



**Australian Government**

**Department of Defence**  
Capability Acquisition and  
Sustainment Group

**CASG-2-INSTRUCTION**

**(PM) 003 – INTEGRATED BASELINE REVIEW AND EARNED  
VALUE MANAGEMENT SYSTEM REVIEW**

**VERSION: 1.0**

<b>Approving Authority</b>	<b>Digital Signature</b>
Director, Project Controls Services	

CASG Instructions are issued under the CASG Manual (CP) 001 – CASG Quality Management Manual

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*This document cancels (PM) 010 Integrated Baseline Review and Earned Value Management System Review Handbook V1.0.*

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**DOCUMENT HISTORY**

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## **INTEGRATED BASELINE REVIEW AND EARNED VALUE MANAGEMENT SYSTEM REVIEW**

### **REFERENCES**

- A. [CASG Policy \(PM\) 003 Earned Value Management Tiered Application to CASG Contracts](#)
- B. [CASG Manual \(PM\) 002 - CASG Project Risk Management Manual \(PRMM\)](#)
- C. [CASG Manual \(PM\) 002 - Project Management Manual](#)
- D. [Standards Australia AS 4817-2019 – Earned value management in project and programme management \(ISO 21508:2018, MOD\)](#)
- E. [CASG Manual \(PM\) 006 - Supplement to the Australian Standard for Earned Value Management, AS 4817-2019](#)
- F. [Contractor Earned Value Management Surveillance process model in CASG BMS.](#)
- G. [ASDEFCON \(Strategic Materiel\)](#)

### **ACRONYMS, ABBREVIATIONS AND DEFINITIONS**

Abbreviations and definitions can be found in the [Australian Defence Glossary \(ADG\)](#).

AC	Actual Cost
ASDEFCON	Australian Standard for Defence Contracting suite of contracting templates
BAC	Budget at Completion
BCR	Baseline Change Request
CAM	Control Account Manager
CAP	Control Account Plan
CAR	Corrective Action Request
CASG	The Department of Defence, Capability Acquisition and Sustainment Group
CASG PM	CASG Project Manager is the leader of the Integrated Project Management Team that includes project stakeholders, CASG cross-Function resources and FIC providers
CMS	Contract Master Schedule
CCP	Contract Change Proposal
CDRL	Contract Data Requirements List
CP	Contract Price
CWBS	Contract Work Breakdown Structure
DID	Data Item Description in the ASDEFCON SOW
EAC	Estimate at Completion
EV	Earned Value
EVM	Earned Value Management
EVMS	Earned Value Management System
EVPR	Earned Value Performance Report
EVT	Earned Value Technique
GFM	Government Furnished Material
GFS	Government Furnished Supplies
IEAC	Independent Estimate at Complete
ILS	Integrated Logistics Support
LOE	Level of Effort
MR	Management Reserve

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OBS	Organisational Breakdown Structure
ODC	Other Direct Costs
PMB	Performance Measurement Baseline
PP	Planning Package
PV	Planned Value
RAM	Responsibility Assignment Matrix
SCRAM	Schedule Compliance Risk Assessment Methodology
SOW	Statement of Work
TCPI	To-Complete Performance Index
UB	Undistributed Budget
WAD	Work Authorisation Document
WP	Work Package

## **SECTION 1 – INTRODUCTION**

### **SCOPE**

1. This Instruction provides the framework and guidance to prepare for, and conduct, Integrated Baseline Reviews (IBR) and Earned Value Management System (EVMS) Reviews. Collectively, these reviews are referred to in this Instruction as the “EVM Reviews” The Instruction does not seek to limit the scope of the reviews to be undertaken but rather it sets a benchmark for what must be achieved.
2. The Instruction is targeted at Defence personnel but should also provide a basis for a common understanding of review processes by both Government and industry. The success of these reviews is based heavily on industry participation and cooperation and, as such, a common understanding is mutually beneficial.
3. This Instruction combined DMH (PROJ) 11-0-002 Integrated Baseline Review Handbook and DMH (PROJ) 11-0-005 - Earned Value System Review Handbook due to the significant level of common content in each. This enables:
  - a. the EVM Reviews processes to be treated as a continuum of activities to review and approve the Performance Measurement Baseline (the purpose of IBR) and review and validate the EVMS (the purpose of the EVMS Review);
  - b. streamlining of the overall process and reduction of scope overlap between the two reviews; and
  - c. strengthening of the two reviews by focusing the processes and procedures on the specific objectives of each review.

### **OVERVIEW**

4. CASG adopts a risk-based approach for decisions on the adoption of EVM on contracts, as described in CASG Policy (PM) 003 Earned Value Management Tiered Application to CASG Contracts. The policy identifies contracts of higher cost, schedule and technical risk, as well as strategic importance, as applicable for the levying of EVM requirements on the contractor.
5. The key reasons CASG applies EVM to applicable contracts are that it promotes better project management practice in industry and ensures contract performance data is shared between contractor and Commonwealth staff so that emerging problems can be identified and acted upon as early as possible.
6. EVM has historically been seen primarily as a methodology which provides early warning signals of cost overruns, thus enabling management of project cost risk. It also supports cost analysis as outlined in CASG (PM) 007 CASG Earned Value Data Analysis Handbook by the following:
  - a. the use of metrics, derived from performance to date, to calculate the future performance required to achieve a targeted cost outcome (either Budget at Completion or Estimate at Completion); and
  - b. the ability to independently forecast completion costs based on historic performance (Independent Estimate at Completion).
7. Although the majority of CASG acquisition contracts are fixed price and the contractor may be seen to bear the cost risk for the project, contractor cost overruns even on fixed price contracts do constitute significant risk to the Commonwealth. Therefore Earned Value Performance Report deliveries from the contractor can play an important role in risk identification and mitigation.
8. The development of Earned Schedule, which has been included in the Australian EVM Standard, AS4817-2019, now provides parallel metrics enabling the identification of project schedule issues and the ability to provide independent schedule forecasts based on performance to date. The Earned Schedule principle is to provide early warning signals, sometimes in advance of the critical path, which can be used to manage schedule risk with time still intact. IFrom the foregoing:
  - a. Project risk reduction starts early in the Capability Life Cycle (CLC) and a decision on whether EVM requirements should be included in a Request For Tender is part of this

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process; and

b. EVM, if properly implemented, is a significant and important cost and schedule risk mitigation activity for both the Commonwealth and the contractor.

9. The information in this Instruction is intended to assist the Commonwealth in ensuring a robust EVMS is put in place and maintained by the contractor.

**TYPICAL CONTRACT EVM ACTIVITIES**

10. The EVM Reviews process typically involves a series of activities to be conducted by the Project Office to review and:

approve the Performance Measurement Baseline (PMB) using the information provided in

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- a. SECTION 2 – INTEGRATED BASELINE REVIEW of this Instruction; and
  - b. assess the contractor’s implementation of an EVMS for compliance with the contractual requirements and that its EVMS generating accurate and reliable data via an EVM System Review as detailed in SECTION 3 – EVMS REVIEW of this Instruction.
11. The delineation of the scope and focus of the IBR and EVMS Review based on the 11 step process model contained in A4817-2019 is shown in Figure 1 below.
12. EVM review activities may also include the ongoing EVMS assurance activities, known as System Assurance Reviews (referred to as “Demonstration Reviews” in AS4817-2019) to ensure that the EVMS maintains compliance with contractual requirements and is producing reliable data and reports that is being used to inform management decision making. See SECTION 4 – SYSTEM ASSURANCE REVIEWS of this Instruction for further information.
13. It is recognised that not all contracts and contractors are alike. Some contracts will be low risk, others high. Some contractors will have a mature EVMS in place while others may not and will have to implement a system from scratch. Guidance on tailoring the EVM Reviews to suit the type of contract and take account of the contractor’s experience is provided in the Tailoring of the EVM Reviews section below.

### **TYPICAL CONTRACT EVM REVIEWS PROCESS**

14. The following is an overview of typical EVM reviews and associated activities, noting that the requirement for and content of each is dependent on the level of perceived risk. The timings are indicative only and will vary from project to project.
15. Figure 2 below provides an indicative timeline of the typical post contract EVM review activities from the Effective Date (ED).
16. The process for conducting any of the EVM Reviews incorporates several activities including:
- a. **An assessment by the Project Office to ascertain the readiness of the contractor to undergo a formal review.** Conducting a formal EVM Review if the contractor is not ready will result in the wasted use of resources by the contractor and the Project Office and usually results in the EVM Review being repeated. If the Project Office should conclude that the contractor is not ready, then it should advise the contractor to that effect.
  - b. **A review of the contractor’s documented process and procedures.** This is usually conducted to inform the Project Office of how the contractor’s EVMS is designed to function. It is also an opportunity to provide feedback to the contractor of perceived shortcomings in meeting the contract requirements and processes that are likely to compromise data integrity. This is not a formal review and the procedures do not undergo any approval process. The review should preferably be conducted prior to the on-site EVMS Review.
  - c. **An on-site review,** to achieve the specific objectives of the EVM review being conducted. EVM reviews also allow the contractor to demonstrate that its EVM System is compliant with specified requirements which will include AS 4817-2019, the Defence Supplement to AS 4817-2019 and the negotiated contract.

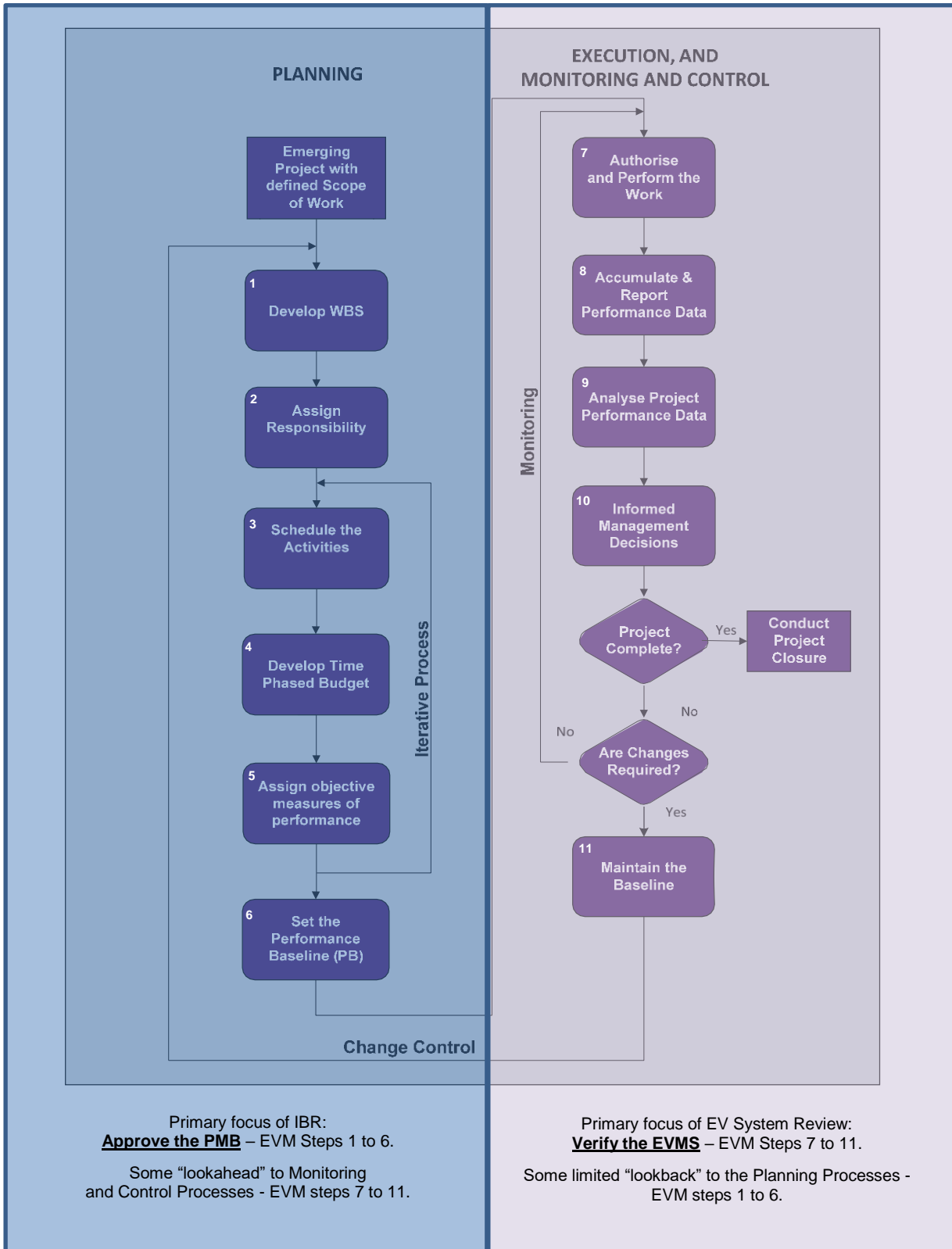


Figure 1. Scope and Focus of IBR and EVMS Review - AS4817-2019 EVM Process Model

### IMPLEMENTATION WORKSHOP

17. The Implementation Workshop (IW) is not a review. It is focused upon the contractor’s proposed implementation strategy and is generally necessary where there is no existing EVMS. The

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IW should be held either during the Offer Definition and Improvement Activities (ODIA) stage or no later than ED +1 month. It provides the Project Office and contractor with the opportunity to gain a common understanding of the EVMS requirements and provides the contractor the opportunity to explain/how these requirements will be met.

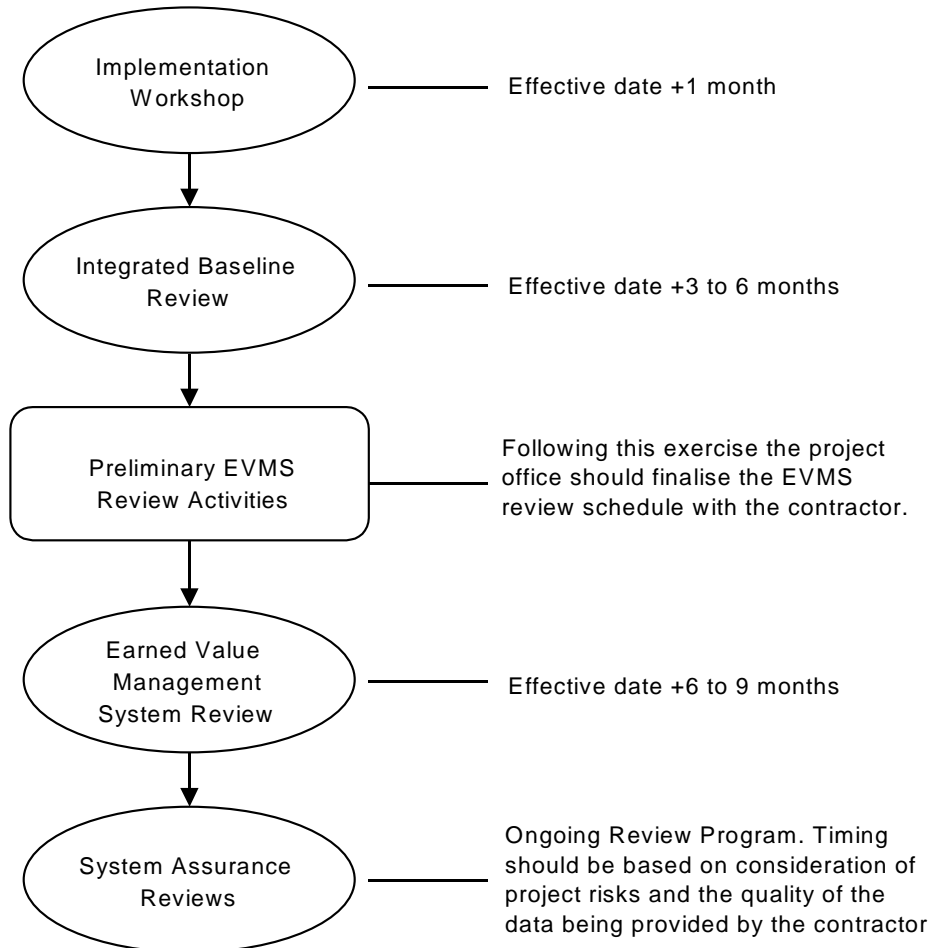


Figure 2. Typical Post Contract EVM Activities

## INTEGRATED BASELINE REVIEW

18. The IBR is a risk-based process enabling technical and schedule review, focusing on the assignment, definition, scheduling, and resourcing of work, thus establishing early visibility into the acceptability of the contractor's contract planning. The IBR also reviews the methods and metrics used to measure contract performance or progress. The focus is upon reviewing the technical merits and resourcing of the plan and to assess the risk associated with the baseline. The process involves a review of pertinent documentation, an on-site review of the contractor's proposed plan, a review of some of the management systems directly related to the establishment of the PMB and interviews/discussions with relevant managers.

An IBR is usually scheduled for ED + 3 to 6 months, however subcontracts may not be awarded simultaneously with the prime contract, which can result in delays of several months. This should be factored into the scheduling of the prime IBR. Refer to

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19. SECTION 2 – INTEGRATED BASELINE REVIEW for further guidance on conducting an IBR.

### **EVM SYSTEM REVIEW**

20. The purpose of this review, which follows the IBR, is to assess the contractor's implementation of an EVMS for compliance with the contractual requirements and that its EVMS is generating accurate and reliable data. This review is also tailored for each project based on project contract characteristics, the contractor's prior EVM experience, and past performance of the contractor in applying EVM to Defence contracts or other contracts where the equivalent EVM requirements have been applied. Refer to SECTION 3 – EVMS REVIEW for further guidance.

### **SYSTEM ASSURANCE REVIEWS**

21. System Assurance Reviews should be conducted as an ongoing exercise to ensure compliance with the requirements is being maintained. This type of review will allow the Project Office to assess the integrity, implementation, and use of the system by the contractor's staff. It is recommended that assurance activities be conducted based on a risk assessment. For example, if the data being provided by the contractor becomes doubtful or quality deteriorates, then a System Assurance Review is necessary. Refer to SECTION 4 – SYSTEM ASSURANCE REVIEWS for further guidance.

### **TAILORING OF THE EVM REVIEWS**

22. The EVM Reviews should be tailored to account for contract-specific circumstances. Where there is no existing EVMS, the full scope of this Instruction should apply.

23. Where an EVMS already exists, there is scope to tailor the EVM Reviews based on contractor experience with EVM and perceived risk to the Project. **Error! Reference source not found.** illustrates the basic steps to undertake when tailoring the EVM Review.

24. Firstly, using Figure 3 determine if the contractor has an EVMS which has been used to manage Defence contracts. If not, then once the contractor has implemented an EVMS, the entire system will need to be reviewed for compliance. However, the duration of the review can be tailored depending on the contract risk (scope, complexity and duration).

25. If the contractor has an established EVMS used for managing Defence contracts, then there is more scope for tailoring because the contractor has had experience in applying EVM and the quality of this application can be corroborated by other Project Offices, where this information is relevant. Tailoring options may include bypassing a formal EVMS Review by combining the EVMS Review with the System Assurance Review or conducting a targeted review.

26. The first step in tailoring an EVM Review is for the Project Office to assess the contract profile to determine those areas of priority or risk to the Project Office. Areas to be addressed may include, but are not limited to:

- a. contract price;
- b. contract duration;
- c. contract type;
- d. strategic capability considerations;
- e. schedule drivers;
- f. technical risk, including degree of development/ integration effort;
- g. cost drivers;
- h. reporting requirements and measurement requirements; and
- i. Project Office resources.



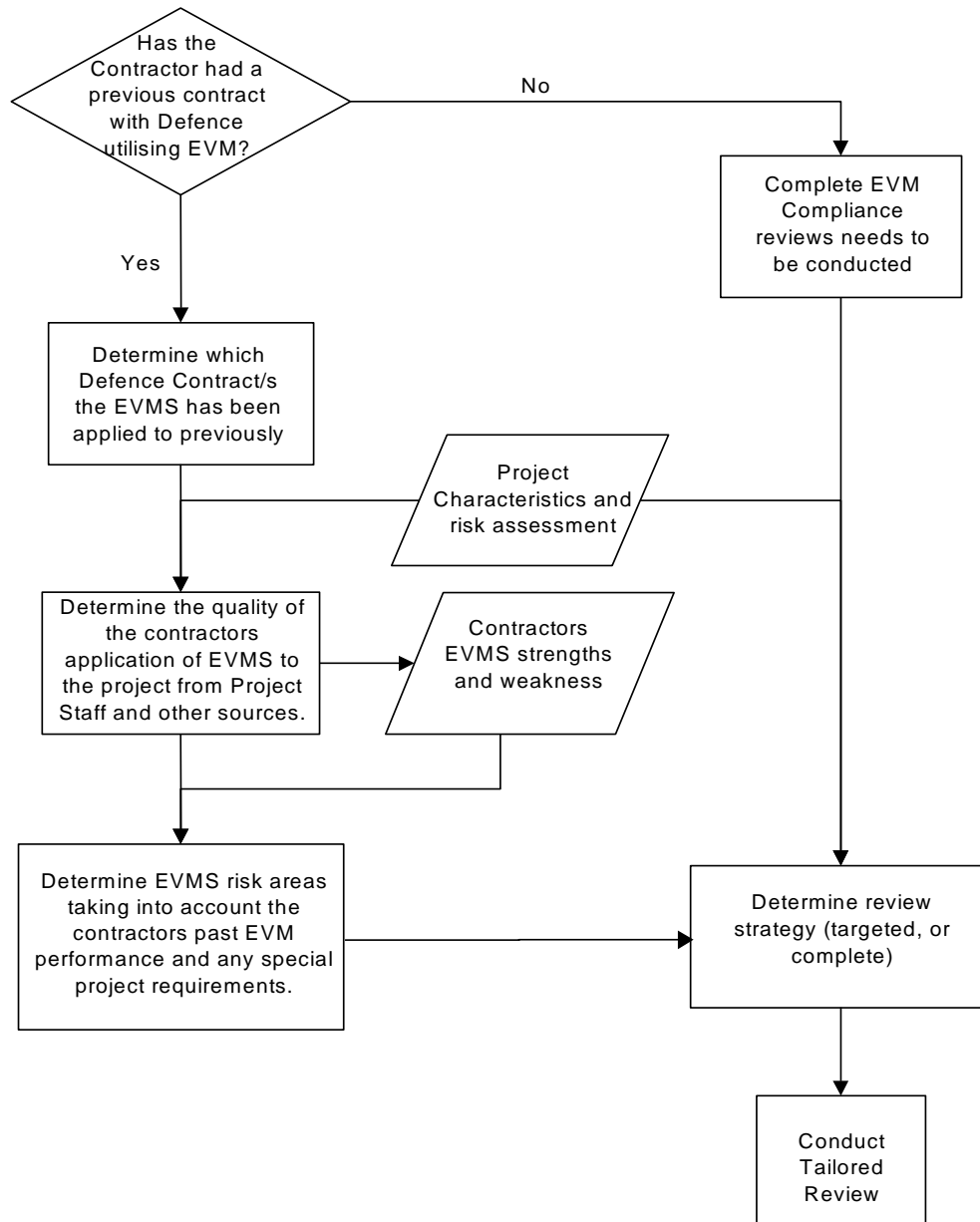


Figure 3. – Tailoring of EVM Reviews

27. It is also recommended that Project Office staff discuss contractor EVM performance with other CASG Projects which have active or recently completed contracts with the contractor. Discussions should centre around, but not be limited to, those priority areas previously determined by the Project Office. Topics to be discussed should include, but not be limited to, contractor performance in the following areas:

- a. data quality, including quality of analysis, and timeliness of provision of reports;
- b. maintenance of change documentation records;
- c. scheduling system and maintenance of schedules;
- d. accounting system;
- e. material handling system;

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- f. general knowledge of the EVMS by staff;
- g. EVM culture;
- h. management commitment;
- i. performance during system assurance reviews
- j. access to EVM data and supporting information; and
- k. management of subcontractors and incorporation of subcontractor data.

28. Further to the above list there is a need to include contextual issues e.g. Contract provisions, experience of both project and contractor at the time, contractor staffing moves, nature of the contract, physical location of contractor, relationship between Project Office and contractor. These set the context in which the EVMS is operating and also provides an insight into previous Project Offices views.

29. From these discussions the Project Office should be able to ascertain the strengths and weakness of the contractor's EVMS including its commitment to using it. This information does not provide conclusive evidence of the EVMS operation but provides leading indicators of risk. Using this information in conjunction with the previous assessment of priority areas the Project Office should be able to compile a list of areas of perceived risk with the contractor's current EVMS. This list of risks can be used to determine the scope of the EVMS Review and ultimately the review strategy.

30. ANNEX A provides a matrix relating risk areas to possible consequences and recommends areas to target using the 11 step process model of EVM described in AS 4817-2019. ANNEX H provides details on how to review these process steps. This is where tailoring based on ANNEX A guidance should occur.

### **TARGETED REVIEWS**

31. A targeted EVM Review covers all aspects of the EVMS although less emphasis is placed on those areas where the contractor has demonstrated its proficiency. Emphasis should be placed on areas that have been assessed as deficient or have been highlighted as problematic in the past.

### **FLOWDOWN OF THE EVM REQUIREMENTS**

32. Attention should also be focused on ensuring that prime contractor EVM reporting is reliable and useful for informing management decision making for both the Commonwealth and prime contractor by ensuring that the:

- a. EVM requirements are appropriately flowed down to subcontractors by prime contractors, particularly on large scale projects and programmes; and
- b. the processes and procedures which will be adopted for subcontractor performance reporting (either utilising EVM reporting or not) facilitate valid integrated performance management and reporting by the prime contractor EVMS covering the whole contract.

33. The following three EVM flow-down scenarios should be considered during EVM Reviews.

#### **Integrated Project Team (IPT)**

34. Where the contractor has implemented an IPT approach, all subcontractor activities, resources and costs will be incorporated into the contractor EVMS and Contract Master Schedule (CMS). This is the simplest approach from an EVM Reviews perspective as there will be only one EVMS to review.

#### **Subcontractor to Prime Contractor EVM Flow-down and Reporting**

35. The subcontractor model is a more common approach which sees:

- a. both prime and subcontractors maintain separate project controls / EVMS;
- a. regular performance reporting at contractually defined intervals from subcontractor to prime contractor;

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- b. integration of the subcontractor's EVM performance reporting into the prime contractor EVMS for reporting to the Commonwealth over the whole contract; and
- c. subcontractor EVM reviews, particularly for IBR needing to be conducted and satisfactorily completed before prime contractor IBR can take place.

### **EVM requirement not imposed on subcontractors**

36. This is also a common approach where EVM may not be imposed on subcontractors, even though it is a prime contract requirement, due to the following:

- a. low risk and/or repetitive nature of the subcontracted work to be undertaken; and/or
- b. subcontract being for the supply of materials, particularly low-cost materials.

37. In this situation, it is important to ensure suitable project performance information is reported upwards for integration and reporting in the prime contractor EVMS. The usual issue is the reporting of performance information which enables the prime contractor to derive an Earned Value measure that can be integrated into the prime's EVMS for overall performance reporting. Common techniques for deriving subcontractor Earned Value include:

- a. **Materials.** Recognising Earned Value based on the Planned Value/budgeted cost of the materials either:
  - i. on receipt if being procured, or
  - ii. after production if being produced by the subcontractor.
- b. **For Direct Labour.** Deriving and recognising Earned Value based on a reliable percentage of completion method. This can often be achieved using the percentage complete derived from a project schedule. While Physical Percent Complete (which takes into account resource loading in the project schedule) is preferable to a duration-based percentage complete, duration based percentage complete is preferable to no performance measure being provided at all.

## **SECTION 2 – INTEGRATED BASELINE REVIEW**

38. Following contract signature, the Project Office and the contractor should work together to establish the details for the conduct of the EVM Reviews process.

39. Preparatory meetings should be held to enable the Project Office team to provide the contractor with information on the process required to establish an approved PMB through the IBR process and implementing a compliant EVMS where none is currently in existence.

### **IBR OVERVIEW**

40. The IBR is also an ASDEFCON Mandated System Review where the Earned Value Management requirement has been included in the contract. It is a process which enables robust review of the technical and schedule aspects of project delivery. IBRs cover the assignment, definition, scheduling and resourcing of work, thus establishing early visibility into the acceptability of the contractor's contract planning.

41. Using the 11 step process mode of EVM and project planning and control included in AS4817-2019 and the Defence supplement as shown in Figure 1, IBR focuses on Steps 1 to 5 of the process which culminates in Step 6, approval of the PMB using the IBR process.

42. The IBR also reviews the methods and metrics to be used to measure contract performance or progress. The focus is upon reviewing the technical merits and resourcing of the plan and to assess the risk associated with the baseline.

43. A secondary focus of IBR includes a preliminary review of the business processes that underpin the development and ongoing maintenance of the PMB. Additionally, the IBR will provide an initial insight into the application of the company's Earned Value Management System (EVMS) to the current contract. While many aspects of the IBR consider EVM artefacts, the focus of the IBR is not EVMS compliance; rather review and approval of the PMB and the risks associated with meeting project objectives.

44. Potential EVMS compliance discrepancies discovered during the conduct of the IBR (that are not dispositioned as Corrective Action Requests) can be documented by the review team as risks for follow up at the EVMS Review as described in detail in SECTION 3 – EVMS REVIEW below.

45. Where the PMB no longer represents the plan for work (e.g. after major scope changes or replanning) a subsequent IBR may be conducted at the discretion of the Project Office. This is a provision of the standard clauses in the EVM section of the ASDEFCON (Strategic Materiel) Statement of Work.

46. It is critical to the success of the IBR that the Commonwealth and the contractor engage in joint efforts to make the interaction between the two teams as collaborative as possible.

47. Responsibility for the conduct of the IBR process lies with the Integrated Project Manager (IPM). The key to the success of an IBR is the involvement of technical staff who have knowledge of the work to be performed. The IBR is an essential process for identifying, quantifying, and mitigating risks in the early stages of a project. It provides valuable insight into the proposed plan for the project and provides a solid foundation for the future management and oversight of the project.

48. The IBR process includes a number of compliance and assurance activities, which ultimately results in formal approval of the PMB. This Instruction covers this process, which involves a review of documentation, an on-site review of the contractor's proposed plan and management systems, and follow-up actions as necessary to satisfy the Project Office that the baseline is valid and executable.

49. The IBR process is considered complete when the PMB has been approved.

### **IBR OBJECTIVES**

50. The objectives of the IBR covered by procedures in this Instruction are:

- a. Ensure that the complete contract scope of work is covered in the Contract Work Breakdown Structure (CWBS).

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- b. Assess whether the technical scope can be accomplished within baseline cost and schedule constraints and that resources have been appropriately distributed to the contract tasks.
- c. Assess that there is a logical sequence of effort that supports the contract schedule.
- d. Identify areas of risk in resource allocations and in the technical performance of the contract and understand the cost and schedule implications of that risk. A related objective is ensuring that the contractor and Commonwealth have a mutual understanding of these risks.
- e. Assess the validity and accuracy of the contractor's baseline by examination of at least one Performance Report (e.g. Cost Performance Report, Earned Value Performance Report (EVPR), or similar).
- f. Review proposed objective measures of performance (e.g. Earned Value Techniques (EVTs)) to be used to measure and report progress to ensure that the measures are appropriate and will provide meaningful indicators of work completed.
- g. Develop Project Office understanding of the PMB, resulting in a better appreciation of the contractor's performance management process and the techniques used to measure performance. This common understanding of the baseline plan should enable improved partnering throughout the contract and reduce misunderstandings.

### **APPROVAL OF THE PERFORMANCE MEASUREMENT BASELINE**

51. Approval of the contractor's PMB is a major focus of the IBR. A reliable and valid PMB supports the effective management of acquisition projects through monitoring and control of cost, schedule and technical progress. An effective PMB must:

- a. fully integrate cost, schedule and technical objectives at each level of the CWBS;
- b. identify appropriate and objective measurement techniques to determine progress;
- c. be based on a product and services structured CWBS in which products are traceable to the engineering specification tree;
- d. show clear accountability for the delivery of working products that meet the specification through the use of a nominated manager for each product in the product hierarchy;
- e. capture all of the technical and schedule requirements of work consistent with the entire contract scope; and
- f. have adequate and appropriately skilled resources assigned.

52. Once the PMB has been established and accepted by the Commonwealth Representative, monthly contractor reports (e.g. EVPRs, Progress Reports) and supporting schedules are then provided to the Project Office to monitor performance and identify the root causes of issues. This can then be used in conjunction with other data and discussions with the contractor to determine what actions can be undertaken to address the problem. Project staff have the ability to load EVPR data into the progress curves page of the Project Performance Review Information Platform (PPRIP), which can then be analysed and discussed in Project Performance Reviews.

### **IBR / PROCEDURES AND ACTIVITIES**

#### **Assessment of IBR Readiness**

53. The contract may establish specific entry criteria for the IBR. At a minimum, the following entry criteria should be met prior to commencing the on-site aspects of the IBR:

- a. The Project Office has received all relevant CDRL items (as detailed in the contract) scheduled for delivery prior to, or at, the IBR, including at least one complete EVPR where required;
- b. The CWBS reflects the entire scope of work and is defined to an appropriate level of detail. The CWBS will be based on the Standard identified in the contract and should be product and services orientated. The CWBS and CWBS Dictionary should be approved prior to the IBR to provide a sound initial basis for the PMB;

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- c. Subcontractor baselines, where applicable, have been incorporated into the prime contractor's PMB and IBRs on those subcontractors successfully completed, unless otherwise agreed with the Commonwealth Representative to complete a combined IBR;
- d. Risks with the potential to impact upon the viability of the PMB have been identified and documented including any assumptions behind likelihood and consequence ratings that may need to be referenced in the future; and
- e. Action items from any previous System Reviews or prior risk reduction activities (e.g. ODIA), which affect IBR, have been successfully addressed or action plans agreed with the Commonwealth Representative.

54. Where a contractual EVM requirement flows down from the prime contractor to subcontractors, the requirement for subcontractor IBRs arises. Usually, separate subcontractor IBRs are conducted prior to the prime contractor's IBR to ensure their inputs to the PMB are robust. These subcontractor IBRs are led by the prime contractor with participation from the CASG Project Office. The prime contractor and CASG's IPM may alternatively plan to undertake a consolidated IBR where the subcontractors' segments of the PMB are addressed together as part of the overall project scope.

55. From a risk management perspective, it is essential to complete any separate subcontractor IBRs before the prime contract IBR. That way all risks identified at the lower level can be flowed into the top level IBR. In some cases, the subcontracts may not be awarded simultaneously with the prime contract. If there is a delay of several months, this should be factored into the scheduling of the prime contract IBR.

### **Planning for an IBR**

56. The processes and procedures required for the planning and preparation of an EVM Review, including IBR are described in detail in ANNEX B.

57. EVM Review team responsibilities are described in ANNEX C.

### **Schedule Risk Analysis**

58. Schedule risk analysis factors risk information into the project's schedule baseline and uses statistical analysis to assess the potential impacts on the duration of the project or the achievement of a particular milestone. Schedule risk analysis performed during or immediately prior to IBRs may identify risks and issues which guide IBR teams on areas for investigation.

59. The process should include the following:

- a. review basis of estimates, including where appropriate provision of parametric modelling for comparison;
- b. identify project risks and issues for input to schedule risk assessment;
- c. conduct schedule integrity and health checks, including critical path analysis; and
- d. conduct Monte Carlo analysis and uncertainty modelling.

60. It is recommended that projects conduct schedule risk analysis prior to, or at, IBR in order to identify project execution risks early enough to enable effective mitigation and facilitate the establishment of a valid Performance Management Baseline.

61. It is preferable to conduct this analysis earlier in the CLC when risks can be mitigated and when issues are often more easily corrected, rather than having to remediate projects following identification of problems relatively late in the life cycle during system integration and test. In this way, the reviews become pre-emptive rather than diagnostic.

62. In the context of an IBR, schedule risk analysis can be used to:

- a. validate schedule estimates (is the schedule realistic and achievable?);
- b. assess project schedule construction and health (can I trust the project schedule?);
- c. identify risks to schedule performance (have all major risks been identified and treated?);
- d. identify Technical Debt (i.e. are engineering short cuts being taken that will cause additional

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rework later in the life cycle?);

- e. conduct schedule risk assessments - forecast project completion based on probability using schedule Monte Carlo analysis (what is the probability of achieving schedule milestones?); and
- f. determine specific actions to be taken to address the root causes of these issues and risks.

63. Schedule Compliance Risk Assessment Methodology (SCRAM) is an independent schedule risk analysis methodology that evolved from reviews of CASG Projects of Interest (POI) and Concern (POC). SCRAM is available at cost to CASG projects to independently analyse schedules and provides a framework and process for identifying risks to schedule compliance.

64. Risks and issues are identified, mainly through interviews, then consolidated and validated whilst the project schedule is being validated by an experienced project scheduler. Once completed, schedule Monte Carlo analysis is conducted to quantify and forecast future milestone dates based on the identified risks and issues, followed by reporting of the review findings. Customers are provided with a verbal out brief followed by a written report.

65. SCRAM Reviews are generally conducted over a two to three week period and consists of an offsite preparation stage followed by an on-site analysis period (typically two weeks). Contact details are available on the [CASG SCRAM home page](#):

### **Off Site Review of Contractor Data**

66. An initial review of the contractor's planning data should take place prior to the commencement of the IBR, preferably in conjunction with training sessions. As much of the contractor's data reviews should take place offsite as practicable so that the onsite activities can focus on the important Control Account Manager (CAM) and other relevant contractor staff interviews.

67. Corrective Action Requests (CARs) may be raised and formally communicated to the contractor during the offsite phase of the IBR. This provides the contractor additional time to address issues and resolve the deficiencies identified in the CARs raised.

68. The contract identifies the required dates for data deliverables. The CWBS and CWBS Dictionary which establishes the project scope and provides the basis for the flow down of the approved project scope into the CMS for project execution and establishing the approved PMB, should be reviewed approved prior to the conduct of the onsite phase of the IBR.

69. The CWBS and CMS are integral for establishing a valid PMB. The inability of the contractor to provide an acceptable CWBS and CMS will prevent a valid PMB, the overarching objective of IBR, being established.

70. Planning data should be current and ideally provided for review well before the on-site phase of the IBR, but no later than the commencement of the IBR. Typically, it would include:

- a. Contract SOW;
- b. CWBS and CWBS Dictionary;
- c. CMS;
- d. Responsibility Assignment Matrix (RAM), or similar document, identifying all Control Accounts and applicable managers;
- e. Control Account Plans (including resourcing profile);
- f. EVPRs;
- g. EVM System Documentation, including the relevant management procedures (as applicable);
- h. estimating methodology and documentation to enable assessment of the basis of the estimates;
- i. skills profile of the staff allocated to Control Accounts;
- j. Estimate to Complete data (if the data has changed since the Effective Date); and

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k. profile of work remaining and associated risks (where a subsequent IBR is required during the life of the contract).

71. It should be noted that not all of the above may be available prior to the review. However, early review of contractor data will improve the efficiency and effectiveness of the onsite phase of IBR at the contractor's facility. Additionally, not all documents will be held in hard copy format which means the IBR review team will need to be flexible in their approach to reviewing the data. Every effort should be made to use the same systems and formats that the contractor uses, to prevent unnecessary effort on the part of the contractor.

72. The CMS is a critical deliverable for the conduct of a successful IBR. On large complex projects, it is common to take up to four months after contract award to develop a credible CMS. Scheduling of the IBR should take into consideration time required to develop a credible CMS and the contract deliverables proposed in the RFT response as confirmed in the signed contract.

73. Once the CWBS and CWBS are received, review staff should conduct:

- a. **A review of the WBS** - to ascertain that the entire scope of the work including all scope changes agreed since the last IBR have been incorporated correctly and ownership taken by the appropriate Control Account Manager. Refer to ANNEX E for further details.
- b. **A review of the contract schedules to ascertain the schedule performance** - to date and to familiarise the review teams with the work plans of the contractor personnel to be interviewed. The review team should note whether the work resides on the critical path, any work that is close to critical and of the remaining time to complete. These will be noted for later reference when interviewing the relevant company personnel. Refer to ANNEX E for further details.

### **On-Site Review Activities**

74. The majority of the IBR process is conducted at the contractor's facility. The IBR should be held as soon as the PMB is implemented and after receipt of at least one EVPR; usually within six months of the contract Effective Date. The specific project requirement will be identified in the contract, based on the nature and complexity of the contract and the contractor's experience with EVM. The IBR should be conducted as early as practicable to allow for the identification of problems, resolution of misunderstandings, and implementation of corrective actions prior to extensive progress.

75. The IBR process is a thorough approach to assessing the PMB, against which performance will be measured. Effort should be focused on areas of known technical complexity and risk, high dollar value CWBS elements and those elements with significant schedule risk. A risk assessment plays a major role in the process.

76. Detailed guidance on the risk assessment process is contained in the [CASG Project Risk Management Manual](#).

77. The on-site activities of the IBR will include:

- a. **A Project Office in-brief** - explaining the purpose of the review, with the opportunity to introduce the members of the Project Office team to the contractor.
- b. **An overview briefing by the contractor** - to familiarise the Review Team with the management control system. For existing systems, the contractor should identify any changes made to meet the contract requirements.
- c. **A documentation review of the contractor's planning data** - including system traces to verify the consistency and integrity of data (covering all aspects not addressed prior to on-site activity) which establishes and maintains the contractor's baseline plan for the contract. This includes work authorisations, schedules, budgets, resource plans, and change records (including management reserve and undistributed budget logs, where appropriate). The purpose is to verify that the contractor has established and is maintaining a valid, comprehensive, and achievable integrated baseline plan for the contract as detailed in ANNEX E.
- d. Interviews/discussions with CAMs - to assess:



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- (1) the basis on which the plan was established;
  - (2) whether appropriate resources have been allocated; and
  - (3) the appropriateness of progress measurement techniques identified;
- e. **Interviews/discussions with other relevant contractor managers** - including project planning and control staff to verify that the contractor's systems are fully implemented and are being used in the management of the contract and that the management systems are operated by competent personnel. Refer to ANNEX G for detailed guidance on the preparation for and conduct of an interview;
- f. **Daily informal briefings** – may be conducted with the contractor to advise them of the status and any issues or CARs raised. This will allow the contractor the opportunity to clarify issues and/or potentially close CARs prior to the exit brief;
- g. **An exit brief** - by the Review Team covering the team's findings. During this briefing, any open corrective actions should be discussed along with the agreed corrective action plan which establishes responsibility and a time frame for closing out corrective action.
- h. **The preparation of an exception report** - addressing any concerns identified during the IBR. All concerns requiring resolution should be clearly documented and communicated and, if not resolved prior to completion of the IBR, should have agreed dates for resolution.

### **Specific Activities Undertaken at Contractor's Facility**

78. **CAM Interviews.** The interview schedule should aim to include interviews with as many CAMs as possible during the IBR, to enable a thorough assessment of all aspects of the plan. It may not always be possible to interview all CAMs and it is then essential to ensure that CAMs are selected on the basis of the risk associated with their responsibilities. Priority Control Accounts of interest include:

- a. Control Accounts that are assessed as medium to high risk (cost, schedule, technical, resourcing) based on review of documentation and contractor/Commonwealth risk registers;
- b. Control Accounts on the critical path (and near critical path); and
- c. high value Control Accounts.

79. Interviews with CAMs are usually supported by a member of the company. The interview centres on the CAM responsibilities associated with the technical content of the Control Accounts, the integration of the work schedule, including the identification of risks, and the application of resources. The basis for estimating the work and the measures of progress need to be reviewed in detail to ensure all parties understand how work was planned and how progress will be measured. A broad guide for undertaking a CAM interview is provided in ANNEX G. A form to assist with evaluating Control Accounts during or following an interview is also provided in ANNEX I. This form is for internal use only and is not provided to the contractor. The details will form the basis for the final IBR Report and any CARs.

80. **Other Interviews.** The following interviews are normally conducted by the Team Leader and the project controls representative(s) and may include the relevant Project technical representative(s).

81. Most companies have a Program Controls person or group responsible for the overall maintenance of the PMB, schedules and status data. This person (or group) will need to be interviewed to gain an understanding of how the data is integrated and captured throughout the company. Program Control personnel will generally be the most appropriate to provide details on traces through the system. CAMs should be able to explain how they provide data to Program Control personnel and what is done with it. It is beneficial to undertake this interview as early as possible to provide context for the CAM interviews and to prevent unnecessary confusion regarding who is responsible for what.

82. The following questions will help the review team to gain an overarching view of the contractor's development and maintenance of the PMB:

- a. Discuss the scope of the Program Control role.

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- b. What is the Work Authorisation process and common documentation?
  - c. What were the baseline planning instructions to the CAMs?
  - d. Overview of the Contract Master Schedule, including:
    - (1) critical path;
    - (2) current float analysis;
    - (3) process for schedule update;
    - (4) process for schedule health assessment; and
    - (5) process for schedule risk assessment.
  - e. Management of subcontractors:
    - (1) Where EVM is not flowed down, how is the contractor planning to manage the subcontracted effort?
    - (2) What is the role of CAMs in subcontractor / supplier management?
    - (3) How are subcontracts integrated into the CMS?
  - f. What is the guidance on Management Reserve and Undistributed Budget?
  - g. How are Baseline Change Requests (BCR) processed?
83. **There may be value in conducting interviews with other personnel** - in the contractor's office, such as Functional Managers, Integrated Product Management Team (IPdMT) Leaders and the IPM.
84. **The Functional Manager and IPT Leader interviews** - will focus on their role with respect to the CAM regarding assistance with schedule, resourcing, review of risks and review of progress. These managers may be responsible for several CAMs.
85. **Interview of the Contractor's Project Manager** - will focus on risks, Management Reserve, reporting mechanisms within the contractor's office and the IPM's confidence in the PMB and the management processes that underpin it. The Project Manager should provide details on the risk management structures and responsibilities and these should be verified through interviews with other managers.
86. **An interview with the Finance Manager** - should be conducted to verify the manner in which overheads/indirect costs are applied to the contract. Guidelines on the acceptable application of overheads/ indirect costs to the contract are provided in The Australian Standard for EVM, AS4817, and the Defence Supplement to AS4817.

### **Areas of Review**

87. Specific issues to be addressed during the IBR include:
- a. **Work Definition.** The team should examine the relationship between the contract SOW, the CWBS and CWBS Dictionary, and the work authorisation documents to confirm integration and consistency. The team should ensure that the technical content of each clause of the SOW is reflected in the CWBS and Control Account documentation. Products within the CWBS should have an associated specification from the specification tree and, with the associated budget, schedule and CWBS Dictionary, should effectively form a 'contract' with the CAM.
  - b. **Risk Identification.** The team should identify all major risk areas and verify that there is a process in place to ensure that risk mitigation activities and contingencies are incorporated into project plans. Through examination of the SOW, CWBS Dictionary, authorisation and supporting work documents, and CAM interviews, the team must understand where the risks are and what can be done to treat them. The IBR should assess, at a minimum, the following:
    - (1) **Technical risk** – the ability of the contractor to achieve the objectives of the scope of work using the plan developed.

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- (2) **Schedule risk** – the adequacy of the time allocated to defined tasks to achieve project milestones, including the effectiveness of the interdependencies identified, the critical path logic and the horizontal and vertical integration.
- (3) **Cost risk** – the likelihood of achieving project objectives within the budget identified, including the review of assumptions used for both estimates and resource allocation for the budgets established for WBS elements.
- (4) **Resource risk** – the feasibility of the resource plan for personnel and facilities, including the risk to successfully meeting objectives based on the proposed skill mix.
- (5) **Management processes risk** – the degree to which the processes identified provide an effective, integrated cost/schedule/technical baseline that will be tightly monitored and controlled to provide timely and accurate performance data (including that of subcontractors) for early warning and risk identification.
- (6) **Schedule Accuracy.** The team should assess the logical sequencing and planned duration of Work Packages to ensure the validity of the total project schedule and that the staff skills profile is consistent with the schedule and achievable. The schedule should be integrated and consistent between different levels of the schedule (master, intermediate and detail) and also within each level of the schedule. This is known as vertical and horizontal integration. Examination of schedules should focus on top-down traceability from the master (contract) level to the detail schedules that support Control Account planning. Detail schedules should be reviewed for consistency with one another and to ensure that all linkages and dependencies are incorporated. Consistency should be established by task tracing and verification of technical and organisational interfaces. Where available, purchase orders, drawing releases, subcontract schedules and material ordering schedules should be examined to confirm consistency between the order and delivery dates and between material milestones and material EVT's. Schedule risk analysis may be undertaken to assist in evaluating whether the schedule is achievable. The CMS is especially important as it reflects the contract SOW and is the primary instrument used to inform progress reporting.
- (7) **Budget Accuracy.** Contractor personnel must be able to substantiate their budgets in terms of the total amount (dollars or hours), mix of resources and time-phasing. The relationship between a Control Account's technical scope and budget plan must be clearly identified and verified. The phasing of the budget must be consistent with the schedule for achieving the work. The team should assess whether the resource levels appear to be reasonable for the given scope of work and schedule constraints.
- (8) **Performance Measurement Techniques.** The IBR team should understand and evaluate the EVT's used to measure accomplishment. The validity of the earned value methodology can be determined by sampling Work Packages within selected Control Accounts. The measurement techniques selected by the contractor should be objective, verifiable, and should reflect the nature of the work being undertaken. Where a measurement program has been implemented for software-intensive systems, the measures identified must be incorporated into the PMB to enable accurate determination of progress.

88. The [ASDEFCON IBR Mandated System Review Checklist](#) contains more detail on areas to be reviewed.

### **Recording of Findings – Corrective Action Requests**

89. Team members will be required to prepare CARs against any deficiencies identified during the IBR process.

90. A template for the CAR is provided in ANNEX J.

91. CARs should be written in a manner that clearly identifies the issue being raised and provides the details surrounding the issue. CARs are provided to the contractor and should therefore be as clear as possible, to prevent confusion when the contractor attempts to identify solutions to the

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problem. CARs are classified as either major or minor according to their implications.

92. Both major and minor findings require the contractor to identify corrective actions, however a major finding will result in the PMB remaining unapproved until the contractor rectifies the issue.

93. **A major finding** is one which identifies deficiencies which directly affect the:

- a. validity and acceptability of the PMB;
- b. integrity of the EVMS due to non-compliance with contractual requirements; or
- c. reliability of the performance measurement techniques.

94. **A major finding** may also result from the existence of numerous minor findings which, when viewed in total, challenges the integrity of the above requirements.

95. **A minor finding** is a one-off occurrence or an issue that needs correcting but has no overall adverse effect on the PMB, overall EVMS or performance reporting.

96. In addition, observations may be recorded that do not require corrective action but, rather, recognise a good practice which should be further enhanced. They may also identify a practice which is not ideal and requires improvement.

### **Exit Brief**

97. The on-site activity associated with the IBR will conclude with the exit brief conducted by the Project Office. All participants, including company senior management, are encouraged to attend.

98. The purpose of the exit brief is to address the findings of the IBR including the strengths and weaknesses of the PMB, any new risks identified during the IBR process, observations and any recommendations. The exit brief will address any open CARs, copies of which should be provided to the contractor at this time, if not provided earlier.

99. Wherever possible, CARs identified during the documentation reviews and CAM interviews should be resolved before the exit brief, so as to minimise the number of CARs carried forward which require resolution.

### **IBR Report**

100. The IPM is responsible for the completion of an exception report, which is provided to the contractor. The report addresses any findings, concerns, observations and actions identified during the IBR. Ultimately, the report should provide a useful record of the outcomes of the IBR and identify future actions.

101. An example IBR report template is provided at ANNEX K.

### **Resolution of Issues**

102. From IBR commencement through to closeout, the review team identifies, addresses and tracks corrective actions. Rather than wait until after the interview portion later in the IBR process, issues should be raised as they are identified to provide opportunity to address PMB quality and integration issues throughout the process.

103. At the conclusion of the on-site IBR activity, all CARs requiring resolution should be identified, with an estimated date for resolution proposed by the contractor.

104. Depending on the number and severity of the findings, the contractor may need to identify a date by which a Corrective Action Plan will be provided to address the findings. Where only a few findings exist, the contractor may be in a position to provide dates against each item prior to the team leaving the contractor's facility.

105. If the IBR results raise serious concerns regarding EVMS baseline implementation, this will impact on any follow-on EVMS Review process and/or System Assurance activities undertaken by the Project Office.

106. The Corrective Action Plan developed by the contractor should provide sufficient detail to allow the Project Office to review the adequacy of the proposed solution. These corrective actions will need to be tracked to closure by the IPM prior to final approval of the PMB.

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107. The IPM should ensure that any risks identified during the IBR are recorded in the internal Project Risk Log and managed accordingly. The IPM should also ensure that the contractor has taken appropriate action to record any risks identified during the IBR process. Both parties should have an agreed understanding on the processes for management of these risks and any future risks that may arise.

### **Approval of the PMB and IBR Exit Criteria**

108. A successful IBR will result in the PMB being approved by the Commonwealth Representative for the future management of the project. This may occur at the time of the IBR on-site activities where no major findings are identified. The Commonwealth Representative will make a decision on PMB approval before the Exit Brief.

109. The following questions should be considered in determining whether the PMB is **accurately defined**:

- a. Is the entire scope of work captured in the PMB?
- b. Is the work accurately sequenced and time-phased?
- c. Are all SoW requirements flowed down to an appropriate management level?
- d. Do the Commonwealth and contractor teams have a shared understanding of the definition of the PMB?

110. The following questions should be considered in determining if the PMB is **achievable**:

- a. Are sufficient resources identified against the work scope?
- b. Are activities sequenced in the most efficient and effective manner?
- c. Is there margin between delivery dates in Agreements with Capability Managers and forecast milestone dates in the CMS?
- d. Is there adequate Management Reserve for the risks identified to date, plus a margin?
- e. Are there peaks and valleys in staffing profiles that may be difficult to achieve?
- f. Is the PMB consistent with prior contractor performance history?

111. Detailed guidance on assessing the PMB is available at Attachment 1.

112. Where corrective actions are required prior to approval of the PMB, these should be managed by the Project Office to ensure that they are adequately addressed. It is essential that prompt attention be given to evaluating any corrective actions and approving the PMB. Once the PMB is approved, any changes to the baseline need to be controlled, managed and documented to ensure the ongoing integrity of the PMB.

113. The contract may establish specific Exit Criteria for the IBR over and above the minimum criteria set out in the [IBR Mandated System Review Checklist](#).

### **Follow-on Activities**

114. CASG scheduling guidance advises that the PMB of the Integrated Master Schedule (IMS) maintained by the CASG Project Office should be set no later than one month after Contract Signature. In these instances, where the IMS PMB is set prior to IBR, forecast dates in the IMS should be updated, where necessary, to reflect the outcomes of the review.

115. The scheduling guidance also acknowledges that many contract schedules are not mature enough within a month of contract signature to support the setting of an IMS PMB. In these instances, and where an IBR is a contractual requirement, the IPM and Scheduler may wait until the successful completion of the IBR before setting the IMS PMB. This should be done within one month of IBR completion/approval of the contractor's PMB. The IMS PMB is to be an accurate reflection of the approved time-phased plan for scope and budget for project execution and must remain within the parameters agreed by Government and as documented in the authorised Delivery Agreement (MAA)

116. Where a contract levies an EVM reporting requirement on the contractor, the next step following IBR is an EVMS Review.

## **SECTION 3 – EVMS REVIEW**

117. Where the contractor does not have a pre-existing EVMS that complies with the Australian Standard for EVM (AS4817) and the Defence Supplement, the approval of the PMB will enable the implementation and assessment of the system to progress.

118. Where the contractor has an existing compliant EVMS, the IBR will provide an insight into the application of the existing EVMS to the new contract. All contractors will be required to be reassessed for compliance with the EVM requirements. However, the maturity of the contractor's utilisation of EVM will be a significant factor in determining the tailoring of the EVMS Review.

119. Tailoring guidance can be found in ANNEX A and the Tailoring of the EVM Reviews section of this Instruction.

### **OBJECTIVES OF THE EVMS REVIEW**

120. Provision for the requirement for EVMS Reviews is included in the standard clauses of the EVM section of the Statement of Work (SOW) as part of the [ASDEFCON Strategic and Complex Materiel templates](#). The timeframe within which the EVMS Review is to be conducted is specified therein.

121. The main objective of the EVMS Review is for the contractor to demonstrate that its EVMS is compliant with AS 4817, the Defence Supplement to AS 4817 and the negotiated contract (Clauses, DIDs, Deliverables, Attachments, etc) which form the consolidated EVM set of requirements.

122. While an EVMS Review is complementary to an IBR and in some cases may need to revisit areas that are reviewed in the IBR:

- a. the EVMS Review focuses on steps 7 to 11 of the EVM process steps shown in Figure 1 above; and
- b. effective tailoring of this review should significantly reduce, if not avoid duplication of effort between the IBR and EVMS Review.

123. The maturity of the contractor's EVMS and contract risk assessment can also be used to tailor the EVMS compliance assessment, as required.

124. Once an IBR has been completed, the Project Office will have seen the initial application of the EVMS through the establishment and approval of the PMB.

125. The EVMS Review has a different focus which will review the ongoing application of the EVMS, including the updates, progress, and control of the baseline.

126. The overarching objective of the EVMS Review is to **verify that the contractor's EVMS is producing reliable information** that is being used to inform management decision making.

127. Secondary objectives include:

- a. **Provide further insight into the risk management process** achieved through discussions with Control Account Managers and other managers and reviewing the success of risk mitigation strategies implemented to date.
- b. **Further develop Project Office understanding of the EVMS**, resulting in a better appreciation of the contractor's performance management processes. This common understanding of the management and reporting processes should enable improved partnering throughout the contract and result in fewer misunderstandings.

128. The overarching objective of verifying the reliability of the EVMS is achieved by reviewing the operation and the reports of the EVMS including:

- a. **Assessing the processes for collecting and verifying performance data** (earned value and actual costs), analysis of data resulting in variance reports, development of EACs, corrective action plans and reporting.
- b. Further examination of at least two Earned Value Reports since approval of the PMB.

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- c. **Review of the processes for maintenance of the baseline** to confirm that the ongoing integrity of the PMB is being maintained.
- d. Further review and confirmation of the validity and appropriateness of the EVT's being used to measure and report progress.

## **ENTRY AND EXIT CRITERIA FOR THE EVMS REVIEW**

### **Entry Criteria**

129. The contract should establish specific entry criteria for the EVMS Review. As a minimum, the contractor should meet the following criteria prior to commencing the on-site aspects of the EVMS Review:

- a. successful completion of the IBR including close out of all major CARs;
- b. the Commonwealth Representative has agreed the PMB (this is the outcome of the IBR);
- c. the delivery and acceptance by the Commonwealth Representative of all relevant CDRL items as listed in the SOW;
- d. risks identified during the IBR have been documented within a risk register and actioned, where appropriate;
- e. the contractor has completed at least two complete monthly accounting periods of performance against the approved baseline budgets and schedules, and has submitted reports required by the contract, including Earned Value reports for these periods; and
- f. All relevant subcontractors have had their EVMS approved by the contractor and have submitted at least two sets of reports to the contractor.

### **Exit Criteria**

130. As a minimum, the following exit criteria should be met prior to completing the EVMS Review process:

- a. All CARs raised as a result of the EVMS Review, have been tracked to closure and/or corrective action agreed. All Major CARs should be closed, and a corrective action plan prepared by the contractor, and approved by the Project Office, to address any open Minor CARs.
- b. All relevant CDRL items which require amendment as a result of the review have been delivered and approved/accepted by the Project Office.
- c. The IPM is satisfied that the contractor's EVMS is compliant with the requirements of AS 4817-2019, the Defence Supplement to AS 4817 and any additional contract requirements.

## **PREPARATION ACTIVITIES**

131. The processes and procedures required for the planning and preparation of an EVMS Review are described in detail in ANNEX B.

132. Review team member responsibilities are described in ANNEX C.

133. Items to be considered in preparing the EVMS Review plan include:

- a. **Scope of the review** - The Project Office should determine the scope of work for the review based on risk, with the view to tailoring the review. This will ensure efficient use of Project Office resources and reduce cost and disruption to the contractor whilst still providing confidence that the review will provide adequate insight into the application and compliance of the contractor's EVMS. See the OVERVIEW and Tailoring of the EVM Reviews sections of this Instruction and ANNEX A.
- b. **Resources for the review** - Once the scope of the work, scale and complexity of the contract is known then the composition and size of the review team can be determined. Aim

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to provide adequate resources to achieve the on-site review within an acceptable time limit (maximum of two weeks). For example, the number of interviews to be conducted will assist in determining the size and composition of the team. This will require that the Project Office identify and train the review team well in advance. Commitment should be obtained from management that the resources will be made available when required. Continuity is important therefore team members should be involved in reviewing the contractor's EVM documentation (CWBS, Schedules, Management System Procedures etc) where delivered as Contract Data Deliverables (CDD). This will give the review team an appreciation of the EVMS they are about to review. Training analysis needs to be conducted well in advance of the review so that suitable training can be arranged and scheduled into the review plan.

c. **Timing of the review** – Normally the reviews dates (IBRs and EVMS) are negotiated and become contractual milestones. It is therefore very important that the milestone dates be realistically established. When negotiating the EVMS Review date the following should be taken into account:

- (1) contract size;
- (2) sufficient time to conduct EVMS Reviews on Subcontractors (where applicable);
- (3) sufficient time to for the contractor to implement an EVMS and train staff; and
- (4) time for the review, comment, and amendment cycle for pertinent CDDs.

134. The review schedule should also be used by the Project Office to plan its pre review activities and take into account other project activities (e.g. training needs analysis, conduct training, and documentation review). Consideration should also be given to other project management activities (e.g. Quarterly Progress Reviews, Design reviews etc in the Integrated Master Schedule).

### **OFF-SITE REVIEW ACTIVITIES**

135. Following contract signature, the Project Office and the contractor should work together to establish the details for the conduct of the EVMS Review process. Preparatory meetings are recommended to enable the Project Office team to provide the contractor with information on the process for implementing a compliant EVMS where none is currently in existence.

136. The EVMS Review will not be the first exposure of the Project Office to the contractor's EVMS. The Project Office should have an insight into how the contractor intends to meet the EVM requirements through:

- a. the Implementation Workshop;
- b. the review of various EVM related Contract Deliverables; and
- c. the conduct of the IBR.

137. The Project Office should engage the contractor frequently to ensure plans are progressing adequately. This can be partly accomplished through a training day for the review team where both the contractor and Commonwealth team members are present.

138. It is recommended that the contractor's data be used in the training, e.g. a sample Control Account Plan with its associated WBS, work authorisation documents, etc. This provides the team with an early insight into the type and layout of the documentation that they will be reviewing during the EVMS Review.

139. Similar to an IBR, to minimise the time spent on-site, the Project Office should assess if the contractor is ready for a review and where possible review any EVMS documentation (refer ANNEX E) and conduct any applicable data traces (refer ANNEX F) the contractor has available prior to the review. Review of the overall system documentation will familiarise the team members with the contractor EVMS and, in particular, their own assigned areas of responsibility. Review team members will usually perform this stage individually and meet to discuss their findings.

140. The quality of the documentation provided by the contractor will also provide an indication of



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their readiness to undertake the review. Prior review, comment, and approval/acceptance<sup>2</sup> of these documents will reduce the on-site workload on the review team. It also gives the contractor a chance to rectify deficiencies before the on-site review.

141. Offsite documentation review activities can include:
- a. **A review of the documentation** - which maintains the contractor's baseline plan for the contract. This includes work authorisations, schedules, budgets, resource plans, and change records (including management reserve and undistributed budget logs, where appropriate). The purpose is to verify that the contractor is maintaining the valid, comprehensive and achievable integrated baseline plan established at IBR for the contract. Refer to ANNEX E for further details.
  - b. **A review of the reported Earned Value performance** - against the PMB along with appropriate analyses of variances, including possible impacts on schedule and cost, as well as a projection of the Estimate to Complete (cost and schedule). Refer to ANNEX F for further detail.
  - c. **A review of the contract schedules to ascertain the schedule performance** - to date and to familiarise the review team with the work plans of the contractor personnel to be interviewed. The review team should note whether the work resides on the critical path, any work that is close to critical and of the remaining time to complete. These will be noted for later reference when interviewing the relevant company personnel. Refer to ANNEX E for further details.
  - d. **A review of the WBS** - to ascertain that any scope changes agreed since the IBR have been incorporated correctly and ownership taken by the appropriate Control Account Manager. Refer to ANNEX E for further details.
  - e. **A review of the procedures** - used to prepare Earned Value Performance data from the lowest level of formal reporting to the Report to the customer.

### **ON-SITE REVIEW ACTIVITIES**

142. It is the contractor's responsibility to demonstrate compliance with the contractual requirements. The contractor will demonstrate to the review team how the EVMS is structured and operates. This entails interviews with relevant key personnel such as Project Managers, Functional Managers, Control Account Managers and Project Controls staff.

143. Pertinent extracts from the EVMS documentation must also be available for all relevant areas of the contractor's organisation. The review normally follows a standard pattern to facilitate the process. A sample agenda for the EVMS Review is provided at ANNEX D.

144. The onsite review for an EVMS Review follows a similar approach as for IBR as described in the On-Site Review section above. On-site activities normally include:

- a. **An overview briefing by the contractor** - to familiarise the Review Team with the management control system. For existing systems, the contractor should identify any changes made to meet the contract requirements;
- b. **Interviews/discussions** - with relevant contractor managers to verify that the contractor's EVMS is fully implemented, being used in the management of the contract and that the management systems are operated by competent personnel (refer to ANNEX G for details);
- c. **Documentation Reviews** – flowing from the off-site documentation reviews outlined in the Off-site Review Activities section of this Instruction;
- d. **Daily informal briefings** - with the contractor to apprise them of any issues or CARs raised. This will allow the contractor the opportunity to clarify any issues and/or potentially close

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<sup>2</sup> Where applicable to contract deliverables.

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CARs prior to the exit brief;

- e. **An exit brief** - by the Review Team covering the team's findings. During this briefing, any open corrective actions should be discussed along with the agreed corrective action plan which establishes responsibility and a time frame for closing out corrective action; and
- f. **A review report** - formally detailing the findings of the Review Team.

145. **Compliance Assessment.** The Review Team should follow the Evaluation guide at ANNEX H to achieve an orderly, comprehensive and conclusive review. Consideration should be given to the priority areas identified during the tailoring process. The team should employ sampling techniques when it is not practical to review entire systems. Based upon the best judgment and advice available, the Team leader will identify the cut-off point in any test when he considers that sufficient evidence has been obtained on which to base conclusive findings.

146. **Compliance and Corrective Action.** Instances of failure to meet EVM requirements should be formally documented in CARs. The contractor must take corrective actions as necessary to achieve compliance with the requirements. Any areas to be re-examined should be clearly identified to the contractor by the Team Leader. The contractor and Team Leader will agree a schedule for implementing solutions and for a subsequent review to confirm compliance. Where the corrective actions cannot be completed by the agreed date, the matter then becomes a contractual issue.

147. **Management of Subcontractors.** The prime contractor is normally responsible for the review and acceptance of each relevant subcontractor's EVMS with participation by the Project Office (under the standard EVM clauses in the SOW). Similar to IBR, EVMS Reviews of all relevant subcontractors should normally be held prior to the review of the prime contractor, especially where successful implementation of an EVMS by the prime contractor represents a milestone payment point. The Team Leader may hold open the review of the prime contractor's EVMS should they fail to adequately discharge their obligations in this respect.

148. **Corrective Action Reports.** Deficiencies found in the review process are documented as CARs or Observations. The same approach is used for categorising CARs in the EVMS Review as for IBR as described in the Recording of Findings – Corrective Action Requests section of this Instruction.

149. **Review Status.** Reviews are either 'Open' (still in progress) or 'Closed' (satisfactorily completed). The contractor must initiate a corrective action plan to resolve problems in a timely manner. Where, at the completion of the EVMS Review, a number of Major CARs are identified, the Project Office will need to work closely with the contractor to ensure that these items are tracked to closure. Policy advice from CASG's Directorate of Project Controls Services may be necessary where the issue is an EVM technical application matter. Depending on the criticality and the number of Major CARs, a further assessment may be deemed necessary tailored to address only the outstanding areas of concern.

150. The Team Leader normally closes the review when the review is completed and all Major CARs are closed. Generally, Major CARs will require a small review team to verify satisfactory corrective action, while Minor CARs may be closed by the Commonwealth Representative as a System Assurance action.

## **EXIT BRIEF**

151. The on-site activity associated with the EVMS Review will conclude with the exit brief conducted by the Team Leader and may include a response by the contractor. The same approach is used for conducting an EVM Exit Brief as for IBR which is described in the IBR Exit Brief section of this Instruction.

## **REVIEW REPORT**

152. The Team Leader is responsible for the completion of an exception report, which is provided to the contractor as soon as possible. The report addresses any findings, concerns, observations, and actions identified during the EVMS Review.

153. Ultimately, the report should provide a useful record of the outcomes of the EVMS Review and identify future actions. A suggested format for this report is provided at ANNEX L.

## **CONCLUSION**

154. Responsibility for the successful planning and conduct of the EVMS Review lies with the IPM. The key to this is the involvement of appropriately experienced team members who have a sound knowledge of EVM principles and the typical disciplines that the contractor will utilise to fulfil the requirements of the contract.

155. A successful EVMS Review outcome provides the confidence that the contractor has implemented a performance management system that will provide accurate and timely performance data which is:

- a. used by the contractor to manage the contract; and
- b. provided to the Commonwealth Representative to meet its management and reporting requirements.

## **SECTION 4 – SYSTEM ASSURANCE REVIEWS**

156. Once the EVMS is implemented and operating it is important that an assurance program be instigated to ensure that the EVMS continues to comply with the contract requirements and is producing reliable information that is being used to inform management decision making. The standard EVM clauses in the ASDEFCON (Strategic Materiel) SOW make provision for System Assurance.

### **RISK BASIS FOR SYSTEM ASSURANCE REVIEWS**

157. The requirement for a system assurance activity to be conducted should be based on risk. Short-term contracts that are low risk may not normally require a system assurance activity to be conducted. However short-term contracts that are high risk, as well as longer-term contracts, will normally require a system assurance activity to be conducted.

### **OPTIONS FOR CONDUCT**

158. System assurance activities can be conducted in a number of ways:
- a. As a formal stand-alone system assurance review - similar to a scaled down EVMS Review targeting risk areas. Once risk areas are identified, the relevant contractor processes should be reviewed using the same procedures as outlined in SECTION 3 – EVMS REVIEW and relevant Annexes of this Instruction;
  - b. Internal system assurance activities conducted by the contractor with the resulting documentation being made available to the Project Office; and/or
  - c. In conjunction with a Schedule Risk Analysis activity or SCRAM Review.

### **CONSIDERATIONS FOR A SYSTEM ASSURANCE REVIEW**

159. When deciding if a system assurance review is required, the following are to be considered:
- a. accuracy of EVM reports;
  - b. quality of Variance Analysis Reports;
  - c. responsiveness of the contractor to Project Office enquires and access to data;
  - d. timeliness of EVM data and statused schedules;
  - e. accuracy of schedules;
  - f. progress towards capability achievement;
  - g. problems with performance verification;
  - h. maintaining the baseline:
    - (1) excessive internal change;
    - (2) excessive replanning; and
    - (3) retroactive changes over and above normal accounting corrections.

## **SECTION 5 – RESPONSIBILITIES**

160. Director, Project Controls Services is responsible for the maintenance of this Instruction. IPMs are responsible for implementing the IBR procedures contained in this Instruction, if applicable to their project.

### **MONITOR AND REVIEW**

161. The Functional Authority, Director Project Controls Services, will monitor and review this policy making amendments where required.

162. Document history will be updated for all document amendments.

### **WORKPLACE HEALTH AND SAFETY/ENVIRONMENTAL ISSUES**

163. There are no WHS and Safety/Environmental issues that are relevant to this procedure.

### **TRAINING AND COMPETENCIES**

164. It is recommended that all members of EVM review teams complete Introduction to Earned Value Management training (CAMPUS Course ID 00004294) which provides participants with:

- a. the skills and knowledge to understand EVM during planning, executing, monitoring and control phases of a project;
- b. an understanding of how EVM enables more effective management, control of projects and improves forecasting;
- c. an understanding of the principles and requirements of EVM Standards (i.e. The Australian Standard for EVM, AS4817, and the Defence Supplement to AS4817); and
- d. the ability to undertake basic analysis, interpret and use Earned Value information.

### **POINT OF CONTACT**

165. The point of contact for this Instruction is Director, Project Controls Services, within CASG.

## ANNEX A: GUIDE TO TARGETING REVIEWS

1. Table A-1 can be used as a guide to determining target areas when tailoring a review. This is to be used in conjunction with the information provided by other Project Offices who have experience with the contractor’s application of EVM. Consideration should also be given to performance measurement and reporting requirements to determine priority areas.

2. Note: An EVMS Review is a review of the Performance Management system. As such, it addresses the procedures and processes implemented that will result in a compliant EVMS which produces reliable data that can be used to inform management decision making.

3. It is important to remember that the EVMS Review is not conducted to resolve technical issues but to identify the issues and risks associated with the EVMS. Follow-up meetings to resolve technical issues identified can be scheduled outside the context of the EVMS Review.

**Table A-1 - Target Areas for a Review**

Item	Areas to assess	Possible risk areas	Areas to target for a tailored review.
1	Data quality, including quality of analysis, and timeliness of provision of reports.	Systemic problems regarding data collection, accumulation, reporting and analysis. Possible problems with contractor’s finance, scheduling, EV and material management systems, CAM training and internal administration.	AS 4817 Steps 8,9,10, and equivalent steps in the Defence Supplement. Step 2 may also be implicated. Also assess company knowledge and commitment to EVMS. See Item 8
2	Maintenance of change documentation records. Including: <ul style="list-style-type: none"> <li>• Timeliness of authorised baseline changes,</li> <li>• Inadequate change documentation, and</li> <li>• Excessive Internal Changes.</li> </ul>	Problems can result in an unstable baseline against which to measure performance. Possible problem areas include: <ul style="list-style-type: none"> <li>• baseline control process not being followed or flawed,</li> <li>• optimistic planning,</li> <li>• inaccurate estimates,</li> <li>• inappropriate performance measurement techniques,</li> <li>• technical problems, or</li> <li>• lack of resources.</li> </ul>	AS 4817 Steps 3, 4, 5, 11 and equivalent steps in the Defence Supplement.
3	Scheduling system.	Problems in this area are indicative of risks associated with drafting, updating and maintaining relevant schedules that relate to the way work is conducted.  A poorly operating scheduling and reporting system will impact the ability to accurately forecast future milestones and assess remaining duration on the contract.	AS 4817 Steps 3, 4, 6, 8, 9, 10, 11, and equivalent steps in the Defence Supplement.

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Item	Areas to assess	Possible risk areas	Areas to target for a tailored review.
4	Accounting system.	Problems in this area can lead to incorrect or delayed collecting of cost data, leading to inaccurate analysis and reporting.  The principal risk of a poorly operating accounting system is an inability to assess the costs of the balance of work to be completed.	AS 4817 Steps 8, and 9 and equivalent steps in the Defence Supplement. Steps 7 and 10 may also be included.
5	Material handling system.	Problems in this area can lead to incorrect collecting of performance data, leading to incorrect analysis and reporting.	AS 4817 Steps 8, and 9 and equivalent steps in the Defence Supplement. Steps 7 and 10 may also be included.
6	Contractor Staff Aspects. Includes : <ul style="list-style-type: none"> <li>• Management commitment,</li> <li>• EVM culture, and</li> <li>• Knowledge of the EVMS by staff.</li> </ul>	This can be a significant risk area. Without a commitment from the company management and staff, the benefits of an EVMS will not be realised. Therefore it is important to assess the contractor's commitment to EVM otherwise the very best of EVM implementations will eventually deteriorate requiring regular assurance activity by the Project Office to ensure the contractor maintains compliance.	The contractor performance in this area can be assessed throughout the review process by: <ul style="list-style-type: none"> <li>• The willingness to provide data and information</li> <li>• The quality of the documents and other information provided</li> <li>• The EVMS knowledge of CAMs and other managerial staff demonstrated during discussions</li> </ul>
7	Performance during previous reviews and assurance activities: <ul style="list-style-type: none"> <li>• Corrective actions, and</li> <li>• Observations.</li> </ul>	Problems with performance by the company during system assurance activities and during verifications can be wide and varied. However they can usually be traced to one or more of Items 1-6. Therefore use the information provided above to determine how to tailor the review.	

## **ANNEX B: EVM REVIEW PREPARATION ACTIVITIES**

### **PLANNING FOR THE EVM REVIEWS**

#### **Integrated Baseline Review**

1. Provision for the IBR is included in the Statement of Work (SOW) as part of the Request for Tender both in ASDEFCON Strategic and Complex Materiel. The timeframe within which the IBR is to be conducted is specified therein.
2. Where the contract involves mission or safety critical software or significant software development, it is essential to involve appropriate software specialists in the IBR. Some of the software related measures identified in the Measurement Plan (refer [ASDEFCON Strategic Material](#) - CDRL Line Number MGT-200) will provide the basis for the measurement techniques to be used to determine software progress and these need to be verified during the IBR.
3. Preparation for the IBR includes identifying the scope of the IBR based on the specific information needs and risk profile of the project. This will enable the IPM to ensure that the appropriate team members are selected, the required documentation is requested and that the team is adequately prepared prior to commencing the on-site aspects of the IBR.
4. For an IBR, the EVM review team should comprise a mixture of the Project's technical staff (e.g. engineering, integrated logistics support), project management and project controls staff. Project staff should be knowledgeable with the subject matter being examined, both technically and in terms of how the work can best be measured.
5. Each team member is allocated responsibility for specific areas of the CWBS by the IPM. The allocation of CWBS elements should be consistent with the team member's field of expertise and project responsibility. For example, the Integrated Logistics Support (ILS) Manager may be responsible for reviewing the ILS component of the WBS in the context of this review.
6. Subcontractor EVM reviews are led by the prime contractor. The team will be largely comprised of the company's technical staff (usually Control Account Managers), project management and project controls staff. The standard EVM clauses within ASDEFCON make provision for Commonwealth staff to participate in these subcontractor reviews.
7. It is important that project knowledge is transferred among all participants of the multi-disciplined IBR team (cost, schedule and technical).
8. Where ASDEFCON (Strategic Materiel) is used, and the project has completed an ODIA stage, the personnel involved should also be involved in the IBR. This ensures that previously identified and/or treated risks are adequately captured and the measures established during the Offer Definition and Improvement measurement workshop are incorporated into the PMB.
9. Technical specialists may be required to assist in the IBR where project resources lack the required skills or experience. For example, the project may bring in an EVM expert or Financial Investigation Services (FIS) staff to assist in assessing the basis of the PMB. These advisers should be identified as early as possible to ensure their availability for the IBR.

#### **EVMS Review**

10. The EVMS review team is responsible for a rigorous assessment of the contractor's compliance with the EVM requirements set as specified in AS 4817-2019, the Defence Supplement to AS 4817 and contract requirements and to verify that the EVMS is capable of generating accurate and reliable performance data. Such assessment includes review of all management control techniques used by all organisational elements that perform work on the contract.
11. Once the scope of the work, scale and complexity of the contract is known the composition and size of the review team can be determined with the aim to provide adequate resources to achieve the on-site review within an acceptable time limit (maximum of two weeks). For example, the number of interviews to be conducted will assist in determining the size and composition of the team. This will require that the Project Office identify and train the review team well in advance. Commitment should



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be obtained from management that the resources will be made available when required.

12. Continuity is important, therefore team members should be involved in reviewing the contractor's EVM documentation (CWBS, Schedules, Management System Procedures etc) where delivered as CDDs.

13. This will give the review team an appreciation of the EVMS they are about to review. Training needs analysis should be conducted well in advance of the review so that suitable training can be arranged and scheduled into the review plan.

### **OTHER ESSENTIAL EXPERTISE**

14. In addition, it is essential for the team to be fully aware of the contract requirements, and the typical disciplines the contractor may use to fulfil them (for example engineering, production processes, production planning, financial management, contract management etc). It is not possible to accurately review data or conduct effective discussions with contractor personnel without specialist knowledge in these disciplinary areas. Therefore, the review team should contain members who are appropriately trained and/or experienced in one or more of the following fields:

- a. knowledge of the technical content of the project or contract;
- b. knowledge of the principal engineering design and test requirements of the contract under review;
- c. general industrial engineering/production control background;
- d. accounting/auditing knowledge;
- e. project planning and control experience;
- f. management analysis and/or cost/price analysis experience; and
- g. contract negotiation or administration experience.

15. Additional information on roles and responsibilities is contained in ANNEX C.

### **TRAINING AND PREPARATION**

16. The IPM should ensure that all efforts are made to work with the contractor during the initial stages of establishing the plans and the baseline for the project, prior to starting the IBR. The IBR should not be the first exposure of the Project Office to the contractor's plans for completing the work. The IBR may also be the first time the Project Office receives visibility of the entire plan but, on a working level, the IPM should engage the contractor frequently to ensure plans are progressing adequately.

17. Following contract signature, the Project Office and the contractor should work together to establish the details for the conduct of the EVM Reviews. Preparatory meetings are recommended to enable the Project Office team to provide the contractor with information on the IBR process. This will ensure a common set of expectations and allow for the detailed scheduling of the associated activities.

18. The Commonwealth Representative should notify the contractor in writing of the dates and agenda for the EVM Review after planning is finalised. An example agenda is provided in ANNEX D.

19. Before undertaking the EVM Review, all team members should be fully prepared. As EVM Reviews are conducted on an infrequent basis, their conduct is unfamiliar to many staff. Training is important to ensure that team members can identify risk in the baseline planning documentation in the areas of technical, schedule, resource and cost. The review team should attend training together and the trainer will ideally use project management deliverables from the contractor to both facilitate learning and allow team members to gain familiarity with the contractor's documentation.

20. As the EVM Reviews are intended to be a collaborative process between the Commonwealth and contractor (especially in terms of establishing a common understanding of the PMB at IBR), Commonwealth and contractor staff are encouraged to participate together in joint training. The benefits that accrue from this include an understanding of the requirements, processes and procedures for the IBR so that there are no surprises in the conduct of the review.

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21. Preparation for the EVM Review should encompass the following:
- a. familiarity with the relevant contractual requirements;
  - b. detailed knowledge of risks associated with allocated areas of work to ensure risk areas are targeted;
  - c. detailed knowledge of the outcomes of any previous risk reduction activities for the project (e.g. ODIA, schedule risk assessments);
  - d. assessment of the most appropriate measures and resources for the allocated work to ensure that meaningful discussions will be held regarding the identification of progress against the baseline;
  - e. training of team members in the IBR process, the general requirements of EV performance management and any contractor -specific system characteristics;
  - f. familiarity with the contractor's EVMS documentation (where applicable);
  - g. review of the contractor's planning documents; and
  - h. liaison between the Project Office and the contractor to ensure that both parties understand the nature and requirements of the review.

**CONTRACTOR PERSONNEL AS TEAM MEMBERS**

22. The use of relevant personnel from the company being reviewed as review team members has a number of advantages and the concept of a joint Defence/contractor review is to be encouraged. Care should be taken by the Team Leader that the contractor team members remain impartial during the various review activities. The ideal contractor team member will be one who is:
- a. independent of the area under review but sufficiently knowledgeable of the company's system to provide clarification in areas of possible confusion to an outsider, and
  - b. sufficiently invested in the outcome of the review to be able to provide meaningful follow up on any corrective actions or system improvements arising out of this process.
23. The advantages of a joint review include:
- a. the contractor's knowledge of their own system will facilitate the review process aiding the project members in understanding the system;
  - b. it generates an atmosphere of cooperation and understanding during the review, which is mutually beneficial for both parties;
  - c. it provides an opportunity for contract staff and project staff to get to know each other at a professional level;
  - d. it reduces the resource requirements of the Project Office;
  - e. it enhances the contractor personnel's' understanding of, and use of, the EVMS; and
  - f. it enhances the contractor's understanding of the contractual requirements for EVM.

## **ANNEX C: EVM REVIEW TEAM RESPONSIBILITIES**

### **TEAM GOAL**

1. The EVM Review team's goal is to achieve the specific objective of the review being undertaken:
  - a. **IBR: Approve the PMB.** This is achieved by conducting a complete assessment of the contractor's detailed planning. This includes focusing on steps 1 to 5 of the AS4817-2019 11 step process as shown in Figure 1 of this Instruction. The team is to ensure that all technical efforts, as defined in the CWBS and the SOW, are included in a logical plan (schedule) with sufficient resources, and that the EV methodology is appropriate and adequate for determining progress. Additionally, the team is to identify and understand where the risks are and what is or can be done to treat them.
  - b. **EVMS Review:** Conduct an on-site review of the contractor's management control systems to ascertain compliance with the requirements of AS4817-2019, the Defence Supplement to AS4817 and any additional contracted EVM requirements. Additionally, the team is to identify and understand the associated risks (contractor's EVMS and the Contract) and the proposed treatment strategy for them.
  - c. **System Assurance Review:** Conduct a review to achieve the specific objectives called for, for the specific Systems Assurance Review.
2. Members of the EVM Review Team are to conduct themselves professionally in discussions with the contractor's personnel and create a cooperative, team environment in ensuring the adequacy of Control Account planning and noting overall process implementation.
3. Members will be responsible to the CASG IPM (Team Leader) for the completion of their assignments. To the extent possible, the Team Leader assigns tasks consistent with background qualifications of team members. However, the Team Leader will retain the prerogative to select and use any professional skills and methods considered necessary to accomplish an assignment adequately.
4. Members will be full-time participants during the EVM Review. However, the team may be augmented with functional specialists to assist in specific aspects of a review. Team size and expertise of members will be determined by the requirements, the review type (IBR, EVMS Review, targeted EVMS Review, or System Assurance Review) contract size and complexity, contractor characteristics, and project characteristics.

### **TEAM LEADER RESPONSIBILITIES**

5. The IPM, or delegate, should undertake the Team Leader role for the IBR with assistance from specialist project controls staff as required. The IPM has the ultimate responsibility for the approval of the PMB in the case of IBR and approval/acceptance of the EVMS. Attachment 1 provides a guide for IPMs to use in the overall evaluation of an IBR.
6. The Team Leader should:
  - a. **Provide direction and leadership** - emphasising the importance of thorough evaluation of cost, schedule and technical integration of contract work and any associated risks for an IBR and thorough evaluation of the EVMS for EVMS Review.
  - b. **Obtain advice on policy** - and interpretation of the EVM requirements (if applicable).
  - c. **Identify suitable team members** - and assign appropriate responsibilities.
  - d. **Ensure team members are adequately trained** - and prepared for the EVM Review being conducted.
  - e. **Conduct day to day management** - of the EVM Review being conducted including the review of all documentation from team members, organisation of daily meetings including

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- debriefs to the contractor and preparation of the applicable report;
- f. **Monitor the corrective actions** - undertaken by the contractor as a result of any CARs raised during the applicable EVM Review.
  - g. Following resolution of any CARs identified:
    - (1) approve the PMB and close the IBR; or
    - (2) after EVMS Review, approve/accept the EVMS.
  - h. Present the In-Brief and Out-Brief to the contractor.

### **PROJECT CONTROLS / EVM SPECIALIST RESPONSIBILITIES**

- 7. Project Controls / EVM specialist personnel should:
  - a. assist with the provision of preparatory training - as required;
  - b. take responsibility for the EVMS aspects of the IBR, provide EVMS technical advice to the team as required, and may also act as an arbiter on any issues relating to the implementation of the PMB and/or EVMS;
  - c. ensure interviews are focused and cover the required information and not venture into problem solving;
  - d. provide advice on the suitability of performance measurement techniques;
  - e. review CARs; and
  - f. assist with the review of Corrective Action Plans.

### **REVIEW TEAM MEMBER RESPONSIBILITIES**

- 8. The primary team members for the applicable EVM Review should include the Project's staff including engineering and ILS staff, with support from project controls staff.
- 9. Where necessary, advisors external to the project may be required to assist. In particular, support can be sought from other Project Offices experienced in EVM Reviews, the Directorate of Project Controls Services and contracted specialists.
- 10. For IBR, emphasis should be placed on the achievability of the technical effort and the measures to be used for determining progress.
- 11. For EVMS Review, the emphasis should be placed on conducting a thorough review of the contractor's EVMS to give the Project Office the confidence that the EVMS is providing accurate performance data by which the contractor can manage the project and also provide the reporting information required by the Project Office.
- 12. Team members should, as applicable for the EVM Review being undertaken:
  - a. Attend all training workshops in order to be prepared for the applicable EVM review;
  - b. Review contractor's planning documentation and undertake data traces;
  - c. Identify areas of risk or concern and ensure that these are covered during CAM interviews;
  - d. Understand and review the measurement techniques to be used for their allocated CWBS areas of responsibility, including methodologies utilised by CAMs to report progress and manage Control Accounts;
  - e. Conduct interviews of key contractor personnel including testing their knowledge and application of the Company's EVMS and the CAMs role in reporting performance data relating to their scope of work focussing on schedule, capability impact, the scope of remaining effort, available resources, and resources required to accomplish the remaining scope;
  - f. Identify, record and communicate and issues risks that arise during the applicable EVM

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review; and

- g. Raise Corrective Action Reports in consultation with the Team leader resulting from interviews, data traces or documentation review activities;
- h. Provide written assessments and contribute to the final EVM Review report.

**CONTRACTOR RESPONSIBILITIES**

- 1. The contractor should endeavour to:
  - a. Provide the appropriate planning documentation to the team for review prior to the start of the applicable EVM Review;
  - b. Provide working space and support for the EVM review team including a working area and administrative support as required;
  - c. Arrange interviews with CAMS and other project management staff and ensure these personnel are available as planned; and
  - d. Provide copies of documentation such as System Documentation/Procedures, schedule, CAM documentation or where these are stored electronically provide electronic access.
  - e. Provide detailed and current performance data analysis and corrective actions including estimated impact on cost, schedule, and scope.

## **ATTACHMENT 1: TEAM LEADER ASSESSMENT OVERVIEW FOR IBR**

### **GENERAL**

1. The IBR Team Leader will need to establish, based on the various interviews and documentation traces, whether the overall PMB is sound and ready for approval.
2. The following table is a guide to the checks required and should be used to supplement the detail contained in ANNEX E and ANNEX G.

<b>CONTRACT SCOPE</b>
1. Does the Company have an organisation in place with the appropriate authorisations?
2. Has all of the total contract effort within the WBS been assigned to responsible organisations?
3. Has the SOW been adequately defined at the lowest level?
<b>RISK MANAGEMENT</b>
4. Have all risks been identified and addressed?
5. Have known risks been addressed during discussions to determine mitigation strategies?
6. Is the process for risk management clearly defined and understood?
7. Is the process for escalating issues within teams and between teams defined and understood?
<b>INTEGRATION OF SCHEDULES</b>
8. Does the Company have appropriate schedules (work accurately sequenced and time-phased) that support contractual delivery dates?
9. Do the Control Account schedules trace vertically to the Project or Master level?
10. Does the scheduling process provide for horizontal integration of the schedules?
11. Are significant interdependencies, interfaces and constraints identified in the schedules?
12. Is the time-phased budget (PMB) consistent with schedules?
<b>WORK DECOMPOSITION</b>
13. Is the breakdown of work at the Control Account level appropriate for management?
14. Are Control Accounts subdivided into Work Packages for discrete activities?
15. Is each Work Package assigned to a single performing organisation?
16. Are Planning Packages outside of the current rolling wave window?
17. Do work and Planning Packages all identify scope and budget?
<b>DETERMINATION OF PROGRESS</b>

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18. Have appropriate performance measurement techniques (earned value techniques, where applicable) been assigned to the Work Packages?
19. Are the performance measurement techniques objective and the reporting of progress controlled adequately?
20. Has effort been appropriately established as discrete, apportioned or LOE?
21. Will the progress reported reflect technical achievement?
<b>ADEQUACY OF RESOURCES</b>
22. Are the budgets assigned to the Control Accounts adequate to accomplish the assigned scope of work?
23. Has a sound basis of estimate been used to plan the work and allocate budget and staff?
24. Are staffing levels adequate to support schedule requirements?
25. Does the skills profile of the staff allocated support technical requirements?
26. Are there peaks and valleys in staffing profiles that may be difficult to achieve?
27. Does the sum of Control Account budgets, indirect (overhead) budgets, undistributed budgets and Management Reserve total correctly and are they consistent with the current contract cost (CP less Profit/Fee)?
<b>APPLICATION OF OVERHEADS / INDIRECT COSTS</b>
28. Discuss Overheads/Indirect Costs with Finance Manager.
29. Assess whether Overheads/Indirect Costs have been appropriately apportioned to this contract.

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**ANNEX D: TYPICAL AGENDA FOR ON-SITE REVIEW**

**OVERVIEW**

1. The EVM Reviews are project-specific activities that needs to be tailored to suit the needs of each project. As such, the agenda needs to reflect the size and complexities of the project. On-site activities associated with EVM Reviews, particularly IBR, can span up to 5 to 10 working days for each contractor and/or subcontractor site.
2. For a complex project, the entire first day may be required for presentations by the contractor on various aspects affecting the EVMS. These presentations may include:
  - a. review of the Contract Master Schedule (CMS) and demonstration of schedule integration;
  - b. an overview of the risk management philosophy;
  - c. review of the EVMS;
  - d. an overview of the company policy / procedures regarding the identification of EVT's; and
  - e. demonstration of how the data is integrated through the various aspects of the EVMS (a walk-through of a trace through the system).

**BASIC AGENDA**

3. A sample, basic agenda for an EVM review is as follows:

<b>DAY 1</b>	
0900 - 0930	Project Office In brief
0930 - 1230	Contractor Presentation
1230 - 1330	Lunch
1330 – Close	Documentation Review, Data Traces & Schedule Review
<b>INTERIM DAYS</b>	
0830 - 1000	Documentation Review/Data Traces, Interview preparation
1000 - 1200	Interviews
1200 - 1230	Team Discussion
1230 - 1330	Lunch
1330 - 1430	Documentation Review/Data Traces, Interview preparation
1430 - 1630	Interviews
1630 - 1700	Team Discussion
1700 - Close	Provide a de-brief to the contractor of the day's findings
<b>FINAL DAY</b>	
0830 - 1230	Documentation Review/Data Traces, follow-up actions from previous days, consolidation of the team's findings

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1230 - 1330	Lunch
1330 - 1430	Results to Company Management
1430 - Close	EVM Review Exit brief

## **ANNEX E: DOCUMENTATION REVIEWS**

### **DOCUMENTATION REVIEW**

1. The documentation review plays an important part in the IBR. It provides the Project Office team with the opportunity to familiarise themselves with the contractor's processes and plans. This may be a continuation of any documentation review undertaken earlier or may need to commence upon arrival at the contractor's facility. This will depend on whether the contractor was able to provide the documentation for prior review.
2. Team members should review the contractor's documentation in their areas of responsibility to ensure that interviews target areas of concern and/or interest. It will include extensive examination of contract deliverables (CDRL items) and non-CDRL items such as the CWBS, SOW, Control Account Plans, authorisation documents, schedules and any other appropriate documentation, such as the System Description or procedures.
3. The conduct of data traces will also be undertaken to ensure consistency in the documentation. Common issues discovered during traces may include:
  - a. agreed scope of work not assigned to any control account;
  - b. traceability issues between SOW, CWBS Dictionary and/or Work Authorisation documentation;
  - c. inconsistency between work scheduled and the time-phased budget for that work; and
  - d. float/contingency not allocated or identified.
4. Guidance on conducting a trace through documentation is provided in ANNEX F. This process is iterative and may need to be undertaken in stages. Further documentation review may be required to validate any findings arising during the CAM interviews.

### **SYSTEM PROCESS**

5. This process review should be conducted against the requirements and, while it is not an approval process, should the team uncover issues, the contractor should be advised accordingly. Should these issues prove to be systemic and the contractor has not yet addressed them, they should be raised as CARs.
6. The purpose of the review of planning and performance documentation is to prepare the team for interviews with the contractor's key personnel (CAMs, functional managers, project controllers, and other personnel). This review allows the team to better understand the CAM's approach to planning and identify areas for discussion (e.g. data anomalies, areas of concern, etc) prior to entering the interview. This data review should be conducted prior to conducting each interview.
7. It should be noted, not all documents will be held in hard copy format and the team will need to be flexible in their approach to reviewing the data. Every effort should be made to use the same systems and formats used by the contractor to prevent unnecessary effort on their part.

### **REVIEW GUIDANCE**

8. The following provides guidance on how to review the documents<sup>3</sup>: Some of these documents are reviewed during the IBR however they are re-examined to ensure that the processes and documents reviewed during the IBR are still valid and are being maintained.
  - a. **Interview Schedule.** Check the interview schedule for the name of your first CAM discussion. Find their location on the organisation chart and find their name and

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<sup>3</sup> The following are typical documents. The contractor may use similar documents with different titles.

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responsibilities on the RAM.

- b. **CWBS Dictionary.** Determine their responsibility area on the CWBS. What does the scope of work entail? Is the work described adequately and at an **appropriate** level?
- c. **SOW/Contract.** Is the total work effort in the CWBS Dictionary consistent with the SOW.
- d. **RAM** - How many Control Accounts does the CAM have? What are the Dollar amounts? Check the dollarised RAM for this data. Is the RAM consistent with other Control Account documentation?
- e. **Work Authorisation Document(s).** Find the work authorisation document that authorises the CAM to do the work. It should show the work they are authorised to do, a schedule to do the work in, a work package number to charge the work to, and a budget for performing the work. The work, schedule, Control Account number and budget should all be consistent with source documents. E.g. Contract Schedule, RAM, CWBS Control Account Plans etc.
- f. **Control Account Plan (CAP).** The CAP is a time-phased budget plan. Contractors may transform data from the CAP to an internal computer data management system. Review the electronic data to ensure it correlates to the Control Account Manager's plan. Select a random sample of Work Packages and review the sufficiency of the allocated Control Account budgets, both in terms of work content, total resources, and time-phasing. Discuss assumptions made by the CAM regarding resources, skills, and availability of staff etc in completing the scope of work. The CAP and the Schedule are interrelated and must be reviewed together.
- g. **Schedule.** Trace the Control Account schedule. Look at the baseline dates versus current schedule. Are all Work Packages and Planning Packages included? Is the CAM providing at least monthly status data? This may be done on a separate "Turn Around Status Document". Does the schedule trace to the next higher level (detail to intermediate to master schedule), also known as vertical integration. Check that the baseline dates and milestones agree with the contracted dates. Check that the schedule activities/Work Packages/Planning Packages/milestones are linked (horizontal integration) and that a critical path can be generated. Check for the existence of excessive float. This can be an indication of bad planning and flawed logic. If the CAM to be interviewed has activities on the critical path note these for discussion. Discuss with CAM the assumptions made regarding resourcing of the plan and the confidence in the ability to meet the schedule constraints.
- h. **Status Turn Around Document.** Check both Earned Value and Schedule status for consistency. Are all fields being completed each month? Is the estimated/forecast start and finish date inserted where applicable? Are the actual start and finish dates displayed?
- i. **Earned Value Techniques (EVT).** - Review the EVT/metrics the CAM is using to declare Earned Value (EV). This may be shown on the CAP or something similar. Check the Earned Value on the Earned Value Report (EVR). Is it consistent with both the Planned Value (PV) and Actual Cost (AC)? Note any inconsistencies for discussion with the CAM.
- j. **Variance Analysis Reports (VAR).** Check to see if the CAM has prepared any VARs. Check the threshold requirements identified in the company procedures/directives and Contract. Does the CAM hold/produce all VARs for Control Accounts exceeding the thresholds? Find the VAR and check it for accuracy and validity. Check that the numbers on the VAR are consistent with those on the Control Account Plan or internal data and that the analysis is complete. Has the CAM identified the problem, quantified, and addressed the areas of impact, and identified corrective actions? Ensure that the CAM has addressed the cost and schedule impact of the corrective action and whether there is a risk that the corrective action will adversely impact on the scope. Discuss with the CAM the assumptions made in planning the corrective action?
- k. **Estimate at Completion (EAC).** If a new EAC was shown on the EVPR (external), check to see consistency with the internal data. Compare previous EACs. Are EACs reflecting current cost and schedule variances? Are the EACs developed in accordance with the System Description? Do the EACs take into account any additional resources required to complete the remaining work?

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- I. **Changes.** Check to see if the CAM made any changes to the CAP since the IBR. If so, find the change that authorised this. This would appear on a Baseline Change Request (BCR) or Control Account Change Request (CACR). Does the change document reconcile from “old” to “new”? If Management Reserve is used, is it appropriate? Are the correct authorisations present and has the change been logged (tracked) adequately?
  
- m. **Earned Value Performance Reports (EVPR).** Review the internal EVPRs at the WP level. Check elements of costs (Material, Labour, & Other Direct Costs). Are they separated appropriately to enable the CAM to manage resources appropriately? Check EV against AC and vice versa. Check for any zeros and inconsistencies between all data elements and question these. Check EV against progress reported in the Work Package schedule for consistency. Analyse the Baseline report (EVPR Format 3). Is it consistent with the Format 1? Review the manpower reports (Format 4) for indications of resourcing problems? Compare previous month's reports.

## **ANNEX F: DATA TRACES**

### **OVERVIEW**

1. Data traces are an important aspect of the review. Traces are undertaken to ensure that the contractor's EVMS does meet the intent of the EVM requirements and that the reporting requirements are valid and thus provide a true indication of the work in progress. Traces are done on a random sample basis and where possible more than one trace should be conducted for each category. The Team Leader may request that examples of the trace be obtained if there are problems found during the trace.
2. The CWBS is a CDR approved under the contract and must be developed in accordance with CDR Line MGT-120. Select random CWBS elements and determine which Control Accounts contain those elements of work. When selecting samples for traces ensure that a variety of samples are chosen and that the samples also include, authorised contract changes, subcontracted elements, items requiring material etc.
3. The following information is aligned to the 11 Step process in AS 4817-2019. Conduct the following traces for the samples chosen:

### **DATA TRACES FOR IBR**

4. The following topics relate to the data traces for the AS 4817-2019 process steps that primarily relate to IBR (with some "lookahead" to process steps 7 to 11) as shown in Figure 1 of this Instruction.

#### **Step 1 – Decompose The Project Scope**

5. Ensure that the CWBS and CWBS dictionary adequately defines the contractual effort to be accomplished within the Control Account. Ensure that this is consistent with the Contract SOW.

#### **Step 2 - Assign Responsibility**

6. Review the RAM (or equivalent) to locate the Control Accounts which contain the trace items. Ensure that the Control Accounts are assigned to a responsible organisation element (i.e. manager) and that they are consistent with the effort to be accomplished.
7. Ensure that the Control Accounts were developed at the intersection of the CWBS to the organisational structure and that the CWBS was extended down to the Control Account level.

#### **Step 3 – Schedule The Work**

8. Review Control Account/Work Package schedules:
  - a. Confirm that the CMS is based on the CWBS and that work elements in the CWBS are easily traced to the CMS.
  - b. Locate the trace item. Ensure that the Control Account schedules are consistent with the baseline dates on the documents for that Control Account.
  - c. Compare the resources applied to the Work Packages/Activities with the Control Account Plan. Are they consistent? Are they realistic?
  - d. Confirm that the Control Account/Work Package schedules contain all contractual deliverables and milestone activities. Compare this against the contract Price and Delivery Schedule for consistency.
  - e. Accomplish a vertical schedule trace that shows the flow from the detailed schedules through to the master schedules. Establish that milestone prerequisites are programmed and logically linked.
  - f. Accomplish a horizontal trace which shows that significant events (System Specification Review, Preliminary Design Review, Detailed Design Review, Test Readiness Review etc)

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and appropriate Work Packages are logically linked.

- g. Review the schedules for excessive float that may indicate flawed logic.
- h. Review the integration of subcontractor schedules and confirm consistency with the prime contractor's baseline schedule.

#### **Step 4 - Develop Time-Phased Budget**

- 9. Review Control Account documentation and internal reports as they pertain to the trace items:
  - a. Ensure that the sum of the planning and work package budgets reconcile with the Control Account budget.
  - b. Ensure that the Planning Packages have their own budget values and are time phased to reflect the expected outcome of detailed planning.
  - c. Determine how PV was time-phased and established. Ensure that the PV reflects the way the work is to be done (interview).
  - d. If applicable (e.g. subcontractor or material items), locate the trace item in the contract or purchase order. Check for consistency and determine how total budget values were established.
  - e. Check that the time-phase budget for the Work Packages (within the Control Account start and finish dates) are consistent with the baseline dates in the Contract Master Schedule (CMS).
- 10. See also Step 6 for related traces.

#### **Step 5 – Assign Objective Measures Of Performance**

- 11. Review Control Account documentation to ensure:
  - a. only one EVT is assigned per work package;
  - b. EVTs assigned are in accordance with company procedures; and
  - c. EVTs are appropriate for the element of work.

#### **Step 6 – Set the Performance Measurement Baseline**

- 12. Ensure that all budget values total the contract price and are consistent across all EVM documentation including EVPRs. For example, Planning Packages and Work Packages equal the Control Account budget etc. If a dollarised RAM exists, this would be a good starting point.
- 13. Ensure that resources have been allocated to the tasks to carry out or complete the work. This can be seen in the way the schedule is resourced, in the Format 4 of the EVPR and by discussion with the CAM.
- 14. See also Step 4 for related traces.

### **DATA TRACES FOR EVM SYSTEM REVIEW**

15. The following topics relate to the data traces for the AS 4817-2019 process steps that primarily relate to EVMS Review (with some "lookback" to process steps 1 to 6) as shown in Figure 1 of this Instruction.

#### **Step 7 – Authorise and Perform the Work**

- 16. Review the Work Authorisation documents and verify that the authorisations have been provided in accordance with company procedure and cover the items listed in the Defence Supplement for Step 7.

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17. Ensure that the Work Authorisation and CWBS definitions of the effort to be accomplished within the Control Account are consistent.

### **Step 8 – Accumulate And Report Performance Data**

18. The traces conducted for this Step ensure that the:
- a. CAM is the person reporting status against the plan;
  - b. CAM's status is accurately reflected in the EVMS and the CMS;
  - c. Actual Costs are accurately translated from the Accounting System;
  - d. CAM checks the Actual Costs to ensure they are correctly attributed to his element of work.
19. Traces may include:
- a. check that the Control Account and/or Work Package containing the trace appears on the Internal and External EVPR Format 1;
  - b. check the EVPR at the WP level to ensure there is no "AC without EV" and vice versa. Note discrepancies to discuss during interviews;
  - c. check for negative entries in PV, EV and AC. Note discrepancies to discuss during interviews;
  - d. if appropriate, confirm the identification of work progress and forecast of completion dates. Check that the CAM's status (as shown on his status reporting document) has been reflected on the revised schedule;
  - e. using the time-sheet as a basis, confirm the traceability to the accounting system and the CAM's EVPR;
  - f. using a purchase order for hardware delivery, confirm the traceability to the accounting system and the CAMs EVR;
  - g. if the item is a subcontracted element of work, trace the subcontractor-reported effort into the CAMs EVPR;
  - h. if applicable, check that the applied escalation and de-escalation factors have been applied consistently; and
  - i. ensure that all those booking to the sample Control Accounts/Work Packages are authorised.

### **Step 9 – Analyse Project Performance Data**

20. Check variance analysis reporting thresholds (internal & external) and examine quality of Variance Analysis and Reports (VAR). Ascertain whether internal VARs are consistent with the reporting required contractually to the Commonwealth.

21. Review the CAMs status reports and the relevant EVPR to ensure that EACs are updated where and when necessary.

### **Step 10 – Take Management Action**

22. For corrective actions resulting from variances, is there a corrective action log? Are actions being followed up? Is it being actioned on a regularly basis?

23. Are the EACs machine generated or developed by the CAMs?

24. Review two periods of EVPRs to ensure that retroactive changes to the PMB are not occurring.

## **Step 11 – Maintain The Baseline**

25. Track changes resulting from Contract Amendments starting with the most recent (this will also determine the timeliness of changes). Check Baseline Change Request (or other change documentation) and trace through to all EVMS documentation i.e. schedule, authorisation documents, CWBS Dictionary, EVPR, CAP, and appropriate logs (Baseline, MR and UB).
26. Conduct similar traces for Internal Changes where scope, schedule or budget has changed since the time of the original planning at the time of the IBR.
27. Check for any retro-active changes by reconciling the cumulative PV from the current reporting month to last month's cumulative PV (as seen on the EVPR for the last two periods). If the answer is negative then a retro-active change has been made. This may require project approval and should be documented.
28. Does a change log exist? Does it reflect the "true" situation?
29. Examine the process utilised for routine 'rolling wave' planning. Is it timely? Do procedures exist to differentiate between routine and non-routine baseline changes?



## **ANNEX G: PREPARATION FOR AND CONDUCTING INTERVIEWS**

### **OVERVIEW**

1. Although the following is written for preparing for interviews with a CAM, it is also applicable to preparing for interviews with other key contractor personnel such as Project Managers, Functional Managers, Project Controls, etc.
2. The team leader should select interview teams of a maximum of three people. It is important that each team establish a lead interviewer. This provides the CAM with the main focus for answers and allows the non-leads to take notes and develop follow-up questions as they arise. They can also keep tabs on the questions generated out of the documentation review. As the role of lead interviewer is a concentration intensive and at times draining one, it is a good idea to rotate the leads during the discussion program.
3. While there is an expectation of the CAM to be prepared for the interview, the Interview Team must also be prepared. If there is a question arising from the documentation review, take whatever documentation or notes into the discussion that will allow the CAM the opportunity to fully address questions raised.
4. When preparing topics for discussion at the CAM interview, refer to the Example Interview Topics in ANNEX H. Each interview will be different based on the CAMs responsibilities, and the timing of the interview (e.g. at the beginning of the review many general questions may be asked that would be more targeted towards the end of the review).

### **FIRST DAY OF AN EVM REVIEW**

5. On the first day of the EVM Review, the contractor will give an overview to the team of their project controls processes and the methodology used to establish their baseline. This will be the team's last opportunity to understand the contractor's system before commencement of the CAM discussions, so team members should ask questions and ensure they understand the details.
6. The Review Team should gain an overarching understanding of the contractor's development and maintenance of the PMB including how the supporting standards, policy, procedures and processes have been implemented. This discussion may include:
  - a. the scope of the Program Control role;
  - b. management of the Contract Master Schedule and Cost Management System(s);
  - c. critical path;
  - d. current float analysis;
  - e. process for schedule update;
  - f. process for schedule health assessment;
  - g. process for schedule risk assessment;
  - h. management of subcontractors including basis of estimates agreed scope; and
  - i. Change Control of PMB.

### **DOCUMENTATION REVIEW**

7. The next phase is typically documentation review time (looking at Control Account Schedules/Plans etc). Some of this documentation may have already been provided for review during the off-site phase. The team's main objective at this stage is to prepare for CAM discussions by reviewing the contractor's planning and performance documentation. This documentation should be made available at the commencement of the review. Guidance on detailed checks during documentation review is provided at ANNEX E.
8. It should be noted, not all documents will be held in hard copy format and the team will need to be flexible in their approach to reviewing the data. Every effort should be made to use the same

CASG-2-Instruction (PM) 003 – Integrated Baseline Review and Earned Value Management System Review systems and formats used by the contractor to prevent unnecessary effort on their part.

## **PROCESS GUIDE**

9. The following is a guide to the processes involved in the EVM Reviews:
  - a. Check the interview schedule for the details of your CAM interviews.
  - b. Find their location on the organisation chart and RAM.
  - c. Determine their responsibility area on the CWBS.
  - d. What does that scope of work entail? Check the CWBS Dictionary and other documentation where the work is described.
  - e. Is the total work effort consistent with the contract SOW?
  - f. How many Control Accounts are they responsible for? What are the dollar amounts? Check the dollarised RAM for this data.
  - g. Find the work authorisation document that authorises the CAM to do work. It should show the work they are authorised to do, a schedule to do the work in, a Control Account or Work Package number to charge the work to, and a budget for performing the work.
  - h. Review the CAMs Control Account Plan. The work, schedule, Control Account number, and budget should be consistent with that authorised on the work authorisation document.
  - i. Review the sufficiency of the allocated Control Account budgets, in terms of work content, total resources and time-phasing.
  - j. Address known risks and identify the CAM's perception of risks. Identify whether the CAM has responsibility for managing the risks and how risks are elevated.
  - k. Contractors will generally enter data from the Control Account Plans into an internal computer data system. Review the outputs of this data to ensure it correlates to the CAM's plan.
  - l. Review the methods the CAM is planning to use or currently using to report progress. This is otherwise known as taking EV via earned value techniques. This may be shown on the Control Account Plan or something similar. Any EV being reported to the Project Office should be consistent and reconcilable to the internal EV.
  - m. Check to see if the CAM has triggered a reporting threshold (internal or external) for reporting a schedule or cost variance and review the resulting Variance Analysis Report. Has the CAM identified the problem, quantified and addressed the areas of impact, and identified corrective actions?
  - n. Trace the Control Account schedule to the next higher level schedule and check that the dates and milestones agree.
  - o. Check to see if the CAM has made any changes to their Control Account Plan. If so, review the authorisation document for the change and ensure the CAM understands how to initiate and implement changes.

## **PLANNING CONTROL ACCOUNT MANAGER INTERVIEW ADMINISTRATIVE ASPECTS**

10. Once the team members have familiarised themselves with the documentation, they should plan for the CAM discussions. Details on conducting a trace are contained in ANNEX F.
11. In order to obtain maximum coverage, the CAM discussion session will be limited to a maximum of two hours. It is important to remember that the interviews are not conducted to resolve technical issues but to identify the issues and risks for future management. Follow-up meetings to resolve these issues can be scheduled outside the context of the EVM Review.
12. Who will ask questions? Who will take notes? Annex D contains a suggested flow of CAM

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discussion topics. In addition to the suggested discussion topics, each member should have the questions generated during the documentation review that require CAM explanation. Take any documents with you to the interview that would help amplify your questions.

13. Immediately following the discussion, each team member should record their findings and any issues using the Control Account Evaluation Sheet in ANNEX I. In addition, any risks identified should be recorded and communicated to the team leader.

### **CONDUCT OF THE CAM INTERVIEW**

14. A thorough interview is required in order to obtain adequate coverage, however the CAM discussion session should, in most cases, be limited to a maximum of two hours. It is therefore important that the review be kept flowing and not get bogged down on a single issue. Remember that the interviews are not conducted to resolve technical issues, but to identify the issues and risks associated with the EVMS and to establish the CAM's knowledge and use of the EVMS.

15. Where possible undertake the interview in the CAM's work area ensuring a friendly environment, insight into documentation used and availability, and insight into schedules used. Normal practice is for the CAM to be supported by at least one other company representative.

16. Use open questions, phrasing them so that they can be easily understood and cannot be answered by "yes" or "no". Use the "show me" or "please describe how" technique. Structure your discussion in such a manner to allow the interviewee to discuss freely how they follow the process. The CAM should use documents when answering questions. If the CAM struggles to understand a question, try to rephrase without using jargon. Remember that some CAMs will be in training and this does not necessarily mean that they do not understand the technical scope and plan for their work.

17. Use the Evaluation Guide at ANNEX H to structure your questions to ensure that all areas of responsibility of the CAM are covered.

18. If required, ask for relevant documents that are referenced. Keep in mind your need to document your work and what is expected as adequate evidence of your conclusions on the overall scope. If documentation is requested during the discussion, but cannot be made available until after the discussion, be sure to get a commitment as to when you should receive the data. This information is only to substantiate the CAM's claim.

19. On EVM reviews, the CAM is to a large extent the "make or break point" in the acceptance process and it is to be expected the company has made the CAM very much aware of this. This puts enormous pressure on the CAM to "perform" well and it is important the team be sensitive to this and conduct the interview in a manner that supports as much as possible, the CAM's need for success.

20. All importantly, treat the contractor like you would like to be treated if you were in the same situation. Treat the CAM as if it were you on the receiving end of the team's questions.

21. All debriefing should be done through the Team Leader. The interview team is not to provide feedback to the CAM directly.

### **POST-INTERVIEW ACTIVITIES**

22. Immediately following the CAM interview, the interview team will retire to the team room to discuss the interview findings. Notes should be compiled into observations and Control Account Evaluation sheets completed as detailed in ANNEX I). It is a good idea to maintain your own discussion file to keep notes for subsequent write-ups and for later reference in the subsequent preparation of the out brief and Review Report. You can then refer to them along with other data you may compile to complete the total write-up for your assigned area.

23. Occasions may arise where additional information is required to clarify an issue identified during either documentation reviews or interviews. Requests for additional information or clarification should be recorded and provided to the contractor by the Team Leader. These requests require tracking to ensure resolution is achieved. Following the provision of the additional information, a CAR may be required and should be completed as necessary. A template for a CAR is provided at ANNEX J.

## **POST-INTERVIEW MEETINGS**

24. Once all interviews for a specific timeslot have been completed, and the teams are ready, a "whole of team" debrief will be given to the Team Leader, to discuss interview findings and to compare notes between the interview teams. This helps to identify common areas of concern and allows the teams to target areas of attention for subsequent interviews. This also helps in the consolidation of CARs. If several interviews highlighted the same area of concern, only one CAR need be raised, but the teams can collaborate to provide specific examples of where the system needs to be better explained or implemented to achieve compliance.

25. At this point, it should be re-emphasised that CARs are to be raised by the teams and submitted to the company through the Team Leader. The Team Leader has the final say as to whether a team's observation will give rise to a CAR or not. The Team Leader will review CAR(s), consolidate any with similar findings, and assess the overall necessity of any CARs prepared. The Team Leader will present finalised CARs to the contractor to be resolved.

26. If the contractor is able to answer/resolve the concern before the team completes the on-site aspect of the EVM Review, the Team Leader will return it to the team member who drafted the CAR for consideration and advise on the contractor 's response.

## **END OF DAY ACTIVITIES**

27. Although the following two activities are not directly related to the conduct of interviews, they are very closely related and bring together the issues raised during the day from interviews, data traces and document reviews.

### **Review Team Meetings**

28. Near to close of business, each member will be given the opportunity to present their areas of concern and/or any discrepancies identified during the day to the rest of the team. This provides the opportunity to determine how many other members had the same concerns and to alert others to concerns that they may need to look for in subsequent review interviews .

### **Company Daily Debrief**

29. At close of business each day, the Team Leader will de-brief the contractor on the day's findings and may provide copies of CARs that the Team Leader has approved. In some circumstances, this meeting may occur first thing the next morning.

## **ANNEX H: REVIEWING THE EVMS**

### **GENERAL INFORMATION**

30. The following table provides guidance on assessments to be made during an IBR as well as how to evaluate EVMS compliance with AS 4817-2019, the Defence Supplement to AS 4817 and any additional contracted EVMS requirements. This table is to be used in conjunction with the above documents to provide items to consider when evaluating implementation and compliance with the requirements. **This Annex is not intended as a checklist** but is provided to assist in conducting the review process in an orderly manner.

31. The assessment activities listed below are not all questions that have “correct/incorrect” outcomes. Sound judgement and a pragmatic approach will need to be applied by the Project Manager when assessing contractual compliance. This will enable the project to determine any inherent risk in the contractor’s EVMS. The team should record their findings in the summary section at the bottom of the table.

32. Some of the following topics are covered during the IBR but they are still listed here as they relate to the EVM requirements. The review team should refer to the above documents to ascertain the full requirements. The summary cell in the table should be used to document the review team’s assessment of each step against the requirements.

33. Training should be undertaken prior to the review so that each team member is conversant with the goals of the review and the tasks to be completed. It is also important that an experienced EVM specialist be part of the review team to ensure that, where compliance with a particular element may be deficient, a reasonable judgement is made as to its relevance to data or system integrity.

### **PROCESS STEPS FOR IBR**

34. The following assessment activities cover the AS 4817-2019 process steps that primarily relate to IBR, as shown in Figure 1 of this Instruction.

**Table H-1. IBR Steps**

<b>Step 1: Decompose the Project Scope</b>		
<b>Management Value</b>		
The contractor shall breakdown the work through a documented Contract Work Breakdown Structure (CWBS). The CWBS provides the framework for management planning and control. It ensures the Statement of Work (SOW) is entirely captured and allows for the integration of work scope, schedule, and cost information. The WBS also facilitates customer communication.		
Assessment Activity	Method	Findings
Does the CWBS contain all the information required by contract? See CDRL Line Number MGT-120	Document Review	
Is the entire scope of work reflected in the CWBS?	Data Trace	
Is the CWBS easily cross referenced to the contract?	Data Trace	
Are the elements of work mutually exclusive? The work shall not be duplicated in another element.	Document Review	
Is the work broken down to a manageable level? This may mean that some CWBS branches may need to be broken down to level four or five while others can be managed at level two.	Document Review	
<b>CWBS Dictionary Notes:</b>		
An associated part of the CWBS is the CWBS Dictionary. Its purpose is to further define the work. This provides the meat to the CWBS. The CWBS Dictionary should provide a concise summary of the work to be completed within the particular CWBS element and its subordinates and be cross-referenced to the Contract SOW.		
Is the Parent element referenced?	Document Review	
Are the subordinate elements identified?	Document Review	
Is the scope of work to be conducted under this element clearly defined and related to the Contract SOW?	Document Review	
Is any related work, which is excluded from this WBS element, clearly identified?	Document Review	
Is the responsible manager clearly identified? If not, are they identified elsewhere?	Document Review	
Is the work conducted by subcontract clearly identified?	Document Review	
Ask the CAM to identify the areas of the CWBS applicable to them.	CAM Interviews	

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Ask the CAM to describe to you what they understand the task to be.	CAM Interviews, Document Review	
Does the CAM's response reconcile with the CWBS elements and the Contract requirements?	CAM Interviews	
<b>Summary - Step 1 Decomposing the Project Scope</b>		

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<b>Step 2: Assign Responsibility</b>		
<b>Management Value</b>		
Assign responsibility for accomplishment of each element of the work at an appropriate management level. An Organisation Breakdown Structure (OBS) is commonly used for this process. An OBS is a direct representation of the hierarchy and description of the organisations established to provide resources to plan and perform the work tasks. The OBS provides the framework for allocation of work, accountability, responsibility, management, and approvals. The OBS helps ensure that management focus is on establishing the most efficient organisation by taking into consideration availability and capability of management and technical staff, including subcontractors, to achieve the project objectives. The relationship between the OBS and the CWBS is typically displayed as Responsibility Assignment Matrix (RAM).		
Assessment Activity	Method	Findings
Has responsibility been assigned for each element of the Project and at the CA level?	Document Review and CAM Interviews	
Is management responsibility clearly defined?	Document Traces and CAM Interviews	
Has responsibility been assigned to an individual from within the organisation for work performed externally (Subcontractors, Purchase Orders etc)?	Document Traces and CAM Interviews	
Who is responsible for managing a subcontractor if a subcontractor provides goods/services to a number of Control Accounts?	CAM Interviews	
How does the CAM manage the subcontracted effort? Is it directly with the Subcontractor or through a Subcontracts Manager?	CAM Interviews	
How does the Subcontract Management Plan or equivalent documented process provide assurance that subcontractor resourced plans are supportive of timely accomplishment of the required work scope?	Document Review and CAM Interviews.	
When reviewing the RAM (or similar document), does the CA reconcile with the CWBS?	Document Trace.	
Even though the Control Account has been defined, does the company have the Human Resources to resource the work?	CAM Interviews	
Do the CAMs understand the scope of the work they are responsible for?	CAM Interviews	



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Do the CAMs have the necessary skills to be able to manage the CAs effectively?	CAM Interviews	
Where a CAM is responsible for multiple CAs he may report up through a single or multiple functional managers. In this case how are conflicts of interests resolved between CAs related to a single functional area or between multiple functional areas?	CAM Interviews	
Does the CAM accept responsibility for achieving their assigned work scope, schedule, and resource targets?	CAM Interviews	
Can the CAM demonstrate the basis of planning (resource and schedule estimates)?	CAM Interviews	
Is the CAM responsible for the accuracy of information generated at the Control Account Level (PV, EV, AC, EAC, VAR)?	CAM Interviews and Data Traces	
Does the CAM analyse the performance data, report and act upon variances in their assigned CAs?	CAM Interviews and Data Traces	
<b>Summary - Step 2: Assign Responsibility</b>		

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<b>Step 3: Schedule the Work</b>		
<b>Management Value</b>		
Scheduling work enables effective planning and statusing, which is critical to the success of all projects. The identification of task relationships facilitates management control, the ability to predict future performance, and the ability to track the impact of any changes to scheduled events.		
<p><b>Notes:</b> The scope of work is broken down below CA level into Work Packages and in some cases the contractor may be required to break down the work to lower level activities. This work needs to be scheduled. The schedule is a chronological plan of how the contractor intends to meet the contract requirements. The schedule should describe the sequence of work and identify all interdependencies required to develop, produce and deliver against the contract requirements. The Contract Master Schedule (CMS) should contain sufficient detail to provide the performance data to manage the project efficiently and provide performance information. If more detailed schedules are required, these are usually maintained by the CAM but the detailed schedules must remain reconcilable with the CMS.</p> <p>An in depth review of the schedule is conducted as part of the IBR, however it is revisited during the EVMS Review. The schedule should be reviewed as a team with at least one technical specialist with the knowledge to be able to make a reasonable assessment of the sequencing of activities and resource requirements and task duration's. In any case, during the EVMS Review the schedule should be reviewed to ensure it has been statused and that the progress in the schedule is consistent with the progress in the EVMS.</p>		
Assessment Activity	Method	Findings
Does the schedule format and content meet the requirements of the contract?	Document Review	
Is the WBS used as the basis for development of the schedule?	Document Review	
Can Work Packages and/or activities be easily traced between the WBS and the schedule?	Data Traces	
Are Work Packages: <ul style="list-style-type: none"> <li>• adequately described and clearly defined with scheduled start and end dates?; and</li> <li>• reasonable in duration or with sufficient value milestones so as to minimise subjective work-in-process assessments?</li> </ul>	Document Review	
Is the subcontracted effort incorporated into the schedule and is it easily identified?	Document Review	
Does the schedule trace successfully horizontally (identifying inter-dependencies) and vertically?	Document Review and Data Traces	
Does the schedule show the baseline, estimated start and finish, progress, and float data?	Document Review	

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Are changes to the schedule controlled? If so, how?	Document Review and Interviews	
When scheduling activities, has consideration been given to available resources?	Document Review and Interviews	
Are the scheduled baseline start and finish dates for the tasks consistent with the PV spread?	Data Traces	
Within the CMS and CAM schedules (if applicable), are the following identified: <ul style="list-style-type: none"><li>• significant decision points;</li><li>• constraints and interfaces;</li><li>• physical products; and</li><li>• technical performance goals.</li></ul>	Data Traces and Interview	
<b>Summary: Step 3. Schedule the Work.</b>		

<b>Step 4: Develop Time-Phased Budget</b>		
<b>Management value</b>		
<p>The time-phased budget relates resources to the scope of work and how the scope is planned to be achieved. The plan established at the work package level provides specific resource requirements. The better the detail, the more effective the execution of the baseline plan.</p>		
<b>Interrelationship between Steps Three and Four</b>		
<p>Resource requirements depend heavily on how the work is scheduled to be completed. After the activities have been defined and scheduled, the contractor should allocate resources to the activities. These resources shall be time-phased for each work package as the work package is planned to be completed. This is the first iteration of developing a time-phased budget. The contractor should then assess the total time phased resource requirements for peaks and troughs. To make maximum use of available resources, peaks and troughs in resource requirements should be avoided. Therefore, after the initial time phased resources have been allocated, the contractor should conduct a resource levelling exercise to smooth out the resource requirement profile as much as possible. This will then require that the time phased resources requirements be re-assessed and re-allocated. There may be a number of iterations between steps 3 and 4 before the schedule and time phased budget can be finalised to enable maximum efficiency of labour resources within the constraints of the contracted delivery requirements.</p> <p>The establishment of budgets should be based on recognised estimating methods, which should result in reasonable estimates. The CAMs should be involved in the establishment of budgets, as they will be required to manage the CAs within the budget. However it should be remembered that the budget is only a target against which to measure cost performance and is only as good as the estimating process. Note that once final budgets have been allocated the movement of budget from one work package to another should be accompanied by the corresponding scope. This should be through a change control process (see Step 11)</p>		
Assessment Activity	Method	Findings
Does the company have a budgeting process and are procedures documented? Do these meet the intent of Step 4 and are they being followed?	Document Review	
Does the contractor use historical performance data when estimating budgets?	Document Review and Interviews	
Are the schedule and PMB identical in planning and consistent in representation of progress?	Data Traces	
Has consideration been given to the availability of skills and resources required to achieve the scope of work as planned (including basis of estimates)	Document Review and Interviews	
Does the contractor estimate work package budgets in accordance with company procedures and processes?	Document Review and Interviews	

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<p>Are work package budgets:</p> <ul style="list-style-type: none"> <li>• reasonably realistic;</li> <li>• established in terms of dollars, man-hours, or other measurable units; and</li> <li>• planned by element of cost; i.e. labour, material, other direct charges?</li> </ul>	Document Review and Interviews	
Do Planning Packages have corresponding budget and scope?	Document Review	
Are the budgets time phased in accordance to how the work is to be performed?	Document Review and Interviews	
How are Planning Packages broken down into Work packages?	Document Review and Interviews	
<p>Do the following budgets reconcile:</p> <ul style="list-style-type: none"> <li>▪ Sum of work and planning package budgets with the CA;</li> <li>▪ Sum of CA budgets, Undistributed Budget and Management Reserve with the Project Budget.</li> </ul>	Data Traces	
Is the Control Account budget and schedules traceable and reconcilable from Work and Planning Packages to various summary levels?	Data Traces	
Where Management Reserve is used, is it identified, controlled, and documented? Is it used appropriately?	Document Review, Data Traces and Interviews	
Has the CAM considered Rework and how is it planned?	CAM Interview	
Have Work Packages more than one element of cost and if so how is progress to be determined? CAM must be able to show that progress of one element is not distorted by progress of another element.	Document Review and CAM Interview	
<p><b>Summary - Step 4: Develop Time-Phased Budget</b></p>		

<b>Step 5: Assign Objective Measures of Performance</b>		
<b>Management Value</b>		
Objective indicators enable accurate measurement of work accomplished, thereby allowing accurate comparison to the plan so that variances from the plan can be identified and appropriate corrective action taken. Meaningful performance metrics enables better management control.		
<b>Notes</b>		
Performance measurement shall be conducted at the work package level. All Work Packages shall be assigned objective measures of performance or Earned Value Techniques (EVT) that best suit the work package.		
The use of the Level Of Effort (LOE) EVT should be minimised as much as possible. The assignment of EVTs is reviewed as part of the IBR. However, it is suggested during later EVMS Reviews, that during CAM interviews newly opened Work Packages be targeted to review the appropriateness of the EVTs.		
Assessment Activity	Method	Findings
Does the CAM assign EVTs in accordance with company procedures and processes? Are these appropriate and are they being followed?	Document Reviews and CAM Interviews	
Has the use of LOE been appropriately applied and minimised?	Document Reviews and CAM Interviews	
For discrete Work Packages are the selected EVTs suitable for the type of and duration of the work package?	Document Reviews and CAM Interviews	
Where the Apportioned Effort technique is applied can the related discrete work package be readily identified?	Data Traces and Interviews	
How does the contractor safeguard against: <ul style="list-style-type: none"> <li>• The use of more than one EVT per work package; and/or</li> <li>• Changing of EVTs once the Work Packages have commenced?</li> </ul>	Document Reviews and Interviews	
Are EVTs selected such that PV and planned AC are consistent?	Data Traces and Interviews	
<b>Summary - Step 5: Assign Objective Measures of Performance</b>		

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<b>Step 6: Set the Performance Measurement Baseline</b>		
<b>Management value</b>		
<p>The Performance Measurement Baseline (PMB) is the integrated plan (baseline) of how the work will be performed. Establishing it ensures that all work scope has been planned within project budget and schedule constraints. Project performance is then assessed against this plan.</p>		
<b>Notes</b>		
<p>This step integrates the CWBS, work scope, schedule, time phased budget and EVT into a formal Performance Measurement Baseline (PMB) for the project. This will be the plan against which progress will be measured. Therefore, it is essential that it is as realistic as possible. Further changes to this PMB should be controlled (see step 11) to maintain a stable baseline to measure progress against.</p>		
Assessment Activity	Method	Findings
Are the company procedures and processes followed when setting the PMB? Do company procedures meet the intent of Step 6?	Document Review and Data Traces	
Are the scheduling systems and budgetary documents used by the contractor properly integrated, traceable from the detail to the summary level, and consistent with overall project objectives?	Data Traces	
How do the contractor's various systems interface and is the integrity of the data maintained? (e.g. the accounting, budgeting, scheduling, material handling, performance measurement)	Company Brief, Document Review and Data Traces	
Has the Project Manager or higher authority approved the PMB?	Approval to be given at the IBR	
Once approved by the Project Manager or higher authority, is the PMB subject to formal change control?	Company Brief, Document Review and Data Traces	
<b>Summary – Step 6: Set the Performance Measurement Baseline</b>		

## PROCESS STEPS FOR EVMS REVIEW

35. The following assessment activities cover the AS 4817-2019 process steps that primarily relate to EVMS Review, as shown in Figure 1 of this Instruction.

<b>Step 7: Authorise and Perform the Work</b>		
<b>Management Value</b>		
Authorising of work ensures that control and accountability are maintained.		
<b>Notes</b>		
All work must have written authorisation before it can commence. Authorisation is hierarchal and commences with the signing of the contract. The contractor then authorises the Project Manager to plan and proceed with the Project. Once Control Accounts have been established, Control Account Managers are authorised to proceed with their allocated work. This is part of the process outlined in Step 2 and part of the authorisation of work is also the acceptance of that work (budget and schedule) by the CAM. CAMs should authorise the commencement of Work Packages.		
Assessment Activity	Method	Findings
Are the company procedures and processes being followed and do these procedures meet the intent of Step 7?	Data Traces and Interviews	
<ul style="list-style-type: none"> <li>• Review a sample of authorisation documents.</li> <li>• Are they signed and dated?</li> <li>• Do they clearly reference the scope of work to be accomplished?</li> <li>• Do they reference a budget available to complete the work?</li> <li>• Does it provide a time frame to complete the work?</li> <li>• Does it reference who will conduct the work?</li> <li>• Does it reference who is responsible for managing the work?</li> <li>• Is the work planned before it is authorised?</li> <li>• Are there any other signatures apart from the authoriser and delegated manager?</li> <li>• If so, who are they and what role do they play in the authorisation?</li> </ul>	Data Traces and Interviews	
Verify the correctness of the data against the other documentation provided, e.g. CWBS, Schedule, CAP and RAM.	Data Traces	
Does the numbering and coding of Work Packages facilitate the	Data Traces and Interviews	



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aggregating of progress and actual costs?		
Are Work Packages the responsibility of a single performing organisation?	Data Traces and CAM interviews	
<b>Summary Step 7: Authorise and Perform the Work</b>		

<b>Step 8: Accumulate and Report Performance Data</b>		
<b>Management Value</b>		
<p>Effective performance management requires knowing where performance has varied from the plan. Accurate and reliable variance data provides visibility into project performance and helps the project manager to focus resources on those areas in need of attention. Project performance management requires sound reporting to higher level management and the customer. Accurate summarisation of data ensures that significant problems from all levels of the work and organisation structure are included in the reporting to higher-level management and to the customer</p>		
<b>Notes</b>		
<p>Cost and schedule performance data should be collected and reported on a regular basis. The maximum time interval for reporting to the Project Office should be negotiated and specified in the contract. The Project Office reporting requirements should be synchronised with the contractor's accounting month. This will save duplication of effort in producing reports. Timing and inclusion of subcontractor data is also critical.</p>		
<b>General</b>		
Assessment Activity	Method	Findings
Is PV, EV, AC, BAC and EAC data derived from the work package level and summarised up through the WBS to the total project level for subsequent analysis?	Interviews and Data Traces	
Does the contractor have procedures addressing the declaring of progress for material and subcontracted effort? Do these procedures meet the intent of Step 8 and are they being followed?	Document Review and Interviews	
Are performance reports distributed to appropriate management levels on a consistent and periodic basis?	Interviews	
For completed Work Packages, does EV equal the total amount budgeted for that Work Package?	Data Traces	
How is the accuracy of the subcontractor cost and performance data verified?	Interviews	
<b>Earned Value</b>		
Assessment Activity	Method	Findings
Does the contractor declare progress for material no earlier than actual receipt and acceptance of that material?	Document Review and Interviews	
How is Earned Value collected for the various types of Work Packages? (e.g. materials, subcontractor effort, labour etc.)	Company Brief and Interviews	

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Is EV being collected such that it is consistent with PV, the type of Work package, and EVT used?	Data Traces	
<p>How is the schedule statused?</p> <ul style="list-style-type: none"> <li>• What measures are used and why?</li> <li>• Does the company status the estimated completion date as well as % complete?</li> <li>• Is the schedule statused at least monthly?</li> </ul> <p>Note This also relates to step 3</p>	Document Review, Data Traces and Interviews	
<p>Contractors usually use scheduling tools to provide progress data to the EVMS:</p> <ul style="list-style-type: none"> <li>• How does the contractor's scheduling system interface with the EVMS?</li> <li>• Does the EV reconcile between EVMS and the scheduling system? Differences should be explainable (Conduct a data trace to verify the accuracy of data for materials, subcontract, and production Work Packages.)</li> <li>• What controls does the contractor have in place to prevent incorrect data transfer? Are they sufficient?</li> </ul>	Data traces and Interviews	
Is schedule forecast at completion information made available to the CAM for comparison with EV status information? Does the CAM undertake this comparison? This is related to Step 9.	Interviews and Data Traces	
<p><b>Actual Costs</b> - Direct costs should be derived from contractor accounting systems without the need to duplicate data. Therefore, there is a requirement for an interface between the accounting system and the EVMS. This interface may be electronic, manual or a mixture of both. When checking the accumulation of costs, consider the following.</p>		
How does the contractor's accounting system interface with the EVMS?	Interviews and Data Traces	
Are actual costs accumulated in a manner consistent with and in the same time frame as the Earned Value? Difference should be explainable.	Data Traces and Interviews	
Are direct costs recorded in manner consistent with acceptable accounting practices and consistent with the manner in which budgets were planned?	Interviews and Data Traces	

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Does the accounting system provide an auditable record of costs charged to the contract? If so, how?	Interviews and Data Traces	
How is the accuracy of the data controlled for: a. booking costs to the accounting system? b. consistency between the Accounting system and the EVMS?	Interviews and Data Traces	
Conduct traces for materials purchases, subcontracts labour Work Packages and indirect costs to ensure that the AC data reported reconciles with the source data (invoices, time sheets etc).	Data Traces	
Are records maintained to provide accountability for materials purchased for a contract? This is related mainly to the purchase and use of bulk materials. Also refer to Step 9 of the Supplement.	Data Traces	
How are indirect costs: • Collected, • Recorded, • Allocated, and • Managed?	Interviews and Data Traces	
Do the ACs recorded include all and only the cost incurred for the work accomplished?	Interviews and Data Traces	
Are performance reports distributed to appropriate management levels on a consistent and periodic basis?	interviews	
<b>Summary: Step 8: Accumulate and Report Performance Data</b>		

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<b>Step 9: Analyse Project Performance Data</b>		
<b>Management Value</b>		
Performance management requires knowing where and why performance has varied from the plan. Effective analysis of deviations from plan provides management at all levels the information to rapidly and effectively implement corrective actions to accomplish the project objectives		
<b>Notes:</b>		
Noting this, it is very important that analysis be conducted at a level that provides effective management feedback without getting into the “weeds”. Another aspect is that any analysis reporting provided to the Commonwealth should be a by-product of the Contractor’s analysis process and not be just a special process to satisfy Commonwealth needs. Therefore, when assessing this step, the Project Office should consider the following.		
Assessment Activity	Method	Findings
Does the contractor conduct analysis in accordance with company procedures? Do these procedures meet the intent of Step 9?	Document Review and Interviews	
Is detailed analysis of significant variances performed? If so, what criteria are used to identify which Control Accounts are to be analysed? Is it based on EVM variance thresholds, Critical Path Work Packages, cost to the contractor etc. Is it consistent with the contract requirements -VAR thresholds?	Interviews, document review and data traces	
Is analysis conducted at a level sufficiently low enough to provide effective management feedback without getting into the “weeds”?	Interviews and document review and data traces	
How are the variances documented? Are the corrective actions/descriptions on the external report considered adequate?	Interviews and document review	
Do CAMs perform their own analyses or, at least, are responsible for them?	CAM Interviews	
Does the CAM check the schedule variance in the EV data against the schedule?	Data Trace	
Does the variances analysis in the problem analysis section of the external Earned Value Performance Report reconcile with the contractor’s internal Variance Analysis Reports at applicable levels? Compare the CAMs report to the external. Ask the contractor to explain any differences.	Interviews and Data Traces	
Does the contractor hold regular internal progress meetings to determine impact	Interviews	

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of problems of one CA on another and to get an overall picture of the program?		
When conducting an analysis of the EVM data, what other inputs are considered? e.g. information from internal meetings, input from the scheduler, materials managers, subcontract managers, resource (human and financial) managers etc.	Interviews	
Is the EAC updated periodically to reflect current performance and management insight? For material Work Packages/CA the EAC should include current material costs, usage rates and estimated residual materials	Interviews and Data Traces	
Has the EAC been updated to include the estimated cost of resources for corrective actions including labour (skill and number), materials, subcontracting etc.	Interviews and Document Review	
How does the EAC figure reconcile to the resource plan and resources required to complete the work? How is this process documented?	Document Review, Data Traces, and Interviews	
Does the reported EAC agree with the EAC developed and used by the contractor?	Data Traces	
<b>Summary – Step 9 Analyse Project Performance Data:</b>		

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<b>Step 10: Take Management Action</b>		
<b>Management Value</b>		
Taking corrective action on the basis of EV information demonstrates that the EVMS is being used in the management of the project. This provides confidence that problems are being identified early and appropriate action is being taken to get the project back on plan.		
<b>Notes:</b>		
Corrective action will often require the application of additional resources to resolve problem areas. This will normally result in increases in costs due to:		
<ul style="list-style-type: none"> <li>• cost overruns if a Work Packages is still open or;</li> <li>• draw down of budget from MR if a work package is created to resolve the problem.</li> </ul>		
Further if the contractor cannot physically procure the additional resources required, then personnel may have to be redirected from other tasks thus leading to possible schedule problems on other follow-on tasks. Corrective action plans should not be determined by the CAM in isolation. Drafting a corrective action plan should involve the project manager, other CAMs, the project scheduler, and other functional managers.		
Assessment Activity	Method	Findings
Does the contractor have a procedure for drafting and implementing corrective action plans, and are these procedures being followed?	Document Review	
Are corrective action plans implemented and periodically evaluated? Is a log of corrective actions kept?	Interviews	
Is the use of additional resources or redirection of resources authorised in accordance with company procedures?	Interviews	
Is there management commitment to the Corrective action plan? Are forecasts revised to account for the corrective actions?	Interviews	
Does the contractor demonstrate effective management of internal and subcontractor effort?	Document Review, Interviews and Data Traces	
Does the contractor have procedures in place that prohibit retroactive changes to Control Account Plans and work authorisation documents? Are these procedures being followed?	Document Review, Interviews and Data Traces	
<b>Summary - Step 10: Take Management Action</b>		

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<b>Step 11: Maintain the Baseline</b>		
<p><b>Management value</b></p> <p>Incorporating changes in a timely manner maintains the integrity of the PMB, and thus its effectiveness as a baseline against which to manage and control performance. Changes to the baseline should be authorised and incorporated in an orderly manner. By ensuring that budget revisions are traceable, the integrity of the current PMB can be verified.</p>		
<p><b>Notes:</b></p> <p>Changes made outside authorised processes compromise the integrity of performance trend data and distort/delay visibility into overall project variance from the plan. By ensuring that budget and schedule revisions are documented and traceable, the integrity of the PMB is maintained and can be verified. This allows CAMs to have valid Control Account Plans against which to execute and measure performance. Retroactive changes to the baseline may mask variance trends and prevent or delay visibility of project variance from plan thus reducing the alternatives and opportunity available to managers for corrective action.</p>		
Assessment Activity	Method	Findings
<p>Does the company have procedures for maintaining the baseline? Do these include procedures for:</p> <ul style="list-style-type: none"> <li>• Internal Replanning (including rolling wave planning);</li> <li>• Incorporation of Contract changes; and</li> <li>• Reprogramming?</li> </ul>		
<p>Does the contractor conduct baseline maintenance using company procedures?</p>	Data Traces and Interviews	
<p>Does the contractor's change control system provide the information required for tracing the change through the entire planning system to determine the following:</p> <ul style="list-style-type: none"> <li>• Effect on work authorisation;</li> <li>• Effect on budgets and schedules; and</li> <li>• Effect on the EAC?</li> </ul>	Data Traces	
<p>Are changes to the PMB made only as a result of contractual redirection, internal replanning, or use of MR?</p>	Data Traces	
<p>Are transactions authorised and recorded as required for the various types of changes?</p>	Data Traces	
<p>Do the records for MR and UB show the budget source, destination, and transaction date? Review change LOGs</p>	Data Traces	
<p>Are changes implemented in a timely manner, controlled, documented, traceable and reported? Does the</p>	Data Traces	



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documentation adequately explain why the change has occurred?		
Conduct traces for internally and externally generated changes to assess if procedures are being followed.	Data Traces	
Are internally generated changes that affect the sequencing of Work Packages analysed and the impact on the schedule evaluated?	Data Traces	
Are procedures for adding, modifying, or cancelling Work Packages followed?	Data Traces	
How often are there internal changes conducted and for what purpose.	Interviews, Document Reviews and Data Traces	
Review a random selection of baseline changes. Select at least one originating from internal replanning, contract changes and a reprogramming exercise where possible. Reprogramming will require Commonwealth Representative approval and a post implementation IBR to be conducted.		
<p>For Work Packages that have been closed as part of a replan:</p> <ul style="list-style-type: none"> <li>• Has the EV been validated?</li> <li>• Has PV set to EV? This set the schedule variance to 0.</li> <li>• Are all existing applicable costs booked to the work package?</li> <li>• Has the remaining work package scope and budget transferred together?</li> <li>• Has the change been appropriately documented?</li> </ul>	Interviews, Document Reviews and Data Traces	
<p>Check for Retroactive changes and check the following:</p> <ul style="list-style-type: none"> <li>• Why were they implemented?</li> <li>• Is the reason for the change compliant with the Contract requirements?</li> <li>• Have they been authorised?</li> <li>• Have they been documented?</li> </ul>	Interviews, Document Reviews and Data Traces	
<p>Externally authorised changes usually result in additional scope and subsequent budget. When reviewing these changes check the following:</p> <ul style="list-style-type: none"> <li>• Has the new work been appropriately planned, budgeted, scheduled and authorised in accordance with company procedures?</li> <li>• Has the change been appropriately documented?</li> </ul>	Interviews, Document Reviews and Data Traces	

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<p>Where a reprogramming exercise has been undertaken (i.e. where the total allocated budget exceeds the Contract budget base) review the following:</p> <ul style="list-style-type: none"><li>• Has the remaining work been determined?</li><li>• Are all applicable costs booked to the relevant Work Packages?</li><li>• Has the PV and EV been set to the AC (this removes all variances)?</li><li>• Has the remaining effort been appropriately planned budgeted, scheduled, and authorised in accordance with company procedures?</li><li>• Has the change been appropriately documented?</li></ul>	<p>Interviews, Document Reviews and Data Traces</p>	
<p><b>Summary - Step 11: Maintain Baseline</b></p>		

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**ANNEX I: CONTROL ACCOUNT EVALUATION SHEET**

Control Account Number	
Control Account Manager	
WBS Element(s) Reviewed	
Total Assigned Budget (Currency)	
No. of CARs raised for this Control Account (Attach)	
Using the information gained from CAM interviews and from document traces, record any issues. Any adverse findings will require a CAR to be completed.	
Team Member	
Date	

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**ANNEX J: SAMPLE CORRECTIVE ACTION REQUEST**

<b>Title:</b>	
	<b>Action Item No.</b>
<b>MAJOR Finding / MINOR Finding / Observation (Please select)</b>	
<b>Requirement Reference</b>	
<b>Control Account No.</b>	(if applicable)
<b>WBS element:</b>	
<b>Finding details:</b>	
<b>Contractor's Response.</b>	
<b>Team Member:</b>	
<b>Date:</b>	
<b>Approved by Team Leader</b>	
<b>Date:</b>	

## **ANNEX K: SAMPLE IBR REPORT**

### **EXAMPLE REPORT OF THE INTEGRATED BASELINE REVIEW**

of  
<company>  
for  
<project >

#### **INTRODUCTION**

1. Over the period <dates>, an Integrated Baseline Review (IBR) of the <company> was conducted to fulfil the contractual obligations for Earned Value implementation on Acquisition Contract <contract identifier> for <Project>.
2. The Review Team comprised <details of team lead, advisers, support staff>.
3. This report presents the consolidated findings of the IBR. A full Review Team roster is provided at Annex A.

#### **PURPOSE AND OBJECTIVES (EXAMPLE)**

4. The purpose of this review was to:
  - a. Ensure the timely establishment of cost, schedule and technical baselines;
  - b. Determine the credibility, sufficiency, and adequacy of these baselines;
  - c. Ensure these baselines are appropriately integrated;
  - d. Determine the adequacy of the skill base allocated to perform the work; and
  - e. Focus on and identify risks (critical success factors, i.e. cost, schedule, technical, and support).>
5. The objectives of this review were to:
  - a. Ensure the complete scope of work is covered in the WBS.
  - b. Assess whether:
    - (1) Scope can be accomplished within cost and schedule constraints,
    - (2) Adequate resources have been appropriately distributed, and
    - (3) A logical sequence of effort supports the contract schedule.
  - c. Identify areas of risk and understand the cost and schedule implications.
  - d. Assess the validity and accuracy of the baseline.
  - e. Develop an understanding of the Performance Measurement Baseline (PMB) and methods used to measure performance through a review of, inter alia:
    - (1) Control Account and Work Package / Planning Package technical content,
    - (2) Sequencing of planned work,
    - (3) Control Account resource adequacy, and
    - (4) Earned Value Methods to assure meaningful objective data are derived.
6. Achieving these objectives would allow the Review Team to form a conclusion about the <company> commitment and ownership of the PMB, and its overall acceptability.

#### **REVIEW METHOD**

7. The Review consisted of: (for example)
  - a. Preparatory research, including a review of the System Description.
  - b. An In-brief from <company> on policies and procedures in use on the SAC. A copy of the <company> briefing pack is attached as Annex B to this report.

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- c. A review of schedule and Control Account planning data derived from the <company> EV system.
- d. An extensive interview program held with the <company> Project Manager and XX Control Account Managers (CAMs) that were available in the Review timeframe.
- 8. The baseline Accounting Period under consideration for this Review was <month, year>, and the WBS under consideration was the <reference to WBS in contract>.
- 9. At the time of the Review, <identify known subcontractors and the status of their baseline, whether it has been wholly incorporated etc. Identify any plans for subcontractors>.
- 10. The Commonwealth's PowerPoint Presentation Out-brief from the Review Team is attached at Annex <X> to this report. It identified the strengths, findings, and overall outcome of the IBR.

### **STRENGTHS**

- 11. There were <e.g. several, one, many> strengths identified through the course of the IBR.

#### **Strength X**

- 12. Supporting statement to validate strength

#### **Strength Y**

- 13. Supporting statement to validate strength

### **INNOVATIONS**

- 14. Any innovative ideas

### **FINDINGS**

- 15. In summary, there were <number> issues raised for clarification and documentation requests at the time of the <insert date> Out-brief. Consideration of these issues and requests, and the respective <company> responses, resulted in XX Major Corrective Action Reports (CARs), XX Minor CARs and XX Observations.
- 16. A schedule of issues raised, CARs and Observations is attached in Annex D.

### **MAJOR FINDINGS**

- 17. XX Major CARs were made by the Review Team. These Major Findings resulted in non-acceptance/ acceptance of the Performance Measurement Baseline (PMB) at the time of the Out-brief.
- 18. The Major Findings need to be addressed via a Corrective Action Plan to ensure timely closure between the Commonwealth and <company>, thus leading to approval of the PMB.
- 19. The Major Findings were:

#### **Description of finding**

- 20. Details. Refer to CAR xx attached.

#### **Description of finding**

- 21. Details. Refer to CAR xx attached.

### **MINOR FINDINGS**

- 22. XX Minor CARs were made by the Review Team. These Minor Findings do/ do not impact the outcome of the review but need to be closed off in a timely manner. <company> is expected to include a plan to close these findings within the Corrective Action Plan it provides to address the Major Findings.
- 23. <company>'s Corrective Actions should provide the Commonwealth confidence that these concerns have been addressed across the program and not just in the areas mentioned in the specific Finding.
- 24. In summary, the Minor findings were in the areas of:

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- a. Details. Refer to CAR xx attached.
- b. Details. Refer to CAR xx attached.

**OBSERVATIONS**

25. XX Observations were made by the Review Team. These do not impact on the outcome of the IBR. They are offered as suggestions for improving the <company> EVM system and implementation process. The Observations were:

- a. <Observation 1> description
- b. <Observation 2> description
- c. <Observation n> description

**SURVEILLANCE ACTIVITY**

- 26. <Details of future plans noting outcomes of IBR.>

**CONCLUSIONS**

- 27. <Relate the conclusions back to the Purpose and Objectives section of the report.>

**RECOMMENDATIONS**

- 28. The Review Team makes the following recommendations (example):
  - a. <company> to produce and implement a Corrective Action Plan to action the close-out of Findings, both Major and Minor.
  - b. All Major Findings be resolved before acceptance of the PMB by the Project Authority.
  - c. The observations should be noted and considered by <company> for further action.
  - d. The follow-up surveillance activity should be conducted <timeframe>.

Name: <project manager's name>

Position title:

<project manager should sign>

<date>

**ATTACHMENTS (EXAMPLE):**

- Review Team Roster
- <company> Briefing Pack
- IBR Review Team Out-brief
- IBR Review Team Issues Raised and Findings
- CAR 1 <CAR Title>
- CAR 2 <CAR Title>
- CAR n <CAR Title>

## **ANNEX L: SAMPLE EVMS REVIEW REPORT**

### **REPORT OF THE EVMS REVIEW of <company name> for <project name>**

#### **INTRODUCTION**

29. Over the period <dates>, an EVMS Review of the <company name> was conducted to fulfil the contractual obligations for Earned Value implementation on Acquisition Contract <contract identifier> for <Project>.

1. The Review Team comprised <details of team lead, advisers, support staff>.
2. This report presents the consolidated findings of the EVMS Review.

#### **PURPOSE AND OBJECTIVES (EXAMPLE)**

3. The purpose of this review was to:
  - a. Ensure the <company name> EVMS is compliant with AS 4817-2019, the Defence Supplement to AS 4817 and the contractual requirements for Earned Value.
  - b. Additional purposes, if any.
4. Secondary objectives of this review were to:
  - a. Further develop an understanding of the < company name > EVMS;
  - b. Confirm the validity and accuracy of the contractor's baseline through review of Earned Value reports;
  - c. Assess the integrity of the baseline through the review of the processes for maintenance of the baseline; and
  - d. Gain an insight into the risk management process and the success of risk treatment to date.>
5. Achieving these objectives allowed the Review Team to form a conclusion about the <company name> compliance with the contractual EVM requirements.

#### **REVIEW METHOD**

6. The Review consisted of: (for example)
  - a. Preparatory research, including a review of the <company name> EVM System procedures and other system documentation provided;
  - b. An In-Brief from <company name> on policies and procedures;
  - c. A review of schedule and Control Account data derived from the <company name> EV system.
  - d. An extensive interview program held with the <company name> Project Manager, various functional managers and XX Control Account Managers (CAMs) that were available in the Review timeframe.
7. The baseline Accounting Periods under consideration for this Review were <months, year>.
8. The review methodology was based around checking compliance with the 11 Steps outlined in AS4817-2019 and additional requirements as laid out in the Defence Supplement to AS4817 and the contract <contract identifier>.
9. At the time of the Review, <identify known subcontractors and the status of their baseline, whether it has been wholly incorporated etc. Identify any plans for subcontractors>.
10. The Commonwealth's PowerPoint Presentation Out-Brief from the Review Team is attached at Annex <X> to this report. It identified the strengths, findings, and overall outcome of the EVMS Review.



## **STRENGTHS**

11. There were <e.g. several, one, many> best practices identified through the course of the EVMS review.

### **Strength x**

12. Supporting statement to validate strength

### **Strength y**

13. Supporting statement to validate strength

## **INNOVATIONS**

14. Describe any innovative ideas

## **FINDINGS**

15. In summary, there were <number> issues raised for clarification and documentation requests at the time of the <insert date> Out-brief. Consideration of these issues and requests, and the respective <company name> responses, resulted in XX Major and XX Minor Corrective Action Requests (CARs) and XX Observations.

16. A schedule of issues raised, CARs and Observations is attached in Annex B.

### **Major CARs**

17. XX Number Major CARs were made by the Review Team. These Major CARs resulted in the non-compliance of the <company name> EVMS at the time of the Out-brief. The Major CARs need to be addressed via a Corrective Action Plan to ensure timely closure between the Commonwealth and <company name>, thus leading to acceptance of the <company name>EVMS

18. The Major CARs were:

a. Description of finding

Details. Refer to CAR xxx attached.

b. Description of finding

Details Refer to CAR xxx attached.

### **Minor CARs**

19. XX Minor CARs were made by the Review Team. These Minor CARs do/ do not impact the outcome of the review but need to be closed off in a timely manner. <company name> is expected to include a plan to close these findings within the Corrective Action Plan it provides to address the Major CARs.

20. <company name>'s Corrective Actions should provide the Commonwealth confidence that these concerns have been addressed across the program and not just in the areas mentioned in the specific Finding.

21. In summary, the Minor CARs were in the areas of:

a. <Brief description of applicable areas> Refer to CARs xxx to yyy attached.

### **Observations**

22. XX Observations were made by the Review Team. These do not impact on the outcome of the EVMS Review. They are offered as suggestions for improving the <company name> EVM system and implementation process. The Observations were:

a. <brief discussion of observations>

b. <Observed risks in the EVMS>

## **SYSTEM ASSURANCE ACTIVITIES**

23. <Details of future plans e.g. closing out remaining open CARs and surveillance plans etc. Please note that assurance activities should be conducted based on need – i.e. if data integrity becomes doubtful, quality of reporting deteriorates, company immature with EVM and needing follow up assurance. If the company undergoes regular

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internal QA, or other check on processes and procedures then this could be provided to assist the Project Office in developing an appropriate assurance regime.>

## **CONCLUSIONS**

24. <Relate the conclusions back to the Purpose and Objectives section of the report.>

### **Recommendations**

25. The Review Team makes the following recommendations (example):

- a. <company name> to produce and implement a Corrective Action Plan to action the close-out of Findings, both Major and Minor.
- b. All Major Findings be resolved before accreditation /letter of compliance with the EVM requirements is provided by the Commonwealth Representative.
- c. The observations should be noted and considered by <company name> for further action.
- d. Assurance activities to be conducted as required<timeframe>.

Name: <project manager's name>

Position title:

<project manager should sign>

<date>

## **ANNEXES (EXAMPLE):**

- A. EVMS Review Team Out-brief
- B. EVMS Review Team Issues Raised and Findings
- C. CAR 001 <CAR Title>
- D. CAR 001 <CAR Title>
- E. CAR n <CAR Title>