SD-26

DMSMS and Parts Management Contracting Guide

Defense Standardization Program Office

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Contents

List of Tables

List of Figures

Foreword

Diminishing manufacturing sources and material shortages (DMSMS) and parts management are two vitally important activities throughout the life cycle of all Department of Defense systems. These disciplines must be performed well, otherwise life-cycle costs will increase, readiness will decline, and vulnerabilities affecting mission performance will be created.

Many DMSMS management functions and nearly all parts management functions are performed by government contractors. The government is entirely responsible for overseeing these two functions, but significant aspects of government oversight are enabled by contractor reporting and data. The interaction of government and contract responsibilities is the foundational reason for publishing this document.

Because of the extensive contractor contributions to these areas, it becomes essential to include all necessary DMSMS and parts management requirements in contracts. These requirements must be expressed in a clear, unambiguous, and very thorough manner. This guide contains details on what contract requirements to consider as a function of the responsibilities assigned to the contractor throughout a weapon system's life cycle. Illustrative requirements language is provided along with the associated Contract Data Requirements Lists (CDRLs) and Data Item Descriptions (DIDs).

In addition, this guide can be used by program offices to prevent the elimination of critical requirements during contract negotiations. I urge you to read it thoroughly and use it on all new contracts and modifications to existing contracts. Its application will avoid many difficult problems throughout a system's life cycle.

Recommended changes to this document should be addressed to the Defense Standardization Program Office, 8725 John J. Kingman Road, Stop 5100, Fort Belvoir, VA 22060-6220, or via email to DSPO@dla.mil

MICHAEL A. HEAPHY JR.
Director, Defense Standardization Program Office

Section 1. Introduction

Effective parts management[1] and diminishing manufacturing sources and material shortages (DMSMS) management[2] complement each other. Because contractors usually play a large role in the development and support of Department of Defense (DoD) systems, DoD contracts associated with these systems should contain provisions relating to DMSMS and parts management. A contract normally begins pre-solicitation with a market investigation during which interested contractors are queried as to their existing DMSMS and parts management practices and how they might be applied on this contract to meet the government's[3] requirements. The program office can use this information to better define the DMSMS and parts management requirements to be included in a consolidated performance work statement (PWS), a statement of objectives (SOO), or a statement of work (SOW) depending on the contracting strategy. This market investigation activity should also allow the program office to refine its DMSMS and parts management requirements to more cost effectively meet the government's objective.

DoD Directive (DoDD) 5000.01[4] requires performance-based acquisition and product support strategies. Such strategies are often implemented through use of a SOO,[5] in accordance with (IAW) Military Handbook 245E (MIL-HDBK-245E),[6] developed by the government and provided to a contractor who then writes a SOW.

Government contracts should require prime and subcontractor design agents and government configuration control boards (e.g., software developers, engineering, system security engineering, and product support subject matter experts [SMEs], etc.) to consider DMSMS and parts management risks, issues, and opportunities throughout the life cycle, when making design choice decisions. As a best practice, performance-based contracts should be used to incentivize contractors to make choices that meet the government's needs, e.g., consideration for increased service life and suitability for use.[7]

Furthermore, contracts should incorporate requirements for a variety of DMSMS and parts management best practices to mitigate life-cycle cost, schedule, and performance (including security and supply chain) risks. This strategy will proactively inform design and supportability decisions based on program risk, as well as issue and opportunity analyses conducted against hardware and software work breakdown structure.

The remainder of this document consists primarily of a series of tables and appendixes. Since this document is guidance, the word *should* is generally used. However, when this document provides

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[1] See Defense Standardization Program Office, Standardization-related Document 19 (SD-19), *Parts Management Guide*, December 2013. A 2023 revision is forthcoming.
[2] See Defense Standardization Program Office, SD-22, *Diminishing Manufacturing Sources and Material Shortages—A Guidebook of Best Practices for Implementing a Robust DMSMS Management Program*, May 2022.
[3] The use of the term government in this document generally refers to the DoD Component organization contracting for DMSMS or parts management services. No distinction is made concerning which elements of the organization are involved. The SD-22 and SD-19 contain more information at that level of detail.
[4] DoDD 5000.01, *The Defense Acquisition System*, with change 1 July 28, 2022.
[5] A government-prepared SOO is more compatible with performance-based acquisition than a government-prepared PWS or SOW. The government's performance objectives can be found in the Capability Development Document.
[6] MIL-HDBK-245E, *Preparation of Statement of Work (SOW)*, September 12, 2022. MIL-HDBK-245E describes the preparation of a SOW, PWS, and SOO.
[7] In accordance with Federal Acquisition Regulation (FAR) 10.001.

illustrative language for contract requirements, the word *shall* is often used in that context. A brief introduction of the tables, separated by section, is as follows:

Section 2

Tables 1.1–1.6 contain illustrative DMSMS management contract language requirements and implementation notes about their applicability as a function of different life-cycle circumstances.

Section 3

Tables 2.1–2.4 contain illustrative parts management contract language requirements and implementation notes about their applicability as a function of different life-cycle circumstances.

The illustrative contract requirement wording in Sections 2 and 3 ***should be tailored*** to complement the program office's Acquisition Strategy and its corresponding product support concepts, competition strategy, and intellectual property strategy.[8] Not every requirement in Tables 1.1–1.6 and Tables 2.1–2.4 is applicable in all circumstances. Inclusion of any of the referenced contract requirements should be based on assessments of the specific risk to the program office and the availability of suitable, government subject matter expertise to review contract proposals and contractor submitted deliverables to ensure they meet the government's requirements.

Section 4

Table 3 lists other sections of a contract where parts and DMSMS management concepts should be included and suggests what should be conveyed.

Section 5

- Table 4 illustrates requirement applicability during each phase of the Major Capability Acquisition (MCA) pathway.[9]
- Table 5 indicates requirement applicability as a function of the level of government involvement in parts and DMSMS management.
- Table 6 shows the decision drivers for Table 5.

Section 6

- Table 7 provides Contract Data Requirements Lists (CDRLs) and related Data Item Descriptions (DIDs) referenced in this document.
- Table 8 enumerates non-DMSMS management CDRLs and DIDs that could or should be present in the contract.

Appendixes

- Appendix A suggests ways to fill out the CDRLs for different scenarios.
- Appendix B provides abbreviations used in this document.

[8] Coordinate with an intellectual property SME to discuss how to tailor technical data and software requirements to enable both the Acquisition Strategy and the product support strategy.

[9] This document assumes that the reader is familiar with the adaptive acquisition framework as described in DoD Instruction (DoDI) 5000.02, *Operation of the Adaptive Acquisition Framework*. Six pathways are described in that document—Urgent Capability Acquisition (UCA) pathway to field capabilities to fulfill urgent operational needs in less than 2 years; Middle Tier of Acquisition (MTA) pathway to rapidly develop fieldable prototypes that require minimal development; MCA pathway to acquire and modernize systems that provide enduring capability; Software Acquisition pathway to facilitate rapid and iterative software capability; Defense Business Systems (DBS) pathway to acquire information systems for business operations; and Acquisition of Services pathway to acquire services from the private sector.

Some of the data requirements shown in Sections 2 and 3 may be duplicative of requirements specified by other program office disciplines. The inclusion of ***duplicative data requirements should be avoided in contracts, because they add unnecessary burden to the contractor and increase government cost***.

Section 2. DMSMS Management Contract Requirements

All program offices must deal with DMSMS issues over the life cycle of their systems, from conceptual design to disposal. The longer life cycles of DoD systems compared to the shorter life cycles of the items[10] used on these systems guarantees the inevitability of DMSMS issues. Therefore, DoD program offices should pursue proactive, strategic DMSMS management approaches to minimize schedule delays, cost, and negative impacts to readiness due to DMSMS.

Effective DMSMS management identifies and resolves part availability problems before they become supply and readiness problems and early enough for less expensive resolutions to be available. Furthermore, by forecasting item availability issues in subsystems over a multi-year planning horizon, program offices can implement resolutions in conjunction with planned weapon system upgrades.

The role of contractors in DoD DMSMS management varies greatly, but most program offices divide responsibilities between contractors and the government program office. At one extreme, contractors perform virtually all DMSMS management activities, including finding ways to resolve DMSMS issues (i.e., determining resolution options, funding the preferred resolutions, and implementing them). Even in that extreme case, the program office remains responsible for ensuring contractors perform those services responsibly and thoroughly, and submit reports and data to enable such monitoring. This end of the spectrum requires the most comprehensive approach from a contract language perspective.

The other extreme is for the program office to perform all DMSMS management functions. That is typically the case during the sustainment phase when the government provides all logistics support to the system. This may also be the case in earlier acquisition phases when the system is basically a commercial item, and the contractor has no ability or expertise to identify or address DMSMS issues. Whatever the reason, in this situation contract language requirements specific to DMSMS management are minimal or nonexistent.

Because most program offices fall between these two extremes, the illustrative language here covers a broad range of contractual arrangements for DMSMS management. It can be used when relevant or tailored to meeting the needs of the program office's specific approach to DMSMS management. The contracting approach might change as the program office progresses through acquisition phases, so both the relevance and the degree of tailoring will, in general, depend on the acquisition phase and other factors.

Program offices should avoid duplication of effort in DMSMS management. If the contractor and its subcontractors have robust DMSMS management capabilities and are properly tasked through contractual requirements, the government may be able to rely on good reporting and metrics for proper oversight. Alternatively, the government may be best served by developing its own internal DMSMS management capability. In every instance, collaboration and timely communication between the program office and the contractor will go a long way toward instituting and maintaining a positive DMSMS management relationship. Neither party can effectively resolve DMSMS issues without involving the other.

[10] The word "item" is used throughout the DMSMS management content in this document to refer to anything in the system and may include parts, software, materials, chemicals, etc. Because the word "parts" is explicit in the "parts management" title, this document does not use the word "item" in the parts management content.

A program office best practice is to employ independent SMEs,[11] even if the prime contractor is already intimately involved in DMSMS management for the system. Independent SMEs can (1) assist the government in overseeing the prime contractor, particularly in terms of taking a life-cycle perspective; (2) give an independent perspective on issues and resolutions; (3) provide specialized tools, processes, data, and unique supplier relationships that may not be available to the prime contractor; (4) advise a program office on formulating DMSMS management contract language, securing bills of materials (BOMs), and other responsive, tailored support to meet specific needs; (5) serve as a central linkage to DMSMS management activities and best practices in other program offices; and (6) provide a conduit to improved access to supplier data in a competitive situation. Independent SMEs may also prove helpful during sustainment, if the government is entirely responsible for sustainment support and the prime contractor has little or no role.

Regardless of the DMSMS management strategy used, the program office needs to budget for and fully fund both DMSMS management operations and the implementation of any required resolutions (usually performed under contract). By definition, the implementation of resolutions only occurs after parts selection.

DMSMS management is a multidisciplinary process consisting of five major steps.

1. The *prepare* step establishes the foundation for all DMSMS management processes and creates a resourced DMSMS Management Plan (DMP).
2. The *identify* step monitors for current DMSMS issues and forecasts issues in the future.
3. The *assess* step determines whether a DMSMS case should be opened and evaluates the timing required and the level of assembly for resolution.
4. The *analyze* step examines potential mitigation strategies and develops the most cost-effective resolution.
5. The *implement* step puts that most cost-effective resolution into effect.

The DMSMS management steps are the organizing principle for the remainder of this section. Table 1.1 contains illustrative contract requirements that are not associated with a single step in the DMSMS management process. The following five subsections and corresponding Tables 1.2–1.6 generally align illustrative DMSMS management contract language corresponding to the DMSMS management steps.

The wording in Tables 1.1–1.6 should be tailored to complement the program office's Acquisition Strategy and its corresponding product support concepts, competition strategy, and intellectual property strategy. All parts of Tables 1.1–1.6 include:

- Requirement number. Requirements 1 through 23 pertain to DMSMS management. For some requirements (e.g., requirement 17) there is flexibility in whether it is included in the DMSMS or parts management section of the contract. To avoid ambiguity, requirements are numbered consecutively throughout all parts of Tables 1.1–1.6.
- Applicability information.
- The life-cycle event or phase where the requirement should be first included in contracts. The requirement should be considered in all contracts after that point in the life cycle.
- Illustrative language with implementation notes. Entries in the Illustrative Language column in italics are intended to be adjusted to meet the needs of the government.

Not every requirement in Tables 1.1–1.6 is applicable in all government circumstances.

[11] Per the SD-22, page 35, an organization or individual outside of both the program office and the prime/original equipment manufacturers that provides DMSMS management services.

The illustrative Tables 1.1–1.6 contract language was developed for the MCA pathway. Applicability to other pathways is discussed to a limited extent within the applicability information column and more so in Section 5.

Table 1.1 Illustrative Contract Requirements Not Associated with a Single DMSMS Management Step

Rqmt No.	Title	Applicability	Initial Life-Cycle Event or Phase	Illustrative Language
1	Definitions	All contracts and phases. These definitions provide clarity in the use of specific DMSMS terms in requirements and DIDs.	Post Milestone A (MSA)	Definitions. For the purpose of this part– **BOM.** List of the items—including raw materials, subassemblies, intermediate assemblies, subcomponents, parts, chemicals, and software—and the quantities of each contained in an end product. The BOM may include additional information that enables the user to determine the precise location of an item within an end product.
				Commercial Item. Any item that meets the definition in 48 CFR 2.101, Definitions.
				DMSMS. The loss, or impending loss, of qualified sources, manufacturers, or suppliers that may cause shortages in the acquisition or procurement of an item or system including design, manufacture, sustainment, or disposal.
				DMSMS Impact. The effect of an unresolved or projected DMSMS issue on the ability to produce or support an item or its higher assemblies over its planned life cycle.
				DMSMS Issue. A projected or realized problem related to the shortage or potential shortage of an item caused by obsolescence, loss of qualified manufacturers or suppliers, legal or policy changes, etc.
				DMSMS Management. A multidisciplinary process to identify issues resulting from obsolescence, loss of manufacturing sources, or material shortages; to assess the potential for negative impacts on schedule or readiness; to analyze potential mitigation strategies; and then to implement the most cost-effective strategy. DMSMS management typically falls into two approaches: Proactive DMSMS management and reactive DMSMS management.
				DMSMS Resilience. The use of design techniques that reduce the likelihood of near-term DMSMS issues and increase the probability of a quick recovery when they do occur. DMSMS resilience is achieved by selecting long life-cycle items, avoiding parts without a qualified, approved alternate, using open architecture in designs, and other techniques.
				DMSMS Risk. The likelihood of a DMSMS issue within a particular time frame, coupled with the severity of the consequences of that issue. An item is considered a high DMSMS risk if a DMSMS issue is likely during the period of performance or within

Rqmt No.	Title	Applicability	Initial Life-Cycle Event or Phase	Illustrative Language
				X years of completion of the contract and if it will impede production, sustainment, or readiness.
				Item. Any part, assembly, software, material, chemical, etc., used in the manufacture, assembly, or operation of contract deliverables.
				Obsolete. Condition where the exact part number has no available manufacturing sources.
				Proactive DMSMS Management. An approach to DMSMS management that attempts to identify DMSMS problems before an unfulfillable demand for the item arises. This approach aims to resolve the issue before the DMSMS risks are realized in a way that impedes a system's production or sustainment.
				Projected DMSMS Issues. Predicted issues identified by the DMSMS monitoring process by contact with the manufacturer or other prediction techniques.
				Reactive DMSMS Management. Situation in which no attempt is made to identify DMSMS problems before an unfulfillable demand for the item arises.
				Subcontractor. The subset of suppliers as defined in the FAR and 48 CFR § 44.101, Definitions, that provide items that are not commercial items.
				Unresolved DMSMS Issues. DMSMS issues identified as valid and determined to affect production or sustainment, but for which no solution has been approved by the responsible authority.
				Implementation note: This requirement should be first in the DMSMS section. For these definitions to apply, the terms must be capitalized in the body of the contract as they are in this section.
2	DMSMS as a source selection criterion	Used in requests for proposals (RFPs) for all phases of acquisition to emphasize effective DMSMS management. In an ideal situation, this would be part of a larger contract section containing other considerations for source selection. In	Post MSA	Proposals shall be evaluated on the DMSMS management approach and the adequacy of planning for mitigating DMSMS risks. Proposals that include DMSMS management plans, defining their specific approach to proactive DMSMS management, will receive more favorable ratings than those without such an approach. A proactive DMSMS management approach includes predictive forecasting strategies; item list screening to the lowest level; item list monitoring; methods for tracking, reporting, and mitigating DMSMS cases to avoid costly solutions; and a process to manage the subcontractor's DMSMS efforts. **Implementation note:** If a proactive DMSMS management approach is needed, this requirement can be used to develop the RFP source selection criteria. Evaluation factors should be mapped to technical outcomes and actual performance objectives within the draft Capability Development Document.

Rqmt No.	Title	Applicability	Initial Life-Cycle Event or Phase	Illustrative Language
		cases where this is true, see Table 3, which lists things to look for in other contract sections. If no other source selection criteria exist, this requirement may be used.		
3	Exit plan	At the termination of a contract, sufficient information should be available to the government to enable the transfer of DMSMS operations and data to the government or to another contractor.	Post MSA	The contractor shall develop and deliver to the government a DMSMS Operations Transfer Plan in accordance with CDRL *XXXX* (see CDRL Template 13) using DID DI-MGMT-82276, DMSMS Operations Transfer Plan that details how DMSMS operations will be transferred to the government or another contractor during the last *6* months of the contract. The plan shall detail the transfer of DMSMS data, the inventory of items related to DMSMS solutions, DMSMS case data, DMSMS items–related logistics data, and technical data. It will also detail risks to the implementation of the plan and any additional costs to the government that may result from the plan. **Implementation note:** This requirement may be inserted as a priced option that will only be exercised at the end of multi-contract procurements or as needed.
4	Metrics report	The contractor should provide reports that support the government's DMSMS management record-keeping and reporting.	At Preliminary Design Review (PDR) and thereafter	The contractor shall deliver DMSMS metrics in support of DMSMS management record-keeping efforts in accordance with CDRL *XXXX* (see CDRL Template 12) using DID DI-MGMT-82275A, DMSMS Metrics Data.

2.1 DMSMS Management Contract Requirements for the Prepare Step

This step focuses on DMSMS management program infrastructure. It encompasses:

- *Define obsolescence*. The government should determine what constitutes obsolescence for the program office, and any contractor responsible for DMSMS management activities should agree to this definition. For example, for the purposes of a contract, hardware, software, and firmware could be considered obsolete when the item can no longer be procured from the prime contractor, as identified in the current technical data package (TDP) or product specification.

- *Determine whether the program office is concerned with critical materials in its supply chains*. If program offices have a reason to be concerned about critical materials in their supply chains, they should consider adding a contract requirement to identify the extent to which such materials are in the supply chains for the subsystems of interest. This is often done today to be compliant with Registration, Evaluation, Authorisation, and Restriction of Chemicals (REACH) and Restriction of Hazardous Substances (RoHS) reporting certification and to meet programmatic environment, safety, and occupation health evaluation requirements. This effort, however, does not normally identify the suppliers of the critical materials nor does it identify the specific critical material content. Typically engineering estimates apply to the total amount of material included. If a more extensive understanding of the supply chain were considered necessary, the program office should limit the list of materials to be tracked in this way.
- *Understand sourcing limitations for the item being procured*. To ensure optimized DMSMS planning, the government should understand the limitations in supplier availability to address a DMSMS risk. There are situations with extremely limited supplier availability, geopolitical constraints on a proposed resolution, and/or regulations excluding certain suppliers.
- *Develop a DMSMS Management Plan*. DoDI 4245.15, *Diminishing Manufacturing Sources and Material Shortages*, requires the government to have its own DMP. Contractors should be required to use SAE International Standard, SAE-STD-0016, *Standard for Preparing a DMSMS Management Plan*.
- *Continually track and manage DMSMS cases*. This process may be performed by any combination of the three categories of providers: the government, the prime contractor and its subcontractors, and/or an independent SME organization. Regardless of the DMSMS management provider, DoD Manual 4245.15, *Management of Diminishing Manufacturing Sources and Material Shortages*, requires the government to maintain complete records.
- *Report performance and track cost metrics*. This may be performed by any combination of the three categories of providers: the government, the prime contractor and its subcontractors, and/or an independent SME organization. The government should define the format to be used and the content to be provided. Regardless of the DMSMS management provider, DoD Manual 4245.15, *Management of Diminishing Manufacturing Sources and Material Shortages*, requires the government to maintain complete records.
- *Manage subcontractor's DMSMS management programs*. This is a required DMSMS management function for the prime contractor. Overseeing the prime contractor's management of its subcontractors' DMSMS management programs is also a government responsibility. This applies whenever DMSMS management is conducted by the prime contractor and its subcontractors. Therefore, it is important to include language for the prime contractor that requires flowing appropriate DMSMS management language down the supply chain. In addition, supplier selection should consider the vendor's past DMSMS management-related performance.

Table 1.2 contains illustrative contract requirements that apply to the prepare step in the DMSMS management process.

Table 1.2 Illustrative DMSMS Management Contract Requirements Associated with the Prepare Step

Rqmt No.	Title	Applicability	Initial Life-Cycle Event or Phase	Illustrative Language
5	DMP	Used when a contractor or subcontractor has any role in DMSMS management. (Some subcontractors	At the PDR and thereafter	The contractor shall develop, maintain, and implement a DMSMS Management Plan in accordance with SAE-STD-0016. In addition, the plan shall address the following topics as they relate to DMSMS management: long-lead time material, unique processes, tooling, and the impact of environmental regulations and policy such as Restriction of Hazardous

Rqmt No.	Title	Applicability	Initial Life-Cycle Event or Phase	Illustrative Language
		may manage DMSMS for subsystems directly for the government.)		Substances (RoHS) and Registration, Evaluation, Authorisation, and Restriction of Chemicals (REACH). The plan will be delivered in accordance with CDRL *XXXX* (see CDRL Template 11) using DID DI-MGMT-81948, DMSMS Management Plan. The target performance for the implemented plan is less than XX percent of all items with current unresolved DMSMS issues or unresolved, projected DMSMS issues expected to have a DMSMS impact within *XX* years of the date of the plan. The performance of the plan will be evaluated by the DMSMS Health Assessment Report to be delivered in accordance with CDRL *XXXX* (see CDRL Template 10) using the DID DI-MGMT-82273, DMSMS Health Assessment Report. **Implementation note:** Adjust the target performance threshold to the government's desired level. For instance, the contractor's plan implementation could be required to provide delivery of production systems with no known DMSMS issues and no projected DMSMS issues that might affect the system within *2* years.
6	Participation in DMSMS management team (DMT) meetings	Used when the government desires contractor participation in DMT meetings.	Post MSA	The contractor shall attend DMSMS Management Team meetings either by teleconference or in person. The meetings will be used to review open cases, the most recent DMSMS Health Assessment Report, the most recent technology management plan, metrics, and other topics necessary in DMSMS management. Meetings are expected to be held (define periodicity here) by teleconference and (define periodicity here) in person at (define location here). **Implementation note:** Define the periodicity and location of the meetings contractors will be required to attend.
7	Flow down DMSMS management requirements to subcontractors	Contractors should flow down DMSMS management requirements to their subcontractors or in some fashion ensure the subcontractor-supplied equipment is effectively	At PDR and thereafter	The contractor shall flow down DMSMS contractual requirements to subcontractors in accordance with SAE-STD-0016, Section 5.2. The flow down requirements shall include proactive DMSMS management, development (or maintenance, if preexisting) of a DMSMS management plan, establishment of DMSMS cases, DMSMS case management, and reporting of DMSMS metrics. Subcontractors shall be required to provide bills of materials (BOMs) either to the contractor or directly to the government for all items delivered under this contract, except for commercial-off-the-shelf items. Subcontractors shall be required to provide notification of DMSMS issues within

Rqmt No.	Title	Applicability	Initial Life-Cycle Event or Phase	Illustrative Language
		managed for DMSMS.		*1* week of discovery. Subcontractors shall report the resolutions of cases, including details of any changes that affect the fit, form, or function of the item, equipment, or software at a frequency agreed upon with the contractor. Subcontractors may report directly to the government if that is agreeable to all parties. When reporting case resolutions, the subcontractors shall provide the following information: the item and equipment affected by the DMSMS issue, type of solution implemented, alternate item number if appropriate, cost of the solution, and cost avoided by implementing the solution. Cost avoidance shall be determined on the basis of guidance from the program office or, if none is provided, the method described in the SD-22. All case reporting data from subcontractors delivered directly to the government will be reported using the data formats and descriptions described in Table 1 of DID DI-MGMT-82274, DMSMS Life-Cycle Management Data, using data elements 1–19 and 22–46.

2.2 DMSMS Management Contract Requirements for the Identify Step

This step focuses on DMSMS monitoring and surveillance. It encompasses:

- *Deliver item data*. The prime contractor and subcontractors should develop, maintain, and deliver item data to enable the identification, forecasting, and management of obsolescence issues and mitigation. Item data may include indentured or flat BOMs or preferred parts lists for all specified subsystems down to the lowest level possible, depending on what is available given the current stage in the life cycle. The program office must receive this data for a robust DMSMS management approach to be successful.
- *Continually monitor BOMs*. This process may be done by any combination of the three categories of providers: the government, the prime contractor and its subcontractors, and/or an independent SME organization. In general, the contractor team will have established supplier relationships and the best understanding of the design content. Regardless of the DMSMS management provider, the government should ensure that it maintains complete records and that there is regular feedback and visibility to the program office. When this process is performed by the prime contractor and its subcontractors, there should be a process to identify and notify the government of pending and emergent obsolescence issues, supplier recall notices, and emergent vendor-implemented changes associated with the system baseline. The prime contractor should include a process for similarly notifying subcontractors.

Table 1.3 contains illustrative contract requirements that apply to the identify step in the DMSMS management process.

Table 1.3 Illustrative DMSMS Management Contract Requirements Initiated in the Identify Step

Rqmt No.	Title	Applicability	Initial Life-Cycle Event or Phase	Illustrative Language
8	BOMs for DMSMS monitoring	Preliminary BOMs should be supplied to the government before PDR to enable review of proposed designs.	Technology Maturation and Risk Reduction (TMRR)	At Preliminary Design Review (PDR), to facilitate independent review and oversight of DMSMS management, the contractor shall submit preliminary, notional, or final bills of materials (BOMs), as appropriate, for the technology demonstration designs, including subcontractor BOMs for all items that are not commercial items. All BOMs will be submitted in accordance with CDRL *XXXX* (see CDRL Template 4) using DID DI-MGMT-82274, DMSMS Life Cycle Management Data. **Implementation note:** Alternatively, BOMs for designs could be requested when the designs are mature enough for review. This would enable the program to review them for DMSMS resilient designs.
		Full BOMs should be delivered to the government as they become available and when the design is updatedor revised. BOMs enable proactive monitoring of parts for DMSMS issues and the evaluation of proposed designs and engineering changes to ensure they do not include potential DMSMS problems.	Engineering and Manufacturing Development (EMD)	At Critical Design Review (CDR), to facilitate independent review of DMSMS management, the contractor shall submit BOMs for the CDR designs to the program office in an indentured format. These BOMs shall include subcontractor BOMs for all items that are not commercial items. The contractor shall provide updates as required for configuration changes during Engineering and Manufacturing Development (EMD) no later than (NLT) *60* days after such changes are finalized. All BOMs will be submitted in accordance with CDRL *XXXX* (see CDRL Template 4) using DID DI-MGMT-82274, DMSMS Life Cycle Management Data. **Implementation note:** Change the reporting timing to meet the needs of the government. **Implementation note:** Alternatively, BOMs for designs could be requested when the designs are mature enough for review. This would enable the program to review the designs for DMSMS resilient designs.
			Production and Deployment (PD) Low Rate Initial	Prior to Low Rate Initial Production (LRIP), to facilitate independent review and oversight of its DMSMS management activities, the contractor shall submit updated BOMs for the production items to the program office in an indentured format. These BOMs

Rqmt No.	Title	Applicability	Initial Life-Cycle Event or Phase	Illustrative Language
			Production (LRIP)	shall include subcontractor BOMs for all items that are not commercial items. The contractor shall provide updates as required for configuration changes during LRIP NLT *60* days after such changes are finalized. All BOMs will be submitted in accordance with CDRL *XXXX* (see CDRL Template 4) using DID DI-MGMT-82274, DMSMS Life Cycle Management Data. **Implementation note:** Change the reporting timing to meet the needs of the government.
			PD Full Rate Production (FRP)	Prior to Full Rate Production (FRP) decision review, to facilitate independent review and oversight of its DMSMS management activities, the contractor shall submit updated BOMs for the production items to the program office in an indentured format. These BOMs shall include subcontractor BOMs for all items that are not commercial items. The contractor shall provide updates as required for configuration changes during production NLT *60* days after such changes are finalized. All BOMs will be submitted in accordance with CDRL *XXXX* (see CDRL Template 4) using DID DI-MGMT-82274, DMSMS Life Cycle Management Data. **Implementation note:** Change the reporting timing to meet the needs of the government.
			Sustainment	To facilitate independent review and oversight of DMSMS management, the contractor shall submit updated BOMs for the contracted items to the program office in an indentured format. These BOMs shall include subcontractor BOMs for items that are not commercial items. The contractor shall provide updates as required for configuration changes NLT *60* days after such changes are finalized. All BOMs will be submitted in accordance with CDRL *XXXX* (see CDRL Template 4) using DID DI-MGMT-82274, DMSMS Life Cycle Management Data. **Implementation note:** Change the reporting timing to meet the needs of the government.

Rqmt No.	Title	Applicability	Initial Life-Cycle Event or Phase	Illustrative Language
9	As-built configuration list	This list provides a double-check to ensure the delivered BOMs are complete.	At PDR and thereafter	The contractor shall provide a list of all items in the system in accordance with CDRL *XXXX* (see CDRL Template 3) using DI-SESS-81830, As-Built Configuration List, to provide a reference for the full system. **Implementation note:** There may be other methods to ensure that the delivered BOMs are complete. Furthermore, DI-SESS-81830 was not developed by the DMSMS community. Therefore, another section of the contract may already call for the same data and consequently, this contract requirement may be unnecessary.
10	List and description of software	Used if software is not included in the delivered BOMs. Used in the same fashion as the BOM requirement 8 of this table.	Post Milestone B (MSB)	The contractor shall provide a list of all software (including commercial items, custom items, or any combination of firmware, middleware, wrappers, gateways, firewall, applications programs, operating systems, or third-party software) the system encompasses. The software list will be submitted in accordance with CDRL *XXXX* (see CDRL Template 16) using DID DI-IPSC-81442A, Software Version Description. **Implementation note:** This requirement may be inserted if the DMSMS software requirements are not sufficiently addressed in the Software section of the contract.
11	Technical data	Used to obtain specific data as needed for DMSMS issues.		The contractor agrees to provide specific items of technical data relevant to DMSMS issues in accordance with CDRL *XXXX* (see CDRL Template 2) using DI-SESS-80776B, Technical Data Package, upon request of the program office. Technical data for commercial items should be limited to information available to the end customer of the product. The contractor shall provide a complete list of all assemblies in the end item in accordance with CDRL *XXXX* (see CDRL Template 3) using DID DI-SESS-81830, As Built Configuration List, to provide a reference for the full system. **Implementation note:** When the costs are prohibitive for buying such a TDP, consider implementing a modular open system approach to resolve the issue.

Rqmt No.	Title	Applicability	Initial Life-Cycle Event or Phase	Illustrative Language
				If there is another contract requirement to provide such data, this requirement is not needed. To proactively plan for obsolete components, program offices can request “priced options” to provide form, fit, function, depot manufacturing, and process data required for a third party to manufacture the obsolete part. Program offices can also consider use of specially negotiated license rights that would enable the government to manufacture the component, when a DoD agency has capability and capacity to do so.
12	Monitoring activities	Monitoring should be required if the contractor and its subcontractors are expected to be responsible for DMSMS management activities.	At PDR and thereafter	As part of its proactive DMSMS management, the contractor shall do the following: a. Analyze the risks of all items to determine those that should be proactively monitored for DMSMS issues and those that should be handled reactively. The risk analysis shall be based upon criteria similar to that described in IEC 62402 Edition 2.0 2019-05 sections 9.1 and 9.3. b. The results of the analysis will be submitted to the government for approval in accordance with CDRL *XXXX* (see CDRL Template 8) using DID DI-MGMT-82274, DMSMS Life Cycle Management Data. c. The contractor shall use predictive tools, component life-cycle curves, and other methods to proactively forecast and monitor the items identified by the risk analysis above for DMSMS issues as described in IEC 62402 Edition 2.0 2019-05 section 9.2.
13	Issue notification report	The government needs to know the DMSMS issues discovered at all phases of the life cycle.	Post MSB	The contractor shall provide a report in accordance with CDRL *XXXX* (see CDRL Template 6) using DID DI-MGMT-82274, DMSMS Life Cycle Management Data, notifying the program office of DMSMS issues and projected DMSMS issues within *1* week of discovering the issue. The government encourages informal reporting of DMSMS issues and projected DMSMS issues to expedite the process.

Rqmt No.	Title	Applicability	Initial Life-Cycle Event or Phase	Illustrative Language
				Implementation note: The government should determine the frequency of this report.
14	Case management and reporting	If the contractor is tasked to manage DMSMS cases, the government needs sufficient data to oversee its activities.	Post MSB	The contractor shall operate and maintain a case management system. Cases shall be created for each valid DMSMS issue resulting from item monitoring or any other source, including the Government and Industry Data Exchange Program and the Defense Logistics Agency. The contractor shall provide the program office with a *monthly* list of all open DMSMS cases in accordance with CDRL *XXXX* (see CDRL Template 5) using DID DI-MGMT-82274, DMSMS Life Cycle Management Data. (Alternatively, the last sentence can be replaced with the following: "The contractor shall provide the government with the right to view and inspect DMSMS cases and reports in the contractor case management system during the period of performance.") The contractor shall also present the status of all open cases at the periodic DMSMS management team meetings and during programmatic meetings, such as the System Requirements Review (SRR), Preliminary Design Review (PDR), Critical Design Review (CDR), and Production Readiness Review (PRR). The contractor should emphasize open cases whose solution timeline will require government funding or will impede production or field readiness. **Implementation note:** The government should determine the frequency of this report.
15	Monitor, manage, and report subcontractor DMSMS capability	The subcontractor's ability to adequately manage DMSMS should be periodically monitored if the contractor is responsible for managing DMSMS.	At PDR and thereafter	The contractor shall evaluate the capability of subcontractors to manage DMSMS. When the contractor's or the program office's evaluation of a subcontractor's capability for DMSMS management reveals deficiencies, the contractor shall either help the subcontractor establish a competent DMSMS capability or, if that is not feasible, assume the DMSMS management functions for the items provided by the subcontractor. The contractor shall report the health of its

Rqmt No.	Title	Applicability	Initial Life-Cycle Event or Phase	Illustrative Language
				subcontractor in accordance with CDRL *XXXX* (see CDRL Template 14) using DID DI-MGMT-82277, DMSMS Subcontractor Health Report, within *3* months of contract acceptance and *annually* thereafter. **Implementation note:** The timing of the initial and follow-on reports should be adjusted to meet the needs of the government.
16	Issue mitigation data	If the contractor is tasked to manage DMSMS, the government needs sufficient data to monitor its activities and determine whether the delivered end items are sustainable.	Prior to PRR in EMD and thereafter	The contractor shall provide a list of DMSMS issues that must be resolved prior to executing follow-on production or sustainment contracts in accordance with CDRL *XXXX* (see CDRL Template 9) and using DID DI-MGMT-82274, DMSMS Life Cycle Management Data. The report shall include unresolved issues and projected DMSMS issues that may negatively affect the system before completion of the contract or within *2* years following completion of the contract. **Implementation note:** The government should determine the number of years the projected report looks forward.
17	DMSMS resilience	Requirements should include some criteria to limit future DMSMS issues.	At PDR and thereafter	Select parts whose forecasted availability (predicted years to end of life) is *5* years or greater to the maximum practical extent for new designs, design changes, modifications, or configuration changes that propose new parts. The contractor shall provide an exception report containing a list of all parts where the 5-year threshold is not met and the reasons why the part was selected (including mitigations such as an upgrade path) in accordance with CDRL *XXXX* (see CDRL Template 18) using DID DI-QCIC-82405. The government may reject any of the parts that do not meet the availability criterion within *30* days of receipt of the exception report and the government may coordinate with the contractor about further use of the parts that do not meet the availability criterion after *30* days of receipt of the exception report. **Implementation note:** This requirement provides contract language to require the contractor to

Rqmt No.	Title	Applicability	Initial Life-Cycle Event or Phase	Illustrative Language
				make a good faith effort to meet the desired time threshold for part availability. Choose the number of years based on the DMSMS planning horizon for the program office. Never choose less than 2 years and only consider 2 years for commercial item assemblies whose life cycle is extremely short. In addition to system development, the above requirement is also important in sustainment when there is likely no formal parts management program in place. For example, this requirement can apply to contracts to buy spares associated with an engineering change proposal (ECP) that resolves a DMSMS issue. Regarding the 30-day window for rejecting parts in the exception report, the government should select a period of time that is most applicable to the specific situation. However, the 30-day window was suggested because the government should be aware of and be monitoring proposed parts well before the time of exception report delivery. In the unlikely situation where it is not possible to raise these issues in advance, then a get-well plan to use an updated design should be developed as soon as possible jointly between the government and the contractor. The get-well plan should also address the disposition of the undesirable parts (reworking, scrapping, or use-as-is). A government decision to reject a part that does not meet the desired availability threshold should take potential alternatives into account. For example, selecting a part that does not meet the desired availability threshold may delay a costly redesign.
18	Technology management plan	This requirement can apply to both acquisition and sustainment phases where the contractor has sufficient knowledge of the	Post MSB	The contractor shall identify subsystems where obsolescence of the technologies used poses a high risk. For the technologies identified, the contractor shall develop (or if one preexists, maintain) a technology roadmap that identifies the current technologies, including software, used in the system that are expected to become obsolete. The roadmap shall categorize the technologies in technology segments of related

Rqmt No.	Title	Applicability	Initial Life-Cycle Event or Phase	Illustrative Language
		technologies involved.		equipment with similar life cycles. The roadmap shall forecast the introduction of new, mature technologies within each technology segment that could be used to update equipment, improve its performance, add new capabilities, or meet new mission requirements. The roadmap shall estimate the optimal time to introduce the new technologies into the system. The contractor shall collaborate with the program office to identify technology areas that should be included in the roadmap, determine the optimal technology segments to include, and describe the desired new capabilities achievable. The contractor shall prepare a modification plan, based on the analysis in the previous paragraph section 1, to cost-effectively update the subsystems to remove the obsolete technologies prior to their becoming unsupportable and deliver it to the government in accordance with CDRL *XXXX* (see CDRL Template 15) using DID DI-MISC-80508B, Technical Report-Study/Service. The plan will cover a rolling 10-year planning horizon over the life of the contract. The modification plan shall factor in the effects of proactive DMSMS management, cost of piecemeal DMSMS resolutions, cost of the modifications, and life cycle of the equipment to determine the optimal timing of the modifications. The plan will be optimized to maximize system readiness and minimize life-cycle cost. The modification plan shall identify the equipment to be updated, include a timetable for the modifications, provide an estimated cost, and furnish an estimate of the projected benefits to the government in terms of cost and improved readiness.

2.3 DMSMS Management Contract Requirements for the Assess Step

This step focuses on an assessment of whether and when to address an obsolescence issue. The key activity in this step is to continually assess DMSMS impacts. This may be done by any combination of the three categories of providers: the government, the prime contractor and its subcontractors, and/or an independent SME organization. This applies both at the item level and at higher levels of assembly. Regardless of the DMSMS management provider, the government should ensure that it maintains

complete records. Government contributions concerning programmatic and logistics factors are necessary.

Table 1.4 contains illustrative contract requirements that apply to the assess step in the DMSMS management process.

Table 1.4 Illustrative DMSMS Management Requirements Associated with the Assess Step

Rqmt No.	Title	Applicability	Initial Life-Cycle Event or Phase	Illustrative Language
19	Logistics information	The government may require logistics data to validate proposed mitigations or to determine the correct mitigations of DMSMS issues.	Post MSB	The contractor shall provide data related to logistics demands and supplies for items when requested in accordance with CDRL *XXXX* (see CDRL Template 1) using DID) DI-SESS-81758A, Logistics Product Data.
20	Health assessment report	The contractor should provide sufficient reports to the government to enable government oversight if the contractor is tasked to manage DMSMS.	At PDR and thereafter	The contractor shall deliver DMSMS impact assessment reports in accordance with CDRL *XXXX* (see CDRL Template 10) using DID DI-MGMT-82273, DMSMS Health Assessment Report, for all assemblies, line replaceable units, and weapon replaceable assemblies and their related software used on the end item deliverables. The report will detail the predicted impact of known DMSMS issues and projected DMSMS issues. It will use the most accurate forecasting data available to the contractor. The report will detail the date the assembly and its related higher assemblies will most likely become unsupportable considering inventories, usage, repair capability, funded upgrades, redesigns, and similar attributes or actions. The report shall cover a period of at least *10* years from the date of its publication.

2.4 DMSMS Management Contract Requirements for the Analyze Step

This step focuses on DMSMS resolution determination. It encompasses:

- *Identify cost-effective resolutions*. This may be done by any combination of the three categories of providers: the government, the prime contractor and its subcontractors, and/or an independent SME organization. Regardless of the DMSMS management provider, the government should ensure that it maintains complete records. Government contributions concerning programmatic and logistics data, cost factors, and product roadmaps are necessary.
- *Determine when it is no longer viable to support a subsystem*. Technology roadmaps are used in conjunction with long-range health assessments to make this determination. In addition, technology roadmaps are an important consideration for developing modification plans (or product roadmaps). The health assessments should be taken into account when determining the timing of modifications, otherwise expenses related to out-of-cycle redesigns may be incurred. A program office typically contracts for technology roadmaps, but not necessarily from the DMSMS

management provider. Product modification plans are often generated internal to the program office. Analyses of these data are often contracted to the DMSMS management provider.

Table 1.5 contains illustrative contract requirements that apply to the analyze step in the DMSMS management process.

Table 1.5 Illustrative DMSMS Management Contract Requirements Associated with the Analyze Step

Rqmt No.	Title	Applicability	Initial Life-Cycle Event or Phase	Illustrative Language
21	Research and analysis of resolutions	Research and analysis of resolutions should be required if the contractor and its subcontractors are expected to be responsible for DMSMS management activities.	At PDR and thereafter	The contractor shall research and analyze each DMSMS issue to ensure the resolutions recommended to the program office consider total life-cycle costs and sustainability. As part of the research and analysis, the contractor shall consider health analysis reports, inventories, and demands to assess whether a DMSMS issue will hinder system performance if not mitigated. The results of this analysis will be reported as cases in accordance with Table *1, requirement 14*, of this document. **Implementation note:** Replace the italicized text with the appropriate requirement used for case management and reporting.
22a	Contractor role in developing and funding DMSMS resolutions	This requirement is used to task the contractor to develop and fund DMSMS resolutions at a level determined by the program office.	Post MSB	The contractor is responsible for formulating proposed DMSMS resolutions and submitting them to the program office for review in accordance with CDRL *XXXX* (see CDRL Template 5) for DI-MGMT-82274. All proposed resolutions shall be reviewed and approved by the program prior to implementation. When directed by the government, the contractor shall implement resolutions to resolve or mitigate obsolescence issues. The contractor shall be responsible for funding DMSMS resolutions below major (alias class 1) Engineering Change Proposals (ECPs), as defined in SAE EIA-649-1, Configuration Management Requirements for Defense Contracts. The contractor is responsible for funding individual DMSMS mitigations costing less than *$1 million*. All resolutions requiring configuration changes shall be made in accordance with the configuration management requirements of this SOW. **Implementation note:** The government should determine the appropriate ECP level for this requirement and the correct cost limit. This requirement could be used to require the contractor to deliver a product free from both known and projected DMSMS issues. For instance, the contractor could be required to develop, fund, and implement all known DMSMS issues and projected DMSMS issues that might affect the system within *2* years. The $1 million threshold over which the government would pay for the resolution was designed to capture redesigns. It can be changed by the

Rqmt No.	Title	Applicability	Initial Life-Cycle Event or Phase	Illustrative Language
				program office as a function of the specific circumstances. Alternatively, the threshold could be expressed as the contractor paying for minor (alias class II) ECPs and the government paying for major (alias class I) ECPs.[12]
22b	Contractor role in developing and funding DMSMS resolutions	The contractor is responsible for developing and funding all DMSMS resolutions until the government assumes configuration management responsibilities IAW the configuration management (CM) and TDP acquisition contract language. When the government accepts CM responsibility for the TDP, funding shall be IAW the configuration management contract language for the TDP or portion of the TDP for which the government has assumed configuration control.	Post MSB	The contractor is responsible for developing, funding, and implementing all DMSMS resolutions subject to government approval. Contractor responsibility includes all costs associated with mitigating DMSMS issues, including • investigating the continued availability, interchangeability, and substitutability of parts, material, and software; • locating alternate/substitute parts, material, and software; • vendor interface; • any required redesign activities; • system compatibility assurance; • interface with the government networks; • engineering efforts; and • testing and qualification. The contractor-proposed DMSMS mitigation strategies will seek to prevent or minimize future costs to the government over a 5-year planning horizon. Life of Need buys are generally considered interim resolutions and will not be adopted without government concurrence. Any design changes considered necessary by these DMSMS management requirements will be made in accordance with the configuration management requirements of this contract. **Implementation note:** When the detailed design TDP is under contractor configuration control, the contractor is typically responsible for all DMSMS mitigation costs, and when the configuration management (CM) responsibility for the detailed design TDP is assumed by the government, the government typically assumes responsibility for all DMSMS mitigation costs. If the government never formally accepts CM responsibility for the detailed design, the contractor is responsible for all mitigation cost until the end of the contract.
22c	Contractor role in developing and funding DMSMS resolutions	This requirement is typically used during sustainment when the government	Sustainment	The contractor is responsible for developing proposed DMSMS resolutions and submitting them to the program office for review in accordance with CDRL *XXXX* (see CDRL Template 5) using DID DI-MGMT-82274, DMSMS Life Cycle Management Data. All proposed resolutions shall be reviewed and approved by the program office prior to

[12] Class I changes affect an item's fit, form or function. See Table 6-2, page 6-16 of MIL-HDBK-61A(SE), *Configuration Management Guidance*, February 7, 2001.

Rqmt No.	Title	Applicability	Initial Life-Cycle Event or Phase	Illustrative Language
		has assumed configuration control for the weapon system or, the government has not assumed CM responsibilities and has lost its contract leverage over the contractor with responsibility for CM (e.g., the government has declined to purchase a detailed design TDP). In this approach, the government is responsible for all DMSMS mitigation costs, unless it can negotiate a cost-sharing arrangement with the contractor during RFP negotiations.		implementation. When directed by the government, the contractor shall implement resolutions to resolve or mitigate obsolescence issues. The contractor shall be responsible for funding DMSMS resolutions below class 1 Engineering Change Proposals (ECPs), as defined in SAE-EIA-649-1, Configuration Management Requirements for Defense Contracts. The government is responsible for all Class I ECPs, except as proposed by the contractor in its RFP response and accepted by the Procuring Contracting Officer (PCO). All solutions requiring configuration changes shall be made in accordance with the configuration management requirements of this SOW. **Implementation note:** In this approach, the government assumes funding responsibility for all DMSMS resolutions classified as major (alias class I) ECPs. Nevertheless, depending on the competitive environment, the program office should encourage contractors to propose cost-sharing alternatives in order to obtain a higher rating. (A cost-sharing proposal of this type could improve both the rating of the technical proposal and the cost proposal if life-cycle costs are being evaluated as part of the basis for award.) If there is no RFP, the phrase referencing it in the illustrative language should be deleted.

2.5 DMSMS Management Contract Requirements for the Implement Step

This step focuses on the implementation of DMSMS resolutions. Table 1.6 contains illustrative contract requirements that apply to the implement step in the DMSMS management process.

Table 1.6 Illustrative DMSMS Management Contract Requirements Associated with the Implement Step

Rqmt No.	Title	Applicability	Initial Life-Cycle Event or Phase	Illustrative Language
23	Program/ budget information	The government needs sufficient	Post MSB	The contractor shall deliver a report that projects DMSMS resolution costs for the next federal budget year and for the succeeding 5 years, explains the assumptions made in the projection, and quantitatively assesses the confidence in the cost

Rqmt No.	Title	Applicability	Initial Life-Cycle Event or Phase	Illustrative Language
		data to budget for DMSMS operations and mitigations.		in accordance with CDRL *XXXX* (see CDRL Template 7) using DID DI-MGMT-82274, DMSMS Life Cycle Management Data. The report shall include details down to the lowest assembly levels, subcontractor items, and an estimate of the date when the items will be unsupportable; it also shall identify a potential resolution with an estimated cost.

Section 3. Parts Management Contract Requirements

Parts management is a systems engineering discipline for *selecting* parts, while accounting for the materials and processes used to manufacture them, throughout all phases of a system's (or equipment's) life cycle from initial design through disposal. During design, part selection decisions are based on the thoughtful assessment and balancing of numerous, overlapping engineering design considerations (many of which are not the responsibility of the parts management practitioner). Part selection considerations include performance, cost, quality, qualification, reliability, maintainability, supportability, standardization, technology features and life-cycle stage, manufacturing processes and producibility, DMSMS risk, system security, cyber weaknesses and vulnerabilities, hardware and software assurance, supply chain risk, susceptibility to counterfeiting, unauthorized tampering, and use of hazardous materials. The selection decision also varies as a function of criticality, the application of the part within the design, program duration, risk that the program office is willing to accept, and other factors.

IAW DoDI 5000.88,[13] program offices should specify parts management requirements in the RFP's SOW.

> *"The PM will ensure that a parts management process is used for the selection of parts during design to consider the life cycle application stresses, standardization, technology (e.g., new and ageing), reliability, maintainability, supportability, life-cycle cost, and diminishing manufacturing sources and material shortages. As applicable, parts management requirements should be specified in the RFP's statement of work for the TMRR, EMD, and production acquisition phases."*

A program office's solicitation and its supporting documents establish the technical and management requirements to be addressed in the contractor's proposal. To meet government requirements, the prime contractor also flows down applicable parts management requirements for the assemblies provided by subcontractors.

The parts management content in this document focuses on how the government specifies its contractual requirements to oversee DoD contractors' selection of the parts (and assemblies designed by others) to use in the system design,[14] production, and sustainment. Three oversight functions are discussed—

1. *Establishing requirements for contractor's parts management processes that suit the government's needs*. This function is supported through requirements for a contractor's parts management program and, in many situations, the delivery of an associated plan based on tailoring the requirements of MIL-STD-11991[15] to the specific situation. In a limited set of circumstances, a contractor's documented parts management processes (i.e., not in a formal parts management plan) may suffice.
2. *Verifying whether the contractor is following the processes in its parts management program and plan*. This function is supported through some combination of audits and inspections (including review of information in contractor databases), site visits, and other requirements.
3. Validating that the contractor's parts management processes are effective. This function is supported through reporting, part approval, and other requirements.

[13] DoDI 5000.88, *Engineering of Defense Systems*, November 18, 2020, p. 25.
[14] The idea of design encompasses initial design and redesign, i.e., any modification of the systems configuration.
[15] MIL-STD-11991A, Department of Defense Standard Practice, *General Standard for Parts, Materials, and Processes*, August 26, 2015.

The next three subsections describe those three government oversight functions; Tables 2.1–2.4 (divided into multiple parts) contain the associated parts management contractual requirements. Requirement numbering in Tables 2.1–2.4 continues consecutively from DMSMS Tables 1.1–1.6. The two principal differences in content are:

- The Tables 2.1–2.4 implementation notes are much more extensive because of the newness of the material.
- The illustrative contract language along with the discussions in the next three subsections considers all acquisition pathways.

As a function of risk, some aspects of a system may merit different parts management contract requirements than others. Considerations include factors such as the nature of the application, potential threats and vulnerabilities, characteristics of the contractor and its supply chain, extent of COTS and/or non-developmental items use, extent of design/development efforts, and to some extent, the availability of requisite government subject matter expertise for oversight.

3.1 Contract Requirements Establishing Contractor's Parts Management Processes that Suit the Government's Need

It is essential for several of the acquisition pathways to establish requirements for a contractor's parts management processes that suit the government's needs. The requirement should always apply to the MCA pathway, and it should usually be applied to the MTA pathway. For the UCA and DBS pathways, the government may choose to establish requirements for a contractor's parts management processes, when the extent of the system's development or design effort warrants it. Such requirements usually do not apply to the Software Acquisition (SWA)[16] and Acquisition of Services pathways. Regardless of the pathway, the government should use a risk assessment to determine its approach for establishing requirements for a contractor's parts management processes. Finally, the approach must be tempered by the program office's capability to perform the technical oversight functions required to assess and address those risks. The following three approaches reflect three different levels of contract requirements specificity:

- *The utilization of contractor's documented parts management processes only as part of a contractor's parts management program*. This is the approach with the lowest level of contract requirements specificity and is most suitable for contracts meeting the following criteria:
  - Minimal development activities are necessary to meet government performance or capability requirements;
  - There is a high degree of confidence that the contractor's internal parts management processes are appropriate to meet the government's needs;
  - There is a high degree of confidence that the contractor will follow its documented processes;
  - An appropriate degree of government approval of part selection is required; and
  - The government believes that it is in the government's best interest to require the contractor to follow its documented parts management practices when selecting new parts for the system.

  This is potentially applicable to the UCA, DBS, some aspects of MTA, and some MCA spares and sustainment contracts. (Table 2.1, requirement 24)
- The next two approaches include the establishment of requirements for a contractor's parts management program, *the documentation of that program in a contractor's Parts Management Plan, and compliance with the Plan*. These two approaches apply to the MCA and some aspects

[16] Eventually, there may be a need to include the SWA pathway for supply chain risk dealing with cybersecurity and untrustworthy or parts without a qualified, approved alternate where there are opportunities for unauthorized tampering.

of the MTA pathways where there is significant development activity including sustainment contracts with major (alias class I) engineering changes. The contractor's Parts Management Plan should evolve to support the desired program office goals over time.

Both of these approaches invoke requirements from MIL-STD-11991. ***These requirements should be tailored by the government to avoid incurring cost associated with unnecessary activities. In its proposal, the contractor should put forth its best effort to meet the tailored requirements. There is nothing prohibiting the contractor from proposing its existing processes based on commercial standards (with potential amendments if needed) as long as the government requirements are met.***

- *The mid-level of contract requirement specificity* is based on the general requirements in MIL-STD-11991, which describes the high-level elements of effective parts management. Circumstances for its use include (1) less skilled or fewer people available for oversight by the government and the government trusts that the contractor will make decisions in the government's best interest; (2) the government's desire to reduce burden (as measured by the number of shall statements) on the contractor in areas where planned government oversight is minimal; and (3) more extensive and formal government parts approval required thereby enabling the government to validate part selections before they are finalized (assuming access to the necessary expertise). (Table 2.1, requirement 25a)
- *The highest level of contract requirement specificity* invokes both the general and detailed requirements of MIL-STD-11991,[17] which includes a knowledge base of specific parts, materials, and process management implementation practices and lessons learned. Circumstances for its use include (1) skilled expertise available for oversight by the government and the government desires leverage on the contractor to implement part changes (especially when the government has a minimal role in a formal parts approval process); (2) the government has little relevant experience with the contractor's parts selection processes; (3) the system performs critical, sensitive, and/or technically challenging functions with an exceptionally high consequence of failure; and (4) the government desire to add to the rigor and specificity of contract requirements when it plans to conduct minimal oversight. (Table 2.1, requirement 25b)

MIL-STD-11991 invokes other standards that have roots in defense and commercial applications, creating further advantages for parts availability and cost-effective procurement, as long as these other standards are consistent with the overall system requirements allocated to the part level.[18] To support the government's establishment of requirements for a contractor's parts management processes, the program office should use its systems engineering plan and life-cycle sustainment plan to derive any additional requirements needed to support the program office's performance and risk management goals. Factors such as part selection criteria based on prior failures (and successes) while supporting timely system development should also be considered. Such lessons learned include many elements that system testing does not address; applying these lessons reduces field failures. Therefore, process requirements, such as those included in a lead-free control plan, a COTS management plan, and a counterfeit risk management plan, may be included with the contractor's Parts Management Plan. (Table 2.1, requirement 25a or requirement 25b)

Table 2.1 contains illustrative contract language for these three levels of specificity.

[17] The Missile Defense Agency's Parts, Materials, and Processes Mission Assurance Plan, MDA-QS-003-PMAP-REV C, October 1, 2019, is at a similar level of rigor.

[18] In general, a program office should select MIL-STD-11991 when a plan for parts, materials, and processes is needed or more rigorous parts management requirements are necessary for the specific system or subsystem under development.

Table 2.1 Illustrative Contract Requirements for Parts Management Processes

Rqmt No.	Title	Applicability	Initial Life-Cycle Event or Phase	Illustrative Language
24	Parts management practices	Used when the government wants the contractor to adhere to good parts management practices, e.g., in the case of contracts with minimal development activity or contracts for preparing or implementing engineering changes (e.g., DMSMS changes).	Generally in all UCA phases, the MTA "Rapid Fielding" and "Operations and Support" phases, and DBS phases after "Functional Requirements and Acquisition Planning." If MTA pathway transitions to the MCA pathway after its "Transition" phase, then requirements in lines 25–27 may apply.	The contractor shall utilize documented parts management processes and procedures including a parts selection authority who ensures that changes to the design maximize the selection of standard or commonly used parts meeting the government objective of using parts with demonstrated quality and reliability, with no forecasted availability issues and qualified, approved alternates available. **Implementation note.** In cases where the system is electronics oriented, little to no development implies that COTS electronics assemblies are heavily used. However, COTS products change. COTS vendors may keep the same part number, but actually change the product. Or they may provide a newer version of the part with a different part number. Therefore, it may be a good idea to also include a requirement for a COTS management plan as discussed in requirement 25. In addition, using technology roadmaps would help "maximize the selection of standard or commonly used parts meeting the government objective of using parts with demonstrated quality and reliability, with no forecasted availability issues and qualified, approved alternates available."
25a	Contractor's parts management program and plan (mid-level of specificity)	Used when a contract includes significant[19] new design, design modification, or redesign activity and the government has determined that a mid-level of contract requirements specificity is needed for the contractor's Parts Management Program and	After MSA	The contractor shall establish a contractor's Parts Management Program that meets the general requirements of MIL-STD-11991; document the Program in a contractor's Parts Management Plan In accordance with CDRL *XXXX* (see CDRL Template 17) for DI-STDZ-81993. Upon government approval, the contractor shall comply with the procedures in the Plan. The Parts Management Plan shall be augmented by the following: ***Note: In some instances, the government may tailor some of the general requirements of MIL-STD-11991.*** • The contractor shall include the parts and materials selection process, including responsibilities for the evaluation, documentation, and notification of part changes, manufacturing processes, and material changes. This selection process shall address allocation of system performance requirements (under the worst-case system non-operating and operating environments over the system life cycle) to parts and materials technical requirements. This selection process

[19] Significance should not be based solely on the dollar value of the contract. A small dollar value contract can involve a complex design of a critical assembly.

Rqmt No.	Title	Applicability	Initial Life-Cycle Event or Phase	Illustrative Language
		Plan. A mid-level of specificity (as distinguished from requirement 25b) does not include the detailed requirements of MIL-STD-11991 and could offer more flexibility to the contractor.		shall take into consideration performance tolerances, and define parts and materials qualification requirements to meet system performance, reliability, quality, and safety requirements. • The contractor shall include its lead-free risk mitigation plans that meet the requirements in GEIA-STD-0005-1 and -2 at control level 2C or equivalent. • The contractor shall include its counterfeit risk mitigation plans that meet the requirements of SAE AS5553 for electronic items and SAE AS6174 for non-electronic items. • The contractor shall include its COTS management plans that meet the requirements of EIA-933. ***Note: The above three bullets may be eliminated if those requirements are included elsewhere in the contract.*** In addition, the contractor's Plan shall include a flow down of applicable parts, materials, and processes management requirements to the subcontractors for the assemblies procured by the contractor. **Implementation note:** The government program office parts management stakeholders (e.g., system and design engineers, procurement specialists, and personnel involved in standardization and logistics) should be involved during contract development so that all areas affecting parts management can be addressed. The more detailed and specific the contract language, the greater the compliance with, and standardization of, parts management disciplines across program offices, resulting in program offices with greater part risk mitigation. Using similar language in the PWS, SOW, or SOO generates more competition for prime contractors when bidding on contracts. Not all parts, materials, and processes management requirements are applicable to every subcontractor. For example, some requirements are not applicable to all types and phases of acquisitions and if contractually invoked, could result in unnecessary and costly work. Conversely, some acquisitions may dictate special parts, materials, and processes management requirements, which can be included. Depending on the government's needs, separate requirements may also be needed for different types of equipment associated with the same system. If so, each requirement should specify the level of parts, materials, and processes

Rqmt No.	Title	Applicability	Initial Life-Cycle Event or Phase	Illustrative Language
				management applicable to the equipment or types of equipment (such as support or test equipment). ***The requirement for parts, materials, and processes lists should be included if those lists are not required elsewhere in the contract. While DI-STDZ-81993 includes such a list, it is unusual to rely on that DID to obtain the lists.*** There is a need to specify a control level to invoke GEIA-STD-0005-1 and -2. The choice of control level 2C or equivalent in lead-free risk mitigation plans is a reasonable baseline. A higher or lower level may be selected or proposed by the contractor as a function of the specific circumstances, but level 2B does not require a process to prevent receipt of pure tin that is not mitigated. SAE AS5553 and SAE AS6174 are intended to be integrated into the requirements of the higher-level Quality Management System in effect on this contract. There are appendices invoked in the general requirements of MIL-STD-11991 that supplement the material for counterfeit risk management and COTS management found in commercial standards. Those appendices were created to add the results of experiential best practices and how-to information. ***The program office should determine whether they apply to its specific situation and then tailor the requirements accordingly.*** In some instances, the requirements for plans for lead-free risk mitigation, counterfeit risk mitigation, and COTS management may already be elsewhere in the contract with different CDRLs and DIDs. In such instances, duplication of the requirement should be avoided.
25b	Contractor's parts program and plan (high level of specificity)	Used when a contract includes significant[20] new design, design modification, or redesign activity and the government has determined	After MSA	The contractor shall establish a contractor's Parts Management Program that meets all requirements (general and detailed) of MIL-STD-11991;[21] document the Program in a contractor's Parts Management Plan in accordance with CDRL *XXXX* (see CDRL Template 17) for DI-STDZ-81993. Upon government approval, the contractor shall comply with the procedures in the Plan. The Parts Management Plan shall be augmented by the following: ***Note: In many instances, the government may tailor some of the general requirements and***

[20] Significance should not be based solely on the dollar value of the contract. A small dollar value contract can involve a complex design and complex manufacturing of a critical assembly.
[21] The Missile Defense Agency's Parts, Materials, and Processes Mission Assurance Plan, MDA-QS-003-PMAP-REV C, October 1, 2019, is at a similar level of rigor.

Rqmt No.	Title	Applicability	Initial Life-Cycle Event or Phase	Illustrative Language
		that a high-level of contract requirements specificity is needed for the contractor's Parts Management Program and Plan. A high-level of specificity (as distinguished from requirement 25a) includes the detailed requirements of MIL-STD-11991 and imposes additional restrictions on the contractor.		***especially some of the detailed requirements of MIL-STD-11991.*** • The contractor shall include the parts and materials selection process, including responsibilities for the evaluation, documentation, and notification of part changes, manufacturing processes, and material changes. This selection process shall address allocation of system performance requirements (under the worst-case system non-operating and operating environments over the system life cycle) to parts and materials technical requirements. This selection process shall take into consideration performance tolerances, and define parts and materials qualification requirements to meet system performance, reliability, quality, and safety requirements. • The contractor shall include its lead-free risk mitigation plans that meet the requirements in GEIA-STD-0005-1 and -2 at control level 2C or equivalent. • The contractor shall include its counterfeit risk mitigation plans that meet the requirements of SAE AS5553 for electronic items and SAE AS6174 for non-electronic items. • The contractor shall include its COTS management plans that meet the requirements of EIA-933. ***Note: The above three bullets may be eliminated if those requirements are included elsewhere in the contract.*** In addition, the contractor's Plan shall include a flow down of applicable parts, materials, and processes management requirements to the subcontractors for the assemblies procured by the contractor. **Implementation note:** The government program office parts management stakeholders (e.g., system and design engineers, procurement specialists, and personnel involved in standardization and logistics) should be involved during contract development so that all areas affecting parts management can be addressed. The more detailed and specific the contract language, the greater the compliance with, and standardization of, parts management disciplines across program offices, resulting in program offices with greater part risk mitigation. Using similar language in the PWS, SOW, or SOO generates more competition for prime contractors when bidding on contracts. Not all parts, materials, and processes management requirements are applicable to every

Rqmt No.	Title	Applicability	Initial Life-Cycle Event or Phase	Illustrative Language
				subcontractor. For example, some requirements are not applicable to all types and phases of acquisitions and if contractually invoked, could result in unnecessary and costly work. Conversely, some acquisitions may dictate special parts, materials, and processes management requirements, which can be included in the tailoring process. Depending on the government's needs, separate requirements may also be needed for different types of equipment associated with the same system. If so, each requirement should specify the level of parts, materials, and processes management applicable to the equipment or types of equipment (such as support or test equipment). ***The requirement for parts, materials, and processes lists should be included if those lists are not required elsewhere in the contract. While DI-STDZ-81993 includes such a list, it is unusual to rely on that DID to obtain the lists.*** There is a need to specify a control level to invoke GEIA-STD-0005-1 and -2. The choice of control level 2C or equivalent in lead-free risk mitigation plans is a reasonable baseline. A higher or lower level may be selected or proposed by the contractor as a function of the specific circumstances. SAE AS5553 and SAE AS6174 are intended to be integrated into the requirements of the higher-level Quality Management System in effect on this contract. There are appendices invoked in the general requirements of MIL-STD-11991 that supplement the material for counterfeit risk management and COTS management found in commercial standards. Those appendices were created to add the results of experiential best practices and how-to information. ***The program office should determine whether they apply to the specific situation and then tailor the requirements accordingly.*** In some instances, the requirements for plans for lead-free risk mitigation, counterfeit risk mitigation, and COTS management may be elsewhere in the contract with different CDRLs and DIDs. ***In such instances, duplication of the requirement should be avoided.***

Additional requirements for manufacturing processes should also be specified either in conjunction with a requirement for a contractor Parts Management Plan or included in the Plan requirement. An example is special manufacturing requirements associated with known problematic processes such as additive manufacturing, soldering, heat treating, and the application of finishes and coatings. (Table 2.2, requirement 26)

Under some circumstances, contract requirements should include detailed requirements for the parts themselves especially when the application for the parts is highly critical and/or extremely demanding. Examples of such high criticality or extreme demand parts include those related to critical air safety, nuclear hardening, missile defense, nuclear propulsion, radiation hardening, and nuclear weapons. The detailed requirements may be included in the contract itself or referenced in another document. The requirements may be specific performance characteristics, physical characteristics, manufacturing-related processes, and limited to suppliers known for their exceptional quality and the performance of their products. These requirements may be included in the requirement for the contractor's Parts Management Plan. To some extent this is done when invoking all requirements of MIL-STD-11991. The detailed requirements section of MIL-STD-11991 contains extensive part selection, material, and process requirements. (Table 2.2, requirement 27)

Table 2.2 contains illustrative contract language for these additional manufacturing and part specification requirements that should be reflected in the contractor's Parts Management Plan regardless of whether a separate contractor requirement is specified.

Table 2.2 Illustrative Contract Requirements for Parts Manufacturing Processes and Part Selection Specifications

Rqmt No.	Title	Applicability	Initial Life-Cycle Event or Phase	Illustrative Language
26	Manufacturing processes	Used selectively whenever a contract includes significant new design, design modification, or redesign activity and the government has determined that added emphasis on specific parts management concerns is needed to ensure that commonly occurring technical deficiencies are treated explicitly. This requirement may be used with both requirements 25a (only the general	After PDR	The contractor's Parts Management Plan shall ensure the following: Processes utilized for the manufacture of parts and assemblies shall produce assemblies and equipment that meet system performance requirements. Finishes and coatings shall be applied as necessary for corrosion and deterioration protection to meet life-cycle requirements. Soldering shall comply with J-STD-001, class 3, and IPC-A-610, class 3. ***Note: This statement is associated with the portion of requirements 25a and 25b that ask for a lead-free risk mitigation plan. It is important to include this statement as a parts management contract requirement even if the requirement for a lead-free risk management plan is elsewhere in the contract.*** Process control methods for planning, implementation, and evaluation shall be utilized to ensure that the manufacturing processes produce quality electrical interconnections and assemblies. Additive manufacturing processes and qualification requirements shall ensure that the parts produced meet system application performance requirements. Part specification shall include the following process control and qualification requirements: a. Identification and control of key process variables and materials b. Process control established and documented for feedstock and material

Rqmt No.	Title	Applicability	Initial Life-Cycle Event or Phase	Illustrative Language
		requirements of MIL-STD-11991) and 25b (all requirements of MIL-STD-11991).		c. Quality control measures, such as build cycle witness test specimens for microstructure assessment and thermo-mechanical properties characterization d. Part qualification requirements to ensure fully meeting application requirements. **Implementation note.** The above requirements are written as stand-alone requirements. They may also be included in the contractor's Parts Management Plan requirement when invoking either the general or all MIL-STD-11991 requirements.
27	Part selection requirements	Used selectively with either requirement 25a (invoking the general requirements of MIL-STD-11991 for a contractor's Parts Management Plan) or 25b (invoking all requirements of MIL-STD-11991 for a contractor's Parts Management Plan).	After MSA	The contractor's Parts Management Plan shall ensure that the contractors select and procure parts for the applications specified below based on the criteria provided: {state requirements or invoke documents that state requirements} **Implementation note:** In certain highly critical, sensitive, safety-oriented, or extreme performance situations, the government may want to specify detailed part requirements associated with quality, physical specifications, performance characteristics, design requirements, materials, and/or manufacturing processes. This may be done by specifying the requirements directly in the contract or by invoking criteria in a military standard, a military specification, a military performance specification, a commercial standard, or some other reference document. Section 5 of MIL-STD-11991 includes such criteria. To mandate the use of Qualified Manufacturers List (QML) or Qualified Products List (QPL) parts, the military specification invoking a QPL or a QML can be made a requirement. Alternatively, an order of precedence can be established with QPL and QML parts having the highest preference. While this requirement may be included in the contractor's Parts (Parts, Materials, and Processes) Management Plan requirement as part of requirement 25a or 25b in table 2.1, it is stronger and clearer if this requirement is written as a separate requirement.

The government should only accept the contractor's Parts Management Plan when it is satisfied that the thoroughness and effectiveness of the processes described in the Plan adequately address the program office's risks and there is a high degree of confidence that the contractor will follow those processes. Parts Management Plans should be reviewed by suitable SMEs for proper consideration of parts management concerns.

Under certain circumstances, the government may believe that having an acceptable contractor's Plan is a sufficient level of oversight. However, the verification effects included in the second and third oversight functions provide a much higher degree of confidence that the contractor's parts management processes are working as intended. They should be performed as long as the government has the SMEs necessary for oversight implementation.

3.2 Contract Requirements for Verifying Whether a Contractor is Following the Parts Management Processes in its Plan

This section addresses the establishment of requirements for the contractor to provide the government with assurance that the contractor is following the processes defined in its Parts Management Plan. From a contractual standpoint, there should be a requirement that allows the program office to have access to information needed to reach the desired level of assurance as well as requirements for the contractor to flow down applicable requirements in its Parts Management Plan to its subcontractors (if it is not stated elsewhere).[22] (Table 2.3, requirement 28)

Some techniques for assuring that the contractor follows its processes are not contractual. For example, the program office may embed engineers to work with contractors for critical or sensitive applications or with demanding technical requirements. Program office engineers may be included in testing events. The government may also call for on-site or virtual audits of the contractor's processes throughout the supply chain. Such audits may be performed by a combination of program office and Defense Contract Management Agency (DCMA) personnel. DCMA may also be asked to surveil the processes to determine their adequacy as a function of risk. In addition, a government led integrated product team that includes contractor representatives may provide key insights on the extent to which the contractor is following the parts management processes in its Plan.

Table 2.3 provides illustrative contract language for determining whether a contractor is following its parts management processes.

Table 2.3 Illustrative Contract Requirements for Verifying Whether a Contractor is Following the Processes in its Parts Management Plan

Rqmt No.	Title	Applicability	Initial Life-Cycle Event or Phase	Illustrative Language
28	Compliance with the processes in the plan	Used selectively with either requirement 25a (invoking only the general requirements of MIL-STD-11991) or 25b (invoking all MIL-STD-11991 requirements).	After MSA	The procedures, planning, and all other documentation, media, and data that define the parts, materials, and processes associated with the Plan and the parts selected for use shall be made available to the government for its review upon request. The government may perform any necessary inspections, verifications, and evaluations to ascertain the contractor's conformance with the processes documented in the contractor's Plan and the adequacy of the contractor's implementing procedures. **Implementation note:** When government requires that its oversight extends beyond a thorough review and approval of the Parts Management Plan, that oversight should

[22] Suggested language in requirements 25a and 25b includes this requirement.

Rqmt No.	Title	Applicability	Initial Life-Cycle Event or Phase	Illustrative Language
				encompass verification that the processes in the Plan are being followed. A flow down of applicable parts, materials, and processes management requirements to the suppliers of the assemblies procured by the contractor is an important aspect of government oversight that the processes in the Plan are being followed. The flow down requirement was included in requirement 25a or 25b. NAS 413 is a standard for remote inspection that is under development. This concept may enable better oversight of the flow down of the processes. The above requirement is written as stand-alone. It may also be included in the contractor's Parts Management Plan requirement when invoking either the general or all MIL-STD-11991 requirements by preceding any or all of these requirements with the words "The contractor's Parts Management Plan shall ensure the following:"

3.3 Contract Requirements for Validating the Contractor's Part Selections

This section addresses contract language for validating that the contractor's processes are effective and requiring the contractor to report data on the parts selected. That data can be used to create reports and metrics useful for government oversight. This document contains recommendations on the most crucial data collection and other oversight requirements. A future version may contain additional reporting requirements to provide further metrics on process effectiveness.

These oversight requirements apply to all contracts with a requirement for a contractor's Parts Management Plan.[23] Some requirements (or some aspects of the requirements) may not be applicable in all situations. The final selection should be based on the government's parts management risk assessment. Furthermore, it is important to recognize that requirements to address the risks associated with these parts management requirements are not limited to the parts management section of the contract. Other contract sections (e.g., cybersecurity, supply chain risk management, systems engineering, counterfeit) should also have risk-related requirements at a much greater level of detail. The following overarching parts management requirements are designed to validate the effectiveness of the parts management processes.

- *Establish reporting requirements for the contractor to inform the government of part selections or procurements that do not meet specified criteria through the use of exception reports*. The specified criteria represent government preferences that cannot be met for every part and consequently cannot be expressed as a requirement. The government must also have the ability to reject[24] parts if the contractor's explanation of why the part was selected implies an

[23] When the government obtains a parts list either in conjunction with the contractor's Parts Management Plan or for monitoring obsolescence, the government may spot check parts for any selected criteria to validate contractor parts selection process effectiveness.
[24] Rejections should occur within a short time window because the government should have been monitoring the situation as part of its oversight processes.

unacceptably high risk from a government perspective. These oversight requirements enable the government to establish metrics and benchmarks on the effectiveness of the parts management processes. Since there are so many parts selection or procurement criteria, use of this oversight mechanism on all or a major subset of the criteria could create burdensome and expensive processes for both the contractor and the program office. Consequently, its use should be initially limited to very important risk areas such as counterfeit mitigation, unauthorized tampering, dependence on high-risk sources, program protection, and part and system assurance. These requirements may be included in the contractor's Parts Management Plan. (Table 2.4, requirements 29–31) If a program office had criteria beyond those in requirements 29–31 that it wanted to monitor, similar illustrative language should be developed and used.

- *Establish requirements for the contractor to submit a complete parts, materials, and processes list to be used for parts management oversight*. If such a requirement is established and the list is reviewed in detail by the government, there would still be a need for the exception reports, introduced in the previous bullet. The exception reports would help focus a review of the entire parts list and they would still be the basis for metrics or benchmarks. It is common for a parts, materials, and processes list to be required in other contract sections such as DMSMS management, configuration management, or logistics product data. Because the list is also specified in the DID for a contractor's Parts Management Plan (DI-STDZ-81993), no separate requirement is included in Table 2; however, the CDRL for the contractor's Parts Management Plan could call for the delivery of the list with the Plan with updates as required.
- *Establish requirements for the contractor to submit selected parts for approval by the government*. Government approval should usually be required for select, highest risk areas the government specifies, such as
  - parts derating,
  - the use of prohibited parts,
  - the use of non-conforming materials or parts,
  - the purchase of application specific integrated circuits from a non-Defense Microelectronics Activity accredited source IAW DoDI 5200.44,
  - parts used in highly critical and/or extremely demanding applications as discussed in the next bullet, or
  - changing parts where the government has configuration control during production or sustainment.

  These oversight requirements could also be the basis of metrics and they may be included in the contractor's Parts Management Plan. (Table 2.4, requirement 32)

Table 2.4 provides illustrative contract requirements for validating whether its parts management processes are effective.

Table 2.4 Illustrative Contract Requirements for Validating the Contractor's Part Selections

Rqmt No.	Title	Applicability	Initial Life-Cycle Event or Phase	Illustrative Language
29	Measuring plan effectiveness in preventing counterfeit and tampering	Used selectively with either requirement 25a (invoking the general requirements of MIL-STD-11991 for a contractor's Parts Management Plan) or 25b (invoking all requirements of	After MSA	Because of the risks of counterfeit, microelectronic parts should only be procured when the suppliers have traceability for those items to an authorized source. The contractor shall further reduce counterfeit risk by testing in accordance with SAE AS6171 when the supplier is not an authorized source. Similarly, microelectronics parts should only be procured when sufficient efforts have been taken to lower the risk of unauthorized

Rqmt No.	Title	Applicability	Initial Life-Cycle Event or Phase	Illustrative Language
		MIL-STD-11991 for a contractor's Parts Management Plan). This requirement reflects a possible contractor reporting deliverable other than the contractor's Parts Management Plan itself.		tampering (e.g., the introduction of malware, unauthorized parts, and unauthorized configuration). Sufficient efforts are based on the requirements and recommendations of ISO/IEC 20243-1:2018 or the identical open group standard "Open Trusted Technology Provider™ Standard (O-TTPS) – Mitigating Maliciously Tainted and Counterfeit Products." The contractor shall further reduce unauthorized tampering risk by testing in accordance with SAE AS6171.[25] The contractor shall provide an exception report containing a list of all microelectronics parts not procured from an authorized source or the unauthorized microelectronics tampering criteria is not met and the reasons why the part was procured (including mitigations such as an upgrade path) in accordance with CDRL *XXXX* (see CDRL Template 18) using DID DID-QCIC-82405. In that report, the contractor shall include parts obtained from sources that rebrand, remark, reassemble, repackage, refurbish, or upcycle parts that are designed/built by other original component or equipment manufacturers (OCMs/OEMs). During the period of performance, the government shall have the right to view and inspect data, information, and reports (including test reports) that support the adequacy of the mitigations for parts procured without traceability, at risk of unauthorized tampering, or rebranded in some way. The government may reject any of the parts that do not meet the traceability or unauthorized tampering criteria or have been rebranded in some way within *30* days of receipt of the exception report and the government may coordinate with the contractor about further use of the parts that do not meet the traceability or unauthorized tampering criteria or have been rebranded in some way after *30* days of receipt of the exception report. Because refrigerants, metal stock, bearings, fasteners, and batteries have high susceptibility to counterfeit, care should be taken to ensure that suppliers have

[25] Only include the italicized words when a determination has been made that the application is so critical that the expensive tampering test methods of SAE AS6171 should be applied irrespective of whether the source is an authorized supplier as defined in SAE AS6171.

Rqmt No.	Title	Applicability	Initial Life-Cycle Event or Phase	Illustrative Language
				addressed traceability and determined authenticity. • For refrigerants, the contractor shall reduce counterfeit risk by testing in accordance with SAE AS6886 when there is no traceability to an authorized source. • For metal stock, the contractor shall reduce counterfeit risk by testing in accordance with SAE AS6279 when there is no traceability to an authorized source. SAE AS6832 and SAE AS6174 provide guidance for fasteners and non-electronic items respectively. **Implementation note:** When the government's oversight extends beyond a thorough review and approval of the contractor's Parts Management Plan, the government should use metrics and other evidence from this requirement to validate the effectiveness of the contractor's Plan for preventing counterfeit and unauthorized tampering. Exception reporting both highlights a minimum level of de facto government parts approval and helps focus analyses of complete parts lists where applicable. Regarding the 30-day window for rejecting parts in the exception report, the government should select a period of time that is most applicable to the specific situation. However, the 30-day window was suggested because the government should be aware of and be reviewing proposed parts well before the time of exception report delivery and well before production. The contractor's Parts Management Plan should include processes to raise and jointly address these issues. In the unlikely situation where it is not possible to raise these issues before production because of special circumstances (e.g., to address qualification failures) then, as soon as possible, a get-well plan to use an updated design should be developed jointly between the government and the contractor. The get-well plan should also address the disposition of the undesirable parts (reworking, scrapping, or use-as-is) previously included in production. Tampering is an element of supply chain risk management (distinct from anti-tamper which involves preventing exploitation if the

Rqmt No.	Title	Applicability	Initial Life-Cycle Event or Phase	Illustrative Language
				items are in the possession of an adversary). At this time, the risk of unauthorized tampering is based on the contractor's assessment using ISO/IEC 20243-1:2018 requirements and recommendations. It is included in the requirement to raise attention to the subject and indicate government interest. Bearing, battery, and additional tampering test standards (SAE AS6834, SAE AS7492, and SAE 6171 respectively) are in development. Some existing SAE 6171 slash sheets have a relationship to tampering as do other commercial standards on counterfeit prevention. With regard to the government's right to *view and inspect*, if applicable, include any requirements with respect to desired location of the information (e.g., a specific government information management system). In addition, in the PWS or SOW, consider requiring the contractor to describe any restrictions on use and distribution of information that will be subject to the aforementioned right to view and inspect (but are not technical data and software deliverables). While this requirement may be included in the contractor's Parts Management Plan requirement as part of requirement 25a or 25b in table 2.1, it is stronger and clearer if this key oversight enabler is written as a separate requirement.
30	Measuring plan effectiveness in minimizing parts without qualified, approved alternates	Used selectively with either requirement 25a (invoking the general requirements of MIL-STD-11991 for a contractor's Parts Management Plan) or 25b (invoking all requirements of MIL-STD-11991 for a contractor's Parts Management Plan). This requirement reflects a possible contractor reporting deliverable other than the contractor's Parts	After MSA	Parts should only be selected and procured when there is a qualified, approved alternate. The contractor shall provide an exception report containing a list of all micro-electronic parts where there is no qualified, approved alternate and where there is an indication of foreign contributions to the part along with the reasons why the part was selected and procured (including mitigations such as an upgrade path) in accordance with CDRL *XXXX* (see CDRL Template 18) using DID DI-QCIC-82405. Foreign contributions to the part include (1) either the country of origin or the country of diffusion, if known, are outside of the U.S. or (2) the address of the source is outside of the U.S. During the period of performance, the government shall have the right to view and inspect data, information, and reports that support the adequacy of the mitigations for microelectronic parts with no qualified,

Rqmt No.	Title	Applicability	Initial Life-Cycle Event or Phase	Illustrative Language
		Management Plan itself.		approved alternate and there is an indication of foreign contributions to the part. The government may reject any of the parts listed in the exception report within *30* days of receipt of the exception report and the government may coordinate with the contractor about further use of the parts listed in the exception report after *30* days of receipt of the exception report. **Implementation note:** When the government requires that its oversight extends beyond a thorough review and approval of the contractor's Parts Management Plan, the government should use metrics to assess the effectiveness of the contractor's Plan for minimizing parts with no qualified, approved alternate. Exception reporting both highlights a minimum level of de facto government parts approval and helps focus analyses of complete parts lists where applicable. The concept of a qualified, approved alternate implies either (1) there is another source for the same item or (2) there is another source for a different item that has been qualified, approved for the application in question. The term is used in lieu of sole source to reduce the number of items to be included in the exception report. To reduce the reporting burden further, the contract requirement does not state that the exception report contain all parts without qualified, approved alternates. Instead, the exception report includes only microelectronic parts where there is an indication of foreign contributions. Microelectronic parts often represent both a significant number of parts without qualified, approved alternates and a high risk to the assurance of the system. Because there are multiple aspects of a part that may have foreign contributions (e.g., location of manufacture, location of packaging, who owns the intellectual property, foreign content) and data on many of these aspects may not be readily available, three aspects of foreign contributions to the part are identified in the requirement. The requirement also signals government interest in the subject. Regarding the 30-day window for rejecting parts in the exception report, the government should select a period of time that is most applicable to the specific situation. However, the 30-day window was

Rqmt No.	Title	Applicability	Initial Life-Cycle Event or Phase	Illustrative Language
				suggested because the government should be aware of and be reviewing proposed parts well before the time of exception report delivery and well before production. The contractor's Parts Management Plan should include processes to raise and jointly address these issues. In the unlikely situation where it is not possible to raise these issues before production because of special circumstances (e.g., to address qualification failures) then, as soon as possible, a get-well plan to use an updated design should be developed jointly between the government and the contractor. The get-well plan should also address the disposition of the undesirable parts (reworking, scrapping, or use-as-is) previously included in production. With regard to the government's right to *view and inspect*, if applicable, include any requirements with respect to desired location of the information (e.g., a specific government information management system). In addition, in the PWS or SOW, consider requiring the contractor to describe any restrictions on use and distribution of information that will be subject to the aforementioned right to view and inspect (but are not technical data and software deliverables). While this concept may be included in the contractor's Parts Management Plan requirement as part of requirement 25a or 25b in table 2.1, it is stronger and clearer when written as a separate requirement.
31	Measuring plan effectiveness in meeting program protection and assurance requirements	Used selectively with either requirement 25a (invoking the general requirements of MIL-STD-11991 for a contractor's Parts Management Plan) or 25b (invoking all requirements of MIL-STD-11991 for a contractor's Parts Management Plan). This requirement reflects a possible contractor reporting deliverable other	After MSA	Parts should be selected and procured that meet program protection and hardware and software assurance requirements. The contractor shall provide an exception report containing a list of all parts where either the program protection or the assurance criteria is not met and the reasons why the part was selected and procured (including mitigations such as an upgrade path or material contained in other documents) in accordance with CDRL *XXXX* (see CDRL Template 18) using DID DI-QCIC-82405. During the period of performance, the government shall have the right to view and inspect data, information, analyses, and reports (including test reports) that support the adequacy of the mitigations for parts that do not meet program protection and hardware and software assurance requirements. The government may reject

Rqmt No.	Title	Applicability	Initial Life-Cycle Event or Phase	Illustrative Language
		than the contractor's Parts Management Plan itself.		any of the parts that do not meet the program protection and hardware and software assurance criteria within *30* days of receipt of the exception report and the government may coordinate with the contractor about further use of the parts that do not meet the program protection and hardware and software assurance criteria after *30* days of receipt of the exception report. **Implementation note:** When government requires that its oversight extends beyond a thorough review and approval of the contractor's Parts Management Plan, the government should use metrics and other evidence from this requirement to assess the effectiveness of the contractor's Plan in meeting (1) program protection requirements as established in a Program Protection Plan and (2) hardware and software assurance requirements established by systems security engineering disciplines that are not addressed in the Program Protection Plan. Exception reporting both highlights a minimum level of de facto government parts approval and helps focus analyses of complete parts lists where applicable. Regarding the 30-day window for rejecting parts in the exception report, the government should select a period of time that is most applicable to the specific situation. However, the 30-day window was suggested because the government should be aware of and be reviewing proposed parts well before the time of exception report delivery and well before production. The contractor's Parts Management Plan should include processes to raise and jointly address these issues. In the unlikely situation where it is not possible to raise these issues before production because of special circumstances (e.g., to address qualification failures) then, as soon as possible, a get-well plan to use an updated design should be developed jointly between the government and the contractor. The get-well plan should also address the disposition of the undesirable parts (reworking, scrapping, or use-as-is) previously included in production. With regard to the government's right to *view and inspect*, if applicable, include any requirements with respect to desired location of the information (e.g., a specific

Rqmt No.	Title	Applicability	Initial Life-Cycle Event or Phase	Illustrative Language
				government information management system). In addition, in the PWS or SOW, consider requiring the contractor to describe any restrictions on use and distribution of information that will be subject to the aforementioned right to view and inspect (but are not technical data and software deliverables). While this requirement may be included in the contractor's Parts Management Plan requirement as part of requirement 25a or 25b in table 2.1, it is stronger and clearer if this key oversight enabler is written as a separate requirement.
32	Government part approval	Used selectively with either requirement 25a (invoking the general requirements of MIL-STD-11991 for a contractor's Parts Management Plan) or 25b (invoking all requirements of MIL-STD-11991 for a contractor's Parts Management Plan).	After MSA	The contractor shall: • Not select a part for use outside vendor specifications other than in in accordance with the criteria in Appendix A of MIL-STD-11991 without government approval. • Not use any prohibited parts, materials, and processes from MIL-STD-11991, Appendix C, without government approval. • Not install any non-conforming parts without government approval. ***Add other conditions where the contractor shall not select a part without government approval.*** The contractor shall only procure application specific integrated circuits that can be identified to be part of a DoD information or weapon system from a Defense Microelectronics Activity accredited trusted supplier in accordance with DoDI 5200.44. The contractor shall request approval from the contracting officer for exceptions to any of the above criteria. The request shall provide justification for an exception and the details of corresponding mitigations, such as an upgrade path or material contained in other documents along with descriptions of the risks associated with the mitigations, including security, supply chain risk management, and manufacturing location. **Implementation note:** The Plan should contain a process for obtaining government approval for parts used outside of vendor specification or prohibited parts. Factors to be considered include whether the part is tested and has a new number or whether

Rqmt No.	Title	Applicability	Initial Life-Cycle Event or Phase	Illustrative Language
				the part is manufactured using an approved process. Although Appendix C of MIL-STD-11991 is invoked in contracts using only the MIL-STD-11991 general requirements, the requirement for government approval is included for emphasis. Experience has shown that use of any of the prohibited parts, materials, or processes leads to problems. The contract itself may provide a list of prohibited parts. The Department may approve requests for exceptions to any of the situations shown in the above illustrative language only where the contractor has documented and demonstrated why the exception should be granted and provides sufficient mitigations to ensure that risks are minimized to an acceptable level. Examples of other situations where government approval may be required include (critical) parts used in highly critical and/or extremely demanding applications, replacements to parts under configuration control during production or sustainment, and parts selected for major (alias class I) ECPs. While this requirement may be included in the contractor's Parts Management Plan requirement as part of requirement 25a or 25b in table 2.1, it is stronger and clearer if this key oversight enabler is written as a separate requirement.

Section 4. DMSMS and Parts Management Related Requirements Often Found in Other Contract Sections

There are other contract sections that may contain DMSMS or parts management related requirements. For this situation, Table 3 identifies:

- Applicable contract section,
- The life-cycle event or phase where the requirement should be *first* included in contracts, and
- Illustrative contract language to be included.

There is some discretion about where certain requirements are placed in a contract. The DMSMS and parts management communities should examine other contract sections to ensure that the requirements indicated within the illustrative contract language are conveyed. If anything is omitted or insufficient, the DMSMS and parts management communities should suggest changes. If those changes are not made, then the requirements should be considered for inclusion in the DMSMS or parts management sections of the contract.

Table 3. DMSMS and Parts Management Related Requirements Often Found in Other Contract Sections

Contract Section	Initial Life-Cycle Event or Phase	DMSMS and Parts Management Language to Look For
Software	Post MSA	**DMSMS Management Considerations** The Contractor shall provide a Software Transition Plan acceptable to the government to transfer information related to software developed or modified for use by the government using DID DI-IPSC-81429A. The Contractor shall provide a list of all software in the system using DID DI-IPSC-81427A.
Configuration Management	Post CDR	**DMSMS Management Considerations** Address DMSMS as required. The Contractor shall develop (or maintain if it preexists) a configuration management plan that addresses changes to ensure the system's most current configuration is documented. The configuration management plan shall be delivered to the government. The Contractor shall periodically validate the end item's technical data to ensure all configuration changes are incorporated into the configuration management database and drawings IAW the configuration management plan. The Contractor shall develop an interchangeability items list that contains the actual manufacturer's name and item number and a comparison of the alternate items for the item replaced, detailing any differences in the specifications, testing, and manufacturing operations performed by the manufacturer.
	Milestone C (MSC) or earlier	**Parts Management Considerations** Design changes including form, fit, function parts substitutions that replace one part with another part that has not been previously approved shall be approved IAW the configuration management process in place on this contract.

Contract Section	Initial Life-Cycle Event or Phase	DMSMS and Parts Management Language to Look For
Counterfeit Risk Management	Post MSB	**DMSMS Management Considerations** The contract should include the provisions listed in Defense Federal Acquisition Regulation Supplement (DFARS) 252.246-7007 and DFARS 252.246-7008 as appropriate. **Parts Management Considerations** The Contractor shall develop or, if preexisting, maintain a process to ensure that no counterfeit items are used in products provided to the government. In addition, meeting the requirements of DoDI 4140.67 addresses all materiel (not just microelectronics), so there should be a counterfeit risk management plan required to assure proper control of risk. The plan should address the requirements of SAE AS5553 and SAE AS6174 to include traceability from OCM/OEM to product acceptance by the government. Documented traceability must be maintained and provided upon request to include parts in inventory. The counterfeit risk management section may also require the Contractor to implement a Counterfeit Risk Management Program consistent with SAE AS5553 and SAE AS6174. If a counterfeit risk management plan is also required, as indicated in the above paragraph, then requirements 25a and 25b in Table 2.1 should not also require such a plan. In addition, the counterfeit risk management section may require testing to assess and minimize counterfeit risk using test methods that have been developed and published as a consensus commercial standard. When that occurs, requirement 29 in Table 2.1 should not require the same testing. It is also important that assumptions about acceptable risk are consistent between the counterfeit risk management and the parts management section.
Source Selection Criteria	Post MSA	**DMSMS Management Considerations** Proposals shall be evaluated on the management approach and the adequacy of planning for mitigating DMSMS risks. Proposals including management plans defining a proactive approach to manage DMSMS will receive more favorable ratings than those without such an approach. A proactive approach will include predictive forecasting strategies; item list screening to the lowest level; item list monitoring; matching of items to the weapon system's environment across the vendor chain; methods for tracking, reporting, and mitigating DMSMS cases to avoid costly solutions; and a process to manage subcontractor's DMSMS efforts.
Intellectual Property	Post MSA	**DMSMS Management Considerations** Verify the intellectual property strategy is described in sufficient detail to demonstrate that it enables or facilitates the Systems Engineering Plan and Life-Cycle Sustainment Plan. Verify that the applicable clauses under DFARS Subpart 252.227 that are prescribed under DFARS Subparts 227.71 and 227.72.
Program Protection	Post MSA	**Parts Management Considerations** Verify that cyber-supply chain risk management addresses part level requirements in implementation of the Program Protection Plan.

There are no absolute rules about which material should be included in any particular contract section. For example, requirement 17 in Table 1.3 could instead be included in the systems engineering or parts management sections. Also, requirements 25a and 25b in Table 2.1 contain lead free, counterfeit, and COTS management requirements that could be placed elsewhere. In fact, the counterfeit subject matter is mentioned again in Table 3. In addition, requirement 26 in Table 2.2 could be found in the manufacturing section of the contract. Lastly, some aspects of parts management requirements

29-31could be located elsewhere, but those other contract sections would not include the important exception reporting requirement which is unique to parts management.

Section 5. Requirement Applicability

Table 4 identifies the phase in the MCA pathway where the requirements in Tables 1 and 2 may be first applicable. The requirement is equally applicable in all subsequent phases.

Table 4. Requirement Applicability for the MCA Pathway

Rqmt No.	Post MSA	Beginning at PDR	Post MSB	Beginning at CDR	Prior to PRR	Post MSC	Sustainment
DMSMS Management							
1	Definitions						
2	DMSMS as a source selection criterion						
3	Exit plan						
4			Metrics report				
5		DMP					
6	Participation in DMT meetings						
7		Flow down DMSMS management requirements to subcontractors					
8	BOMs for DMSMS monitoring						
9		As-built configuration list					
10			List and description of software				
11			Technical data				
12		Monitoring activities					
13			Issue notification report				
14			Case management and reporting				
15		Monitor, manage, and report subcontractor					

Rqmt No.	Post MSA	Beginning at PDR	Post MSB	Beginning at CDR	Prior to PRR	Post MSC	Sustainment
		DMSMS capability					
16					Issue mitigation data		
17		DMSMS resilience					
18			Technology management plan				
19			Logistics information				
20		Health assessment report					
21		Research and analysis of resolutions					
22a			Contractor role in developing and funding DMSMS resolutions				
22b			Contractor role in developing and funding DMSMS resolutions				
22c							Contractor role in developing and funding DMSMS resolutions
23			Program/ budget information				
Parts Management							
24							Parts management practices
25a	Contractor's Parts Management Program and Plan (mid-level of specificity)						
25b	Contractor's Parts						

Rqmt No.	Post MSA	Beginning at PDR	Post MSB	Beginning at CDR	Prior to PRR	Post MSC	Sustainment
	Management Program and Plan (high level of specificity)						
26	Manufacturing processes						
27	Part selection requirements						
28	Compliance with the processes in the Plan						
29	Measuring Plan effectiveness in preventing counterfeit and tampering						
30	Measuring Plan effectiveness in minimizing parts without qualified, approved alternates						
31	Measuring Plan effectiveness in meeting program protection and assurance requirements						
32	Government part approval						

In general, the DMSMS management contracting requirements for the MCA pathway apply to other acquisition pathways. The principal differences are:

- The phase at which the requirements become applicable.
- The items for which the requirements are relevant prior to fielding. (The government is involved in the development of a subset of the items on a system. At fielding, all items become relevant.)

For the MTA pathway, the MCA requirements that become applicable post-MSA and after PDR may begin at the start of the “rapid prototyping” phase. These requirements could be appropriate for the items and assemblies where the government funds development activities (and that could be substantial). The remainder of the MCA requirements should be considered at the time of “rapid fielding.” There are also options for the MTA pathway to transition to the MCA pathway either at MSB or MSC. When this occurs, Tables 1.1–1.6 apply without modification.

For the UCA pathway, all MCA requirements (with the exception of those beginning in sustainment) may be applicable to the development phase. However, they would only be relevant to items that the government develops which may be very few. Post deployment, applicability is a function of how long the system will be operational. If the operational time is planned to be very small, it may not be necessary to use those requirements.

As its name suggests, the DBS pathway is heavily software oriented although some hardware may be involved. Much, but not necessarily all, of the hardware and software are commercial. DMSMS management applies to both. The following is the alignment of DBS phases to MCA phases.

- The functional requirements and acquisition planning phase aligns with the MCA technology maturity and risk reduction which begins at MSA and also covers the PDR.
- The acquisition testing and deployment phase aligns with the MCA EMD which begins at MSB and extends through CDR and MSC.
- The capability support phase aligns with sustainment.

The contract requirements are applicable accordingly. Until the capability support phase, only government developed hardware and software are relevant.

From a DMSMS perspective, the SWA pathway may have obsolescence associated with the software it acquires and may lead to functional obsolescence elsewhere. Consequently, all requirements may be applicable during the SWA pathway's planning and execution phases and the requirements are relevant to both government developed software and the hardware and software on systems where the software is operational. Since the planning phase is normally short, the relevancy is much higher in the execution phase.

For parts management, requirement 24 will generally be sufficient for the UCA and DBS pathways because the development activity is likely to be minimal. The MTA pathway varies. When development work is very small or when there are limited ECPs in sustainment, requirement 24 may be sufficient. Otherwise, requirements 25 through 32 would apply.

Table 5 shows requirement applicability based on the level of government involvement which can either be low, collaborative, or high. These are not mutually exclusive categories. While low government involvement precludes the others, high government involvement may or may not be collaborative.

Furthermore, the nature of government involvement is inherently different between DMSMS and parts management. The government often performs DMSMS management. High government involvement implies that the government is the primary DMSMS management performer. Low government involvement means that the government is overseeing contractor efforts. Collaborative therefore means that both the government and the contractor perform DMSMS management, and the responsibilities are shared in an agreed upon way.

The contractor generally selects the parts for DoD systems. The level of government involvement implies the extent of parts management oversight. A low implies very little government involvement, collaborative implies the government working closely with the contractor, and high government involvement implies rigorous parts management oversight.

Table 5. Requirement Applicability Based on Government Involvement in DMSMS and Parts Management

Rqmt No.	Description	Low Government Involvement	Collaborative	High Government Involvement
1	Definitions	X	X	X
2	DMSMS as a source of selection criterion	X	X	
3	Exit plan	X	X	
4	Metrics report	X	X	
5	DMP	X	X	
6	Participation in DMT meetings		X	X
7	Flow down DMSMS management requirements to subcontractors	X	X	
8	BOMs for DMSMS monitoring		X	X
9	As-built configuration list		X	X
10	List and description of software		X	X
11	Technical data		X	X
12	Monitoring activities	X	X	
13	Issue notification report	X	X	X
14	Case management and reporting	X	X	X
15	Monitor, manage, and report subcontractor DMSMS capability	X	X	
16	Issue mitigation data	X	X	
17	DMSMS resilience	X	X	X
18	Technology management plan	X	X	
19	Logistics information	X	X	X
20	Health assessment report	X	X	
21	Research and analysis of resolutions	X	X	
22a	Contractor role in developing and funding DMSMS resolutions	X	X	
22b	Contractor role in developing and funding DMSMS resolutions	X	X	
22c	Contractor role in developing and funding DMSMS resolutions	X	X	
23	Program/budget information	X	X	
24	Parts management practices	X	X	
25a	Contractor's parts management program and plan (mid-level of specificity)	X	X	X
25b	Contractor's parts management program and plan (high level of specificity)	X	X	X
26	Manufacturing processes	X	X	X
27	Part selection requirements		X	X
28	Compliance with the processes in the plan	X	X	X
29	Measuring plan effectiveness in preventing counterfeit and tampering		X	X

Rqmt No.	Description	Low Government Involvement	Collaborative	High Government Involvement
30	Measuring plan effectiveness in minimizing parts without a qualified, approved alternate		X	X
31	Measuring plan effectiveness in meeting program protection requirements		X	X
32	Government part approval		X	X

Table 6. Notional Drivers for Table 5

	Decision Drivers
Low Government Involvement	• Contractor has excellent DMSMS and parts management capabilities • Design is owned by the contractor • Commercial maintenance is planned
Collaborative	• Contractor has good DMSMS and parts management capabilities • Project is of high value • Maintenance will be shared between government and industry
High Government Involvement	• Contractor has minimal DMSMS and parts management capabilities • Project is of high value • Either the government or the contractor may have configuration management responsibility • Government maintenance is planned

Note: Not all drivers need to be present to make a decision.

Section 6. CDRLs and DIDs

Table 7 lists DMSMS and parts management CDRLs and DIDs. Appendix A contains a CDRL template (which provides illustrative information for creating the CDRL by completing DD Form 1423) for each line in the table. Table 7 also contains the associated DID numbers with a link to the DID itself.

Table 8 shows other DIDs that have a relationship to DMSMS and parts management. As mentioned earlier, there is some flexibility in which contract section establishes certain DMSMS and parts management requirements. Consequently, there is similar flexibility in whether a CDRL and DID are included in Table 7 or Table 8. For that matter, there are also choices about whether a CDRL and DID should be referenced in the DMSMS or parts management sections of the contract.

Table 7. DMSMS and Parts Management CDRLs and DIDs

Template	CDRL	DID Number	DID Link
1	Logistics Product Data	DI-SESS-81758A	DI-SESS-81758A
2	Technical Data Package	DI-SESS-80776B	DI-SESS-80776B
3	As-Built Configuration List—Common	DI-SESS-81830	DI-SESS-81830
4	DMSMS Bills of Materials	DI-MGMT-82274, DMSMS Life Cycle Management Data	DI-MGMT-82274 Life Cycle Management Data
5	DMSMS Case Data		
6	DMSMS Change and Discontinuance Notification Data		
7	DMSMS Case Mitigation, Cost, and Budgeting Data		
8	Proactively Monitored Parts List		
9	DMSMS Issue Mitigation Data		
10	DMSMS Health Assessment Report	DI-MGMT-82273	DI-MGMT-82273
11	DMSMS Management Plan	DI-MGMT-81948[26]	DI-MGMT-81948
12	DMSMS Metrics Data	DI-MGMT-82275A	DI-MGMT-82275A
13	DMSMS Operations Transfer Plan	DI-MGMT-82276	DI-MGMT-82276
14	DMSMS Subcontractor Health Reports	DI-MGMT-82277	DI-MGMT-82277
15	10-Year Rolling Technology Refresh Plan	DI-MISC-80508B	DI-MISC-80508B
16	Software List	DI-IPSC-81442A	DI-IPSC-81442A
17	Parts Management Plan referencing MIL-STD-11991	DI-STDZ-81993	DI-STDZ-81993
18	Exception Report	DI-QCIC-82405	DI-QCIC-82405

Note: The numbers refer to the figure numbers in Appendix A.

Table 8. Other CDRLs and DIDs That Could or Should Exist in the Contract

CDRL	DID
Configuration Management Plan	DI-CMAN-80858B
Software Transition Plan	DI-IPSC-81429A

[26] DI-MGMT-81949 is a DID for an implementation plan for the DMP. It is not necessary to use that DID because much of this document already requires information from the contractor that only a functioning DMSMS program could provide.

CDRL	DID
Software Development Plan	DI-IPSC-81427A
Software Version Description	DI-IPSC-81442

Appendix A. CDRL Templates

Figure 1. Logistics Product Data

2. Title of Data Item	3. Subtitle	4. Authority	7. DD 250 REQ	8. APP Code	10. Frequency	11. As of Date	12. Date of First Submission	13. Date of Subsequent Submission	14.a. Addressee	14.b. Copies Draft	14.b. Copies Reg	14.b. Copies Repro
Logistics Product Data		DI-SESS-81758A	LT	A	ASREQ	N/A	See Block 16	See Block 16	Program Office	1	1	

16. Remarks

1. Deliver Logistics Product Data as detailed in DI-SESS-81758A. The report will be requested by a technical instruction letter from the government, which will detail the assembly or assemblies on which to report and the level of indenture required for each. The frequency of the report will be no more than *monthly*. The purpose of the report is to obtain sufficient logistics data to perform a DMSMS impact analysis on an assembly or assemblies that contain an item with a DMSMS issue.
2. Block 8: Approval for technical content and format. The government has *30* days to review. The Contractor has *15* days to incorporate comments.
3. Block 12: The report will be requested by a technical instruction letter from the government.
4. Block 13: Subsequent reports will be requested by a technical instruction letter from the government.
5. The report shall be tailored to include only the elements listed below. The elements are from GEIA-STD-0007 Appendix A.

Elements

acquisition_decision_office_Type
acquisition_method_code_Type
acquisition_method_suffix_code_Type
additional_reference_number_Type
annual_operating_time_Type
commercial_and_government_entity_code
criticality_code_Type
document_availability_code_Type
end_item_acronym_code_Type
engineering_failure_mode_mean_time_between_failure_Type
essentiality_code_Type
failure_rate_Type
indenture_code_Type

2. Title of Data Item	3. Subtitle	4. Authority	7. DD 250 REQ	8. APP Code	10. Frequency	11. As of Date	12. Date of First Submission	13. Date of Subsequent Submission	14.a. Addressee	14.b. Copies Draft	14.b. Copies Reg	14.b. Copies Repro
		item_name_Type mean_time_between_failures_Type national_item_identification_number_Type national_stock_number_activity code_Type national_stock_number_cognizance_code_Type production_lead_time_Type reference_number_category_code_Type reference_number_Type reference_number_variation_code_Type repair_survival_rate_Type shelf_life_action_code_Type shelf_life_Type source_maintenance_recoverability_code_Type											
Tailoring Comments		A technical instruction letter will likely be required to request the data. The elements listed are suggested; the list can be adjusted to include any of the data elements defined in DI-SESS-81758A as needed. Adjust the timing of the report, the text in italics, as required.										

Figure 2. Technical Data Package

2. Title of Data Item	3. Subtitle	4. Authority	7. DD 250 REQ	8. APP Code	10. Frequency	11. As of Date	12. Date of First Submission	13. Date of Subsequent Submission	14.a. Addressee	14.b. Copies Draft	14.b. Copies Reg	14.b. Copies Repro
Technical Data Package		DI-SESS-80776B	LT	A	ASREQ	N/A	See Block 16	See Block 16	Program Office	1	1	
16. Remarks		1. Deliver a Technical Data Package as detailed in DI-SESS-80776B Sections 3.a and 3.b. The report will be requested by a technical instruction letter from the government, which will detail the assembly or assemblies on which to report and the level of indenture required for each. The frequency of the report will be no more than *monthly*. The purpose of the delivery is to obtain sufficient technical data to research and resolve DMSMS issues on assemblies and components. 2. The report shall be tailored to include only the technical data as described in MIL-STD-31000B: Paragraph 5.4.1.3: Product engineering design data and associated lists and Paragraph 5.4.1.4: Commercial engineering design data and associated lists.										

2. Title of Data Item	3. Subtitle	4. Authority	7. DD 250 REQ	8. APP Code	10. Frequency	11. As of Date	12. Date of First Submission	13. Date of Subsequent Submission	14.a. Addressee	14.b. Copies Draft	14.b. Copies Reg	14.b. Copies Repro
		1. Block 8: Approval for technical content and format. The government has *30* days to review. The Contractor has *15* days to incorporate comments. 2. Block 12: The report will be requested by a technical instruction letter from the government. 3. Block 13: Subsequent reports will be requested by a technical instruction letter from the government.										
Tailoring Comments		As written, this template can be used for commercial and non-commercial tech data. This section can be further tailored to meet the program's objectives. Adjust the timing of the deliverable, the text in italics, as required.										

Figure 3. As-Built Configuration List—Common

2. Title of Data Item	3. Subtitle	4. Authority	7. DD 250 REQ	8. APP Code	10. Frequency	11. As of Date	12. Date of First Submission	13. Date of Subsequent Submission	14.a. Addressee	14.b. Copies Draft	14.b. Copies Reg	14.b. Copies Repro
As-Built Configuration List—Common		DI-SESS-81830	LT	A	ANNLY	365DAC	N/A	15DARP	Program Office		1	
16. Remarks		1. Deliver an As-Built Configuration List as detailed in DI-SESS-81830 *1* year after contract award and *annually* thereafter. The report will be updated *annually* to incorporate all changes during the reporting period. The report shall be formatted as specified in the DID. 2. The data will provide a complete list of all Contractor-furnished equipment and software to be delivered to the government, including equipment and software from subcontractors. Commercial-off-the-shelf items shall be included on the list. 3. The lowest level of reporting for the report is the assembly level. Components or piece parts, such as screws, nuts, adhesives, transistors, and integrated circuits, do not need to be reported. 4. The data reported shall include only the following columns from the list in Table 1 of DI-SESS-81830: 3. Indenture Level 4. Part Number 5. Reference Designator 6. Part Description 12. Drawing Revision 15. Manufacturer CAGE Code										

2. Title of Data Item	3. Subtitle	4. Authority	7. DD 250 REQ	8. APP Code	10. Frequency	11. As of Date	12. Date of First Submission	13. Date of Subsequent Submission	14.a. Addressee	14.b. Copies Draft	14.b. Copies Reg	14.b. Copies Repro
		17. NHA Part Number 19. End Item Part Number										
Tailoring Comments		If this DID is referenced by some other Configuration Management CDRL, the program should coordinate with that team to determine how best to get this information. Adjust the timing of the deliverable, the text in italics, as required.										

Figure 4. DMSMS Bills of Materials

2. Title of Data Item	3. Subtitle	4. Authority	7. DD 250 REQ	8. APP Code	10. Frequency	11. As of Date	12. Date of First Submission	13. Date of Subsequent Submission	14.a. Addressee	14.b. Copies Draft	14.b. Copies Reg	14.b. Copies Repro
DMSMS Life Cycle Management Data	DMSMS Bill of Materials	DI-MGMT-82274		A	ASREQ	N/A	See Block 16	See Block 16	Program Office	1	1	
16. Remarks		1. Provide Bills of Materials for all items in the end item deliverables using DI-MGMT-82274. These BOMs shall include BOMs for subcontractor items that are not commercial items as defined in 48 CFR 2.101, Definitions. 2. Block 8: Approval for technical content and format. The government has *30* days to review. The Contractor has *15* days to incorporate comments. 3. Block 12: Date of First Submission: the correct entry for block 12 depends on the acquisition phase. Using the information below, the user can either determine the correct date and enter it in Block 12 using the prescribed format or put “SEE BLOCK 16” in Block 12 and detail the date in Block 16. TMRR—At PDR EMD—At CDR PD LRIP—Just prior to LRIP PD FRP—Just prior to FRP Decision Review Sustainment—**60** days from the beginning of the contract **60** DAC (Entered in Block 12, with no entry in Block 16). 4. Block 13: The Contractor shall provide updates as required for configuration changes NLT *60* days after such changes are finalized. 5. The BOM will provide the following data elements from Table 1 of DI-MGMT-82274: 1–26.										
Tailoring Comments		Adjust the frequency of the update submittals, the text in italics, as required to meet government objectives.										

Figure 5. DMSMS Case Data

2. Title of Data Item	3. Subtitle	4. Authority	7. DD 250 REQ	8. APP Code	10. Frequency	11. As of Date	12. Date of First Submission	13. Date of Subsequent Submission	14.a. Addressee	14.b. Copies Draft	14.b. Copies Reg	14.b. Copies Repro
DMSMS Life Cycle Management Data	DMSMS Case Data	DI-MGMT-82274	LT	A	MTHLY	0	60DAC	5DARP	Program Office	1	1	
16. Remarks		1. Provide DMSMS case data for all cases that were open during the preceding month using the data elements in Table 1 of DI-MGMT-82274 as specified below. Cases provided shall include subcontractor items that are not commercial items as defined in 48 CFR 2.101, Definitions. 2. The data will be comprised of the following data element from Table 1 of DI-MGMT-82274: 1–19 and 22–46. 3. Block 8: Approval for technical content and format. The government has *30* days to review. The Contractor has *15* days to incorporate comments.										
Tailoring Comments		Frequency of reports may be adjusted, the text in italics, to accommodate the program's schedule. Data elements may be adjusted to meet the program's case management needs.										

Figure 6. DMSMS Change and Discontinuance Notification Data

2. Title of Data Item	3. Subtitle	4. Authority	7. DD 250 REQ	8. APP Code	10. Frequency	11. As of Date	12. Date of First Submission	13. Date of Subsequent Submission	14.a. Addressee	14.b. Copies Draft	14.b. Copies Reg	14.b. Copies Repro
DMSMS Life Cycle Management Data	DMSMS Change and Discontinuance Notification Data	DI-MGMT-82274			ASREQ	See Block 16	See Block 16	See Block 16	Program Office		1	
16. Remarks		1. Provide DMSMS issue notification reports, using DI-MGMT-82274, containing all DMSMS issues and projected DMSMS issues discovered since the last report for all items in the end item deliverables within 1 week of discovering the issue. 2. The deliverable will provide the following data elements from Table 1 of DI-MGMT-82274: 1–3, 11, 15–19, and 44–53. 3. Block 12: The first delivery will be within *1* week of discovery of a DMSMS issue. 4. Block 13: Subsequent deliveries will be within *1* week of discovery of a DMSMS issue.										

2. Title of Data Item	3. Subtitle	4. Authority	7. DD 250 REQ	8. APP Code	10. Frequency	11. As of Date	12. Date of First Submission	13. Date of Subsequent Submission	14.a. Addressee	14.b. Copies Draft	14.b. Copies Reg	14.b. Copies Repro
Tailoring Comments		This CDRL may not be required if the Contractor is performing all DMSMS activities. Adjust the timing of the deliverable, the text in italics, as required.										

Figure 7. DMSMS Case Mitigation, Cost, and Budgeting Data

2. Title of Data Item	3. Subtitle	4. Authority	7. DD 250 REQ	8. APP Code	10. Frequency	11. As of Date	12. Date of First Submission	13. Date of Subsequent Submission	14.a. Addressee	14.b. Copies Draft	14.b. Copies Reg	14.b. Copies Repro
DMSMS Life Cycle Management Data	DMSMS Case Mitigation, Cost, and Budgeting Data	DI-MGMT-82274	LT	A	SEE BLOCK 16	0	180DAC	See Block 16	Program Office	1	1	
16. Remarks		1. The Contractor shall deliver data, using DI-MGMT-82274, that will be used to project DMSMS resolution costs for the next federal budget year and for the succeeding *5* years. The report shall include details down to the lowest assembly levels and subcontractor items that are not commercial items as defined in 48 CFR 2.101, Definitions, unless otherwise specified in the contract. The report shall contain the following data elements from DID DI-MGMT-82274: 1, 2, 9–12, 15, 24, 25, and 27–44. 2. Block 8: Approval for technical content and format. The government has *30* days to review. The Contractor has *15* days to incorporate comments. 3. Block 10: The data will be delivered annually, except for the final delivery, which will be made *6* months prior to the contract end. 4. Block 13: The data will be delivered annually after the first delivery, except for the final delivery, which will be made *6* months prior to the contract end.										
Tailoring Comments		If the program office is conducting DMSMS management activities and collecting case data using DI-MGMT-82274, these reports may not be needed as the data to build the reports are included in the case data. Adjust the timing of the deliverable, the text in italics, as required.										

Figure 8. Proactively Monitored Parts List

2. Title of Data Item	3. Subtitle	4. Authority	7. DD 250 REQ	8. APP Code	10. Frequency	11. As of Date	12. Date of First Submission	13. Date of Subsequent Submission	14.a. Addressee	14.b. Copies Draft	14.b. Copies Reg	14.b. Copies Repro
DMSMS Life Cycle Management Data	Proactively Monitored Parts List	DI-MGMT-82274	LT	A	ANNLY	0	90DAC	14DARP	Program Office	1	1	
16. Remarks		1. The Contractor shall deliver a list of all items that they plan to proactively monitor. The list of items will detail the results of the Contractor's risk-based analysis of all items to determine those they plan to monitor for obsolescence. The report shall contain the following data elements from DI-MGMT-82274 Table 1: 1–5, 7–11, 15–19, and 23–25. 2. Block 8: Approval for technical content and format. The government has *30* days to review. The Contractor has *15* days to incorporate comments.										
Tailoring Comments		If the program office is conducting DMSMS management activities and collecting case data using DI-MGMT-82274, these reports may not be needed as the data to build the reports are included in the case data. Adjust the timing of the deliverable, the text in italics, as required.										

Figure 9. DMSMS Issue Mitigation Plan

2. Title of Data Item	3. Subtitle	4. Authority	7. DD 250 REQ	8. APP Code	10. Frequency	11. As of Date	12. Date of First Submission	13. Date of Subsequent Submission	14.a. Addressee	14.b. Copies Draft	14.b. Copies Reg	14.b. Copies Repro
DMSMS Life Cycle Management Data	DMSMS Issue Mitigation Plan	DI-MGMT-82274	LT	A	1	N/A	SEE BLOCK 16	N/A	Program Office	1	1	
16. Remarks		1. Deliver a detailed list of all unresolved DMSMS issues or projected DMSMS issues that have the potential to negatively impact the end item within *2 years* of delivery. The list shall include subcontractor items. Provide the list using the data elements in Table 1 of DI-MGMT-82274 as specified below. 2. Data Elements from DI-MGMT-82274 Table 1: 1, 2, 9–12, 15, 24, 25, and 27–44. 3. Block 8: Approval for technical content and completeness. The government will approve or disapprove within *1* month of initial delivery. The Contractor will resubmit for approval or provide a final copy of the plan within *30* days of government disposition. 4. Block 12: Deliver *180* days prior to the contract end.										

2. Title of Data Item	3. Subtitle	4. Authority	7. DD 250 REQ	8. APP Code	10. Frequency	11. As of Date	12. Date of First Submission	13. Date of Subsequent Submission	14.a. Addressee	14.b. Copies Draft	14.b. Copies Reg	14.b. Copies Repro
Tailoring Comments		The program office should adjust the frequency, the text in italics, of the deliverable to accommodate its needs. If the program office is conducting DMSMS management activities and collecting case data using DI-MGMT-82274, these reports may not be needed as the data to build the reports are included in the case data.										

Figure 10. DMSMS Health Assessment Report

2. Title of Data Item	3. Subtitle	4. Authority	7. DD 250 REQ	8. APP Code	10. Frequency	11. As of Date	12. Date of First Submission	13. Date of Subsequent Submission	14.a. Addressee	14.b. Copies Draft	14.b. Copies Reg	14.b. Copies Repro
DMSMS Health Assessment Report		DI-MGMT-82273	LT	A	SEMIA	0	180DAC	5DARP	Program Office	1	1	
16. Remarks		1. Provide a DMSMS Health Assessment Report as described in DI-MGMT-82273 for all end item deliverables. The provided report shall include all items in the deliverable and subcontractor items that are not commercial items as defined in 48 CFR 2.101, Definitions. 2. Block 8: Approval for technical content and completeness. Government will approve or disapprove within *1* month of initial delivery. The Contractor will resubmit for approval or provide final copy of the plan within *30* days of government disposition.										
Tailoring Comments		The program office should adjust the frequency of the deliverable, the text in italics, to accommodate its needs. If the program office is conducting DMSMS management activities and collecting case data using DI-MGMT-82274, these reports may not be needed as the data to build the reports are included in the case data.										

Figure 11. DMSMS Management Plan

2. Title of Data Item	3. Subtitle	4. Authority	7. DD 250 REQ	8. APP Code	10. Frequency	11. As of Date	12. Date of First Submission	13. Date of Subsequent Submission	14.a. Addressee	14.b. Copies Draft	14.b. Copies Reg	14.b. Copies Repro
DMSMS Management Plan		DI-MGMT-81948	LT	A	1	180DAC	180DAC	N/A	Program Office	1	1	
16. Remarks		1. Deliver a draft DMSMS Management Plan (DMP) as detailed in DI-MGMT-81948 *6* months after contract award. The plan shall address the following topics as they relate to DMSMS management: long-lead time material; unique processes; tooling; the impact of environmental regulations and policy such as Restriction of Hazardous Substances (RoHS) and										

2. Title of Data Item	3. Subtitle	4. Authority	7. DD 250 REQ	8. APP Code	10. Frequency	11. As of Date	12. Date of First Submission	13. Date of Subsequent Submission	14.a. Addressee	14.b. Copies Draft	14.b. Copies Reg	14.b. Copies Repro
		Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH). The plan will detail how the Contractor will operate at Intensity Level 3 IAW Clauses 5 and 6 and Table A-1 of SAE-STD-0016. 2. Block 8: Approval for technical content and completeness. The draft plan will be evaluated using SAE-STD-0016 for completeness and adherence to the guidance of that standard. The government will approve or disapprove within *1* month of initial delivery. The Contractor will resubmit for approval or provide a final copy of the plan within *30* days of government disposition.										
Tailoring Comments												

Figure 12. DMSMS Metrics Data

2. Title of Data Item	3. Subtitle	4. Authority	7. DD 250 REQ	8. APP Code	10. Frequency	11. As of Date	12. Date of First Submission	13. Date of Subsequent Submission	14.a. Addressee	14.b. Copies Draft	14.b. Copies Reg	14.b. Copies Repro
DMSMS Metrics Data		DI-MGMT-82275A	LT	A	MTHLY	0	60DAC	5DARP	Program Office		1	
16. Remarks		1. Provide DMSMS metrics data for the reporting period using Table 1 of DI-MGMT-82275A. The metrics provided shall include the required information for all items in the deliverable and subcontractor items that are not commercial items as defined in 48 CFR 2.101, Definitions. 2. Block 8: Approval for technical content and format. The government has *30* days to review. The Contractor has *15* days to incorporate comments.										
Tailoring Comments		Level 1 metrics should be required at a minimum. Level 2 metrics provide more detail and will, in the long term, benefit the program office and higher-level authorities. The frequency of the deliverable may be adjusted, the text in italics, to accommodate the program's schedule. The data elements may be adjusted to meet the program's needs or the level of involvement of the Contractor.										

Figure 13. DMSMS Operations Transfer Plan

2. Title of Data Item	3. Subtitle	4. Authority	7. DD 250 REQ	8. APP Code	10. Frequency	11. As of Date	12. Date of First Submission	13. Date of Subsequent Submission	14.a. Addressee	14.b. Copies Draft	14.b. Copies Reg	14.b. Copies Repro
DMSMS Operations Transfer Plan		DI-MGMT-82276	LT	A	1	N/A	See Block 16	N/A	Program Office	1	1	
16. Remarks		1. Deliver a DMSMS Operations Transfer Plan as detailed in DI-MGMT-82276. 2. Block 8: Approval for technical content and completeness. Government will approve or disapprove within *1* month of initial delivery. Contractor will resubmit for approval or provide final copy of the plan within *30* days of government disposition. 3. Block 12: Deliver *180* days prior to the end of the contract.										
Tailoring Comments		This CDRL may not be required if the Contractor is not managing DMSMS or if all of the relevant information has been transferred to the government by other means. Adjust the timing of the deliverable, the text in italics, as required.										

Figure 14. DMSMS Subcontractor Health Reports

2. Title of Data Item	3. Subtitle	4. Authority	7. DD 250 REQ	8. APP Code	10. Frequency	11. As of Date	12. Date of First Submission	13. Date of Subsequent Submission	14.a. Addressee	14.b. Copies Draft	14.b. Copies Reg	14.b. Copies Repro
DMSMS Subcontractor Health Reports		DI-MGMT-82277			ANNLY	0	180DAC	See Block 16	Program Office		1	
16. Remarks		1. Deliver the DMSMS Subcontractor Health Report as described in DI-MGMT-82277. The report shall contain health information for all subcontractors that supply items that are not commercial items, as defined in 48 CFR 2.101, Definitions. 2. Block 13: Subsequent reports will be submitted annually beginning *1* year after the first submission.										
Tailoring Comments		Adjust the timing of the deliverable, the text in italics, as required.										

Figure 15. 10-Year Rolling Technology Refresh Plan

2. Title of Data Item	3. Subtitle	4. Authority	7. DD 250 REQ	8. APP Code	10. Frequency	11. As of Date	12. Date of First Submission	13. Date of Subsequent Submission	14.a. Addressee	14.b. Copies Draft	14.b. Copies Reg	14.b. Copies Repro
Technical Report Study/ Services	10-Year Rolling Technology Refresh Plan	DI-MISC-80508B	DD	A	SEMIA	0	180DAC	See Block 16	Program Office	1	1	
16. Remarks		1. The plan shall indicate the OEM's recommended optimum time to conduct a periodic technology refreshment to proactively mitigate DMSMS issues predicted to negatively affect cost or readiness. In each recommended technology refreshment, the plan shall indicate the assemblies and subsystems to be refreshed, scope of the DMSMS issues necessitating this action, and an estimate of the cost and benefits to the government. The refresh plan shall be continually revised as the tech refresh event draws closer to the current date. 2. Block 8: Approval for technical content and format. The government has *30* days to review. The Contractor has *15* days to incorporate comments. 3. Block 13: Subsequent reports will be delivered *30* days prior to the scheduled date of each DMSMS Management Team meeting.										
Tailoring Comments		Adjust the timing of the deliverable, the text in italics, as required.										

Figure 16. Software Lists

2. Title of Data Item	3. Subtitle	4. Authority	7. DD 250 REQ	8. APP Code	10. Frequency	11. As of Date	12. Date of First Submission	13. Date of Subsequent Submission	14.a. Addressee	14.b. Copies Draft	14.b. Copies Reg	14.b. Copies Repro
Software Version Description		DI-IPSC-81442A	DD	A	ANNLY	0	180DAC	See Block 16	Program Office		1	
16. Remarks		1. Deliver a list of all software to be delivered to the government as part of the end item deliverable. Only the data described in the DID Content Section of Section 3.2, "Inventory of software contents," is required. The list will comprise the following fields: identifying numbers, titles, abbreviations, dates, version numbers, and release numbers. It will only include the top level of the software. Underlying files and modules are not required. All other parts of the Content Section of the DID are not required. 2. The data shall be provided as an electronically editable, machine-readable, comma-separated values (CSV) text file with text fields enclosed in double quotation marks.										

2. Title of Data Item	3. Subtitle	4. Authority	7. DD 250 REQ	8. APP Code	10. Frequency	11. As of Date	12. Date of First Submission	13. Date of Subsequent Submission	14.a. Addressee	14.b. Copies Draft	14.b. Copies Reg	14.b. Copies Repro
		3. Block 8: Approval for technical content and format. The government has *30* days to review. The Contractor has *15* days to incorporate comments. 4. Block 13: Subsequent submissions will be annually beginning *1* year after the first submission.										
Tailoring Comments		Adjust the timing of the deliverable, the text in italics, as required.										

Figure 17. Parts Management Plan

2. Title of Data Item	3. Subtitle	4. Authority	7. DD 250 REQ	8. APP Code	10. Frequency	11. As of Date	12. Date of First Submission	13. Date of Subsequent Submission	14.a. Addressee	14.b. Copies Draft	14.b. Copies Reg	14.b. Copies Repro
Parts, Materials, and Processes (PM&P) Management Plan		DI—STDZ-81993	LT	A	ASREQ	60 DAC	60DAC	See Block 16	Program Office	1	1	
16. Remarks		1. Deliver a draft contractor's Parts Management Plan *60* days after contract award. The Plan will address the general (Section 4) requirements of MIL-STD-11991. For the purposes of this contract, a Parts Management Plan and a Parts, Materials, and Processes Management Plan are synonymous. 2. BLOCK 8. Government comments or draft approval will occur within *30* days after receipt. The Plan will be evaluated based on a government assessment of the completeness and effectiveness of the processes documented in the Plan in meeting the general (Section 4) requirements of MIL-STD-11991. The contractor will resubmit for approval or provide a final copy of the Plan within *30* days of government disposition. 3. BLOCK 13: Revisions will be submitted as required when changes occur to the Plan or the Parts, Materials, and Processes List (if the List is required), but not more frequently than every *6* months. 4. A Parts, Materials, and Processes List is or is not required. 5. The Plan being submitted will represent how the contractor intends to tailor the general (Section 4) requirements of MIL-STD-11991. 6. Submit electronically in a supported version of Microsoft Word (unless otherwise approved by the government).										

2. Title of Data Item	3. Subtitle	4. Authority	7. DD 250 REQ	8. APP Code	10. Frequency	11. As of Date	12. Date of First Submission	13. Date of Subsequent Submission	14.a. Addressee	14.b. Copies Draft	14.b. Copies Reg	14.b. Copies Repro
Tailoring Comments		In number 4, select whether a Parts, Materials, and Processes List is or is not required. In numbers 1, 2, and 5 add the italicized text if the Plan is at a mid-level of specificity. For a high level of specificity, remove the italicized text.										

Figure 18. Parts Selection Exception List

2. Title of Data Item	3. Subtitle	4. Authority	7. DD 250 REQ	8. APP Code	10. Frequency	11. As of Date	12. Date of First Submission	13. Date of Subsequent Submission	14.a. Addressee	14.b. Copies Draft	14.b. Copies Reg	14.b. Copies Repro
Parts Management Exception Data		DI-QCIC-82405	LT	A	ASREQ	N/A	See Block 16	See Block 16	Program Office	1	1	
16. Remarks		1. A list of all selected and procured parts in the design meeting any of the following exception types: 1.1 DMSMS risk. Forecasted availability less than the availability horizon established in the SOW. 1.2 Traceability risk. Microelectronic parts procured from suppliers without traceability to an authorized source. 1.3 Tampering risk. Sufficient efforts have not been taken to lower the risk of unauthorized tampering (e.g., the introduction of malware, unauthorized parts, and unauthorized configuration) for microelectronics. Sufficient efforts are based on the requirements and recommendations of ISO/IEC 20243-1:2018 or the identical open group standard "Open Trusted Technology Provider™ Standard (O-TTPS)—Mitigating Maliciously Tainted and Counterfeit Products." 1.4 Rebranding risk. Obtained from sources that rebrand, remark, reassemble, repackage, refurbish, or upcycle parts that are designed/built by other OCMs/OEMs. 1.5 Parts without qualified, approved alternate risk. Microelectronic parts without a qualified, approved alternate where there is an indication of foreign contributions to the part (Foreign contributions to the part include (1) either the country of origin or the country of diffusion, if known, are outside of the U.S. or (2) the address of the source is outside of the U.S.). 1.6 Assurance risk. Program protection and hardware and software assurance requirements not met. 2. BLOCK 8: The government will accept this submission or provide comments within *15* days. Government rejection of any part reported in accordance with the above criteria will be within *30* days of government acceptance. 3. BLOCK 12: Date of First Submission: In order to allow the government the ability to promptly review parts selected for items that may be used in end item deliverables and which do not meet the part selection criteria established in the SOW, part selection exception reports for all equipment, including equipment from subcontractors, shall be provided to the government within *10* days of the completion of preliminary designs. The part selection exception reports will be provided at the lowest assembly level.										

2. Title of Data Item	3. Subtitle	4. Authority	7. DD 250 REQ	8. APP Code	10. Frequency	11. As of Date	12. Date of First Submission	13. Date of Subsequent Submission	14.a. Addressee	14.b. Copies Draft	14.b. Copies Reg	14.b. Copies Repro
		4. BLOCK 13: The Contractor shall provide updates as required for design changes NLT *10* days after such changes are finalized. 5. The data shall be provided as an electronically editable, machine-readable, Comma Separated Values (CSV) text file with text fields enclosed in double quotation marks.										
Tailoring Comments		In numbers 3 and 4, adjust the frequency of the update submittals, the text in italics, as required to meet government objectives.										

Appendix B. Abbreviations

BOM	bill of materials
CDR	Critical Design Review
CDRL	Contract Data Requirements List
CFR	*Code of Federal Regulations*
CM	configuration management
COTS	commercial off-the-shelf
CSV	comma-separated values
DBS	Defense Business System
DCMA	Defense Contract Management Agency
DFARS	Defense Federal Acquisition Regulation Supplement
DID	Data Item Description
DMP	DMSMS Management Plan
DMSMS	diminishing manufacturing sources and material shortages
DMT	DMSMS management team
DoD	Department of Defense
DoDD	DoD Directive
DoDI	DoD Instruction
ECP	engineering change proposal
EMD	Engineering and Manufacturing Development
FAR	Federal Acquisition Regulation
FRP	Full Rate Production
IAW	in accordance with
LRIP	Low Rate Initial Production
MCA	Major Capability Acquisition
MIL-HDBK	Military Handbook
MIL-STD	Military Standard
MSA	Milestone A
MSB	Milestone B
MSC	Milestone C
MTA	Middle Tier of Acquisition
NLT	no later than
OCM	original component manufacturer
OEM	original equipment manufacturer
O-TTPS	Open Trusted Technology Provider™ Standard
PCO	Procuring Contracting Officer
PD	Production and Deployment

PDR	Preliminary Design Review
PM&P	Parts, Materials, and Processes
PRR	Production Readiness Review
PWS	performance work statement
QML	Qualified Manufacturers List
QPL	Qualified Products List
REACH	Registration, Evaluation, Authorisation, and Restriction of Chemicals
RFP	request for proposal
RoHS	Restriction of Hazardous Substances
SAE-STD	SAE International Standard
SD	Standardization-related Document
SME	subject matter expert
SOO	statement of objectives
SOW	statement of work
SRR	System Requirements Review
SWA	software acquisition
TDP	technical data package
TMRR	Technology Maturation and Risk Reduction
UCA	Urgent Capability Acquisition

Appendix C. References

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[3] AIA/NAS, NAS 413, *Remote Verification Implementation Guidance*, May 18, 2020.

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[5] Defense Standardization Program Office, SD-22, *Diminishing Manufacturing Sources and Material Shortages—A Guidebook of Best Practices for Implementing a Robust DMSMS Management Program*, May 2022.

[6] DFARS 252.246-7007, “Contractor Counterfeit Electronic Part Detection and Avoidance System,” January 31, 2023.

[7] DFARS 252.246-7008, “Sources of Electronic Parts,” January 31, 2023.

[8] DFARS 227.71, “Rights in Technical Data,” January 31, 2023.

[9] DFARS 227.72, “Rights in Computer Software and Computer Software Documentation,” January 31, 2023.

[10] DFARS 252.227, “Reserved,” January 31, 2023.

[11] DI-CMAN-80858B, *Contractor’s Configuration Management Plan*, September 10, 2000.

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[13] DI-IPSC-81429A, *Software Transition Plan (STrP)*, January 10, 2000.

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[19] DI-MGMT-82275A, *DMSMS Metrics Data*, July 2, 2019.

[20] DI-MGMT-82276, *DMSMS Operations Transfer Plan*, July 2, 2019.

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[24] DI-SESS-80776B, *Technical Data Package*, August 1, 2019.

[25] DI-SESS-81830, *As-Built Configuration List*, August 20, 2015.

[26] DI-SESS-81758A, *Logistics Product Data*, December 27, 2022.

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[29] DoDI 4140.67, *DoD Counterfeit Prevention Policy*, March 6, 2020.

[30] DoDI 4245.15, *Diminishing Manufacturing Sources and Material Shortages*, November 5, 2020.

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[32] DoDI 5000.88, *Engineering of Defense Systems*, November 18, 2020.

[33] DoDI 5200.44, *Protection of Mission Critical Functions to Achieve Trusted Systems and Networks (TSN)*, October 15, 2018.

[34] FAR 10.001, “Policy,” December 30, 2022.

[35] GEIA-STD-0005-1, *Performance Standard for Aerospace and High Performance Electronic Systems Containing Lead-free Solder*, March 2012.

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[38] IEC 62402 Edition 2.0, *Obsolescence Management*, May 29, 2019.

[39] IPC-A-610, *Acceptability of Electronic Assemblies*, October 15, 2020.

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