Tailoring Earned Value Management

General Guidelines

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Prescribed by ANSI Std Z39.18
General Principles

• Consider all risk factors when tailoring EVMS
  – type of contract (determined by cost risk)
  – technology
  – schedule
  – past contractor performance
• May be bound by customer policies (e.g. DOD)
  – Most aspects are still able to be tailored
• Should be tailored to reflect internal management
  – should not be seen as customer report
• Written variance analysis is #1 cost driver
  – only ask for what you really need
• Apply common sense!
• Dialogue with industry
A Spectrum of Implementation

Where

- Small Companies
- Larger Companies

When

- as desired
- corporate policy, “enterprise wide”

Reports

- streamlined, no paper?
- tailored to needs

Tailored Applications

- ANSI/EIA-748-1998 (32 criteria)

5 Core EV Principles

- Government Organic
- Major Defense Contractors
- Foreign Countries

DoD Non-Major Contracts (>12 months)
- <$6M*
- >$6M

DoD Major Contracts
- >$73M RDT&E
- >$315M Prod

FFP contracts?

C/SSR

CPR

*with judgement

All $ are BY00
OMB Guidance

• Agency should define thresholds and applications
• Get the basic data (BCWS, BCWP, ACWP)
• Explain variances >10% in annual reports
• Explain corrective actions
  – EAC
  – terminate?
• OMB approves baseline changes
  – at program level
A Special Note about DOD

- EVMS started in DOD over 1/3 century ago
- DOD generally awards large, complex contracts
- Considered to be “high end” of EVMS implementation
  - Still can and should be tailored

One size does not fit all
## Risk Factors to Consider

<table>
<thead>
<tr>
<th>Cost Risk to Agency</th>
<th>Technology Risk</th>
<th>Schedule Risk</th>
<th>Contractor Past Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost Contracts</td>
<td>State of the art or beyond</td>
<td>Complex schedule, concurrency</td>
<td>Poor</td>
</tr>
<tr>
<td>FPI Contracts</td>
<td>Under development</td>
<td>Moderate risk, some concurrency</td>
<td></td>
</tr>
<tr>
<td>FFP Contracts</td>
<td>Off the shelf</td>
<td>Low Risk schedule</td>
<td>Good</td>
</tr>
</tbody>
</table>
How can EVMS be tailored?

- Application thresholds
- Guidelines
- Validation of system
- Baseline assessment
- Earning performance
- Reporting
- Analysis
- Surveillance
Tailor EVMS to Inherent Risk

Full implementation
- with tailoring as appropriate

More tailoring

Most streamlined

LOW RISK

HIGH RISK
Application Thresholds - DOD Model

- Full compliance with criteria, with CPR
  - $73M development (BY00$)
  - $315M production (BY00$)
  - $315M O&M (BY00$)
  - not on firm fixed price contracts

- CPR, no criteria
  - below $ thresholds
  - if CPR level reporting is needed

- C/SSR, no criteria
  - below CPR criteria
  - greater than 12 months and $6M
  - below $6M with judgement
Application Thresholds

- Agency policy should define thresholds
  - > 12 month effort
  - Significant investments ($ threshold ?)
  - FFP, incentive, or cost contracts

- Agency recommendations
  - >12 months
  - Agency defined floor (e.g., >$10M)

Exclusions at all levels
- level of effort
- time and material
- <12 month total effort
Guidelines

Current Status

• ANSI/EIA-748 is the industry standard
  – 32 guidelines (formerly known as criteria)
  – have stood the test of time
  – have been applied to significant projects in past
    • typically, government projects requiring full compliance

• Smaller projects
  – contractors could use validated system
  – if not validated, contractors needed to show how their system met general principles in C/SSR DFAR clause

• Commercial
  – wide range
  – some contractors have tailoring policy
Application of Guidelines

• Full compliance with ANSI/EIA-748

• Recommend application of ANSI/EIA-748

• Contractor tailoring as desired

• 5 Basic Guidelines
5 Basic Guidelines

• **Organize the project team and the scope of work**, using a work breakdown structure. Each task should have a single WBS number and organizational code.

• **Schedule the tasks in a logical manner** so that lower level schedule elements support other elements and the top level milestones.

• **Allocate the total budget resources** to time-phased control accounts.

• **Establish objective means for measuring work** accomplishment. Budget should be earned in the same way that it was planned.

• **Control the project** by analyzing cost and performance variances, assessing final costs, developing corrective actions, and controlling changes to the integrated baseline.
Validation Options

- Validation by customer
  - U.S. government, Australia, other countries
- Third party
- Self-certification
- Submission of summary description to customer
  - (optional) may use already validated system
- None
Baseline Assessment

- Formal review by customer
- Joint development of baseline
  - post award (phased: technical, schedule, budget)
  - pre award
- Integrated into program reviews
- Incremental
  - evolutionary acquisition, significant milestones, task orders, etc.
- Walk through, talk through
- Assess schedule and EV measurement only
- Self assessment
Earning Performance

- Performance earned at control account level
  - summed up from detail level

- Performance earned by logical means at higher level
Reporting

- Full performance reports (detailed cost level)
- Tailored reports (eliminate certain formats)
- Contractor defined significant variances
- Report at price or hours (FFP)
- Contractor shares internal reports
- On line, no paper
- No formal variance analysis
- Tabular or graphical status

always tailor data reporting level to risk
Analysis

• Formal analysis
  – by both contractor and customer

• Formal analysis by contractor
  – provided to customer

• Incorporated as part of program reviews

• Top level analysis by both or by contractor
Surveillance

- Formal surveillance by in plant team
  - metrics, formal reports

- Periodic surveillance by visiting team
  (metrics)

- Self reported metrics

- None
Additional Thoughts on FFP Contracts

- Place emphasis on controlling
  - technical growth
  - schedule
- Ensure integration of work and schedule
- Use EVMS as basis for payments
  - performance metrics
  - significant milestones (contract deliverables)
- Use contractor tools and reporting
The Bottom Line

• EVMS *can* and *should* be tailored
  – *Should not* be seen as a cost driver
  – *Should always* make common sense
  – *Should always* reflect how projects are managed on a daily basis