

EVM tailoring and scaling at NSF

EVM Tailoring:

“Tailoring” means applying the requirements of the EIA-748 guidelines to fit the project’s characteristics while addressing all of the guidelines. In other words, tailored EVMS implements the 32 EVMS guidelines in a manner that fits the specific needs of the project for effective project management control and reliable performance reporting to NSF based on the project’s characteristics, including the type of work, complexity, execution method, etc.

EVM Scaling:

“Scaling” means focusing on the seven basic EVMS principles with implementation of EVMS guidelines that are essential for either reliable project management and/or agency oversight. In other words, a scaled EVMS implementation recognizes smaller or less complex projects do not require the same level of data detail and/or the same level of control rigor that are needed for large, complex projects. In particular, the scaled EVMS incorporates minimum requirements of EVMS following the seven basic principles of EVMS. In a scaled EVMS, not all of EIA-748 32 guidelines are required or need to be implemented at the same level of rigor, and the required data details could be at a higher summary level. The level of control and data detail vary depending on the size and the complexity of the project. Scaling EVM at NSF can be viewed as modifying the degree of implementation of the EVMS guidelines based on the size and the complexity of the project while adhering to the seven basic principles.

Practice guide to scale EVM for NSF mid-scale projects:

1. Process 1: Defining and organizing the project (Principle 1 and 2)
Primary guidelines: Guideline 1, 2, 5
 - 1) Defining project scope in terms of WBS
 - 2) Defining Project organization chart (OBS)
 - 3) Identifying organizational responsibility for work, including significant subcontractors, for sufficient level of management/controlConsiderations for further scaling: set WBS at higher level.
2. Process 2: Establishing project cost, schedule, and contingencies (Principle 3)
Primary Guidelines: Guideline 6,7,8,9,13,14
 - 1) Schedule the work with logical sequence and task dependencies
 - 2) Identify technical milestones and/or other methods for progress measurement
 - 3) Establish time-phased budget by WBS with identified resources
 - 4) Incorporate indirect cost
 - 5) Assess project risks and estimate uncertainties to establish cost and schedule contingencyConsiderations for further scaling:
Detail level in schedule: higher level summary tasks with assigned budget and resource;
number and level of milestones
3. Process 3: Progress and performance monitoring (Principles 4, 5, 7)

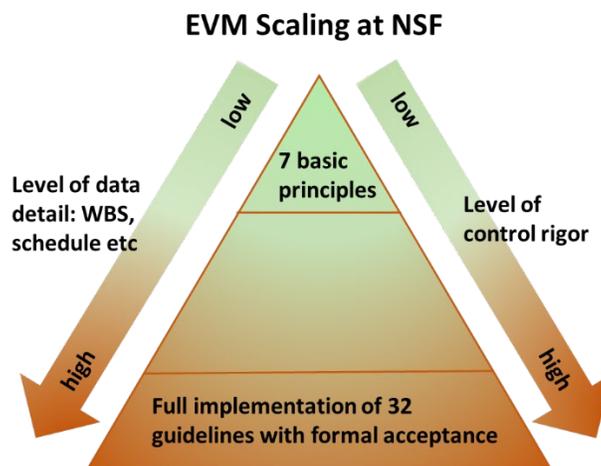
Primary guidelines: Guideline 17,18, 22 , 23, 26

- 1) Record and summarize actual cost by WBS and OBS:
 - 2) Record task progress and summarize EV for completed work by WBS
 - 3) Periodically, summarize schedule and cost performance at appropriate level of the WBS and compare to plan established in Process 2
 - 4) Analyze schedule and cost variances
 - 5) Management actions using information from variance analysis
- Considerations for further scaling: set control accounts at higher level

4. Process 4: Management analysis and control (Principle 6 and 7)

Primary guidelines: Guideline 27, 28, 32

- 1) Periodically, update estimates of remaining work
 - 2) Incorporate major changes to the project plan with change control
 - 3) Update risk assessment and assess the remaining contingencies
 - 4) Periodically, summarize project status and forecast milestones for NSF reporting.
- Consideration: streamlined change control process



- *The principles of an EVMS are:*
 1. *Plan all work scope for the program to completion.*
 2. *Break down the program work scope into finite pieces that are assigned to a responsible person or organization for control of technical schedule, and cost objectives.*
 3. *Integrate program work scope, schedule, and cost objectives into a performance measurement baseline plan against which accomplishments are measured. Control changes to the baseline.*
 4. *Use actual costs incurred and recorded in accomplishing the work performed.*
 5. *Objectively assess accomplishments at the work performance level.*
 6. *Analyze significant variances from the plan, forecast impacts, and prepare an estimate at completion based on performance to date and the remaining work to be performed.*
 7. *Use the EVMS information in the organization's management processes.*