

## In This Issue

Choosing the right team  
Page....1

Keys to a successful team

Meeting for productivity  
Page....2

Team Development  
Page....3

Innovative Idea Spotlight  
Page....4



PUBLISHED QUARTERLY - WINTER  
ISSUE 1 YEAR

2016

# Value Engineering

## WSDOT

Embracing Creativity and Innovation

## Choosing the right Team Members for Effective Value Engineering Workshops

### Who should be selected as a member of the Value Engineering team for your project?

A Value Engineering team may be comprised of Subject Matter Experts (SME) within the agency and from other state, local and federal agencies. Consultants with specialized skills, experience or knowledge may also be Contracted to act as team members.

Additionally members of the VE team may include members who represent groups and organizations with an interest in or who may be impacted by the project under study. These team members should be selected for the contextual insight they can provide and can include representatives from local agencies, environmental & community groups, FHWA, Railroad and Transit authorities to name a few.

When choosing your team members it is a good idea to match them with the project at hand. Firstly, consider the major elements of the project and risk issues that may be extant, use these to determine the disciplines that need to be represented in the composition of Value Engineering team. A Team well matched to a project under study will enhance the efficacy of any value engineering study. The appropriate team members ensure the correct knowledge base and experience is present to apply useful innovations and solutions to the project.

It is recommended that members of the project design team should not be included as members of the VE team. Design Team members having a profound knowledge of the project are invaluable to the VE team in disseminating information about the project and for consultation during the study. However this same profound knowledge may result, in some cases, to hinder creativeness and objectivity when the design team also acts as the VE team.



“Individual talents get magnified many times over through the collective lens of an effective team.”

*Dalal Haldeman*



### FHWA Regulation 23 CFR PART 627 – Value Engineering

This Regulation prohibits individuals directly involved in the design of a project from participating on the VE team for project under study.

It is important for the Project Manager and Design team to be available for the VE team to consult. This is especially critical early in the study to provide information about the project that may help the VE team focus on areas where the most value can be realized.

# What are the keys to a successful team?

## Clear objectives

There are mutually-agreed aims and objectives, and everyone has a clear understanding of these.

## Understanding roles

Team members have a clear understanding their role as a VE team member

## Understanding the VE processes

Team Members should understand the Value Engineering process and how each of the steps of the Job Plan contribute to the success of the workshop.

## Open Communication

Each team member is allowed the opportunity to communicate their concepts and ideas in an open manner without judgment.

## Good Leadership

The team trusts the team leader and feels that it is led in an appropriate way.

## Support and trust

People help each other by listening, evaluating, offering ideas, encouraging experimentation and giving support.

## Co-operation

There is a readiness to be involved and committed. Individuals' abilities, knowledge and experience are pooled and used by the team.



## Setup Your Meeting for productivity



Where team members sit in the room will shape the effectiveness of the workshop and different seating arrangement will be more effective for differing types of meetings.

In example, a Training environment should be a U-shape. This type of setup allows the instructor to have one on one interaction with the students and promotes equality.

A Value Engineering workshop, requires a very high level of inter-action among team members. A seating arrangement should be chosen that encourages robust creativity and Problem solving and one that places all Team members on an equal footing.

A Circular type arrangement works best for this. This arrangement ensures that there is no one at the “Head” of the table as well as working to cultivate a feeling of contribution for all team members

For comprehensive information about effective meeting room arrangements see Paul Collins presentation titled, [Guidelines for Meeting Room Seating Arrangements](http://www.jordan-webb.net), at: [www.jordan-webb.net](http://www.jordan-webb.net)



## Team Development

Tuckman's model of group development states that there are four stages to the development of any team.

- Forming
- Storming
- Norming
- Performing

This model from Tuckman, proposes that all these phases are necessary for a team to develop, meet challenges, tackle problems, find solutions and deliver results.

## Navigating the Stages

### Forming

In this stage the team are still acting as independent members, they individually are learning about the project, they are orienting themselves and ascertaining where they fit in.

This stage is important to allow the team members to get to know a little about each other and what the roles and expectations for the workshop are.

Ice Breakers should be employed during this stage. Beyond simple introductions and a little about yourself there are many short activities that can help people become comfortable with one another and begin thinking like a team.

*Importance of Forming Stage:  
Allows the team members to get to know a little about each other*

*One great way to accomplish this during a Value Engineering study is have a team lunch some place comfortable after the site visit on Day one.*

### Storming

During Storming, the team is accessing what contributions or expertise the other members are bringing to the team, making personality judgments, and generally forming their opinions about the rest of the team.

While the robust discussion that occurs during this time can assist in making a stronger team as they resolve conflict and settle into their roles, disagreements and personality conflict must not be managed. This type of tension will quickly de-motivate a team and members will not feel comfortable contributing and will lessen its overall effectiveness.

*Importance of Storming Stage:*

- Resolve Disagreements Positively
- Emphasize tolerance
- Manage dominant personalities
- Encourage Participation

*Foster an atmosphere of patience and tolerance of views and ideas.*

### Norming

Team members begin to understand one another's personalities, opinions and views, and most importantly accept them. They understand and embrace their role in the team and begin to work together collaboratively.

*Importance of Norming Stage:  
Team members begin to work toward common goals. Norming must be accomplished before a team can perform effectively.*

*Guide team in constructive communication techniques to assuage conflicts*

### Performing

Team members know where they fit in, what is expected of the team, conflicts have been resolved and they are enthusiastic to achieve success in the workshop.

Disagreement will still occur in the performing stage, but if the proper groundwork in good communication and trust has been established, team members will use conflicting opinions as a tool to examine ideas and to amalgamate them into great solutions.

*It is Normal for a team to regress to the Storming and Norming stages throughout their time as a team and work their way back to performing.*



# Workshop Spotlight Innovative Idea

## Allow one additional hour per night for Concrete Panel Replacement

In order to replace the failed Portland Cement Concrete Pavement panels along Interstate 5, the panels will be removed, subgrade will be treated and concrete will be poured. The concrete curing time needed before opening to traffic is 2 - 2.5 hours.

Panels require 1 hour each to remove the existing panel, treat the subgrade, and pour the new panel. With the 4.5 hour closure currently allowed for lane 3 work, only 2 hours are available to replace panels prior to curing.

If the lane 3 and lane 4 closure hours are extended by 1 hour, this will increase productivity by:

replacing 3 panels / night closure instead of 2 panels / night. The ultimate savings is 1 month of contract duration.

### Assumptions/Calculations

Traffic Control = \$15,000 / night closure.

Each night concrete plant is operated =

\$2,500/night closure = 2 panels/crew

Additional hour night closure = 3 panels/crew =

10% unit cost savings

Panel Cost Each = \$475/SY x 20SY = \$9,500/Panel

With additional hour Panel Cost Each =

\$9,500/Panel (1- 10%) = \$8,550/Panel



### Night Closures extended by 1 hour a night SAVED:

- 23 night closures
- \$345,000 in traffic control savings
- \$57,500 night Concrete plant Operations
- \$65,550 Savings on panels due to Construction efficiencies
- Additional saving in reduction of administrative costs

**Total Savings =  
\$730,000 and  
23 Nights of road  
closures**