Cost As An Independent Variable (CAIV) Acquisition Strategies: A Brief Overview

9th International Cost/Schedule Performance Conference
Tysons Corner, Virginia
October 22, 1997

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Overview

• What is CAIV?

• CAIV’s History and Evolution

• Use of Earned Value Management in CAIV Acquisition

• CAIV’s Impact on Acquisition Management
  • Current Trends
  • Future Trends

• Where To Learn More
What is CAIV?

CAIV is DoD’s acquisition methodology of making technical and schedule performance a function of available (budgeted) resources.

**Strategy**
- Aggressively set realistic cost objectives for acquiring and supporting defense systems, and
- Manage programs to meet those objectives.

**Approach**
- Set realistic but aggressive cost objectives early in each program
- Manage risks to achieve cost, schedule and performance objectives
- Devise metrics for tracking progress in setting and achieving cost objectives
- Motivate/incentivize government/industry to achieve objectives
- Incentivize operating and support cost reductions for fielded systems
CAIV is...

Explain another way...

• Three program performance parameters
  • Technical
    • Schedule
    • Cost (Price)
  • Two of these variables must depend on the third

• Systematic analysis of all life cycle cost elements
  • Acquisition
  • Operations/Support
  • Manpower
  • Modernization
  • Disposal
Cost/Performance Optimization Process

Mission Goals

System Performance Goals

Technology-Performance Classifications

Historical $ 

Process Changes (Mgt, Mfg, Eng)

Future $

Necessary Performance? Lowest Cost?

Technology Opportunities

Yes

Iterate Over Time

Technology/Process Investment

No

Reset Performance Goals

Reset Mission Goals

Yes

No
CAIV’s History and Evolution

- Based on commercial practice
- History is in the making, now!
  - 1995 - 1996
    - OSD policy on cost/performance trade-offs
    - Test implementation on flagship Army/Navy/Air Force/Marine Corp programs
  - 1997 - 1998
    - Services’ promulgate policy/guidance documents, business plans
- Why CAIV? Improves systems acquisition cost estimating diligence and program controls.
Use of Earned Value Management in CAIV Acquisition

- CAIV’s “first diagnostic of risk management”.
- Principle method of validating whether expected cost performance will be met
- Tool for adjusting performance requirements to meet cost objectives
- Performance monitoring (expected life cycle cost validation) conducted on an ongoing basis through all Acquisition phases:
  - Concept Exploration
  - Program Definition and Risk Reduction
  - EMD/LRIP
  - Production, Fielding/Deployment, Operational Support
CAIV’s Impact on Acquisition Management: Current Trends

- Increasing rigor in cost modeling
- Cost/Performance Integrated Process Teams (CPIPT)
- Existing data quality/granularity - limiting the quality/sophistication of post-acquisition life cycle costing
- New contract incentives
- Program reporting: improved quality
CAIV’s Impact on Acquisition Management: Future Trends

- Improved systems engineering - performance tradeoff and cost/performance tradeoff tools
- Renewed interest in VECPs as incentives
- Continued risk management method improvements
- Increased use, improvements to technical performance management (TPM)
- Improvements to historical O&S cost databases
- Increased focus on data quality during the cost data collection process
- Increased focus on industry/contractor process cost data associated with Government systems - ABC/ABM
Where to Learn More

- Web Sites

- Future military service guidance documents