



Ministry
of Defence



**SCHEDULE O – EARNED VALUE MANAGEMENT SYSTEM REPORTING REQUIREMENTS
(PLACEHOLDER SUBJECT TO NEGOTIATION WITH CONTRACTOR)**

MERLIN AND APACHE ENGINES FUTURE SUPPORT

**CONTRACT NUMBER
HELSS/0102**

SCHEDULE O

EARNED VALUE MANAGEMENT SYSTEM REPORTING

EARNED VALUE MANAGEMENT

1.1 The Earned Value Management System (EVMS) reporting requirements as identified in this Schedule shall apply to all aspects of the Contract including where, under Item 2 of the Schedule of Requirements (Pricing and Payment for Additional Services as listed in Schedule H), the estimated or required timescale for a specific task or activity placed or to be placed conflicts with the completion of the process as described herein.

1.2 Where the Contractor considers that the provisions of this schedule cannot be concluded within a timescale consistent with that required for a specific task placed or to be placed under Item 2 of the Schedule of Requirements they shall advise the Authority accordingly and provide an impact statement for consideration by the Authority which may, at its discretion, revise the EVMS requirement for the specific task.

1.3 The Contractor shall also provide the documentation identified in Annex C in support of the EVMS reporting and monitoring activities.

1.4 The Contractor will present EVMS data as part of the Performance Management reporting obligations and present the monthly agreed EVMS performance as part of the evidence supporting the Application for Payment process.

ANNEX A - LEVEL 3 CONTRACT TERMS AND DEFINITIONS

Term	Definition
Actual Cost of Work Performed (ACWP or AC)	The sum of all cost incurred or accrued up to a point in time.
Association for Project Management (APM)	A UK based chartered body for the project profession that sets standards and values that describe the benchmark for professional project management. For Earned Value Management, the APM standard is embodied in three publications: <ol style="list-style-type: none"> 1. <i>Earned Value Management: APM Guidelines (2008)</i>, 2. <i>The Earned Value Management Compass (APM,2010)</i>, and; 3. <i>The Earned Value Management Handbook (APM, 2013)</i>. 4. The use of BS/ISO 21508:2018 Earned Value management shall take precedence over the APM guidelines as defined in the schedule of Standrds and practises.
Budgeted Cost for Work Performed (BCWP)	Earned Value (EV).
Budgeted Cost for Work Scheduled (BCWS)	Planned Value (PV).
Basis of Schedule (BOS)	A document that provides justification for the durations, resource loadings and logic assigned to tasks in the schedule.
Change Control	A process for ensuring configuration control and obtaining appropriate approval.
Contract Budget Baseline (CBB)	The amount of the authorised cost of a contract and the estimated cost of authorised non-priced work. This is the baseline that measures cost compliance.
Contract Cost and Schedule Status Report (CSSR)	A simplified report that provides to DE&S a contractor's position with regard to planned, actual and forecast expenditures over the period of performance of the contract.
Contract Data Requirements List (CDRL)	A listing of the deliverables in a contract.
Contract Extensions	An expansion of some element of a contract that may increase period of performance or scope of work.
Contract Line Item Number (CLIN)	A clause in a contract that identifies the items or services being acquired.
Contract Master Schedule (CMS)	The contractor's schedule for accomplishing the scope of work.
Contract Milestones	Those points in time when the Contractor will achieve or expects to receive significant deliverables.
Contract Performance Reports (CPR)	A set of reports used in an Earned Value Management System that complies with the APM requirements and EIA 748.
Contracting, Purchasing and Finance (CP&F)	A DE&S software tool.
Contract Work Breakdown Structure (CWBS)	That portion of the DE&S Work Breakdown Structure which devolves the contractor's scope of work into manageable subordinate elements.
Contract Work Breakdown Structure (CWBS) Dictionary	The definition of the content of each element in a WBS that makes clear the scope, schedule and cost associated with each element
Control Account	An element of the Work Breakdown Structure (WBS) where control of scope, schedule and cost are assigned to a responsible person.
Control Account Manager (CAM)	The person responsible for achieving the scope, schedule and cost associated with an element of the Work Breakdown structure.
Cost Variance (CV)	An EVM term for the difference between the value of work performed and its cost. (BCWP-ACWP=CV).
Data Item Description (DID)	Document defining the data required from a Contractor .

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Term	Definition
Defined Pricing Structure (DPS)	A format defined within UK regulation requiring industry to provide data to the Government for all Single Source Qualifying Defence Contracts. A product or service orientated hierarchy that defines the logical relationship among all components to a specific level that does not constrain the Contractor's ability to define or manage the project or resources to deliver that project.
Earned Value Management Plan (EVMP)	A description of how the Earned Value Management System will be applied.
Earned Value Management System (EVMS)	A sound management approach that provides all levels of management with early visibility into cost and schedule performance. An EVMS will: <ul style="list-style-type: none"> • Relate time-phased budgets to specific contract tasks or statements of work. • Provide the basis to capture work progress assessments against the baseline plan. • Relate technical, schedule, and cost performance. • Provide valid, timely and auditable data and information for proactive project management analysis and action. • Supply managers with a practical level of summarisation for effective decision making.
EIA	Electronic Industries Alliance.
Government Furnished Asset (GFA)	An asset that is furnished by the government.
Government Furnished Equipment (GFE)	Equipment that is furnished by the government.
Government Furnished Information (GFI)	Information that is furnished by the government.
Government Furnished Structures (GFS)	Structures or facilities that are furnished by the government.
Government Furnished Items (GFX)	Includes Government Furnished Equipment (GFE), Government Furnished Assets (GFA), Government Furnished Information (GFI), and Government Furnished Structures (GFS).
Integrated Baseline Review (IBR)	An assessment of the content and integrity of the performance measurement baseline.
Major Subcontractor(s)	Those subcontractors where the subcontractor portion of the overall contract cost is equal to or greater than 20% or £20M of the contract..
Managerially Significant	Having importance and recognition to the management team.
Mandated EVMS Review	A required assessment.
Mandated Reviews	Required assessments.
New Contract Phases	Additional, subsequent portions of a scope of work.
Nominated EV Standard	The standard that has either been mandated or agreed as governing the Earned Value requirements for a contract.
P3M Integration Team	A DE&S team that is implementing an automated system for project controls.
Payment Milestone	A milestone that has a payment value associated with it.
Performance Measurement Baseline (PMB)	A time-phased budget of the work to be performed against which cost and schedule performance is measured.
Pre-Contract Award Readiness Review	An assessment of a contractor's ability to execute a contract should it be awarded.
Project Control Manager (PCM)	The senior member of the project control team.
Project Controls	The organisation tasked with developing and implementing data gathering, management and analytical processes that predict, understand and constructively influence time and cost outcomes.
Project Controls System Description (PCSD)	A narrative that identifies and describes how a Project Control System will be implemented, including the data gathering, management and analytical processes used to predict, understand and constructively influence time and cost outcomes.

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Term	Definition
Project Management Plan (PMP)	A narrative that documents the actions necessary to define, prepare, integrate and coordinate the various project activities, including how it will be executed, monitored, controlled, and closed.
Readiness Assessments	The Contractor process for measuring organisational preparedness and identification of needs and development prior to execution of major phases of a contract.
Risk Register	A log or table that contains the identified risks for performing a body of work. It includes a description of the risks, a description of the actions which are to be taken to avoid or reduce the risk, the probability of occurrence and the impact if realised.
Statement of Work (SOW)	A narrative of the scope to be accomplished.
Suitably Qualified and Experienced Personnel (SQEP)	A person or persons with sufficient demonstrated experience and relevant qualifications to provide assurance that they will be able to accomplish the work assigned to them.
Schedule Variance (SV)	The difference between the Earned Value (EV) and the Planned Value (PV).
System Surveillance	An assessment which is undertaken to assure that a system, such as an EVMS, is performing as expected.
Variance at Completion (VAC)	The difference between the Budget at Completion (BAC) and the Estimate at Completion (EAC).
Work Breakdown Structure (WBS)	Defines how the scope of work is subdivided to accomplish the overall objective.

ANNEX B – EVM REQUIREMENTS

1. EARNED VALUE MANAGEMENT SYSTEM IMPLEMENTATION

1.1. The Contractor, in accord with CDRL (DID-PC-001), shall develop, deliver and update as needed over the term of the contract, an Earned Value Management Plan (EVMP) that:

- a. Describes an EVMS that is compliant with BS ISO 21508:2018 and the Association for Project Management (APM) *Earned Value Management: APM Guidelines (2008)*, *The Earned Value Management Compass (APM,2010)* and *The Earned Value Management Handbook (APM,2013)* (collectively, the *Nominated EV Standard*) or an equivalent standard (such as the ISO/ British Standard 21508) to be agreed by the Authority. It should be noted that Professional standards usually sit below ISO in the order of precedence; and
- b. Describes how tools, processes and Suitably Qualified and Experienced Personnel (SQEP) are available to support the implementation and use of an EVMS throughout the contract duration. The Contractor shall conduct Earned Value Management (EVM) in accordance with the Approved EVMP until contract completion.
- c. Describes how the EVMS is governed, lists the accountabilities and outlines the approval and timeframe for regular review and updating.
- d. Details how configuration control is applied to the EVMS system. Describes the Change Control process (including but not limited to change to the EVMP, engineering, technical, baseline, or contract changes).
- e. The Contractor shall facilitate the Authority's Representative to conduct a Pre-Contract Award Readiness Review to enable assurance to the Authority of the Contractor's ability to comply with the contract.

1.2. The Contractor shall, within one (1) month (or earlier specified date as agreed by the Authority) after the Contract award, have an established EVMS that complies with the requirements as defined in the Nominated EV Standard and the Approved EVMP.

1.3. The Contractor shall, within a period of one month after award (or as agreed by the Authority), facilitate the Authority review of the Contractor's EVMS in accordance with the Nominated EV Standard for the purpose of assessing compliance with the requirements of the contract.

1.4. The Contractor shall ensure that its EVMS continues to meet the requirements of the contract subsequent to successful completion of an EVMS Demonstration Review, during which any issues found shall be rectified.

1.5. The Contractor shall facilitate the Authority Representative to conduct ongoing System Surveillance of its EVMS in accordance with the Nominated EV standard to assess continuing compliance with the requirements of the Contract. The Authority reserves the right to conduct a review of the Contractor EVMS at any time.

1.6. The Contractor shall, in accordance with the EVMP, provide all facilities and assistance reasonably required by the Authority to conduct EVMS Mandated Reviews (IBRs, Demonstration and Surveillance Reviews) including Readiness Assessments for Contract Extensions or New Contract Phases.

2. CONTRACT WORK BREAKDOWN STRUCTURE

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2.1. The Contractor shall develop, deliver and update a Contract Work Breakdown Structure (CWBS) in accordance with CDRL (DID-PC-002) that meets both the Authority reporting requirements and can be aligned with the Defined Pricing Structure (DPS) where applicable.

2.2. The Contractor shall manage the Contract in accordance with the approved CWBS & CWBS Dictionary. Alignment of data from CWBS to Contract Line Item Number (CLIN) is to be maintained to enable the Authority Contracting, Purchasing and Finance (CP&F) data requirements.

2.3. The Contractor shall maintain and update the CWBS Structure and Dictionary throughout the contract using configuration control as defined within the agreed Change Control Process. Proposed changes to the CWBS that may affect Authority or DPS requirements must be provided to the Authority, within one (1) week of the change being proposed, and must include an updated CWBS Dictionary for Approval. No change that may affect Authority requirements may be implemented without prior approval.

2.4. The Contractor may amend the approved CWBS or CWBS Dictionary, without first obtaining the Authority's approval under clause 2.3 as long as changes are formally recorded as part of the agreed Change Control Process under delegated authority and:

- a. All elements affected by the amendment are below the reporting level;
- b. The amendments are consistent with the Approved CWBS; and
- c. The Authority is notified within 30 calendar days of the changes being made.

2.5. The CWBS implemented shall enable reconciliation of the EVMS back to the Contract. The Contractor Budget Baseline shall be equal to the Contract Price minus margin/fees. The Contractor Budget Baseline shall comprise of the Performance Measurement Baseline and Management Reserve. The Performance Measurement Baseline shall be set with a deterministic schedule with the balance of cost being defined as Management Reserve and the balance of schedule remaining being defined as schedule reserve.

3. CONTRACT MASTER SCHEDULE (CMS)

3.1. The Contractor shall develop, deliver and update a Contract Master Schedule (CMS) in accordance with CDRL-(DID-PC-003). This will include the Performance Measurement Baseline (PMB), a current forecast schedule with updated performance against the PMB, and a high-level summary schedule as agreed with the Authority.

3.2. The Contractor shall use the approved CMS as the primary schedule for managing the Contract.

3.3. The Contractor shall conduct schedule health checks to assure compliance with DE&S standards. The standards applied are consistent with the Defence Contract Management Agency (DCMA) Fourteen Point Schedule Health Checks, or as otherwise agreed with the Authority.

3.4. The Contractor shall ensure that the CMS fully incorporates all of the defined scope within the CWBS and will be used as the basis of the Performance Measurement Baseline (PMB).

3.5. Rolling wave planning may be used when establishing the baseline schedule to set the detail at an appropriate level in relation to the understanding of the work to be delivered. Typically, the planning horizon between detailed work packages and outline planning packages would be approximately 18 months or at natural project break points, as agreed with the Authority. Where planning packages are used they are expected to have a defined scope, duration and associated budget.

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3.6. The Contractor shall ensure that the CMS is created in a format that allows an Export file compatible with scheduling software as defined by the Authority, e.g. Primavera P6 .xer and .xml file. The output of any alternative software systems must be compatible with being translated to an alternative file format as agreed by the Authority.

3.7. The Performance Measurement Baseline (PMB) must be under configuration control with any approved changes in accord with the standards defined in Annex B EVM Requirements. The PMB change log shall describe the changes to time and budget to Control Account level on the change request.

3.8. The contractor shall preserve a record of historical Budgeted Cost of Work Scheduled and not implement retroactive changes, including but not limited to re-baselining the Performance Measurement Baseline, unless approved by the Authority.

3.9. The Contractor may amend the agreed CMS, without first obtaining the Authority's Approval under clause 3.7 as long as:

- a. payments under the Contract are not affected;
- b. the Baseline dates for Contract Milestones are not affected;
- c. the ability of the Authority to meet its obligations under the Contract is not affected; and,
- d. it does not impact any Authority dependent activities.

3.10. Authority approval of an amendment to the Approved CMS under clause 3.9 shall be obtained when the next update to the CMS is required, as specified in the DID.

3.11. Authority Approval of an amendment to the approved CMS shall not affect either party's responsibilities or obligations under Earned Value Management System (EVMS).

3.12. If the Contractor becomes aware that the baseline is no longer achievable, they shall notify the Authority within seven calendar days.

4. RISK AND OPPORTUNITY MANAGEMENT

4.1. In accordance with DID-PC-005, the Contractor shall maintain a Risk and Opportunity Management Plan (ROMP) that enables a risk process to be jointly managed with the Authority.

4.2. Prior to establishing the Performance Measurement Baseline an assessment will be made of the associated risk, allowing an appropriate Management Reserve to be established.

4.3. The Contractor shall make it possible for the Authority to engage with the regular risk update process via regular risk reviews and formal risk reporting.

5. INTEGRATED BASELINE REVIEW (IBR)

5.1. The Contractor shall, at Contract Award, be suitably prepared for and participate in a formal on-site IBR by the Authority Representative, in accordance with the Nominated EV Standard to enable an assessment of and acceptance of the Performance Measurement Baseline (PMB).

5.2. The Authority may, at its discretion, conduct subsequent IBRs to reassess and accept a revised PMB.

5.3. Subsequent to the IBR further EVMS demonstration and on-going surveillance reviews shall be completed to ensure the continued validity of the EVMS, as outlined in Annex F.

6. EARNED VALUE PERFORMANCE REPORTING

6.1. The Contractor shall produce Contract Performance Reports (CPR) in accordance with DID-PC-004 with data at the following minimum levels:

- a. CPR Format 1 to the appropriate material level agreed with the Authority to represent a Managerially Significant breakdown of the work, in accordance with DID-PC-004, unless otherwise specified in the Approved EVMP.
- b. CPR Format 3 by each uniquely identified Baseline Change Request, in accordance with DID-PC-004, unless otherwise specified in the Approved EVMP.
- c. CPR Format 5 at the appropriate material level agreed with the Authority to represent a Managerially Significant breakdown of the work, in accordance with DID-PC-004 unless otherwise specified in the approved EVMP. An analysis report is required each agreed monthly reporting period where the cost and schedule variance, current or cumulative to date, or the variance at completion of any reporting element:
 - i. Adversely affects any activity that lies on the critical path and Sub-Critical Path;
 - ii. Adversely affects the top 10 risk elements as notified from time to time to the Contractor by the Authority Representative; or
 - iii. Either exceeds the variance thresholds in Table 1 or alternate variance thresholds as defined in the approved EVMP.

Project % Complete As a % of BAC	Cumulative Cost Variance	Cumulative Schedule Variance	Variance at Completion
0 - 25%	+/-15% and £50K	+/-10% and £50K	+/-10%
26 – 75%	+/-10% and £50K	+/-7% and £50K	
76 – 100%	+/-7% and £50K	+/-4% and £50K	

Table 1 – Cost and Schedule Variance Thresholds (For this Table: $SV\%=(SV \times 100)/BCWS$: or $(SV \times 100)/PV$ $CV\%=(CV \times 100)/BCWP$: or $(CV \times 100)/EV$)

- d. CPR Format 6 – a set of reports or files which shall be agreed with the authority from the contractor scheduling system.
- e. CPR Format 7 to be provided at the appropriate material level agreed with the Authority and including BCWS, ACWP, BCWP and ETC time phased by month and reported in Great British Pounds Sterling.
- f. CPR Format 8 at the appropriate material level agreed with the Authority, provide both the current year and the ten-year forecast of the ETC and sum them with the cumulative ACWP to yield a time-phased ETC and the EAC. A version of the Format 8 based on the current forecast of BCWS from current time through completion is also needed if not provided as a Format 6 schedule report.

6.2. The Contractor shall conduct workshops with the Authority as part of each mandated EVMS review or other project reviews, to agree on the CPR reporting levels, time increments and the reporting threshold for CPR formats over the next project phase. The agreed reporting levels, time

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increments and reporting thresholds, including to an initial standard agreed with the Authority, shall be documented by the Contractor in an update to the EVMP.

6.3. The Contractor shall provide electronic copies of all CPRs and full open-book access to data (including but not limited to source data for planned value, earned value, actual cost and schedule performance) so that the Authority can validate the data.

6.4. The Contractor shall provide or make available Suitably Qualified and Experienced Personnel (SQEP) to provide in-depth analysis of EVM data presented, typically to include the Project Control Manager (PCM), Control Account Manager (CAM), and senior Project Controls staff or alternatives to be agreed in advance with the Authority.

7. CHANGE CONTROL

7.1. The Contractor shall identify a process that ensures the PMB is not changed without appropriate analysis, communication, and approval. The change control process shall:

- a. Document, track and communicate changes to the Performance Measurement Baseline
- b. Reconcile current budgets to prior budgets in terms of changes to the authorised work in the detail needed by management for effective control
- c. Control retroactive changes to records pertaining to work performed that would change previously reported amounts for actual costs, earned value, or budgets. Adjustments should be made only for correction of errors, routine accounting adjustments, effects of customer or management directed changes, or to improve the baseline integrity and accuracy of performance measurement data
- d. Prevent revisions to the program budget except for authorised changes

7.2. The Authority shall review and the contractor shall ensure that the change control process and procedures meet the needs of the Authority, in accord with DID-PC-006.

8. SUBCONTRACTOR MANAGEMENT – PROJECT CONTROL

8.1. The Contractor shall ensure that all Major Subcontractors shall manage their contracts in accordance with the Contractors own approved project management and earned value management plans.

8.2. Contract elements delivered by Major Subcontractor(s) must be listed in the Contractor PMP, EVMP or Contractor Management Plan (as appropriate) with the value and scope of the subcontract. Major Subcontractors must have separate Control Accounts within the Contractors PMB.

8.3. Unless otherwise agreed by the Authority, the minimum requirement for an EVMS (including EVMP, CWBS, CMS and CPRs and Subcontractor PMB shall be flowed down to the appropriate material level agreed with the Authority to represent a Managerially Significant breakdown of the work where the Subcontract or group of Subcontracts requires effort:

- a. in excess of 12 months and the Subcontract price exceeds £20m;
- b. represents more than 20% of the contract value;
- c. as deemed appropriate by the contractor; or,
- d. as directed by the Authority. Authority direction will be based on a risk assessment of the scope of work being undertaken in the subcontract.

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9. SUBCONTRACTOR EARNED VALUE MANAGEMENT REQUIREMENTS

9.1. Where EVMS requirements flow down to a Subcontractor, the Subcontractor shall maintain and use, throughout the delivery of the Subcontract, an EVMS compliant with the Nominated EV Standard, Contractor Approved Subcontract EVMP that meets the requirements of this Contract.

9.2. The Contractor shall ensure the Subcontractor's EVMS is compliant during Contractor pre-Contract Readiness Reviews, or at the point of Subcontract Award, with the requirements of this Contract. EVMS Reviews shall be in accordance with the Nominated EV Standard.

9.3. The Contractor shall be responsible for reviewing and accepting the Subcontractor's Performance Measurement Baseline (PMB) and Contract Budget Baseline (CBB) through an Integrated Baseline Review (IBR) conducted in accordance with the Nominated EV Standard.

9.4. The Contractor shall permit Authority Representative(s) to participate in any review associated with the Subcontractor's EVMS, including IBRs, EVMS Demonstration Reviews and System Surveillance activities for the Subcontract, to ensure compliance of the Subcontract EVMS with the requirements of the Contract.

9.5. The Contractor shall give the Authority at least 30 days prior notice in writing of when a Subcontractor Review is to be carried out.

9.6. The Contractor shall make available to the Authority records and source data that supports any EVMS compliance review or Demonstration Review or Surveillance Review of a Subcontractor's EVMS within 30 days of receipt or production.

9.7. The Contractor shall include EVM data from approved Subcontractors within their CPRs, which has the same status as the Contractor's EVM data when preparing CPRs in accordance with DID-PC-004.

9.8. The Contractor for small high-risk subcontract(s), especially where placed on fixed or firm price contract(s), instead of a CPR Format 1 shall mandate the delivery from the subcontractor of a Contract Cost and Schedule Status Report (CSSR) similar to the template provided in Annex G9. These reports will be made available to the Authority aligning to the Authority data requirements.

10. SUBCONTRACTOR MONITORING AND CONTROL WHERE EVM DOES NOT APPLY

10.1. The Contractor shall ensure that the approved Subcontractors monitor progress against their own plans.

10.2. The Contractor shall ensure that the approved Subcontractors implement corrective actions to address any deviations from any plan.

10.3. The Contractor shall ensure that the Subcontractors prepare and deliver Subcontract status reports to the Contractor within the same intervals that the Contractor reports to the Authority.

10.4. The Contractor shall derive and include EVM data from approved Subcontractors, which corresponds to the data being provided by the Contractor's EVM data, when preparing CPRs in accordance with DID-PC-004.

10.5. Upon request, the Contractor shall provide the Authority with a copy of the Subcontractors' supporting data / basis of performance reports.

11. DELIVERABLE DATA FORMATS

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11.1. The Contractor shall ensure that project/programme data can be exchanged using the Authority preferred software tools. These include:

- a. Microsoft Office tools for narrative documents;
- b. Primavera P6 for schedules; or outputs that can be translated to a .xer and .xml file as agreed by the Authority.
- c. Microsoft Excel compatible for numerical reports
- d. Oracle Unifier

11.2. The output of an alternative software system must be compatible with being translated to a .xer and .xml format file or alternative file as agreed by the Authority. The Contractor shall ensure that the CMS is created in a format that allows an export file compatible with scheduling software defined above or as approved by the Authority.

12. RELATIONSHIP TO CONTRACT PERFORMANCE AND APPLICATION FOR PAYMENT

12.1. EVMS reports shall be considered an integral and material component of the contract performance reporting obligations, The supplier shall present the agreed EVMS performance data as part of the Monthly Performance Report.

12.2. Agreed Monthly EVMS performance reports shall be used to assess and agree the monthly fees paid based on the combination of contract performance and the EVMS performance.

ANNEX C1 – EARNED VALUE MANAGEMENT PLAN - DID-PC-001

2. **Title:** EARNED VALUE MANAGEMENT PLAN (EVMP)

3. **Number:** DID-PC-001

4. **Version:** 1.0

5. **Delivery Schedule:** Refer to Annex E.

6. **Applicable Forms:**

7. **Description:** The EVMP documents the Contractor's plans, methodologies and processes for ensuring compliance with the EVMS requirements of the Contract. The EVMP shall include a description of the system structure and data flows, Project Controls System Description (PCSD), plans for implementation and subsequent review and maintenance of the Contractor's EVMS. If the Authority agrees that a standalone plan is not required, the EVM elements may be embedded in the Project Management Plan (PMP).

8. **Use/Relationship:**

8.1. The Authority will use the EVMP to:

- a. Gain confidence that the full scope of work related to the EVMS Contractual requirements, together with associated system implementation risk have been captured and are within the plan for implementation of a compliant EVMS on the Contract;
- b. Review and assess the Contractor's proposed EVMS for:
 - i. compliance with the requirements of the Contract;
 - ii. the EVMS ability to support effective Contract Management; and
 - iii. the EVMS ability to meet the Authority's data requirements.
- c. Understand the design and functionality of the Contractor's EVMS as the basis for conduct of EVMS related reviews;
- d. Gain confidence that the Contractor has appropriate controls procedures in place to maintain a compliant system during the course of the Contract; and,
- e. Form a basis for assessing the ongoing compliance of the EVMS.

8.2. The EVMP is subordinate to the Project Management Plan (PMP) where this document exists.

9. **Applicable Standards, Governance & Related Documentation:**

9.1. The Earned Value Management Plan (EVMP) shall describe an EVMS that is compliant with BS ISO 21508:2018 and the Association for Project Management (APM) *Earned Value Management: APM Guidelines (2008)*, *The Earned Value Management Compass (APM,2010)* and *The Earned Value Management Handbook (APM,2013)* (collectively, the Nominated EV Standard) or an equivalent standard (such as EIA-748) to be agreed by the Authority;

9.2. Integrated Baseline Reviews will be conducted in accordance with Association for Project Management, *A Guide to Conducting Integrated Baseline Reviews (IBR) 2016* or the EIA-748 Standard, or nominated standard as appropriate.

10. **Reference Documents:**

10.1. BS ISO 21508:2018 Earned value management in project and programme management

10.2. Association for Project Management (APM)

- a. Earned Value Management: APM Guidelines (2008);
- b. The Earned Value Management Compass (APM,2010);
- c. The Earned Value Management Handbook (APM,2013) ;
- d. A Guide to Conducting Integrated Baseline Reviews (IBR) (2016)].

10.3. Electronic Industries Alliance 748 (EIA-748) EVMS Standard

10.4. DE&S Guide: EVM – Contract Performance Report Completion Guidance.

10.5. DCMA Fourteen Point Schedule Health Check.

11. Requirements:

11.1. EVMP Overview

- a. The EVMP shall describe the objectives, scope, constraints, and assumptions associated with the Contractor's EVMS activities related to this contract. Any risks identified with the Contractor's EVMS implementation and operation shall be documented in the Risk Register; however, the EVMP shall describe the risk management strategies associated with any EVMS implementation and operation related risks.
- b. Configuration Management to be defined within the context of EV within the EVMP.

11.2. EVM Implementation

- a. The EVMP shall describe the processes and schedule that the Contractor intends to use to implement the EVMS including:
 - i. a description of the areas of non-compliance between the Contractor's current project management system and the EVMS contractual requirements;
 - ii. the corrective actions to be undertaken to rectify the areas of non-compliance, including the timeframes involved;
 - iii. identification of any new or modified procedures, an overview of the scope of the new or modified procedures, and the responsibilities and timeframes for developing and approving these procedures;
 - iv. identification of areas of risk to the proposed EVMS implementation and proposed mitigation strategy;
 - v. a summary of the implementation schedule, with the full implementation schedule being provided as part of the Contractor Master Schedule (CMS);

- vi. a description of the activity to ensure Subcontractor implementation of EV related contract requirements.

11.3. EVMS Description

a. The EVMP shall provide a description of the Contractor's EVMS that demonstrates compliance with the requirements of the contract covering all relevant EV Criteria as defined by the applicable standard. Where Contractor generated processes are referenced copies are to be provided to the Authority. These will include, but not be limited to, processes for Work Authorisation, Scheduling, Risk Management, Change Management, Cost Control, and Accounting processes

11.4. Contractor EVMS Assurance

- a. The EVMP shall describe the Contractor's EVMS quality assurance strategy to ensure that the EVMS remains compliant with the requirements of the Contract, including:
 - i. The criteria to determine that an EVMS Review is required; and,
 - ii. the company roles/personnel involved in the reviews/activities.
- b. Details of any continuous improvement process the company utilises. Results of Contractor Internal EVMS Assurance reviews and processes shall be shared with the Authority.

11.5. EVM Performance Reports

- a. The EVMP shall describe the EVMS performance reporting processes and timescales used by the Contractor. The EVMP shall confirm adherence to the Contract Terms & Conditions by describing the reporting levels, structures and variance thresholds for the provision of CPRs including the standard reporting levels by CWBS elements.
- b. The EVMP shall detail the variance thresholds that, when exceeded, require the provision of CPR Format 5 and at what level of the CWBS.
- c. The EVMP shall describe any variations to the reporting levels and variance thresholds as the Contract progresses or the risk profile change.
- d. The EVMP shall confirm the electronic formats to be used for the provision of EVMS data to the Authority in order to facilitate data transfer and analysis.
- e. The EVMP shall describe the level and methodology to produce trend data.

11.6. Data Integrity Checks

- a. The EVMP shall detail the methodology and frequency of data, schedule and EV health checks.
- b. The EVMP shall define the process through which it will be possible to reconcile the finance data within the system back to the contract value (price).

11.7. EVM Related Reviews

- a. The EVMP shall describe the facilities and support that will be provided to the Authority in support of IBRs. This should include but is not limited to:

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- i. The provision of supporting documentation to the Authority review team no later than 30 working days prior to a review;
- ii. All documentation shall be delivered electronically to the Authority;
- iii. Documentation delivered in support of a review shall be the final version that will be presented at the review unless otherwise agreed by the Authority;
- iv. Selected Control Account Managers (CAM) and Project Management & Control staff shall be available to support pre-planned interviews; and,
- v. Access provisions are to be made for the review of documentation in electronic formats such as EVMS process and procedures, schedules, CPR CAM documentation and any related data requested to support the review.

11.8. EVM Flow Down to Major Subcontractors

- a. Unless otherwise agreed by the Authority, the requirement for an EVMS (including EVMP, CWBS, CMS and CPRs and Subcontractor PMB shall be flowed down to the appropriate material level agreed with the Authority to represent a Managerially Significant breakdown of the work where the Subcontract or group of Subcontracts requires effort:
 - i. in excess of 12 months and the Subcontract price exceeds £20m;
 - ii. represents more than 20% of the contract value; or
 - iii. as directed by the Authority. Authority direction will be based on a risk assessment of the scope of work being undertaken in the subcontract.
- b. The EVMP will detail a list of all significant Subcontracts (where the subcontractor portion of the overall contract cost is => 20% or £20M) incorporating the following information:
 - i. Subcontract title and description;
 - ii. Subcontract type;
 - iii. Subcontract value and Duration;
- c. Subcontractor EVMS experience including standards that applied and any formal recognition of the applied EVMS.
- d. The EVMS Description of Flow Down arrangements to each Subcontract shall include the following information:
 - i. Contractors Plans for assessing EV maturity to meet the Authority's EV Standards and Contract Requirements, including plans for Subcontractor Reviews and Surveillance. Note the Authority shall be given the opportunity to participate in these reviews in accordance with the Contract terms.
 - ii. Plans for subcontract report data incorporation against WBS (CPR Format 1), Baseline Change (CPR Format 3), Variance Analysis (CPR Format 5), Schedule Reports (CPR Format 6).
 - iii. Proposed timing of Subcontract data incorporation

12. Preparation Instructions:

12.1. The data item shall comply with the general format, content and preparation instructions contained in this DID.

12.2. Where referenced information is included, it shall refer to the lower-level EVMS procedures, these referenced procedures and any related instructions shall be delivered as attachments to the EVMP.

12.3. The content requirements of this data item should be considered as the minimum standard that is required. It is not intended to constrain or otherwise restrict the inclusion of any content required to effectively develop the plan or implement the EVMS requirements of the Contract.

ANNEX C2 – CONTRACT WORK BREAKDOWN STRUCTURE (CWBS) AND DICTIONARY – DID-PC-002

1. **Title:** CONTRACT WORK BREAKDOWN STRUCTURE (CWBS) and Dictionary
2. **Number:** DID-PC-002
3. **Version:** 1.0
4. **Delivery Schedule:** Refer to Annex E.
5. **Applicable Forms:** N/A
6. **Description:** The Contract Work Breakdown Structure (CWBS) is the Contractor's extension of the Authority Work Breakdown Structure (WBS) and forms the framework for Contract planning, management and status reporting and for estimating costs, schedule and technical achievements at completion.

7. Use/Relationship:

7.1. This DID summarises the format and content for the CWBS Structure and Dictionary and provides preparation instructions to support the data and frequency requirements specified in the contract. This DID applies to all contracts that require a CWBS.

7.2. The purpose and intent of the CWBS, and associated Dictionary, is to document and understand the Contractor's product oriented deliverable scope and planned approach to performing the contract.

7.3. CWBS at the nominated reporting level will be used in the CPR Reports.

7.4. The CWBS is related to, and shall be consistent with the Contractor's Earned Value Management Plan (EVMP) (DID-PC- 001) and the Contractor Master Schedule (CMS) DID-PC-003.

8. Applicable Standards, Governance & Relevant Documentation

8.1. As per example provided in tender submission.

9. Requirements

9.1. The data item shall comply with the general format, content and preparation instructions contained in this DID.

- a. Configuration control of the CWBS and its Dictionary must be maintained throughout the Contract. Changes to the CWBS or its Dictionary affecting the Authority WBS & WBS Dictionary require the prior approval of the Authority.
- b. All contract scope must be included in the CWBS Dictionary.
- c. The CWBS shall be developed in as much detail as required to define the work effort into manageable parts that successfully achieve the end objective of the Contract.
- d. The CWBS Dictionary shall define in detail the scope of work included against each CWBS element. It shall correlate all Contract deliverables (CLINs, CDRLs and accomplishment of Mandated Reviews) against the lowest level of CWBS elements to ensure responsibility for delivery of all items is assigned and planned appropriately.
- e. The CWBS shall be consistent with the DPS where appropriate.
- f. The CWBS will also include additional data as described below.

9.2. Contract Work Breakdown Structure

- a. The CWBS structure is a hierarchical family tree arrangement of WBS elements, defined by:
 - i. Specific interface points to the Authority's WBS;
 - ii. Incorporating any contractually required high-level WBS structure; and
 - iii. Lower level elements of the Contractor's WBS necessary to provide an appropriate framework throughout the project for product and service definition and control. Including allowing invoicing alignment to CLINs to provide the Authority with P3M system monthly reconciliation.
- b. The CWBS Structure shall comprise of:
 - i. CWBS/WBS Code. The preferred convention is to use a numeric structure starting with the Authority WBS Code for the relevant CWBS element.
 - ii. CWBS Element Level. The level of the CWBS element.
 - iii. CWBS Element Name. The title of the CWBS element using the specific name or nomenclature. The CWBS element names used in the CWBS Structure must be identical for the same element in the CWBS Dictionary.

9.3. Contract Work Breakdown Structure Dictionary

- a. The CWBS Dictionary includes narrative descriptions of each WBS element scope and reference data to support tracing to other documents. The following features should be included (where applicable to each level):
 - i. CWBS/WBS Code. The same codes used in the structure.
 - ii. CWBS Element Level. The level of the CWBS element. It is desirable to note where the WBS element represents a Contractual Reporting Level, a Control Account, or, where relevant, a Work Package.
 - iii. CWBS Element Name. Enter the same element names used in the CWBS structure.
 - iv. CWBS Approved Changes. List of changes approved in the change control process.
 - v. CWBS Element Status. Status of Scoping Statement (Draft/Approved).
 - vi. Scoping Statement version number & Revision date.
- b. CWBS Scope Definition. Enter a complete description of the work content of each CWBS element. It is important that the Contractor specifies all hardware and software equipment that are associated with each WBS element. The work content definition must include a short description of the process used to design, produce or sustain the end item or service. The description must address the types of activities (e.g., design, production, analysis, or management) included within the CWBS element. These descriptions must include information on whether the reporting Contractor or a Subcontractor is performing the work being described.

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- c. CWBS Dictionaries must reflect only the work that is being completed within the contract for which the document is being submitted.
- i. If work is not expected to occur for a given CWBS element, the CWBS Dictionary definition must indicate that this element is not applicable.
 - ii. If work at some elements is being performed by a Supplier/Subcontractor, the Dictionary must state this. Similarly, if the CWBS is for a subcontract/supplier, the work defined for each element must be specific to the Subcontractor/supplier's scope of effort, and must not include the prime Contractor's work.
 - iii. If there are Government Furnished Assets (GFA) items being integrated into the end item, it is not expected that a detailed description of those items is provided, however, all GFA items being integrated into the system as part of the contract must be labelled as such in the CWBS Dictionary under the appropriate elements.
- d. Typical features of the Scope Definition include:
- i. **PURPOSE:** One or two sentences summarising why the scope exists.
 - ii. **BOUNDARIES:** Explicit statements of what is in or out of scope to describe the boundaries. Consider including things by exception (obvious boundaries don't need stating whereas more subtle boundaries will require more description). To add clarity it is desirable to indicate where excluded scope is captured (e.g. alternate WBS/alternate Contract/ Customer).
 - iii. **STRATEGY:** How is the scope to be delivered? Is it Prime Contractor Scope or is it to be subcontracted? Is the strategy summarised in policies or processes?
 - iv. **KEY ASSUMPTIONS and EXCLUSIONS:** Any top level assumptions and exclusions that have been made in the definition of this scope, identifying clear interface points in delivery, and subsequent planning. For example: 'It is assumed that System X's design will reuse the power-plant from System Y'. If this assumption were to change, it would likely have scope, time and cost implications and so the baseline would require a change proposal.
 - v. **ACCEPTANCE CRITERIA:** How will you know when the scope is complete (where appropriate, generally when there are deliverables/products).
 - vi. **DEPENDENCIES:** Identify interdependencies with other WBS elements. If there is a particularly important dependency to another area of this project's WBS then consider including it. It is desirable to note the delivering WBS element. Interdependencies with of from the Authority should be identified and captured in accordance with the above instructions.
 - vii. **PRODUCTS/OUTPUTS:** Insert the key deliverables particularly those that form dependencies to other WBS element (it is desirable to note the receiving WBS element) or contract deliverables or review requirements. Scope without deliverables is acceptable, but this should not be the norm.
 - viii. Cross reference to the conditions of contract and Statement of Work (SOW) that informed the scope definition, or other traceability reference (a reference matrix for SOW clauses to the WBS may be desirable), or the applicable standards or references that determine the scope.

9.4. Subcontracted Activities

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a. Subcontracted activities shall be identified in one or more separate WBS which shall be integrated into and identifiable within the CWBS. In the circumstance that one Subcontractor is supplying products to multiple CWBS elements or work packages:

- i. The WBS shall maintain a product structure reflecting the specification tree;
- ii. The responsibility for specifying each product shall remain with the design engineer for the WBS element to which the product belongs;
- iii. The cost of each product shall remain with the WBS element to which it belongs;
and
- iv. A commercially clean interface can be maintained with the Subcontractor by creating a Subcontract Management WBS element for each such Subcontract.

10. Preparation Instructions:

N/A

11. Data Format & Delivery Instructions:

11.1. Routine reporting shall be at the appropriate level as agreed with the Authority to represent a Managerially Significant breakdown of the work for all Contractors unless otherwise defined in the Contract terms or EVMP.

11.2. More detailed reporting of the CWBS shall be required for those lower-level elements that address high-risk, high-value, or high-technical-interest areas of a Project. Consult with the Authority for guidance as needed.

11.3. The CWBS will be prepared and submitted in electronic format that is either Microsoft Word or Microsoft Excel compatible.

Annex C3 – Contractor Master Schedule (CMS) – DID-PC-003

1. **Title:** CONTRACTOR MASTER SCHEDULE (CMS)
2. **Number:** DID-PC-003
3. **Version:** 1.0
4. **Delivery Schedule:** Refer to Annex E.
5. **Applicable Forms:** N/A
6. **Description:** The CMS describes the contracted activities, milestones and decision points to enable the objectives and deliverables of the contract to be satisfied. The CMS will define the project schedule status through a comparison of the current schedule status and appropriate accepted baseline schedule.
7. **Use/Relationship:**
 - 7.1. The Authority will use the CMS to:
 - a. Provide visibility into the Contractor’s planning baseline and current forecast schedules;
 - b. Understand and evaluate the Contractors approach to meeting the requirements of the contract;
 - c. Monitor Contractor progress in meeting the requirements of the contract;
 - d. As a source of input when completing Authority planning activities; and
 - e. Understand the required touch points between the Contractor’s and the Authority’s work.
 - 7.2. The CMS relates to the following documents required within the contract:
 - a. Earned Value Management Plan (EVMP);
 - b. Project Management Plan (PMP); and
 - c. Contract Work Breakdown Structure (CWBS).
 - 7.3. The CMS shall be traceable and integrated with:
 - a. The CWBS (DID-PC-002) – all activities and milestones on the schedule will be coded to the lowest level of the CWBS that represent the scope to which the activity pertains;
 - b. Contract Milestones – shall be clearly identifiable within the logic linked activity network;
 - c. The Contractor’s EVMS – the integration of scope, schedule and budget will be undertaken around the CWBS, which will form the primary structure for EV Performance reporting; and,
 - d. Each submission of the CMS shall be consistent with the associated Contract Performance Report (CPR) delivered within this Contract.
8. **Applicable Standards, Governance & Related Documentation:**
 - 8.1. Nominated EV Standard - unless otherwise stated in the Contract Terms and Conditions.
 - 8.2. DE&S Scheduling guidance to comply with DE&S standard schedule quality health checks - unless otherwise stated in the Contract terms.

9. Requirements:

9.1. The CMS shall be capable of comparing planned and current forecast data and being displayed in a variety of formats to include;

- a. A Gantt chart
- b. A listing of all tasks, together with planned (baseline and current progress including forecast) and actual start and finish dates
- c. A listing of project milestones (to include all contract milestones) together with original, rescheduled, forecast and actual completion dates
- d. All activity durations within the schedule shall be in days unless otherwise agreed by the Authority.
- e. All resource units within the schedule shall be in hours and costs shall be in Great British Pounds Sterling unless otherwise agreed by the Authority.

9.2. The CMS shall be capable of being displayed at the following levels:

- a. Summary Level – The Summary level of the CMS shall provide a graphical display of Contract activities, key events, and milestones at managerial significant level of the WBS.
- b. Intermediate Level – The Intermediate Level of the CMS shall provide a graphical display of Contract activities, key events, and milestones at the control account level of the WBS. A CMS generated at the Intermediate Level shall be able to be rolled up to, and shall provide visibility of, the Summary Level.
- c. Detailed Level – The Detailed Level of the CMS shall provide a graphical display of Contract activities, key events, and milestones at the work-package level of the WBS. A CMS generated at the Detailed Level shall be able to be rolled up to, and shall provide visibility of and access to, both the Intermediate Level and the Summary Level.

9.3. The CMS shall identify the following aspects;

- a. Activities and associated duration
- b. Milestones, including Contract Milestones, Payment Milestones and significant project events
- c. The relationships and dependencies of activities and associated milestones that are to be completed within the scope of this contract.
- d. Earliest and latest start and finish dates for all activities and associated milestones
- e. Total float and free float of the overall schedule
- f. Critical Path, list of activities on the critical path and those that are near the critical path from start through to completion of the contract.
- g. Resource Profiles, depicting manpower, materials and equipment.
- h. The baseline budget for all activities aggregating to the total Performance Measurement Baseline (PMB), allowing a roll-up to work package and control account levels.

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- i. Subcontracting schedules to include all major sub-contract activities and outputs at the appropriate level of detail, reflecting complexity and risk.
- j. Required Government Furnished Items (GFX) to include Government Furnished Equipment (GFE), Government Furnished Assets (GFA), Government Furnished Information (GFI), Government Furnished Structures (GFS) if applicable, together with 'required by' dates and 'end of loan dates'.
- k. All non-working time such as holidays and known disruptions

9.4. A Basis of Schedule (BOS) shall be produced and maintained under configuration control. The BOS should include the following;

- a. How the CMS has been produced;
- a. Detail methodologies used to establish estimated durations;
- c. Key assumptions and exclusions;
- b. Details of the standard working time and calendar that has been included;
- e. Risks, including risk analysis techniques used, and any mitigations embedded in the schedule;
- c. f. The standards used to establish duration lengths and use of constraints, ensuring no open ended activities and compliance with DE&S Schedule guidance;
- g. The basis of estimate and associated assumptions for the cost and duration of baseline activities, covering both labour and materials. This may take the form of a master data and assumptions list; and,
- h. The Configuration and assurance procedures that will be used to manage and ensure the ongoing integrity of the CMS.

10. **CMS Reports:**

10.1. The following reports, which collectively comprise CPR Format 6, are required:

- a. Baseline Reports (Performance Measurement Baseline)
- b. Reports that describe and reflect the initial baseline
- c. Subsequent approved changes that caused revision of the baseline.
- d. A Schedule narrative shall be provided with the original baseline and any subsequent baseline revisions outlining how the schedule has been constructed, the key assumptions together with the basis of estimate and logic of milestone selection and a description of the critical and near critical paths.
- e. A set of Authority agreed schedule health metrics
- f. Schedule Risk Analysis shall be conducted on the Contractor schedule, at least quarterly and on the Authority's request, a Schedule Risk Analysis Report and electronic copies of the SRA schedule and the Contractor SRA models shall be provided to the Authority.

10.2. Progress Reports (Stated Current Working Schedule)

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- a. Electronic copy of the progressed schedule each reporting period that has formed the basis of the CPR for that period
- b. A Schedule narrative shall be provided with the progressed schedule outlining, the key assumptions underlying the progress and forecast together with the basis of estimate for key forecast activities where this is significantly different to the baseline, the impact and rationale of any significant logic changes and the resulting change to the schedule risk implications, and the resulting impact on key (including Contract) milestone and deliverables, if any. Analysis shall include a narrative description of the current Critical and near Path Analyses.
- c. Milestone Report. Agreed milestones to be shown with the baseline and current forecast dates. Report to provide RAG status and indication of float. Note that there shall be clear definitions and acceptance criteria for reporting milestones.
- d. Critical Path, Sub-Critical Path and Float Erosion Analysis Reports. Critical path analysis against the baseline and current forecast dates within the CMS. Summary / variance commentary of movements / changes to the critical path to be reported.
- e. Interdependencies (Give/Get Milestones) Table. To indicate key interdependencies between supply chain, MoD and contractor schedules. Report should indicate movements in the period relating to both the baseline schedules and the current forecast version of these schedules. Variance commentary to be provided.
- f. A set of agreed schedule health metrics for the submitted progressed schedule.
- g. Schedule Risk Analysis shall be conducted on the Contractor schedule with a Schedule Analysis Report and copies of the SRA schedule being provided to the Authority. SRA analysis will be provided together with associated confidence figures for the deterministic baseline considering both uncertainty and risk (against a submitted risk register) and uncertainty.

11. Preparation Instructions:

- 11.1. The data item shall comply with the general format, content and preparation instructions contained in this DID.
- 11.2. The CMS shall be the primary schedule used for the contract; all other schedules produced in support of this are considered as subordinate to this primary schedule.

12. Data Format & Delivery Instructions:

- 12.1. Acceptable file formats are those that are compatible with the Authority IT System.
- 12.2. CMS deliveries shall include the original baseline schedule and Basis of Schedule, all agreed baseline amendments, the current working schedule together with forecast completion dates and durations.
- 12.3. Contractor schedules updated to reflect current progress shall be provided to the Authority on a monthly basis to the end of the calendar month unless agreed otherwise. The monthly reports shall be provided within 7 working days of the end of the reporting period unless otherwise specified in the Conditions of Contract.
- 12.4. A Control Level schedule hard copy as well as electronic submission in the native file format (P6, or alternate package supported by Terms & Conditions of Contract).
- 12.5. Each submission of the CMS shall be consistent with the associated Contract Performance Report (CPR).

Annex C4 –Contract Performance Report (CPR) – DID-PC-004

1. **Title:** CONTRACT PERFORMANCE REPORTS (CPR)
2. **Number:** DID-PC-004
3. **Version:** 1.0
4. **Delivery Schedule:** Refer to Annex E.
5. **Applicable Forms:**
6. **Description:** The CPRs are prepared by the Contractor to provide the Authority with earned value performance data designed to report multiple aspects of contract performance and future planning activity. Examples of Format 1-5 and 7 reports have been provided.
 - 6.1. Format 1 – Measures cost and schedule performance by Work Breakdown Structure (WBS) elements at the appropriate material level agreed with the Authority to represent a Managerially Significant breakdown of the work.
 - 6.1. Format 2 – Providing a similar level of measurement by agreed organisational or functional resource categories.
 - 6.2. Format 3 – Provides the Performance Measurement Baseline (PMB), and records changes to the PMB implemented during the reporting period. The PMB is represented as a time phased budget baseline plan against which performance is measured.
 - 6.3. Format 4 – Manpower loading forecasts correlating with resource estimate predictions, supported by the forecast schedule.
 - 6.4. Format 5 – Narrative report used to explain significant cost and schedule variances together with other related Contractor problems. Significant variances are those that exceed the contracted thresholds for these variances.
 - 6.5. Format 6 – Provided by reports from the Contractor Master Schedule.
 - 6.6. Format 7 – Full EVMS data export.
 - 6.7. Format 8 – Time-phased Estimate at Completion.
7. **Use/Relationship:**
 - 7.1. The Authority will use the CPRs to:
 - a. Assess and evaluate contract performance and as the basis for contract performance meetings and reviews;
 - b. Assess the impact of existing and potential problems encountered resulting in significant cost and schedule variances and as the basis for discussing potential mitigation actions.
 - c. Provide accurate, timely status information to aid Authority view of Contractor performance and as the basis for summarisation of performance across the Authority.
 - d. CPRs directly relate to the requirements specified in the Earned Value Management Plan (EVMP) and reconcile to progress incorporated in any related status reports that may be required within the scope of the Project Management Plan (PMP) where required.
8. **Applicable Standards, Governance & Related Documentation:**
 - 8.1. Nominated EV Standard unless otherwise stated in the Contract terms.

9. Requirements:

9.1. Data provided within the CPRs shall relate to the authorised contract work undertaken in support of this contract, demonstrating compliance to EV requirements.

9.2. Data provided shall include both priced and unpriced effort.

9.3. The level of detail required for each report shall be as agreed by the Authority. **NOTE:** Lower level detail may be required on an ad hoc basis in areas where a problem has occurred until such time that the Authority is content to return to the higher level.

10. Preparation Instructions:

10.1. The content requirements of this data item should be considered as a minimum standard that is required. It is not intended to constrain or otherwise restrict the inclusion of any content required to effectively develop the plan or implement the EVMS requirements of the Contract.

10.2. Definitions for each cell and guidance on completing the CPR's can be found in DE&S document *EVM – Contract Performance Report Completion Guidance*.

11. Data Format & Delivery Instructions:

11.1. The data item shall comply with the general format, content and preparation instructions contained in this DID.

11.2. CPRs are to be delivered in both static and electronic format to the Authority and in accordance with the CDRL timescales. Electronic format shall permit drill down to the lowest level where cost performance is captured.

11.3. Reports shall be delivered on a monthly basis.

11.4. Ensure that reports apply agreed variance thresholds to ensure completeness of CPR format 5 narratives.

11.5. Agree organisational or functional categories to be reported in format 2 and 4.

11.6. Agree time increments to be used for baseline, resource, historical & forecast projections required within format 3, 4, 6, 7 and 8.

Annex C5 – Risk Management – DID-PC-005

1. **Title: Risk Management**
2. **Number: DID-PC-005**
3. **Version: Draft**
4. **Delivery Schedule: TBC.**
5. **Applicable Forms:**
6. **Description:** The Contractor shall maintain a Risk and Opportunity Management Plan (ROMP) that enables a formal risk process to be managed in conjunction with the Authority. The Contractor shall make it possible for the Authority to engage with the regular risk update process via regular risk reviews and formal risk reporting.

7. Use/Relationship:

- 7.1. The Authority will use the risk management process to
 - a. Assess and evaluate potential events that might have either a positive or negative impact on the delivery of the baseline scope of work;
 - b. Enable joint risk management effort between the Authority and the Contractor.

8. Applicable Standards, Governance & Relevant Documentation:

- 8.1. PCF-COR-INS-0022. Develop and manage risk instruction.
- 8.2. APM Project Risk Analysis and Management guide (PRAM).
- 8.3. APM Interfacing Risk and Earned Value guide.
- 8.4. APM Prioritising Project Risks guide.

9. Requirements:

- 9.1. The ROMP defines roles, responsibilities, methodology (process), tools and techniques specific to the project and how threats and opportunities are to be managed through life as part of the overall project management strategy.
- 9.2. In the ROMP the contractor must take due cognisance of the scope of the project (performance, cost and time) to establish a mutually agreed risk appetite (agreed tolerances) that enables the contractor to develop their scoring criteria for cost time and performance.
- 9.3. The process shall:
 - a. Establish ownership for significant project risks;
 - b. Reduce overall project risk exposure;
 - c. Ensure all scope is considered to give a balanced view of risk;
 - d. Deliver information in support of the overall project decision making and governance processes;
 - e. Enable quantitative analysis to support forecasts of project cost and schedule out-turn.

10. Formal Reports:

- 10.1. In support of the risk management process the following reports are required:

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- a. Risk register. Full risk register for contracted scope, defining risk (case, event, consequence), owner, proximity, current and target impact (probability and cost/schedule/performance impact) and associated management responses. The register shall cover both risks (threats) and opportunities.
- b. Schedule Risks Analysis (SRA). Identification of which risks were used in the analysis, which points of the Work Breakdown Structure / schedule they were applied to (Risk Network), Tornado Chart and sensitivity analysis. The schedule network used for SRA will be representative of the current progressed schedule, with the basis of the uncertainty applied explained.
- c. Risk and opportunity change report. ARM Standard Report - Risk & Opportunities Change Report. Report of risks that have been escalated to higher level for action / information.
- d. Risk profile. Risk exposure profiled over duration of contract
- e. Risk / opportunity pre & post mitigation response. ARM Waterfall charts highlighting reduction in risk as a result of mitigation actions.
- f. Risk & Opportunities Process Health metrics report. Information reported from last 30 days and includes ; Total number of risks, risks added, closed, updated, review planned, review overdue, scoring updated - increased - decreased, risk escalated / de-escalated, plan added - updated, responses added, response completed before due date, response completed after due date, response completed before trigger date, response completed after trigger date, responses updated.

11. Preparation Instructions:

11.1. The content requirements of this data item should be considered as a minimum standard that is required.

12. Data Format & Delivery Instructions:

12.1. The data item shall comply with the general format, content and preparation instructions contained in this DID.

12.2. Documents are to be delivered in both static and electronic format to the Authority and in accordance with the CDRL timescales.

12.3. Reports shall be delivered on a monthly basis.

Annex C6 – Baseline Change Control – DID-PC-006

1. Title: Baseline Change Control

2. Number: DID-PC-006

3. Version: Draft

4. Delivery Schedule: TBC.

5. Applicable Forms:

6. Description: The change control process describes how the baseline will be maintained under configuration control, including defining how revisions will be analysed, communicated and approved (in conjunction with the Authority when appropriate).

7. Use/Relationship:

7.1. The Authority will use the change management process to:

- a. Assess and approve potential changes to the baseline where they break defined thresholds as agreed with the authority;
- b. Assess and understand potential impact to the funding profile and key dates as agreed with the MOD Front Line Command via the CASP;
- c. Understand the status of changes and as such the basis of the performance measurement baseline;
- d. Enable the Authority to obtain visibility of specific change request documentation where it is requested.

8. Applicable Standards, Governance & Relevant Documentation:

8.1. PCF-COR-INS-0033. Baseline change management instruction.

8.2. DEFCON 620: Contract change control procedure.

8.3. DEFCON 503: Formal amendments to contract.

8.4. APM Planning, Scheduling, Monitoring and Control (PSMC) guide.

8.5. APM Earned Value Management Handbook

8.6. Electronic Industries Alliance 748 (EIA-748) EVMS Standard

9. Requirements:

9.1. The change control process shall:

- a. Document, track and communicate to stakeholders changes to the Performance Measurement Baseline;
- b. Ensure that the full impact of any change is articulated, including: scope, schedule and budget;
- c. Ensure that all changes are assessed and endorsed by the right group of stakeholders;
- d. Reconcile current budgets to prior budgets in terms of changes to the authorised work in the detail needed by management for effective control;

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- e. Control retroactive changes to records pertaining to work performed that would change previously reported amounts for actual costs, earned value, or budgets. Adjustments should be made only for correction of errors, routine accounting adjustments, effects of customer or management directed changes, or to improve the baseline integrity and accuracy of performance measurement data;
- f. Allow a forward view of potential changes;
- g. Prevent revisions to the budget except for authorised changes
- h. Be in accordance with best practice as defined by the standards referenced above (i.e. not be used to cover poor performance).

9.2. The Contractor's Change Control Process is required to accept and control:

- a. Internal changes that do not impact the contract – can often be processed without need for Authority approval, but specialist requirements, e.g., safety, may result in a requirement for Authority assessment and endorsement;
- b. Internally raised changes that impact the contract – will always require formal approval from the Authority (DEFCON 620). Changes that impact the contract include any that has an impact on contractually agreed scope, milestones, or the funding split across financial years;
- c. Externally directed changes – raised by the Authority and formally submitted to the Contractor in accordance with DEFCON 503. This DEFCON also requires that the Contractor submit their response back to the Authority in a set format and timescales.

9.3. All changes are required to follow the agreed formal process, noting that changes that impact contract must also follow the associated commercial processes before being contractually agreed.

10. Formal Reports:

10.1. In support of the change management process the following reports are required:

- a. Contract Baseline Change Request Log. Baseline Change Requests (BCR), impact statements and approval status. The log shall cover all identified changes, including potential and approved changes. Access shall be provided to individual BCRs as required.
- b. Contingency drawdown reports. Indicates contractor forecast contingency burn rate (i.e. Risk Drawdown, uncertainty or associated BCR) for both cost and schedule
 - i. Note: It is expected that CPR3 will give visibility of all changes approved and implemented in month.

11. Preparation Instructions:

11.1. The content requirements of this data item should be considered as a minimum standard that is required.

11.2. The agreed change thresholds shall be defined within the EVMP.

12. Data Format & Delivery Instructions:

12.1. The data item shall comply with the general format, content and preparation instructions contained in this DID.

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12.2. Documents are to be delivered in both static and electronic format (excel, XER or other format agreed with the Authority) to the Authority and in accordance with the CDRL timescales.

12.3. Reports shall be delivered on a monthly basis.

Annex C7 – Cost Collection Reports – DID-PC-007

1. **Title: Cost Collection Reports**
2. **Number: DID-PC-007**
3. **Version: Draft**
4. **Delivery Schedule: TBC**
5. **Applicable Forms:**
6. **Description:** The majority of cost information will be provided via the EVMS as part of the normal reporting against the system (see DID-PC-001 and DID-PC-004). The intent of the cost collection reports is to supplement this information where there is an additional business need for the Authority.
7. **Use/Relationship:**
 - 7.1. The Authority will use the cost data provided to support its financial reporting obligations.
8. **Applicable Standards, Governance & Relevant Documentation:**
 - 8.1. DEFCON 647 - Financial Management Information
9. **Requirements:**
 - 9.1. In support of the financial management process the following reports are required:
 - a. Transaction Report. List of the transactions (data) to support an invoice.
 - b. In-Year Cash Forecast. The Contractor shall provide a cash forecast summary for both in-year and 10 year periods.
 - c. Fee Projection. Where fee is variable, a report indicating the value of the fee still available to be claimed.
 - d. Cost Report. A report detailing costs that have been incurred in month but not yet invoiced. The report will be required at a frequency defined by the Authority.
10. **Preparation Instructions:**
 - 10.1. NA
11. **Data Format & Delivery Instructions:**
 - 11.1. Documents are to be delivered in both static and electronic format to the Authority and in accordance with the CDRL timescales.
 - 11.2. Reports shall be delivered on a frequency as agreed with the Authority.

Annex D – DID Evaluation Pro-forma

Data Item Description Evaluation Pro-forma

Any agreed tailoring to the requirements in the following templates must be incorporated in the specific Contract terms and conditions. The DID's themselves should not be altered.

The content requirements within the data items should be considered as the minimum standard that is required. It is not intended to constrain or otherwise restrict the inclusion of any content required to effectively develop the plan or implement the EVMS requirements within the Contract.

CDRL Deliverable Title	
DID No	
Version	
Date of Delivery	
Review Deadline	[XX working days post-delivery*]
Reviewed by:	[List names of those who have reviewed this document*]
Accepted/Rejected Decision	[Please detail if the deliverable has been accepted or rejected based on whether the document conforms to the requirements within the relevant DID.*]

Section/ Para No/ Reference	Comments/Observations Please note any specific non-conformances against the relevant DID	Reviewer

* Content in grey should be considered as a prompt

ANNEX E – CONTRACT DATA REQUIREMENT LIST (CDRL)

The CDRL will incorporate a full list of contract deliverables covering all aspects of Project Controls; below are those aspects that relate to EVM only.

Ref No	Title	DID Ref if applicable	Delivery Schedule	Decision Required	Acceptance Criteria	Intended Use
CDRL-PC-001	Earned Value Management Plan (EVMP)	DID-PC-001	Initial– as part of Tender submission Final Delivery – Contract Award + 30 days Any IBR – 30 days Any EVMS Demonstration or Surveillance -30 days Updates – 30 days prior to implementation significant changes to Contractor EVMS or EV approach	Review Accept/Reject Accept/Reject Accept/Reject Accept/Reject	Document Compliance with DID-PC-001 and EVMS compliant with Nominated Standard	Demonstrate compliance with Nominated EV Standard and the contractor’s proposed means of meeting the Authority’s EV management and data requirements.
CDRL-PC-002	Contract Work Breakdown Structure (CWBS)	DID-PC-002	Initial– as part of Tender submission Final– Contract Award + 30 days	Review Accept/Reject	Compliance with DID-PC-002 and conformance with Authority WBS	Ensure intended scope is captured in the contractor’s Performance Measurement Baseline. .
CDRL-PC-003	Contractor Master Schedule (CMS)	DID-PC-003	Initial delivery – Tender submission –In accordance with tender submission deadline	Review	Compliance in accordance with DID-PC-003. Delivery does not constitute Authority Acceptance of the	Assess progress achieved and predicted outcome

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Ref No	Title	DID Ref if applicable	Delivery Schedule	Decision Required	Acceptance Criteria	Intended Use
			<p>Post Contract Award + 2 months.</p> <p>Updates to be provided on a monthly basis (or alternative timescale to be agreed by the project team)</p>	Accept/Reject	initial delivery or the baseline schedule – Baseline Schedule dependent on Link to IBR activity	
CDRL-PC-004	Contract Performance Reports (CPR)	DID-PC-004	<p>Initial delivery – Contract Award + 60 days</p> <p>Subsequent Delivery – end of calendar month +7 working days</p>	Accept/Reject	Compliance in accordance with DID-PC-004	Assess performance and progress achieved
CDRL-PC-005	Risk Management	DID-PC-005	<p>Initial delivery – Contract Award + 60 days</p> <p>Subsequent Delivery – end of calendar month +15 working days</p>	Accept/Reject	Compliance in accordance with DID-PC-005	Assess risk position.
CDRL-PC-006	Change Control	DID-PC-006	<p>Initial delivery – Contract Award + 60 days</p> <p>Subsequent Delivery – end of calendar month +7 working days</p>	Accept/Reject	Compliance in accordance with DID-PC-006	Assess pending changes.
CDRL-PC-007	Cost Collection	DID-PC-007	<p>Initial delivery – Contract Award + 60 days</p> <p>Subsequent Delivery – end of calendar month +7 working days</p>	Accept/Reject	Compliance in accordance with DID-PC-007	Assess cost incurred.

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ANNEX F – MANDATED PROJECT EVENTS

This table includes EVM Related project events to ensure that they have been captured, there is a scope of work allocated to the event incorporating entry and exit criteria where applicable and acceptance criteria.

Event	Guide Ref	Schedule	Review Authority	Completion Criteria	Intended Use
Pre-Contract readiness review	Nominated EV Standard or APM Guide	Prior to Contract award	Authority	Contractor can comply with contract requirements	Authority understanding and confidence in Contractors compliance
Contract Integrated Baseline Review	Nominated EV Standard or APM Guide to Conducting and Integrated Baseline Review (Association for Project Management, A Guide to Conducting Integrated Baseline Reviews (IBR) 2016 or equivalent standard)	Within 3 months of Contract Award Within 3 months of significant change to planning, rolling wave or Re-baseline	Authority	Authority Acceptance of: Contract Work Breakdown Structure Dictionary, Performance Measurement Baseline (including Earned Value Techniques); Corrective Action Completion to the Authority's satisfaction	Authority understanding and agreement to the Performance Measurement Baseline
Subcontract Integrated Baseline Review	Nominated EV Standard or APM Guide to Conducting and Integrated Baseline Review (Association for Project Management, A Guide to Conducting Integrated Baseline Reviews (IBR) 2016 or equivalent standard)	At least 1 month prior to Contract IBR	Contractor and Authority	Contractor/Authority Acceptance of: Contract Work Breakdown Structure Dictionary, Performance Measurement Baseline (including Earned Value Techniques); Corrective Action Completion to the Authority's satisfaction	Contractor/Authority understanding and agreement to the Performance Measurement Baseline
Contractor EVMS Demonstration Review	Nominated EV Standard or APM Earned Value Management Handbook (Association for Project Management Earned Value Management Handbook 2013 or equivalent standard)	Indicatively, after 6 months of post IBR EVM Data	Authority	Authority Acceptance of: Contract EVMS; Corrective Action Completion to the Contractor's/Authority's satisfaction	Authority Assurance of the reliability of the Contractor's Earned Value Reporting data.

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Event	Guide Ref	Schedule	Review Authority	Completion Criteria	Intended Use
Subcontractor EVMS Demonstration Review	Nominated EV Standard or APM Earned Value Management Handbook (Association for Project Management Earned Value Management Handbook 2013 or equivalent standard)	At least 1 month prior to Contract Contractor EVMS Demonstration Review	Contractor and Authority	Contractor/Authority Acceptance of: Subcontractor EVMS; Corrective Action Completion to the Authority's satisfaction	Contractor/Authority Assurance of the reliability of the Contractor's Earned Value Reporting data.
Contractor EVMS On Going Surveillance Review	Nominated EV Standard or APM Earned Value Management Handbook (Association for Project Management Earned Value Management Handbook 2013 or equivalent standard)	Annual intervals after Contractor EVMS Demonstration Review Upon DE&S assessment that EVMS Output quality is deteriorating	Authority	Authority On going assurance of: Contract EVMS; Baseline Change, Corrective Action Completion to the Contractor's/Authority's satisfaction	Authority Assurance of the reliability of the Contractor's Earned Value Reporting data.
Subcontractor EVMS On Going Surveillance	Nominated EV Standard or APM Earned Value Management Handbook (Association for Project Management Earned Value Management Handbook 2013 or equivalent standard)	Annual intervals after Contractor EVMS Demonstration Review Upon DE&S assessment that EVMS Output quality is deteriorating	Contractor and Authority	Contractor/Authority On going assurance of: Subcontractor EVMS; Corrective Action Completion to the Authority's satisfaction	Contractor/Authority Assurance of the reliability of the Contractor's Earned Value Reporting data.

LEVEL 3 ANNEX G5 – CPR FORMAT 5 – AS TAILORED BY DE&S (CPI AND SPI ARE PREFERRED BUT NOT REQUIRED)

CLASSIFICATION (After Completion)

CONTRACT PERFORMANCE REPORT FORMAT 5 - EXPLANATIONS AND PROBLEM ANALYSES															FORM APPROVED DES-CPR-5		
SUBMIT COMPLETED FORMS IN ACCORD WITH CONTRACTUAL REQUIREMENTS																	
1. CONTRACTOR			2. CONTRACT				3. PROGRAMME				4. REPORT PERIOD						
a. NAME			a. NAME				a. NAME				a. FROM (YYYYMMDD)						
b. LOCATION (Address and Post Code)			b. NUMBER				b. PHASE				b. TO (YYYYMMDD)						
			c. TYPE		d. SHARE RATIO		c. EVMS ACCEPTANCE NO YES (YYYYMMDD)										
5. EVALUATION																	
WBS																	
CURRENT PERIOD																	
CUMULATIVE TO-DATE																	
AT COMPLETION																	
WBS ELEMENT	BCWS	BCWP	ACWP	SV	CV	SPI	CPI	BCWS	BCWP	ACWP	SV	CV	SPI	CPI	BAC	EAC	VAC
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
				0	0						0	0					0

Explanation should include but is not limited to:

Summary Analysis
 Summary of Overall Contract Variances
 Differences between EAC and BAC
 Changes in Undistributed Budget
 Changes in Management Reserve
 Significant timephasing shifts in Baseline (BCWS) (Format 3)
 Significant timephasing shifts or Overall Changes in Forecasted Staffing (Format 4)

Analysis of Significant Variances: (identify and describe each)
 Type and Magnitude of Variance
 Explanation of Significant Causes
 Effect on Immediate Task
 Effect on Total Contract
 Corrective Actions Taken or Planned

DES-CPR-5

CLASSIFICATION (After Completion)

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ANNEX G9: COST AND SCHEDULE STATUS REPORT

1. Contract Information

Contract Name					Report No	
Project Name					Version	
Project Phase	Project Start		Project Finish		Report Date	
Identifier	Owner				Report Period	Start
Sponsor	Program ID				Report Period	End

2. Status Narrative

Overall	This Period						Last Period	This Period
							G	A

Project Milestones	WBS No.	Scope (this Period only)	Milestones and Deliverables (this Period only)	Planned Due Date	Actual Date	Var (Cal. Days)	Last Period	This Period
							G	G

Budget	This Period					This Year					Last Period	This Period
	WBS No.	Actuals	Forecast	Var. (£)	Var. (%)	Actuals	Forecast	Budgeted	Var (£)	Var (%)	A	G

This Period Milestones	WBS No.	Scope (this Period only)	Milestones and Deliverables (this Period only)	Planned Due Date	Actual Date	Var (Cal. Days)	Last Period	This Period
							A	R

Risks (Top 5)	Risk ID	Risk Rating	Risk title (and description if necessary)	Risk Owner	Change in Period	Last Period	This Period
						A	A

Issues (Top 5)	Issue ID	Issue Rating	Issue title (and description if necessary)	Issue Owner	Change in Period	Last Period	This Period
						A	A

3. Changes

Ref	Description	Requested on	Value	Status

4. Next Period

Ref	