly process for both parties involved and those costs ultimately add to the bottom line. Relying solely on this tool for every project has, sadly, become the norm. In reality, there is a hidden wealth of cost savings beyond the process that, for many companies, remain untapped.

**Summary**

In the end, working with a CM is a cost-control measure in and of itself. As opposed to in-house manufacturing, a manufacturing partner can leverage its existing resources (including machinery, process, supply-chain, and personnel talent) to ultimately meet cost targets and determine new ones.

In addition, this type of relationship offers greater scalability. As products move from the prototype phase to full-scale manufacturing a partner can manage quality and costs along the way. Growing is always good, but managing costs as things scale up is better for the over-all health of the company and allows for further expansion, quicker.

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A closer relationship between design and implementation resulting in greater efficiency is an age-old model. But it is a model that the world has moved away from as design and manufacturing have grown apart physically. Today, there is a chance to move back to this model as communication infrastructure has improved, designs have become more malleable, and on shoring has become more prevalent. The results can be a best of both worlds scenario in which partnerships exist to reduce costs while maintaining health profits for everyone involved.

*Barth Industries Co. is a world class provider of special machines, precision components & fabricated systems. We partner with companies in a wide range of industries to optimize manufacturing through innovative design, consistent service and manufacturing. For more information visit [www.barthindustries.com](http://www.barthindustries.com).*