



# PW Principles of value analysis

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## Are your best information sources right?

Since starting to use VA principles, we have ended, as nearly as practicable, talk of buying things. Instead, we are buying functions. We almost always receive requisitions written in terms of things, and we must translate them into a different language—the function language.

We are learning the great value of more knowledge. We have learned to accept knowledge only from the best source, and to use the knowledge, once we have learned it.

Now we face a shocking truth. The best source may be wrong. Put another way, "There may be a better source than the best source" in any area. The chemist, in the laboratory, is the best source in the area for chemical knowledge; the maintenance engineer for lubrication knowledge; the tool engineer for tooling knowledge. But, the unique position of the buyer puts him into possible contact with essentially every source of knowledge in the country—the technical people of all potential supplier companies. Buying function, the buyer can ask questions that tap that essential and available knowledge. The buyer can bring this in. In so doing, he will increase the accuracy of the knowledge of the local "best sources" and increase earnings as well. Let's learn from a few examples.

The item is a flange-shaped casting about 6 in. in dia. with a 3 in. center hole being bought for 35¢. Quantities were 100,000/year. Tool engineering had set up some machines to machine out the bore, and drill and tap 4 holes. These operations cost 19¢, bringing the cost, ready to use, to 54¢. The flange buyer, checking the function of the flange he was buying found that it was used to mount an appliance onto a sink. The functions required strength, rigidity, and permanence. He asked the "best source," the manager of tooling, if it might be practicable to perform this task with a cupped and shaped disc of heavy steel. The answer was, "It would no doubt be functionally all right, but the tools would cost so much, it would kill it."

Now what should the buyer do? He knew that this was the best source locally. He also knew that what this source believed controlled decisions in the plant. He didn't know whether tool engineers with other experience and in other businesses would agree, or whether they might have ingenious methods for making tooling of high quality at lower costs. He called a supplier of heavy stamped and formed items and described these flanges and their function. The vendor studied the application and said, "This is a very good application for a heavy steel formed part. We have the right equipment to make it. We would like to make it for you, and it would save you money. There is one big problem.

Your factory also has the right equipment to make this formed stamping. If we use our time and our expertise working it out, designing and making tooling, even though it saves you a lot of money, you won't buy it. Your tooling people will then build their own tooling and make it themselves. They would probably be happy to buy the tooling from us—but that's no good. We're not in the business of designing and selling tooling; we're a production parts source. We need our tooling people to support our production needs."

So now, what does the buyer do? The function of holding the appliance to the sink was costing \$54,000/year, and the supplier tooling specialist indicated that it could be cut about in half. What he did do was to take all of this knowledge to his boss who cleared it with top decision makers of the plant and it came back this way. "You tell your supplier that if he can supply it for about half, and if the tooling cost is not so excessive that it eats up most of 6 months saving, and if our design engineers approve the product, we will guarantee to buy 50,000 production parts, which is a six months supply, from him." The cost then became \$2,200 for tooling and 21¢ each, which meant a reduction of \$33,000/year after a one time tool cost of \$2,200. As we see, the "best source" was certainly not the local manager of tool engineering. Said another way, "The local tooling manager is now a much better source of this type of tooling knowledge than he was before."

In an example of the same general

type pertaining to marketing, the buyer caused actions which increased earnings \$25,000/year. He was buying a "push-push" switch to turn a television set off and on. To increase his knowledge he asked the supplier for a quotation on the same switch, but "push-pull." It would be the same basic switch, but did not need several of the actuating parts. It therefore was the same quality and rating, a little more reliable, because there were fewer parts to wear, and would cost \$25,000/year less. He reasoned that the marketing manager was the best source to know whether this cost should be continued. The marketing manager was somewhat startled by the amount but said, "yes, the customers like it—keep the push-pull."

About that time, the marketing manager attended a VA orientation meeting given for people of his level of responsibility in all departments. He then pondered functions and costs. Specifically, he decided that since the push-pull switch was eminently satisfactory, the only reason to continue paying out the \$25,000/year was to increase sales. He followed through by setting up a special test showroom which operated for 30 days. He called the buyer at the end of the time saying, "We had it set up so that people were making choices and buying sets. We had sets with both kinds of switches for them to examine. During that 30 days, not one person bought a specific set because it had a push-push switch. I'm telling the engineers that they can change the specifications."

*Lawrence D. Miles has been practicing and refining value analysis since he originated the techniques as a member of GE's corporate purchasing department almost thirty years ago. He has written and lectured extensively on VA, and has published two books on the subject: "Cutting Costs by Analyzing Values," and "Techniques of Value Analysis and Engineering." He is a Fellow of the Society of American Value Engineers (SAVE), and served as its first president. And he is a holder of the Distinguished Public Service Award—the highest military honor awardable to a civilian—given him for benefits accrued to the U.S. Navy from the use of VA techniques.*