

3.4 EARNED VALUE MANAGEMENT

INTRODUCTION

- 1 This chapter applies to all procurement undertaken in the Defence Materiel Organisation (DMO) and is available for use by other Defence Groups
- 2 Earned value management (EVM) represents a set of best practice project management principles that integrate cost, schedule and technical performance.
- 3 EVM should be applied from the beginning of the Project. When properly applied, EVM provides an early warning of performance problems, improves the definition of project scope, prevents scope creep, communicates objective progress to stakeholders, and keeps the project team focused on achieving progress.
- 4 EVM may be used in contracts to gain an objective understanding of a contractor's technical and managerial performance throughout the life of the contract.

MANDATORY POLICY

- **The use of EVM is mandatory for DMO contracts valued at \$20 million or more except with Division Head approval.**
- **The percentage of the contract price to be paid by earned value must not exceed 30% without Division Head approval.**
- **DMO staff must comply with the following policy documents, which are available on the DMO Earned Value Management intranet site at:**
<http://intranet.defence.gov.au/dmoweb/Sites/EVM/comweb.asp?page=Home>
 - **Earned Value Management System Review Handbook;**
 - **Integrated Baseline Review Handbook;**
 - **Guide to Earned Value Payments;**
 - **AS 4817 Project performance measurement using Earned Value; and**
 - **DMO Supplement to AS 4817.**

OPERATIONAL GUIDANCE

USE OF EARNED VALUE MANAGEMENT BY DMO

- 5 An EVM system provides both DMO and contractors with performance data that:
 - illustrates performance against a detailed plan of the entire contractual scope of work;
 - reflects an objective measure of contract progress;
 - aids in forecasting future cost and schedule outcomes; and
 - assists informed and timely decision-making by providing an early indication of possible problem areas.
- 6 EVM encourages better planning by contractors and focuses both DMO and contractors on contract performance.

APPLICATION OF EARNED VALUE MANAGEMENT TO DMO CONTRACTS

- 7 A project's EVM requirement, if any, will appear in its Equipment Acquisition Strategy or equivalent planning documentation. Projects must apply EVM to all DMO acquisition contracts valued at more than \$20 million. The main driver for using earned value is risk.
- 8 A decision not to use EVM for any contract over \$20 million in value must be justified only on the basis of low risk and this decision must be formally made by a Division Head. The relevant information to support the decision should be provided in a submission which outlines the type of contract (e.g. production), an assessment of the schedule, technical and cost risks, and an assessment of the contractor's alternative method for measuring, monitoring and managing performance.
- 9 For the purposes of this chapter 'production contracts' means acquisition contracts where design or integration work is not required, For example, the procurement of COTs or MOTs equipment that is constructed using an established production process and modification is not required.
- 10 The criticality of the procurement, the anticipated contract duration and the project risk profile are to be considered when deciding whether earned value requirements should be applied to a contract or subcontract(s). With regards to the risk profile, the risk items to be considered should include: contract cost, duration, capability importance, schedule, technical issues, payment method, reporting requirements and project resources. The higher the risk assessment, the greater the need to implement a earned value management system that will facilitate early notification of departures from the contract's technical, schedule and cost requirements. Even in projects of low technical complexity, there are schedule risks to deliver capability by the prescribed in-service date, or cost risks associated with pressures to complete within the current project budget.
- 11 EVM may not need to be applied to certain production contracts. In some cases, the contract may be for a large quantity of similar products, constructed using an established production process that would not warrant the implementation of an alternative performance measurement system. In instances such as these, alternative objective performance measures could be considered. Projects should seek formal advice from the Director Program Management Office in instances where the policy threshold is met or exceeded but an earned value management requirement is not considered to be necessary.

Earned Value Management Requirements in Request Documentation

- 12 ASDEFCON (*Strategic Materiel*) and ASDEFCON (*Complex Materiel*) Volume 2 contain conditions of tender response requirements and Statement of Work provisions relating to earned value. Further guidance on these provisions can be obtained from the *Earned Value Management FAQs for Tender Evaluation* and the *Earned Value Management System Review Handbook* available on the DMO EVM intranet site.

Payment by Earned Value

- 13 The preferred method of payment is milestone payments and this should be pursued in preference to a mix of payment by earned value and milestone payments. However, ASDEFCON (*Strategic Materiel*) does contain options for projects subject to EVM requirements to elect to base contract payments on a mix of earned value payments and milestone payments.
- 14 If used, the ratio of earned value payments to milestone payments requires careful consideration to ensure the appropriate balance between technical achievement and cash flow requirements. The percentage of the contract price to be paid by earned value must not exceed 30% without Division Head approval.

- 15 Guidance on payment by earned value may be found in the *Guide to Earned Value Payments* available on the DMO EVM intranet site. It also describes the steps to be followed in order to verify a contractor's earned value payment claims. The assessment includes in-depth review and verification of supporting evidence, earned value performance reports, control accounts and performance data.

Tender Evaluation and Contract Negotiation

- 16 Guidance can be obtained from the *Earned Value Management FAQs for Tender Evaluation* available on the DMO EVM intranet site.

CONTRACTOR REVIEWS

The Integrated Baseline Review

- 17 Once the project is in contract, project managers are responsible for the conduct of the Integrated Baseline Review in order to review the technical merits and resourcing of the plan and to assess the risk associated with the baseline. Guidance on the conduct of integrated baseline reviews is available from the *Integrated Baseline Review Handbook* available on the DMO EVM intranet site.

The Earned Value Management System Review Process

- 18 Assessment of compliance with the contractual requirements and acceptance of the contractor's EVM system is the responsibility of the project manager. Guidance on the conduct of EVM system reviews is available from the *Earned Value Management System Review Handbook* available on the DMO EVM intranet site.

System Assurance Activities

- 19 Once the contractor's EVM system is assessed as compliant it is important that a program be instigated to ensure that the system continues to maintain compliance. Project managers are responsible for determining, based on a risk assessment, the frequency and scope of System Assurance Reviews. Further information on the risk factors to consider and the methods of conducting the assurance can be found in the *Earned Value Management System Review Handbook*.

DATA REPORTING AND ANALYSIS

- 20 Contract performance information, in the form of earned value performance reports, should be provided by the contractor at mutually agreed intervals (monthly as a minimum). All relevant project office personnel are responsible for reviewing contractor earned value performance reports (including the contractor's written analysis).
- 21 Detailed guidance on the analysis of earned value performance reports can be found in the *Earned Value Data Analysis Guide*.

KEY REFERENCES:

- *ASDEFCON (Strategic Materiel)*
- *ASDEFCON (Complex Materiel) Volume 2*
- *AS 4817 Project performance measurement using Earned Value*
- *DMO Supplement to AS 4817*
- *Earned Value Management System Review Handbook*

- *Integrated Baseline Review Handbook*
- *Guide to Earned Value Payments*
- *Earned Value Data Analysis Guide*
- *Project Performance Management Guide*
- *Earned Value Management FAQs*
- *The EVM references in the Chapter are all available on the DMO EVM intranet site at: <http://intranet.defence.gov.au/dmoweb/Sites/EVM/comweb.asp?page=Home>*