

WHAT IS VALUE ANALYSIS?

Value Analysis (aka Value Engineering) is a function-oriented, systematic team approach used to analyze and improve value in a project, product, or process. It is a powerful methodology for solving problems and reducing costs while improving performance and quality. “Value” can be summed up with the following equation:

$$\text{Value} = \frac{\text{Performance}}{\text{Cost} + \text{Delivery}}$$

WORKSHOP JOB PLAN

Caltrans’ VA workshops follow the proven successful VA methodology job plan. The typical 40 hour six phase workshop includes; Information (4 hours), Analyze (4 hours), Creativity (8 hours), Evaluation (8 hours), Development (12 hours), and Presentation (4 hours). Separate Preparation and Implementation meetings (2 hours each) are also very important in the job plan.

VALUE ANALYSIS MIND SET

VA uses a multi-disciplined team of experts to provide a broad perspective of ideas that solve difficult engineering problems. The challenge is to be innovative. VA provides a forum for SME’s to think “outside the box”. It’s with an “open mind” and a “no boundaries” attitude that allows the Team to achieve significant, meaningful results.

Value Analysis Team

Caltrans’ teams of VA professionals are committed to promoting successful teams and are available to answer questions addressing your VA Training needs:

Statewide VA Program Manager:

Troy Tusup
(916) 653-3538

Statewide VA Administrator:

Stephen Poole
(916) 653-4436

North Region:

Mike McCalligan (DVAC)
(530) 741-5499

District 4:

Binh Dang (DVAC)
(510) 286-5873

Central Region:

Jennifer Nishikawa (DVAC)
(559) 243-3449
Jennifer Armstrong (asst. DVAC)
(559) 243-3579
Robert (Bob) Johnson Jr. (asst. DVAC)
(559) 243-3564

District 7:

Dale Benson (DVAC)
(213) 897-2934

District 8:

Nivine Georges (DVAC)
(909) 383-6043

District 11:

Chili Cilch (DVAC)
(619) 688-4217

District 12:

Son Nguyen (DVAC)
(949) 724-2138

FHWA VA Contact:

Jeff Holm
(916) 498-5021

<http://www.dot.ca.gov/hq/oppd/value/index.htm>



Value Analysis

Training Guide



July 2016

TEAM MEMBER TRAINING

The HQ VA program offers a 1-day training workshop on "How to be an Effective Value Analysis (VA) Team Member". This course will help potential VA team members to understand the VA process as embraced by Caltrans/FHWA.

Effective VA Team Member training focuses on preparing subject matter experts (SME) to be active participants in the VA study. SMEs from all functional units are welcome to participate.

This interactive workshop is designed to teach VA team members their roles and responsibilities as well as expected behaviors and attitudes. Participants will also learn federal mandates, Caltrans policy, and VA guidance for the VA process. In addition, through exercises in team dynamics and a mock VA study, participants will learn:

- Performance Measures
- Criteria Attributes
- Function Analysis (FAST diagram)
- Brainstorming
- Idea Evaluation
- Alternative Development

This is a Capital Project Skill Development program course. Participants can register through Staff Central.

The LMS Course Code is 101335.

SEMINARS SERIES

The VA Program offers 1 – 2 hour seminars which can be customized for any audience. The focus of this seminar is to educate, engage with stakeholders, and to market the many different applications of VA for project delivery. Each seminar will update:

- VA/VE federal legislation
- Benefits of VA
- Optimizing VA for project delivery
- Best Practices
- Resourcing VA studies in project work-plans
- Integrating VA with other PM tools such as risk management, CCS, practical design, performance based decision making, LCC, etc...

WHAT CAN VA DO FOR YOU?

Project Managers: using VA to solve complex problems, building stakeholder consensus, updating risk registry and cost contingencies.

Functional Managers and District Decision Makers: resourcing VA efforts, streamlining delivery, and building stakeholder consensus.

Local Agencies: meeting federal mandates, building stakeholder consensus, engaging Caltrans, multi-modal solutions, practical design, and partnering.

Contact the Statewide VA Program Manager or your local DVAC for more information or to schedule a seminar.

WHY VALUE ANALYSIS?

Question: What is the difference between VA and other problem solving methods?

Answer: Function Analysis and Quantifiable Performance Measures.

Function Analysis is the cornerstone of the VA methodology. Expert team leaders perform the analysis and create the Function Analysis System Technique (FAST) diagram. The FAST diagram visually describes the “How” and “Why” we solve the project’s purpose and need. By describing the problem functionally with a two word verb-noun description, team members can explore innovative ideas to perform the same function more effectively. FAST is also an excellent communication tool for stakeholders to better understand the problem and the solutions.

Project delivery is a complex balancing act between cost, schedule and system performance. Using the VA performance measure is a valuable tool for decision makers to balance these variables. In today’s VA study, we use technology and mathematics to quantify the benefits of the VA alternatives against the baseline design. Optimizing cost, schedule, and performance to meet the purpose and need of the project appeals to decision makers and stakeholders alike.

These two techniques are what make VA the premier project management tool for project delivery. When performed correctly by a trained team, results can be amazing. However, without dedication and the time commitment needed, results may vary drastically.