Earned Value

Defense Acquisition Reform and Project Management

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Defense Acquisition Reform and Project Management
Unclassified

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DoD Acquisition Reform

- The acquisition environment
  - Industrial base consolidation
- Earned Value “Reengineered”
  - From C/SCSC to Earned Value Management Systems (EVMS) Criteria
- Integrated Project Management
  - Scope/Schedule/Resources/Risk

EVM Web Site - www.acq.osd.mil/pm
DoD Acquisition Reform

- Make DoD the smartest buyer of best goods & services to meet warfighter needs at best value over life of product
  - New laws and policies
  - Separate mandatory/discretionary practices
  - Simplify acquisition policy documents
  - Integrate policies & procedures for weapon systems and information systems
- Shift from “oversight” to “insight”
1961 Pentagon Spending:
- 40% of Federal Budget
- 8% of GDP

1997 Pentagon Spending:
- 15% of Federal Budget
- 3% of GDP

Military Procurement Budget:
- Down 67% since 1985 peak
- $60 Billion goal
DoD Responses

- Acquisition Reform
- “The Last Supper”
  - 1993 DepSecDef dinner
  - Fewer, larger companies
- Followed previous OSD-led management initiatives
  - Better integrate cost, schedule, technical perf. using Earned Value
  - Ongoing since 1980s
Effective Management*

**Contract:** 4 miles of railroad track in 4 weeks for $4 million.

**Status:** After 3 weeks, only $2 million has been spent.

**Question:** How are you doing (and how do you know)?

**Spend Plan**
- Planned $1M/week
- Planned $3M to date
- Actual cost $2M
- $1M favorable???

**Earned Value**
- Planned $1M/week
- Planned $3M to date
- Earned $1M (66% behind)
- Actual $2M (100% overrun)
- EAC $8M, 8 weeks late

*Source: May 1997 General Accounting Office Report*
Earned Value Management =
Basic Management Principles
Lesson of the A-12 (& others)
The “Beach” Report,  A-12 Administrative Inquiry, 28 Nov 1990

- Too often, earned value insights remain the sole province of the supporting program control staff of both contractors and the government.
  - Earned value must be an integral part of the performing design and manufacturing organizations
  - Only when program technical staffs are held accountable for earned value analysis, will they begin to understand its implications
Reengineering EVMS
October 1993 - A Vision

Inspection → Management
Integrated Product Teams: The Key to Success

Management systems don’t manage - people do!
EVM is used to identify, communicate and manage the resource effect of technical and schedule problems
The Really Nice Thing About Not Planning

Failure comes as a complete surprise and is not preceded by long periods of worry and depression!*

*Micro Planning International
Work Breakdown Structure: The Key to Integration

MIL-HDBK-881
Reengineering EVM: DoD Improvements

- Redefined Earned Value Ownership
  - Financial reporting to management
  - Government to industry
  - PMs “assume” data integrity
- Better management tools
- Integrated Baseline Reviews
  - Improved planning process
  - Better technical/risk management
- Revised DoD 5000.2-R
  - Defense Acquisition Deskbook
Reengineering EVM: Integrated Baseline Reviews

- Within 6 months of award
- Mutually understand plan
  - Scope
  - Schedule
  - Resources
- Planning process vs. event
- PM leads
  - EVM staff supports
  - Management system reviews effectively eliminated

IBR Training
- Schedules
- Mgmt. Systems

Risk
Growing Consensus: Gov’t/Industry Best Practice

- Dec. ‘96 DoD accepted industry EVMS guidelines as C/SCSC replacement
- Reserved right for government reviews
  - As determined by project manager
  - “Self-certification” not in public interest
- Encouraged “true” standard
  - ANSI/EIA 748-98 Earned Value Management Systems
  - For now, DoD and industry EVMS criteria are equal
  - International discussions ongoing  Canada, UK
**Keynote Themes**

- **Industry**
  - EVM does not cost
  - Pays “big time”
  - Improves bottom line
  - Customer satisfaction
  - More bang for buck

- **Government**
  - Perceptions
  - Martyrs, Missionaries, Messengers
Roadmap from Requirements to Competitive Advantage

- Challenges:
  - Cost-effective government requirements
  - International cooperation
  - Commercial environment efficiently eliminates non value-added practices.

- Exam question:
  - Can EVMS respond?
Industry’s Vision

- National Defense Industrial Association Management Systems Subcommittee
- Move the community from a requirements structure to one based on competitive advantage
- Yogi Berra: “When you arrive at a fork in the road, take it.”
Roadmap - Requirements to Competitive Advantage

- **Industry**
  - Grow business (new contracts)
  - Achieve customer expectations (contract performance)
  - Achieve stockholder expectations (improve financial results)

- **Government**
  - Reduce project costs
  - Reduce schedule risk
  - Program Success: improve predictability
Roadmap - Requirements to Competitive Advantage

- Common Business Processes give the Program Manager the tools to avoid reinventing the wheel for each program.
- EV is a tool integrating technical, schedule and cost performance measurement and analysis data for management.
- Cost savings and competitive advantage come from a broad business application.

Program by program application isn’t good enough.
Roadmap from Requirements to Competitive Advantage

**Government**
- IBRs
- 32 EVMS Criteria
- Regulations Revised

**Contractor Project Management Practices**
- ANSI-EIA 748
- Advance Agreements

**Industry**
- IBRs

- Incorporate ANSI-EIA 748 in DoD Regulation
- Business Unit Policy & Process embrace EVMS (Ownership)
- International recognition of EVMS Guidelines
ROADMAP FROM REQUIREMENTS TO COMPETITIVE ADVANTAGE

Integrated Program Management Competitive Advantage (ALL non-value added activity eliminated)

- Business Unit EVM Policy & Ownership
- Business Unit Processes embrace Earned Value
- Integrated Program Management using Earned Value in the most effective manner
Sustaining the Progress

- Public/Private cooperation
  - Expand contact with commercial firms
  - Eliminate unessential differences between government and commercial management practices
  - Civil-Military Integration
- Global Standards (or guidelines)
  - Work with industrial partners
  - While encouraging wider dialogue
Sustaining the Progress (cont’d)

- Project Management Education
  - Alternative delivery
    » Distance learning
    » Alternate sources

- Integrated Project Management
  - Technical Performance Management
    IPT + IBR + EVM = IPM

- In-house management
  - November 1998 conference
Sustaining the Progress (cont’d)

- Interagency cooperation
  - Office of Management and Budget
  - “One government” approach
- Associations are valued partners
  - American Project Management Forum
  - Global Forum
  - Standards
  - Education
  - PMA/PMI
Sustaining the Progress (cont’d)

- “Clearinghouse”
  - Trust & Communication
  - OSD to DCMC
  - Mr. Richard Zell
    (703) 767-3469
    richard_zell@hq.dla.mil

- Cloud Kingdom
  - At your service
    (703) 695-5166
    abbawf@acq.osd.mil
WAR (wInsight Analysis & Review) Room

- 8 Screens
  - WBS
  - Product Photo
  - Schedule status
  - Schedule perf. trend
  - Risk + (Monte Carlo)
  - Cost perf. trend
  - Est. at complete
  - Funding status

- Compare programs
  - Update in real time
  - Link performance to budget decisions

- Natl. Reconnaissance Office
  - Near Dulles Airport
  - Visits can be arranged
  - Demo at Tysons conf.

World Class Best Practice in Partnership with DoD
Using Variance Information

- **Schedule Variance**
  - BCWS tied to early start/finish
    - Late with float
    - “Real” problem
    - Deliberately delayed
    - Work done; no BCWP
    - Early
    - Anomalies

- **Cost Variance**
  - Negative
  - Positive
  - Anomalies
Negotiating Contract Changes

- Value of completed work
- Value of work in process
- Value of work deleted (yet to be done)

- ACWP Cum
- BCWP Cum
- ACWP Cum (+ ETC)
- Baseline Budget