

## WINNING WAYS

C. Calvin Jefferson, Jr.  
Value Engineering Officer  
Baltimore District  
U.S. Army Corps of Engineers



Calvin Jefferson has been employed by the Baltimore District for over 25 years in such capacities as a Project Manager in Construction and Engineering Divisions; Chief Navigation Branch, Operations Divisions; and, for the past eight years, Value Engineering (VE) Officer. Prior to this, he was employed by the Navy Department for 10 years. He has a B.S. degree in Civil Engineering from the Johns Hopkins University.

He was the Department of the Army recipient of the Department of Defense Value Engineering Achievement Award as the Outstanding Individual for fiscal year 1993.

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### ABSTRACT

This paper was developed by a novice in public presentation, who is a doer on the technical end. It deals with the basic approaches to a successful and meaningful Value Engineering (VE) program. It is geared towards people newly involved in VE, novices who are having problems getting the VE message across, and veteran value engineers who would like to hear what another veteran engineer-turned-value engineer has to share. This paper covers such topics as techniques to win over project participants, optimum use of team members, and lessons learned, all of which may help to make VE projects successful. It takes an interesting twist at the end by comparing VE with partnering.

### INTRODUCTION

I would like to begin by sharing with you my introduction to VE, because I got into the field quite by accident. Well, not so much by accident, but rather by force. But I can now say that it was a worthwhile and rewarding experience.

But first, I must ask, "How many of you have ever had experience with public speaking?" I have had very little, so I must admit that I am not much of a speaker. I do, however, consider myself a doer. So I was encouraged after reading the guidelines for preparing and presenting a paper at this conference and finding that they were not looking for orators, but rather they wanted someone to deliver a message with meaning and substance. I hope to do just that, so when we leave here, we will know a little more about VE and the people involved in it. I must also add

that I hope to achieve this not just for your benefit but for mine as well.

Before coming to the Baltimore District's VE office about eight years ago, I was chief of the Navigation Branch in the Operations divisions, where I dealt with dredging, debris removal, and surveying navigable water ways in the Baltimore District. Prior to this, I served in various other positions within the Construction and Engineering Divisions over a period of 15-plus years.

When my supervisor told me that I would be moving to VE, I was devastated at first. The District's VE program was looked upon somewhat as a "stepchild," and it was believed that anyone who was given the position was given it as a reward for failing at other assignments. I thought to myself, "Where did I fail or whose toes did I unknowingly step on?" The District's personnel director informed me that I served at the pleasure of the district engineer, who has the authority to assign me as he sees fit.

Bewildered, I bit the bullet and went to see the district engineer, a "do-it-now" individual with a short fuse and little patience. But much to my surprise, I learned that he was being prodded to get the VE program into gear and make it responsive, productive, and able to generate real savings. What's more, he told me that because of the knowledge and experience I had gained through numerous positions I have held in the district, I was a "renaissance" and, therefore, the one he wanted for the job -- producing

a meaningful VE program.

But now I can as humbly as possible surmise that the district engineer was either brilliant or just lucky when he assigned me to the job. In the eight years I have been associated with it, the Baltimore District VE program has exceeded all goals set by Headquarters, U.S. Army Corps of Engineers. During my tenure as the district's value engineer, the program has generated savings in excess of \$72 million. For this effort, I was awarded the 1993 Department of Defense VE Achievement Award. Most of all, however, I have achieved personal satisfaction with the job.

That's enough about myself. Now, let's get into the real nuts and bolts of VE.

#### THE MAIN INGREDIENT OF A SUCCESSFUL VE PROGRAM

I would like to ask all of you to think of the one thing you believe it takes to make a successful VE program. I think there is one very important main ingredient, which I will reveal at the end of this presentation, so remember what you have thought.

#### APPROACHES TO A SUCCESSFUL AND MEANINGFUL VE PROGRAM

VE should be approached like anything else in your life or in your business; it has a beginning, a middle, and an end, each of which must be properly dealt with.

From the start, everyone involved in a VE program or anyone who comes in contact with it must have belief in it. Having faith in your program and believing that it will succeed is vital.

You may be wondering why I distinguished between those who are "involved in" and those who come "in contact with" VE. Well, we can use top management to illustrate the distinction. Those at the top will come in contact with the program as part of their management tool -- a nice way to say that they will be concerned first and foremost with the resultant savings. They will almost never be involved in the nuts and bolts of the program. But if you want to achieve a better understood and, therefore, a more productive VE program, you need to get top and even middle management involved in it -- from the beginning. If this is all accomplished in a sure-fire manner, then the middle and the end will most likely fall into place.

But this does not hold for each individual VE study, each phase of which must be handled separately for it to be successful.

The beginning of a study must consist of understanding -- getting as much information about the project to the VE team as possible. The more knowledge, the more VE results. So, if a study is being done for a first-time customer or department in your organization, give them as much information about VE as you can give them. The Corps has a booklet titled "VE in the COE" to assist in this task. It even has a catchy, appropriate subtitle: "Everything You Wanted to Know --- But Were Afraid to Ask." I make the book available to users, reviewers, and anyone participating in a study for the first time. In addition, I have prepared a package for new project managers and supervisors within the Baltimore District that explains the District VE program and includes enclosures such as OMB Circular A-131 and the afore-mentioned booklet. I would be more than happy to share this package with you; you can see me after this program or contact me to request a copy.

Participation is another key factor in establishing the foundation of a prosperous study. "The more the merrier," I like to say. Getting as many people who are going to be involved in the project to be part of the entire study from start to end as possible. VE results will most assuredly reflect participation or a lack thereof.

Also key to the development of an effective study are negotiations. Make certain that a price is negotiated to be agreeable to all parties involved, thus avoiding any resultant friction that may arise and hamper the study. Do not go into a study with one side or the other feeling that the negotiations were not equitable. Do not force anyone to do a study for you. Work out a fair price or acquire the services of someone else. Do not think that your cost to do business is always correct; that is what negotiations are all about. I find them to be challenging and satisfying, as well as necessary in accomplishing a study.

The middle of the VE study should be open and informal or semi-formal, but not a black-tie affair. I always tell participants that this is the time to let out frustrations. If, for example, a mechanical engineer had an inkling to be an architect or a landscaper, this is his or her time and chance to present innovative ideas, because in VE, no idea or suggestion is shunned or mocked -- at least not openly.

The end of a study can, at times, have surprising results. This is not always a negative thing. But don't always look for a study to produce mega-buck savings. An end is actually achieved when a study has been successfully completed with the project's functions being produced for the least overall costs, including life-cycle costs. This must be gained without sacrificing quality, aesthetics, operation and maintenance capability, and, most of all, customer's needs. Do not be surprised if this end is achieved in the project's original programming and/or design; just be sure to give credit where credit is due.

I must tell you now that if you think that VE is the "do all" and "end all," than you are in the wrong business. This attitude will never produce a successful program. The only thing I can say to you if you have this view of VE is, "Get out of the kitchen, because it is only going to get hotter." In other words, this attitude will make it much harder to accomplish your job's goals.

#### TECHNIQUES USED TO WIN OVER PROJECT MANAGERS, USERS, AND DESIGNERS

To win over project managers, users, and designers, get them involved in the process early and keep them involved and informed. Advise them that the study is just another review and is open to participation by all parties. Ensure them that their schedules will not be affected by the study and keep to this promise. Let them know that all results will be jointly resolved and reviewed. Remember, VE is not the "do all" and "end all."

Yes, VE is a team effort. However, you must be firm when dealing with a study's participants. Advise them that there are certain guidelines that must be followed and certain reporting procedures that must be maintained, and you intend to make sure that the game plan is followed. Guidelines and procedures are different for each company/organization, so we will not go into them at this time. But I will say that it is very important to know them and convey them to all involved parties.

Once guidelines and procedures have been defined, they should not be altered to satisfy an individual's desires or necessities. I am a firm believer that there is resolution to every VE proposal, providing everyone is open-minded and willing to find a joint resolution. That solution can be acceptance of the original design, full or partial acceptance of the VE proposal, or use of another alternative.

#### OPTIMUM USE OF TEAM MEMBERS

By definition, "to optimize" means "to make as effective as possible." To be effective, one must be informed and motivated, and must know that his or her input is equally important. Optimizing team members in this manner will result in a successful study and project.

All participants of a study are team members, the "lead" members being the study team members and everyone else being the "other" members, a title that, admittedly, belittles the importance of these participants. Let it be known that if a study's members are not informed and motivated right from the beginning, then the study is in deep trouble. Assembled, "lead" members should form a winning team; remember, if they fail, it reflects upon you and your program. So find participants who can do the job. Ask for short resumes from potential "lead" members and seek out those who can perform beyond those submitted pages. What's more, all "lead" members don't need to be seasoned veterans; introducing new blood into a program can give it fresh and additional views and energy.

#### TECHNIQUES TO BEING A FAIR AND IMPARTIAL PROGRAM MANAGER

Again, one of the most important parts of a VE program are the techniques used by its manager. These include communication, patience, open-mindedness, and the ability to see all sides of an argument and to give and take when needed. So, VE managers should let team members know up front how the VE program works, what its purpose is, and that it is a tool to be used to help ensure that a project or program is successful.

A VE manager should also know that he or she is the leader and should act as such by guiding discussions and all study efforts in the proper directions. A manager also decides when enough is enough; it is surely not when a proposal has been beaten to death in hopes of getting it accepted. I say this moment occurs when discussions have sufficiently addressed the advantages and disadvantages of acceptance or rejection. This has a lot to do with the amount of the savings and how much a proposal will improve a project. For smaller savings amounts, for example, you can usually give in to the original design, not only satisfying the user and the designer, but also letting it be known that VE is "user friendly," an important concept that will be beneficial down the road.

Make certain that through some written correspondence, you thank everyone for participating in the study; this can also have great mileage.

### IMPORTANCE OF BELIEVING YOUR PROGRAM WILL SUCCEED

The first order of business in believing that your program will be successful is believing in yourself. You will need a positive outlook to work on a VE study, knowing that your attitude will propel the attitudes of other team members.

With this in mind, you must be confident that your team will overcome obstacles that may appear along the road to a study's completion. I said earlier that the Baltimore District VE program was dormant and lacked visibility. But this massive roadblock was overcome through selling VE as a user-friendly tool, by winning the confidence of VE non-believers, by being level-headed, and by being courteous, no matter how much it hurt.

Low- or no-saving outcomes are an obstacle that can devastate the confidence and function of a VE program. But being satisfied with the efforts you and your team put into each study can produce a by-pass for this potential program clog.

### LESSONS LEARNED AND THEIR BENEFITS

The on-the-job incidents I am about to relate to you were ones in which both sides in the project -- the client and I -- learned something and benefited from the new-found knowledge.

The first happened soon after I became the Baltimore VE. I was working on a study on an administrative building at a military base near Washington, D.C. I went to meet the project manager, who was one of those individuals with a negative attitude towards VE. Being the cool and level-headed individual that I am, I let him have his say, which was pretty extensive. In the end, I told him that we were still committed to doing the study and further told him what it was that we hoped to achieve. During the study's information phase, he still demonstrated a negative attitude. But after the study was completed and he saw the positive results it produced -- we saved about \$2.5 million -- he was sold; so much so, in fact, that he was soon talking up the advantages of VE to other project managers and declaring that he wanted VE studies done on all of his projects. The negative aspect that came out of the study, however, was that the project manager wanted

to write-up the design engineer for not coming up with the ideas produced by the VE study team. But, as I told him politely, there are many ways to perform a function without affecting it -- some just result in cost savings.

My other story involves the Pentagon complex renovation. As you may know, there is a program underway to renovate the Pentagon at an estimated cost of \$1 billion over a 10- to 15-year period. We have completed four studies to date concerning the project. During the first two, the Pentagon was under the management of the General Service Administration, which had little input in our studies. However, between the second and third studies, Pentagon management was changed to the Washington Headquarters Services (WHS), which took an active role in the last two VE studies, including design and construction aspects of the project.

Enter, at this point, the director of engineering for WHS: Dr. Georgine Glatz. Dr. Glatz was under the assumption that the best design for the Pentagon project was already obtained, and after the information meeting for the third study, many of the VE study team members, including myself, did not believe that we were going to get far. But much to her surprise, the product as designed was not the least-overall-cost one. In addition to savings of almost \$12 million the VE study produced, the study revealed a major problem with project scheduling and staging areas. These results have prompted WHS to revisit scheduling and staging areas of the Pentagon project.

After the presentation meeting, which, at times, became very heated, Dr. Glatz thanked us for our efforts and told us how pleased she was with our results. She also said that she would like us to do a fourth study on the Pentagon. She wasn't kidding, and after the completion of the 35% design of Wedge I, she had us do the study. Although she had appeared to be sold on VE, it was still an uphill battle getting her to buy the fourth study. But she did, and after the dust cleared, the resultant savings were in excess of \$15 million, results that were well worth the effort.

So, learn your lessons and learn from your lessons and you, too, can benefit further with VE.

### VE LIKED TO PARTNERING

The new buzz word on the block these days is

"partnering." But a close examination of this concept shows that partnering has been around for a long time in the form of VE.

Partnering is the process of bringing groups from different organizations together to create one team that collaborates at an exceptionally high degree to achieve a set of common and complimentary objectives. Similarly, VE is an organized effort that analyzes a function of construction, manufacturing, and equipment to achieve that function at the least-overall cost.

Partnering is a cutting-edge, proactive approach involving shared responsibility. Likewise, VE has introduced and continues to introduce innovative ideas and approaches. This is what VE is all about.

Partnering techniques provide a formal recognition of interdependence and the development of a win/win attitude right from the beginning of a project. In a parallel sense, the obligation of VE is to ensure that all proposals are thoroughly reviewed and comments are equally weighted, for it is the purpose of VE to get the most "bang for the buck."

VE is also about fun. Not in the sense of "funny" fun, but in the sense of gaining satisfaction through a job well-done. I have enjoyed VE and have, at times, had fun with it in the traditional sense of the word.

To end, I would like to give you my answer to my original question. The main ingredient for a successful VE program is common sense.