

# BREAKTHROUGH

Lean Implementation & Training Resource Publication  
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## VAVE: VALUE ANALYSIS VALUE ENGINEERING

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### DESIGN IMPACTS MANUFACTURING

We work with numerous companies that functionally separate design and manufacturing. Typically, they are separated geographically and through the reporting structure; not meeting up again until we reach the senior VP level or above. We also observe that the cost savings focus for both groups is kept separate. However, sometimes we have the opportunity to work with the design and manufacturing group cross-functionally to enhance design and improve cost. This process, known as Value Analysis – Value Engineering (VAVE) allows us to realize cost savings that we simply do not get working alone in the functional silos.

Although the design groups account for a very small percentage of the unit cost of our products (typically about 5%), they can actually impact the cost of the unit by as much as 70%. There is rarely a greater opportunity for cost savings within an enterprise. And yet, most companies have never attempted a VAVE event. Some of you may have never learned about it.

We recently held a VAVE event with one of our clients. In attendance were approximately twenty people including some key suppliers for a one-week event. Of course, there is quite a bit of cost associated with one of these events; making the need for results more apparent. The unit cost of one of their products – a fairly complex unit – is \$38,000. The event yielded 120 cost savings opportunities worth \$6,355! Of course, the savings are in the process of being captured and some tests are required to ensure all of the ideas are feasible. Let's say that only about half of the ideas get implemented. How many of us realize a 10% reduction in total cost in a single year?

### IMPROVE PERSPECTIVE

The VAVE process allows us to address quality concerns, processing concerns, and reduce cost of materials, parts, processing, and service (post-sales installation and servicing). The VAVE process uses a far different perspective than typical cost savings events. The perspective focuses on the function of each component – the primary function and the three types of secondary functions (required, aesthetic and unwanted). When following this perspective on function, we find opportunities to eliminate components, substitute with less expensive or more reliable components and materials, standardize (to avoid part number proliferation), simplify (typically resulting in greater manufacturability), and improve quality.

We also look at increasing value to the customer. We do this by enhancing function, by providing items that weren't initially intended (such as quick change tooling), creating product differentiation, enhancing reliability, and employing a market-in strategy. Often, the opportunity to increase value to the customer, and so, to gain market share, is a much greater opportunity than that of simply reducing cost.

So, as we focus on increasing value and decreasing cost in our organizations, let's take a cross-functional look at our product design. Great opportunities are waiting. Has this introduction to VAVE sparked ideas for improvement in your operation? We would be glad to meet at your operation to learn what you are seeking to achieve, [click here](#) to contact us. You are invited to visit [www.LMSPI.com](http://www.LMSPI.com) to view the [entire archive](#) of publications on a variety of topics addressing continuous improvement.

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