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ORGANIZATION AND MEASUREMENT OF VALUE ENGINEERING EFFECTIVENESS

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Each great forward step in either military or business strategy was based in part upon knowledge, in part upon faith, and filled with the pain of birth.

History records the doubts and the mental pain which preceded the construction of the steel Monitor and the Merrimac, and their surprising record of effectiveness.

Today we are a part of the uncertainty, and the stress which precedes the evolutionary use of the Value Engineering approach.

You have learned not to act on proof alone -- proof is sometimes fraudulent. You require proof of results plus understanding in your frame of reference.

If this meeting provides sufficient proof and understanding -- you will act. If it does not, search out more. As your professional witness, I tell you that the depth of the Value Engineering technology goes far beyond the obvious.

Make no mistake -- in Value Engineering is significant new technology -- not a wrap-up under a new name.

The DC 6 is not a new name for the DC 3.

The jetliner is not a new name for the DC 6.

Although they have much in common, each is a different creation -- different in operation -- different in results.

Likewise, Value Engineering is a new system, a new way to more efficiently accomplish one type of results.

In Value Engineering as in golf -- the good score does not result from the surface enthusiasm and vigor only, but from knowing just how to make each stroke, and take each action.

Use of Value Engineering is change. Change is the manager's job. Change is confusion, irritation, discomfort, distress. The automobile breaks arms until we change -- we add the self-starter.

I am often asked: "We see the benefits of the value engineering system but where and how do you do it without disrupting the work of our organization?"

I grew up on a farm in Nebraska. We used certain facilities in a small building 100' to the rear of the house. One day my father returned from town with something he called a "water closet." He said: "We'll put this in the house. Think of the advantages when the temperature is 20° below zero and snow drifts are three feet deep!"

But where do we put it? Farm kitchens were large and bedrooms very small. The obvious place was the corner of the kitchen. Mother made a curtain to go around it. This solved basic problems but created others. It was sometimes disturbing. The blend of the kitchen aromas was less than the best and to the sensitive ear the blend of sound with the music of the gramophone was inharmonious.

To minimize these disadvantages Dad moved it into the large closet in the kitchen. In this closet we kept our farm and barn-yard clothes at one end and our "good" clothes at the other. We now had to crowd both into one end which badly wrinkled the good clothes and transferred more of the barn-yard fragrance to them.

This did minimize the two problems but it was now frustrating to try to find a needed garmet in the over-crowded closet.

This equilibrium of frustrations continued a few years until happily Dad designed and built a new house. Lo and behold! There was room in it for the water closet!

At once all of the compromises and frustrations disappeared while even more benefits continued.

In utilizing a new tool or process or procedure -- always start first where conditions are most favorable. For example, the first automobile did not start on the muddy up-hill road. It lacked power. The wheels cut into the mud. It lacked control. Furthermore, it competed with the horses. Start on the level road. Later, add tires, add power, add control, pave roads.

Always start small but solid. Plant one acre of potatoes but get good seed, good fertilizer, good cultivation; then plant 10 acres, and then 100.

Start now with good value engineering.

Start with the simplest. Start with hardware of previous design where there are previous costs. This constitutes a solid beachhead. It is well shown by the value engineering book just issued by the Department of Defense.

Proceed to the difficult. Put some water flow through the fire hose, the, instead of fearing its gyrations, we can quickly learn how to handle it.

At this moment we are in the position we would be in if we were working out all of the laws governing people before we had any people situations. We could write reams; we would fear inequitites. When people arrive on the scene, we would find some wrong laws, we would find some situations not covered. We would change both and get a fit.

I've handled this particular "fire hose" enough so that I know the benefits to both industry and government will be enormous.

Organization problems will disappear when the "room in the house" is provided with "uses" and"doorways" made known.

Measurement problems will be progressively solved. A combination of three types of measurements can be used:

1. Count the dollars

   Dollars actually saved

   Dollars of changes approved, useful -- on the next order but too late for this one

2. Indicators

Competence, training, experience, number and use of men. Their environment factors of organization, procedures, spot on the PERT diagram, inclusion in the business planning and communication system, etc.

3. Expert opinion

Evaluation of indicators and environment, strengths and weaknesses, and results by experts.

But you may rightly ask: "If the original wording or measurements are imperfect, won't there by the unscrupulous who will take advantage of it for unearned profits and unmerited cost to the government?"

Yes. These fringe cases always appear in the new. As soon as they show their faces, measurements will be made more perfect and the downward movement of costs to the military accelerated.

Again you ask: "Suppose I take a contract and the unforeseen imperfections, as you call them, are disastrous to me? What appeal do I have?"

Ask this question of the authoritative panel to follow.

A review of history shows individual wrong decisions, often wrong decisions by inaction, by the score, which have resulted in "lost victories" of colossal magnitude, influencing, even controlling, the world's history. Today, when high cost threatens to limit the adequacy of our minimum defense, and when self-liquidating Value Engineering is available to correct it, knowledgeable men in both government and industry, have determined that a "lost victory" must not happen. It remains for us to courageously start using, continuously modify, and promptly benefit from these new tools.

Gentlemen, --- if I can contribute further on any specific point, I will be in the audience and at your command.

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