DATA ITEM DESCRIPTION

1. DID NUMBER: -V5.2
2. TITLE: CONTRACTOR Engineering Management PLAN
3. DESCRIPTION and intended use

The Contractor Engineering Management Plan (CEMP[[1]](#footnote-1)) describes the Contractor’s plans and procedures for the management of a fully integrated engineering program to deliver Engineering Services in accordance with the Contract. The CEMP provides the roadmap to the Contractor’s organisational structure, responsibilities, procedures, processes and resources that it applies to the conduct and management of the Engineering Support effort under the Contract.

The Contractor uses the CEMP, including or supplemented by subordinate plans, to:

define, manage and monitor the Engineering Support program for the Contract;

ensure that those parties (including Subcontractors) who are providing Engineering Services understand their respective responsibilities, the processes to be used, and the time-frames involved;

demonstrate that it has and maintains an organisation with the capability and capacity to meet its Engineering Support responsibilities under the Contract including, when applicable, the ability to comply with the relevant ADF regulatory / assurance framework requirements; and

define the Contractor’s expectations for Commonwealth involvement in the provision of Engineering Services.

The Commonwealth uses the CEMP to:

gain visibility and assurance that the Contractor’s Engineering Services will meet the requirements of the Contract including, when applicable, the ability to comply with ADF regulatory / assurance framework requirements;

provide a basis for monitoring and assessing the Contractor’s performance in relation to the Engineering Support requirements of the Contract; and

confirm and coordinate Commonwealth interfaces with the Contractor’s Engineering Support organisation and provide input into the Commonwealth’s planning.

1. INTER-RELATIONSHIPS

The CEMP is subordinate to the Support Services Management Plan (SSMP).

The CEMP is the highest-level plan for Engineering Support activities. All other Engineering Support plans are subordinate to, and fit beneath the umbrella of, the CEMP.

The CEMP inter-relates with the following data items, where these data items are required under the Contract:

Application for Engineering Organisation Approval (AEOA);

Configuration Management Plan (CMP);

In-Service Materiel Safety Plan (IMSP);

Software Support Plan (SWSP);

Innovations / Efficiencies Implementation Plan (IEIP);

Systems Engineering Management Plan (SEMP);

Software Management Plan (SWMP);

Maintenance Management Plan (MMP);

Supply Support Plan (SSP);

Technical Data Management Plan (TDMP) / Technical Data Plan (TDP);

Quality Plan (QP); and

Combined Services Summary Report (CSSR).

1. Applicable Documents

The following documents form part of this DID to the extent specified herein:

|  |  |
| --- | --- |
| 1. AAP 8000.011 | 1. Defence Aviation Safety Regulations (DASR) |
| 1. ANP3411-0101 | 1. Naval Maritime Assurance Publication |
| 1. LMSM | 1. Land Materiel Safety Manual |

1. Preparation Instructions
   1. Generic Format and Content

The data item shall comply with the general format, content and preparation instructions contained in the CDRL clause entitled ‘General Requirements for Data Items’.

When the Contract has specified delivery of another data item that contains aspects of the required information, the CEMP shall summarise these aspects and refer to the other data item.

The data item shall include a traceability matrix that defines how each specific content requirement, as contained in this DID, is addressed by sections within the data item.

Where the Contract requires that Engineering Services comply with an ADF regulatory / assurance framework, the CEMP shall include a traceability matrix that defines how each specific content requirement, as contained in this DID, is addressed by sections within the data item and the related requirements in the ADF regulatory / assurance framework publication, as listed in the Applicable Documents and in the SOW (‘Engineering Organisation and System Compliance’).

* 1. Specific Content

Note: Guidance for Engineering management plans may be included within the Applicable Documents and the publications listed in the SOW clause for ‘Engineering Organisation and System Compliance’. This guidance is generally written for the Commonwealth and needs to be read in the context of the Contractor’s responsibilities that are to be described in the CEMP. If there is doubt as to whether particular requirements in those documents apply to the CEMP, then guidance should be sought from the Commonwealth Representative.

* + 1. Authorisation and Sponsorship

The CEMP shall include a statement of authorisation by the Contractor’s Executive Authority or Accountable Manager for the Contract.

The CEMP shall include a statement of sponsorship by the Senior Engineering Manager (SEM), which refers to the SEM’s responsibility for ensuring compliance of the Engineering system with the CEMP.

* + 1. Introduction

The CEMP introduction shall summarise the purpose of the CEMP, its relationship with other Contract plans, its review and update cycle, and the types of Engineering Services to be provided. Specifically, the introductory section of the CEMP shall:

describe the scope of the engineering roles of the Contractor’s organisation, as applicable to the Engineering Services required under the Contract;

describe the ADF regulatory / assurance framework and, if applicable and identified in the SOW, the Defence organisation’s EMP (or Technical Integrity Management Directive, if applicable) being complied with;

outline the management strategy for the provision of Engineering Services, including goals and objectives, as applicable; and

provide an overview of the relationships between the Contractor and other external agencies, including Commonwealth entities and Approved Subcontractors.

* + 1. Engineering Organisation Structure

Note: ADF regulatory / assurance framework publications, as specified in the SOW, may include requirements for specific management appointments and authorised engineering roles, which should be addressed in response to the following requirements.

The CEMP shall describe the Contractor’s and Approved Subcontractors’ organisational arrangements for meeting the Engineering Support requirements of the Contract, including:

the Contractor’s and Approved Subcontractors’ organisations and management structures, showing how the Engineering Support organisational and managerial arrangements integrate into the higher-level management structures and organisations;

the interrelationships and lines of authority between all parties involved in the Contractor’s Engineering Support activities;

the responsibilities of all parties involved in the Contractor’s Engineering Support activities, including the identification of the individual within the Contractor’s organisation who will have managerial responsibility and accountability for meeting the Engineering Support requirements of the Contract; and

an organisational chart, or equivalent, showing the associated management hierarchy and the partitioning of Engineering Support responsibilities between the various organisations.

The CEMP shall identify the positions or types of positions to be filled by personnel delegated with engineering / technical authority for the design and/or control of the supported Products.

* + 1. Engineering Support Management

If Engineering Services are provided by more than one organisation, functional area, or location, the CEMP shall describe the approach used to partition work activities between the organisations, functional areas and locations.

The CEMP shall describe:

how resources are allocated to each Engineering Support organisation or work activity;

how work activities are planned, scheduled, and controlled;

how Engineering Support activities and outcomes are recorded and reported; and

any Engineering-related Performance Measures, other than the KPIs and OPMs specified in the Contract, and how the Contractor uses these to measure and assess the effectiveness and the efficiency of the Engineering Support system and/or the provision of the required Engineering Services.

The CEMP shall detail the arrangements for conducting Engineering Support Performance Reviews (ESPRs) or for addressing Engineering Support issues at the Combined Services Performance Reviews (CSPRs) (as applicable to the Contract).

The CEMP shall include references to the specific plans, procedures, instructions and other documents, either physical or as part of a Quality Management System (QMS), used to describe the management of the Contractor’s Engineering Support activities.

Except where otherwise provided to the Commonwealth Representative through other means, the CEMP shall include, as annexes to the CEMP, all associated plans, processes, procedures, and instructions that are required for the management and provision of the Contractor’s Engineering Support activities.

The CEMP shall describe how engineering decisions are recorded, reviewed and managed to provide traceability and authority to engineering decisions.

* + 1. Engineering Information System

The CEMP shall describe the Engineering Information System (EIS) for managing the conduct of Engineering Support activities, including reference to major components of the system, and all associated documentation describing use, process flows, interfaces, and quality controls related to the Engineering Support activities.

* + 1. Engineering Activities

Note: ADF regulatory / assurance framework publications, as specified in the SOW, may include specific requirements for managing and recording specific engineering activities (eg, for accountable decisions), which should be addressed in response to the following requirements.

The CEMP shall describe the scope of engineering activities to be, or being, undertaken in the provision of Engineering Services, including:

a summary of the range of Products managed or supported by the Contractor;

the type of technologies supported, including any specific technologies that present a higher level of technical risk;

the scope and boundaries of design control, Configuration Item management, technical investigation, and other engineering activities performed under the Contract, identifying where the type and level of Engineering Services varies with the differing Products Being Supported;

reference to the maintenance of the applicable design / certification baseline or type certificate(s), as applicable; and

reference to regulations, standards, policies, and significant Quality procedures applicable to the engineering activities.

* + 1. Related Certifications

The CEMP shall include the Certification details of the Contractor’s QMS (eg, Certification to ISO 9001 or equivalent).

Where the Contract requires compliance with the DASR, the CEMP shall describe any current or previous engineering or design certifications issued by the Defence Aviation Safety Authority, other National Military Airworthiness Authorities, and any other regulatory authorities (eg, civil authorities), for work that is applicable to the Engineering Services.

* + 1. Personnel

Note: ADF regulatory / assurance framework publications, as specified in the SOW, may include specific requirements for the appointment and/or authorisation of engineering personnel, which should be addressed in response to the following requirements.

The CEMP shall detail how engineering / technical authority is managed which may include a description or reference to, the Contractor’s register of position profiles for each position (or type of position) for which engineering / technical authority is required to be held by an incumbent, as identified in the organisational structure, including:

the type of engineering / technical authority required to be held by an incumbent;

source of authorisation requirement (eg, legislation, regulation or policy details);

the necessary formal qualifications, associated training, and required experience to be held by an incumbent, including any registrations or other endorsements required;

the duties to be undertaken; and

the required competency assessments and/or selection criteria for the position, as applicable.

The CEMP shall describe the Contractor’s processes for managing activities requiring engineering / technical authority during the extended absence of personnel holding positions that require engineering / technical authority.

The CEMP shall describe the Contractor’s register of positions and individual personnel holding an engineering or technical authority (eg, an ‘EA Register’ or ‘TA Register’). The register shall identify:

past and all current persons delegated engineering/technical authority, including the dates when authorisations were granted and ceased;

qualifications, training and experience of persons delegated engineering/technical authority;

alternate persons assigned to act during the extended absence of persons holding positions that require engineering/technical authority; and

the position profiles, as required in clause 6.2.8.1, associated with each position and person delegated engineering/technical authority.

The CEMP shall describe the Contractor’s approach for the professional development and continuity of persons holding positions that require engineering/technical authority.

* + 1. Subcontractor and Support Network Management

The CEMP shall describe how Engineering Support tasks performed by Subcontractors will be allocated and integrated into the Engineering Support activities performed by the Contractor.

The CEMP shall describe how all Engineering Support work conducted by Subcontractors will be monitored and managed to ensure that the required Engineering Services are achieved.

The CEMP shall identify the technical / design support network of organisations, including subcontractors and other companies, which provide technical advice for engineering activities.

* + 1. Data and Records Management

Note: ADF regulatory / assurance framework publications, as specified in the SOW, may include specific requirements for engineering data and documentation, which should be addressed in response to the following requirements.

The CEMP shall, including by reference to the Technical Data List, list the specifications, type design and configuration data, drawings, engineering and safety standards, regulations, procedures, manuals, instructions, and other data required to enable Engineering Services to be performed.

The CEMP shall describe the Contractor’s processes and management arrangements used to ensure that Technical Data for Engineering Support activities is authoritative, accurate, appropriate, complete and accessible, including:

identifying the types of Technical Data used (eg, design manuals, design standards, technical references, specifications, engineering reports, drawings and records);

presenting, as a diagram, the hierarchy of plans, procedures and instructions;

identifying the scope of certification and design-type Technical Data managed by the Contractor, as required by the Contract, with reference to the governing plan for CM under the Contract (eg, CMP) to define associated management arrangements;

describing the process for integrating Subcontractor Technical Data;

identifying the responsible personnel (by position) and describe the methods used for maintaining control of document status;

describing the performance of audits of engineering Technical Data; and

describing how the Technical Data is:

made accessible to authorised Commonwealth, Contractor, and Subcontractor personnel;

controlled to ensure that only current versions / issues of Technical Data are used; and

assessed for suitability and applicability; and

describing how proposed changes are reviewed by authorised personnel prior to use or delivery to the Commonwealth, as required by the Contract.

The CEMP shall describe, or cross-refer, to the arrangements under the Contract to ensure access to Technical Data that is subject to IP-related restrictions, export controls or any other applicable restriction.

* + 1. Technical Investigations

The CEMP shall describe the process to manage technical investigations in accordance with the Contract.

* + 1. Equipment Restrictions Register

The CEMP shall describe the use of the equipment restrictions register to record details for restrictions placed on the use and/or maintenance of supported Products, including equipment identification, description and period of the restriction, and reference to the notifying document.

* + 1. Facilities and Equipment

The CEMP shall identify the Facilities and significant Support and Test Equipment (including Software) required to perform the engineering activities required by the Contract.

* + 1. Concessions for Non-Conformance

If prepared to accord with the land or maritime ADF regulatory / assurance framework, the CEMP shall describe the procedures for seeking and recording concessions, from the Commonwealth Representative, for temporary non-conformances with the applicable ADF regulatory / assurance framework and/or the Approved CEMP.

* + 1. Audit Requirements

The CEMP shall describe the procedures for preparation, conduct and reporting of internal and external audits, including the audit of Approved Subcontractors, in accordance with the applicable ADF regulatory / assurance framework.

* + 1. Engineering Change Management

If engineering change management Services are required under the Contract, the CEMP shall describe the strategy, management, methodology, processes and tools to be used by the Contractor to ensure that the engineering change management requirements of the Contract are satisfied, including:

how engineering change decisions are made and managed, including the relationships between decision-making and the significance of an engineering change;

the application of the Contractor’s risk-management processes to engineering changes, including in relation to judgements of significance; and

the systems engineering systems and processes to be employed.

* + 1. Additional ADF Regulatory / Assurance Framework Requirements

Notwithstanding the requirements above, the CEMP shall address additional requirements for an EMP, as applicable to the Contractor, as defined by the applicable ADF regulatory / assurance framework document(s).

If the Contract requires Engineering Services to be provided in accordance with the DASR, the CEMP shall address the DASR-specific planning and management requirements within the relevant sections of the CEMP. The Contract may specify Engineering Services to be provided in accordance with the DASR to support:

a Defence Continuing Airworthiness Management Organisation;

the discharge of Military Type Certificate Holder obligations; and

a specified Delegate of the Safety Authority.

* 1. Specific Content – Engineering Subprogram Plans
     1. Configuration Management

Note: ADF regulatory / assurance framework publications and standards, as specified in the SOW (including DSDs), may include specific requirements for Configuration Management, which should be addressed in the response to the following requirements.

If Configuration Management (CM) Services are required under the Contract, the CEMP shall describe the strategy, management, methodology, processes and tools to be used by the Contractor to ensure that the CM requirements of the Contract are satisfied, including (as applicable):

Configuration Identification;

Configuration Control;

Configuration Status Accounting;

Configuration Audits;

Baseline management; and

any related plans and instructions to be used in the performance of CM, including, if applicable, reference to Commonwealth plans and instructions.

* + 1. Software Support

If Software support Services are required under the Contract, the CEMP shall describe the strategy, management, methodology, processes and tools to be used by the Contractor to provide Software support Services, including (as applicable):

a description of the Software Products Being Supported, including:

the scope of the Software Products Being Supported; and

the Intellectual Property rights and other rights required to use, distribute and modify the applicable Software Products;

a description of the Software support environment, including:

host and target computer systems;

Software tools and other system components; and

interfaces with Commonwealth hardware and Software systems;

a description of the operation of the Software support environment, including tools, processes and methodologies for:

Software generation / compilation;

Software change development and testing;

Software integration;

managing and updating data libraries; and

maintaining system access and security controls; and

details of the required coordination activities involving Associated Parties.

* + 1. In-Service Materiel Safety (System Safety) Program

If a system safety engineering program is required under the Contract, the CEMP shall describe the strategy, management, methodology, processes and tools to be used by the Contractor in performing the In-Service Materiel Safety (system safety) program activities of the Contract, including (as applicable):

a description of the range of Products for which Materiel Safety will be managed;

identification of the Materiel Safety certification baseline(s) and other Materiel Safety-related data that the Contractor manages and/or contributes to;

a description of how the program is integrated with other activities under the Contract, including activities associated with the design, development, implementation, delivery, and V&V of a Major Change; and

a summary of the required coordination activities involving Associated Parties.

* + 1. Technology Evolution / Technology Insertion

The CEMP shall describe the strategy, management, methodology, processes and tools to be used by the Contractor to address any requirements for technology evolution and/or technology insertion under the Contract (including under the Capability Innovations and Efficiencies (CIE) Program), including (as applicable):

cross-references to the IEIP or other relevant plan, where applicable;

a description of the management arrangements for undertaking these activities;

the identification the change drivers that could apply to the Products Being Supported, including:

evolution of technology;

changes to threats;

changes to user needs;

changes to external systems and interfaces including, if applicable, changes to host systems (ie, the Materiel Systems, platforms or information technology networks for which the system being analysed is a component);

Supportability considerations (eg, Obsolescence and reliability growth); and

Mission System enhancements or upgrades, including those planned by the Contractor or component element suppliers;

the identification the candidate elements for change based on an assessment of the potential areas of the Products Being Supported that may change over the LOT due to the change drivers identified in response to clause 6.3.4.1c;

a description of the Contractor’s strategies for:

ensuring that that the set of change drivers is kept current (eg, in relation to new or evolving technologies, threats and user needs);

addressing the change drivers as they apply to the identified candidate elements;

addressing Obsolescence (eg, the specific Obsolescence management strategies that will be employed, cross-referring to the Approved SSP where appropriate);

undertaking studies and providing business cases to the Commonwealth when an identified change or change driver warrants consideration by the Commonwealth (eg, to enhance the Capability or to address Obsolescence); and

addressing the associated Total Cost of Ownership (TCO) considerations;

a description of the associated methodologies, processes and tools to implement the identified strategies (eg, use of technology roadmaps); and

a summary of the required coordination activities involving Associated Parties.

* + 1. Research and Development

If a research and development (R&D) program is required under the Contract, the CEMP shall describe the strategy, management, methodology, processes and tools to be used by the Contractor in performing the R&D program activities of the Contract, including (as applicable):

a description of the arrangements for managing and undertaking the R&D program, including in relation to:

Approved Subcontractors; and

third parties, such as Defence Science and Technology Group (DSTG), Commonwealth Scientific and Industrial Research Organisation (CSIRO), state governments, academia and other Commonwealth agencies;

a description of the methodology to be used by the Contractor and Approved Subcontractors to assist with the identification of potential R&D opportunities (eg, targeted collaborative activities with particular R&D stakeholders);

a description of the general approach to specifying, managing and undertaking R&D opportunities, including:

the expected involvement of the Commonwealth;

the specific plans and reports that will be developed, including any such requirements defined in the SOW;

the criteria to be used for determining whether or not an R&D opportunity should be progressed through to production and fielding; and

success or failure criteria linked to key decision points associated with either the developmental programs for the relevant Products Being Supported or the R&D opportunity itself, such as potential requirements for additional funding, transitioning to production, or off-ramps.

* + 1. Contractor Standing Capability

Not used.

1. ’CEMP’ is a generic name used for the governing plan for Engineering under ASDEFCON contracts. Different ADF regulatory / assurance frameworks may have a different name for the equivalent Commonwealth document. [↑](#footnote-ref-1)