



SAVE 2008

DoD Acquisition/Sustainment/Readiness Initiatives: Value Engineering (VE) and Reduction of Total Ownership Cost (R-TOC)

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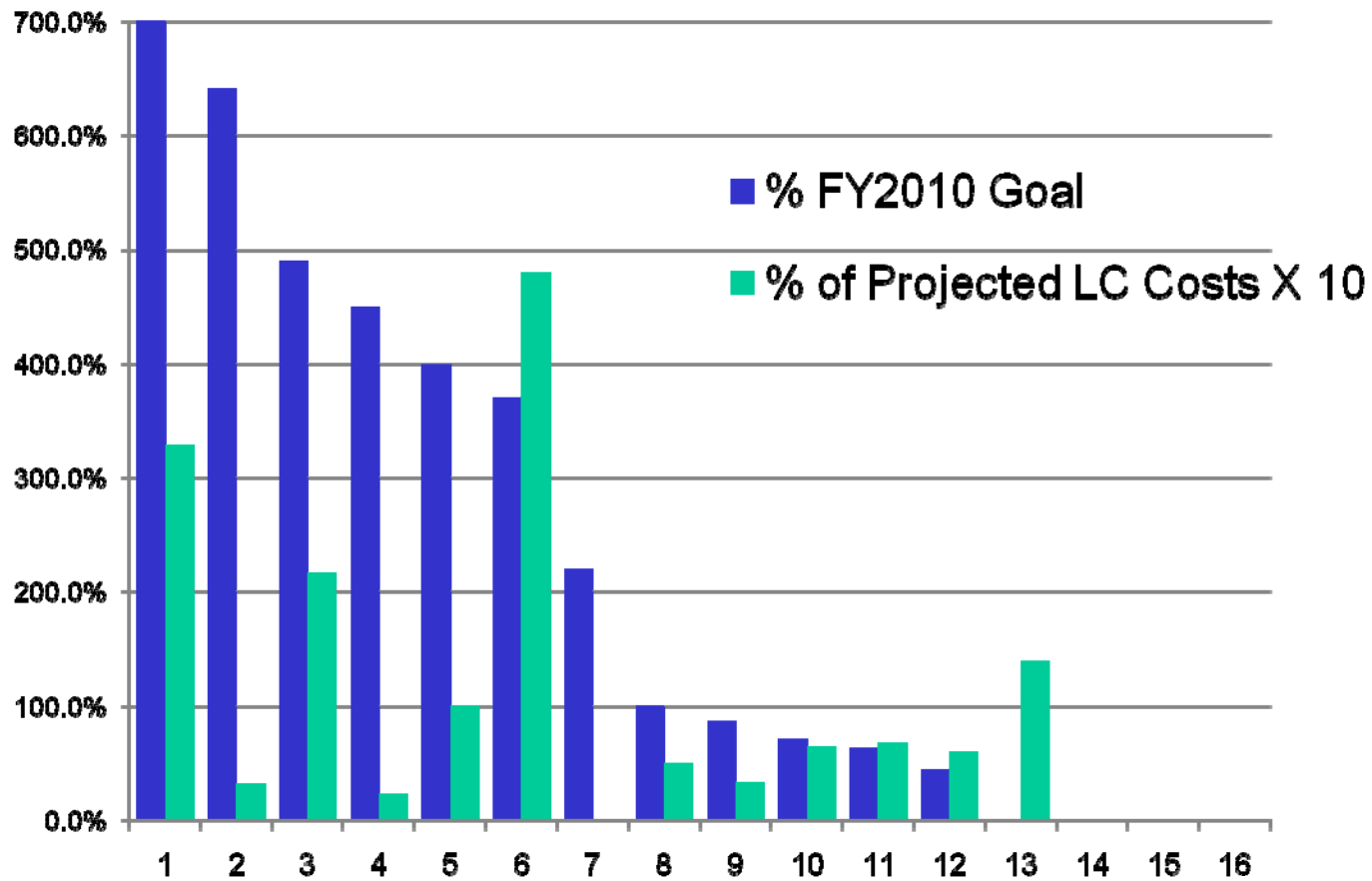
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June 13, 2008

USD(AT&L) R-TOC

- USD(AT&L) Goal: “Maximize cost avoidance on total defense systems FY 2010 O&S costs from an FY 2004 baseline, by offsetting 30% of predicted inflation.”
 - Goal extends to **all** defense systems on program-by-program basis
 - 15 Special Interest Programs (SIPs) designated lead programs to “show the way” towards achieving the goal
 - SIPs are monitored through semi-annual reports and quarterly R-TOC Forums
 - Services will include this goal in their reviews
- Ultimately expand to **all** defense systems
- \$25M/year R-TOC PE created

Status of R-TOC Program Savings



Initiatives Contributing to R-TOC

- Lean Enterprise Value
- Six Sigma
- Supply Chain Management
- DoD Manufacturing Technology (ManTech)
- Value Value Engineering
 - Law(s) Require
 - OMB Directs Implementation
 - FAR provisions offer contractual incentives
 - Strategic Plan guides DoD
 - Methodology offers an approach to partner with industry

VE Authority

- Office of Federal Procurement Policy Act 41 USC 432 – Each executive agency shall establish & maintain cost-effective VE procedures & processes
- Public Law Implemented by OMB Circular A-131
- All Agencies Will:
 - Establish and maintain a VE Program
 - Develop annual plans
 - Budget for VE
 - Encourage VECs
 - Encourage VEPs
 - Identify and report results
 - Provide training
- OMB Circular A-131 implemented by the DoD through VE Strategic Plan

DoD VE Strategic Plan

- Signed by USD (AT&L)
- Objectives
 1. Improve the Value Proposition for Defense Systems
 2. Align Industry and Government Value Propositions in Defense Systems
 3. Increase Value Engineering Expertise

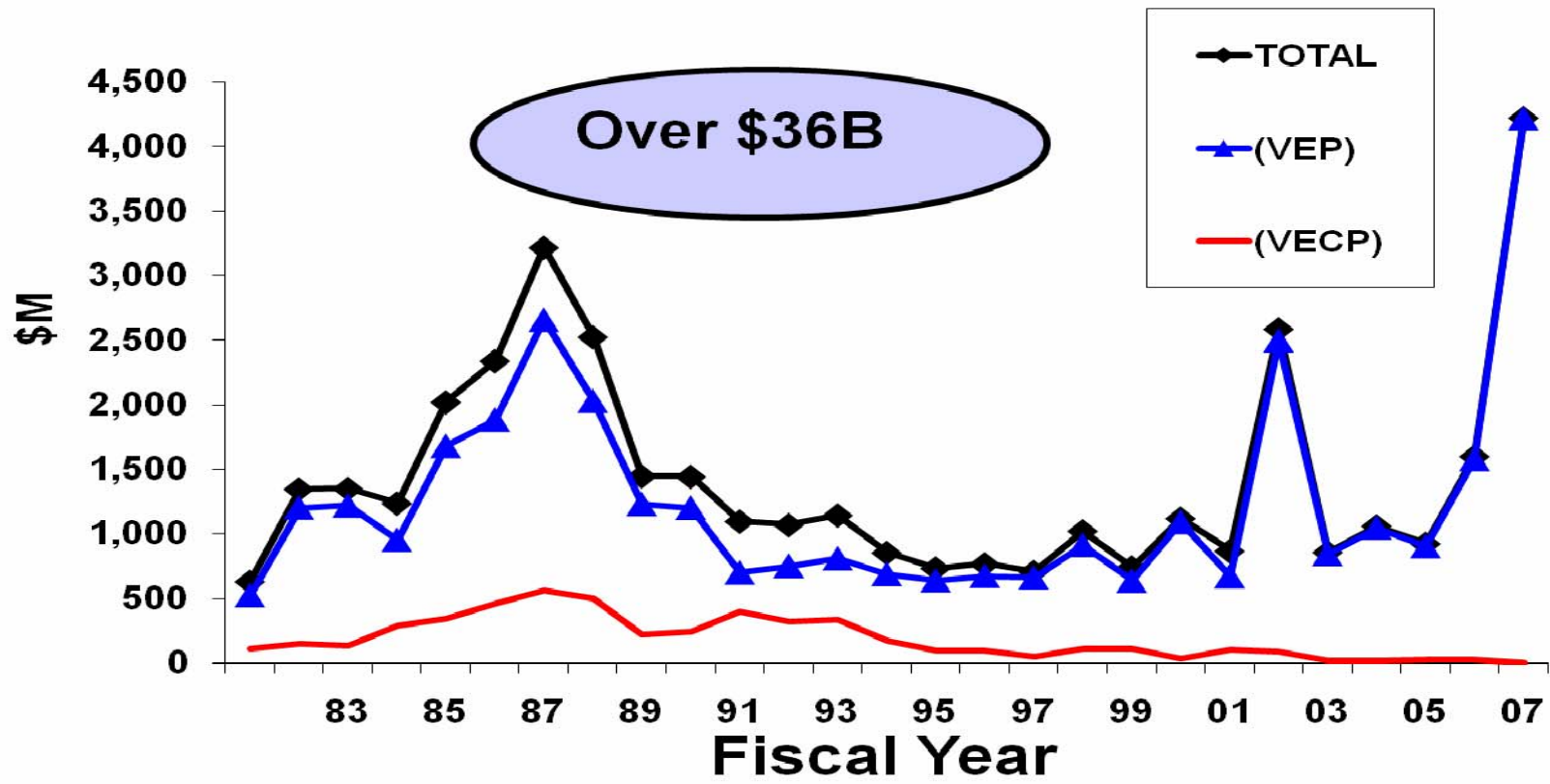
SAVINGS GOAL = 1.5% OF TOA ANNUALLY

Definition

- **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. OMB Circular A-131*

VE Goal: Lower the government's costs, improve value & provide cost effective solutions to problems in design, development, fielding, support, & disposal

DoD VE Savings & Cost Avoidance



VE and R-TOC in Systems Engineering

- **VE methodology is an effective tool for making systems engineering decisions**
 - Reduce cost
 - Increase productivity
 - Improve quality related features
 - Improve processes/procedures

While...meeting or exceeding functional performance capabilities

- **VE is applicable at any point in the life cycle**

How...making SE trades

VE/R-TOC in Defense Systems

- **Early in the Life Cycle – Concept Refinement**
 - Analysis of Alternatives – evaluate functions vs. requirements
 - Challenge needs/ensure requirements are valid
 - SE trades
 - Develop cost of alternatives
 - Consider O&S life cycle cost implications – R-TOC

Savings For All Production Units

VE/R-TOC in Defense Systems

- **During Technology Development**
 - Analyze value of requirements/specifications
 - Can these be tailored?
 - Cost as an independent variable
 - Compare function, cost and worth of new technologies
 - Consider O&S cost implications of new technologies – R-TOC

VE/R-TOC in Defense Systems

- **During Systems Development and Demonstration**
 - Identify technical approaches
 - Eliminate unnecessary design restrictions
 - Estimate cost of functions
 - Identify alternatives
 - Evaluate design concepts – O&S life cycle concepts - R-TOC
 - Search for new technologies
 - Simplify designs

VE/R-TOC in Defense Systems

- **During Production and Deployment**
 - Evaluate and improve manufacturing processes, methods and materials
- **During Operations and Support**
 - Analyze advances in technologies
 - Evaluate modifications
 - Reduce repair costs
 - Analyze packaging requirements
 - Improve RM&S – R-TOC
 - Analyze/Improve supply chain/logistics footprint – R-TOC
 - Implement CBM – R-TOC
 - Reduce support manpower – R-TOC

SUMMARY

- R-TOC and VE provide savings/cost avoidances for DoD
- VE is a tool for Systems Engineering – All Life Cycle Phases
- R-TOC provides a focus on O&S considerations - All Life Cycle Phases
- DoD VE documents: 1) VE Contractor's Guide, 2) VECP Contracting Guide, and 3) VE Handbook
- VE revitalization effort in-work – USD(A&T) memo on compliance with OMB Circular A-131 guidance
- OMB A-131 update needed

- R-TOC/VE websites: <http://rtoc.ida.org> or <http://ve.ida.org>

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