



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
441 G STREET, NW
WASHINGTON, DC 20314-1000

07 May 2015

CECW-CE

MEMORANDUM FOR MSC Value Program Managers/District VEOs

SUBJECT: COVE #2015-02, USACE VE Workshop Standard and Evaluation Index

1. To ensure statutory intent is clearly identified and addressed, USACE policy and procedures have adopted industry accepted practices for Value Engineering (i.e. ASTM E1699 and SAVE International® Value Methodology Standard). To further clarify this long standing policy, the subject is issued for immediate implementation.
2. The "USACE VE Workshop Standard and Evaluation Index" were developed to establish the expectations of what "must" be accomplished in order to meet and demonstrate compliance with the statutory and Federal requirements for VE. Please refer to the VCOP SharePoint Site for the HQ FAST-1 and FAST-2 Workshop proceedings for the context behind the development this Standard.
3. The key requirements of the Standard include a multidisciplinary workshop format; performed by agency/contract personnel qualified in the Value Methodology (i.e. CVS) with the expert application of continuous function analysis; utilization of the Value Methodology Job Plan; and use of the Workshop Evaluation Index to measure performance/compliance with policy, management procedures, workshop effort (including pre/post), and outcomes.
4. Any questions should be directed to the undersigned at (202) 761-5533, or for more information visit the USACE VE website at www.usace.army.mil/ValueEngineering.aspx.

A handwritten signature in black ink, appearing to read "Jeffery T. Hooghouse", with a long horizontal line extending to the right.

JEFFERY T. HOOGHOUSE, AIA, CVS
Chief Value Officer (CVO)



**US Army Corps
of Engineers®**
Headquarters



COVE POLICY LETTER # 2015-02

May 7, 2015

SUBJECT: USACE Value Engineering (VE) Standard & Evaluation

The purpose of this document is to enhance the application of industry standards for the use of Value Engineering (VE) within USACE. This standard emphasizes key functions that must be accomplished within the application of value engineering to better achieve the spirit and letter of the federal requirements. This USACE VE Standard establishes the expectations of what must be accomplished in order to meet the expectations and statutory intent of VE. The value engineering industry has primarily defined VE with two key documents, ASTM Standard E1699 and the SAVE International® Value Methodology (VM) Standard. Identified herein are the key functions of the industry standards that are critical to the application of VE within the USACE area of responsibility (AOR). Therefore, the USACE VE Standard is a compilation of the ASTM E1699 standard, the SAVE International® VM Standard, and this document. The standard is applicable to programs, projects, products, and processes; and for simplification, this standard will use the term “project” to refer to all four.

The USACE VE Standard includes:

1. Use of the industry accepted standard VE process
2. Application of the process in an intensive workshop format
3. Use of a multidisciplinary team of subject matter experts
4. Facilitation of the process by a qualified team leader experience/certified in the application of the Value Methodology (i.e., Certified Value Specialist® or CVS®)
5. Focus on expanding the solution-set, analyzing functions, and supplementing the knowledgebase of the project delivery team (PDT)

The SAVE International® VM Standard defines the six step Job Plan (Information, Function Analysis, Creativity, Evaluation, Development, and Presentation phases), the requirement to have a multidisciplinary team, led by a qualified team leader with expertise in the application of this process, and in a workshop environment. The USACE VE Standard recognizes, accepts, and adopts industry standards as being essential components that create the framework for success; however, what is accomplished within this framework is what is truly most important. Merely stepping through the Job Plan does not guarantee the desired outcome is achieved. The intent of this supplement to the industry standards is to improve the application, consistency and outcome of the USACE VE process.

VE is uniquely different from other existing processes, tools, and techniques used in project development or improvement. The overall objective of VE is to make projects better specifically by challenging and testing the proposed solutions. The term challenge, in this context, is not intended in any way to criticize the proposed solutions but rather to push against the boundaries or project parameters looking for opportunities to improve the value of the project.

To better realize this objective, the USACE VE Standard puts greater emphasis on the following functions that must be accomplished within the application of the Job Plan:

Expand Solution-Set

Expand the solution-set to identify alternatives not previously considered that may optimize the efficiency and effectiveness of the solution.

- Foster an environment to challenge constraints, criteria, and decisions
- Exploit misperceptions, misinformation, misunderstandings, disconnects, assumptions, and/or perceived constraints to identify targets of opportunity

Analyze Functions

Analyze functions to specifically understand the rationale of the proposed solution and validate that it achieves the project objectives in the most efficient and effective manner.

- Extract knowledge to create a common understanding of the required project functions
- Distill the knowledge obtained into basic elements that define “what the project must do” rather than how it is being done (Function Analysis)
- Force a collaborative dialogue by encouraging multidisciplinary interaction with thought-provoking questions to stimulate creative thinking

Supplement Knowledgebase

Supplement the PDT with additional knowledge and expertise in the subject matter to enrich the knowledgebase.

- Infuse expertise to achieve different perspectives on the subject or to scrutinize areas that may not have been thoroughly explored previously
- Expand knowledge with the addition of expertise not included on the PDT

These are crucial functions that **MUST** occur in order to achieve successful results. It is also very important to understand the Job Plan is a sequential process that builds off the previous step, where Function Analysis is a common thread throughout. Each step provides a unique and critical component that contributes to the success of the overall outcome. Although the steps are clearly listed within the SAVE International[®] VM Standard, it is important to further expand USACE expectations within each step. These expectations will be further defined in the latest version of the “USACE VE Community of Practice- Manual of Practice” and made a part of the this Standard by reference.



Jeffery T Hooghouse, AIA, DBIA, CVS
Chief Value Officer
US Army Corps of Engineer, HQ

**Note: Refer to V COP SharePoint for actual documents embedded in this word file.*

TRANSMITTAL - HQ Final FAST 1 & 2 Workshop Outputs





HQUSACE FAST #1 Workshop Report:

Workshop #1 Report






Adobe Acrobat Document

HQUSACE FAST #2 Workshop Report, Revised FAST Diagram, and Evaluation with Weighting:

| Workshop #2 Report | FAST Diagram | FAST Diagram (Native) | Evaluation of FAST 1 & 2 Workshop |
|-------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
|  Adobe Acrobat Document |  Adobe Acrobat Document |  USACE VE FAST rvsd 12-15-2014.vsd |  Evaluation_FAST1&2.xlsx |

HQUSACE FAST 1 & 2 Workshop Graphics:

| Key Functions Map | USACE Standards | Evaluation |
|-------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
|  Adobe Acrobat Document |  Adobe Acrobat Document |  Adobe Acrobat Document |

HQUSACE FAST 1 & 2 Workshop Presentation:

Presentation



Final-Presentation_Fast1&2-Workshops.ppt

USACE VE Workshop Standards and Evaluation Template:

USACE VE Workshop Standards and Evaluation Template



USACE_VE-Standard.docx



USACE_VEWorkshop_EvaluationTemplate_v

USACE VE Workshop Standard COVE:

Commander's Intent (COVE)

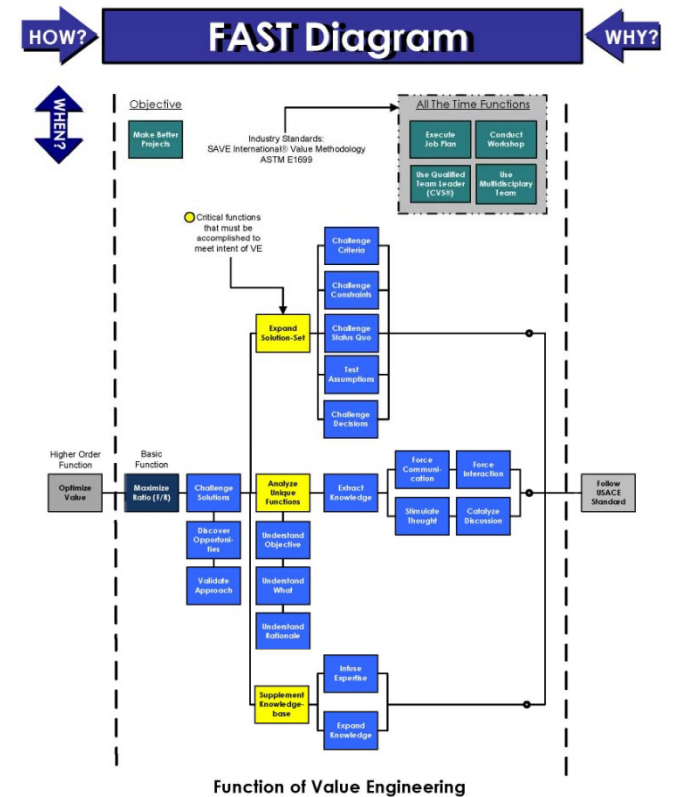
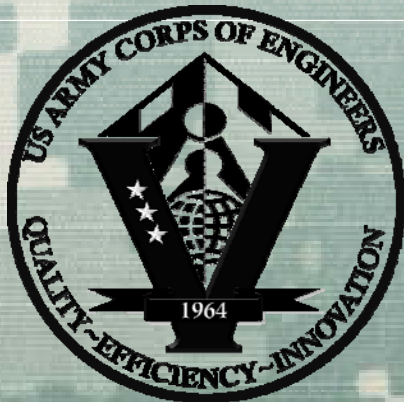


USACES-VE-WorkshopStandard_COVE.docx

VALUE TEAM PRESENTATION

Value Engineering FAST 1 & 2 Workshops for HQ USACE CVO

July 15-18, 2014 & November 11-14, 2014



VALUE TEAM

Value Team Leader

John L. Robinson PE, CVS-Life

Strategic Value Solutions, Inc.

Value Team Members – FAST Workshop #1 July 15-18, 2014

| Name | Organization | Role |
|--------------------------------|-----------------------------------------------------|-------|
| Jeff Hooghouse, AIA, DBIA, CVS | USACE HQ Chief Value Officer | SME |
| Benjamin Robertson, PE, CVS | USACE Louisville District Value Engineering Officer | SME |
| Kyle Shafersman, PE, CVS | SVS | SME |
| Ryan Robinson, AVS | SVS | Admin |

Value Team Members – FAST Workshop #2 Nov 11-14, 2014

| Name | Organization | Role |
|--------------------------------|-----------------------------------------------------|-------|
| Jeff Hooghouse, AIA, DBIA, CVS | USACE HQ Chief Value Officer | SME |
| Carole Lee Rankin, PE, CVS * | USACE Deputy Chief Value Officer | SME |
| Benjamin Robertson, PE, AVS | USACE Louisville District Value Engineering Officer | SME |
| Ryan Robinson, AVS | SVS | Admin |

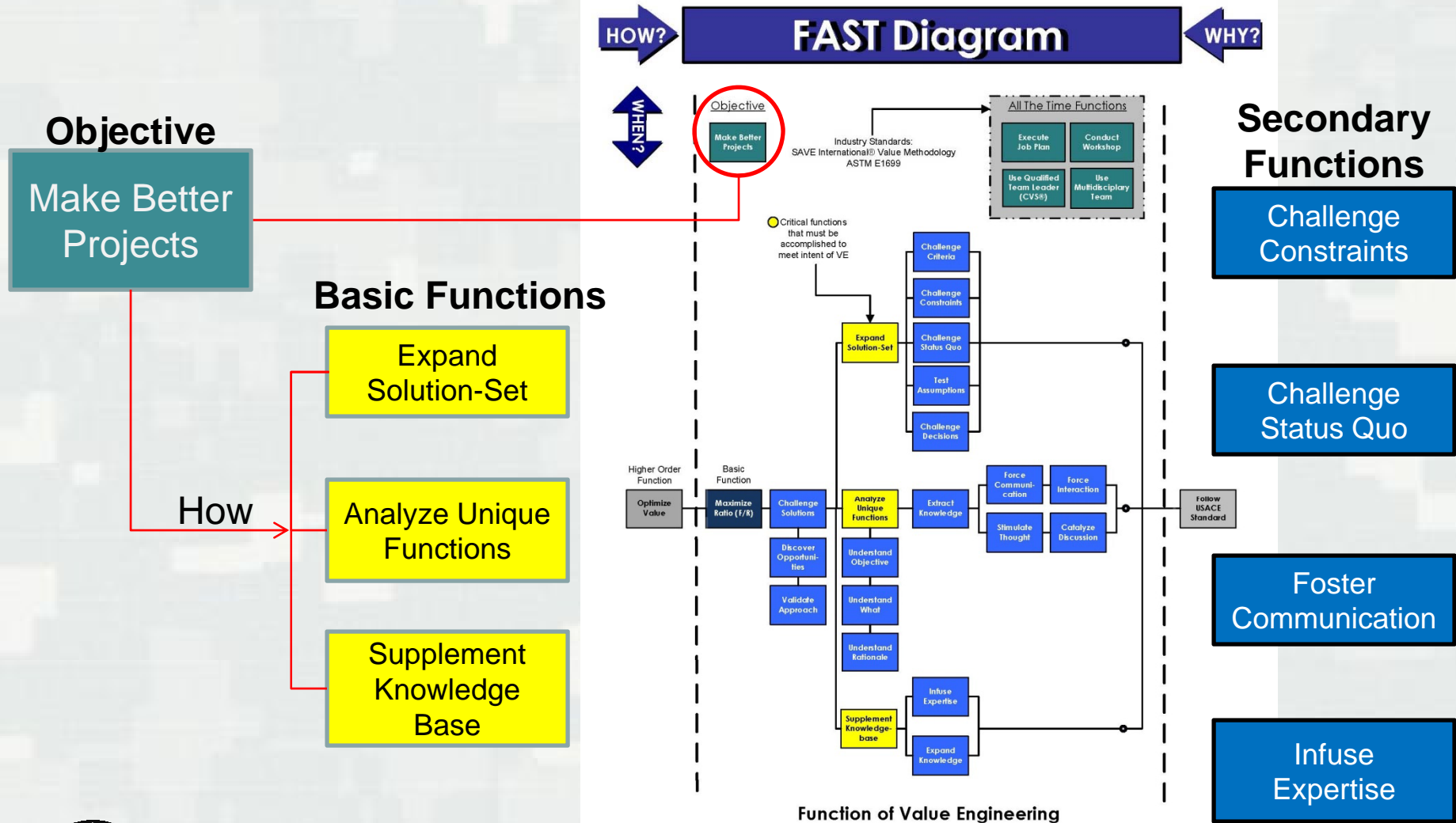


* Via Conference Call

SUPPORT VALUE ENGINEERING IT PAYS



Answer the Question – What Is VE!



SUPPORT VALUE ENGINEERING IT PAYS



So How Do We Accomplish These Functions? – Follow USACE Standards

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To better realize this objective, the USACE VE Standard puts greater emphasis on the following functions that must be accomplished within the application of the Job Plan:

Expand Solution-Set

Expand the solution-set to identify alternatives not previously considered that may optimize the

CECW-CE

...emphasize key functions that must be accomplished...

MEMORANDUM FOR ALL MSC Val

SUBJECT: Establish USACE Standard

...what must be accomplished to meet intent of VE...

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understanding of the required project functions elements that define "what the project must do" (on Analysis) Facilitating multidisciplinary interaction with thought-provoking questions to stimulate creative thinking

...workshop format... multidisciplinary team of subject matter experts... qualified team leader...

...expand solution-set... analyze functions... supplement knowledgebase of PDT

and expertise in the subject matter to enrich the perspectives on the subject or to scrutinize areas that may not have been thoroughly explored previously expertise not included on the PDT

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...intent is to improve outcome and consistency...

...make projects better... challenging and testing the proposed solutions... expand solution set... analyze functions... supplement knowledge base

JEFFERY T. HOOHOUSE, AIA, CVS
Chief, Office of the Value Engineer



SUPPORT VALUE ENGINEERING IT PAYS



How Do We Know When VE is Accomplished?

Evaluation Index:

• Compliance with Requirements Weighted @ 15%

- Analyze Functions
- Workshop Environment
- Follow Job Plan
- Multi Disciplinary Team
- Qualified Team Leader
- Expand Solution Set
- Supplement Knowledge

• Management Procedures Weighted @ 20%

- PDT & Stakeholder Participation
- Full-time VE team participation
- Appropriate amount of time
- VMP Developed
- Scoping Meeting Held
- VE Materials Prior to Workshop

• Workshop Weighted @ 50%

- Functions vs. Activities
- Meaningful Functions
- Challenge Status Quo
- Appropriate Experience
- Select High Value Alternatives
- Clearly Written Alternatives

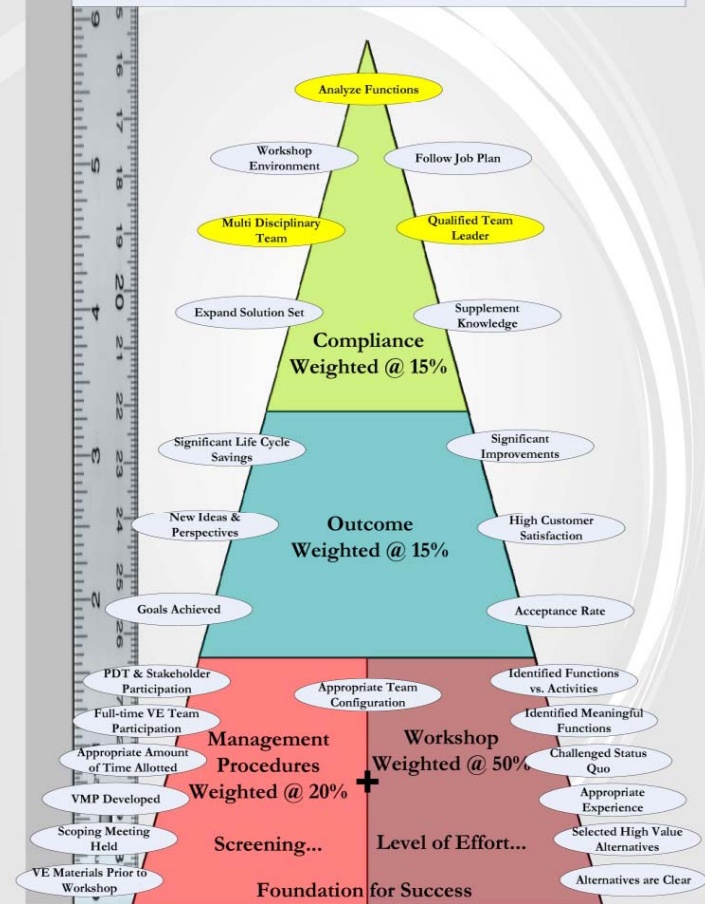
• Outcome Weighted @ 15%

- Identified Significant LCCA
- Identified Significant Improvements
- Identified new perspectives and alternatives
- Acceptance rate 35% or greater
- Goals and Objectives achieved



US Army Corps of Engineers Value Engineering Standard
Measurement Attributes & Worth

Raise the Bar on Quality by Measuring Adherence to the USACE VE Standards



Version 1.0.0



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