



Department of Defense
DIRECTIVE

May 7, 1984
NUMBER 4245.8

USDR&E

SUBJECT: DoD Value Engineering Program

- References:
- (a) DoD Directive 5010.8, subject as above, May 12, 1976 (hereby canceled)
 - (b) DoD Instruction 7110.2, "Budget Guidance for Value Engineering," April 3, 1972 (hereby canceled)
 - (c) DoD 5025.1-M, "DoD Directives System Procedures," April 1981, authorized by DoD Directive 5025.1, October 16, 1980
 - (d) Federal Acquisition Regulation (FAR), Chapter 1, Subchapter G, Part 48, April 1, 1984
 - (e) Military Standard (MIL-STD) 1771, "Value Engineering Program Requirements," December 30, 1981
 - (f) DoD Directive 4245.3, "Design to Cost," April 6, 1983
 - (g) DoD FAR Supplement, April 1, 1984

A. PURPOSE

This Directive:

1. Replaces references (a) and (b) to update policy, procedures, and responsibilities for the DoD Value Engineering (VE) Program.
2. Authorizes DoD 5010.8-H, "Value Engineering," September 12, 1968, to remain in effect until a revision is issued consistent with reference (c). The revised DoD 5010.8-H shall be renumbered DoD 4245.8-H.
3. Continues the DoD VE Committee.

B. APPLICABILITY

This Directive applies to the Office of the Secretary of Defense, the Military Departments, the Organization of the Joint Chiefs of Staff, and the Defense Agencies. The term "DoD Components," as used herein, refers to the Military Departments and the Defense Agencies.

C. DEFINITIONS

1. Value Engineering. An organized effort directed at analyzing the function of systems, equipment, facilities, services, and supplies for the purpose of achieving essential functions at the lowest life-cycle cost consistent with required performance, reliability, maintainability, interchangeability, product quality, and safety. (Terms such as value analysis, value control, value improvement, and value management are synonymous.)

2. VE Change Proposal (VECP). A change proposal submitted under the VE clause in a contract that results in a net life-cycle cost reduction to the Department of Defense and requires a contract modification.

3. VE Contract Clauses. Part 48, Subchapter G, Chapter 1, of the FAR (reference (d)) requires VE clauses to be included in most DoD contracts. The two types of VE contract clauses are a VE incentive (VEI) clause and a VE program requirement (VEPR) clause. The VEPR clause shall be used in conjunction with MIL-STD 1771 (reference (e)).

4. VE Proposal. A specific change submitted by DoD personnel as a result of their use of VE techniques. The term also is used for a change submitted by contractor personnel that does not require a contract change to be implemented.

5. VE Task Teams. Teams of professionals who specialize in engineering, production, procurement, and estimating and who are organized to develop and submit VE proposals on high-cost areas to the appropriate decisionmaking authorities. Normally they are led by a value engineer or a person trained in VE.

D. POLICY

It is DoD policy to promote VE actions that will reduce cost and improve the productivity of DoD in-house and contractor resources.

E. PROCEDURES

1. The DoD VE Program includes:

a. Training engineering and other personnel in the principles of VE so that they may use these techniques in carrying out their normal duties.

b. Use of the VE clauses under reference (d) to reduce overall cost, improve quality and other product characteristics, increase productivity, and encourage the submittal and implementation of VECPs.

c. Selective use of VE task teams internally and by contractors to investigate high-cost areas and recommend cost-reducing alternatives whenever costs are excessive or significantly exceed "design to cost" goals, or whenever designs far exceed operational requirements, or whenever spare parts prices exceed intrinsic value.

2. The VE process shall be used to support "design to cost" objectives for acquisition and ownership costs in accordance with DoD Directive 4245.3 (reference (f)).

3. Although the appropriation benefiting from the VE savings normally shall be used to bear the costs of VE activities, VE activity during design and development shall be funded by the current research, development, test, and evaluation (RDT&E) appropriation or other appropriate monies, or both. Contractor shares of VE savings shall be funded by the appropriation cited in the contract or transferred from the benefiting appropriation.

F. RESPONSIBILITIES

1. The Under Secretary of Defense for Research and Engineering (USDR&E) shall:

- a. Provide overall policy guidance for the DoD VE Program.
- b. Maintain and revise, when necessary, DoD 5010.8-H (to be renumbered DoD 4245.8-H) consistent with DoD 5025.1-M (reference (c)).
- c. Issue supplementary guidance as may be required.
- d. Review DoD Component results and future plans.
- e. Provide for recognition of exemplary VE accomplishment by DoD in-house and contractor personnel and activities.

2. The Heads of DoD Components shall:

- a. Use VE in acquisition, service, support, construction, and operations and maintenance (O&M) activities.
- b. Establish a VE point of contact for the Component and at each Component level engaged in acquisition, support, construction, and O&M activities.
- c. Ensure that funds necessary for operating the DoD VE Program and expenses, such as testing and evaluating proposals, are included in annual budget requests. They shall establish procedures to provide the necessary funds for training, projects, development and testing of internal or contractor VE proposals, and payment of the contractor share of savings that occur in future budget years or in different budget accounts.
- d. Establish and maintain an annual Component DoD VE Program plan, including, but not limited to, training, staffing, contractual projects, task team efforts, and in-house projects. Progress against the plan shall be reviewed at least semiannually by senior DoD Component officials.
- e. Establish VE goals for subordinate in-house and contractual activities. Activities responsible for managing major systems, such as project offices and system program offices, shall set VE goals.
- f. Apply VE to identify spare parts whose prices are excessive and use VE to support actions to reduce unnecessary cost. Contracts for spare parts and repair kits of \$25,000 or more, for other than standard commercial parts, shall contain a VE clause (DoD FAR Supplement, reference (g)).
- g. Establish and maintain criteria by which VE investment opportunities will be evaluated and funded.
- h. Evaluate and process, objectively and promptly, contractor and in-house VE proposals.
- i. Ensure managers (program and project, procurement, contract administration, engineering, and support) motivate contractors and DoD personnel to develop and submit VE proposals.

j. Provide training in "Principles and Applications of Value Engineering (PAVE)" and "Contractual Aspects of Value Engineering (CAVE)" to contract negotiators, contracting officers, other procurement and contract administration personnel, engineers, and program management office staffs.

k. Develop criteria and procedures for providing recognition awards to individuals and organizations for exceptional VE accomplishments.

l. Provide annual nominations for the DoD Honorary VE Awards Program.

G. DoD VE COMMITTEE

1. Organization and Management. The DoD VE Committee shall:

a. Be chaired by a representative of the Office of the Deputy Under Secretary of Defense for Research and Engineering (Acquisition Management), (ODUSD(AM)), Office of the USDR&E (OUSDR&E).

b. Be composed of senior representatives from DoD Components.

c. Meet periodically at the call of the chair.

2. Functions. The DoD VE Committee shall:

a. Review progress and problems.

b. Recommend policy changes.

c. Exchange concepts and techniques.

d. Review honorary award nominations and forward its recommendation to the DUSD(AM), OUSDR&E.

H. INFORMATION REQUIREMENTS

1. DoD Components shall submit to the USDR&E one summary report covering the first 6 months and another for the entire year within 45 days after the end of the reporting period in accordance with enclosure 1.

2. The report specified in subsection H.1., above, has been assigned Report Control Symbol DD-DR&E(SA)1138.

I. EFFECTIVE DATE AND IMPLEMENTATION

This Directive is effective immediately. Forward two copies of implementing documents to the Under Secretary of Defense for Research and Engineering within 120 days.



WILLIAM H. TAFT, IV
Deputy Secretary of Defense

Enclosure - 1
Statistical Summary of VE Actions

STATISTICAL SUMMARY OF VE ACTIONS

- A. DoD Component: _____ FY: _____
- B. Number of actual full-time VE personnel (excluding clerical and secretarial) at the end of the reporting period _____
- C. In-house Studies (VEPs)
1. Number of proposals developed _____
 2. Number of proposals approved _____
 3. Estimated net dollar savings to the Department of Defense
 - a. Current fiscal year \$ _____
 - b. Budget next year \$ _____
 - c. One additional year \$ _____
 4. Cost to develop proposals in C.1. and to implement proposals in C.2., above \$ _____
 5. Return on investment ((C.3.a. + C.3.b. + C.3.c.)/C.4., above) _____
- D. VECPs
1. Number received _____
 2. Number approved _____
 3. Estimated net dollar savings to the Department of Defense
 - a. Current fiscal year \$ _____
 - b. Budget next year \$ _____
 - c. One additional year \$ _____
 - d. During the remaining contract sharing period \$ _____
 4. Cost to develop proposals in D.1. and to implement proposals in D.2., above \$ _____
 5. Return on investment ((D.3.a. + D.3.b. + D.3.c. + D.3.d.)/D.4., above) _____
- E. Number of program requirement clauses placed in contracts this year _____
- F. Funds specifically set aside this FY for VE investment (excludes personnel and overhead: report only such direct costs as development, implementation, and testing identifiable to specific VE projects)

Appropriation:

1. RDT&E \$ _____
2. Procurement \$ _____
3. O&M \$ _____
4. Total \$ _____

G. Training: Number of personnel trained during this FY in VE

1. Principles and applications (40 hours or more) _____
2. Contractual aspects (40 hours or more) _____
3. Orientations (4 to 40 hours) _____
4. Seminars (2 to 4 hours) _____

H. For major programs (with estimated total RDT&E costs greater than \$200 million or with total procurement (production) costs greater than \$1 billion), submit the following data:

1. Program name
2. Number of VECs submitted
3. Number of VECs approved
4. Estimated net dollar savings to the Department of Defense during the sharing period
5. Estimated dollar value of the contractor's share of savings reported in H.3., above

I. Provide narrative of qualitative (nondollar) accomplishments resulting from DoD VE Program.

INSTRUCTIONS

A. Item C

1. A study or project may be reported as an in-house VE study only if (a) it was identified as a VE project before presentation of specific proposals for decisions or (b) evidence of the application of elements of the VE discipline is available (such as functional analysis, evaluation of worth, or cost comparisons).

2. Internal VE actions with estimated savings equal to or greater than \$100,000 shall be verified by a higher management level official designated by the head of the DoD Component or designee.

B. Item D. Report all VECs received under both VEI clauses and VEPR clauses.

C. Item D.3. The sharing period will vary according to the length of the contract and the nature of the VEC. Include estimates of collateral savings, if any, in lines D.3.a., b., c., and d., as appropriate.

D. Item D.4. Include only direct contractor and DoD nonrecurring investment costs to develop and test proposals in item D.1. and to implement proposals approved in item D.2.