MSR CHECKLIST

1. IDENTIFICATION: MSR-CHECKLIST-IBR-V5.3

2. TITLE: INTEGRATED BASELINE REVIEW CHECKLIST

3. DESCRIPTION AND INTENDED USE

3.1 The Integrated Baseline Review (IBR) is an integral part of Earned Value Management (EVM), which provides for the review of the Contractor's execution plans, focusing on the assignment, definition, scheduling and resourcing of work, thus establishing early visibility into the acceptability of the Contractor's planning for the Contract. The IBR also reviews the methods and metrics used to measure Contractor performance and progress. The focus is upon reviewing the technical merits and resourcing of the plan, and to assess the risk associated with the baseline.

3.2 The objectives of the IBR are to:

a. ensure that the complete Contract scope of work is covered in the Contract Work Breakdown Structure (CWBS);

b. assess whether the technical scope can be accomplished within baseline cost and schedule constraints and that resources have been appropriately distributed to the Contract tasks;

c. assess that there is a logical sequence of effort that supports the Contract schedule;

d. identify areas of risk in resource allocations and in the technical performance of the Contract and understand the cost and schedule implications of that risk;

e. assess the validity and accuracy of the Contractor's baseline by examination of at least one Earned Value Performance Report (EVPR);

f. review proposed Earned Value Techniques (EVTs) to be used to measure and report progress to ensure that the measures are appropriate and will provide meaningful indicators of work completed; and

g. improve Commonwealth understanding of the Performance Measurement Baseline (PMB), resulting in a better appreciation of the Contractor's performance management process and the techniques used to measure performance. This common understanding of the baseline plan should enable improved partnering throughout the Contract and reduce misunderstandings.

3.3 This Mandated System Review (MSR) Checklist sets out the Commonwealth's requirements and minimum expectations for the conduct of an IBR. The level of consideration needed to address each of the checklist elements is dependent up on the scale and risks for the Contract. Further detailed guidance on the conduct of an IBR is provided in the CASG-2-Instruction (PM) 003, *Integrated Baseline Review and EVM System Review*.

3.4 Capitalised terms used in this MSR Checklist, where these terms are not included in the Glossary to the Contract, have the meaning given in:

a. CASG Manual (PM) 006 Defence Supplement to the Australian Standard for Earned Value Management, AS 4817; and

b. AS 4817:2019 Earned value management in project and programme management.

4. INTER-RELATIONSHIPS

4.1 The IBR shall be conducted in accordance with the Approved System Review Plan (SRP), and shall be consistent with the following data items, where these data items are required under the Contract:

a. Project Management Plan (PMP); and

b. Earned Value Management Plan (EVMP).

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

a. Contract Work Breakdown Structure (CWBS);

b. Contract Master Schedule (CMS);

c. Earned Value Performance Report (EVPR);

d. System Review Plan (SRP);

e. Mission System Technical Documentation Tree (MSTDT);

f. Measurement Plan, including the Information Needs and Measures Specification, which the Contract may require to be delivered separately from the Measurement Plan; and

g. Australian Industry Capability (AIC) Plan.

Note: The Status column in the following three tables indicates whether or not the associated Checklist items are able to be tailored by the Contractor in its SRP, based on the following definitions:

a. Mandatory items are not to be tailored;

b. Highly Desirable items should not be tailored, but may be tailored depending upon the specifics of the Contract and the Contractor's internal processes; and

c. Optional items may be tailored, based upon the specifics of the Contract and the Contractor's internal processes.

Notwithstanding the Status assigned to each Checklist item, the items are to be included in the SRP if they are applicable.

5. REVIEW ENTRY CRITERIA

Item	Entry Criteria	Status
1.	All data items required to be delivered before IBR have been delivered (including the IBR agenda, the EVM System documentation, and at least one complete Earned Value Performance Report (EVPR)), and the Commonwealth Representative considers these documents to be suitable for the purposes of conducting IBR.	Mandatory
2.	The CWBS reflects the entire scope of work for the Contract and is defined to an appropriate level of detail. The delivered CWBS complies with the requirements of DID-PM-DEF-CWBS.	Mandatory
3.	Subcontractor baselines, where applicable, have been incorporated into the PMB, and IBRs on those Subcontractors have been successfully completed by the Contractor.	Mandatory
4.	Risks with the potential to impact upon the viability of the PMB have been identified and documented, including any assumptions that may need to be referenced in the future.	Mandatory
5.	Action items from any previous System Reviews or prior risk-reduction activities (eg, an Offer Definition and Improvement Activities phase), which affect IBR, have been successfully addressed or action plans agreed with the Commonwealth Representative.	Mandatory

6. REVIEW CHECKLIST

Item	Checklist Item	Status
1.	Were all entry criteria satisfied before starting IBR?	Mandatory
2.	Has the impact of Approved and pending CCPs been assessed?	Highly Desirable
3.	Have all Commonwealth Representative review comments against data items been adequately addressed?	Mandatory
4.	Is all of the work defined in the Contract (including through the Price and Payments Schedules, SOW, CDRL and the implied work through the DIDs) fully incorporated into the CWBS? Do the CWBS and CWBS Dictionary provide a direct cross-reference to the Contract?	Mandatory
5.	Is all of the work defined in the Contractor's management plans (eg, PMP) fully incorporated into the CWBS?	Mandatory
6.	Is all of the work defined in the Subcontracts, including the Contractor's work associated with managing the Subcontracts, fully incorporated into the CWBS?	Mandatory
7.	Is the CWBS structured around the major products to be delivered under the Contract (eg, Mission Systems) and is the breakdown of each Mission System in the CWBS consistent with the product breakdown structure for that Mission System?	Mandatory
8.	Is the CWBS and associated CWBS Dictionary internally consistent (ie, no overlaps or gaps)?	Mandatory
9.	Does the CWBS Dictionary clearly describe the full scope of work for each CWBS element?	Mandatory
10.	Does each product in the CWBS have an associated specification, with a plan to develop and baseline the specification at an appropriate time?	Mandatory
11.	Does the hierarchy of specifications and design documents defined in the MSTDT map to the CWBS?	Mandatory
12.	Do key CWBS elements have defined entry and exit criteria, including, where applicable, acceptance requirements? Are the entry and exit criteria for Milestones and System Reviews, which are defined in the Contract (including, where applicable, the Approved SRP), traceable to the applicable CWBS elements?	Mandatory
13.	Has responsibility been assigned for each Control Account and Work Package (eg, through the Organisation Breakdown Structure (OBS) or the Responsibility Assignment Matrix (RAM)) to an appropriate Control Account Manager (CAM) and Work Package manager, respectively?	Mandatory
14.	Is the work assigned to one responsible organisation in a manner that represents the way in which work is to be performed?	Mandatory
15.	Is the RAM consistent with Control Account authorisations?	Mandatory
16.	Do the CAMs and Work Package managers have an adequate understanding of EVM and its implementation for the Contract, including the proposed tools to be used?	Mandatory

Item	Checklist Item	Status
17.	For each component product within the Mission System product breakdown structure, does the CWBS facilitate clear and visible accountability for ensuring that the delivered component product meets its specification?	Mandatory
18.	Has an appropriate division of responsibility been defined; firstly, for the overall management of Subcontracts and, secondly, for the management of those elements of Subcontracts, which either interface with, or are subordinate to, other CWBS elements (eg, lower-level products within the Mission System product breakdown structure)?	Mandatory
19.	Are the work authorisation documents consistent with the SOW, CWBS and CWBS Dictionary?	Mandatory
20.	Is the organisation assigned in the RAM, also the responsible organisation identified in the work authorisation documents?	Mandatory
21.	Are the work authorisation documents approved and signed by the responsible functional managers designated in the RAM?	Mandatory
22.	Are the Contractor's risk treatments, which involve work, identifiable in the CWBS?	Mandatory
23.	Is the process for risk management clearly defined and understood? Do CAMs understand processes for elevating risks, communicating changes, and statusing their progress?	Mandatory
24.	Is the process for escalating issues within teams and between teams defined and understood?	Mandatory
25.	Is the CMS derived from, and traceable to, the CWBS?	Mandatory
26.	Does the draft CMS comply with DID-PM-DEF-CMS?	Mandatory
27.	Does the CMS represent a logical sequence of activities to satisfy the Contract requirements?	Mandatory
28.	Does the CWBS capture a feasible integration and test strategy and is this reflected in the CMS with appropriate linkages and timescales?	Mandatory
29.	Is the CMS structurally sound (eg, are all tasks suitably linked, have the appropriate precedence relationships, and minimise the use of forced constraints, such as 'must start on')?	Mandatory
30.	Does the CMS comply with any Contract constraints (eg, production cannot commence until Verification of the first article is complete)?	Mandatory
31.	Does each task in the schedule have a well-defined outcome or deliverable (with the exception of level-of-effort tasks)?	Mandatory
32.	Does the CMS identify all Commonwealth interactions and dependencies that impact upon the Contract timeframes (eg, delivery of Government Furnished Material (GFM) and Government Furnished Services (GFS), attendance at System Reviews and review of data items)?	Mandatory
33.	Are the Commonwealth's interactions and dependencies in the CMS (eg, for GFM and GFS) tied to the Contractor's CMS activities that reflect the Contractor's actual need / consumption points?	Mandatory

Item	Checklist Item	Status
34.	Are significant decision points, constraints, and interfaces identified as key milestones in the CMS?	Mandatory
35.	Are the Planning Packages readily identifiable? Have the Planning Packages been defined appropriately, such that they are neither too general nor too large in scope, value, and duration?	Mandatory
36.	Are the lower-tier schedules vertically traceable to the CMS?	Mandatory
37.	Are the estimates for task times and resource requirements for both Work Packages and Planning Packages stable, reasonable and precedented? Are these task times and resource requirements based on sound estimating principles and practices (eg, historical, quantitative, performance estimates)?	Mandatory
38.	Have the task times and resource requirements for the higher-risk tasks (eg, software-development activities) been validated using multiple methods (eg, historical data and software-estimating models and tools)?	Mandatory
39.	Is the basis of estimate for all task times and resource requirements for both Work Packages and Planning Packages documented and agreed by those who will be doing the work?	Mandatory
40.	Are all of the dependencies between Control Accounts clearly defined in the CMS, and is the meaning / expectations of each dependency clearly understood by each CAM and reflected in their respective plans?	Mandatory
41.	Have all internal and external dependencies been identified and assessed for feasibility? (External dependencies include interfaces, facilities, works and other services, etc.)	Mandatory
42.	Does the CMS include sufficient contingency to absorb “normal” variance (eg, expected levels of rework) as well as some level of unanticipated events?	Mandatory
43.	Has the CMS been constructed bottom up from quantitative estimates, not driven by predetermined dates?	Mandatory
44.	Has the CMS been resource levelled to reflect realistic staff availability, including Contract ramp-up, staff leave/absences, public holidays, training, Contract ramp-down, etc?	Mandatory
45.	Have the critical and near-critical path activities been identified?	Mandatory
46.	Have the implications of parallel activities in the schedule been analysed to produce a clear understanding of the risks, including resource overlaps?	Mandatory
47.	Has schedule risk analysis been undertaken to assist in evaluating whether the schedule is achievable?	Mandatory
48.	Are the Subcontractor’s schedules vertically and horizontally integrated with the CMS?	Mandatory
49.	Does the schedule reflect learning curve inefficiencies?	Mandatory
50.	Where available, have purchase orders, drawing releases, Subcontract schedules and material ordering schedules been examined to confirm consistency between the order and delivery dates and between material milestones and material EVTs?	Mandatory

Item	Checklist Item	Status
51.	Is the Contractor's staff/skills profile reasonable, achievable, and derived from the CMS (particularly for critical skills where there may be known shortages, such as systems engineers, software engineers and integrated logistic support staff)?	Mandatory
52.	Has the dependence on Key Persons been addressed in the schedule?	Mandatory
53.	Are the resources required to meet the schedule available (including personnel, facilities, subcontractor capacity, etc)?	Mandatory
54.	Are Control Accounts adequately described, budgeted and decomposed to perform the work?	Mandatory
55.	Are the CMS and PMB integrated? Is the scheduling system integrated with the budgeting and cost accumulation systems?	Mandatory
56.	Are the schedule(s) and PMB identical in planning and consistent in their representation of progress?	Mandatory
57.	Are Contractor staff able to substantiate their budgets in terms of the total amount (dollars or hours), mix of resources and time-phasing?	Mandatory
58.	Is the phasing of the budget consistent with the schedule for achieving the work?	Mandatory
59.	Are the budgets assigned to Planning Packages distributed appropriately to reflect the expected outcome of detailed planning?	Mandatory
60.	Are there adequate procedures for converting a Planning Package into a Work Package, including for the establishment of EVTs for new Work Packages?	Mandatory
61.	Are budgets allocated once and summed appropriately through the EVMS?	Mandatory
62.	Are all budgeting documents consistent throughout the EVMS? Is the budget information in the work authorisation documents, the RAM, and the internal performance measurement reports reconcilable? Are the amounts on internal reports consistent with the external report being forwarded to the Commonwealth?	Mandatory
63.	Are Control Accounts broken down into different cost elements (eg, labour, materials, and other direct costs)?	Mandatory
64.	Is Management Reserve (MR) clearly identified as such? Is the amount of MR consistent with the Contractor's assessment of risk?	Mandatory
65.	Are appropriate arrangements in place for the management of MR, including authorising its use?	Mandatory
66.	If MR or Undistributed Budget (UB) has been utilised, do the transfers reconcile with EVPR amounts?	Highly Desirable
67.	For any aspects of the Contract where there is a high probability of rework occurring within scope (eg, document revisions and retesting), has appropriate provision for that work been included in the PMB?	Mandatory
68.	Where rework is likely to be required, do the Contractor's procedures ensure that zero-budget Work Packages will not be used and that budget will be assigned, the effort planned and performance measured?	Mandatory

Item	Checklist Item	Status
69.	Have the Work Packages been established so that, if different elements of cost (eg, labour and materials) have been included in a Work Package, a variance in the performance of one element will not make an assessment of earned value misleading or inaccurate?	Mandatory
70.	Do the Control Accounts identify EVTs at Work Package level (or lower) to enable effective measurement of progress?	Mandatory
71.	Are the EVTs objective, verifiable, and appropriate for the nature of the work being undertaken, including the length of each Work Package?	Mandatory
72.	Will progress being reported using the EVT correlate with technical achievement?	Mandatory
73.	Are the EVTs consistent with the measures identified in the Information Needs and Measures Specification (where a Measurement Plan or a stand-alone Information Needs and Measures Specification are a requirement of the Contract)?	Mandatory
74.	Where the EVT is identified as 'percent complete', does the CAM have objective measures to identify the progress at a lower level?	Mandatory
75.	Where progress has been claimed, is it in accordance with the EVT identified?	Mandatory
76.	Are the EVTs to be used for measuring Subcontracted effort appropriate?	Mandatory
77.	Is the Level of Effort (LOE) content of Control Account budgets only applied where appropriate?	Mandatory
78.	Is the percentage of LOE across the Contract budget less than 20%? This percentage should be calculated across Contractor labour (ie, with materials and other costs (eg, Subcontractors) removed).	Mandatory
79.	Do Control Account status sheets reflect that progress is being claimed appropriately?	Mandatory
80.	Are the time-phased budgets (PVs) for the same Work Packages consistent with the start and finish dates on the baseline schedule?	Mandatory
81.	Are actual costs being recorded in the same period as the related performance?	Mandatory
82.	Are the Control Account or WBS Element start and finish dates on the Control Account Plans consistent with the baseline schedule dates?	Mandatory
83.	Is the progress recorded on the schedule reconcilable to the earned value?	Mandatory
84.	Wherever schedules are updated or forecast completion dates amended by CAMs, are these changes reflected in supporting schedules?	Mandatory
85.	Are any discrepancies between schedule progress and earned value able to be explained to ensure that they are consistent?	Mandatory
86.	Are changes to the schedule(s) appropriately controlled?	Mandatory
87.	Is the data reliable and producing information useful for management decisions? Is earned value being claimed in the same manner in which it was planned?	Mandatory

Item	Checklist Item	Status
88.	Is the Estimate At Completion (EAC) being updated and providing meaningful indication of the likely outcomes?	Mandatory
89.	Is the effect of all known Contractor risks incorporated into the EAC?	Mandatory
90.	Are the cumulative variances either explained and corrective action plans in place or are the variances reflected in the EAC?	Highly Desirable
91.	Do the Actual Costs (AC) not exceed the EAC amounts for completed Control Accounts or Work Packages?	Mandatory
92.	Does the EAC include Subcontractor updates for actual costs, material values, etc?	Mandatory
93.	Are variance reports being generated that allow for effective management?	Mandatory
94.	Are changes incorporated correctly and in a timely manner? Does traceability exist between the Control Account(s), change requests, MR, UB as appropriate (including current budget to original budget)?	Mandatory
95.	Is Subcontractor earned value data being appropriately incorporated into the Contractor's EVMS?	Mandatory
96.	Are appropriate methodologies being employed by the CAMs to verify Subcontractor progress and manage their performance?	Mandatory
97.	Is material being tracked effectively?	Mandatory
98.	Are the budgets for material time-phased to support schedule requirements?	Mandatory
99.	Is material managed against the original estimated requirement?	Mandatory
100.	Are the systems for managing material integrated?	Mandatory
101.	Is EAC data updated to account for actual material costs incurred and/ or committed?	Mandatory
102.	Is the process used to track material issued from the Contractor to the Subcontractor for work appropriate (and vice versa)?	Mandatory
103.	Have overheads / indirect costs been appropriately apportioned to the Contract?	Mandatory
104.	Does a process exist for monitoring performance against overheads?	Mandatory
105.	Is the company EVMS adequate to meet contractual requirements?	Mandatory
106.	If applicable, is the integrity of the PMB sound enough to support payment by earned value?	Mandatory
107.	Are the breakdown and the scheduling of activities in the CWBS and CMS consistent with the AIC Plan, and vice versa?	Highly Desirable

7. REVIEW EXIT CRITERIA

Item	Exit Criteria	Status
1.	All checklist items have been addressed to the satisfaction of the Contractor and the Commonwealth Representative.	Mandatory
2.	All major problem and risk areas have been identified and resolved and, for minor problems and risks, corrective action plans have been recorded and agreed by the Commonwealth Representative.	Mandatory
3.	The PMB has been Approved.	Mandatory
4.	Plans for the measurement and analysis program for the next phase have been agreed by the Commonwealth Representative, including the measures to be collected, associated collection methods, and analysis techniques.	Mandatory
5.	All risks identified during the course of IBR have been documented and analysed.	Mandatory
6.	The risks with proceeding to the next phase are acceptable to the Commonwealth Representative.	Mandatory
7.	All major corrective action requests have been closed.	Mandatory
8.	All minor corrective action requests have been documented and assigned with agreed closure dates.	Mandatory
9.	Review minutes have been prepared, Approved, and distributed in accordance with the Contract.	Mandatory

MSR CHECKLIST

1. IDENTIFICATION: MSR-CHECKLIST-SRR-V5.3

2. TITLE: SYSTEM REQUIREMENTS REVIEW CHECKLIST

3. DESCRIPTION AND INTENDED USE

3.1 The objectives of the System Requirements Review (SRR) are to:

a. validate that the system requirements for both the Mission System and the Support System are complete and well formulated, both individually and in sets;

b. ensure that the OCD, FPS, System Specification (SS), Support System Specification (SSSPEC), and the Contractor's designs for the Mission System and Support System are consistent and coherent for this stage of the design process;

c. ensure that the set of system requirements are consistent with the Commonwealth's intent; and

d. ensure that both the Commonwealth and the Contractor have a common understanding of the requirements.

3.2 This MSR Checklist sets out the Commonwealth's requirements and minimum expectations for the conduct of an SRR.

4. INTER-RELATIONSHIPS

4.1 The SRR shall be conducted in accordance with the Approved System Review Plan (SRP), and shall be consistent with the following data items, where these data items are required under the Contract:

a. Systems Engineering Management Plan (SEMP);

b. Integrated Support Plan (ISP); and

c. Verification and Validation Plan (V&VP).

4.2 Primarily, the SRR addresses the requirements embodied in the:

a. System Specification (SS); and

b. Support System Specification (SSSPEC),

which have been derived from analyses of such documents as the Function and Performance Specification (FPS), the Operational Concept Document (OCD), and other regulatory and stakeholder requirements as defined by the SOW.

Note: The Status column in the following three tables indicates whether or not the associated Checklist items are able to be tailored by the Contractor in its SRP, based on the following definitions:

a. Mandatory items are not to be tailored;

b. Highly Desirable items should not be tailored, but may be tailored depending upon the specifics of the Contract and the Contractor's internal processes; and

c. Optional items may be tailored, based upon the specifics of the Contract and the Contractor's internal processes.

Notwithstanding the Status assigned to each Checklist item, the items are to be included in the SRP if they are applicable.

5. REVIEW ENTRY CRITERIA

Item	Entry Criteria	Status
1.	All data items required to be delivered before, and linked to, the SRR have been delivered and the Commonwealth Representative considers these data items to be suitable for the purposes of conducting SRR.	Mandatory
2.	Operational and support concepts and scenarios for the Mission System and Support System have been established and are current. Proposed changes to the OCD to address any inconsistencies between the OCD and the SS/SSSPEC have been received by the Commonwealth Representative.	Mandatory
3.	Proposed Deviations to the FPS, to address any conflicts between the proposed SS or SSSPEC requirements and the FPS, have been advised to the Commonwealth Representative.	Mandatory
4.	Stakeholder (eg, sponsor, user, operator, maintainer, other system managers) needs, expectations, constraints and interfaces for all phases of each system's life cycle have been identified, collected, analysed and transformed into system requirements.	Mandatory
5.	WHS, Environmental, legal, and other constraints have been analysed to identify system requirements for both the Mission System and the Support System.	Mandatory
6.	A preliminary Hazard Analysis, covering both the Mission System and the Support System, has been completed and reviewed with relevant stakeholders.	Mandatory
7.	Verification and Validation requirements and techniques, for both the Mission System and the Support System, have been identified.	Mandatory
8.	Traceability of specification requirements, for both the Mission System and the Support System, to their source has been established.	Mandatory
9.	Traceability of Verification methods, for both the Mission System and the Support System, to their source has been established.	Mandatory
10.	The Contractor has reviewed the Contract plans to assess their consistency with the system requirements.	Highly Desirable
11.	Action items from any previous System Reviews affecting SRR have been successfully addressed or action plans agreed with the Commonwealth Representative.	Mandatory
12.	Objective review criteria have been agreed with the Commonwealth Representative for the system-level requirements. Example review criteria include completeness, consistency, singularity, verifiability, traceability and that the level of detail describing the requirements is appropriate and suitable as the basis for Acceptance.	Mandatory
13.	The Commonwealth Representative has reviewed the system requirements for both the Mission System and the Support System and all comments have been addressed to the satisfaction of the Commonwealth Representative.	Highly Desirable

6. REVIEW CHECKLIST

Item	Checklist Item	Status
1.	Were all entry criteria satisfied before starting SRR?	Mandatory

Item	Checklist Item	Status
2.	Has the impact of Approved and pending CCPs been assessed?	Highly Desirable
3.	Have all Commonwealth Representative review comments against data items delivered for the purposes of SRR, been adequately addressed?	Mandatory
4.	Are all sources of requirements valid, appropriate and Approved by the Commonwealth Representative?	Mandatory
5.	Do the system requirements for both the Mission System and the Support System accurately reflect the needs, expectations, constraints and interfaces of stakeholders (eg, sponsor, user, operator, maintainer, and other system managers)?	Mandatory
6.	Have conflicts between the initial Commonwealth requirements and other stakeholder (eg, government regulatory organisations and other Defence stakeholders) requirements been resolved?	Mandatory
7.	Are the Mission System requirements necessary and sufficient to ensure that the system can be used in accordance with the operational concepts and scenarios documented in the OCD?	Mandatory
8.	Are the Support System requirements necessary and sufficient to ensure that the Mission System can be supported in accordance with the operational and support concepts and scenarios documented in the OCD?	Mandatory
9.	Has an appropriate allocation of functions and requirements between the Mission System and Support System been made (eg, trade-offs associated with the levels of built-in test / diagnostics)?	Highly Desirable
10.	Have conflicts between the Mission System and Support System requirements been resolved?	Highly Desirable
11.	Have all assumptions made, with respect to defining system requirements for both the Mission System and the Support System, been analysed to ensure that they are consistent with the systems being designed and developed?	Mandatory
12.	Are all external interface requirements for the Mission System consistent with the documentation of the external interfaces?	Mandatory
13.	Are all system interface requirements for the new elements of the Support System consistent with the documentation of the interfaces for the existing support infrastructure?	Highly Desirable
14.	Do the system requirements, for both the Mission System and the Support System, satisfy the requirements of the Contract and, if applicable, the Contract (Support) (eg, applicable standards, practices, SOW, SEMP and ISP)?	Mandatory
15.	Are the requirement statements well formulated individually and as sets?	Mandatory
16.	Is each system requirement for both the Mission System and the Support System: a. uniquely identifiable; and b. traceable to its source (eg, FPS, OCD)?	Mandatory
17.	Do all FPS requirements trace to the Mission System and Support System requirements?	Mandatory

Item	Checklist Item	Status
18.	Do all FPS requirements, which have been modified in tracing to the Mission System and Support System requirements, have adequate rationale supporting the changes?	Mandatory
19.	Do all Mission System and Support System requirements that have been derived from parent documentation have adequate rationale?	Mandatory
20.	Do all Mission System and Support System requirements satisfy the agreed objective review criteria?	Mandatory
21.	Have remaining areas of requirements variances, voids and conflicts been identified and an approach defined to address them?	Mandatory
22.	Can the Mission System and Support System be verified to show that the systems satisfy their respective system requirements?	Mandatory
23.	Are the Acceptance Verification criteria agreed with the Commonwealth Representative?	Mandatory
24.	Are interface requirements for both the Mission System and the Support System defined to an appropriate level of detail for this stage of the Contract?	Mandatory
25.	Are the system boundaries for both the Mission System and Support System well defined?	Mandatory
26.	Are all system interfaces well understood and do all external systems have matching expectations for the system? For example, for any external interfaces that are under development, both sides of the interface need to be developed as a coordinated effort.	Mandatory
27.	Have Logical Solution Representations for both the Mission System and the Support System and their external behaviours been established? Examples of Logical Solution Representations include Functional Flow Block Diagrams, Timelines, and Context Diagrams.	Mandatory
28.	Are the system Logical Solution Representations internally consistent?	Mandatory
29.	Are the system Logical Solution Representations of sufficient scope to address the risk areas of the Mission System and Support System?	Mandatory
30.	Are the initial set of states and modes for the Mission System and Support System adequately defined?	Mandatory
31.	Have constraints affecting the designs of both the Mission System and the Support System been identified and their impact analysed (eg, critical timing analysis has been completed)?	Mandatory
32.	Are alternative system and Software architectures for the Mission System being considered?	Highly Desirable
33.	Are Support System alternatives being considered?	Highly Desirable
34.	Have potential Support System alternatives been evaluated with respect to Life Cycle Cost (LCC), benefits, and risks?	Mandatory
35.	Has an initial allocation of Mission System requirements to subsystems been performed to assess the convergence of initial design concepts to a range of viable solutions?	Mandatory
36.	Has an initial allocation of Support System requirements been made to each of the Support System Constituent Capabilities?	Mandatory

Item	Checklist Item	Status
37.	Have key technologies for the Mission System and Support System Components been identified and their maturity assessed and maturation processes identified where necessary?	Mandatory
38.	Has a hierarchy of Measures Of Effectiveness (MOEs) for both the Mission System and Support System been developed that derive from critical operational issues and lead to specific performance measures in the SS and SSSPEC?	Highly Desirable
39.	Have key Technical Performance Measures (TPMs) been identified and reported against?	Highly Desirable
40.	Has an assessment of the feasibility of Mission System and Support System requirements in terms of technology, design constraints, producibility, deployability, operability, supportability, trainability, disposability, etc, been performed?	Mandatory
41.	Have Mission System and Support System requirements been analysed with the purpose of minimising LCC, and reducing development schedule and risk?	Mandatory
42.	Have trade-offs among stated system/subsystem specification requirements/constraints and resulting engineering design requirements/constraints, and logistic/cost-of-ownership requirements/constraints been performed?	Highly Desirable
43.	Have the results of Commonwealth-directed trade studies been presented, and have the implications for the requirements for the Mission System and Support System been addressed?	Optional
44.	Have the likely areas for future change or expansion for both the Mission System and Support System over the LOT been considered?	Mandatory
45.	Have the system requirements for both the Mission System and Support System adequately captured the need for future change or expansion in the likely areas?	Mandatory
46.	Have the appropriate standards for external interfaces and, if applicable, for internal architecture been considered to ensure the solution for the Mission System is robust over the LOT?	Highly Desirable
47.	Have quality factors (eg, availability, reliability, standardisation, interoperability and obsolescence) been specified as measurable requirements or prioritised design goals for both the Mission System and Support System Components?	Mandatory
48.	Has human engineering including personnel numbers, skill levels and workload, both for operation and support, been analysed and adequately addressed in the system requirements for both the Mission System and the Support System?	Highly Desirable
49.	Have appropriate regulatory issues been addressed in the system requirements for both the Mission System and the Support System? For example, consider: a. Australian Communications and Media Authority (ACMA) regulatory requirements; b. environmental requirements; c. EMI/EMC regulatory requirements; d. Materiel Safety requirements; e. system security requirements; and f. ADF regulatory / assurance framework requirements.	Mandatory

Item	Checklist Item	Status
50.	Have the identified hazards and their classification been Approved by the Commonwealth Representative?	Mandatory
51.	Have alternative approaches for implementing system security requirements been evaluated?	Highly Desirable
52.	Have all risks identified prior to SRR been reported against?	Mandatory
53.	Does the Contractor's proposed solution for both the Mission System and Support System represent a minimised LCC solution, as demonstrated in accordance with the Approved governing plan for LCC (eg, LCC Management Plan (LCCMP))?	Mandatory
54.	Have any Contractor-provided proposals to reduce LCC been addressed (eg, as documented in the LCC Report and Model (LCCRM))?	Highly Desirable
55.	Are Contract plans and schedules consistent with the system requirements for both the Mission System and the Support System?	Highly Desirable
56.	Has the process for managing changes to the system requirements post SRR been agreed?	Mandatory

7. REVIEW EXIT CRITERIA

Item	Exit Criteria	Status
1.	All checklist items have been addressed to the satisfaction of the Contractor and the Commonwealth Representative.	Mandatory
2.	All major problem and risk areas have been identified and resolved and, for minor problems and risks, corrective action plans have been recorded and agreed by the Commonwealth Representative.	Mandatory
3.	Plans for the next phase are deemed to be realistic and achievable by both the Contractor and the Commonwealth Representative.	Mandatory
4.	Plans for the measurement and analysis program for the next phase have been agreed by the Commonwealth Representative, including the measures to be collected, associated collection methods, and analysis techniques.	Mandatory
5.	All risks identified during the course of SRR have been documented and analysed.	Mandatory
6.	The risks with proceeding to the next phase are acceptable to the Commonwealth Representative.	Mandatory
7.	All major action items have been closed.	Mandatory
8.	All minor action items have been documented and assigned with agreed closure dates.	Mandatory
9.	Review minutes have been prepared, Approved, and distributed in accordance with the Contract.	Mandatory

MSR CHECKLIST

1. IDENTIFICATION: MSR-CHECKLIST-SDR-V5.3

2. TITLE: SYSTEM DEFINITION REVIEW CHECKLIST

3. DESCRIPTION AND INTENDED USE

3.1 The objectives of the System Definition Review (SDR) are to:

a. enable the Functional Baselines (FBLs) for the Mission System and Support System to be established in accordance with the Contract;

b. confirm that the Contractor's system-level designs for both the Mission System and Support System are complete and balanced, including to validate that the system requirements for both the Mission System and Support System are complete, verifiable, achievable and realistic;

c. demonstrate convergence on, and achievability of, technical requirements for both the Mission System and the Support System; and

d. demonstrate readiness to initiate the subsequent system design phase for both the Mission System and the Support System.

3.2 This MSR Checklist sets out the Commonwealth's requirements and minimum expectations for the conduct of an SDR.

4. INTER-RELATIONSHIPS

4.1 The SDR shall be conducted in accordance with the Approved System Review Plan (SRP), and shall be consistent with the following data items, where these data items are required under the Contract:

a. Systems Engineering Management Plan (SEMP);

b. Integrated Support Plan (ISP); and

c. Verification and Validation Plan (V&VP).

4.2 Primarily, the SDR addresses the requirements embodied in the:

a. System Specification (SS); and

b. Support System Specification (SSSPEC),

which have been derived from analyses of such documents as the Function and Performance Specification (FPS), the Operational Concept Document (OCD), and other regulatory and stakeholder requirements as defined by the SOW.

Note: The Status column in the following three tables indicates whether or not the associated Checklist items are able to be tailored by the Contractor in its SRP, based on the following definitions:

a. Mandatory items are not to be tailored;

b. Highly Desirable items should not be tailored, but may be tailored depending upon the specifics of the Contract and the Contractor's internal processes; and

c. Optional items may be tailored, based upon the specifics of the Contract and the Contractor's internal processes.

Notwithstanding the Status assigned to each Checklist item, the items are to be included in the SRP if they are applicable.

5. REVIEW ENTRY CRITERIA

Item	Entry Criteria	Status
1.	All data items required to be delivered before, and linked to, the SDR have been delivered and the Commonwealth Representative considers the data items to be suitable for the purposes of conducting SDR.	Mandatory
2.	The OCD has been reviewed to ensure that the operational and support concepts and scenarios for the Mission System and Support System are current. Proposed changes to the OCD to address any inconsistencies between the OCD and the SS/SSSPEC have been Approved by the Commonwealth Representative.	Mandatory
3.	Proposed Deviations to the FPS, to address any conflicts between the proposed SS or SSSPEC requirements and the FPS, have been Approved by the Commonwealth Representative.	Mandatory
4.	All documentation to form part of the Functional Baselines for both the Mission System and Support System has been placed under configuration control.	Mandatory
5.	Specification requirements for both the Mission System and the Support System have documented traceability to their source.	Mandatory
6.	Verification methods for both the Mission System and the Support System have documented traceability to their source.	Mandatory
7.	The Contractor has reviewed the Contract plans to assess their consistency with the requirements for both the Mission System and Support System.	Highly Desirable
8.	Action items from any previous System Reviews affecting SDR have been successfully addressed or action plans agreed with the Commonwealth Representative.	Mandatory
9.	The Commonwealth has reviewed the system requirements for both the Mission System and the Support System and all comments have been addressed to the satisfaction of the Commonwealth Representative.	Mandatory

6. REVIEW CHECKLIST

Item	Checklist Item	Status
1.	Were all entry criteria satisfied before starting SDR?	Mandatory
2.	Has the impact of Approved and pending CCPs been assessed?	Highly Desirable
3.	Have all Commonwealth Representative review comments against data items delivered for the purposes of SDR been adequately addressed?	Mandatory
4.	Have all Commonwealth-Approved sources of requirements been used to elicit requirements?	Mandatory
5.	Do the system requirements for both the Mission System and the Support System accurately reflect the needs, expectations, constraints and interfaces of stakeholders (eg, sponsor, user, operator, maintainer, and other system managers)?	Mandatory
6.	Have all conflicts between the initial Commonwealth requirements and other stakeholder (eg, government regulatory organisations and other Defence stakeholders) requirements been resolved?	Mandatory

Item	Checklist Item	Status
7.	Are the Mission System requirements necessary and sufficient to ensure that the system can be used and supported in accordance with the operational concepts and scenarios documented in the OCD?	Mandatory
8.	Are the Support System requirements necessary and sufficient to ensure that the Mission System can be supported in accordance with the operational and support concepts and scenarios documented in the OCD, while also achieving any support-related Australian Industry Activities (AIAs) set out in the Contract?	Mandatory
9.	Has an appropriate allocation of functions and requirements between the Mission System and Support System been made (eg, trade-offs associated with the levels of built-in test / diagnostics)?	Mandatory
10.	Have conflicts between the Mission System and Support System requirements been resolved?	Mandatory
11.	Have all assumptions made, with respect to defining system requirements for both the Mission System and the Support System, been analysed to ensure that they are consistent with the systems being designed and developed?	Mandatory
12.	Do the system requirements for both the Mission System and the Support System satisfy the requirements of the Contract and, if applicable, the Contract (Support) (eg, applicable standards, practices, SOW, SEMP and ISP)?	Mandatory
13.	Are the requirement statements well formulated individually and as sets?	Mandatory
14.	Has the requirements traceability between the SS/SSSPEC and the source documents (eg, FPS, OCD) been updated and finalised since SRR? Is the accompanying rationale sufficient?	Mandatory
15.	Have all requirements variances, voids and conflicts been resolved?	Mandatory
16.	Do the Mission System and Support System requirements have feasible and acceptable Verification strategies and methods?	Mandatory
17.	Are the Acceptance Verification criteria agreed with the Commonwealth Representative?	Mandatory
18.	Are all external interface requirements for the Mission System consistent with the documentation of the external interfaces?	Mandatory
19.	Are all system interface requirements for the new elements of the Support System consistent with the documentation of the interfaces for the existing support infrastructure?	Mandatory
20.	Are interface requirements for both the Mission System and the Support System defined to an appropriate level of detail for this stage of the Contract?	Mandatory
21.	Are the system boundaries for both the Mission System and Support System well defined?	Mandatory
22.	Are all system interfaces for both the Mission System and the Support System well understood and do all external systems have matching expectations for the system?	Mandatory

Item	Checklist Item	Status
23.	Have all of the Support System elements that will form a part of, or be resident on, the Mission System been identified? Have the implications of these elements been addressed in the System Specification? In particular, consider: a. Software applications resident on the Mission System, such as Computer Based Training (CBT) and Interactive Electronic Technical Publications (IETPs); b. Training simulation modules; c. Spares and Support and Test Equipment (S&TE); d. Maintenance workshops (eg, on a ship); e. failure and fault diagnostic systems; f. data logging systems; g. built-in test equipment, including diagnostic Software; and h. hard copy manuals.	Mandatory
24.	Are there any updates to the requirements for Government Furnished Material (GFM), particularly Government Furnished Equipment (GFE), currently documented in the Contract, including the timeframes for delivery?	Mandatory
25.	Have the system requirements, for both the Mission System and the Support System, been assigned to the applicable system logical models?	Mandatory
26.	Have the Logical Solution Representations for the Mission System been developed to adequately capture the system behaviour and the required behaviour of the subsystems?	Mandatory
27.	Have the Logical Solution Representations for the Support System been developed to adequately capture the system behaviour and the required behaviour of the Support System Constituent Capabilities?	Mandatory
28.	Have the Logical Solution Representations for the Mission System been partitioned and assigned to physical system design elements?	Mandatory
29.	Are system states and modes for both the Mission System and the Support System adequately defined?	Mandatory
30.	Are timelines of behaviour (eg, time-based sequences and relationships between system elements, events and activities) defined for both the Mission System and Support System, in particular for critical operational and support issues?	Mandatory
31.	Are data and control flows and interactions defined for both the Mission System and Support System?	Mandatory
32.	Have the failure modes, effects and the associated criticality for both the Mission System and, if applicable, Support System been analysed, and is the expected system behaviour on failure adequately captured?	Mandatory
33.	Has bi-directional traceability for the Mission System been established between system and subsystem requirements, system requirements and Logical Solution Representations, and Logical Solution Representations and subsystem designs?	Highly Desirable
34.	Have potential Support System alternatives been evaluated with respect to Life Cycle Cost (LCC), benefits, and risks?	Mandatory
35.	Has a final allocation of Support System requirements been made to each of the Support System Constituent Capabilities?	Mandatory

Item	Checklist Item	Status
36.	Has a hierarchy of MOEs for both the Mission System and Support System been developed that derive from critical operational issues and lead to specific performance measures in the SS and SSSPEC?	Mandatory
37.	Have key Technical Performance Measures (TPMs) been identified and have the status of these TPMs been reported against their respective progress?	Mandatory
38.	Are the updated/completed System and Subsystem Specifications for the Mission System adequate and cost effective in satisfying validated mission requirements?	Mandatory
39.	Is the updated/completed SSSPEC adequate and cost effective in satisfying validated operational and support requirements, including any support-related AIAs?	Mandatory
40.	Does the set of Subsystem Specifications represent a complete, consistent and optimised synthesis of the Mission System requirements, including to confirm that the SS is complete, verifiable, achievable and realistic?	Mandatory
41.	Have the technical program risks for both the Mission System and Support System been identified, ranked, and appropriate mitigation strategies defined?	Mandatory
42.	Have the results of significant trade studies been presented, for example: a. sensitivity of selected mission requirements versus realistic performance parameters and cost estimates; b. system centralisation versus decentralisation; c. automated versus manual operation; d. Reliability, Availability and Maintainability (RAM); e. commercially-available items versus new developments; f. testability trade studies (ie, allocation of fault detection/isolation capabilities between elements of built-in test, on board/on-site fault detection/isolation subsystem, separate S&TE, and manual procedures); g. size and weight; h. desired propagation characteristics versus reduction of interference to other systems (optimum selection frequencies); i. supportability for both the Mission System and Support System; j. functional allocation between hardware, Software, firmware and personnel/procedures; k. cost versus performance versus supportability; l. sensitivity of performance parameters versus cost; m. design versus manufacturing consideration; n. make versus buy; o. Software-development schedule; and p. on-equipment versus off-equipment maintenance tasks, including S&TE impacts.	Mandatory
43.	Has the analysis, assessments and trade-off studies recommended any additional special studies or development efforts?	Highly Desirable

Item	Checklist Item	Status
44.	Have the results of Commonwealth-directed trade studies been presented, and have the implications for the requirements and design of the Mission System and Support System been addressed? Have the agreed outcomes from Commonwealth-directed trade studies presented at previous reviews been incorporated into the requirements and design for the Mission System and Support System?	Optional
45.	Has design feasibility and system effectiveness for the Mission System been evaluated?	Mandatory
46.	Have Engineering Support functions developed by the Contractor been reviewed to determine that support concepts are valid, technically feasible, and understood. In particular, has attention been given to: a. design management of the Mission System and major Support System Components over the Life-of-Type (LOT) of the Mission System; b. the network of design and design-related authorities that will contribute to the Engineering Support function over the LOT of the Mission System; c. configuration management over the LOT of the Mission System, including the linkages between the Acquisition and In-Service Phases; d. provision of Verification and Validation during the In-Service Phase; and e. management of the Engineering Information System (EIS) during the In-Service Phase.	Mandatory
47.	Have Maintenance Support functions developed by the Contractor been reviewed to determine that support concepts are valid, technically feasible, and understood. In particular, has attention been given to: a. RAM considerations in the updated System and Subsystem Specifications; b. Maintenance design characteristics of the system; c. Corrective Maintenance and Preventive Maintenance requirements; d. special equipment, tools, or material required; e. item Maintenance analysis compatibility with required maintenance program when weapon is deployed; f. specific Configuration Item support requirements; g. Maintenance-related trade-off studies and findings (includes commercially-available equipment, Software fault diagnostic techniques); h. logistic cost impacts; i. support procedures and tools for Software, which facilitate Software modification, improvements, corrections and updates; and j. S&TE concept.	Mandatory

Item	Checklist Item	Status
48.	Have Supply Support functions developed by the Contractor been reviewed to determine that support concepts are valid, technically feasible, and understood. In particular, has attention been given to: a. supply pipelines for each of the states and modes of the Support System; b. interfaces between organisational entities along the supply pipeline; c. inventory management and asset tracking mechanisms and interfaces; d. lines of communication and divisions of responsibility; e. packaging, handling, storage and transportation considerations; and f. linkages to the maintenance concepts.	Mandatory
49.	Has system effectiveness for the Support System been evaluated, including for each of the Support System Constituent Capabilities?	Mandatory
50.	Have Support System cost, schedule and risk drivers been identified and evaluated, and mitigation strategies implemented?	Mandatory
51.	Has the capability of the selected configuration to meet the requirements of the System and Subsystem Specifications been evaluated?	Mandatory
52.	Has the allocation of Mission System requirements to subsystems/ Configuration Items been evaluated?	Highly Desirable
53.	Has the allocation of inter- and intra- system interface requirements for both the Mission System and Support System been evaluated?	Mandatory
54.	Have all entries marked "not applicable (N/A)" or "to be determined (TBD)" been identified and explained by the Contractor?	Highly Desirable
55.	Have specific design concepts, which require development toward advancing the state-of-the-art, been evaluated?	Optional
56.	Have high risk areas or design concepts requiring possible advances of the state-of-the-art been identified, and prepared approaches to the problem reviewed?	Optional
57.	Producibility Analysis and Manufacturing: Have the requirements for manufacturing methods and processes been updated? Has the production feasibility and risk analyses addressed at the SRR been updated and expanded? Has the production capability been reviewed to assess the facilities, materials, methods, processes, equipment and skills necessary to perform the development and production efforts? Have requirements to upgrade or develop manufacturing capabilities been identified? Have the management controls and the design and manufacturing engineering approaches been presented to ensure that the equipment is producible? Has a review of trade-off studies for design requirements against the requirement for producibility, facilities, tooling, production test equipment, inspection, and capital equipment for intended production rates and volume been presented?	Highly Desirable
58.	Have prepared test programs been reviewed for sufficiency and compatibility with the specified threat environment and existing simulation test facilities?	Optional

Item	Checklist Item	Status
59.	Have specific subsystems/components which may require "hardware proofing" and high-risk Long Lead Time Items (LLTIs) been evaluated?	Highly Desirable
60.	Growth, Evolution and Obsolescence: Have the likely areas for future change or expansion over the LOT been considered and reviewed since SRR? Have lower-level requirements adequately captured the need for future change or expansion in the likely areas? Have the appropriate standards for external interfaces and for internal architecture been considered to ensure the solution is robust over the LOT? Have additional elements, over and above those documented in the Growth Plan, that could cause obsolescence problems early in the system life-cycle been identified?	Mandatory
61.	Reliability, Maintainability and Testability (RMT): Have reliability, maintainability and testability been specified as measurable requirements or prioritised design goals for both the Mission System and the Support System Components? Are the support concepts documented in the OCD valid and feasible in light of the specified RMT requirements and the allocation of these requirements to subsystems? Do the requirements in the SSSPEC enable the Mission System maintainability and, if applicable, testability requirements to be met? Does the analysis of the RMT requirements indicate any areas of risk, particularly with respect to feasibility? Do the maintainability characteristics of the Mission System accord with the concepts for operational and deployed maintenance?	Mandatory
62.	Logistics Engineering (Transportability): Have transportability issues with the hardware and the software media been addressed for both the Mission System and Support System, including the use of differing transportation modes? Have the environmental implications of the differing transportation modes been addressed?	Highly Desirable
63.	Logistics Engineering (Standardisation): Has the use of commercially available and standard parts been evaluated? Does the proposed design utilise standard off-the-shelf elements to the maximum practicable extent?	Highly Desirable
64.	Human Engineering: Has human engineering including personnel numbers, skill levels and workload, both for operation and maintenance been analysed and adequately addressed in the requirements for both the Mission System and Support System?	Mandatory
65.	Electromagnetic Environment Effects: Has the interference caused by the external environment to the system and the system to the external environment been evaluated? Have the allocated performance characteristics of all system transmitters and receivers been evaluated to identify potential intra-system electromagnetic (EM) incompatibilities? Have non-design, spurious and harmonic system performance characteristics and their effect on electromagnetic environments of operational deployments been evaluated?	Mandatory

Item	Checklist Item	Status
66.	Safety: Have all Materiel Safety issues that affect the requirements and design of the Mission System and Support System, including hazard analyses, been addressed? Has an analysis of failure modes been undertaken to determine the safety implications of those modes? Have the identified hazards and their risk classifications been agreed by the Commonwealth Representative?	Mandatory
67.	Security: Have all security issues that affect the requirements and design of the Mission System and Support System been addressed, including in relation to physical security, Emanation Security (EMSEC), Information and Communications Technology (ICT) security and cyber security? Have appropriate security evaluations, Certifications and Security Authorisations been programmed into Contract plans and schedules?	Mandatory
68.	Regulatory: Have appropriate regulatory issues been addressed in the system requirements for both the Mission System and the Support System? For example, consider: a. Australian Communications and Media Authority (ACMA) regulatory requirements, b. environmental requirements, c. EMI/EMC regulatory requirements, d. Materiel Safety requirements, e. system security requirements (eg, for Certification and Security Authorisations), and f. ADF regulatory / assurance framework requirements.	Mandatory
69.	Environmental: Have the proposed designs for both the Mission System and Support System been reviewed for interaction with the natural environment, including the implications associated with temperature, humidity, vibration, shock, pressure, wind, salt, spray, sand, and dust? Have the ranges and extremes of environmental requirements been specified and addressed in the designs of both the Mission System and Support System? Have the operational and support concepts documented in the OCD been analysed to address environmental considerations for all phases of activity (eg, operations, maintenance, transportation, and storage)? Have all proposed environmental tests been reviewed for compatibility with the specified natural environmental conditions?	Mandatory
70.	Have all risks identified prior to SDR been reported against?	Mandatory
71.	Does the Contractor's proposed solution for both the Mission System and Support System represent a minimised LCC solution, as demonstrated in accordance with the Approved governing plan for LCC (eg, LCC Management Plan (LCCMP))?	Mandatory
72.	Have any Contractor-provided proposals to reduce LCC been addressed (eg, as documented in the LCC Report and Model (LCCRM))?	Highly Desirable

Item	Checklist Item	Status
73.	Are Contract plans and schedules consistent with the system requirements and design for both the Mission System and Support System?	Highly Desirable
74.	Does the Contractor's management of technical requirements with subcontractors and vendors allow the Contract needs to be achieved?	Mandatory
75.	Are appropriate procedures, tools and resources in place for the conduct of subsequent supportability analyses in accordance with applicable plans? Analysis examples include Failure Modes, Effects and Criticality Analysis (FMECA); Reliability Centred Maintenance (RCM); task analysis; Level Of Repair Analysis (LORA); and performance needs (Training) analysis.	Mandatory

7. REVIEW EXIT CRITERIA

Item	Exit Criteria	Status
1.	All checklist items have been addressed to the satisfaction of the Contractor and the Commonwealth Representative.	Mandatory
2.	All major problem and risk areas relating to the requirements and design for the Mission System and Support System have been identified and resolved and, for minor problems and risks areas, corrective action plans have been recorded and agreed by the Commonwealth Representative.	Mandatory
3.	The system-level designs for the Mission System and Support System are consistent with the requirements (including OCD, FPS, draft SS and draft SSSPEC), balanced, achievable, and sufficiently mature to support the design and development activities of the next phase.	Mandatory
4.	Both the Contractor and the Commonwealth Representative consider that: a. the system requirements for both the Mission System and Support System are complete, verifiable, achievable and realistic; and b. the Functional Baselines for the Mission System and Support System (which, for clarity, include the Verification requirements, the external interface requirements and the traceability requirements defined in the SOW) are able to be established in accordance with the Contract.	Mandatory
5.	Plans for the next phase are deemed to be realistic and achievable by both the Contractor and the Commonwealth Representative.	Mandatory
6.	Plans for the measurement and analysis program for the next phase have been agreed by the Commonwealth Representative, including the measures to be collected, associated collection methods, and analysis techniques.	Mandatory
7.	All risks identified during the course of SDR have been documented and analysed.	Mandatory
8.	The risks with proceeding to the next phase are acceptable to the Commonwealth Representative.	Mandatory
9.	All major action items have been closed.	Mandatory
10.	All minor action items have been documented and assigned with agreed closure dates.	Mandatory

Item	Exit Criteria	Status
11.	Review minutes have been prepared, Approved, and distributed in accordance with the Contract.	Mandatory

MSR CHECKLIST

1. IDENTIFICATION: MSR-CHECKLIST-PDR-V5.3

2. TITLE: PRELIMINARY DESIGN REVIEW CHECKLIST

3. DESCRIPTION AND INTENDED USE

3.1 The objectives of the Preliminary Design Review (PDR) are to confirm:

a. the Mission System preliminary design is sufficiently mature to proceed to the detailed design phase;

b. all subsystem and enabling product building blocks have been defined appropriately;

c. all subsystem building block designs satisfy their parent requirements;

d. the approaches to the next phase of development have been appropriately planned and that risks are identified with appropriate mitigation plans in place; and

e. the Supportability of the Mission System has been adequately addressed and the implications of the Mission System preliminary design on the Support System have been identified and incorporated into the applicable Contract plans.

3.2 This MSR Checklist sets out the Commonwealth's requirements and minimum expectations for the conduct of a PDR.

4. INTER-RELATIONSHIPS

4.1 The PDR shall be conducted in accordance with the Approved System Review Plan (SRP), and shall be consistent with the following data items, where these data items are required under the Contract:

a. Systems Engineering Management Plan (SEMP);

b. Integrated Support Plan (ISP); and

c. Verification and Validation Plan (V&VP).

4.2 Primarily, the PDR demonstrates how the evolving design solution for the Mission System, as captured by the hierarchy of specifications and design documentation defined in the Mission System Technical Documentation Tree (MSTDT):

a. addresses the requirements embodied in the System Specification (SS) and Support System Specification (SSSPEC); and

b. allows the Commonwealth to achieve the capability defined by the Operational Concept Document (OCD).

Note: The Status column in the following three tables indicates whether or not the associated Checklist items are able to be tailored by the Contractor in its SRP, based on the following definitions:

a. Mandatory items are not to be tailored;

b. Highly Desirable items should not be tailored, but may be tailored depending upon the specifics of the Contract and the Contractor's internal processes; and

c. Optional items may be tailored, based upon the specifics of the Contract and the Contractor's internal processes.

Notwithstanding the Status assigned to each Checklist item, the items are to be included in the SRP if they are applicable.

5. REVIEW ENTRY CRITERIA

Item	Entry Criteria	Status
1.	All data items required to be delivered before, and linked to, the PDR have been delivered and the Commonwealth Representative considers the data items to be suitable for the purposes of conducting PDR.	Mandatory
2.	All technical documentation, as defined by the MSTDT and required to inform the PDR, has been developed and delivered in accordance with the CDRL, the MSTDT, and the Contractor's plans.	Mandatory
3.	The Contractor has reviewed Contract plans (including the Performance Measurement Baseline) to assess their consistency with the system requirements.	Highly Desirable
4.	Action items from any previous System Reviews affecting PDR have been successfully addressed or action plans agreed with the Commonwealth Representative.	Mandatory

6. REVIEW CHECKLIST

Item	Checklist Item	Status
1.	Were all entry criteria satisfied before starting PDR?	Mandatory
2.	Has the impact of Approved and pending CCPs been assessed?	Highly Desirable
3.	Have all Commonwealth Representative review comments against data items been adequately addressed?	Mandatory
4.	Have the Mission System Functional Baseline (FBL) and the Support System FBL been established?	Mandatory
5.	Are there any outstanding unresolved issues with the Mission System or Support System requirements (eg, requirements annotated with TBD in either the Mission System FBL or the Support System FBL)?	Mandatory
6.	Has a consistent Configuration Baseline been established for all documents associated with PDR?	Mandatory
7.	Where, as a result of the refinement of the design, any proposed change to an SS or SSSPEC requirement is in conflict with the FPS, has an Application for a Deviation been proposed for Commonwealth Representative Approval?	Mandatory
8.	Has traceability been established, both downward and upward, between the Mission System FBL and the lower-level Configuration Items (CIs) in the proposed design solution?	Mandatory
9.	Are Acceptance Verification criteria agreed with the Commonwealth Representative?	Mandatory
10.	For the set of Mission System Hardware CIs and Software CIs (including those elements of the Support System embedded within the Mission System): a. Has it been determined that the preliminary design solution expressed as the set of Hardware and Software CIs will meet the overall Mission System FBL? b. Has the behaviour of the set of system components in each state and mode, including failure modes of the CIs, been identified? c. For each of the key system performance measures, have the budgeted performance allocations across CIs been identified and does the preliminary design allow these budgets to be met?	Mandatory

Item	Checklist Item	Status
	d. Have any remaining areas of requirements variances, voids and conflicts been identified and an approach defined to address them?	
11.	For each Mission System Hardware CI (including those elements of the Support System embedded within the Mission System): a. Will the preliminary Hardware CI detail design satisfy the performance characteristics of its specification? b. Are the Hardware CI operating characteristics in each mode compatible with the overall system design requirements (eg, do the states and modes of the Hardware CI map to the higher-level states and modes and aggregate to achieve higher-level functionality)? c. Have all physical and functional interfaces between the Hardware CI and other items of equipment, computer Software, and facilities been defined? d. Have the risks associated with the design and production of the Hardware CI and the mitigation strategies to address them?	Mandatory
12.	For each Mission System Software CI (including those elements of the Support System embedded within the Mission System): a. determine whether all interfaces between the Software CI and all other CIs both internal and external to the system meet their functional and interface requirements; b. determine whether the top-level design embodies all the functional and interface requirements; c. determine whether the approved design methodology has been used for the top-level design; d. determine whether the appropriate Human Engineering principals have been incorporated in the design; e. determine whether timing and sizing constraints have been met throughout the top-level design; and f. determine whether logic affecting Materiel Safety has been incorporated in the design.	Mandatory
13.	For each Support System Hardware and Software CI that must interface with the Mission System in the operational environment: a. identify the behaviour of each of the Support System CIs that interface with the Mission System in each of its applicable states and modes, including the failure modes of the CIs that may impact upon the Mission System; b. determine whether all interfaces between the Mission System and Support System CIs meet their functional and interface requirements; c. determine that the preliminary design for each of the Support System CIs provides the capability of satisfying the performance characteristics of its specification; d. establish compatibility of the Support System CI operating characteristics in each mode with the overall Mission System design requirements; and e. determine the risks associated with the deployment and the design and production of the Support System CIs and the mitigation strategies to address them.	Highly Desirable
14.	Have additional Technical Performance Measures (TPMs) been identified since SDR? Has the status of all TPMs been reported against their respective progress?	Mandatory

Item	Checklist Item	Status
15.	Have the results of significant trade studies been presented, for example: a. sensitivity of selected mission requirements versus realistic performance parameters and cost estimates; b. operations design versus maintenance design, including Support and Test Equipment (S&TE) impacts; c. system centralisation versus decentralisation; d. automated versus manual operation; e. Reliability, Availability and Maintainability (RAM); f. commercially-available items versus new developments; g. existing inventory items versus new development; h. testability trade studies (eg, allocation of fault detection/isolation capabilities between elements of built-in-test, on board/on-site fault detection/isolation subsystem, separate S&TE, and manual procedures); i. size and weight; j. desired propagation characteristics versus reduction interference to other systems (optimum selection frequencies); k. performance/logistics trade studies; l. Life Cycle Cost (LCC) reduction for different computer programming languages; m. functional allocation between hardware, Software, firmware and Personnel/procedures; n. LCC / system performance trade studies to include sensitivity of performance parameters to cost; o. sensitivity of performance parameters versus cost; p. cost versus performance; q. design versus manufacturing consideration; r. make versus buy; s. Software-development schedule; t. on-equipment versus off-equipment maintenance tasks, including S&TE impacts; and u. common versus special-to-type S&TE.	Mandatory
16.	Have the results of Commonwealth-directed trade studies been presented, and have the implications for the requirements and design of the Mission System and, where applicable, the Support System been addressed? Have the agreed outcomes from Commonwealth-directed trade studies presented at previous reviews been incorporated into the requirements and design for the Mission System and, where applicable, the Support System?	Optional
17.	Packaging and Mounting: Do the proposed preliminary mechanical and packaging designs of consoles, racks, drawers, printed circuit boards, connectors, etc, allow the system requirements to be met? Do the equipment layout and preliminary drawings (including three-dimensional / computer-aided design models, if applicable) indicate that the system design can be accommodated within the available space/facilities? Have power distribution and grounding design aspects been addressed?	Mandatory

Item	Checklist Item	Status
	Is the packaging design compatible with the maintenance concepts (particularly maintenance to be conducted on-equipment) and maintainability considerations?	
18.	Design Producibility and Manufacturing: The Contractor shall demonstrate and present evidence that manufacturing engineering will be integrated into the design process. The Contractor shall provide evidence of performing producibility analyses on development hardware trading off design requirements against manufacturing risk, cost, production, volume, and existing capability/availability. Evidence of such analyses may be in the Contractor's own format but must conclusively demonstrate that in-depth analyses were performed by qualified organisations/individuals and the results of those analyses will be incorporated in the design. Preliminary manufacturing engineering and production planning demonstrations shall address: material and component selection, preliminary production sequencing, methods and flow concepts, new processes, manufacturing risk, equipment and facility utilisation for intended rates and volume, production in-process and acceptance test and inspection concepts (Efforts to maximise productivity in the above areas should be demonstrated.). Management systems to be utilised will ensure that producibility and manufacturing considerations are integrated throughout the development effort. The producibility and manufacturing concerns identified in the SRR and the SDR shall be updated and expanded to: a. provide evidence that concerns identified in the manufacturing feasibility assessment and the production capability estimate have been addressed and that resolutions are planned or have been performed; and b. make recommendations, including manufacturing technology efforts and provide a schedule of necessary actions to the Commonwealth to resolve open manufacturing concerns and reduce manufacturing risk.	Highly Desirable
19.	Growth, Evolution and Obsolescence: Have the likely areas for future system change or expansion over the LOT been considered and reviewed since SDR? Have the allocated system and lower level requirements adequately captured the need for future change or expansion in the likely areas? Have the appropriate standards for internal architecture been considered to ensure the solution is robust over the LOT? Has the purchasing strategy been assessed to ensure that COTS elements of the solution subject to rapid change in the marketplace are acquired using just-in-time principles? Has the robustness of the design with respect to areas of likely growth and change over the LOT, including likely changes to user requirements and changes to hardware or Software technology solutions been addressed?	Mandatory
20.	Design Reliability: Identify the quantitative reliability requirements and their allocations derived from the Mission System FBL. Address the treatment and design for system failures that may be attributed to either hardware or Software failures. Review results of Failure Mode, Effects and Criticality Analysis (FMECA), including any design implications. Review failure rate sources, derating policies, and prediction methods.	Mandatory

Item	Checklist Item	Status
	Review the reliability mathematical models and block diagrams as appropriate. Describe planned actions when predictions are less than specified requirements. Identify and review parts or components that have a critical life or require special consideration, and general plan for handling. Agencies so affected shall present planned actions to deal with these components or parts. Identify applications of redundant Hardware CI elements. Evaluate the basis for their use and provisions for "on-line" switching of the redundant element. Review critical signal paths to determine that a fail-safe/fail-soft design has been provided. Review safety margins for Hardware CIs between functional requirements and design provisions for elements, such as: power supplies, transmitter modules, motors, and hydraulic pumps. Similarly, review structural elements (eg, antenna pedestals, dishes, and radomes) to determine that adequate margins of safety shall be provided between operational stresses and design strengths. Review Reliability design guidelines for Hardware CIs to ensure that design reliability concepts shall be available and used by equipment designers. Reliability design guidelines shall include, as a minimum, part application guidelines (electrical derating, thermal derating, part parameter tolerances), part selection order of preference, prohibited parts/materials, reliability apportionments/predictions, and management procedures to ensure compliance with the guidelines. Review preliminary plans for verifying that Hardware CIs meet the reliability requirements: failure counting ground rules, accept-reject criteria, number of test articles, test location and environment, planned starting date, and test duration. Review elements of the Integrated Reliability, Maintainability and Testability Plan (IRMTP) to determine that each reliability task has been based on achieving specified requirements. Review Subcontractor/supplier reliability controls.	
21.	Design Maintainability: Identify the quantitative maintainability requirements specified in the hardware Development and Software Requirements Specifications; if applicable, compare preliminary predictions with specified requirements. Review Hardware CI Preventive Maintenance schedules in terms of frequencies, durations, and compatibility with system schedules. Review repair rate sources and prediction methods. Review planned actions when predictions indicate that specified requirements will not be attained. Review planned designs for accessibility, testability, and ease of maintenance characteristics (including provisions for automatic or operator-controlled recovery from failure/malfunctions) to determine consistency with specified requirements. Determine if planned Hardware CI design indicates that parts, assemblies, and components will be so placed that there is sufficient space to use test probes, soldering irons, and other tools without difficulty and that they are placed so that structural members of units do not prevent access to them or their ease of removal. Review provisions for diagnosing cause(s) of failure; means for localising source to lowest replaceable element; adequacy and locations of planned test points; and planned system diagnostics that	Mandatory

Item	Checklist Item	Status
	provide a means for isolating faults to and within the CI. This review shall encompass on-line diagnostics, off-line diagnostics, and proposed technical orders and/or commercial manuals. Evaluate for Hardware CIs the preliminary plans for verifying that the items meet maintainability requirements, including number of maintenance tasks that shall be accomplished; accept-reject criteria; general plans for introducing faults into the Hardware CI and personnel involved in the demonstration. Review elements of the IRMTP to determine that each maintainability task has been initiated towards achieving specified requirements. Ensure that consideration has been given to optimising the system/item from a maintainability and maintenance viewpoint and that it is supportable within the maintenance concept as developed. Also, for Hardware CIs, ensure that Level Of Repair Analysis (LORA) considerations have been addressed.	
22.	Logistics Engineering (Transportability): Review Hardware CIs (for both the Mission System and any Support System Components that may need to be deployed with the Mission System) to determine if design meets Contract requirements governing size and weight to permit economical handling, loading, securing, transporting, and disassembly for shipment within existing capabilities of military and commercial carriers. Identify potential outsized and overweight items. Identify system/items defined as being hazardous. Ensure Packaging afforded hazardous items complies with Hazardous Chemicals and Dangerous Goods regulations. Identify Hardware CIs requiring special temperature and humidity control or those possessing sensitive and shock susceptibility characteristics. Determine special transportation requirements and availability for use with these Hardware CIs. Review transportability analyses to determine that transportation conditions have been evaluated and that these conditions are reflected in the design of protective, shipping, and handling devices. In addition to size and weight characteristics, determine that analysis includes provisions for temperature and humidity controls, minimisation of sensitivity, susceptibility to shock, and transit damage.	Mandatory
23.	Logistics Engineering (Parts Standardisation and Interchangeability): a. Review procedures to determine if maximum practical use will be made of parts built to approved standards or specifications. The potential impact on the overall program is to be evaluated when a part built to approved standards and specifications cannot be used for any of the following reasons: (i) performance; (ii) cost; (iii) schedule and timing considerations; (iv) weight; (v) size; (vi) RAM; (vii) Supportability; and (viii) survivability (including accidental damage, nuclear, biological, chemical, and battle damage). b. Identify potential design changes that will permit a greater use of standard or preferred parts and evaluate the trade-offs. c. Review specific trade-offs or modifications that may be required of existing designs if existing items are, or will be, incorporated in the Hardware CI.	Mandatory

Item	Checklist Item	Status
	d. Ensure that appropriate actions will be implemented for hardware items identified as engineering or logistics critical.	
24.	Human Engineering: Review the evidence that substantiates the functional allocation decisions to Hardware and Software CIs, including all operational and maintenance functions of the CI. In particular, ensure that the approach to be followed emphasises the functional integrity of the human with the machine to accomplish a system operation. Review design data, design descriptions and drawings on system operations, equipment, and facilities to ensure that human performance requirements of the Hardware Development and Software Requirements Specifications are met. Examples of the types of design information to be reviewed are: a. operating modes for each display station, and for each mode, the functions performed and the displays and control used; b. the format and content of each display, including data locations, spaces, abbreviations, the number of digits, all special symbols and alert mechanisms (eg,, flashing rates); c. the control and data entry devices and formats including keyboards, special function keys, cursor control; d. the format of all operator inputs, together with provisions for error detection and correction; and e. all status, error, and data printouts - including formats, headings, data units, abbreviations, spacings, columns, etc. These should be presented in sufficient detail to allow: a. Commonwealth Representative personnel to judge adequacy from a human usability standpoint, b. design personnel to know what is required, c. test personnel to prepare tests, and d. logistics personnel to undertake task analysis and performance needs (Training) analysis and development. Make recommendations to update the System/Subsystem, or Software Requirements Specification and Interface Requirements Specification(s) in cases where requirements for human performance need to be more detailed. Review human/machine functions to ensure that each human's capabilities are used but not exceeded. Have biomedical considerations (eg, life support and crew station requirements) been addressed?	Mandatory
25.	Electromagnetic Environmental Effects: Review Hardware CI design for compliance with electromagnetic compatibility / electromagnetic interference (EMC/EMI) requirements. Review Mission System design for EMC with the Support System Components that are either embedded within the Mission System or interface with it. Review preliminary EMI test plans to assess adequacy to confirm that EMC requirements have been met.	Mandatory
26.	System Safety: Have all Mission System Materiel Safety issues that affect the requirements and design of the Mission System and Support System, including those identified through hazard analyses, been addressed? Has an analysis of failure modes been undertaken to determine the safety implications of those modes?	Mandatory

Item	Checklist Item	Status
	Review results of CI safety analyses, and quantitative hazard analyses (if applicable). Have the identified hazards and their risk classifications been agreed by the Commonwealth Representative? Review results of system and intra-system safety interfaces and trade-off studies affecting the CI. Review safety requirements levied on Subcontractors. Review known special areas of safety, peculiar to the nature of the system (eg, fuel handling, fire protection, high levels of radiated energy, high voltage protection, safety interlocks, etc). Review results of preliminary safety tests (if appropriate). Generally review adequacy and completeness of CI from design safety viewpoint. Review compliance of commercially available CIs or CI components with Materiel Safety requirements and identify modifications to such equipment, if required. Ensure the safety authority has reviewed the evidence supporting the draft Safety Case Report.	
27.	System Security: Have all Mission System security issues that affect the requirements and design of the Mission System and Support System been addressed, including in relation to physical security, Emanation Security (EMSEC), Information and Communications Technology (ICT) security and cyber security? Have appropriate security evaluations, Certifications and Safety Authorisations been programmed into Contract plans and schedules? Review unique security requirements and the techniques to be used for implementing and maintaining security within the Hardware and Software CIs.	Mandatory
28.	Regulatory: Have appropriate Mission System regulatory issues been addressed in the design of both the Mission System and the Support System? For example, consider: a. Australian Communications and Media Authority (ACMA) regulatory requirements, b. environmental requirements, c. EMI/EMC regulatory requirements, d. Materiel Safety requirements, e. system security requirements (eg, for Certifications and System Authorisations), and f. ADF regulatory / assurance framework requirements.	Mandatory
29.	Environmental: Review Contractor's planned design approach toward meeting climatic conditions (eg, operating and non-operating ranges for temperature, humidity, etc). Ensure that the Contractor clearly understands the effect of, and the interactions between, the natural environment and Hardware CI design, including the implications associated with temperature, humidity, vibration, shock, pressure, wind, salt, spray, sand, and dust. In cases where the effect and interactions are not known or are ambiguous, ensure that studies are in progress or planned to make these determinations.	Mandatory

Item	Checklist Item	Status
	Have the ranges and extremes of environmental requirements been specified and addressed in the Hardware CI designs? Have thermal design aspects been addressed? Have corrosion prevention/control considerations been addressed?	
30.	Assignment of Official Nomenclature: Ensure understanding of procedure for obtaining assignment of nomenclature and approval of nameplates. Determine that agreement has been reached with the Commonwealth Representative on the level of nomenclature (ie, system, set, central, group, component, sub-assembly, unit, etc).	Mandatory
31.	Verification & Validation (V&V): Review information to be provided by the Contractor regarding concepts for V&V (both informal and formal). Information shall include the progress/status of the test effort since the previous reporting milestone. Ensure that all test planning documentation has been updated to include new test support requirements and provisions for long-lead time support requirements. Review Contractor test data from prior testing to determine if such data negates the need for additional testing. Describe the required test-unique support Software, hardware, and facilities and the interrelationships of these items. Describe how, when, and from where the test-unique support items will be obtained. Describe requirements for V&V-related Government-provided Software, hardware, facilities, data, and documentation.	Mandatory
32.	Maintenance and Maintenance Data (Hardware CIs): Describe Maintenance concepts for impact on design and S&TE. Review adequacy of Maintenance plans. Coverage shall be provided for on-equipment (organisational), off-equipment – on-site (intermediate), and off-equipment – off-site (depot) Maintenance levels. Determine degree of understanding of the background, purpose, requirements, and usage of Maintenance (failure) data collection and historical/status records. Describe method of providing Maintenance, failure, reliability and maintainability data to the Commonwealth Representative. Review the requirements for Corrective Maintenance tasks, which have been identified through FMECA, to ensure consistency with Maintenance concepts. Review the results of Reliability Centred Maintenance (RCM) analyses for: a. possible implications on the design of the Mission System and the requirements for Support System Components; and b. consistency with the concepts for Preventive Maintenance.	Mandatory
33.	Spares and Government Furnished Material (GFM): Review logistics and provisioning planning to ensure full understanding of scope of requirements in these areas and that a reasonable time-phased plan has been developed for accomplishment. Of specific concern are the areas of: provisioning requirements, GFM usage and spare parts, and support during installation, checkout, and test. Review provisioning actions and identify existing or potential provisioning problems – logistic critical and Long Lead Time Items	Mandatory

Item	Checklist Item	Status
	(LLTIs) are identified and evaluated against use of the interim release requirements. Review progress toward determining and acquiring total installation, checkout, and test support requirements. Review the range and quantity of Spares identified to be held in the Mission System (eg, on a ship) to determine that the Spares will fit into the allocated space.	
34.	Packaging/Special Design Protective Equipment (SDPE): Analyse all available specifications (System/Subsystem, Hardware CI development, Software requirements, interface requirements, and critical items) for Packaging requirements for each product fabrication and material specification. Evaluate user/operational support requirements and maintenance concepts for effect and influence on package design. Establish that time-phased plan for Packaging design development is in consonance with the development of the equipment design. Review planned and/or preliminary equipment designs for ease of packaging and simplicity of Packaging design, and identify areas where a practical design change would materially decrease cost, weight, or volume of Packaging required. Review requirements for SDPE necessary to effectively support CI during transportation, handling and storage processes. Ensure SDPE is categorised as a CI utilising specifications conforming to the types and forms as prescribed in the Contract. Review SDPE development/product specifications for adequacy of performance/ interface requirements. Determine initial Packaging design baselines, concepts, parameters, constraints, etc., to the extent possible at this phase of the CI-development process. Ensure previously developed and approved Packaging design data for like or similar CIs is being utilised. Establish plans for trade studies to determine the most economical and desirable Packaging design approach needed to satisfy the functional performance and logistic requirements. Verify the adequacy of the prototype Packaging design. Identify Packaging specification used for Hazardous Chemicals and Dangerous Goods.	Mandatory
35.	Support and Test Equipment (S&TE) and Training Equipment: Review the range and quantity of S&TE identified to be held in the Mission System (eg, on a ship) to determine that the S&TE will fit into the allocated space. Review considerations applicable to Hardware CI and Software CI as appropriate. Verify testability analysis results. For example, on repairable integrated circuit boards are test points available so that failure can be isolated to the lowest level of repair? Review progress of S&TE and Training Equipment LLTIs. Review progress toward determining total S&TE and Training Equipment requirements. Review the reliability/maintainability/availability of S&TE and Training Equipment items. Identify logistic support requirements for S&TE and Training Equipment items and rationale for their selection. Review calibration requirements for S&TE.	Mandatory

Item	Checklist Item	Status
	Describe technical manuals and data availability for S&TE and Training Equipment items. Verify compatibility of proposed S&TE and Training Equipment items with support concepts. For existing S&TE, review Maintainability data resulting from the field use of this equipment. Review the cost difference between systems using single or multipurpose S&TE vs proposed new S&TE. Examine technical feasibility in using existing, developmental, and proposed new S&TE. For mobile systems, review the mobility requirements of S&TE. Review the relationship of the computer resources in the system/subsystem with those in Automatic Test Equipment (ATE). Relate this to the development of Built In Test Equipment (BITE) and try to reduce the need for complex supporting S&TE. Verify on-equipment versus off-equipment maintenance task trade study results, including S&TE impacts. Review updated lists of required S&TE and Training Equipment.	
36.	Technical Data: Review the suitability of available commercial manuals and/or proposed modifications. Review the application of Technical Data standards in the development of Technical Data including, when applicable, definition documents (eg, business rules and schema) for Interactive Electronic Technical Publications. Review the range and scope of proposed publications (hardcopy and/or electronic) to determine their suitability in enabling the support concepts to be met. Review the proposed availability of publications and other Technical Data for verification and validation activities.	Mandatory
37.	Have all risks identified prior to PDR been reported against?	Mandatory
38.	Does the Contractor's proposed solution for both the Mission System and Support System represent a minimised LCC solution, as demonstrated in accordance with the Approved governing plan for LCC (eg, LCC Management Plan (LCCMP))?	Mandatory
39.	Have any Contractor-provided proposals to reduce LCC been addressed (eg, as documented in the LCC Report and Model (LCCRM))?	Highly Desirable
40.	Are Contract plans and schedules (including the Performance Measurement Baseline) consistent with the system requirements and design?	Highly Desirable
41.	Does the Contractor's management of technical requirements with subcontractors and vendors allow the Contract needs to be achieved?	Mandatory
42.	Does the Contractor's management of subcontractors and vendors allow visibility of objective progress to be reported in the Earned Value Management System?	Mandatory

7. REVIEW EXIT CRITERIA

Item	Exit Criteria	Status
1.	All checklist items have been addressed to the satisfaction of the Contractor and the Commonwealth Representative.	Mandatory
2.	All major problem and risk areas in relation to the preliminary design for the Mission System, including in relation to the required design maturity to achieve the objectives of the PDR, have been identified and resolved and, for minor problems and risks, corrective action plans have been recorded and agreed by the Commonwealth Representative.	Mandatory
3.	The preliminary designs for the Mission System is consistent with the requirements, balanced, achievable, and able to support the design and test activities of the next phase.	Mandatory
4.	The implications of the Mission System preliminary design for the Support System design have been identified and incorporated into the applicable Contract plans.	Mandatory
5.	Plans for the next phase are deemed to be realistic and achievable by both the Contractor and the Commonwealth Representative.	Mandatory
6.	Plans for the measurement and analysis program for the next phase have been agreed by the Commonwealth Representative, including the measures to be collected, associated collection methods, and analysis techniques.	Mandatory
7.	The plan for achievement of work for the next phase is reflected in the Performance Measurement Baseline and the reporting levels and variance analysis thresholds have been agreed and documented in the Earned Value Management Plan.	Mandatory
8.	All risks identified during the course of PDR have been documented and analysed.	Mandatory
9.	The risks with proceeding to the next phase are acceptable to the Commonwealth Representative.	Mandatory
10.	All major action items have been closed.	Mandatory
11.	All minor action items have been documented and assigned with agreed closure dates.	Mandatory
12.	Review Minutes have been prepared, Approved, and distributed in accordance with the Contract.	Mandatory

MSR CHECKLIST

1. IDENTIFICATION: MSR-CHECKLIST-DDR-V5.2

2. TITLE: DETAILED DESIGN REVIEW CHECKLIST

3. DESCRIPTION AND INTENDED USE

3.1 The objectives of the Detailed Design Review (DDR) are to demonstrate that:

a. the Mission System detailed design is sufficiently mature to proceed to the build phase;

b. the specifications, drawings and Software development documentation have been appropriately defined;

c. that building block end product designs satisfy their parent requirements;

d. that enabling product requirements have been adequately defined;

e. that the building blocks are either ready for further development, adequately defined for procurement, or adequately defined for fabrication;

f. the approaches to the next phase have been appropriately planned and that risks are identified with appropriate mitigation plans in place; and

g. the Supportability of the Mission System has been adequately addressed and the implications of the Mission System preliminary design on the Support System have been identified and incorporated into the applicable Contract plans.

3.2 This MSR Checklist sets out the Commonwealth's requirements and minimum expectations for the conduct of a DDR.

4. INTER-RELATIONSHIPS

4.1 The DDR shall be conducted in accordance with the System Review Plan (SRP), and shall be consistent with the:

a. Systems Engineering Management Plan (SEMP);

b. Integrated Support Plan (ISP); and

c. Verification and Validation Plan (V&VP).

4.2 Primarily, the DDR demonstrates how the mature design solution for the Mission System, as captured by the hierarchy of specifications and design documentation defined in the Mission System Technical Documentation Tree (MSTDT), will:

a. satisfy the requirements embodied in the System Specification (SS) and Support System Specification (SSSPEC); and

b. allow the Commonwealth to achieve the capability defined by the Operational Concept Document (OCD).

Note: The Status column in the following three tables indicates whether or not the associated Checklist items are able to be tailored by the Contractor in its SRP, based on the following definitions:

a. Mandatory items are not to be tailored;

b. Highly Desirable items should not be tailored, but may be tailored depending upon the specifics of the Contract and the Contractor's internal processes; and

c. Optional items may be tailored, based upon the specifics of the Contract and the Contractor's internal processes.

Notwithstanding the Status assigned to each Checklist item, the items are to be included in the SRP if they are applicable.

5. REVIEW ENTRY CRITERIA

Item	Entry Criteria	Status
1.	All data items required to be delivered before, and linked to, the DDR have been delivered and the Commonwealth Representative considers the data items to be suitable for the purposes of conducting DDR.	Mandatory
2.	All technical documentation as defined by the MSTDT and required to inform DDR, has been developed and delivered in accordance with the CDRL, the MSTDT and the Contractor's plans.	Mandatory
3.	The Contractor has reviewed Contract plans (including the Performance Measurement Baseline) to assess their consistency with the system requirements.	Highly Desirable
4.	Action items from any previous System Reviews affecting DDR have been successfully addressed or action plans agreed with the Commonwealth Representative.	Mandatory

6. REVIEW CHECKLIST

Item	Checklist Item	Status
1.	Were all entry criteria satisfied before starting DDR?	Mandatory
2.	Has the impact of Approved CCPs been assessed?	Highly Desirable
3.	Have all Commonwealth Representative review comments against data items been adequately addressed?	Mandatory
4.	Have changes to the Mission System Functional Baseline (FBL) and the Support System FBL since the last review been identified and captured in the design?	Mandatory
5.	Are there any outstanding unresolved issues with the Mission System or Support System requirements (eg, requirements annotated with TBD) in either the Mission System FBL or the Support System FBL?	Mandatory
6.	Has a consistent Configuration Baseline been established for all documents associated with DDR?	Mandatory
7.	Where, as a result of the refinement of the design, any proposed change to an SS or SSSPEC requirement is in conflict with the FPS, has an Application for a Deviation been proposed for Commonwealth Representative Approval?	Mandatory
8.	Has traceability been established, both downward and upward, between the Mission System FBL and the lowest-level Configuration Items (CIs) in the final design solution?	Mandatory
9.	Are Acceptance Verification criteria agreed with the Commonwealth Representative?	Mandatory
10.	For the set of Mission System Hardware CIs and Software CIs (including those elements of the Support System embedded within the Mission System): a. has it been determined that the final design solution expressed as the set of Hardware and Software CIs will meet the overall Mission System FBL; b. has the behaviour of the set of system components in each state and mode, including failure modes of the CIs, been identified;	Mandatory

Item	Checklist Item	Status
	c. for each of the key system performance measures, have the budgeted performance allocations across CIs been identified and does the final design allows these budgets to be met; and d. have any remaining areas of requirements variances, voids and conflicts been identified and an approach defined to address them?	
11.	For each Mission System Hardware CI (including those elements of the Support System embedded within the Mission System): a. will the final Hardware CI detail design satisfy the performance characteristics of its specification; b. has all firmware been identified, together with the strategies for its support over the LOT; c. have all physical and functional interfaces between the Hardware CI and other items of equipment, Software, and facilities been defined; and d. have the risks associated with the production and installation of the Hardware CI and the mitigation strategies to address them been identified?	Mandatory
12.	For each Mission System Software CI (including those elements of the Support System embedded within the Mission System), the Contractor shall present the detailed design (including rationale) of the Software CI to include: a. the determination as to whether all interfaces between the Software CI and all other CIs both internal and external to the system meet their final functional and interface requirements; b. the determination as to whether the final top-level Software design embodies all the functional and interface requirements; c. the determination as to whether the approved design methodology has been used for the top-level design; d. the determination as to whether the appropriate Human Engineering principals have been incorporated in the design; e. the determination as to whether timing and sizing constraints have been met throughout the top-level design; f. the determination as to whether logic affecting Materiel Safety has been incorporated in the design; g. the assignment of Software CI requirements to specific Software units, the criteria and design rules used to accomplish this assignment, and the traceability of unit designs to satisfy Software CI requirements, with emphasis on the necessity and sufficiency of the units for implementing unit design requirements; h. the overall information flow between Software units, the method(s) by which each unit gains control, and the sequencing of units relative to each other; i. the design details of the Software CI and units including data definitions, timing and sizing, data and storage requirements and allocations; j. the detailed design characteristics of all interfaces, including their data source, destination, interface name and interrelationships; and, if applicable, the design for direct memory access. The Contractor shall also give an overview of the key design issues of the interface Software design, and indicate whether data flow formats are fixed or subject to extensive dynamic changes; and k. the detailed characteristics of any data base or significant data storage elements. Data base structure and detailed design,	Mandatory

Item	Checklist Item	Status
	including all files, records, fields, and items. Access rules, how file sharing will be controlled, procedures for data base recovery/ regeneration from a system failure, rules for data base manipulation, rules for maintaining file integrity, rules for usage reporting, and rules governing the types and depth of access shall be defined. Data-management rules and algorithms for implementing them shall be described. Details of the language required by the user to access the data base shall also be described.	
13.	For each Support System Hardware and Software CI that must interface with the Mission System in the operational environment: a. identify the behaviour of each of the Support System CIs that interface with the Mission System in each of its applicable states and modes, including the failure modes of the CIs that may impact upon the Mission System; b. determine whether all interfaces between the Mission System and Support System CIs meet their functional and interface requirements; c. determine that the final design for each of the Support System CIs provides the capability of satisfying the performance characteristics of its specification; d. establish compatibility of the Support System CI operating characteristics in each mode with the overall Mission System design requirements; and e. determine the risks associated with the deployment and production of the Support System CIs and the mitigation strategies to address them.	Highly Desirable
14.	Have additional Technical Performance Measures (TPMs) been identified since PDR? Has the status of all TPMs been reported against their respective progress?	Mandatory
15.	Have the results of significant trade studies been presented, for example: a. sensitivity of selected mission requirements versus realistic performance parameters and cost estimates; b. operations design versus maintenance design, including Support and Test Equipment (S&TE) impacts; c. system centralisation versus decentralisation; d. automated versus manual operation; e. Reliability, Availability and Maintainability (RAM); f. commercially-available items versus new developments; g. existing inventory items versus new development; h. testability trade studies (eg, allocation of fault detection/isolation capabilities between elements of built-in-test, on board/on-site fault detection/isolation subsystem, separate S&TE, and manual procedures); i. size and weight; j. desired propagation characteristics versus reduction interference to other systems (optimum selection frequencies); k. performance/logistics trade studies; l. Life Cycle Cost (LCC) reduction for different computer programming languages;	Mandatory

Item	Checklist Item	Status
	m. functional allocation between hardware, Software, firmware and personnel/procedures; n. LCC/system performance trade studies to include sensitivity of performance parameters to cost; o. sensitivity of performance parameters versus cost; p. cost versus performance; q. design versus manufacturing consideration; r. make versus buy; s. Software-development schedule; t. on-equipment versus off-equipment maintenance tasks, including S&TE impacts; and u. common versus special-to-type S&TE.	
16.	Have the results of Commonwealth-directed trade studies been presented, and have the implications for the requirements and design of the Mission System and, where applicable, the Support System been addressed? Have the agreed outcomes from Commonwealth-directed trade studies presented at previous reviews been incorporated into the requirements and design for the Mission System and, where applicable, Support System?	Optional
17.	Packaging and Mounting: Do the final mechanical and packaging designs of consoles, racks, drawers, printed circuit boards, connectors, etc allow the system requirements to be met? Do the final equipment layout drawings (including three-dimensional / computer-aided design models, if applicable) indicate that the system design can be accommodated within the available space/facilities? Have power distribution and grounding design aspects been addressed? Is the packaging design compatible with the Level Of Repair Analysis (LORA) decisions and maintainability considerations?	Mandatory
18.	Design Producibility and Manufacturing: Review the status of all producibility (and productivity) efforts for cost and schedule considerations. Review the status of efforts to resolve manufacturing concerns identified in previous technical reviews and their cost and schedule impact to the production program. Review the status of Manufacturing Technology programs and other previously recommended actions to reduce cost, manufacturing risk and industrial base concerns. Identify open manufacturing concerns that require additional direction/effort to minimise risk to the production program. Review the status of manufacturing engineering efforts, tooling and test equipment demonstrations, proofing of new materials, processes, methods, and special tooling/test equipment. Review the intended manufacturing management system and organisation for the production program in order to show how their efforts will effect a smooth transition into production.	Highly Desirable
19.	Growth, Evolution and Obsolescence: Have the likely areas for future system change or expansion over the LOT been considered and reviewed since PDR?	Mandatory

Item	Checklist Item	Status
	Have the final design solution and architecture been considered to ensure the solution is robust over the LOT? Has the purchasing strategy been assessed to ensure that COTS elements of the solution subject to rapid change in the marketplace are acquired using just-in-time principles? Has the robustness of the final design with respect to areas of likely growth and change over the LOT, including likely changes to user requirements and changes to hardware or Software technology solutions been addressed?	
20.	Design Reliability: Review the most recent predictions of hardware and Software reliability and compare against requirements specified in hardware development specifications and Software requirements specifications. For hardware, predictions are substantiated by review of parts application stress data. Review applications of parts or CIs with minimum life, or those which require special consideration to ensure their effect on system performance is minimised. Review applications of redundant CI elements or components to establish that expectations have materialised since the PDR. Review updates to the Failure Mode, Effects and Criticality Analysis (FMECA) as a result of design changes since the PDR. Review detailed Hardware CI reliability demonstration plan for compatibility with specified test requirements. The number of test articles, schedules, locations, test conditions, and personnel involved are reviewed to ensure a mutual understanding of the plan and to provide overall planning information to activities concerned. Review the failure data reporting procedures and methods for determination of failure trends. Review the thermal analysis of components, printed circuit cards, modules, etc. Determine if these data are used in performing the detailed reliability stress predictions. Review on-line diagnostic programs, off-line diagnostic programs, S&TE, and preliminary technical orders (and/or commercial manuals) for compliance with the system maintenance concept and specification requirements. Review Software reliability prediction model and its updates based upon test data and refined predictions of component usage rates and complexity factors.	Mandatory
21.	Design Maintainability: Review the most recent predictions of quantitative maintainability and compare these against requirements specified in the Hardware CI Development Specification and Software Requirements Specification. Review Preventive Maintenance frequencies and durations for compatibility with overall system requirements for both the Mission System and Support System and maintenance planning criteria. Identify unique maintenance procedures required for each CI during operational use and evaluate their total effects on maintenance concepts. Confirm that the Mission System is optimised from a maintenance and maintainability viewpoint and conforms with the maintenance concepts. This shall include a review of provisions for automatic, semi-automatic, and manual recovery from hardware / Software failures and malfunctions.	Mandatory

Item	Checklist Item	Status
	Identify that design-for-maintainability criteria have, in fact been incorporated. Determine if accessibility requirements are sufficient to enable parts to be removed and maintenance to be performed including the use of S&TE (eg, parts, assemblies, and other items are so placed that there is sufficient space to use test probes, soldering irons, and other tools without difficulty and that they are placed so that structural members of units do not prevent access to them or their ease of removal). Review detailed plans for verifying that items meet maintainability requirements. Supplemental information is provided and reviewed to ensure a mutual understanding of the plan and to provide overall planning information to activities concerned.	
22.	Logistics Engineering (Transportability): Confirm that the design of Hardware CIs (for both the Mission System and any Support System Components that may need to be deployed with the Mission System) meet Contract requirements governing size and weight to permit economical handling, loading, securing, transporting, and disassembly for shipment within existing capabilities of military and commercial carriers. Identify any updates since PDR to the list of potential oversized and overweight items. Identify any updates since PDR to the list of system/items defined as being hazardous. Confirm that packaging afforded hazardous items complies with Hazardous Chemicals and Dangerous Goods regulations. For those Hardware CIs identified as requiring special temperature and humidity control or those possessing sensitive and shock susceptibility characteristics, confirm that special transportation requirements will be available for use. Review Transportability Analysis to confirm that transportation conditions have been evaluated and that these conditions are reflected in the design of protective, shipping, and handling devices. In addition to size and weight characteristics, confirm that analysis includes provisions for temperature and humidity controls, minimisation of sensitivity, susceptibility to shock, and transit damage. Review design of special materials handling equipment, when required, and action taken to acquire equipment. Identify equipment to be test loaded for transportability via the transportation modes identified in the Mission System FBL and Support System FBL.	Mandatory
23.	Logistics Engineering (Parts Standardisation and Interchangeability): Determine that every reasonable action has been taken to fulfil the standardisation requirements for use of standard items (standard item with NSN should be first preference). Accordingly, the following criteria shall be evaluated: a. data sources that were reviewed; b. factors that were considered in the decision to reject known similar, existing designs; and c. factors that were considered in decisions to accept any existing designs which were incorporated, and the trade-offs, if any, that had to be made. Confirm that maximum practical inter-changeability of parts exists among components, assemblies, and Hardware CIs.	Mandatory
24.	Human Engineering:	Mandatory

Item	Checklist Item	Status
	Review detail design presented on drawings, schematics, mockups, or actual hardware to determine that it meets human performance requirements and accepted human engineering practices. Demonstrate by checklist (eg, MIL-STD-1472) or other formal means the adequacy of design for human performance. Review each facet of design for human/machine compatibility. Review time/cost/effectiveness considerations and forced trade-offs of human engineering design. Evaluate the following human engineering/biomedical design factors: a. operator controls; b. operator displays; c. maintenance features; d. anthropometry; e. safety features and emergency equipment; f. workspace layout; g. internal environmental conditions (noise, lighting, ventilation, etc); h. Training Equipment; and i. Personnel accommodations. Have biomedical considerations (eg, life support and crew station requirements) been addressed?	
25.	Electromagnetic Environmental Effects: Review Contractor electromagnetic design of all Hardware CIs. Determine compliance with requirements of the Contract, regulatory requirements and Hardware CI specifications. Review system EMC including effects on the electromagnetic environment (inter-system EMC) and intra-system EMC. Determine acceptability of final EMC design and residual risks in meeting contractual EMC requirements. Confirm Mission System design for EMC with the Support System Components that are either embedded within the Mission System or interface with it. Review EMC test plans. Determine adequacy to confirm EMC design characteristics of the system/Hardware CI/subsystem.	Mandatory
26.	System Safety: Have all Mission System Materiel Safety issues that affect the requirements and design of the Mission System and Support System, including those identified through hazard analyses, been addressed? Has an analysis of failure modes been undertaken to determine the safety implications of those modes? Review CI detail design for compliance to safety design requirements. Have the identified hazards and their risk classifications been agreed by the Commonwealth Representative? Review Acceptance verification requirements to ensure adequate safety requirements are reflected therein. Evaluate adequacy of detailed design for safety and protective equipment/devices. Review CI operational maintenance safety analyses and procedures. Ensure the safety authority has reviewed the evidence supporting the draft Safety Case Report.	Mandatory
27.	System Security:	Mandatory

Item	Checklist Item	Status
	Have all Mission System security issues been addressed in the final design of the Mission System and Support System, including in relation to physical security, Emanation Security (EMSEC), Information and Communications Technology (ICT) security and cyber security? Have appropriate security evaluations, Certifications and Accreditations taken place or been programmed into Contract plans and schedules? Review unique security requirements and the techniques to be used for implementing and maintaining security within the Hardware and Software CIs.	
28.	Regulatory: Confirm that appropriate Mission System regulatory issues have been addressed in the design of both the Mission System and the Support System. For example, consider: a. Australian Communications and Media Authority (ACMA) regulatory requirements, b. environmental requirements, c. EMI/EMC regulatory requirements, d. Materiel Safety requirements, e. system security requirements (eg, for Certifications and Accreditations), and f. ADF regulatory / assurance framework requirements.	Mandatory
29.	Environmental: Review detail design to determine that it meets natural environment requirements of the hardware Development Specification. Ensure that studies have been accomplished concerning effects of the natural environment on, or interactions with, the Hardware CI. Studies that have been in progress shall be complete at this time. Have the ranges and extremes of environmental requirements been specified and addressed in the final Hardware CI designs? Have thermal design aspects been addressed? Have corrosion prevention/control considerations been addressed?	Mandatory
30.	Assignment of Official Nomenclature: Determine whether official nomenclature and approval of nameplates have been obtained to the extent practical. Ensure that approved nomenclature has been reflected in the Development and Product Specifications. Identify problems associated with nomenclature requests together with status of actions towards resolving the problems.	Mandatory
31.	Codification: Determine whether all Mission System CIs that will require Codification have been identified, including any modified CIs that may require extant Codification Data to be updated.	Highly Desirable
32.	Verification & Validation (V&V): Review updating changes to all specifications subsequent to the PDR, to determine whether the specifications adequately reflect these changes. Review all available V&V documentation for currency, technical adequacy, and compatibility with requirements specifications.	Mandatory

Item	Checklist Item	Status
	For any development model, prototype, etc, on which testing may have been performed, examine test results for design compliance with hardware development, Software requirements, and interface requirements specification requirements. Review quality assurance provisions/qualification requirements in Hardware CI product, Software requirements, or interface requirements specifications for completeness and technical adequacy. Review all Verification documentation required to support verification requirements of Hardware CI product specifications for compatibility, technical adequacy, and completeness. Inspect any breadboards, mockups, or prototype hardware available for test program implications. Review Software test descriptions to ensure they are consistent with Software test plans and they thoroughly identify necessary parameters and prerequisites to enable execution of each planned Software test and monitoring of test results.	
33.	Maintenance and Maintenance Data: Review status of unresolved Maintenance and Maintenance data problems since the PDR. Review updates to FMECA since PDR to confirm that all Mission System Corrective Maintenance tasks have been identified, are achievable, and are consistent with Maintenance concepts. Review updates to RCM analyses since PDR to confirm that all Mission System Preventive Maintenance tasks have been identified and, are achievable, and are consistent with Maintenance concepts.	Mandatory
34.	Spare Parts and Government Furnished Material (GFM): Confirm that the range and quantity of Spares (including GFM items) identified to be held in the Mission System (eg, on a ship) will fit into the allocated space.	Mandatory
35.	Support and Test Equipment (S&TE) and Training Equipment: Confirm that the range and quantity of S&TE identified to be held in the Mission System (eg, on a ship) will fit into the allocated space. Review the reliability and maintainability of S&TE and Training Equipment, which have been designed (including the integration of existing components) under the Contract (ie, not off-the-shelf solutions).	Highly Desirable
36.	Have all risks identified prior to DDR been reported against?	Mandatory
37.	Does the Contractor’s proposed solution for both the Mission System and Support System represent a minimised LCC solution, as demonstrated in accordance with the Approved governing plan for LCC (eg, LCC Management Plan (LCCMP))?	Mandatory
38.	Have any Contractor-provided proposals to reduce LCC been addressed (eg, as documented in the LCC Report and Model (LCCRM))?	Highly Desirable
39.	Are Contract plans and schedules (including the Performance Measurement Baseline) consistent with the system requirements and design?	Mandatory
40.	Does the Contractor's management of technical requirements with subcontractors and vendors allow the Contract needs to be achieved?	Mandatory

Item	Checklist Item	Status
41.	Does the Contractor's management of subcontractors and vendors allow visibility of objective progress to be reported in the Earned Value Management System?	Mandatory

7. REVIEW EXIT CRITERIA

Item	Exit Criteria	Status
1.	All checklist items have been addressed to the satisfaction of the Contractor and the Commonwealth Representative.	Mandatory
2.	All major problem and risk areas in relation to the detailed design for the Mission System, including in relation to the required design maturity to achieve the objectives of DDR, have been identified and resolved and, for minor problems and risks, corrective action plans have been recorded and agreed by the Commonwealth Representative.	Mandatory
3.	The detailed design for the Mission System is consistent with the requirements, balanced, achievable, and able to support the production, installation and Verification activities of the subsequent phases.	Mandatory
4.	The implications of the Mission System detailed design for the Support System design have been identified and incorporated into the applicable Contract plans.	Mandatory
5.	Plans for the next phase are deemed to be realistic and achievable by both the Contractor and the Commonwealth Representative.	Mandatory
6.	Plans for the measurement and analysis program for the next phase have been agreed by the Commonwealth Representative, including the measures to be collected, associated collection methods, and analysis techniques.	Mandatory
7.	The plan for achievement of work for the next phase is reflected in the Performance Measurement Baseline and the reporting levels and variance analysis thresholds have been agreed and documented in the Earned Value Management Plan.	Mandatory
8.	All risks identified during the course of DDR have been documented and analysed.	Mandatory
9.	The risks with proceeding to the next phase are acceptable to the Commonwealth Representative.	Mandatory
10.	All major action items have been closed.	Mandatory
11.	All minor action items have been documented and assigned with agreed closure dates.	Mandatory
12.	Review Minutes have been prepared, Approved, and distributed in accordance with the Contract.	Mandatory

MSR CHECKLIST

1. IDENTIFICATION: MSR-CHECKLIST-SSDDR-V5.3

2. TITLE: SUPPORT SYSTEM DETAILED DESIGN REVIEW CHECKLIST

3. DESCRIPTION AND INTENDED USE

3.1 The objectives of the Support System Detailed Design Review (SSDDR) are to demonstrate that:

a. specifications and/or drawings or Software-development documentation for Support System Components have been appropriately defined;

b. the designs for the Support System Constituent Capabilities have been adequately defined;

c. the design and/or selection of the required Support System Components will enable the Functional Baselines (FBLs) for the Mission System and Support System to be met; and

d. the Support System Components are either ready for further development, adequately defined for procurement, or adequately defined for fabrication.

3.2 The SSDDR will often be held as the conclusion to a period of review for Support System process and component design and the review of task-analysis activities. The SSDDR reviews the Support System information to ensure it reflects the required FBL and is an accurate source from which recommended provisioning lists and resource development can be based.

3.3 This MSR Checklist sets out the Commonwealth's requirements and minimum expectations for the conduct of an SSDDR.

4. INTER-RELATIONSHIPS

4.1 The SSDDR shall be conducted in accordance with the Approved System Review Plan (SRP), and shall be consistent with the following data items, where these data items are required under the Contract:

a. Integrated Support Plan (ISP); and

b. Verification and Validation Plan (V&VP).

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

a. Support System Description (SSDESC);

b. Life Cycle Cost Report and Model (LCCRM) (to demonstrate that the Contractor's design solution for the Support System represents a minimised LCC solution within the boundaries set by other ILS objectives and program constraints);

c. Task Resources Report (to ensure that the Support Resources for Operating Support, Engineering Support, Maintenance Support and Supply Support tasks are sufficiently defined to enable Level of Repair Analysis (LORA) modelling, resource utilisation calculations, and resource optimisation to be performed, consistent with Contract requirements);

d. Logistic Support Analysis Record (LSAR) (to ensure that the Support Resources for operations, Maintenance, and supply support tasks are sufficiently defined for further analysis);

e. Support System Technical Data List (SSTDL) (to ensure that the Technical Data for the Support System has been appropriately addressed, including in relation to Australian Industry Capability (AIC));

f. Australia and New Zealand (ANZ) Subcontractor Technical Data List (ASTDL) (to ensure that the Technical Data being provided to ANZ Subcontractors will enable the AIC Obligations to be satisfied and the AIC Objectives to be achieved); and

g. Software Support Plan (SWSP) (to ensure that the Support Resources (including Software tools) associated with Software support has been appropriately addressed).

Note: The Status column in the following three tables indicates whether or not the associated Checklist items are able to be tailored by the Contractor in its SRP, based on the following definitions:

a. Mandatory items are not to be tailored;

b. Highly Desirable items should not be tailored, but may be tailored depending upon the specifics of the Contract and the Contractor's internal processes; and

c. Optional items may be tailored, based upon the specifics of the Contract and the Contractor's internal processes.

Notwithstanding the Status assigned to each Checklist item, the items are to be included in the SRP if they are applicable.

5. REVIEW ENTRY CRITERIA

Item	Entry Criteria	Status
1.	All data items required to be delivered before, and linked to, the SSDDR have been delivered and the Commonwealth Representative considers the data items to be suitable for the purposes of conducting SSDDR.	Mandatory
2.	The Contractor has reviewed Contract plans (including the Performance Measurement Baseline) to assess their consistency with the system requirements.	Highly Desirable
3.	Action items from any previous System Reviews affecting SSDDR have been successfully addressed or action plans agreed with the Commonwealth Representative.	Mandatory

6. REVIEW CHECKLIST

Item	Checklist Item	Status
1.	Were all entry criteria satisfied before starting SSDDR?	Mandatory
2.	Has the impact of Approved CCPs been assessed?	Highly Desirable
3.	Have all Commonwealth Representative review comments against data items been adequately addressed?	Mandatory
4.	Have changes to the Support System Functional Baseline (FBL) since the last review been identified and captured in the design?	Mandatory
5.	Are there any outstanding unresolved issues (eg, requirements annotated with TBD) in the Support System FBL?	Mandatory
6.	Has a consistent configuration baseline been established for all documents associated with SSDDR?	Mandatory
7.	Where, as a result of the refinement of the design, any proposed change to the Support System FBL is in conflict with the FPS, has an Application for a Deviation been proposed for Commonwealth Representative Approval?	Mandatory

Item	Checklist Item	Status
8.	Has downwards traceability been established from the Support System FBL to the individual Support System Components in the final design solution for the Support System?	Mandatory
9.	Are Acceptance Verification criteria for the Support System, including Support System Components and processes, agreed with the Commonwealth Representative?	Mandatory
10.	Have remaining areas of requirements variances, voids and conflicts been identified and an approach defined to address them?	Mandatory
11.	Have all potential tasks for each Support System Constituent Capability to be undertaken by Defence and support contractors (including, where applicable, the Contractors (Support) and Subcontractors (Support), but excluding Original Equipment Manufacturers) been identified?	Mandatory
12.	Is it technically feasible that Defence and the support contractors (including, where applicable, the Contractors (Support) and Subcontractors (Support)) could undertake all the potential tasks that have been identified for them?	Mandatory
13.	Are the tasks allocated to ANZ support contractors (including, where applicable, the Contractor (Support) and Subcontractors (Support)) consistent with the AIC Obligations and plans?	Mandatory
14.	For each Support System Hardware and Software Configuration Item (CI): a. For any developmental items, confirm that the relevant design details (including functional flow block diagrams, logic diagrams, Software specifications, interface specifications, schematics, etc) have been completed. b. For any Support System CIs that must interface with other CIs (including the Mission System), confirm that the behaviour and compatibility of interfaces with those other CIs in each of their applicable states and modes, and the failure modes of the Support System CIs that may impact upon the other CIs, have been addressed. c. For any Support System CIs that must interface with other CIs (including the Mission System), determine that all designs for interfaces with the Mission System and between the Support System CIs and other Support System CIs, meet their functional and interface requirements. d. Ensure that the interface designs have addressed any interfaces with the existing support infrastructure and with any new facilities. e. Determine that the final design provides the capability of satisfying the performance characteristics of its specification. f. Determine the risks associated with the deployment and production of the Support System Configuration Items and the mitigation strategies to address them.	Mandatory
15.	Operating Support: Has the allocation of all Operating Support tasks to operational locations and/or deployment situations been completed? Have all Support Resources (including Personnel) for the identified Operating Support tasks been identified adequately for use in system level resource calculations and allocations to units/locations?	Mandatory

Item	Checklist Item	Status
	Confirm that the delivery schedule for these Support Resources will enable the Mission System to be operated and the Support System to be implemented when required. Confirm that the overall Support System solution from an Operating Support perspective will enable the Mission System and Support System FBLs to be met.	
16.	Engineering Support: Have the functions and processes of the approved / accredited in-service engineering organisation, and associated Design/Technical Support Network, been adequately defined and the allocation of tasks completed? Have all Support Resources (including Personnel) for all Engineering Support tasks, been identified adequately for use in system level resource calculations and allocations to the System Program Office, design and ADF regulatory / assurance framework authorities, Software support facilities, and any other supporting units? Confirm that the delivery schedule for these Support Resources will enable the Support System to be implemented when required. Are the Engineering Support tasks allocated to ANZ support contractors (including Contractor (Support) and Subcontractors (Support)) consistent with the AIC Obligations and plans? Confirm that the overall Support System solution from an Engineering Support perspective will enable the Support System FBL to be met.	Mandatory
17.	Maintenance Support (Level of Repair): Has the LORA for the Mission System been performed in a way that is: a. consistent with the Maintenance concept and other, related, support concepts, including those operational concepts where Maintenance Support is required to be deployed; b. consistent with the AIC Obligations and plans; c. compliant with non-economic LORA criteria (eg, strategic, legal and regulatory criteria) and limits placed on Defence Personnel numbers, skills and distribution; d. consistent with the Mission System and Support System FBLs; and e. within the given constraints, a minimised LCC solution? Have the plans for the Maintenance of Support System Components (which exclude Mission System Spares) been adequately defined in terms of tasks, skills, Support Resources, and locations? Have calibration requirements for Support System Components been defined, including the necessary Support Resources associated with the calibration requirements?	Mandatory
18.	Maintenance Support (Maintenance Data): Review adequacy of the Support System solution from a Maintenance Support perspective. Review status of unresolved Maintenance and Maintenance data problems since the DDR. Where applicable, review updates to FMECA, as a result of design changes since DDR, to confirm that all Mission System Corrective Maintenance tasks have been identified, are achievable, and are consistent with Maintenance concepts. Where applicable, review updates to RCM analyses, as a result of design changes since DDR, to confirm that all Mission System	Mandatory

Item	Checklist Item	Status
	Preventive Maintenance tasks have been identified, are achievable, and are consistent with Maintenance concepts. Review the packaging of Preventive Maintenance tasks and the resulting planned servicing schedule data. Confirm that the Support Resource requirements for all Mission System Maintenance tasks, including updates resulting from design changes since DDR, have been defined. Confirm that the Support Resource requirements (including Personnel) for all Support System Maintenance tasks have been defined. Confirm that the delivery schedule for these Support Resources will enable the Support System to be implemented when required.	
19.	Maintenance Support (Interfaces): Review the allocation of Engineering Support, Supply Support and Training Support tasks to the related Maintenance levels and locations. Confirm that the overall Support System solution from a Maintenance Support perspective will enable: a. the Maintenance demands to be met at the various levels and proposed locations of repair; and b. the Support System FBL to be met.	Mandatory
20.	Supply Support: Have the required functions and processes of the Supply Support system, including inventory control, supply chain management, supplier networks, on-going export/import provisions, etc, been adequately defined and the allocation of related tasks completed? Have all Support Resources (including Personnel) for all Supply Support tasks been identified adequately for use in system level resource calculations and allocations to units/locations? Confirm that the delivery schedule for these Support Resources will enable the Support System to be implemented when required. Have all Supply Support interfaces and lines of communication been identified and incorporated into the Support System design? Have the disposal requirements associated with Mission System Spares and Support System Components been addressed? Confirm that the overall Support System solution from a Supply Support perspective will enable: a. the demands for Spares and other applicable Support System Components to be met, including the demands at the various levels of, and the proposed locations for undertaking, repair; and b. the Support System FBL to be met.	Mandatory
21.	Performance Needs (Training) Analysis: Confirm that Personnel skills and competency levels, for all tasks to be conducted by Defence and support contractors (including, where applicable, Contractors (Support) and Subcontractors (Support)), have been identified adequately to complete the task inventory and the performance needs (Training) analysis (including feasibility studies). Confirm that the planned training programs are compatible with the skill levels of those Personnel to be involved in the operational and support tasks. Confirm that the analysis of performance needs and Training has addressed the requirements for all of the different types of Training required under the Contract (eg, Introduction into Service Training,	Mandatory

Item	Checklist Item	Status
	Sustainment Training, Conversion Training, Continuation Training and Train-the-trainer Training). Is the proposed Training to be delivered to ANZ support contractors (including, where applicable, the Contractor (Support) and Subcontractors (Support)) consistent with the AIC Obligations and plans?	
22.	Training Support: Have the required functions and processes of the Training Support system been adequately defined and the allocation of related tasks completed? Have all Support Resources (including Personnel) for the identified Training Support tasks been identified adequately for use in system level resource calculations and allocations to units/locations? Confirm that the delivery schedule for these Support Resources will enable the Support System to be implemented when required. Confirm that the overall Support System solution from a Training Support perspective will enable the Support System FBL to be met.	Mandatory
23.	Have the results of Commonwealth-directed trade studies been presented, and have the implications for the requirements and design of the Support System been addressed? Have the agreed outcomes from Commonwealth-directed trade studies presented at previous reviews been incorporated into the requirements and design for the Support System?	Optional
24.	Growth, Evolution and Obsolescence: Have the likely areas for future Support System change or expansion over the LOT been considered and reviewed since DDR? Has the purchasing strategy been assessed to ensure that the COTS elements of the solution, which are subject to rapid change in the marketplace, are acquired using just-in-time principles? Has the robustness of the final Support System design with respect to areas of likely growth and change over the LOT, including likely changes to user requirements and changes to hardware or Software technology solutions been addressed?	Mandatory
25.	Design Reliability: Confirm that the design and/or selection of Support System Components has addressed the reliability requirements specified in the Support System FBL.	Mandatory
26.	Design Maintainability: Confirm that the design and/or selection of Support System Components has addressed the maintainability requirements specified in the Support System FBL.	Mandatory
27.	Logistics Engineering (Transportability): Confirm that the design/selection of Support System Components will satisfy the Support System FBL with respect to size and weight to permit economical handling, loading, securing, transporting, and disassembly for shipment within existing capabilities of military and commercial carriers. Identify any updates since DDR to the list of potential oversized and overweight items. Identify any updates since DDR to the list of system/items defined as being hazardous. Confirm that packaging requirements afforded hazardous items complies with Hazardous Chemicals and Dangerous Goods regulations.	Mandatory

Item	Checklist Item	Status
	For those Support System Components identified as requiring special temperature and humidity control or those possessing sensitive and shock susceptibility characteristics, confirm that special transportation requirements will be available for use. Review transportability analyses to confirm that transportation conditions have been evaluated and that these conditions are reflected in the design of protective, shipping, and handling devices. In addition to size and weight characteristics, confirm that analyses have addressed provisions for temperature and humidity controls, minimisation of sensitivity, susceptibility to shock, and transit damage. Review design/selection of special materials handling equipment, when required, and action taken to acquire equipment. Identify equipment to be test loaded for transportability via the transportation modes identified in the Mission System FBL and Support System FBL.	
28.	Logistics Engineering (Parts Standardisation and Interchangeability): Have Support Resources that are already in use in Defence and that have been identified as preferable for use as common / standardised resources, or that are Support Resources to be reused from a Mission System being replaced, been considered by the Contractor for the purposes of provisioning screening and standardisation?	Highly Desirable
29.	Human Engineering: Review Support System Component drawings (including three-dimensional / computer-aided design models, if applicable), schematics, mock-ups, or actual hardware to determine that it meets human performance requirements and accepted human engineering practices. Review each facet of design for human/machine compatibility and confirm the requirements for special materiel handling and other support equipment. Review time/cost/effectiveness considerations and forced trade-offs of human engineering design. Evaluate the following human engineering / biomechanical design factors: a. anthropometry; b. safety features and emergency equipment; c. workspace layout; d. workspace environmental conditions (noise, lighting, ventilation, etc); e. Training Equipment; and f. Personnel accommodations.	
30.	Electromagnetic Environmental Effects: Review the Support System EMC including effects on the electromagnetic environment (inter-system EMC) and intra-system EMC. Determine acceptability of final EMC design and residual risks in meeting contractual EMC requirements. Confirm Support System design for EMC with Mission System components, existing support infrastructure components, and associated Maintenance and Operating Support procedures. Review EMC test plans for the Support System. Determine adequacy to confirm EMC design characteristics of the system/Hardware Configuration Item/subsystem.	Mandatory
31.	System Safety:	Mandatory

Item	Checklist Item	Status
	Have all Materiel Safety issues that affect the requirements and design of the Support System Components and interfaces with the existing support infrastructure, including those identified through hazard analyses, been addressed? Has an analysis of failure modes of significant Support System Components been undertaken to determine the safety implications of those modes? Does the Hazard Log include all problematic items of Supplies that represent a risk to health and safety, including for both Mission System Spares and Support System Components? Review safety analyses and procedures for all support functions. Evaluate adequacy of detailed design for safety and protective equipment/devices. Ensure the safety authority has reviewed any changes to the Safety Case Report, and supporting evidence, required since DDR to incorporate safety issues arising out of the Support System detailed design.	
32.	System Security: Review unique security requirements and the techniques to be used for implementing and maintaining security within the Support System, including in relation to physical security, Emanation Security (EMSEC), Information and Communications Technology (ICT) security and cyber security.	Mandatory
33.	Regulatory: Confirm that appropriate regulatory issues have been addressed for the implementation of the Support System and its interface with the existing support infrastructure. For example, consider: a. Australian Communications and Media Authority (ACMA) regulatory requirements, b. environmental requirements, c. EMI/EMC regulatory requirements, d. Materiel Safety requirements, e. system security requirements (eg, for Certifications and Accreditations), and f. ADF regulatory requirements.	Mandatory
34.	Environmental: Ensure that studies concerning the effects of the natural environment on, or interacting with, the Support System have been concluded and the implementation requirements documented. Ensure that studies concerning the effects of the Support System on the natural environment have been concluded, and the implementation requirements documented.	Mandatory
35.	Assignment of Official Nomenclature: Determine whether official nomenclature and approval of nameplates for Support System Components have been obtained to the extent practical. Identify problems associated with nomenclature requests together with status of actions towards resolving the problems.	Highly Desirable
36.	Codification: For applicable Mission System CIs, determine whether Codification Data has been submitted to:	Highly Desirable

Item	Checklist Item	Status
	a. the Commonwealth, for Codification by the Australian National Codification Bureau (NCB); or b. an overseas NCB, for Codification in the country of origin. Determine whether Support System Components that will require Codification have been identified, including any Support System Components that may require extant Codification Data to be updated due to the item being modified.	
37.	Verification & Validation (V&V): Review updating changes to all Support System specifications subsequent to the DDR, to determine whether the specifications adequately reflect these changes. Review all available Supportability V&V documentation for currency, technical adequacy, and compatibility with requirements specifications. Review the Software Supportability aspects of test descriptions and ensure they are consistent with Software test plans. Ensure the Supportability of Software will be adequately assessed. Can the Support System (once assembled) be tested, analysed, or inspected to show that it satisfies the Support System FBL?	Mandatory
38.	Spares: Confirm that the Spares-optimisation modelling (including valid data sets and procedures), where required under the Contract, is being developed to meet the requirements of the Mission System and Support System FBLs at a minimised LCC. Review provisioning planning through normal logistics channels and the Commonwealth Representative to ensure its compatibility (content and time phasing) with contractual requirements (data and SOW items). The end objective is to provision by a method which ensures supportability of the Mission System at the required Contract time (eg, at the System Acceptance Audit). Also accomplish the following: a. ensure Contractor understanding of contractual requirements, including time phasing, instructions from logistics support agencies, interim release authority and procedure, and responsibility to deliver spare/repair parts by need date; b. determine that scheduled provisioning actions, such as provisioning reviews, interim release and screening, are being accomplished adequately and on time; and c. identify existing or potential provisioning problems. Determine quantitative and qualitative adequacy of provisioning drawings and data. Verify that logistics critical items are listed for consideration and that adequate procedures exist for reflecting design change information in provisioning documentation and other Technical Data. Ensure support requirements have been determined for installation, checkout, and Verification for approval by the Commonwealth Representative. Ensure screening has been accomplished and the results are included into provisioning lists. Determine that adequate storage space requirements have been programmed for on-site handling of installation and checkout, Verification support material, and a scheme has been developed for "down streaming" and joint use of insurance (high cost) or catastrophic failure support items.	Mandatory
39.	Packaging/Special Design Protective Equipment (SDPE):	Mandatory

Item	Checklist Item	Status
	Confirm that the proposed Packaging solution has addressed requirements for handling, storage and transportation for Mission System Spares and Support System Components. Review proposed Packaging design to ensure that adequate protection to Hardware CIs, and the media on which Software CIs are recorded, is provided against natural and induced environments/hazards to which the equipment will be subjected throughout its life cycle, and to ensure compliance with contractual requirements. Review the results of trade studies, engineering analyses, etc, to substantiate selected Packaging/SDPE design approach, choice of materials, handling provisions, environmental features, etc. Ensure that Packaging/SDPE design provides reasonable balance between cost and desired performance. Review all pre-production test results of the prototype Packaging design to ensure that Hardware CIs are afforded the proper degree of protection. Review Packaging requirements of Hardware CI product specifications for correct format, accuracy and technical adequacy.	
40.	Support and Test Equipment (S&TE) and Training Equipment: Confirm requirements for S&TE and Training Equipment for the support of Mission System Hardware CIs and Software CIs. Identify existing or potential S&TE and Training Equipment provisioning problems. Determine qualitative and quantitative adequacy of provisioning drawings and data. Review reliability and maintainability of S&TE and Training Equipment. Review logistic support requirements for S&TE and Training Equipment items. Review calibration requirements. Review documentation for S&TE and Training Equipment.	Mandatory
41.	Technical Data: Review the suitability of final commercial manuals and/or proposed modifications. Review the application of Technical Data standards in the development of Technical Data, including, when applicable, definition documents (eg, information sets for data modules) for Interactive Electronic Technical Publications. Review the range and scope of proposed publications (either hardcopy or electronic) to determine their suitability in enabling the support concepts to be met. Review the availability of publications and other Technical Data for V&V activities.	Mandatory
42.	Is the proposed Technical Data to be delivered to ANZ support contractors (including, where applicable, the Contractor (Support) and Subcontractors (Support)) consistent with the AIC Obligations and plans?	Mandatory
43.	Have all Support System risks identified prior to SSDDR been reported against?	Mandatory
44.	Does the Contractor's design for the Support System provide for a minimised LCC solution, for the combination of the Mission System	Mandatory

Item	Checklist Item	Status
	and Support System, as determined in accordance with the Approved governing plan for LCC (eg, LCC Management Plan (LCCMP))?	
45.	Have any Contractor-provided proposals to reduce LCC been addressed (eg, as documented in the LCCRM)?	Highly Desirable
46.	Are Contract plans and schedules consistent with the Support System requirements and design?	Mandatory
47.	Does the Contractor's management of technical requirements with Subcontractors and vendors allow the Contract needs to be achieved?	Mandatory

7. REVIEW EXIT CRITERIA

Item	Exit Criteria	Status
1.	All checklist items have been addressed to the satisfaction of the Contractor and the Commonwealth Representative.	Mandatory
2.	All major problem and risk areas have been identified and resolved and, for minor problems and risks, corrective action plans have been recorded and agreed by the Commonwealth Representative.	Mandatory
3.	The design for the Support System, including interfaces with the existing support infrastructure, are consistent with the requirements, are achievable, and are able to support the implementation and V&V activities of the next phase.	Mandatory
4.	Plans for the next phase are deemed to be realistic and achievable by both the Contractor and the Commonwealth Representative.	Mandatory
5.	Plans for the measurement and analysis program for the next phase have been agreed by the Commonwealth Representative, including the measures to be collected, associated collection methods, and analysis techniques.	Mandatory
6.	All risks identified during the course of SSDDR have been documented and analysed.	Mandatory
7.	The risks with proceeding to the next phase are acceptable to the Commonwealth Representative.	Mandatory
8.	All major action items have been closed.	Mandatory
9.	All minor action items have been documented and assigned with agreed closure dates.	Mandatory
10.	Review Minutes have been prepared, Approved, and distributed in accordance with the Contract.	Mandatory

MSR CHECKLIST

1. IDENTIFICATION: MSR-CHECKLIST-TARR-V5.3

2. TITLE: TASK ANALYSIS REQUIREMENTS REVIEW CHECKLIST

3. DESCRIPTION AND INTENDED USE

3.1 The objectives of the Task Analysis Requirements Review (TARR) are to:

a. demonstrate that all tasks necessary to ensure that the Mission System and Support System Components can be operated and supported have been captured and defined;

b. demonstrate that Support Resources, procedures, and the Personnel Competencies for each applicable task are sufficiently defined to enable the production of associated publications and Training Materials; and

c. allow for the review of the completed Task Analysis Report (TAR) for each of the Support System Constituent Capabilities (SSCCs) required by the Statement of Work (SOW).

3.2 The TARR provides the Commonwealth and Contractor with the opportunity to review the output of the task-analysis process before proceeding with the relatively expensive processes of technical publication development and Training Materials development, including the production of Interactive Electronic Technical Publications (IETPs) and Computer Based Training (CBT). The TARR reviews task information, which is often a combination of results from newly conducted analyses and data collected from previous analyses (for off-the-shelf systems/components).

3.3 The TARR enables the Commonwealth and Contractor to confirm that the documented tasks address:

a. all applicable Failure modes and Preventive Maintenance requirements; and

b. all operator and non-maintenance support tasks with logistic requirements (including Training and documentation).

3.4 The TARR confirms that all aspects of the Commonwealth's operating and support environments have been duly considered in the task analysis process, including the correct application of Personnel skill categories, terminology, operational and support concepts, and the use of local resources. The TARR may also be used to confirm Australian Industry Capability (AIC) obligations based on the allocation of maintenance, engineering and other support tasks.

3.5 The tasks in the TAR should be reviewed progressively over an extended period leading up to the TARR. The TARR should be conducted as the culmination of the review process. The TAR may be reviewed as a stand-alone report or as a report referring to detailed task information in a Logistic Support Analysis Record (LSAR). The TARR should not review every task or LSAR task record, but if the SOW requires a LSAR, then access to the LSAR during the TARR is required.

3.6 Multiple TARRs may be held (eg, one for each of the SSCCs required by the SOW), as set out in either the Approved System Review Plan (SRP) or the Approved Integrated Support Plan (ISP).

3.7 This Mandated System Review (MSR) Checklist sets out the Commonwealth's requirements and minimum expectations for the conduct of a TARR.

4. INTER-RELATIONSHIPS

4.1 The TARR shall be conducted in accordance with the Approved SRP, and shall be consistent with the Approved ISP.

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

a. TAR;

b. System Specification (SS);

c. Support System Specification (SSSPEC);

d. Support System Description (SSDESC);

e. Failure Mode, Effects and Criticality Analysis Report (FMECAR), which provides input information for the task analysis process;

f. Reliability Centred Maintenance Analysis Report (RCMAR), which provides input information (ie, Preventive Maintenance requirements) for the task analysis process;

g. Level of Repair Analysis Report (LORAR), which provides input information for the task analysis process;

h. Performance Needs Analysis Report (PNAR), which analyses the learning/Training requirements for identified tasks; and

i. Personnel Resource Requirements List (PRRL), which is derived from TAR Personnel information.

4.3 All ILS data items related to Support Resources, support plans, provisioning lists, and the PNAR are related to the TAR and depend on a successful outcome of the TARR.

Note: The Status column in the following three tables indicates whether or not the associated Checklist items are able to be tailored by the Contractor in its SRP, based on the following definitions:

a. Mandatory items are not to be tailored;

b. Highly Desirable items should not be tailored, but may be tailored depending upon the specifics of the Contract and the Contractor's internal processes; and

c. Optional items may be tailored, based upon the specifics of the Contract and the Contractor's internal processes.

Notwithstanding the Status assigned to each Checklist item, the items are to be included in the SRP if they are applicable.

5. REVIEW ENTRY CRITERIA

Item	Entry Criteria	Status
1.	The data items required to be delivered before, and linked to, the TARR have been delivered and the Commonwealth Representative considers the data items to be suitable for the purposes of conducting TARR.	Mandatory
2.	Data deliveries associated with data items, including LORA models and LSAR data, have been reviewed by the Commonwealth, and all comments have been addressed to the satisfaction of the Commonwealth Representative.	Highly Desirable
3.	Action items from any previous System Reviews affecting TARR have been successfully addressed or action plans agreed with the Commonwealth Representative.	Mandatory

6. REVIEW CHECKLIST

Item	Checklist Item	Status
4.	Were all entry criteria satisfied before starting TARR?	Mandatory
5.	Has the impact of Approved and pending Contract Change Proposals (CCPs) been assessed?	Highly Desirable
6.	Have all Commonwealth Representative review comments against data items been adequately addressed?	Mandatory
7.	Are all operator tasks consistent with, and likely to achieve[1], the Mission System's operational requirements described in the Mission System Functional Baseline (FBL) and the Operational Concept Document (OCD) (eg, in terms of available operator skills and Operating Support Resources)?	Mandatory
8.	Have Preventive Maintenance and Corrective Maintenance tasks been identified for both the Mission System and the Support System Components at each level of Maintenance, as required under the Contract?	Mandatory
9.	Are all Maintenance tasks for the Mission System consistent with, and likely to achieve, the Support System FBL?	Mandatory
10.	Are tasks for the Maintenance of Support System Components consistent with, and likely to provide, the Maintenance needed to sustain the Support System and to satisfy the Support System FBL? (Consider all relevant Support and Test Equipment (S&TE), Training Equipment, and transportation and handling equipment; Facilities, plant and machinery; and specialist tools.)	Mandatory
11.	Are all operational level Maintenance tasks, to be conducted in a **deployed** situation, consistent with, and likely to achieve, the operational Maintenance requirements needed to support the Mission System in accordance with the Support System FBL (eg, in terms of available Maintenance Personnel and other Support Resources)?	Highly Desirable
12.	Are all operational level Maintenance tasks, to be conducted in a **contingency** situation, consistent with, and likely to achieve, the operational Maintenance requirements needed to support the Mission System in accordance with the Support System FBL (eg, in terms of available Maintenance Personnel and other Support Resources)?	Highly Desirable
13.	Are all operational level Maintenance tasks, to be conducted in non-deployed / non-contingency situations, consistent with, and likely to achieve, the operational Maintenance requirements needed to support the Mission System in accordance with the Support System FBL (eg, in terms of available Maintenance Personnel and other Support Resources)?	Highly Desirable
14.	Are the Maintenance task allocations, as a result of the LORA process, consistent with the Maintenance concept documented in the OCD?	Highly Desirable

[1] Actual achievement will be a subject of the Verification and Validation Program. The intention during the TARR is to ensure consistency with Commonwealth requirements and to avoid costly rework and any associated schedule delays.

Item	Checklist Item	Status
15.	Are all Maintenance tasks, at levels other than the operational level, consistent with, and likely to achieve, the Maintenance requirements needed to support the Mission System in accordance with the Support System FBL (eg, in terms of available Maintenance Personnel and other Support Resources)?	Highly Desirable
16.	Are the identified Engineering Support tasks likely to provide the engineering support required for the Mission System and the Support System Components to enable the Support System FBL to be satisfied?	Mandatory
17.	Have Supply Support tasks been identified at each level of maintenance and at each Supply Support location between each level of Maintenance?	Mandatory
18.	Are the identified Supply Support tasks likely to provide an effective Supply Support capability for both the Mission System and the Support System Components to enable the Support System FBL to be satisfied?	Mandatory
19.	Are the identified Training Support tasks likely to provide an effective Training Support capability for both the Mission System and the Support System to enable the Support System FBL to be satisfied?	Mandatory
20.	Are the Maintenance and other support task allocations consistent with achieving Australian Industry Capability (AIC) Requirements?	Mandatory
21.	Have all new and/or critical Support Resources been documented and detailed in the risk register and/or management plans as appropriate?	Highly Desirable
22.	If applicable, do the projected requirements for Personnel numbers and skills, arising out of the task analyses, comply with specified Personnel constraints?	Highly Desirable

7. REVIEW EXIT CRITERIA

Item	Exit Criteria	Status
1.	All checklist items have been addressed to the satisfaction of the Contractor and the Commonwealth Representative.	Mandatory
2.	All major problem and risk areas have been identified and resolved and, for minor problems and risks, corrective action plans have been recorded and agreed by the Commonwealth Representative.	Mandatory
3.	All risks identified during the course of TARR have been documented and analysed.	Mandatory
4.	The risks associated with continuing the development of the Support System based on the task analyses are acceptable to the Commonwealth Representative.	Mandatory
5.	All major action items are closed.	Mandatory
6.	All minor action items have been documented and assigned with agreed closure dates.	Mandatory
7.	Review Minutes have been prepared, Approved, and distributed in accordance with the Contract.	Mandatory

MSR CHECKLIST

1. IDENTIFICATION: MSR-CHECKLIST-LLTIR-V5.3

2. TITLE: LONG LEAD TIME ITEMS REVIEW CHECKLIST

3. DESCRIPTION AND INTENDED USE

3.1 The objective of the Long Lead Time Items (LLTIs) Review (LLTIR) is for the Commonwealth Representative and Contractor to review the recommended LLTIs, prior to any formal procurement action for LLTIs.

3.2 The LLTIR is applicable where there is need to commit to the procurement of items with a long lead time, either to ensure their timely delivery into service or, perhaps, to realise price reductions through (for example) taking advantage of prime-equipment production runs for the manufacture of LLTIs.

3.3 Decisions to procure Long Lead Time Items (LLTIs) are required before a fully detailed analysis of Support Resource requirements can be undertaken, and a considerable time before normal provisioning reviews. Accordingly, the LLTIR allows the parties to determine the best balance between price and the risk of procuring items of an incorrect configuration (ie, due to design decisions and configuration changes occurring after the procurement is actioned).

3.4 The LLTIR allows the Commonwealth to Approve the list of LLTIs and any alterations to this list as a consequence of the LLTIR.

3.5 This Mandated System Review (MSR) Checklist sets out the Commonwealth's requirements and minimum expectations for the conduct of an LLTIR.

4. INTER-RELATIONSHIPS

4.1 The LLTIR shall be conducted in accordance with the Approved System Review Plan (SRP), and shall be consistent with the following data items, where these data items are required under the Contract:

a. Integrated Support Plan (ISP);

b. Supply Support Development Plan (SSDP); and

c. Training Support Plan (TSP).

4.2 The primary data deliverable for the LLTIR is a proposed list of LLTIs. The following data items, which are normally produced after more detailed analysis, must be adjusted for LLTI procurements, where these data items are required under the Contract:

a. Recommended Spares Provisioning List (RSPL);

b. Training Equipment List (TEL);

c. Support and Test Equipment Provisioning List (S&TEPL);

d. Packaging Provisioning List (PACKPL).

Note: The Status column in the following three tables indicates whether or not the associated Checklist items are able to be tailored by the Contractor in its SRP, based on the following definitions:

a. Mandatory items are not to be tailored;

b. Highly Desirable items should not be tailored, but may be tailored depending upon the specifics of the Contract and the Contractor's internal processes; and

c. Optional items may be tailored, based upon the specifics of the Contract and the Contractor's internal processes.

Notwithstanding the Status assigned to each Checklist item, the items are to be included in the SRP if they are applicable.

5. REVIEW ENTRY CRITERIA

Item	Entry Criteria	Status
1.	The list of LLTIs and all other data items required to be delivered before, and linked to, the LLTIR have been delivered and the Commonwealth Representative considers the Contract Data Requirements List (CDRL) items to be suitable for the purposes of conducting LLTIR.	Mandatory
2.	Action items from any previous System Reviews affecting LLTIR have been successfully addressed or action plans agreed with the Commonwealth Representative.	Mandatory

6. REVIEW CHECKLIST

Item	Checklist Item	Status
1.	Were all entry criteria satisfied before starting LLTIR?	Mandatory
2.	Has the impact of Approved and pending Contract Change Proposals (CCPs) been assessed?	Highly Desirable
3.	Have all Commonwealth Representative review comments against data items been adequately addressed?	Mandatory
4.	Have all of the potential LLTIs been identified across the required set of Support System Constituent Capabilities, as defined by the Contract?	Mandatory
5.	Have all alternatives, other than procuring items as LLTIs, been thoroughly investigated?	Mandatory
6.	Is the list of potential LLTIs supported by cost, benefit and risk analyses?	Mandatory
7.	Has the ability to take advantage of prime-equipment production runs for the manufacture of LLTIs been fully identified and planned for?	Highly Desirable
8.	Has the ability to procure LLTIs in batches, to reduce risk by taking advantage of equipment roll-out schedules and delaying procurement decisions, been fully investigated?	Highly Desirable
9.	If there is a requirement for phased production and procurement of items, has this been taken into consideration when planning the provisioning of LLTIs?	Highly Desirable

7. REVIEW EXIT CRITERIA

Item	Exit Criteria	Status
1.	All checklist items have been addressed to the satisfaction of the Contractor and the Commonwealth Representative.	Mandatory
2.	All major problem and risk areas have been identified and resolved and, for minor problems and risks, corrective action plans have been recorded and agreed by the Commonwealth Representative.	Mandatory
3.	Plans for procurement, production and delivery of LLTIs included on the Approved list of LLTIs are deemed to be realistic and achievable.	Highly Desirable
4.	All risks identified during the course of LLTIR have been documented and analysed.	Mandatory
5.	The risks associated with approving the list of LLTIs, and commencing procurement of these items, are acceptable to the Commonwealth Representative.	Mandatory
6.	All major action items have been closed.	Mandatory
7.	All minor action items have been documented and assigned with agreed closure dates.	Mandatory
8.	Review Minutes have been prepared, Approved, and distributed in accordance with the Contract.	Mandatory

MSR CHECKLIST

1. IDENTIFICATION: MSR-CHECKLIST-SPPR-V5.3

2. TITLE: SPARES PROVISIONING PREPAREDNESS REVIEW CHECKLIST

3. DESCRIPTION AND INTENDED USE

3.1 The objectives of the Spares Provisioning Preparedness Review (SPPR) are to:

a. review the Recommended Spares Provisioning List (RSPL) to confirm that the recommended Spares will support achievement of the Functional Baselines (FBLs) for the Mission System and the Support System at a minimised Life Cycle Cost (LCC);

b. review the Packaging Provisioning List (PACKPL) to confirm that recommended special-to-type Packaging (if applicable) will support achievement of the FBLs for the Mission System and the Support System at a minimised LCC; and

c. enable the Commonwealth to proceed with actions for the procurement of Spares and special-to-type Packaging.

3.2 The SPPR is applicable when Spares and special-to-type Packaging are being supplied under the Contract.

3.3 In relation to Spares, the SPPR provides the Commonwealth and Contractor with the opportunity to review the RSPL as a result of the Spares-determination process, and to identify issues that may affect the production and delivery of the Spares in accordance with the Contract. Where the re-use of existing Spares or the sharing of common Spares with other Mission Systems and their respective Support Systems are considerations of the program, the SPPR shall review the rationalisation of the RSPL. The SPPR shall also consider provisioning actions previously undertaken in relation to LLTIs.

3.4 In relation to special-to-type Packaging, the SPPR provides the Commonwealth and Contractor with the opportunity to review the PACKPL and how the recommended special-to-type Packaging will enable suitable protection for Spares and other items of equipment, consistent with the handling, storage and transportation requirements (including deployment requirements) described through the Support System Functional Base Line (SSFBL).

3.5 The SPPR allows the Commonwealth to Approve the RSPL and PACKPL and any alterations to the RSPL and PACKPL, as a consequence of SPPR evaluations.

3.6 There may be a requirement to have more than one review meeting as part of the SPPR to enable separate consideration of off-the-shelf equipment and developmental items, or Spares and special-to-type Packaging for the Mission System, simulator (for example), and Support System Components.

3.7 This Mandated System Review (MSR) Checklist sets out the Commonwealth's requirements and minimum expectations for the conduct of a SPPR.

4. INTER-RELATIONSHIPS

4.1 The SPPR shall be conducted in accordance with the Approved System Review Plan (SRP), and shall be consistent with the following data items, where these data items are required under the Contract:

a. Integrated Support Plan (ISP); and

b. Supply Support Development Plan (SSDP).

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

a. the RSPL;

b. the PACKPL;

c. Life Cycle Cost Report and Model (LCCRM) (to ensure that the RSPL and the PACKPL represent a minimised LCC solution);

d. Logistic Support Analysis Record (LSAR) (to ensure that the Spares and special-to-type Packaging identified in the RSPL and PACKPL, respectively, are consistent with the LSAR);

e. Task Resources Report (to ensure that the Spares and special-to-type Packaging associated with each of the Support System Constituent Capabilities (SSCCs) have been identified and included in the RSPL and PACKPL, as applicable);

f. Facilities Requirements Analysis Report (FRAR) (to ensure that Spares and special-to-type Packaging for Facilities and fixed plant has been appropriately addressed);

g. Training Equipment List (TEL) (to ensure that Spares and special-to-type Packaging for Training Equipment have been appropriately addressed);

h. Support System Technical Data List (SSTDL) (to ensure that Technical Data for Spares and special-to-type Packaging has been appropriately addressed);

i. Support and Test Equipment Provisioning List (S&TEPL) (to ensure that Spares and any special-to-type Packaging associated with S&TE have been appropriately addressed); and

j. Software Support Plan (SWSP) (to ensure that Spares associated with Software support have been appropriately addressed).

4.3 These data items will be required in either draft or completed form to support SPPR, unless otherwise agreed by the Commonwealth Representative.

Note: The Status column in the following three tables indicates whether or not the associated Checklist items are able to be tailored by the Contractor in its SRP, based on the following definitions:

a. Mandatory items are not to be tailored;

b. Highly Desirable items should not be tailored, but may be tailored depending upon the specifics of the Contract and the Contractor's internal processes; and

c. Optional items may be tailored, based upon the specifics of the Contract and the Contractor's internal processes.

Notwithstanding the Status assigned to each Checklist item, the items are to be included in the SRP if they are applicable.

5. REVIEW ENTRY CRITERIA

Item	Entry Criteria	Status
1.	The RSPL, PACKPL, and all other data items required to be delivered before, and linked to, the SPPR have been delivered and the Commonwealth Representative considers the data items to be suitable for the purposes of conducting SPPR.	Mandatory
2.	Action items from any previous reviews affecting SPPR have been successfully addressed or action plans agreed with the Commonwealth Representative.	Mandatory

6. REVIEW CHECKLIST

Item	Checklist Item	Status
1.	Were all entry criteria satisfied before starting SPPR?	Mandatory
2.	Has the impact of Approved and pending Contract Change Proposals (CCPs) been assessed?	Highly Desirable
3.	Have all Commonwealth Representative review comments against data items been adequately addressed?	Mandatory
4.	Has the required Spares and Packaging information been documented in the LSAR or the Task Resources Report(s), as required under the Contract? Is the RSPL consistent with the LSAR or the Task Resources Report(s)? Is the special-to-type Packaging listed in the PACKPL consistent with the LSAR or the Task Resources Report(s)?	Optional
5.	If the development of a Spares-optimisation model is required under the Contract, does the model adequately capture the Mission System and the Support System, including the operational and support concepts documented in the Operational Concept Document (OCD)?	Mandatory
6.	If the development of a Spares-optimisation model is required under the Contract, is the model consistent with the other models and data sources associated with the Mission System and Support System?	Highly Desirable
7.	Are the assumptions underpinning, and the limitations with, the Spares-optimisation model (if required) acceptable to the Commonwealth Representative?	Mandatory
8.	Does the RSPL identify Spares associated with each of the SSCCs to include the Spares for the Support System Components within these SSCCs (as well as for the Mission System)?	Highly Desirable
9.	Does the identified range and quantity of Spares to be procured support the achievement of the required levels of Mission System availability and sustainability described in the FBLs and the OCD?	Mandatory
10.	Does the identified range and quantity of Spares to be procured enable the Support System FBL and the support concepts documented in the OCD to be met? Does the identified range and quantity of special-to-type Packaging to be procured enable the Support System FBL and the support concepts documented in the OCD to be met (including the needs for environmental protection, transportation modes and materials handling)?	Mandatory
11.	Does the identified range and quantity of Spares to be procured enable the Mission System to successfully undertake the contingency requirements described in the FBLs and the OCD? Are the range and quantity of Spares identified to be deployed adequate? Does the identified range and quantity of special-to-type Packaging to be procured support the identified deployment and contingency requirements?	Highly Desirable

Item	Checklist Item	Status
12.	Volumetrics. Will the range and quantity of Spares identified to be held inside the Mission System (eg, on a ship) fit into the allocated space, including when contained in protective Packaging?	Optional
13.	Have all Spares and special-to-type Packaging to be managed within a Commonwealth inventory and/or distribution management system, been codified?	Highly Desirable
14.	Where the use of existing Commonwealth Spares or the sharing of Spares with other systems are considerations of the Contract, has the RSPL been appropriately rationalised?	Optional
15.	Have any issues that may affect the production and delivery of the Spares, in accordance with the Contract, been identified and action plans developed?	Mandatory
16.	If there is a requirement for phased production and procurement of items, has this been taken into consideration when planning the provisioning of Spares?	Highly Desirable
17.	Has the ability to take advantage of prime equipment production runs for the manufacture of Spares been fully identified and planned for?	Optional
18.	Have issues of growth, Obsolescence and post-production support been addressed in the range and quantities of Spares identified in the RSPL? For example, have requirements for Life-of-Type (LOT) Spares procurement been addressed?	Highly Desirable
19.	Is the RSPL and the PACKPL consistent with other support-related lists (eg, the S&TEPL, TEL and SSTDL)?	Highly Desirable
20.	Has the RSPL been prepared to ensure that other support elements for the Spares (eg, Packaging, Technical Data, warehousing and storage requirements, etc) will be properly identified?	Highly Desirable
21.	Do the RSPL and the PACKPL provide for a minimised LCC solution for the combination of the Mission System and Support System, as determined in accordance with the Approved governing plan for LCC (eg, Life Cycle Cost Management Plan (LCCMP))?	Mandatory
22.	Do the RSPL and the PACKPL consider any Spares and special-to-type Packaging that were previously acquired as LLTIs?	Mandatory
23.	If applicable, does the price for the agreed list of Spares fit within the Contract Not-To-Exceed (NTE) prices for Spares?	Highly Desirable
24.	***Note to drafters: Omit the following item if an NTE price for Packaging is not included in the Contract.*** If applicable, does the price for the agreed list of special-to-type Packaging fit within the Contract NTE prices for special-to-type Packaging?	Highly Desirable
25.	Does the RSPL provide all of the information for each Spare, as required by DID-ILS-SUP-RSPL?	Highly Desirable
26.	Does the PACKPL provide all of the information for each item of special-to-type Packaging, as required by the DID-ILS-SUP-PACKPL?	Highly Desirable

7. REVIEW EXIT CRITERIA

Item	Exit Criteria	Status
1.	All checklist items have been addressed to the satisfaction of the Contractor and the Commonwealth Representative.	Mandatory
2.	All major problem and risk areas have been identified and resolved and, for minor problems and risks, corrective action plans have been recorded and agreed by the Commonwealth Representative.	Mandatory
3.	Plans for procurement, production and delivery of Spares and special-to-type Packaging are deemed to be realistic and achievable.	Highly Desirable
4.	All risks identified during the course of SPPR have been documented and analysed.	Mandatory
5.	The risks associated with approving the RSPL and the PACKPL, and (as applicable) either commencing related procurements or progressing the actions required to incorporate the Approved lists into the Contract through one or more CCPs in accordance with clause 11.1 of the Conditions of Contract (COC), are acceptable to the Commonwealth Representative.	Mandatory
6.	All major action items have been closed.	Mandatory
7.	All minor action items have been documented and assigned with agreed closure dates.	Mandatory
8.	Review Minutes have been prepared, Approved, and distributed in accordance with the Contract.	Mandatory

MSR CHECKLIST

1. IDENTIFICATION: MSR-CHECKLIST-S&TEPPR-V5.3

2. TITLE: SUPPORT AND TEST EQUIPMENT PROVISIONING PREPAREDNESS REVIEW CHECKLIST

3. DESCRIPTION AND INTENDED USE

3.1 The objectives of the Support and Test Equipment (S&TE) Provisioning Preparedness Review (S&TEPPR) are to:

a. review the recommended S&TE Provisioning List (S&TEPL) to confirm that the recommended S&TE will support achievement of the Functional Baselines (FBLs) for both the Mission System and the Support System at a minimised Life Cycle Cost (LCC); and

b. enable the Commonwealth to proceed with actions for the procurement of S&TE.

3.2 The S&TEPPR is applicable when S&TE is being supplied under the Contract.

3.3 The S&TEPPR provides the Commonwealth and Contractor with the opportunity to review the S&TEPL as a result of the Level of Repair Analysis (LORA) and any subsequent S&TE optimisation process, including standardisation and offsetting. The S&TEPPR enables the Commonwealth and Contractor to identify issues that may affect the production and delivery of the S&TE in accordance with the Contract. Where the re-use of existing S&TE or the sharing of S&TE with other Mission Systems and their respective Support Systems are considerations of the program, the S&TEPPR shall review the rationalisation of the S&TEPL. The S&TEPPR shall also consider provisioning actions previously undertaken in relation to Long Lead Time Items (LLTIs).

3.4 The S&TEPPR allows the Commonwealth to Approve the S&TEPL and any alterations to the S&TEPL as a consequence of S&TEPPR evaluations.

3.5 There may be a requirement to have more than one review meeting as part of the S&TEPPR to enable the progressive consideration of operational, maintenance, and other support equipment, or S&TE for the Mission System, simulator (for example), and Support System Components.

3.6 This Mandated System Review (MSR) Checklist sets out the Commonwealth's requirements and minimum expectations for the conduct of an S&TEPPR.

4. INTER-RELATIONSHIPS

4.1 The S&TEPPR shall be conducted in accordance with the Approved System Review Plan (SRP) and shall be consistent with the following data items, where these data items are required under the Contract:

a. Integrated Support Plan (ISP).

4.2 The S&TEPPR inter-relates with the following data items, where these data items are required under the Contract:

a. S&TEPL;

b. Life Cycle Cost Report and Model (LCCRM) (to ensure that the S&TEPL represents a minimised LCC solution);

c. Logistic Support Analysis Record (LSAR) (to ensure that the S&TE identified in the S&TEPL is consistent with the LSAR);

d. Task Resources Report (to ensure that S&TE associated with each of the Support System Constituent Capabilities (SSCCs) has been identified and included in the S&TEPL);

e. Facilities Requirements Analysis Report (FRAR) (to ensure that S&TE for Facilities and fixed plant has been appropriately addressed);

f. Recommended Spares Provisioning List (RSPL) (to ensure that Spares for the S&TE have been appropriately addressed);

g. Packaging Provisioning List (PACKPL) (to ensure that Packaging for the S&TE has been appropriately addressed);

h. Training Equipment List (TEL) (to ensure that S&TE for Training Equipment has been appropriately addressed);

i. Support System Technical Data List (SSTDL) (to ensure that Technical Data for the S&TE has been appropriately addressed); and

j. Software Support Plan (SWSP) (to ensure that S&TE associated with Software support has been appropriately addressed).

Note: The Status column in the following three tables indicates whether or not the associated Checklist items are able to be tailored by the Contractor in its SRP, based on the following definitions:

a. Mandatory items are not to be tailored;

b. Highly Desirable items should not be tailored, but may be tailored depending upon the specifics of the Contract and the Contractor's internal processes; and

c. Optional items may be tailored, based upon the specifics of the Contract and the Contractor's internal processes.

Notwithstanding the Status assigned to each Checklist item, the items are to be included in the SRP if they are applicable.

5. REVIEW ENTRY CRITERIA

Item	Entry Criteria	Status
1.	The S&TEPL and all other data items required to be delivered before, and linked to, the S&TEPPR, have been delivered and the Commonwealth Representative considers the data items to be suitable for the purposes of conducting S&TEPPR.	Mandatory
2.	Action items from any previous reviews affecting S&TEPPR have been successfully addressed or action plans agreed with the Commonwealth Representative.	Mandatory

6. REVIEW CHECKLIST

Item	Checklist Item	Status
1.	Were all entry criteria satisfied before starting S&TEPPR?	Mandatory
2.	Has the impact of Approved and pending Contract Change Proposals (CCPs) been assessed?	Highly Desirable
3.	Have all Commonwealth Representative review comments against data items been adequately addressed?	Mandatory
4.	Has the required S&TE information been documented in the LSAR or the Task Resources Report(s), as required under the Contract? Is the S&TEPL consistent with the LSAR or the Task Resources Report(s)?	Optional
5.	Does the S&TEPL identify S&TE for each of the SSCCs, including S&TE for Support System Components within these SSCCs (as well as for the Mission System)?	Highly Desirable

Item	Checklist Item	Status
6.	Does the identified range and quantity of S&TE to be procured support the achievement of the required levels of Mission System availability and sustainability described in the FBLs and the Operational Concept Document (OCD)?	Mandatory
7.	Does the identified range and quantity of S&TE to be procured enable the Support System FBL and the support concepts documented in the OCD to be met?	Mandatory
8.	Does the identified range and quantity of S&TE to be procured enable the Mission System to successfully undertake the contingency requirements described in the FBLs and the OCD? Are the range and quantity of S&TE identified to be deployed adequate?	Highly Desirable
9.	Will the range and quantity of S&TE identified to be held inside the Mission System (eg, on a ship) fit into the allocated space?	Optional
10.	Have all items of S&TE that are to be managed within a Commonwealth inventory and/or distribution management system, been codified?	Highly Desirable
11.	Where the use of existing Commonwealth S&TE (ie, offsetting) or the sharing of S&TE with other systems are considerations of the Contract, has the S&TEPL been appropriately rationalised?	Optional
12.	Has standardisation with existing Commonwealth S&TE been addressed? Has standardisation across the range of S&TE being proposed for the Contract been considered?	Optional
13.	Has the ST&EPL been prepared to ensure that the support items for the S&TE (eg, Spares, Training, Technical Data, etc) will be properly identified?	Highly Desirable
14.	Have the different categories of S&TE been identified, particularly any developmental items of S&TE?	Highly Desirable
15.	Have requirements for modifications to existing S&TE, Obsolescence, and developmental S&TE been fully considered?	Highly Desirable
16.	Has any Software development associated with any S&TE (eg, Test Program Sets for Automatic Test Equipment) been identified? Are appropriate arrangements in place to manage this Software development within the proposed delivery schedule?	Optional
17.	Have issues that may affect the production and delivery of the S&TE, in accordance with the Contract, been identified and action plans developed?	Mandatory
18.	Has S&TE required to support other S&TE (eg, calibration equipment) been identified?	Mandatory
19.	Is the S&TEPL consistent with other support-related lists (eg, the RSPL, PACKPL, SSTDL, etc)?	Highly Desirable
20.	Have other support elements considered the issues and implications associated with the range and quantity of S&TE identified in the S&TEPL (eg, storage and transportation of S&TE, training on the operation and maintenance of the S&TE, supply pipelines for the S&TE, etc)?	Highly Desirable
21.	Does the S&TEPL provide for a minimised LCC solution for the combination of the Mission System and Support System, as determined in accordance with the Approved governing plan for LCC (eg, Life Cycle Cost Management Plan (LCCMP))?	Mandatory

Item	Checklist Item	Status
22.	Has the S&TEPL considered any items of S&TE that were previously acquired as LLTIs?	Mandatory
23.	If applicable, does the price for the agreed list of S&TE fit within the Contract NTE price for S&TE?	Highly Desirable
24.	Does the S&TEPL provide all of the information required for each item of S&TE, as required by DID-ILS-S&TE-S&TEPL?	Highly Desirable

7. REVIEW EXIT CRITERIA

Item	Exit Criteria	Status
1.	All checklist items have been addressed to the satisfaction of the Contractor and the Commonwealth Representative.	Mandatory
2.	All major problem and risk areas have been identified and resolved and, for minor problems and risks, corrective action plans have been recorded and agreed by the Commonwealth Representative.	Mandatory
3.	Plans for procurement, production and delivery of S&TE items are deemed to be realistic and achievable.	Highly Desirable
4.	All risks identified during the course of S&TEPPR have been documented and analysed.	Mandatory
5.	The risks associated with approving the S&TEPL, and (as applicable) either commencing S&TE procurement or progressing the actions required to incorporate the Approved list of S&TE into the Contract through one or more CCPs in accordance with clause 11.1 of the Conditions of Contract (COC), are acceptable to the Commonwealth Representative.	Mandatory
6.	All major action items have been closed.	Mandatory
7.	All minor action items have been documented and assigned with agreed closure dates.	Mandatory
8.	Review Minutes have been prepared, Approved, and distributed in accordance with the Contract.	Mandatory

MSR CHECKLIST

1. IDENTIFICATION: MSR-CHECKLIST-TEPPR-V5.3

2. TITLE: TRAINING EQUIPMENT PROVISIONING PREPAREDNESS REVIEW CHECKLIST

3. DESCRIPTION AND INTENDED USE

3.1 The objectives of the Training Equipment Provisioning Preparedness Review (TEPPR) are to:

a. review the recommended Training Equipment List (TEL) to confirm that the recommended Training Equipment will support achievement of the required Training and the Functional Baselines (FBLs) for both the Mission System and the Support System at a minimised Life Cycle Cost (LCC); and

b. enable the Commonwealth to proceed with actions for the procurement of Training Equipment listed on the TEL.

3.2 The TEPPR is applicable when Training Equipment (including equipment for both Training delivery and Training development) is being supplied under the Contract.

3.3 The TEPPR provides the Commonwealth and Contractor with the opportunity to review the recommended TEL as a result of the Training-related analyses and any subsequent Training development and optimisation processes. The TEPPR enables the Commonwealth and Contractor to identify issues that may affect the production and delivery of the Training Equipment in accordance with the Contract. Where the re-use of existing Training Equipment or the sharing of Training Equipment with other Mission Systems and their respective Support Systems are considerations of the program, the TEPPR shall review the rationalisation of the TEL. The TEPPR shall also consider provisioning actions previously undertaken in relation to Long Lead Time Items (LLTIs).

3.4 The TEPPR allows the Commonwealth to Approve the TEL and any alterations to the TEL as a consequence of TEPPR evaluations.

3.5 There may be a requirement to have more than one review meeting as part of the TEPPR to enable the progressive consideration of Training Equipment for operational, maintenance, and other support functions.

3.6 This Mandated System Review (MSR) Checklist sets out the Commonwealth's requirements and minimum expectations for the conduct of a TEPPR.

4. INTER-RELATIONSHIPS

4.1 The TEPRR shall be conducted, in accordance with the Approved System Review Plan (SRP), and shall be consistent with the following data items, where these data items are required under the Contract:

a. Integrated Support Plan (ISP); and

b. Training Support Plan (TSP).

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

a. TEL;

b. Life Cycle Cost Report and Model (LCCRM) (to ensure that the TEL represents a minimised LCC solution);

c. Performance Needs Analysis Report (PNAR) (to ensure that the TEL is consistent with the PNAR);

d. Logistic Support Analysis Record (LSAR) (to ensure that the Training Equipment identified in the TEL is consistent with the LSAR);

e. Task Resources Report (to ensure that Training Equipment associated with Training for each of the Support System Constituent Capabilities (SSCCs) has been identified and included in the TEL);

f. Training Materials List (TML) (a consolidated list of Training Materials within the Master Technical Data Index (MTDI));

g. Support System Technical Data List (SSTDL) (to ensure that Technical Data associated with the Training Equipment has been appropriately addressed (part of the MTDI));

h. Recommended Spares Provisioning List (RSPL) (to ensure that Spares for the Training Equipment has been appropriately addressed);

i. Packaging Provisioning List (PACKPL) (to ensure that Packaging for the Training Equipment has been appropriately addressed);

j. Support and Test Equipment Provisioning List (S&TEPL) (to ensure that S&TE for the Training Equipment has been appropriately addressed);

k. Software Support Plan (SWSP) (to ensure that Training Equipment associated with Software support has been appropriately addressed); and

l. Computer Based Training (CBT) (optional) (to ensure that the list of Training Equipment is consistent with the CBT requirements).

4.3 These data items will be required in either draft or completed form to support TEPPR, unless otherwise agreed by the Commonwealth Representative.

Note: The Status column in the following three tables indicates whether or not the associated Checklist items are able to be tailored by the Contractor in its SRP, based on the following definitions:

a. Mandatory items are not to be tailored;

b. Highly Desirable items should not be tailored, but may be tailored depending upon the specifics of the Contract and the Contractor's internal processes; and

c. Optional items may be tailored, based upon the specifics of the Contract and the Contractor's internal processes.

Notwithstanding the Status assigned to each Checklist item, the items are to be included in the SRP if they are applicable.

5. REVIEW ENTRY CRITERIA

Item	Entry Criteria	Status
1.	The TEL and all other data items required to be delivered before, and linked to, the TEPPR, have been delivered and the Commonwealth Representative considers the data items to be suitable for the purposes of conducting TEPPR.	Mandatory
2.	Action items from any previous reviews affecting TEPPR have been successfully addressed or action plans agreed with the Commonwealth Representative.	Mandatory

6. REVIEW CHECKLIST

Item	Checklist Item	Status
1.	Were all entry criteria satisfied before starting TEPPR?	Mandatory
2.	Has the impact of Approved and pending Contract Change Proposals (CCPs) been assessed?	Highly Desirable

Item	Checklist Item	Status
3.	Have all Commonwealth Representative review comments against data items been adequately addressed?	Mandatory
4.	Has the required Training Equipment information been documented in the LSAR or the Task Resources Report(s), as required under the Contract? Is the TEL consistent with the LSAR or the Task Resources Report(s)?	Optional
5.	Does the TEL identify Training Equipment associated with the Training for each of the SSCCs?	Highly Desirable
6.	Does the identified range and quantity of Training Equipment to be procured support the achievement (through quantities of sufficiently skilled personnel) of the required levels of Mission System availability and sustainability described in the FBLs and the Operational Concept Document (OCD) (ie, as should be defined in the PNAR)?)	Mandatory
7.	Does the identified range and quantity of Training Equipment to be procured enable the Support System FBL and the support concepts documented in the OCD to be met?	Mandatory
8.	Have all items of Training Equipment to be managed within a Commonwealth inventory and/or distribution management system, been codified?	Highly Desirable
9.	Where the use of existing Commonwealth Training Equipment or the sharing of Training Equipment with other systems are considerations of this program, has the TEL been appropriately rationalised?	Optional
10.	Has standardisation with existing Commonwealth Training Equipment been addressed? Has standardisation across the range of Training Equipment being proposed for the Contract been considered?	Optional
11.	Has the TEL been prepared to ensure that other support items (eg, for Spares, Technical Data, and S&TE) do not duplicate or omit required Training Equipment and related Support Resources?	Highly Desirable
12.	Have the different categories of Training Equipment been identified, particularly any developmental items of Training Equipment?	Highly Desirable
13.	Have requirements for modifications to existing Training Equipment, Obsolescence, and developmental Training Equipment requirements been fully considered?	Highly Desirable
14.	Has any Software development associated with any Training Equipment been identified? Are appropriate arrangements in place to manage this Software development within the proposed delivery schedule?	Optional
15.	If CBT is provided as part of the Training solution, has access to the use, duplication, further development and compilation of CBT packages, which may be subject to Intellectual Property (IP) rights (refer to the IP clauses under the Contract), been adequately addressed to enable the on-going function and up-keep of the CBT and associated CBT packages?	Highly Desirable
16.	Have any issues that may affect the production and delivery of the Training Equipment, in accordance with the Contract, been identified and action plans developed?	Mandatory

Item	Checklist Item	Status
17.	Is the TEL consistent with other support-related lists (eg, the RSPL, PACKPL, S&TEPL, SSTDL, etc)?	Highly Desirable
18.	Has the TEL been prepared to ensure that other support elements for the Training Equipment (eg, Spares, Packaging, S&TE, Technical Data, warehousing and storage requirements, support of Training Equipment, etc) will be properly identified (noting that these other support elements will be the subject of other Mandated System Reviews)?	Highly Desirable
19.	Does the Training Equipment identified in the TEL provide for a minimised LCC solution for the combination of the Mission System and Support System, as determined in accordance with the Approved governing plan for LCC (eg, LCCMP)?	Mandatory
20.	Has the TEL considered any Training Equipment that was previously acquired as LLTIs?	Mandatory
21.	If applicable, does the price for the agreed list of Training Equipment fit within the Contract NTE price for Training Equipment?	Highly Desirable
22.	Does the TEL provide all of the information required for each item of Training Equipment, as required by DID-ILS-TNG-TEL?	Highly Desirable

7. REVIEW EXIT CRITERIA

Item	Exit Criteria	Status
1.	All checklist items have been addressed to the satisfaction of the Contractor and the Commonwealth Representative.	Mandatory
2.	All major problem and risk areas have been identified and resolved and minor corrective action plans have been recorded and agreed by the Commonwealth Representative.	Mandatory
3.	Plans for procurement, production and delivery of Training Equipment are deemed to be realistic and achievable.	Highly Desirable
4.	All risks identified during the course of TEPPR have been documented and analysed.	Mandatory
5.	The risks associated with approving the TEL, and (as applicable) either commencing Training Equipment procurement or progressing the actions required to incorporate the Approved list of Training Equipment into the Contract through one or more CCPs in accordance with clause 11.1 of the Conditions of Contract (COC), are acceptable to the Commonwealth Representative.	Mandatory
6.	All major action items are closed.	Mandatory
7.	All minor action items have been documented and assigned with agreed closure dates.	Mandatory
8.	Review Minutes have been prepared, Approved, and distributed in accordance with the Contract.	Mandatory

MSR CHECKLIST

1. IDENTIFICATION: MSR-CHECKLIST-TNGRR-V5.3

2. TITLE: TRAINING READINESS REVIEW CHECKLIST

3. DESCRIPTION AND INTENDED USE

3.1 The objectives of the Training Readiness Review (TNGRR) are to:

a. enable the Commonwealth and the Contractor to review the readiness of new, modified and existing Training programs, including Training Materials, Training Equipment (including Training Equipment installed into Facilities), and other Support Resources;

b. enable the co-ordination of Contractor Personnel and Commonwealth Personnel and other required preparations for the delivery of Training course(s) under the Contract; and

c. prepare for the evaluation of Training courses and Training Support and, when applicable, the hand-over of Training to the Commonwealth and/or Contractor (Support) as the in-service Training provider.

3.2 A TNGRR is held prior to each Training course, or a series of related Training courses, as required by the Contract and further defined in the Approved Training Support Plan (TSP) or Approved Integrated Support Plan (ISP) (whichever is the governing plan under the Contract).

3.3 The TNGRR allows the parties to plan for the evaluation of the Training solution being delivered under the Contract. Accordingly, the TNGRR should be coordinated with Verification and Validation (V&V) activities for Training programs and related Support Resources.

3.4 This Mandated System Review (MSR) Checklist sets out the Commonwealth's requirements and minimum expectations for the conduct of a TNGRR.

4. INTER-RELATIONSHIPS

4.1 The TNGRR shall be conducted in accordance with the Approved System Review Plan (SRP), and shall be consistent with the following data items, where these data items are required under the Contract:

a. Integrated Support Plan (ISP);

b. Training Support Plan (TSP); and

c. Verification and Validation Plan (V&VP).

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

a. Performance Needs Analysis Report (PNAR);

b. Learning Management Packages (LMPs);

c. Training Equipment List (TEL);

d. Training Materials List (TML);

e. Computer Based Training (CBT); and

f. Acceptance Test Plans (ATPs) and Acceptance Test Procedures (ATProcs).

Note: The Status column in the following three tables indicates whether or not the associated Checklist items are able to be tailored by the Contractor in its SRP, based on the following definitions:

a. Mandatory items are not to be tailored;

b. Highly Desirable items should not be tailored, but may be tailored depending upon the specifics of the Contract and the Contractor's internal processes; and

c. Optional items may be tailored, based upon the specifics of the Contract and the Contractor's internal processes.

Notwithstanding the Status assigned to each Checklist item, the items are to be included in the SRP if they are applicable.

5. REVIEW ENTRY CRITERIA

Note: The following Review Entry Criteria cover both the Training to be delivered to students and the Training Support Resources to be delivered to the Training Support organisation(s).

Item	Entry Criteria	Status
1.	The data items required to be delivered before, and linked to, the TNGRR have been delivered and the Commonwealth Representative considers the data items to be suitable for the purposes of conducting the TNGRR.	Mandatory
2.	Action items from any previous reviews affecting the TNGRR have been successfully addressed or action plans agreed with the Commonwealth Representative.	Mandatory
3.	Inspections of Training Facilities that are to be, or have been, delivered or modified under the Contract, have been conducted by the Commonwealth Representative, and evaluated for compliance with Contract requirements and the Approved LMP(s).	Highly Desirable
4.	Training Materials (including CBT materials, if applicable) required to be delivered under the Contract, have been delivered to the Commonwealth Representative and reviewed for compliance with Contract requirements and the Approved LMP(s).	Mandatory
5.	Training Equipment (including, if applicable, relating to CBT), aids and devices necessary for the delivery of Training have been delivered to the Training location and functional checks have been successfully demonstrated to the Commonwealth Representative.	Highly Desirable

6. REVIEW CHECKLIST

Item	Checklist Item	Status
1.	Were all entry criteria satisfied before starting TNGRR?	Mandatory
2.	Has the impact of Approved and pending Contract Change Proposals (CCPs) been assessed?	Highly Desirable
3.	Have all Commonwealth Representative review comments against data items been adequately addressed?	Mandatory
4.	Will the proposed Training course(s), including Training Materials and Training Equipment, address the scope of the performance needs and Training requirements identified for those Training course(s) in the PNAR and LMP(s)?	Highly Desirable
5.	Do the proposed Training course(s) support the development of those competencies needed to achieve the Mission System and the Support System Functional Baselines (FBLs), and the scenarios described in the Operational Concept Document (OCD) (ie, will skills be taught to a level that supports Defence operations)?	Mandatory
6.	Have Training Materials, Training Equipment and other Support Resources been provided in sufficient quantity, and installed (if applicable), to enable the delivery of the Training courses required to be delivered under the Contract, including trial courses and initial Training as applicable?	Mandatory
7.	Will the proposed Training course(s), including Training Equipment and Training Materials, enable the Mission System and Support System FBLs to be met at a minimised Life Cycle Cost?	Mandatory
8.	Have the Support Resources necessary to maintain and update Training Materials and required to be delivered under the Contract, been delivered to the Training Support location and successfully demonstrated to the Commonwealth Representative? If applicable, this criterion includes Software and systems applicable to the further development and upkeep of CBT.	Highly Desirable
9.	Will the proposed Support Resources and, if applicable, the proposed Training of Commonwealth trainers and training developers, enable the long-term maintenance and update of the applicable Training course(s)?	Highly Desirable
10.	If applicable, have plans or contracts been put in place, for Training and/or Training Support services, which will enable the on-going operation of the Training program?	Highly Desirable
11.	Are all of the Support Resources needed for Training (eg, Training Equipment, Training Materials, training aids, training providers, etc) available, as and when required, to enable Training to be delivered under the Contract?	Mandatory
12.	If the TNGRR is held in preparation for a trial course (ie, for new or modified Training courses), are the Acceptance Test Plans and supporting Acceptance Test Procedures, if applicable, and reporting requirements considered suitable to enable an evaluation of that Training course?	Highly Desirable

7. REVIEW EXIT CRITERIA

Item	Exit Criteria	Status
1.	All checklist items have been addressed to the satisfaction of the Contractor and the Commonwealth Representative.	Mandatory
2.	All major problem and risk areas have been identified and resolved and, for minor problems and risks, corrective action plans have been recorded and agreed by the Commonwealth Representative.	Mandatory
3.	If applicable, plans and/or support contracts for on-going Training and Training Support are deemed to be realistic and achievable.	Highly Desirable
4.	All risks identified during the course of TNGRR have been documented and analysed.	Mandatory
5.	The risks associated with commencing Training and/or related V&V activities, are acceptable to the Commonwealth Representative.	Mandatory
6.	All major action items have been closed.	Mandatory
7.	All minor action items have been documented and assigned with agreed closure dates.	Mandatory
8.	Review Minutes have been prepared, Approved, and distributed in accordance with the Contract.	Mandatory

MSR CHECKLIST

1. IDENTIFICATION: MSR-CHECKLIST-FACRR-V5.3

2. TITLE: FACILITIES READINESS REVIEW CHECKLIST

3. DESCRIPTION AND INTENDED USE

3.1 The objectives of the Facilities Readiness Review (FACRR) are to:

a. review the state of Facilities that are new, refurbished, fitted-out, or otherwise modified by the Contractor to confirm that the Facilities are complete and ready for the Commonwealth and/or other agencies (eg, the Contractor under a Contract (Support)), as applicable, to occupy; and

b. enable the co-ordination of the hand-over of Facilities with the Verification and Validation (V&V) program, leading to the Acceptance of Facilities from the Contractor.

3.2 The FACRR is applicable when new or modified Facilities are being supplied under the Contract. The Defence Security and Estate Group (SEG) is the Commonwealth entity responsible for Commonwealth Premises/Facilities and should be consulted for advice and direction (through the Commonwealth Representative).

3.3 The FACRR provides the Commonwealth and the Contractor with the opportunity to review the implementation of new, refurbished, fitted-out, or otherwise modified Facilities as required under the Contract. The FACRR also assists the Commonwealth with ensuring that all necessary measures for the future support and upkeep of Facilities have been appropriately planned for (eg, through in-house support arrangements or via support contracts).

3.4 The FACRR is one of the steps leading to the Acceptance of Facilities by the Commonwealth. In general, the determination as to whether or not a Facility is fit for purpose will not be able to occur until the Facility is occupied and the actual activities to be undertaken within that Facility are performed. The FACRR, therefore, provides an initial check that Facilities are ready for occupation, with the Acceptance of those Facilities occurring after the Facilities have been Validated in accordance with the Contract (eg, through maintenance support effectiveness demonstrations, supply support effectiveness demonstrations, etc).

3.5 This Mandated System Review (MSR) Checklist sets out the Commonwealth's requirements and minimum expectations for the conduct of a FACRR.

Note: This checklist refers to Facilities and their applicable equipment fit-out. "Fit-out" refers to permanent fixtures required for the building to perform its functions, including utilities and "hotel services". Fit-out will include electricity (mains and back-up systems), water, water extraction, air-conditioning, heating, air and water filtration, fire-suppression, security and surveillance, communications, lifts, compressed air, overhead cranes, etc, as applicable.

4. INTER-RELATIONSHIPS

4.1 The FACRR shall be conducted in accordance with the Approved System Review Plan (SRP), and shall be consistent with the following data items, where these data items are required under the Contract:

a. Integrated Support Plan (ISP);

b. Site Installation Plan (SIP); and

c. Verification and Validation Plan (V&VP).

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

a. Facilities Requirements Analysis Report (FRAR);

b. Logistic Support Analysis Record (LSAR); and

c. Task Resources Report, which identifies the Facilities associated with each of the Support System Constituent Capabilities (SSCCs).

4.3 As the FACRR may consider a range of Facilities types (eg, maintenance, training, storage, etc), data and information specific to the use of each Facility will also be required to support FACRR unless the Commonwealth Representative agrees that all relevant information has been incorporated into the FRAR.

Note: The Status column in the following three tables indicates whether or not the associated Checklist items are able to be tailored by the Contractor in its SRP, based on the following definitions:

a. Mandatory items are not to be tailored;

b. Highly Desirable items should not be tailored, but may be tailored depending upon the specifics of the Contract and the Contractor's internal processes; and

c. Optional items may be tailored, based upon the specifics of the Contract and the Contractor's internal processes.

Notwithstanding the Status assigned to each Checklist item, the items are to be included in the SRP if they are applicable.

5. REVIEW ENTRY CRITERIA

Item	Entry Criteria	Status
1.	The data items required to be delivered before, and linked to, the FACRR have been delivered and the Commonwealth Representative considers the data items to be suitable for the purposes of conducting FACRR.	Mandatory
2.	Action items from any previous reviews affecting FACRR have been successfully addressed or action plans agreed with the Commonwealth Representative.	Mandatory
3.	Building inspections required by government legislation/by-laws/etc for new or structurally modified Facilities have been conducted and the applicable reports/certificates provided to the Commonwealth Representative.	Highly Desirable
4.	All required building inspections related to use (eg, explosive storage rating, security, electromagnetic shielding, energy efficiency, etc) have been performed and applicable reports and/or certificates have been provided to the Commonwealth Representative.	Highly Desirable
5.	If applicable, all necessary licences, permits and workplace registrations (eg, Work Health and Safety (WHS) and environmental) for the Facilities and/or for the activities to be conducted in the Facilities are in place, or sufficient progress has been made in obtaining these licences, permits and workplace registrations to enable FACRR to be entered.	Mandatory

6. REVIEW CHECKLIST

Item	Checklist Item	Status
1.	Were all entry criteria satisfied before starting FACRR?	Mandatory
2.	Has the impact of Approved and pending Contract Change Proposals (CCPs) been assessed?	Highly Desirable

Item	Checklist Item	Status
3.	Have all Commonwealth Representative review comments against data items been adequately addressed?	Mandatory
4.	Do the new/modified Facilities accord with the Facilities requirements documented in the Approved FRAR or other Approved Facilities requirements document, as required under the Contract?	Mandatory
5.	Has the required Facilities information been documented in the LSAR or the Task Resources Report(s), as required under the Contract?	Optional
6.	Do the new/modified Facilities, and applicable equipment fit-out, support the functions required to achieve the Mission System availability and sustainability described in the Functional Baselines (FBLs) and in the Operational Concept Document (OCD) (ie, will the Facilities be able to perform their required functions)?	Mandatory
7.	Do the new/modified Facilities, and applicable equipment fit-out, have the capacity to undertake the predicted workload (ie, utilisation rate) required to achieve the Mission System availability and sustainability described in the FBLs (ie, can the Facilities, for example, accommodate the maintenance throughput or student courses per year)?	Mandatory
8.	Do the new/modified Facilities, and applicable equipment fit-out, meet the Commonwealth's support concepts for each of the SSCCs (ie, concepts for Operating Support, Engineering Support, Maintenance Support, Supply Support and Training Support), as documented in the OCD?	Highly Desirable
9.	Will the new/modified Facilities, and applicable equipment fit-out, enable the Mission System to successfully undertake the contingency requirements described in the Mission System and Support System FBLs and in the OCD?	Highly Desirable
10.	Will the new/modified Facilities, and equipment fit-out, enable the requirements documented in the Support System FBL to be met at a minimised Life Cycle Cost (LCC)?	Mandatory
11.	If applicable, have plans or support contracts been put in place for the upkeep and maintenance of the new/modified Facilities and equipment fit-out?	Highly Desirable
12.	Have applicable provisioning lists been prepared to ensure that the required Support System Components to be procured (eg, Spares for back-up power generators, S&TE, Training Equipment, etc) have been included but not duplicated?	Highly Desirable

7. REVIEW EXIT CRITERIA

Item	Exit Criteria	Status
1.	All checklist items have been addressed to the satisfaction of the Contractor and the Commonwealth Representative.	Mandatory
2.	All major problem and risk areas have been identified and resolved and, for minor problems and risks, corrective action plans have been recorded and agreed by the Commonwealth Representative.	Mandatory
3.	If applicable, plans and/or support contracts for Facility upkeep and maintenance are deemed to be realistic and achievable.	Highly Desirable

4.	All risks identified during the course of FACRR have been documented and analysed.	Mandatory
5.	The risks associated with occupying the Facilities, and then commencing use and/or additional Acceptance Validation activities, are acceptable to the Commonwealth Representative.	Mandatory
6.	All major action items have been closed.	Mandatory
7.	All minor action items have been documented and assigned with agreed closure dates.	Mandatory
8.	Review Minutes have been prepared, Approved, and distributed in accordance with the Contract.	Mandatory

MSR CHECKLIST

1. IDENTIFICATION: MSR-CHECKLIST-FCA-V5.3

2. TITLE: FUNCTIONAL CONFIGURATION AUDIT CHECKLIST

3. DESCRIPTION AND INTENDED USE

3.1 The objective of a Functional Configuration Audit (FCA) for an item is to demonstrate that the item's actual performance complies with all elements of its specification. An FCA can be applicable to the Mission System and its Configuration Items and the Support System and its components (noting that some Support System Components may have their own Configuration Items), as defined under the Contract.

3.2 As part of the FCA for an item, the configuration status of the item needs to be established such that that all Verification activities have been conducted on a known final baseline or one that can adequately trace to the final baseline. Test and other data shall be reviewed to Verify that the item performs as required by its functional / allocated configuration identification. Any problems, test failures, deviations or waivers need to be identified to ensure that they have been addressed and any necessary regression testing conducted.

3.3 An FCA for a complex Configuration Item may be conducted progressively throughout the Configuration Item's development, subject to Approval by the Commonwealth Representative. Such an approach will culminate at the completion of the qualification testing of the Configuration Item with a review of all discrepancies at the final FCA.

3.4 The FCA is to be conducted on that configuration of the item which is representative (prototype or preproduction) of the configuration to be released for:

a. production of the operational inventory quantities, when more than one article is to be produced; or

b. Acceptance, when only a single article is to be produced.

3.5 When a prototype or preproduction article is not produced, the FCA is to be conducted on the first production article. For cases where Configuration Item qualification can only be determined through integrated system testing, FCAs for such Configuration Items will not be considered complete until completion of the integrated testing.

3.6 This MSR Checklist sets out the Commonwealth's requirements and minimum expectations for the conduct of a FCA.

4. INTER-RELATIONSHIPS

4.1 The FCA shall be conducted in accordance with the Approved System Review Plan (SRP), and shall be consistent with the following data items, where these data items are required under the Contract:

a. Systems Engineering Management Plan (SEMP);

b. Configuration Management Plan (CMP);

c. Integrated Support Plan (ISP); and

d. Verification and Validation Plan (V&VP).

Note: The Status column in the following three tables indicates whether or not the associated Checklist items are able to be tailored by the Contractor in its SRP, based on the following definitions:

a. Mandatory items are not to be tailored;

b. Highly Desirable items should not be tailored, but may be tailored depending upon the specifics of the Contract and the Contractor's internal processes; and

c. Optional items may be tailored, based upon the specifics of the Contract and the Contractor's internal processes.

Notwithstanding the Status assigned to each Checklist item, the items are to be included in the SRP if they are applicable.

5. REVIEW ENTRY CRITERIA

Item	Entry Criteria	Status
1.	All data items required to be delivered before, and linked to, the FCA have been delivered and the Commonwealth Representative considers the data items to be suitable for the purposes of conducting FCA.	Mandatory
2.	The Commonwealth Representative has Approved the item baseline in accordance with the Contract.	Mandatory
3.	The Contractor has provided the Commonwealth Representative with clear identification of the item to be audited, including nomenclature, specification identification number and Configuration Item number, if applicable.	Mandatory
4.	The Contractor has provided the Commonwealth Representative with a current listing of all deviations/waivers against the item, either requested of, or Approved by the Commonwealth Representative.	Mandatory
5.	The Contractor has provided the Commonwealth Representative with the status of the Verification program with respect to the item.	Mandatory
6.	The allocation of system requirements to the item has been established and is traceable from the system requirement to the item and from the item requirement back to system requirements.	Mandatory
7.	The Contractor has provided the Commonwealth Representative with the draft Product Specification for the item.	Mandatory
8.	Action items from any previous reviews affecting FCA have been successfully addressed or actions plans agreed with the Commonwealth Representative.	Mandatory

6. REVIEW CHECKLIST

Item	Checklist Item	Status
1.	Were all entry criteria satisfied before starting FCA?	Mandatory
2.	Has the impact of Approved and pending CCPs been assessed?	Mandatory
3.	Have all Commonwealth Representative review comments against data items been adequately addressed?	Mandatory
4.	Have all deviations / waiver for the item been Approved by the Commonwealth Representative?	Mandatory
5.	Have the Hazard Log contents and their classification been reviewed by the relevant safety authority and Approved by the Commonwealth Representative?	Mandatory
6.	Has each requirement of the item's functional baseline / specification been Verified by the agreed method?	Mandatory
7.	Were all tests required to be conducted as part of AV&V witnessed by the Commonwealth Representative or a delegated representative?	Mandatory

Item	Checklist Item	Status
8.	Where Verification is by inspection or analysis, has adequate inspection or analysis been performed and are the results sufficient to ensure that the item conforms to the specification?	Mandatory
9.	Were all models or simulations used as part of the Verification for the item Validated with respect to their assumptions and required fidelity?	Mandatory
10.	Is the current physical configuration of the item the same as that which was Verified? If not, have adequate regression tests and/or other activities been conducted?	Mandatory
11.	Have drawings been selectively sampled to ensure that test data essential to manufacturing is included on, or furnished with, the drawings.	Mandatory
12.	Where any items have failed to pass quality assurance test provisions, have these failures been analysed as to the cause of failure?	Highly Desirable
13.	Were appropriate corrections made to both the item and associated engineering data before the item was subjected to re-qualification?	Mandatory

7. REVIEW EXIT CRITERIA

Item	Exit Criteria	Status
1.	All checklist items have been addressed to the satisfaction of the Contractor and the Commonwealth Representative.	Mandatory
2.	The test procedures, reports and data used by the FCA team have been made a matter of record in the FCA minutes.	Mandatory
3.	All major problem and risk areas have been identified and resolved and, for minor problems and risks, corrective action plans have been recorded and agreed by the Commonwealth Representative.	Mandatory
4.	All risks identified during the course of FCA have been documented and analysed.	Mandatory
5.	The risks with proceeding to the next phase are acceptable to the Commonwealth Representative.	Mandatory
6.	All major action items have been closed.	Mandatory
7.	All minor action items have been documented and assigned with agreed closure dates.	Mandatory
8.	Review Minutes have been prepared, Approved, and distributed in accordance with the Contract.	Mandatory

MSR CHECKLIST

1. IDENTIFICATION: MSR-CHECKLIST-PCA-V5.3

2. TITLE: PHYSICAL CONFIGURATION AUDIT CHECKLIST

3. DESCRIPTION AND INTENDED USE

3.1 The objective of a Physical Configuration Audit (PCA) is to formally examine the as-built version of a Configuration Item against its design documentation in order to establish the Product Baseline. A PCA is applicable to Configuration Items of the Mission System and the Support System as defined under the Contract, including Support System Components such as Support and Test Equipment (S&TE).

3.2 The PCA also determines that the production acceptance testing requirements prescribed by the documentation is adequate for acceptance of production units of a Configuration Item by quality assurance activities.

3.3 After successful completion of the PCA, all subsequent changes are formally processed by engineering change action. The PCA includes a detailed audit of engineering drawings (which include three-dimensional models / computer-aided design drawings, as applicable), specifications, Technical Data and tests utilised in production of the Configuration Item, including the design documentation, listings, and manuals for Software Configuration Items. The review includes an audit of the released engineering documentation and quality control records to make sure the as-built or as-coded configuration is reflected by this documentation. For Software elements, the Software product specification and Software version description documentation are part of the PCA review.

3.4 A PCA should be conducted on the first article of a Configuration Item and those that are a re-procurement of a Configuration Item already in the inventory. A PCA should also be conducted on the first Configuration Item to be delivered by a new contractor even though a PCA was previously accomplished on the first article delivered by a different contractor.

3.5 Satisfactory completion of a PCA for a Configuration Item results in the establishment of the Product Baseline for that Configuration Item.

3.6 A final review is to be made of all operation and support documents to check format, completeness, and conformance with applicable data item descriptions. A review of engineering data as to its suitability for intended use is also to be performed in conjunction with the results of the Functional Configuration Audit (FCA).

3.7 The PCA cannot be performed unless data pertinent to the Configuration Item being audited is provided to the PCA team at time of the audit. The Contractor must compile and make this information available for ready reference.

3.8 This MSR Checklist sets out the Commonwealth's requirements and minimum expectations for the conduct of a PCA.

4. INTER-RELATIONSHIPS

4.1 The PCA shall be conducted in accordance with the Approved System Review Plan (SRP), and shall be consistent with the following data items, where these data items are required under the Contract:

a. Systems Engineering Management Plan (SEMP);

b. Configuration Management Plan (CMP);

c. Integrated Support Plan (ISP); and

d. Verification and Validation Plan (V&VP).

Note: The Status column in the following three tables indicates whether or not the associated Checklist items are able to be tailored by the Contractor in its SRP, based on the following definitions:

a. Mandatory items are not to be tailored;

b. Highly Desirable items should not be tailored, but may be tailored depending upon the specifics of the Contract and the Contractor's internal processes; and

c. Optional items may be tailored, based upon the specifics of the Contract and the Contractor's internal processes.

Notwithstanding the Status assigned to each Checklist item, the items are to be included in the SRP if they are applicable.

5. REVIEW ENTRY CRITERIA

Item	Entry Criteria	Status
1.	All data items required to be delivered before, and linked to, the PCA have been delivered and the Commonwealth Representative considers the data items to be suitable for the purposes of conducting PCA.	Mandatory
2.	Where specified in the Contract, the Commonwealth Representative has Approved the Functional Baseline for the Configuration Item in accordance with the Contract.	Mandatory
3.	The Contractor has submitted the final draft of the product specification for the Configuration Item to be audited to the Commonwealth Representative for review prior to PCA.	Mandatory
4.	The Contractor has provided the Commonwealth Representative with a current listing of all deviations/waivers against the Configuration Item, either requested of, or Approved by the Commonwealth Representative.	Mandatory
5.	The Contractor has provided the Commonwealth Representative with identification of the Configuration Item to be audited in terms of nomenclature, specification identification number and Configuration Item number.	Mandatory
6.	The Contractor has provided the Commonwealth Representative with drawings, part numbers and build status of the Configuration Item subject to audit, including serial numbers and Software identification.	Mandatory

6. REVIEW CHECKLIST

Item	Checklist Item	Status
1.	Were all entry criteria satisfied before starting PCA?	Mandatory
2.	Has the impact of Approved and pending CCPs been assessed?	Mandatory
3.	Have all Commonwealth Representative review comments against data items been adequately addressed?	Mandatory
4.	Have all deviations/waivers for the Configuration Item been Approved by the Commonwealth Representative?	Mandatory
5.	Has the Contractor provided the Commonwealth Representative with the following information for review: a. Configuration Item product specification; b. engineering drawing index and drawings including revision status; c. operating, maintenance, and illustrated parts breakdown manuals; d. approved nomenclature and nameplates; e. Software operations, maintenance and support documentation; f. Software version description documentation;	Mandatory

Item	Checklist Item	Status
	g. FCA minutes for the Configuration Item; and h. the findings and status of quality assurance activities relating to the Configuration Item?	
6.	Has the Contractor provided all data describing the configuration of the Configuration Item, including: a. current approved issue of hardware development specifications, Software requirements specifications, and interface requirements specifications and approved deviations/ waivers; b. identification of all changes actually made to the Configuration Item during testing; c. identification of any required changes not completed; d. all approved drawings and documents, in the form specified in the Contract, by the top drawing number as identified in the Configuration Item product specification; and e. manufacturing instruction sheets for hardware Configuration Items identified by the Commonwealth Representative?	Mandatory
7.	Are there any differences between the physical configurations of the selected production item and the item used for the FCA? Has it been demonstrated to the Commonwealth Representative that any differences do not degrade the functional characteristics of the selected units?	Mandatory
8.	Have the drawings and manufacturing instructions been reviewed? Selected drawings and associated manufacturing instructions for each hardware Configuration Item, as identified by the Commonwealth Representative, should be reviewed to determine their accuracy and ensure that they include the authorised changes reflected in the engineering drawings and the hardware. Inspection of drawings and associated manufacturing instruction may be accomplished on a valid sampling basis. The purpose of this review is to ensure the manufacturing instructions accurately reflect all design details contained in the drawings. Since the hardware is built in accordance with the manufacturing instructions, any discrepancies between the instructions and the design details and changes in the drawings will also be reflected in the hardware. The following information should be recorded for each drawing reviewed: a. drawing number/title (include revision letter); b. date of drawing approval; c. list of manufacturing instructions (numbers with change letter/titles and date of approval) associated with this drawing; and d. discrepancies / comments. Select a sample of part numbers reflected on the drawing. Check to ensure compatibility with any parts standardisation activities and/or Contract requirements, and examine the Configuration Item to ensure that the proper parts are actually installed. As a minimum, the following inspections are to be accomplished for each drawing and associated manufacturing instructions: a. Drawing number identified on manufacturing instruction should match latest released drawing. b. List of materials on manufacturing instruction should match materials identified on the drawing. c. All special instructions called on the drawing should be on the manufacturing instruction.	Mandatory

Item	Checklist Item	Status
	d. All dimensions, tolerances, finishes, etc., called out on the drawing should be identified on the manufacturing instruction. e. All special processes called out on the drawing should be identified on the manufacturing instruction. f. Nomenclature descriptions, part numbers and serial number markings called out on the drawing should be identified on the manufacturing instruction. g. Review drawings and associated manufacturing instructions to ascertain that all approved changes have been incorporated into the Configuration Item. h. Check release record to ensure all drawings reviewed are identified. i. Record the number of any drawings containing more than five outstanding changes attached to the drawing. j. Check the drawings of a major assembly / black box of the hardware Configuration Item for continuity from top drawing down to piece-part drawing.	
9.	Have all records of baseline configuration for the hardware been reviewed by direct comparison with the Contractor's engineering release system and change control procedures to establish that the configuration being produced does accurately reflect released engineering data? This includes interim releases of Spares provisioned prior to PCA to ensure delivery of currently configured Spares.	Mandatory
10.	Is the following information contained on release documentation supplied by the Contractor or Subcontractor for each drawing number, if applicable: a. serial numbers, top drawing number, specification number; and b. drawing number, title, code number, number of sheets (for hard copy drawings), date of release, change letter / revision number, change / revision date, engineering change order (ECO) number?	Mandatory
11.	Is the Contractor's release function and documentation capable of determining: a. the composition of any part at any level in terms of subordinate part numbers (disregard standard parts); b. the next higher assembly using the part number, except for assembly into standard parts; c. the composition of the Configuration Item or part number with respect to other Configuration Items or part numbers; d. the Configuration Item and associated serial number on which subordinate parts are used (noting that this does not apply to Subcontractors who are not producing Configuration Items); e. the accountability of changes which have been partially or completely released against the Configuration Item; f. the Configuration Item and serial number effectively of any change; g. the standard specification number or standard part numbers used within any non-standard part number; and h. the Contractor specification document and specification control numbers associated with any Subcontractor part number?	Mandatory
12.	Is the engineering release system and associated documentation capable of:	Mandatory

Item	Checklist Item	Status
	a. identifying changes and retaining records of superseded configurations formally accepted by the Commonwealth Representative; b. identifying all engineering changes released for production incorporation. These changes are to be completely released and incorporated prior to formal acceptance of the Configuration Item; and c. determining the configuration released for each Configuration Item at the time of formal acceptance?	
13.	Has engineering data been released or processed through a central authority to ensure coordinated action and preclude unilateral release of data?	Mandatory
14.	Are all engineering changes uniquely identified?	Mandatory
15.	Have all hardware Configuration Items that failed to pass Acceptance Verification requirements been repaired, if necessary, and retested by the Contractor in accordance with the product specification? Has the Contractor presented data confirming the inspection and test of Subcontractor equipment end items at the point of manufacture? Has the documentation describing the Configuration Item been reviewed for correct types and quantities to ensure adequate coverage at the time of shipment to the user?	Mandatory
16.	Have the following actions been performed on each Software Configuration Item being audited: a. Review all documents which will comprise the Software product specification for format and completeness. b. Review FCA minutes for recorded discrepancies and actions taken. c. Review the design descriptions for proper entries, symbols, labels, tags, references, and data descriptions. d. Compare top level Software unit design descriptions with lower level Software unit descriptions for consistency. e. Compare all lower-level design descriptions with all Software listings for accuracy and completeness. f. Check Software operational, maintenance and support manual format completeness and conformance with applicable data item descriptions. Formal verification/acceptance of these manuals should be withheld until system testing to ensure that the procedural contents are correct. g. Examine actual Software delivery media to ensure conformance with contractual requirements. h. Review the listings for compliance with approved coding standards.	Mandatory

7. REVIEW EXIT CRITERIA

Item	Exit Criteria	Status
1.	All checklist items have been addressed to the satisfaction of the Contractor and the Commonwealth Representative.	Mandatory
2.	The data used by the PCA team has been made a matter of record in the PCA minutes.	Mandatory

3.	All major problem and risk areas have been identified and resolved and, for minor problems and risks, corrective action plans have been recorded and agreed by the Commonwealth Representative.	Mandatory
4.	All risks identified during the course of the review have been documented and analysed.	Mandatory
5.	The risks with proceeding to the next phase are acceptable to the Commonwealth Representative.	Mandatory
6.	Configuration differences between the Configuration Item qualified and the Configuration Item being audited have been made a matter of record in the PCA minutes.	Mandatory
7.	All build records for the Configuration Item confirm that the Configuration Item has been built in accordance with the drawings and specifications.	Mandatory
8.	All major action items have been closed.	Mandatory
9.	All minor action items have been documented and assigned with agreed closure dates.	Mandatory
10.	Review Minutes have been prepared, Approved, and distributed in accordance with the Contract.	Mandatory

MSR CHECKLIST

1. IDENTIFICATION: MSR-CHECKLIST-TRR-V5.3

2. TITLE: TEST READINESS REVIEW CHECKLIST

3. DESCRIPTION AND INTENDED USE

3.1 The Test Readiness Review (TRR) relates to a specific Acceptance Verification and Validation (AV&V) phase for a Configuration Item (CI), group of CIs, subsystem, component (including Support System Constituent Capability) or system (including Mission Systems, Support System or combination thereof). In this checklist, these items are referred to as the Item(s) Under Test (IUT(s)), where the item may be a CI, subsystem or end item.

3.2 The objectives of the TRR are to demonstrate, prior to formal testing, that:

a. the test procedures for the relevant AV&V phase and IUT(s) are complete and Approved;

b. that the development status of each IUT is mature enough to enable effective conduct of the AV&V phase;

c. the developer is prepared for formal testing for the IUT(s); and

d. organisational arrangements for the AV&V phase are in place.

3.3 The TRR should be held after the test procedures for formal testing have been dry run against the same configuration of the IUT(s) as that which will be presented for formal testing. A technical understanding of the informal test results arising from the dry run should be established, and on the validity and the degree of completeness of the relevant documentation.

3.4 This MSR Checklist sets out the Commonwealth's requirements and minimum expectations for the conduct of a TRR.

4. INTER-RELATIONSHIPS

4.1 The TRR shall be conducted in accordance with the Approved System Review Plan (SRP) and shall be consistent with the following data items, where these data items are required under the Contract:

a. Systems Engineering Management Plan (SEMP);

b. Integrated Support Plan (ISP); and

c. Verification and Validation Plan (V&VP).

Note: The Status column in the following three tables indicates whether or not the associated Checklist items are able to be tailored by the Contractor in its SRP, based on the following definitions:

a. Mandatory items are not to be tailored;

b. Highly Desirable items should not be tailored, but may be tailored depending upon the specifics of the Contract and the Contractor's internal processes; and

c. Optional items may be tailored, based upon the specifics of the Contract and the Contractor's internal processes.

Notwithstanding the Status assigned to each Checklist item, the items are to be included in the SRP if they are applicable.

5. REVIEW ENTRY CRITERIA

Item	Entry Criteria	Status
1.	All data items required to be delivered before, and linked to, TRR have been delivered and the Commonwealth Representative considers the data items to be suitable for the purposes of conducting TRR.	Mandatory
2.	The status of all design and test documentation for each IUT has been established and declared to the Commonwealth Representative.	Mandatory
3.	The traceability from IUT requirements to the test procedures and contract test requirements has been established and declared to the Commonwealth Representative.	Mandatory
4.	Action items from any previous reviews affecting TRR have been successfully addressed or action plans agreed with the Commonwealth Representative.	Mandatory
5.	The TRR agenda addresses the following for review by the Commonwealth Representative: a. requirements changes; b. design changes; c. test plans and descriptions; d. test procedures; e. previous informal and dry run tests; f. test resources; g. test limitations; h. known problems; i. schedules; and j. documentation updates.	Highly Desirable

6. REVIEW CHECKLIST

Item	Checklist Item	Status
1.	Were all entry criteria satisfied before starting TRR?	Mandatory
2.	Has the impact of Approved and pending CCPs been assessed?	Highly Desirable
3.	Have all Commonwealth Representative review comments against data items been adequately addressed?	Mandatory
4.	Are all test procedures for each IUT complete and Approved by both the Contractor and the Commonwealth Representative?	Mandatory
5.	Have changes to the Mission System Functional Baseline (FBL) and the Support System FBL since the last review been identified and captured in the design?	Mandatory
6.	Have all IUT changes and their impact been assessed to ascertain their impact on formal testing?	Mandatory
7.	Is the development status of each IUT mature enough to enable effective conduct of the AV&V phase?	Mandatory
8.	Have the Hazard Log contents and their classification been reviewed by the Safety Authority and Approved by the Commonwealth Representative?	Mandatory

Item	Checklist Item	Status
9.	Has a consistent configuration baseline been established for both the IUT(s) and the test environment?	Mandatory
10.	Have all the test procedures been dry run and the performance of the IUT(s) Verified using these procedures?	Mandatory
11.	Has the impact of any configuration changes since the dry runs been assessed?	Mandatory
12.	Were there any significant test failures or non-conformities identified as a result of the dry-runs?	Mandatory
13.	Are adequate procedures in place to capture the test results and any failures?	Mandatory
14.	Is the strategy for regression testing and restart of testing after failures agreed?	Mandatory
15.	Are the facilities and services required for the test in place and have they been Verified against requirements (especially boundary interfaces for facilities, power conditioning, etc)?	Mandatory

7. REVIEW EXIT CRITERIA

Item	Exit Criteria	Status
1.	All checklist items have been addressed to the satisfaction of the Contractor and the Commonwealth Representative.	Mandatory
2.	All major problem and risk areas have been identified and resolved and, for minor problems and risks, corrective action plans have been recorded and agreed by the Commonwealth Representative.	Mandatory
3.	All required resources including personnel, equipment and facilities are available for formal testing.	Mandatory
4.	The IUT(s) and test procedures are deemed to be satisfactory by both the Contractor and the Commonwealth Representative to support formal testing.	Mandatory
5.	Plans for the measurement and analysis program for the next AV&V phase have been agreed by the Commonwealth Representative, including the measures to be collected, associated collection methods, and analysis techniques.	Mandatory
6.	The plan for achievement of work for the next AV&V phase is reflected in the Performance Measurement Baseline and the reporting levels and variance analysis thresholds have been agreed and documented in the EVM Plan.	Mandatory
7.	All risks identified during the course of TRR have been documented and analysed.	Mandatory
8.	The risks with proceeding to formal testing are acceptable to the Commonwealth Representative.	Mandatory
9.	All major action items have been closed.	Mandatory
10.	All minor action items have been documented and assigned with agreed closure dates.	Mandatory
11.	Review Minutes have been prepared, Approved, and distributed in accordance with the Contract.	Mandatory

MSR CHECKLIST

1. IDENTIFICATION: MSR-CHECKLIST-SAA-V5.3

2. TITLE: SYSTEM ACCEPTANCE AUDIT CHECKLIST

3. DESCRIPTION AND INTENDED USE

Note: In this MSR Checklist, a reference to the Contract (Acquisition) is a reference to the Contract, a reference to the Contractor (Acquisition) is a reference to the Contractor, and a reference to the Subcontractors (Acquisition) is a reference to the Subcontractors.

3.1 The objectives of the System Acceptance Audit (SAA) are to:

a. demonstrate that each Mission System and, where applicable, associated Support System elements (eg, delivered Support Resources and Training and, if applicable, any Defence-Required Australian Industry Capability (DRAICs) or DRAIC Elements required for support) meet the required criteria to enable Mission System Acceptance to be achieved;

b. confirm that, prior to Acceptance, each Mission System has been assessed as safe and suitable for service, and satisfactorily meets the specified requirements, including, where applicable, those requirements in relation to technical and operational regulation;

c. if applicable, confirm that, as part of Mission System Acceptance, sufficient elements of the Support System are in place to enable the Mission System(s) to be effectively operated, and that these elements are safe, suitable, and meet requirements;

d. confirm that all requirements of the Contract (Acquisition) in relation to Mission System Acceptance have been satisfied; and

e. confirm that all requirements of any associated Contract (Support) in relation to Mission System Acceptance have been satisfied.

3.2 The SAA audits each of the Mission Systems being submitted for Acceptance as well as any accompanying Support Resources and Training and any DRAICs and/or DRAIC Elements required for support that are being submitted for Acceptance at the same time ('**SAA Supplies**'). The principal outcome of a successful SAA is the signing of the Supplies Acceptance Certificate for the SAA Supplies by the Commonwealth Representative, to formally certify that the SAA Supplies have been Accepted. While each Mission System (or set of Mission Systems) is the primary item of Supplies being assessed during the SAA, the audit is also assessing the total ability of the Commonwealth to effectively and safely operate and support the Mission System(s), but only to the extent that the Contractor (Acquisition) is responsible for these aspects. Multiple Mission Systems may progress through an SAA at the same time, and this would typically be the case for production deliveries of Mission Systems.

3.3 The SAA applies whenever a Mission System (or set of Mission Systems) is being submitted for Acceptance under the Contract (Acquisition), which may include:

a. the first Mission System (ie, the First Article);

b. production versions of the Mission System; or

c. updates or upgrades to a Mission System, which has already been Accepted under the Contract (Acquisition), for which the updates / upgrades are now being submitted for Acceptance.

3.4 This MSR Checklist sets out the Commonwealth's requirements and minimum expectations for the conduct of an SAA. This MSR Checklist does not apply to Final Acceptance.

4. INTER-RELATIONSHIPS

4.1 SAA shall be conducted in accordance with the Approved System Review Plan (SRP), and shall include the relevant requirements of the following data items, where these data items are required under the Contract:

a. Project Management Plan (PMP);

b. Systems Engineering Management Plan (SEMP);

c. Integrated Support Plan (ISP);

d. Configuration Management Plan (CMP);

e. Verification and Validation Plan (V&VP);

f. all data items derived from the Master Technical Data Index (eg, Mission System Technical Documentation Tree (MSTDT), Support System Technical Data List (SSTDL) and Publications Tree);

g. Australia and New Zealand Subcontractor Technical Data List (ASTDL);

h. Recommended Spares Provisioning List (RSPL);

i. all data items that identify Support System Components (eg, Support and Test Equipment (S&TE) Provisioning List (S&TEPL) and Training Equipment List (TEL));

j. Australian Industry Capability (AIC) Plan;

k. Defence-Required Australian Industry Capability Plan (DRAICP); and

l. Quality Plan (QP).

Note: Unlike other MSR Checklists, this SAA Checklist is not able to be tailored by the Contractor (Acquisition) in its SRP.

Note to drafters: The SAA Checklist is intended to be modified by drafters to suit the circumstances of the particular Contract (Acquisition). The Status column in the following tables indicates whether or not the associated Checklist items are able to be either tailored or deleted. Drafters may insert additional line items into the Checklist, but should ensure that any work associated with these additional line items is appropriately captured in the SOW.

The Status column is to be removed before the SAA Checklist is incorporated into the draft Contract (Acquisition).

5. REVIEW ENTRY CRITERIA

Item	Entry Criteria	Status
1.	All data items required to be delivered before, and linked to, the System Acceptance Audit (SAA), including those identified in both the CDRL and other data items (eg, SSTDL, MSTDT and Publications Tree), have been delivered to the Commonwealth and the Commonwealth Representative considers the data items to be suitable for the purposes of conducting the SAA. To avoid doubt, this entry criterion includes all Technical Data (including Publications / Interactive Electronic Technical Publications and engineering drawings including 3-D computer-aided design data, as applicable) that are required to be delivered to the Commonwealth to enable the operation and support of the SAA Supplies.	***Not Tailorable***
2.	The SAA includes the requirements from all of the applicable plans that impact upon the SAA (eg, PMP).	***Not Tailorable***
3.	Where the SAA Supplies have previously undergone Acceptance Verification and Acceptance Validation (AV&V), the configuration of the SAA Supplies has not changed since the completion of the AV&V	***Not Tailorable***

Item	Entry Criteria	Status
	activities, except where otherwise agreed by the Commonwealth Representative.	
4.	All Support System Components, Spares and DRAIC Elements being provided by the Contractor (Acquisition), which are required for the operation and support of the SAA Supplies (including, where applicable, any Support System Components, Spares and DRAIC Elements required to operate and support any previously-delivered Supplies), have been delivered to the required delivery points in accordance with the Contract (Acquisition).	***Not Tailorable***
5.	All Facilities works being undertaken by the Contractor (Acquisition), including those of a temporary nature, which are required for the operation and support of the SAA Supplies, have been completed to the satisfaction of the Commonwealth Representative.	***Not Tailorable***
6.	Operator and support (eg, Maintenance) Training has been provided to Defence Personnel, as required under the Contract (Acquisition), and the Commonwealth Representative assesses that these Personnel are competent to safely operate and support the SAA Supplies.	***Tailorable: May need to be modified to align with the Training requirements of the Contract (Acquisition).***
7.	AV&V activities, as required under the Contract (Acquisition), have been completed for the SAA Supplies.	***Not Tailorable***
8.	Where a Functional Configuration Audit (FCA) was conducted for any of the SAA Supplies, the exit criteria for that FCA have been satisfied.	***Not Tailorable***
9.	Where a Physical Configuration Audit (PCA) was conducted for any of the SAA Supplies, the exit criteria for that PCA have been satisfied.	***Not Tailorable***
10.	Where a DRAIC Readiness Review (DRAICRR) was conducted for any of the SAA Supplies, the exit criteria for that DRAICRR have been satisfied.	***Not Tailorable***
11.	Each required Design Certificate / Designer's Certificate for the SAA Supplies has been signed by the applicable Contractor (Acquisition) personnel and delivered to the Commonwealth Representative.	***Tailorable: Adjust the terminology to accord with the applicable ADF regulatory / assurance framework.***
12.	Each required Supplies Acceptance Certificate for the SAA Supplies has been signed by the applicable Contractor (Acquisition) personnel and delivered to the Commonwealth Representative. These Supplies Acceptance Certificates (or accompanying attachments) identify all of the minor omissions and defects in the Supplies, as required by the COC. ***Note: These Supplies Acceptance Certificates will not be signed by the Commonwealth Representative until all other elements of the SAA have been successfully completed.***	***Not Tailorable***

Item	Entry Criteria	Status
13.	Suitable receipt documentation has been provided to the Commonwealth Representative for all SAA Supplies, including, where applicable, appropriate certificates of conformance.	***Not Tailorable***
14.	Suitable evidence of receipt documentation from the Contractor (Support) has been provided to the Commonwealth Representative for any items that are being provided by the Contractor (Acquisition) to the Contractor (Support).	***Tailorable: Delete if there is no Contract (Support)***
15.	Action items from any previous System Reviews affecting SAA have been successfully addressed or action plans agreed with the Commonwealth Representative.	***Not Tailorable***

6. REVIEW CHECKLIST

Item	Checklist Item	Status
1.	Were all entry criteria satisfied before starting the SAA?	***Not Tailorable***
2.	Has the impact of any Approved CCPs on the SAA Supplies been assessed?	***Not Tailorable***
3.	Have all Commonwealth Representative review comments against data items applicable to the SAA been adequately addressed?	***Not Tailorable***
4.	Have all elements of the SOW that affect the SAA Supplies been addressed?	***Not Tailorable***
5.	Have all appropriate regulatory and certification issues been addressed for the SAA Supplies to enable Acceptance to occur? For example, consider: a. Australian Communications and Media Authority (ACMA) regulatory requirements, b. environmental requirements, c. EMI/EMC regulatory requirements, d. safety requirements, e. security requirements, f. technical integrity requirements, and g. operational regulatory requirements.	***Not Tailorable***
6.	Have all of the outstanding issues from the set of FCA activities conducted on the SAA Supplies been reviewed to ensure that all of the issues have been addressed to the satisfaction of the Commonwealth Representative? Have all deviations, waivers and configuration changes been incorporated into the FCA outcomes?	***Not Tailorable***
7.	Have all of the outstanding issues from the set of PCA activities conducted on the SAA Supplies been reviewed to ensure that all of the issues have been addressed to the satisfaction of the Commonwealth Representative? Have all deviations, waivers and configuration changes been incorporated into the PCA outcomes?	***Not Tailorable***
8.	Have all of the outstanding issues from the set of DRAICRR activities conducted on the SAA Supplies been reviewed to ensure that all of the issues have been addressed to the satisfaction of the Commonwealth Representative?	***Not Tailorable***
9.	Have the range and quantity of Support System Components, Spares and, if applicable, DRAIC Elements delivered to Defence operational and support elements and the Contractor (Support) been	***Tailorable: Should be modified if***

Item	Checklist Item	Status
	checked to confirm that sufficient and appropriate support is in place to enable the safe and effective operation and support of the SAA Supplies, as defined in the Operational Concept Document (OCD) and any accompanying Contract (Support)? Are the delivered Spares consistent with the Spares-modelling outcomes developed by the Contractor (Acquisition) (if required under the Contract (Acquisition)), thereby enabling sufficient support to be available for the Materiel System elements that are already in operation as well as the SAA Supplies?	***there is no Contract (Support)***
10.	Have all shelf-life restrictions or special storage and handling requirements for the SAA Supplies been advised to the Commonwealth Representative?	***Not Tailorable***
11.	Have all Technical Data (particularly Publications), which will be used by Defence Personnel to operate and support the SAA Supplies, been Accepted or Approved, as required under the Contract (Acquisition)?	***Not Tailorable***
12.	Has the Technical Data included in the SAA Supplies been checked to confirm that it complies with the format requirements of the Contract (Acquisition)?	***Not Tailorable***
13.	Has all necessary Codification Data for the SAA Supplies been provided to the Commonwealth? This Checklist item only applies to those SAA Supplies that either will be accounted for, or managed on, an authorised Defence inventory-management system or will need to travel through the Defence supply chain to support operational requirements.	***Tailorable: Delete if Codification is not applicable.***
14.	Has all necessary maintenance-management data (including calibration data) for the SAA Supplies been provided to the Commonwealth Representative? This Checklist item only applies to those SAA Supplies that either will be managed on an authorised Defence maintenance-management system or will require the maintenance-planning parameters to be monitored and, possibly, adjusted by Defence Personnel to enable Supportability to be maintained and enhanced over the Life-of-Type.	***Tailorable: May need to be either deleted or modified to accord with the maintenance concept.***
15.	Have all storage requirements for the SAA Supplies (excluding any DRAIC Elements) been advised to the Commonwealth Representative to enable these storage requirements to be implemented? Have the storage requirements, which are required to be implemented by the Contractor (Acquisition), for the SAA Supplies actually been implemented?	***Not Tailorable***
16.	***Note to drafters: Select the first clause if the ASDEFCON Linkages Module (Strategic) has been employed or the second clause if not.*** ***Option 1:*** If applicable to the SAA Supplies, have the Phase In activities for any linked Contract (Support) been checked to confirm that appropriate contractually-provided support will be in place, as required, when the relevant SAA Supplies are required to be employed by Defence operational elements?	***Tailorable: Should be deleted if there is no Contract (Support) and the appropriate option selected otherwise.***

Item	Checklist Item	Status
	Option 2: If applicable to the SAA Supplies, has the Contractor (Acquisition) done everything reasonably required under the Contract (Acquisition) to facilitate the Phase In activities of any linked Contract (Support) to ensure that appropriate contractually-provided support will be in place, as required, when the relevant SAA Supplies are required to be employed by Defence operational elements?	
17.	***Note to drafters: Select the first clause if the ASDEFCON Linkages Module (Strategic) has been employed or the second clause if not.*** ***Option 1:*** If applicable to the SAA Supplies, have the ramp-up activities for any linked Contract (Support) been checked to confirm that appropriate contractually-provided support will be in place, as required, when the relevant SAA Supplies are required to be employed by Defence operational elements? ***Option 2:*** If applicable to the SAA Supplies, has the Contractor (Acquisition) done everything reasonably required under the Contract (Acquisition) to facilitate the ramp-up activities of any linked Contract (Support) to ensure that appropriate contractually-provided support will be in place, as required, when the relevant SAA Supplies are required to be employed by Defence operational elements?	***Tailorable: Should be deleted if there is no Contract (Support) and the appropriate option selected otherwise.***
18.	Have the applicable AIC Obligations, which are linked to the Acceptance of the SAA Supplies (excluding any DRAICs or DRAIC Elements that form part of the SAA Supplies), been checked to confirm that these AIC Obligations have been achieved?	***Tailorable: Should be deleted if AIC does not apply***
19.	Has the Life Cycle Cost Report and Model (LCCRM) been checked to confirm that it is up-to-date and consistent with the configuration(s) of the SAA Supplies.	***Tailorable: Should be modified to align with the LCC req'ts of the Contract (Acquisition)***
20.	Have all risks identified prior to the SAA been reported against?	***Not Tailorable***
21.	Are Contract plans and schedules consistent with the activities post-SAA under the Contract (Acquisition) and, if applicable, the Contract (Support), including the activities to address any minor omissions and defects in the SAA Supplies?	***Not Tailorable***

7. REVIEW EXIT CRITERIA

Item	Exit Criteria	Status
1.	The Acceptance Verification activities have confirmed that the SAA Supplies have no failures that are categorised as either Failure Severity 1 or Failure Severity 2.	***Not Tailorable.***

Item	Exit Criteria	Status
	To avoid doubt, Failure Severity 1 and Failure Severity 2 include those failures that, by themselves, would otherwise be classified at a lower level of severity; however, the number of failures at the lower levels of severity or the frequency of occurrence causes them to be classified at this higher level.	
2.	The Acceptance Verification activities have confirmed that the SAA Supplies have no more than [...DRAFTER TO INSERT...] failures, which are categorised as Failure Severity 3, per Configuration Item. To avoid doubt, Failure Severity 3 include those failures that, by themselves, would otherwise be classified at a lower level of severity; however, the number of failures at the lower levels of severity or the frequency of occurrence causes them to be classified at this higher level.	***Tailorable, but only to the extent defined.***
3.	The Acceptance Verification activities have confirmed that the SAA Supplies have no more than [...DRAFTER TO INSERT...] failures, which are categorised as Failure Severity 4, per Configuration Item. To avoid doubt, Failure Severity 4 include those failures that, by themselves, would otherwise be classified at a lower level of severity; however, the number of failures at the lower levels of severity or the frequency of occurrence causes them to be classified at this higher level.	***Tailorable, but only to the extent defined.***
4.	The Acceptance Verification activities have confirmed that the SAA Supplies have no more than [...DRAFTER TO INSERT...] failures, which are categorised as Failure Severity 5, per Configuration Item.	***Tailorable, but only to the extent defined.***
5.	The Acceptance Validation activities have confirmed that the SAA Supplies are fit for purpose when these SAA Supplies are operated and supported in accordance with the OCD and any accompanying Contract (Support).	***Tailorable: Delete if there are no Acceptance Validation activities.***
6.	Any third-party certifications, which are required under the Contract (Acquisition) for the SAA Supplies, have been delivered to the Commonwealth Representative and these third-party certifications are assessed as acceptable by the Commonwealth Representative.	***Not Tailorable***
7.	The Commonwealth Representative has Approved each required Design Certificate for the SAA Supplies.	***Tailorable: Amend terminology to align with the applicable ADF regulatory / assurance framework.***
8.	All Integrated Logistic Support (ILS) Assurance requirements applicable to the SAA Supplies, which are the responsibility of the Contractor (Acquisition), have been satisfied, except where otherwise agreed by the Commonwealth Representative.	***Tailorable: Delete if ILS Assurance is not applicable to the Contract (Acquisition).***
9.	***Note to drafters: If this element is included, the SOW will need to be checked to ensure that the Contractor (Acquisition)'s scope***	***Tailorable: Should be deleted if not applicable to***

Item	Exit Criteria	Status
	of work associated with achieving certification from the applicable regulatory authority representative is clearly defined. The [… INSERT APPLICABLE REGULATORY AUTHORITY REPRESENTATIVE …] has certified that the SAA Supplies are operationally suitable and able to be fielded for operational use.	***the Contract (Acquisition) and modified accordingly otherwise.***
10.	Where Acceptance of the SAA Supplies will enable the Commonwealth to perform specified functions or achieve a level of Capability defined in the Contract (Acquisition) (eg, in a Milestone description), the Commonwealth Representative assesses that the elements being provided by the Contractor (Acquisition) are satisfactory and sufficient for these purposes.	***Not Tailorable***
11.	Where, in conjunction with the Acceptance of the SAA Supplies, operational and support services also need to be provided by Defence Personnel to perform specified functions or achieve a level of Capability defined in the Contract (Acquisition), the Commonwealth Representative assesses that the Contractor (Acquisition) has done everything reasonably required under the Contract (Acquisition) to ensure that the services provided by these Defence Personnel are satisfactory and sufficient for these purposes.	***Not Tailorable***
12.	Where, in conjunction with the Acceptance of the SAA Supplies, support services also need to be provided through an accompanying Contract (Support) to perform specified functions or achieve a level of Capability defined in the Contract (Acquisition), the Commonwealth Representative assesses that the services, which are either being provided through the Contract (Support) or will be provided after the Operative Date under the Contract (Support), are satisfactory and sufficient for these purposes. Where Acceptance of the SAA Supplies are part of the Operative Date provisions under the Contract (Support), all other requirements of the Operative Date clause have been achieved, except where otherwise agreed by the Commonwealth Representative. Where Acceptance of the SAA Supplies also requires a change to the Contract (Support) to include these SAA Supplies within the scope of that contract, the applicable CCP has been approved by the Commonwealth, except where otherwise agreed by the Commonwealth Representative.	***Tailorable: Delete if there is no linked Contract (Support).***
13.	Where AIC Obligations are linked to Acceptance of the SAA Supplies (excluding any DRAICs or DRAIC Elements that form part of the SAA Supplies), including the transfer, creation or upgrade of skills, resources and Intellectual Property, as applicable, the Commonwealth Representative assesses that these AIC Obligations have been achieved.	***Not Tailorable***
14.	The Safety Case Report (SCR) and the associated hazard log are up-to-date and consistent with the SAA Supplies. To avoid doubt, this exit criterion includes the Mission System and the Support Resources included in the SAA Supplies as well as the services associated with operating and supporting the SAA Supplies (eg, operating and maintaining equipment), but excludes any DRAICs or DRAIC Elements.	***Tailorable: May need to be tailored to accord with the safety req'ts of the Contract (Acquisition).***
15.	Where applicable, all Certifications and Accreditations for physical security, emanations security and cyber security have been provided by the applicable Certification and Accreditation authorities, including in relation to Cyberworthiness.	***Not Tailorable***

Item	Exit Criteria	Status
16.	For all substances in the SAA Supplies, which are either hazardous to personnel or the environment (or both), the applicable Safety Data Sheets (SDSs) have been delivered to the Commonwealth Representative and these SDSs are assessed as acceptable by the Commonwealth Representative.	***Not Tailorable***
17.	The Approved Disposal Plan is up-to-date and consistent with the configuration of the SAA Supplies.	***Not Tailorable***
18.	The Technical Data and Software Rights Schedule is up-to-date and consistent with the configuration of the SAA Supplies and the configuration of all previously Accepted Supplies, except where otherwise agreed by the Commonwealth Representative.	***Not Tailorable***
19.	The Configuration Status Account (CSA), including any related data items that define the configuration (in full or in part) of the SAA Supplies (eg, CSA Report, Logistic Support Analysis Record (LSAR), and MSTDT), have been updated to reflect any required changes identified through the SAA.	***Not Tailorable***
20.	The SSTDL and, where applicable, the ASTDL are up-to-date and consistent with the configuration of the SAA Supplies and the configuration of all previously Accepted Supplies, except where otherwise agreed by the Commonwealth Representative.	***Not Tailorable***
21.	The Technical Data identified in the Approved SSTDL and the ASTDL for delivery to all of the respective parties identified in the SSTDL and the ASTDL (except the Commonwealth, but including, for example, the Approved escrow account and in-country support contractors and subcontractors), which is required for the operation and support of the SAA Supplies, has been delivered to those respective parties.	***Not Tailorable***
22.	The required Supplies Acceptance Certificates (including any attachments) for the SAA Supplies have been updated to incorporate any additional minor omissions and defects in these Supplies, which have been identified through this SAA.	***Not Tailorable***
23.	The required Supplies Acceptance Certificates for the SAA Supplies have been signed by the Commonwealth Representative.	***Not Tailorable***
24.	All checklist items have been addressed to the satisfaction of the Contractor (Acquisition) and the Commonwealth Representative.	***Not Tailorable***
25.	All major problem and risk areas relating to both the SAA Supplies and the development and delivery of future equivalent Supplies have been identified and resolved and, for minor problems and risks, corrective action plans have been recorded and agreed by the Commonwealth Representative.	***Not Tailorable***
26.	Plans for the next phase, if applicable, are deemed to be realistic and achievable by both the Contractor (Acquisition) and the Commonwealth Representative.	***Not Tailorable***
27.	Plans for the measurement and analysis program for the next phase, if applicable, have been agreed by the Commonwealth Representative, including the measures to be collected, associated collection methods, and analysis techniques.	***Not Tailorable***
28.	All risks identified during the course of the SAA have been documented and analysed.	***Not Tailorable***
29.	The risks with proceeding to the next phase, if applicable, are acceptable to the Commonwealth Representative.	***Not Tailorable***

Item	Exit Criteria	Status
30.	All major action items have been closed.	***Not Tailorable***
31.	All minor action items have been documented and assigned with agreed closure dates. To avoid doubt, these minor action items include: a. any minor omissions or defects in the SAA Supplies, as documented on the Supplies Acceptance Certificate(s); and b. any open problem reports or trouble reports (or equivalent reports used by the Contractor (Acquisition)) that have been assessed as minor by the Commonwealth Representative, where these types of reports are not covered under the minor omissions and defects in the SAA Supplies.	***Not Tailorable***
32.	Review Minutes have been prepared, Approved and distributed in accordance with the Contract (Acquisition).	***Not Tailorable***

MSR CHECKLIST

1. IDENTIFICATION: MSR-CHECKLIST-TXRR-V5.3

2. TITLE: TRANSITION REQUIREMENTS REVIEW CHECKLIST

3. DESCRIPTION AND INTENDED USE

Note: In this MSR Checklist, a reference to the Contract (Acquisition) is a reference to the Contract, a reference to the Contractor (Acquisition) is a reference to the Contractor, and a reference to the Subcontractors (Acquisition) is a reference to the Subcontractors.

Note: Defined terms not within the Contract (Acquisition) Glossary will appear in the Contract (Support) Glossary, and have a relationship to the Contract (Acquisition) even if the contracts are not formally linked. For example, applicable 'Products' are included in the Supplies and 'Services' are deliverable services provided by the Contractor (Support) to those Products.

3.1 The objectives of the Transition Requirements Review (TXRR) are to:

a. demonstrate that the requirements for the transfer of materiel Supplies and processes from the Contractor (Acquisition) to the Contractor (Support) and to Commonwealth support organisations have been identified and clearly defined;

b. demonstrate that the various Commonwealth and contractor organisations involved in Transition have been identified and their responsibilities are defined and agreed;

c. evaluate the suitability of the Contractor Transition Plan (CTXP) for managing Transition activities, particularly in regard to, but not limited to, coordination with the Contractor (Support) and Commonwealth organisations;

d. evaluate the suitability of the Contract (Support) Phase In Plan (PHIP) and Ramp Up Management Plan (RUMP) to manage and coordinate Phase In and Ramp Up activities consistent with the Transition activities defined in the CTXP;

e. evaluate the suitability of specified Contract (Support) management plans for the purpose of managing the Services needed to support the Materiel System;

f. obtain the acknowledgement and agreement of all parties attending the TXRR of their responsibilities for Transition;

g. evaluate the suitability of the Support Resources, to be transitioned, in enabling the Contract (Support) to achieve the applicable requirements of the Support System Functional Base Line (SSFBL); and

h. demonstrate that any sustainment-related Industrial Capabilities established (in whole or in part) in Australian Entities under the Contract (Acquisition) will be appropriately transitioned to enable the Contract (Support) to achieve the applicable requirements of the SSFBL, including in relation to Defence-Required Australian Industrial Capabilities (DRAICs) and other applicable Australian Industrial Activities (AIAs) identified in Attachment F.

3.2 As required by the Contract (Acquisition) SOW and the Contract (Support) SOW, the TXRR is attended by representatives from organisations with significant involvement in the Transition and in-service support of the Materiel System including, as applicable, the Commonwealth acquisition and support organisations, Contractor (Acquisition), Approved Subcontractors (Acquisition), the Contractor (Support) and Approved Subcontractors (Support).

3.3 This MSR Checklist sets out the Commonwealth's requirements and minimum expectations for the conduct of a TXRR.

Note: Transition activities transfer responsibilities, Support Resources, and often skills, from the Contractor (Acquisition) to in-service organisations, including the Contractor (Support). The Contractor (Acquisition) and Contractor (Support) may be related entities, separate entities working under a formal agreement, or Associated Parties. The type of relationship between contractors will likely influence the level of visibility of each others' contract and data items, but in all cases the Commonwealth, Contractor (Acquisition), Contractor (Support) and applicable

Subcontractors will need to co-operate in order to implement the Support System, as defined by the Support System Description (SSDESC) delivered under the Contract (Acquisition). Accordingly, where contractors are Associated Parties, the accountability of one or the other for individual checklist items may vary, but all parties remain responsible for sharing information and collaborating, consistent with the Transition, Phase In, Ramp Up and Co-ordination and Co-operation clauses applicable to each contract.

4. INTER-RELATIONSHIPS

4.1 The TXRR shall be conducted in accordance with the Approved System Review Plan (SRP) and shall be consistent with the following plans, if these plans are required under the Contract (Acquisition):

a. Contractor Transition Plan (CTXP);

b. Project Management Plan (PMP);

c. Integrated Support Plan (ISP);

d. Australian Industry Capability (AIC) Plan and other AIC-related plans (eg, DRAIC Plan (DRAICP));

e. Verification and Validation Plan (V&VP); and

f. subordinate plans to the above that are applicable to Transition activities, the implementation of Support Resources, and/or initial Training.

4.2 The TXRR inter-relates with the following data items, if these data items are required under the Contract (Acquisition):

a. Support System Description (SSDESC);

b. Site Installation Plan (SIP);

c. Recommended Spares Provisioning List (RSPL);

d. Support and Test Equipment (S&TE) Provisioning List (S&TEPL);

e. Packaging Provisioning List (PACKPL);

f. Training Equipment List (TEL);

g. Training Materials List (TML);

h. Learning Management Package (LMP);

i. Support System Technical Data List (SSTDL);

j. Australia and New Zealand Technical Data List (ASTDL);

k. Logistic Support Analysis Record (LSAR);

l. Software Support Plan (SWSP); and

m. Disposal Plan (DISP).

Note: The PHIP and RUMP include the Contractor (Support)'s plans for receiving Supplies from the Contractor (Acquisition) and GFM from the Commonwealth; both plans are to address issues considered at the TXRR. The Contract (Support) Services management plans describe how the Contractor (Support) will manage their part of the Support System; hence, these are relevant to defining the end-state of the Transition process and are reviewed accordingly.

4.3 The TXRR considers the relevant requirements of the following plans if these plans are required by the Contract (Support) CDRL for delivery prior to the TXRR:

a. Phase In Plan (PHIP);

b. Ramp Up Management Plan (RUMP);

c. Support Services Management Plan (SSMP);

d. Operating Support Plan (OSP);

e. Contractor Engineering Management Plan (CEMP);

f. Maintenance Management Plan (MMP);

g. Supply Support Plan (SSP); and

h. Training Support Plan (TSP).

4.4 The following Contract (Support) Attachments and Annexes, which may be incomplete at the Effective Date, are applicable to the TXRR if these documents are required by the Contract (Support) CDRL for delivery prior to the TXRR:

a. Attachment E, 'Government Furnished Material';

b. SOW Annex A, 'List of Products Being Supported';

c. SOW Annex D, 'List of Referenced Manuals'; and

d. any other Attachment or Annex update required to be delivered prior to the TXRR.

Note: The Status column in the following tables indicates when the associated checklist items can be tailored by the Contractor (Acquisition) in its SRP, based on the following definitions:

a. Mandatory items are not to be tailored;

b. Highly Desirable items should not be tailored, but may be tailored depending upon the specifics of the Contract (Acquisition), the Contract (Support) and the internal processes of the Contractor (Acquisition) and Contractor (Support); and

c. Optional items may be tailored, based upon the specifics of the Contract (Acquisition), the Contract (Support) and the internal processes of the Contractor (Acquisition) and Contractor (Support).

Notwithstanding the Status assigned to each checklist item, the items are to be included in the SRP if they are applicable.

5. REVIEW ENTRY CRITERIA

Item	Entry Criteria	Status
1.	All Contract (Acquisition) data items required by the CDRL to be delivered before, and linked to, the TXRR have been delivered and the Commonwealth Representative considers them to be suitable for the purposes of conducting the TXRR.	Mandatory
2.	All Contract (Support) data items required by the CDRL to be delivered before, and linked to, the TXRR have been delivered and the Commonwealth Representative considers them to be suitable for the purposes of conducting the TXRR.	Mandatory
3.	Action items from any previous System Reviews affecting the TXRR have been successfully addressed or action plans have been agreed with the Commonwealth Representative.	Mandatory

6. REVIEW CHECKLIST

Item	Checklist Item	Status
1.	Were all entry criteria satisfied before starting the TXRR?	Mandatory
2.	Has the impact of Approved and pending CCPs for the Contract (Acquisition) and/or Contract (Support) been assessed?	Highly Desirable
3.	Have all Commonwealth Representative review comments against the relevant Contract (Acquisition) data items been adequately addressed?	Mandatory
4.	Have all Commonwealth Representative review comments against the relevant Contract (Support) data items been adequately addressed?	Highly Desirable

Item	Checklist Item	Status
5.	Have the required Supplies (including Technical Data and associated Intellectual Property (IP) rights), to be transferred from the Contractor (Acquisition) to the Commonwealth and from the Contractor (Acquisition) to the Contractor (Support), been adequately identified?	Mandatory
6.	Have the required Products (including Supplies, Technical Data and associated IP rights), to be transferred from the Commonwealth to the Contractor (Support) in order to establish support Services, been adequately identified?	Highly Desirable
7.	Have requirements for the transfer of skills (including in relation to both knowhow and know-why) from the Contractor (Acquisition) and Subcontractors (Acquisition), to the Contractor (Support) and Subcontractors (Support), been identified? Have associated Training activities been identified and planned?	Highly Desirable
8.	a. In respect of proposed updates to Contract (Support) SOW Annex A ('Annex A') and Annex D ('Annex D') delivered prior to the TXRR, are all of the applicable Products identified in the relevant sections, specifically: b. Are the Mission System(s) (and excluded items) and Repairable Items of the Mission System and Support System (including S&TE and Training Equipment), identified in Annex A, consistent with the Approved SSDESC and provisioning lists (eg, RSPL, S&TEPL, TEL and PACKPL)? c. Are the required non-Repairable Items, identified in Annex A, consistent with the applicable provisioning lists? d. Is all of the required Technical Data identified in Annex A and Annex D, and are those Annexes consistent with the Approved Contract (Acquisition) SSTDL and Contract (Support) TDL? e. Are all Software items identified in Annex A consistent with the draft or Approved SWSP (as applicable at the time that the TXRR is held)? f. Have identifiers for allocating Services (ie, within table columns) been assigned to the Products in a manner that is consistent with Contractor (Support) responsibilities, as defined in the SSDESC and Contract (Support) SOW?	Mandatory
9.	a. In respect of the proposed update to Annex A, delivered prior to the TXRR, do the: b. Contractor (Support), c. Contractor (Acquisition), and d. Commonwealth Representative, e. agree that the Products that are Support Resources will reasonably allow the Contractor (Support) to: f. satisfy the SSFBL for the Services to be provided under the Contract (Support); and g. achieve the required performance level(s) specified for Key Performance Indicators within the Contract (Support)?	Mandatory
10.	Have all of the organisations involved in Transition, including the Commonwealth, Contractor (Acquisition), Contractor (Support), Subcontractors (Acquisition) and Subcontractors (Support) organisations been identified and their responsibilities agreed?	Mandatory
11.	In respect of Government Furnished Material (GFM) for the Contract (Support), if a proposed update to the Contract (Support) Attachment E was delivered prior to the TXRR:	Highly Desirable

Item	Checklist Item	Status
	Have all materiel items to be delivered by the Contractor (Acquisition) to the Contractor (Support), and designated as GFM, been included in the proposed update? Have all materiel items to be provided by the Commonwealth to the Contractor (Support), as GFM but not sourced from the Contract (Acquisition), been included in the proposed update? If updates to Attachment E to the Contract (Support) were proposed for Government Furnished Facilities (GFF) and/or Government Furnished Services (GFS), have these been sufficiently defined to facilitate Transition, Phase In and Ramp Up, as applicable?	
12.	In respect of the Supplies, have the in-service processes and responsibilities for warranty repair or replacement by the Contractor (Acquisition) been defined by the Contractor (Acquisition) and the Contractor (Support), and are these arrangements acceptable to the Commonwealth Representative?	Highly Desirable
13.	Is the Technical Data identified in the SSTDL and the ASTDL (and associated IP rights) for delivery to each entity that is, or will become, the Contractor (Support) or a Subcontractor (Support), sufficient to enable the required Services to be provided?	Highly Desirable
14.	Are the Support Resources, Training, IP rights, and other Supplies to be provided by the Contractor (Acquisition), sufficient to enable the AIC Obligations of the Contract (Acquisition) to be completed? Are the Support Resources, Training, IP rights, and other Products and Services to be established or provided by the Contractor (Support), sufficient to enable the AIC obligations of the Contract (Support) to be achieved?	Mandatory
15.	Have the sustainment-related DRAICs and other applicable AIAs (including any that have a dual acquisition and sustainment function) been programmed for incorporation into the support environment for the Supplies under the Contract (Support) (eg, through the applicable Contract (Support) plans)? For any sustainment-related DRAICs and other applicable AIAs that were only partially implemented under the Contract (Acquisition), have the necessary activities to fully implement these Industrial Capabilities been programmed into the planning for the Phase In and Ramp Up of the Contract (Support)? Are the programming requirements for the sustainment-related DRAICs and other applicable AIAs appropriate (in terms of timing) and sufficient (in terms of scope) to ensure that these Industrial Capabilities will be available, when required, under the Contract (Support)? Have any risks or Issues with incorporating the sustainment-related DRAICs and other applicable AIAs into the support environment under the Contract (Support) been identified and, if so, have risk-mitigation activities been identified and actioned?	Mandatory
16.	If Contract (Support) management plans have been delivered prior to the TXRR, are these plans consistent with: the SSFBL and the Approved SSDESC; and Contractor (Acquisition) delivered plans for Support Services, including the SWSP and DISP, as applicable? Applicable Contract (Support) plans include those under clause 4.3, as required by the Contract (Support) CDRL.	Highly Desirable

Item	Checklist Item	Status
17.	Have all of the Facilities, to be used by the Commonwealth and the Contractor (Support) for the provision of in-service support, been identified? Are Facilities and site installation works being undertaken by the Commonwealth, Contractor (Acquisition) and/or Contractor (Support) progressing sufficiently to meet Transition and Phase In and Ramp Up schedules or are plans in place to address any anticipated delays?	Mandatory
18.	Have the schedule and management requirements for the delivery of Supplies to the Commonwealth and Contractor (Support), as applicable, been defined by the CTXP? Applicable management requirements include delivery locations, receipting, record keeping and processes for reporting progress.	Mandatory
19.	Have Transition, Phase In and Ramp Up activities been defined and scheduled consistent with the Contract (Acquisition) V&V program, including any involvement by the Contractor (Support) and Approved Subcontractors (Support) in V&V activities? Are the activities in the CTXP, PHIP and RUMP plans scheduled consistent with the Contract (Acquisition) and Contract (Support) Milestones, including inter-related and concurrent Milestones?	Highly Desirable
20.	Are the CTXP and related Contract (Acquisition) plans consistent with the identified requirements and responsibilities for Transition?	Mandatory
21.	Are the PHIP, RUMP and related Contract (Support) plans consistent with the identified requirements and responsibilities for Phase In and Ramp Up?	Mandatory
22.	Are the CTXP, SIP, PHIP and RUMP harmonised?	Mandatory
23.	Has the schedule for the transfer of responsibilities from the Contractor (Acquisition) to the Commonwealth and to the Contractor (Support), as applicable, been defined in the CTXP? Applicable responsibilities may include those for Configuration Control, item management, Technical Data update, and so on.	Mandatory
24.	Has the schedule for the receipt and implementation of Supplies / Products, GFM and for the transfer of responsibilities, been defined in Contract (Support) plans?	Highly Desirable
25.	Have all identified Contract (Acquisition) Transition risks been reported against?	Mandatory
26.	Have all identified Contract (Support) Phase In and Ramp Up risks been reported against?	Mandatory
27.	Have future Transition Working Group (TXWG) activities been scheduled and agreed by the Commonwealth Representative, the Contractor (Acquisition) and the Contractor (Support)?	Highly Desirable

7. REVIEW EXIT CRITERIA

Item	Exit Criteria	Status
1.	All checklist items have been addressed to the satisfaction of the Contractor (Acquisition) and the Commonwealth Representative.	Mandatory

Item	Exit Criteria	Status
2.	All major problem and risk areas for Transition have been identified and resolved and, for minor risks, corrective action plans have been recorded and agreed by the Commonwealth Representative.	Mandatory
3.	All major problem and risk areas for Phase In and Ramp Up, including those related to Transition activities, have been identified and resolved and, for minor risks, corrective action plans have been recorded and agreed by the Commonwealth Representative.	Mandatory
4.	All significant Support Resources, processes, Services and Industrial Capabilities (eg, DRAICs) required to be transitioned to the support environment have been identified and agreed by the Commonwealth Representative and Contractor (Acquisition).	Mandatory
5.	All significant Support Resources, processes, Services and Industrial Capabilities required for Phase In and Ramp Up of the Contract (Support) have been identified, are consistent with Transition, and are agreed by the Commonwealth Representative and Contractor (Support).	Mandatory
6.	All major responsibilities for the Transition activities have been allocated, and the Contractor (Acquisition), Subcontractors (Acquisition) and Commonwealth units each understand their applicable Transition responsibilities.	Mandatory
7.	The Commonwealth Representative is satisfied that sufficient information has been provided by the Contractor (Acquisition) and the Contractor (Support) (or further will be provided in updated plans) to enable Commonwealth organisations to plan Commonwealth transition activities, for those activities that interface with or are dependent upon the activities of the contractors.	Mandatory
8.	All major responsibilities for Phase In and Ramp Up activities have been allocated and the Contractor (Support), Subcontractors (Support) and Commonwealth units each understand their applicable Phase In and Ramp Up responsibilities.	Mandatory
9.	Any discrepancies between the Contract (Acquisition) provisioning lists (eg, TEL, TML, S&TEPL, RSPL and PACKPL) and the proposed Commonwealth and Contractor (Support) stock-holdings, have been resolved, or plans are in place to resolve them, to the satisfaction of the Commonwealth Representative, Contractor (Acquisition) and Contractor (Support).	Mandatory
10.	Contractor (Acquisition) plans and schedules for Transition are realistic and have been agreed by the Commonwealth Representative and Contractor (Acquisition).	Mandatory
11.	Contractor (Support) plans and schedules for Phase In and Ramp Up are realistic, consistent with Transition, and have been agreed by the Commonwealth Representative and Contractor (Support).	Mandatory
12.	The Contract (Support) management plans are consistent with the Approved SSDESC, the SSFBL, the sustainment-related AIC Obligations under the Contract (Acquisition), and the AIC obligations under the Contract (Support), or plans are in place to update those management plans to enable Approval prior to the Contract (Support) Operative Date.	Mandatory
13.	The CTXP and the Contract (Support) PHIP and RUMP are Approved.	Mandatory

Item	Exit Criteria	Status
14.	The Contractor (Acquisition) and the Contractor (Support) agree that implementation of Transition and the Phase In and Ramp Up of Services, in accordance with the Approved CTXP, Approved PHIP and Approved RUMP, will establish the Contract (Support) functions necessary to satisfy the applicable requirements of the SSFBL and the sustainment-related AIC obligations under both Contracts. For this exit criterion, agreement will be deemed to have been provided when the Contractor (Acquisition) and the Contractor (Support) have both signed the minutes of the TXRR.	Mandatory
15.	All major action items have been closed.	Mandatory
16.	All minor action items have been documented and assigned with agreed closure dates.	Mandatory
17.	All outcomes from TXRR have been addressed adequately in the Contract Master Schedule to the satisfaction of the Commonwealth Representative.	Mandatory
18.	Review Minutes have been prepared, Approved, and distributed in accordance with the Contract (Acquisition).	Mandatory

MSR CHECKLIST

1. IDENTIFICATION: MSR-CHECKLIST-DRAICRR-V5.3

2. TITLE: DEFENCE-REQUIRED AUSTRALIAN INDUSTRIAL CAPABILITY READINESS REVIEW CHECKLIST

3. DESCRIPTION AND INTENDED USE

3.1 The Defence-Required Australian Industrial Capability (DRAIC) Readiness Review (DRAICRR) forms an integral part of the assurance activities for a DRAIC, prior to Acceptance of the DRAIC. The objectives of the DRAICRR are to:

a. demonstrate that the DRAIC meets the required criteria to enable Acceptance of the DRAIC to be achieved, including that the DRAIC or specific DRAIC Elements meet the applicable requirements of the Contract;

b. confirm that the required DRAIC Elements are in place and that the DRAIC can be operated and perform its required functions, including in relation to (as applicable) designing, developing, integrating, conducting Verification and Validation (V&V) on, and supporting, the Mission System and/or the Support System; and

c. confirm that support arrangement for sustaining the DRAIC are in place, such that it is, and will be, operational when required and for the duration required.

3.2 The DRAICRR applies whenever a DRAIC (or set of DRAICs) is offered for Acceptance, which may include:

a. a DRAIC undergoing Acceptance for the first time; or

b. for a DRAIC that is developed or implemented in increments, undergoing a subsequent Acceptance for the new Industrial Capabilities that have been implemented.

3.3 For the purposes of this MSR Checklist, the term '**Relevant DRAIC**' means the DRAIC or set of DRAICs for which the DRAICRR is being conducted.

3.4 This MSR Checklist sets out the Commonwealth's requirements and minimum expectations for the conduct of a DRAICRR.

4. INTER-RELATIONSHIPS

4.1 The DRAICRR shall be conducted in accordance with the System Review Plan (SRP), and shall include the relevant requirements of the following plans and data items, where these data items are required under the Contract:

a. DRAIC Plan (DRAICP);

b. AIC Plan and other AIC-related plans (eg, Supply Chain Management Plan) to the extent applicable to the DRAIC;

c. Project Management Plan (PMP);

d. Systems Engineering Management Plan (SEMP);

e. Integrated Support Plan (ISP);

f. Contract Master Schedule (CMS);

g. Health and Safety Management Plan (HSMP);

h. Environmental Management Plan (ENVMP);

i. Hazard Log (HL);

j. Safety Data Sheets (SDSs) (for any Hazardous Substances in the DRAIC);

k. Quality Management Plan (QMP) (in relation to the quality systems and processes associated with operating and supporting the DRAIC);

l. Configuration Management Plan (CMP) (in relation to Configuration Management systems and processes for implementing and supporting the DRAIC);

m. Verification and Validation Plan (V&VP) (in relation to V&V activities for any DRAICs that will form part of the Support System (ie, as part of Support System Acceptance V&V (AV&V)) and/or where the SOW specifies that particular DRAIC Elements or the DRAIC itself are required to undergo AV&V);

n. Support System Technical Data List (SSTDL);

o. ANZ Subcontractor Technical Data List (ASTDL) in relation to the Technical Data required for implementing, operating and supporting a DRAIC; and

p. any data items required for operating and supporting the DRAIC, as listed in the Approved ASTDL (eg, maintenance plans, maintenance management plan, and inventory management plan).

5. REVIEW ENTRY CRITERIA

Item	Entry Criteria
1.	All data items required to be delivered before, and linked to, the DRAICRR, including those identified in the CDRL and in other data items (eg, SSTDL and ASTDL), have been delivered and the Commonwealth Representative considers the data items to be suitable for the purposes of conducting the DRAICRR.
2.	The assurance scenarios for confirming the suitability of the Relevant DRAIC have been agreed by the Commonwealth Representative, including scenarios in relation to the use and support of the Relevant DRAIC, to ensure that the required functionality is achieved, and integrating (as applicable) with other elements of the design, development, production, V&V and delivery systems for the Materiel System. The assurance scenarios include traceability to: a. the scenarios identified in the Approved DRAICP; b. any functional and performance requirements in Attachment F and any requirements for the DRAIC derived from the requirements in Attachment F; c. any operating and support concepts in Attachment F; and d. other applicable requirements sources (eg, legislation, the Support System Specification (SSSPEC) and, where applicable, the Contract (Support)).
3.	Any precursor transfer of technology activities to establish the Relevant DRAIC within Australian Industry have been undertaken, including in relation to transfer of technology, Technical Data and Intellectual Property, and knowhow and know-why (eg, through training, secondment or other means). For clarity, this criterion only applies to transfer of technology activities set out in an Approved DRAICP.
4.	If applicable, any equipment associated with the Relevant DRAIC that requires installation has been installed and functionally checked, as appropriate, except as otherwise agreed by the Commonwealth Representative.
5.	The supportability analysis for the DRAIC Elements has been conducted and all of the Support Resources and Training associated with the Relevant DRAIC, which are capable of being identified at the time of the DRAICRR, have been identified, except as otherwise agreed by the Commonwealth Representative.
6.	The ICT applicable to the Relevant DRAIC has been Verified as satisfying the relevant requirements in the Technical Data that sets out the ICT needs at the DRAIC.
7.	The applicable governing plans for the work to be undertaken in the Relevant DRAIC (eg, the HSMP, ENVMP, QP, CMP and maintenance plans, as applicable) are up-to-date, Approved, and appropriately address the operating and support functions to be conducted for the Relevant DRAIC, except to the extent otherwise agreed by the Commonwealth Representative for sustainment DRAICs.

Item	Entry Criteria
8.	All required Authorisations to operate and support the Relevant DRAIC have been obtained, except to the extent otherwise agreed by the Commonwealth Representative for sustainment DRAICs.
9.	Action items from any previous System Reviews, affecting the readiness of the Relevant DRAIC to perform its identified functions, have been successfully addressed or action plans agreed with the Commonwealth Representative.

6. REVIEW CHECKLIST

Item	Checklist Item
1.	Were all entry criteria satisfied before starting the DRAICRR?
2.	Have Approved and pending CCPs, which could have an effect on the Relevant DRAIC, been assessed?
3.	Have all Commonwealth Representative review comments against data items applicable to the DRAICRR been adequately addressed?
4.	Are operational-level plans for the Relevant DRAIC in place, current and authorised? For clarity, operational-level plans are used to operate the Relevant DRAIC under and within the scope of the governing plans identified in the entry criteria (eg, workshop plans).
5.	Have the work process flows to be conducted in the Relevant DRAIC been defined? For clarity, this includes operating and support processes within the Relevant DRAIC and, as applicable, functions in relation to designing, developing, integrating, conducting V&V on, and supporting the Materiel System. Do these process flows define external interfaces associated with the Relevant DRAIC (which, for clarity, includes the identification of both sides of the interface including in other DRAICs) in relation to: a. the flow of materials (eg, raw materials, component parts) into the Relevant DRAIC; b. data flows and data exchanges; and c. the flow of materials, including completed products, out of the Relevant DRAIC. Are there current and authorised procedures that align to these process flows? Is the requisite data for these process flows defined, and is appropriate access to this data available at the associated work areas? Is the data current and authorised? Are the materials associated with these process flows identified and physically located where needed to provide the requisite operational functionality for the Relevant DRAIC? Do processes and procedures address any special handling and related requirements (eg, in relation to Government Furnished Material (GFM), shelf life, security, storage environment, WHS, Problematic Substances, Problematic Sources, and environmental protection)?
6.	Do the physical locations and the layout of the Relevant DRAIC facilities, equipment, storage, ICT and work areas enable effective and efficient work practices when the DRAIC is operated and supported in accordance with authorised procedures?
7.	Do the physical locations and the layout of the Relevant DRAIC facilities, equipment, storage, ICT, and work areas enable the DRAIC to achieve capacity and throughput requirements, including if parallel activities are undertaken, such as when multiple Mission Systems are being built, tested, integrated, and/or supported? If there are parallel activities applicable to the Relevant DRAIC, but these cannot be physically demonstrated, are the modelling and other assumptions,

	requirements and constraints underpinning the capacity / throughput analyses appropriate for the nature of the work to be performed?
8.	Have all items of equipment required to operate the Relevant DRAIC been identified, delivered and physically located where needed to provide the requisite operational functionality for the Relevant DRAIC? For equipment requiring installation, has each item of equipment been functionally tested to confirm installed performance?
9.	Have all items of equipment required to support the Relevant DRAIC, which are capable of being identified, been identified, delivered and physically located where needed to provide the requisite support functionality for the Relevant DRAIC? For equipment requiring installation, has each item of equipment been functionally tested to confirm installed performance? For clarity, this includes all Support and Test Equipment (S&TE) and equipment for materials handling.
10.	Is the equipment required to operate and support the Relevant DRAIC serviceable and, for equipment requiring calibration, does the equipment have current calibration certification?
11.	For each item of bespoke equipment, has a Design Certificate been signed by the applicable Contractor or Subcontractor authority, and has each Design Certificate either been witnessed by, or (if required) delivered to, the Commonwealth Representative?
12.	Are all items of equipment that form part of the DRAIC identified in the information management systems / Configuration Management systems applicable to the DRAIC?
13.	Is all of the Technical Data required to operate the Relevant DRAIC equipment resident in the information management systems applicable to the DRAIC?
14.	Is all of the Technical Data required to support the Relevant DRAIC equipment resident in the information management systems applicable to the DRAIC? For clarity, this includes data in relation to Maintenance (including calibration), Spares, inventory management (including Packaging, handling, storage and transportation), supply chain and Configuration Management.
15.	Have performance-management systems and processes for the Relevant DRAIC been defined and implemented?
16.	Are the plans, procedures and Technical Data to be used by a predominantly Australian Industry workforce provided to Simplified Technical English (STE) standards (ie, using a dictionary derived from ASD-STE100), or otherwise suitable for a workforce with the typical skills and experience to be found in Australian Industry for undertaking the type of work in the Relevant DRAIC?
17.	Does the ICT that forms part of the DRAIC implement all of the functionality required for the operation and support of the Relevant DRAIC, including to the extent applicable for the Relevant DRAIC: a. project management (eg, for scheduling or resource allocation); b. quality management; c. enterprise resource management; d. materiel requirements planning; e. manufacture resource planning; f. production engineering; g. Technical Data management; h. Configuration Management; i. Maintenance management; j. software support; k. inventory management; l. supply chain management;

	m. requirements management; n. integration and test management; o. V&V management; p. Work Health and Safety (WHS); and q. environmental protection?
18.	Are any items of GFM required to provide the requisite operational and/or support functionality for the Relevant DRAIC in place and serviceable?
19.	Are the necessary personnel in place in sufficient numbers and with the correct skills mix to operate the Relevant DRAIC, as identified in the Approved DRAICP? Are the necessary personnel in place in sufficient numbers and with the correct skills mix to support the Relevant DRAIC, as identified in the Approved DRAICP? Are the management and organisational structures (including supervisory roles) commensurate with the nature and complexity of the tasks, the hazard analyses for the Relevant DRAIC, and the associated WHS and environmental risks? Where there are shortfalls in personnel numbers and/or skills, are there plans in place to rectify these shortfalls so that the Relevant DRAIC will achieve full operational capability when required, as set out in the Approved CMS or Approved DRAICP (as applicable)?
20.	Are there Training programs in place so that: a. personnel who are required to undertake work in the Relevant DRAIC can maintain currency; and b. to enable Training to be provided to replacement personnel when required? (Note that this will include training records and evidence of certification as necessary.)
21.	Is the hazard log for the Relevant DRAIC, including identified Problematic Substances and Problematic Sources, up-to-date and consistent with the systems, equipment, plans, processes and procedures associated with the Relevant DRAIC? Have all hazards arising out of the Approved Hazard Log, which are applicable to the Relevant DRAIC, been addressed? For all substances, which are either hazardous to personnel or the environment (or both), are the applicable Safety Data Sheets (SDSs) in place and readily available to the workforce in the Relevant DRAIC (eg, through the WHS Management System)? Has Training been provided to ensure a safe workplace for the Relevant DRAIC? Has the workforce demonstrated an understanding of the safety considerations at the workplace?
22.	Are the required Subcontracts in place to provide the resources (eg, labour, materials, component parts and specialist services) required to meet the schedules applicable to operating the Relevant DRAIC and undertaking, as applicable, the design, development, integration, V&V, and support of the Materiel System? Where these arrangements have not been fully implemented, are there plans in place to implement these arrangements at a suitable future time so that the Relevant DRAIC will achieve full operational capability when required, as set out in the Approved CMS or Approved DRAICP (as applicable)?
23.	Are the required Subcontracts in place to provide the resources (eg, labour, spares, consumables and specialist services, including in relation to disposal) required to support the Relevant DRAIC? Where these arrangements have not been fully implemented, are there plans in place to implement these arrangements at a suitable future time so that the Relevant DRAIC will achieve full operational capability when required, as set out in the Approved CMS or Approved DRAICP (as applicable)?

24.	Have the Sovereignty requirements linked to the Relevant DRAIC been achieved? For clarity, these Sovereignty requirements are those defined through the Approved AIC Plan(s) (ie, including Subcontractor AIC Plans), the Approved DRAICP, and related data items, as they apply to the Relevant DRAIC.
25.	Are disposal plans and waste / scrap management, reclamation and recycling plans applicable to the Relevant DRAIC in place and authorised?
26.	Have the assurance scenarios agreed through the applicable entry criterion provided the integrated view of operations for the Relevant DRAIC to confirm suitability in relation to operating and supporting the Relevant DRAIC and, as applicable, designing, developing, integrating, conducting V&V on, and supporting, the Mission System and/or the Support System?
27.	Has a WHS audit been conducted of the Relevant DRAIC? Are safety plans, equipment and personnel training in place?
28.	Have all risks for the Relevant DRAIC identified prior to the DRAICRR been reported against?
29.	Are Contract plans and schedules consistent with the Contract activities post-DRAICRR, including the activities to address any minor omissions and defects in the Relevant DRAIC?

7. REVIEW EXIT CRITERIA

Item	Exit Criteria
1.	All checklist items have been addressed to the satisfaction of the Contractor and the Commonwealth Representative.
2.	To the extent applicable, the Technical Data and Software Rights Schedule is up-to-date and consistent with the systems, equipment and processes included in the Relevant DRAIC, except to the extent otherwise agreed by the Commonwealth Representative.
3.	The ASTDL is up-to-date and consistent with the systems, equipment and processes included in the Relevant DRAIC, except to the extent otherwise agreed by the Commonwealth Representative.
4.	All major problem and risk areas with the Relevant DRAIC have been identified and resolved and, for minor problems and risks, corrective action plans have been recorded and agreed by the Commonwealth Representative.
5.	All risks identified during the course of DRAICRR have been documented and analysed.
6.	The risks with proceeding to the next phase (ie, using the Relevant DRAIC to perform its specified functions in relation to the Materiel System) are acceptable to the Commonwealth Representative.
7.	All major action items have been closed.
8.	All minor action items have been documented and assigned with agreed closure dates.
9.	Review Minutes have been prepared, Approved, and distributed in accordance with the Contract.