

# Doing Value Engineering

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Value Engineering is a set of techniques developed to help people and organizations create changes to make things better. Too many organizations are finding that the old ways are just not good enough, that they must do better. With the Value Engineering techniques, a bit of hard work, and a lot of common sense, you can make things better for your organization and for yourself.

## THE WAY WE THINK MAKES A DIFFERENCE

Over more than 45 years, people have been using, testing, and improving the techniques of Value Engineering. One of the key factors is that we learn to think in different ways. The basic aspects of Value Engineering are:

- to think about value rather than cost
- to think about function rather than action
- to think about creativity rather than judgment.

We then put these together in the Job Plan, to develop ideas where we need them and get them implemented.

## VALUE ENGINEERING, NOT COST REDUCTION

Value is the goal. By Value, we mean the kind of Value there is when you talk about getting real value for your money. Buying the lowest cost item is very often not the best value. There are even a few times when the highest priced item is the best value. Your organization delivers value to your customers. When trying to make things better, it is often a mistake to simply think of ways to reduce cost, because in reducing cost, we may reduce the function of the item, thus lowering the value.

On the other hand, it is almost always possible to provide the required and desired function at a lower cost. This is definitely better value. Most of the changes you develop will reduce cost, but if they

reduce value by reducing the desired functions more than the reduction in cost, you are making things worse, not better.

## FUNCTION, NOT PRODUCT OR SERVICE

Customers do not buy a product or service for itself, they buy it for its function. If I offer to sell you a watch for 50 cents, this might be a great value, but if it does not tell time, I don't want it. However, if there was a way I could always know the time without having a watch, that might be good enough. Whenever you want to make things better, first try to figure out what function you are performing, just what is it the customer is paying you for. When you seek other ways to perform that same function, in almost every case a better, less expensive, higher value way is available. This is the key trick to the success of Value Engineering.

## CREATIVITY FIRST, THEN JUDGMENT

It has been proven over and over and over: When ideas are judged as quickly as they are thought of or spoken, ideas stop coming. When ideas are allowed to flow out without immediate judgment for a longer period of time, then judged, many more ideas are available for use. This increased volume includes ideas which are much better, providing higher value.

### Instant VE

Value Engineering can be as simple as three questions:

1. What is it you are **really** trying to do? (Like don't raise the bridge, lower the water.)
2. What are some ways to do **that**?
3. Which would work best in **this** situation?

To get this increased volume, we must learn to let ourselves have crazy ideas. Like an artist who does a lot of scribbling before creating a masterpiece, we must allow ourselves to have incomplete, non-workable ideas. We will have to throw away most of these ideas, but there will be a few gold nuggets which make all the work and craziness worthwhile.

To really get the organization more creative, we must also allow and encourage our co-workers to be creative, to "brainstorm". Groups of people brainstorming produce extremely good ideas.

Of course, there is a difference between "talking crazy" in brainstorming and "being crazy". It is more necessary than ever to be careful with the ideas selected before acting on them. With careful consideration, the ideas finally acted upon will have very high impact on the organization and its customers.

Of course, many of the ideas which seem good to an individual or a single department, will not turn out to be best for the whole organization. What successful Value Engineering requires is that we do not take this rejection personally, that we do not stop proposing our ideas because one or two did not work out. This is probably the hardest part of a continuing Value Engineering program.

#### **JUDGING IDEAS, ACCEPTING IDEAS**

Those who have the task of looking over a proposed idea have a very hard task. The hardest thing is to put in the time it takes to realistically consider an idea. All of us are busy. Most of us are smart enough and creative enough to think of a reason not to do something that at least sounds good. This takes about thirty seconds.

This is a tempting way to go, because then we can get back to the rest of our job. But this is unfair to the organization, to the person submitting the idea, and to ourselves. At least half of the ideas people will suggest will have some merit, and five to ten percent will be very good. Evaluators play a very key role in the creative process. They are responsible to really test an idea to make sure that it is worth doing and does not have some hidden risk. They must know when to accept an idea and recommend that it be done, when to reject an idea, and when to send it back for more

work, because it is pretty good, but has a few flaws. This is an important task, but often a thankless task. Accepted ideas give credit to the one who thought of them and rejected ideas are blamed on the evaluator. It can be a no-win situation. Those with this task must work creatively and professionally, while the rest of us must appreciate the difficulty of their job and give them some credit when they do a good job.

#### **STEPS TO A CREATIVE DISCUSSION**

The various elements can be put together in a sequence of steps which can be followed by individuals or groups for more creative meetings. This "Job Plan" can be described in many ways. The following seven questions are a good guide for less experienced groups:

1. What opportunity or problem do we want to discuss?
2. What is good about the current situation?
3. What would we like improved about the area?
4. What functions do we really need to perform?
5. In what other ways might we perform each function?
6. Which of these are we willing to try?
7. What are the steps, and who will do them?

Discuss each question, try to be open minded, and take notes so you do not forget the key points made.

#### **PUTTING IT ALL TOGETHER**

When we start to look at functions and look for more creative ways to perform those functions, when we choose the ideas which give a better value and pass them along to those who must judge them and take action on them, and when we creatively and honestly consider ideas suggested to us by others, a Value Engineering program can change the productivity of the organization without trying to do less or make people work harder. It is possible to provide better value to the customer and to get rewarded for it. It is not easy. It takes hard work. It takes thinking differently. But it is possible. And worth the effort.