



Earned Value Management

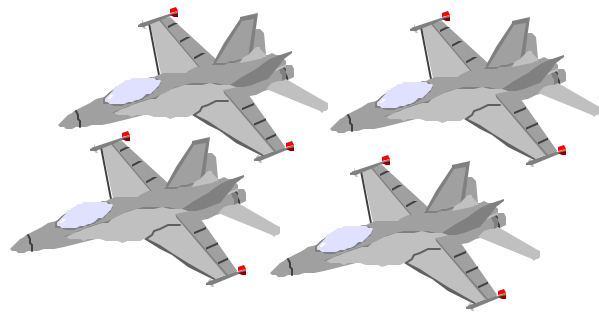
Future Directions in DoD

Wayne Abba

***Office of the Under Secretary of Defense
(Acquisition & Technology)***

Earned Value Management

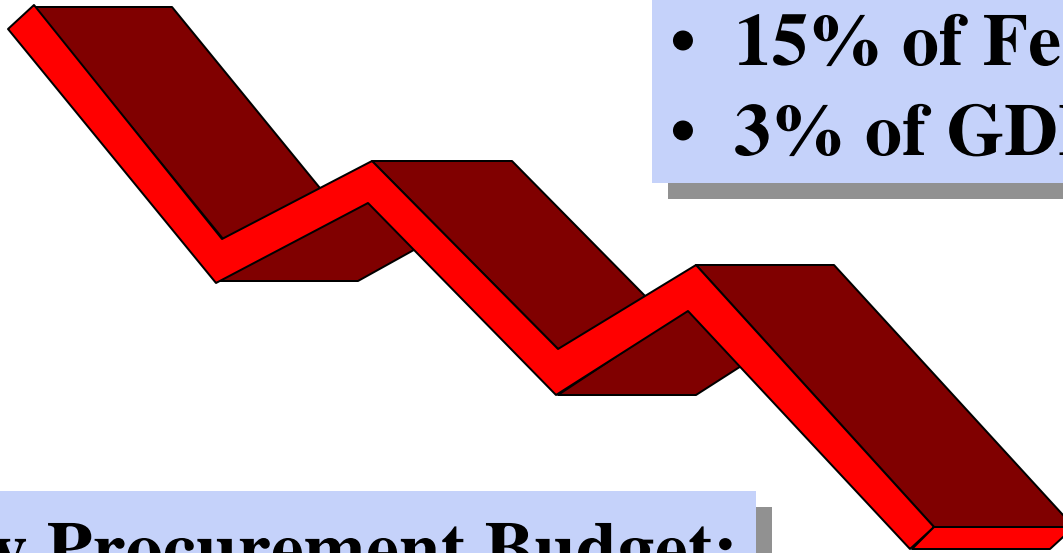
- ◆ **The facts of (DoD procurement) life**
- ◆ **EVM beginnings**
 - **DoD contracting requirement**
- ◆ **EVM status**
 - **Government/Industry best practice**
- ◆ **EVM future**
 - **DoD's role**



1961 Pentagon Spending:

- 40% of Federal Budget
- 8% of GDP

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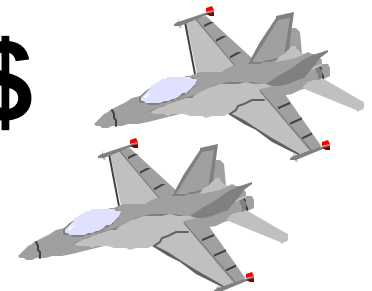
1997 Pentagon Spending:

- 15% of Federal Budget
- 3% of GDP

Military Procurement Budget:

- Down 67% since 1985 peak

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DoD Responses

- ◆ **Acquisition Reform**
- ◆ **“The Last Supper”**
 - 1993 SecDef dinner
 - Fewer, larger companies
- ◆ **Improved Defense Project Management**
 - Better integrate cost, schedule, technical perf.
 - Earned Value Management



“And then there were 3”

**Lockheed
GD Mil. Jets
Sanders Assoc.**

Lockheed

**Martin Marietta
GD Rockets
GE Aerospace**

Martin Marietta

**Loral
Unisys Defense
IBM Fed. Systems
LTV Missiles
Ford Aerospace
Goodyear Aerospace**

Loral

Lockheed Martin

**Northrop
LTV Aircraft
Grumman
Westinghouse Def**

Northrop Grumman

**Boeing
Rockwell Def & Space
McDonnell Douglas**

**Boeing
Rockwell Def & Space
McDonnell Douglas**

Boeing

**Raytheon
E-Systems
Texas Instruments Def**

**Raytheon
Texas Instruments Def**

Raytheon

**Hughes Aircraft
Magnavox Def
CAE Link
GD Missiles**

Hughes Aircraft

Industrial Base Concerns

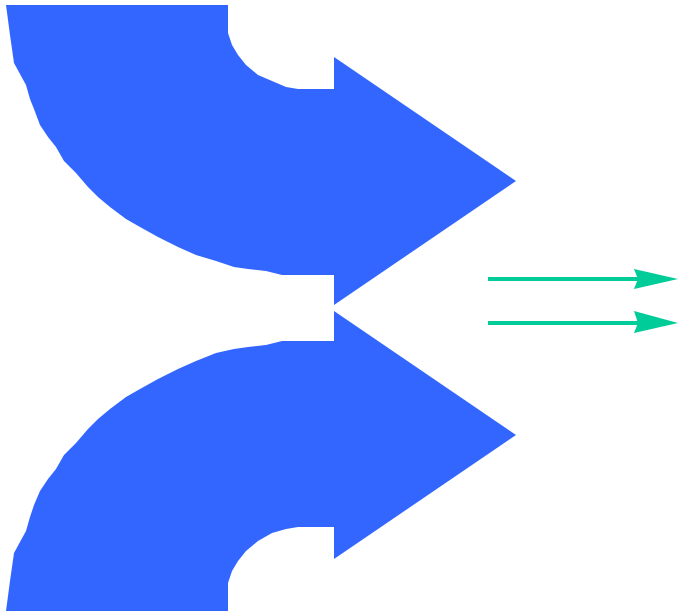
- ◆ **Market forces**
 - Monopsony
 - Monopoly
 - Price gouging
- ◆ **Vertical integration**
- ◆ **Innovation**
- ◆ **Quality**



“The late 1990s and the early 21st Century will mark a difficult and expensive procurement era.”

Earned Value Management: Origins

Industry Best
Practices



Government
Requirements

1967: DoD Instruction 7000.2
**35 Cost/Schedule Control
Systems Criteria (C/SCSC)**

Criterion-based Management

- Brief statements of attributes
- Not “how-to manage”
- Not a system
- Minimum acceptable standard

1997: DoD Regulation 5000.2-R
**32 Earned Value Management
Systems (EVMS) Criteria**

Earned Value Management: Implementation Problems

- ◆ “Financial Management”
- ◆ Audit-like reviews
- ◆ Government-required reporting
- ◆ Too many “surprises”
 - A-12 (Navy)
 - AAWS-M (Army)
 - C-17 (Air Force)
- ◆ Challenge: keep good principles, stop bad practices



Earned Value Management: DoD Improvements

- ◆ **Redefined Earned Value Ownership**

- From finance to project management
- From reporting to management
- From government to industry

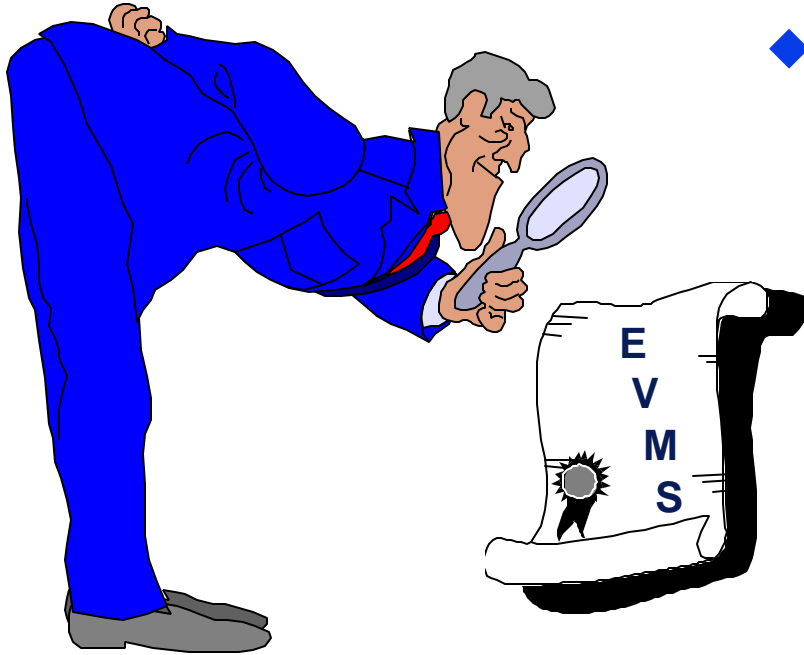
- ◆ **Better management tools**

- ◆ **Integrated Baseline Reviews**

- Planning process
- Better technical/risk management



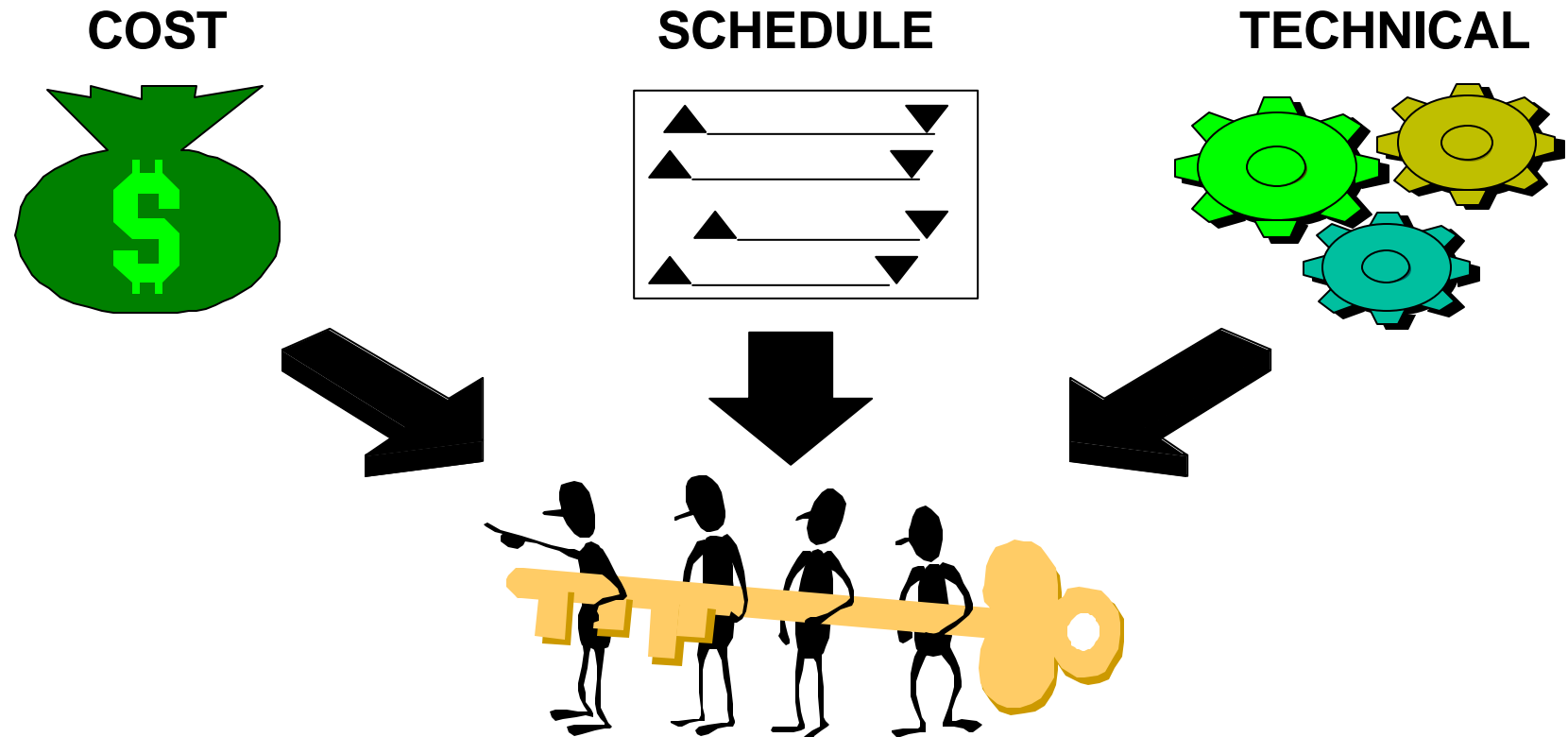
DoD Earned Value Policy



- ◆ **Examined & Reaffirmed**
 - 1984 - Arthur D. Little Study**
 - 1991 - DoD Instruction 5000.2**
 - 1993 - Inspector General Report**
 - 1994 - Coopers & Lybrand Study**
 - 1996 - DoD Regulation 5000.2-R**
 - 1996 - Office of Management & Budget Circular A-11 Part 3**
 - 1997 - General Accounting Office Report**

Australia, Canada, New Zealand, Sweden, United Kingdom

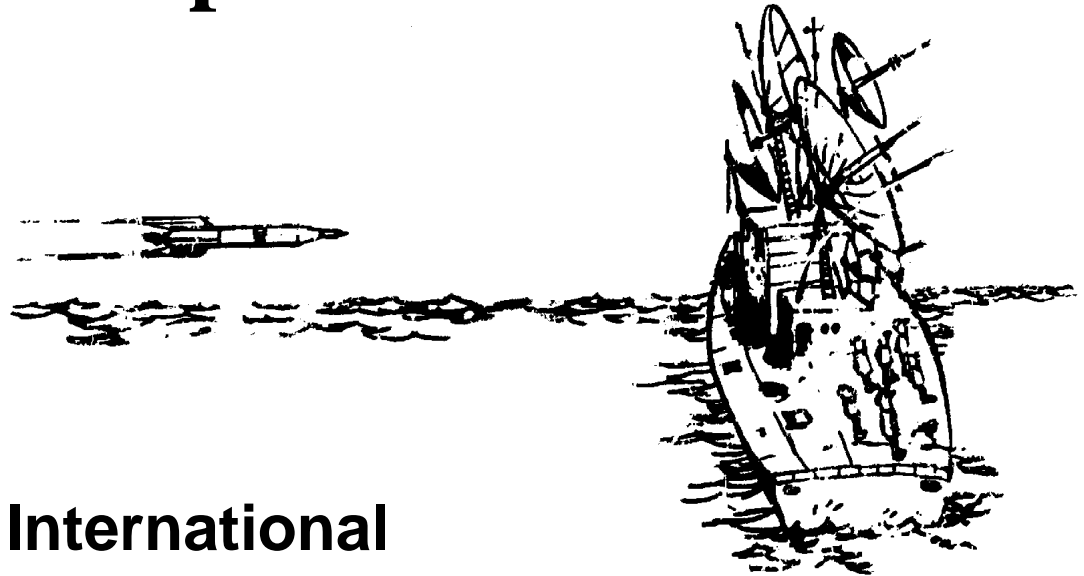
Integrated Product Teams: The Key to Success



**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**

Integrated Baseline Reviews

- ◆ **Mutual understanding of plan for**
 - Scope
 - Schedule
 - Resources
- ◆ **Emphasis on risk**
- ◆ **Planning process vs. review**
- ◆ **PM leads; EVM staff supports**
 - Management system reviews effectively eliminated



Putting it all together:

$$\text{IPT} + \text{IBR} + \text{EVM} = \text{IPM}$$

- ◆ **Involve earned value specialists and cost estimators on program IPTs**
- ◆ **Tailor reports - limit levels and analysis**
- ◆ **Do Integrated Baseline Reviews**
- ◆ **Encourage active, forward-looking management**

“IPTs must control all the project, technical and functional elements needed for the product or process.”

Earned Value Management: Gov't/Industry Best Practice

- ◆ **Dec. 1996 USD(A&T) accepted 32 EVMS guidelines as replacement for C/SCSC**
- ◆ **Reserved right for government reviews**
 - **As determined by project manager**
 - **“Self-certification” not in public interest**
- ◆ **Encourages evolution to “true” standard**
 - **Industry/International (ISO)**
 - **For now, DoD and industry EVMS are equal**

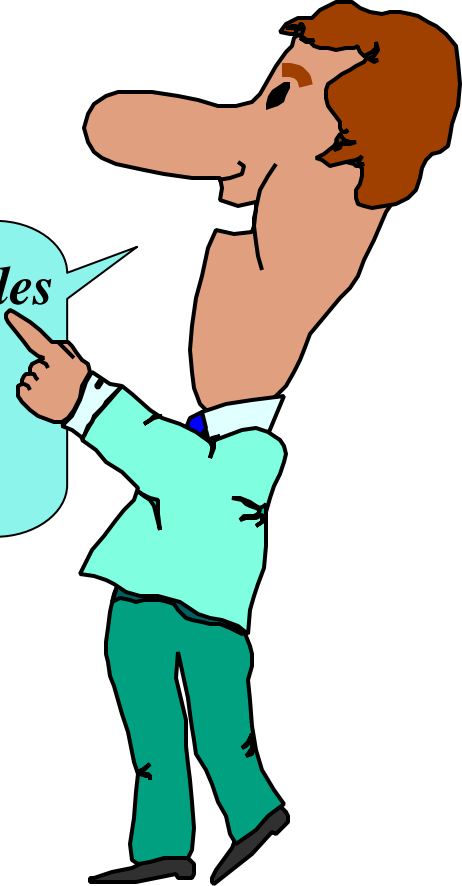
Earned Value Management: The Future

- ◆ **Office of Management & Budget Guidance**
 - 1996 - Circular A-11 Part 3
 - 1997 - Principles of Budgeting for Capital Asset Acquisitions (FY98 Budget)
 - 1997 - Capital Programming Guide (Supplement to A-11 Part 3)
- ◆ **Government-wide management principles**

American Project Management Forum

Earned Value Management: The Future

- ◆ A-11 Part 3 extends DoD-pioneered performance measurement to all agencies
- ◆ It effectively requires Earned Value Management for all contractor performance-based management systems
- ◆ Agency budget approvals will depend on *performance* measured by EVM



The principles are not new to the Dept. of Defense!

EVM: A 30-year old idea is today's best practice!

Earned Value Management: The DoD's Role

- ◆ **Integrated Program Management Initiative**
- ◆ **Monitor industry standards**
- ◆ **Participate in standards-setting bodies**
- ◆ **Continue inter-agency cooperation**
- ◆ **Improve project management education**
 - **Within government**
 - **Cooperate with academia and professions**
- ◆ **Improve in-house management**