

Circular No. A-131

May 21, 1993

TO THE HEADS OF EXECUTIVE DEPARTMENTS AND ESTABLISHMENTS

SUBJECT: Value Engineering

1. Purpose
2. Supersession Information
3. Authority
4. Background
5. Relationship to other management improvement processes
6. Definitions
7. Policy
8. Agency responsibilities
9. Reports to OMB
10. Inspectors General audits
11. Related Guidance
12. Effective date and Implementation
13. Sunset review
14. Inquiries

1. **Purpose.** This Circular requires Federal Departments and Agencies to use value engineering (VE) as a management tool, where appropriate, to reduce program and acquisition costs.

2. **Supersession Information.** This Circular supersedes and cancels OMB Circular No. A-131, **Value Engineering**, dated January 26, 1988.

3. **Authority.** This Circular is issued pursuant to 31 U.S.C. [[section]]1111.

4. **Background.** For the purposes of this Circular, value analysis, value management, and value control are considered synonymous with VE. VE is an effective technique for reducing costs, increasing productivity, and improving quality. It can be applied to hardware and software; development, production, and manufacturing; specifications, standards, contract requirements, and other acquisition program documentation; facilities design and construction. It may be successfully introduced at any point in the life-cycle of products, systems, or procedures. VE is a technique directed toward analyzing the functions of an item or process to determine "best value," or the best relationship between worth and cost. In other words, "best value" is represented by an item or process that consistently performs the required basic function and has the lowest total cost. In this context, the application of VE in facilities construction can yield a better value

when construction is approached in a manner that incorporates environmentally-sound and energy-efficient practices and materials.

VE originated in the industrial community, and it has spread to the Federal Government due to its potential for yielding a large return on investment. VE has long been recognized as an effective technique to lower the Government's cost while maintaining necessary quality levels. Its most extensive use has been in Federal acquisition programs.

- An August 1991 recent audit of VE in the Federal Government by the President's Council on Integrity and Efficiency concluded that more can and should be done by Federal agencies to realize the benefits of VE. Reports issued by the General Accounting Office and agency Inspectors General have also consistently concluded that greater use of this technique would result in additional savings to the Government.

5. Relationship to other management improvement processes. VE is a management tool that can be used alone or with other management techniques and methodologies to improve operations and reduce costs. For example, the total quality management process can include VE and other cost cutting-techniques, such as life-cycle costing, concurrent engineering, and design-to-cost, approaches, by using these techniques as analytical tools in process and product improvement.

VE contributes to the overall management objectives of streamlining operations, improving quality, reducing costs, and can result in the increased use of environmentally-sound and energy-efficient practices and materials. The complementary relationship between VE and other management techniques increases the likelihood that overall management objectives are achieved.

6. Definitions.

- a. **Agency.** As used in this Circular, the term "agency" means an Executive department or an independent establishment within the meaning of sections 101 and 104(1), respectively, of Title 5, United States Code.
- b. **Life-cycle cost.** The total cost of a system, building, or other product, computed over its useful life. It includes all relevant costs involved in acquiring, owning, operating, maintaining, and disposing of the system or product over a specified period of time, including environmental and energy costs.
- c. **Cost savings.** A reduction in actual expenditures below the projected level of costs to achieve a specific objective.
- d. **Cost avoidance.** An action taken in the immediate time frame that will decrease costs in the future. For example, an engineering improvement

that increases the mean time between failures and thereby decreases operation and maintenance costs is a cost avoidance action.

- e. **In-house savings.** Net life-cycle cost savings achieved by in-house agency staff using VE techniques.
- f. **Contracted savings.** Net life-cycle cost savings realized by contracting for the performance of a VE study or by a Value Engineering Change Proposal submitted by a contractor.
- g. **Total Quality Management (TQM).** A customer-based management philosophy for improving the quality of products and increasing customer satisfaction by restructuring traditional management practices. An integral part of TQM is continuous process improvement, which is achieved by using analytical techniques to determine the causes of problems. The goal is not just to fix problems but to improve processes so that the problems do not recur. Value engineering can be used as an analytical technique in the TQM process.
- h. **Value Engineering.** An organized effort directed at analyzing the functions of systems, equipment, facilities, services, and supplies for the purpose of achieving the essential functions at the lowest life-cycle cost consistent with required performance, reliability, quality, and safety. These organized efforts can be performed by both in-house agency personnel and by contractor personnel.
- i. **Value Engineering Change Proposal (VECP).** A proposal submitted by a contractor under the VE provisions of the Federal Acquisition Regulations (FAR) that, through a change in a project's plans, designs, or specifications as defined in the contract, would lower the project's life-cycle cost to the Government.
- j. **Value Engineering Proposal (VEP).** An in-house agency-developed proposal, or a proposal developed by a contractor under contract to provide VE services, to provide VE studies for a Government project/program.

7. Policy. Federal agencies shall use VE as a management tool, where appropriate, to ensure realistic budgets, identify and remove nonessential capital and operating costs, and improve and maintain optimum quality of program and acquisition functions. Senior management will establish and maintain VE programs, procedures and processes to provide for the aggressive, systematic development and maintenance of the most effective, efficient, and economical and environmentally-sound arrangements for conducting the work of agencies, and to provide a sound basis for identifying and reporting accomplishments.

8. Agency responsibilities. To ensure that systemic VE improvements are achieved, agencies shall, at a minimum:

1. Designate a senior management official to monitor and coordinate agency VE efforts.
2. Develop criteria and guidelines for both in-house personnel and contractors to identify programs/projects with the most potential to yield savings from the application of VE techniques. The criteria and guidelines should recognize that the potential savings are greatest during the planning, design, and other early phases of project/program/system/product development. Agency guidelines will include:
 1. Measuring the net life-cycle cost savings from value engineering. The net life-cycle cost savings from value engineering is determined by subtracting the Government's cost of performing the value engineering function over the life of the program from the value of the total saving generated by the value engineering function.
 2. Dollar amount thresholds for projects/programs requiring the application of VE. The minimum threshold for agency projects and programs which require the application of VE is \$1 million. Lower thresholds may be established at agency discretion for projects having a major impact on agency operations.
 3. Criteria for granting waivers to the requirement to conduct VE studies, in accordance with the FAR 48.201(a).
 4. Guidance to ensure that the application of VE to construction projects/programs and other projects/programs, will include consideration of environmentally-sound and energy efficient considerations to arrive at environmentally-sound and energy efficient results.
3. Assign responsibility to the senior management official designated pursuant to [[section]]8a above, to grant waivers of the requirement to conduct VE studies on certain programs and projects. This responsibility may be delegated to other appropriate officials.
4. Provide training in VE techniques to agency staff responsible for coordinating and monitoring VE efforts and for staff responsible for developing, reviewing, analyzing, and carrying out VE proposals, change proposals, and evaluations.