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U.S. Department of
Homeland Security

United States
Coast Guard



Diminishing Manufacturing Sources and Material Shortages (DMSMS) Manual

COMDTINST M4105.12
Nov 13, 2012



Commandant
United States Coast Guard

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COMDTINST M4105.12

NOV 13 2012

COMMANDANT INSTRUCTION M4105.12

Subj: DIMINISHING MANUFACTURING SOURCES AND MATERIAL SHORTAGES (DMSMS) MANUAL

- Ref:
- (a) System Integrated Logistics Support (SILS) Policy Manual, COMDTINST M4105.8 (series)
 - (b) Major Systems Acquisition Manual (MSAM), COMDTINST M5000.10 (series)
 - (c) Simplified Acquisition Procedures (SAP) Manual, COMDTINST M4200.13 (series)
 - (d) Logistics Element Manager’s (LEM) Desk Guide, COMDTINST M4105.11 (series)
 - (e) Command, Control, Communications, Computers and Information Technology (C4&IT) Systems Development Life Cycle (SDLC) Policy, COMDTINST 5230.66 (series)
 - (f) Defense Acquisition University (DAU) website www.dau.mil
 - (g) Department of Defense (DoD) DMSMS Center of Excellence website www.dmsms.org
 - (h) Information and Life Cycle Management Manual, COMDTINST M5212.12 (series)
 - (i) Coast Guard Strategic Cost Manual, COMDTINST M7000.4 (series)
 - (j) Total Ownership Cost Guiding Principles, COMDTINST M4140.1 (series)
 - (k) Diminishing Manufacturing Sources and Material Shortages Guidebook, Department of Defense SD-22

1. PURPOSE. To provide guidance and assign responsibility for the Coast Guard’s (CG) Diminishing Manufacturing Sources and Material Shortages (DMSMS) program. The DMSMS program strives to lower Total Ownership Costs (TOC) by mitigating the impact of DMSMS on all USCG systems, parts, and material, and to improve availability of essential materials necessary to support current and planned requirements until a suitable replacement is procured. This is accomplished by using DMSMS, both proactive and reactive methodologies, and teaming with other Government DMSMS management organizations and industry to identify and resolve DMSMS issues.

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NON-STANDARD DISTRIBUTION:

2. ACTION. All Coast Guard unit commanders, commanding officers, officers-in-charge, deputy/assistant commandants, and chiefs of headquarters staff elements shall comply with the provisions of this Manual. Internet release is authorized.
3. DIRECTIVES AFFECTED. None.
4. DISCLAIMER. This document is intended to provide operational requirements for CG personnel and is not intended to, nor does it impose, legally-binding requirements on any party outside the CG.
5. RECORDS MANAGEMENT. This Manual has been evaluated for potential records management impacts. The development of the Manual has been thoroughly reviewed during the directives clearance process, and it has been determined there are no further records scheduling requirements, in accordance with Federal Records Act, 44 U.S.C. 3101 et seq., National Archives and Records Administration (NARA) requirements, and the Information and Life Cycle Management Manual, COMDTINST M5212.12(series). This policy does not have any significant or substantial change to existing records management requirements.
6. BACKGROUND. The CG is experiencing a growing complexity of its systems, increasing age, and constantly changing technology, which is adversely affecting support because of obsolescence issues. DMSMS, or obsolescence, impacts CG systems and equipment from initial design through disposal. DMSMS became an issue in the early 1970s with the advent of complex electronics and specialized materials. The CG, the DoD, and the DMSMS community define DMSMS as “the loss, or impending loss, of the last known manufacturer of an item or supplier of an item or raw material”. The CG “loses” a manufacturer when the last known manufacturer, discontinues or plans to discontinue production of needed components, software, or raw materials. This Manual was developed to establish and maintain a comprehensive DMSMS program to help address this problem.
7. DISCUSSION. The CG must properly support every asset and system it acquires, as described in references (a) through (e). A DMSMS management program, as a logistics element, is an integral part of this support. This program, as described in this instruction, is designed to give structure, common tools and processes to the ongoing CG effort to mitigate obsolescence. Enclosure (1) is a template for developing a DMSMS management plan, which is required for both major and non-major acquisitions. The majority of DMSMS problems occur in the area of electronic components, primarily Federal Stock Class (FSC) 5961 Semiconductors, FSC 5962 Microcircuits, and FSC 5998 Electrical and Electronic Assemblies, Boards, Cards, and Associated Hardware. However, DMSMS affects all systems and materiel categories, including software. DMSMS includes obsolescence at the part, module, component, equipment, and system indenture level. Also, DMSMS resolutions can have a cascading affect on a system or its integrated systems, creating a requirement to reintegrate the overall system back into a smoothly working whole. DMSMS can occur in any phase of a project’s life cycle, from early design phases through postproduction support, and has the potential to severely impact a project in terms of schedule and life cycle cost. It should be noted that new CG acquisition approaches increasingly place more parts management responsibility on system contractors. Based on this responsibility transfer, it is important for the project office management team or operations office to oversee and validate

the contractor's DMSMS management program. DMSMS background information can be obtained from references (f) and (g).

8. POLICY.

- a. A "single manager", known as the DMSMS Manager, shall be assigned the responsibility to manage DMSMS for each major USCG system (cutter, boat, aircraft, information technology system, electronics system, etc.), in the acquisition or sustainment phases. This position resides at the project level or item/platform support level, such as item managers at the logistics centers or personnel in acquisition offices. Based on workload and available resources, this responsibility can be performed by existing item managers, analysts, or logisticians, and can be a full time or collateral duty. This manager will perform all aspects of DMSMS management, and will ensure existing item managers, analysts, or logisticians create, collect, and maintain records in support of the DMSMS program in accordance with reference (h). Location of the DMSMS manager will vary based on circumstance. In an acquisition project, DMSMS management will most likely be done by the prime contractor as directed by the contract. Therefore, the DMSMS manager will reside in the prime contractor's acquisition office. CG personnel will oversee the prime contractor's effort, making sure it meets contract requirements. If the prime contractor does not perform DMSMS management, then the DMSMS manager will reside in the office designated by the CG project office, either in the project office, a logistics center, service center, or at a support contractor or another Government activity employed by the project office.
- b. Final resolution decisions of DMSMS cases shall be made at the project level or item/platform support level.
- c. If a prime contractor is performing DMSMS management for a CG acquisition project, that management effort shall be transferred to the CG during the Produce/Deploy and Support Phase, when the prime contractor transitions support responsibility to the CG. The process of this transition shall be documented in the project Transition Plan.
- d. All DMSMS resolutions shall be based on best value for the predicted life of the system or component. This shall be determined by conducting an economic analysis or total ownership cost analysis. Analyses for determining the best value resolution shall include Performance Based Requirements and the use of architecture migrations, such as Open Systems Architecture designs, to mitigate DMSMS impacts. For information on how to conduct an economic analysis, see reference (i). For information on how to conduct a total ownership cost analysis, see reference (j).
- e. When using Contractor Logistics Support or other similar support strategies that do not include the Government obtaining a complete technical data package, analyses, or support strategy, the contractor deliverables shall include the potential DMSMS impacts of not acquiring this data.
- f. All DMSMS resolutions shall preserve Operational Safety, Suitability, Effectiveness, and Configuration Control.

- g. Choice of a Life-of-Type (LOT) Buy as a solution for an obsolescence issue shall be made only when all other more economical and logistically acceptable alternatives have been exhausted. If a LOT Buy is necessary, the acquiring activity is responsible for making the LOT Buy as part of the initial spares purchase, and the Logistics Center/Item Manager (IM) is responsible for funding and procurement of the LOT Buy after the Material Support Date (MSD) has been achieved. Logistics Center/IM is also responsible for managing, storing, distributing, and disposing of that LOT Buy. The project manager or System Development Agent is responsible for funding and procurement of LOT Buys used as Government Furnished Material (GFM) for new production of end items and initial spares prior to MSD.
- h. DMSMS managers shall conduct required market research to comply with Federal Acquisition Regulation (FAR) Part 10, 41 U.S.C.253a(a)(1), 41 U.S.C.264b, and 10 U.S.C.2377 to ensure that legitimate needs are identified and trade-offs evaluated when acquiring items. DoD Standardization Document 5 (SD-5), "Market Research, Gathering Information about Commercial Products and Services", provides guidance.
- i. A history file, indicating the issue and final resolution of all DMSMS issues shall be maintained by the cognizant DMSMS manager, as well as reported to the Government Industry Data Exchange Program (GIDEP) via the GIDEP website (<http://www.gidep.org/>) using a supplemental DMSMS Notice to update the original notice.
- j. All CG DMSMS programs shall coordinate with the Assistant Commandant for Engineering and Logistics, Office of Logistics, Logistics Program Management Division, Commandant (CG-441), to achieve maximum cost benefits and avoid duplication of effort. The CG DMSMS Program Manager will also coordinate efforts with DMSMS managers in the DoD, Federal agencies, and private industry to strengthen the CG DMSMS effort. Items to coordinate include DMSMS resolutions, obsolescence notifications, and best practices.
- k. CG project and item managers shall develop and update parts data for their cognizant systems or equipment, which at a minimum will consist of a Bill of Materials (BOM) as described in enclosure (2).
- l. The DMSMS Management Plan shall be an attachment to the Integrated Logistics Support Plan, or the Equipment Integrated Logistics Support Plan.

9. RESPONSIBILITIES.

- a. Assistant Commandant for Engineering and Logistics, Office of Logistics Program Management, Commandant (CG-441) shall:
 - (1) Serve as the Program Manager for the CG DMSMS Program.
 - (2) Establish and chair the CG DMSMS Integrated Product Team (team members include CG-41, CG-45, CG-6, CG-9, CG-7, and the Logistics Centers).
 - (3) Ensure all program policy and guidance is consistent with Department of Homeland Security (DHS), and alignment with DoD and Federal Government efforts.

- (4) Coordinate DMSMS efforts with DoD activities, federal agencies, and industry as required, and share methodologies and tools needed to manage DMSMS, to include participation in DoD, Navy, and GIDEP working groups.
 - (5) Guide Logistics Centers and Service Centers (SFLC, ALC, C3CEN, TISCOM) implementation of the CG DMSMS program.
 - (6) Monitor and support CG DMSMS program resource requirements.
 - (7) Promote DMSMS program awareness through the use of publications, periodicals, reports, briefings, training, etc.
 - (8) Use metrics to gauge program effectiveness. Metrics shall include Number of DMSMS notifications and/or cases created, number of cases closed, number of cases resolved, average time to case closure, average time to case resolution, estimated or actual cost avoidance, and avoided operational availability deficiencies due to obsolescence.
 - (9) Ensure there are DMSMS points of contact at all CG activities performing DMSMS management.
 - (10) Ensure there are team relationships with Program Executive Offices (PEO), Project Managers (PM), Item Managers (IM), Foreign Military Sales (FMS) representatives, and Contracting Officers, to address obsolescence/nonavailability issues.
- b. Assistant Commandant for Engineering and Logistics, Commandant (CG-4) shall:
- (1) Ensure that every project under their cognizance has a DMSMS Manager and a DMSMS Management Plan.
 - (2) Assign a single DMSMS point of contact for each office in Commandant (CG-4) with asset/system management responsibilities, and establish that cognizant Logistics Centers have a DMSMS Program and point of contact. Provide a representative to serve as a member of the CG DMSMS Integrated Product Team.
 - (3) Make certain that DMSMS is mentioned and referenced in applicable Commandant (CG-4) policy.
 - (4) Ensure there is a complete and accurate BOM developed for every end item to be supported. The BOM is developed by either the prime contractor or the CG. If the BOM is developed by the contractor, then the contract will site Data Item Description DI-SESS-81656, "Source Data for Forecasting Diminishing Manufacturing Sources and Material Shortages (DMSMS)".
- c. Assistant Commandant for Command, Control, Communications, Computers and Information Technology, Commandant (CG-6) shall:
- (1) Ensure that every project under their responsibility has a DMSMS manager and a DMSMS Management Plan.
 - (2) Ensure there is a single DMSMS point of contact.
 - (3) Make certain that DMSMS is mentioned and referenced in applicable Commandant (CG-6) policy.

- (4) Ensure there is a representative to serve as a member of the CG DMSMS Integrated Product Team.
 - (5) Ensure that subordinate commands under C4IT Service Center (e.g. Telecommunications and Information Systems Command (TISCOM) and Command, Control, and Communications Engineering Center (C3CEN) have a DMSMS program and point of contact.
 - (6) Ensure that all new acquisition requirements and contracts include requirements for DMSMS management.
 - (7) Ensure that a complete and accurate BOM is developed for every end item to be supported, for every acquisition project. The BOM is developed by either the prime contractor or the CG. If the BOM is developed by the contractor, then the contract will site Data Item Description DI-SESS-81656, "Source Data for Forecasting Diminishing Manufacturing Sources and Material Shortages (DMSMS)".
- d. Assistant Commandant for Capability, Commandant (CG-7) shall:
- (1) Ensure that every project under their responsibility has a DMSMS Manager and a DMSMS Management Plan.
 - (2) Ensure there is a single DMSMS point of contact.
 - (3) Ensure that DMSMS is mentioned and referenced in applicable Commandant (CG-7) policy.
 - (4) Ensure there is a representative to serve as a member of the CG DMSMS Integrated Product Team.
- e. Assistant Commandant for Acquisition, Commandant (CG-9) shall:
- (1) Ensure that every acquisition project under their responsibility, both major and non-major, has a DMSMS Manager and a DMSMS Management Plan.
 - (2) Ensure that a complete and accurate BOM is developed for every end item to be supported, for every acquisition project. The BOM is developed by the prime contractor, item manufacturer, support contractor, or CG logistics centers. If the BOM is developed by the contractor, then the contract will site Data Item Description DI-SESS-81656, "Source Data for Forecasting Diminishing Manufacturing Sources and Material Shortages (DMSMS)".
 - (3) Ensure there is a single DMSMS point of contact.
 - (4) Make certain that all new acquisition contracts include requirements for DMSMS management.
 - (5) Ensure there is a representative designated to serve as a member of the CG DMSMS Integrated Product Team.
 - (6) Ensure DMSMS procedures are incorporated in applicable Commandant (CG-9) policy.
- f. The Logistics Centers and Service Centers (SFLC, ALC, C4ITSC) shall:

- (1) Ensure that every project under its responsibility has a DMSMS manager and a DMSMS Management Plan.
 - (2) Ensure there is a representative to serve as a member of the CG DMSMS Integrated Product Team.
 - (3) Ensure that DMSMS procedures are incorporated in applicable logistics and service center policy.
 - (4) Ensure there is a single DMSMS point of contact.
- g. Acquisition or Sustainment Project Managers shall:
- (1) Develop a DMSMS Management Program and designate a DMSMS Manager. The Management Program shall be developed and maintained by either the prime contractor or the CG project office under the cognizant Logistics Center or Services Center. It shall have a DMSMS Management Plan in accordance with enclosure (1).
 - (2) Ensure their DMSMS Management Program is proactive, that staff are trained in DMSMS management and equipped with DMSMS tools, and is adequately funded as funding permits.
- h. The DMSMS Manager shall:
- (1) Develop and maintain a structured DMSMS Management Program for items under their cognizance.
 - (a) Identify and cost-effectively resolve DMSMS issues.
 - (b) Hold GIDEP membership and participate in the GIDEP program. Report DMSMS information, as appropriate, to GIDEP.
 - (c) Conduct market research to evaluate the most cost-effective resolution to the logistics/cost impact.
 - (d) Execute the most cost-effective resolution consistent with mission requirements for the predicted life of the system.
 - (e) Explore and develop new strategies to resolve DMSMS issues, such as Technology Refreshment and Technology Insertion.
 - (f) Ensure that resolutions developed preserve Operational Safety, Suitability, and Effectiveness baselines.
 - (g) Utilize forums for exchanges of DMSMS information within the CG, the DoD, other government organizations and industry.
 - (h) Work with other engineering and logistics offices to prioritize DMSMS solutions to achieve resolution of various Reliability, Availability, and Maintainability (RAM) problems, and to identify opportunities for improving system RAM.

- (i) Identify opportunities across common system platforms to share resources and minimize the duplication of effort during the identification and resolution of DMSMS issues.
 - (j) Develop team relationships with project and item managers of programs that offer potential resolutions (Modernization Through Spares, Value Engineering, etc.) and other activities, as appropriate, to facilitate obsolescence resolutions.
 - (k) Make use, when advantageous, of Government fabrication facilities for defense unique and/or low-volume production items not easily obtained in the commercial sector.
 - (l) Ensure DMSMS items held in inventory (Life of Type Buys) are reviewed annually for retention, to confirm demand or potential demand.
 - (m) Provide status information of the DMSMS program and ongoing cases to review teams during major acquisition reviews.
- (2) Oversee the prime contractor DMSMS effort.
- (a) Oversee the development and execution of the DMSMS management plan by the prime contractor in accordance with enclosure (1), or, if there is no prime contractor, develop a DMSMS management plan in accordance with enclosure (1).
 - (b) Participate proactively in parts selection and application during early phases of the acquisition, making sure there is a complete BOM, assessing parts for DMSMS impact, monitoring and predicting part availability, and identifying technical substitutes.
- (3) Interface with Commandant (CG-441).
- (a) Provide Commandant (CG-441) DMSMS metric data and information as required. Metric information is found in reference (k).
 - (b) Designate a DMSMS point of contact to Commandant (CG-441) and advise Commandant (CG-441) whenever point of contact changes occur.
 - (c) Meet with Commandant (CG-441) regularly to exchange lessons learned via IPT meetings and metrics reports, and keep abreast of changes in DMSMS tools and processes.
- i. Logistics Element Managers and Item Managers, for both acquisition and sustainment, shall:
- (1) Ensure that DMSMS management is conducted for assigned logistics elements where applicable.
 - (2) Ensure that all new acquisition and sustainment contracts include requirements for DMSMS management.

10. **REVISIONS.** Recommendations for improvements to this Manual shall be submitted to Office of Logistics Program Management, Commandant (CG-441).

11. ACRONYMS AND DEFINITIONS. Acronyms are included as Enclosure (3). Definitions are included as Enclosure (4).
12. DISTRIBUTION. No Paper Distribution will be made of this Manual. To view this Manual or other unclassified directives visit the Coast Guard Directives System Intranet site at: <http://cgweb.comdt.uscg.mil/CGDirectives/Welcome.htm> and CG Portal: <https://cgportal.uscg.mil/delivery/Satellite/CG612>, or the Internet site: <http://www.uscg.mil/directives>.
13. ENVIRONMENTAL ASPECT AND IMPACT CONSIDERATIONS. Environmental considerations under the National Environmental Policy Act (NEPA) were examined in the development of this Commandant Instruction without substantive change. It is categorically excluded from further NEPA analysis and document requirements under Categorical Exclusion #33 as published in National Environmental Policy Act Implementing Procedures and Policy for Considering Environmental Impacts, COMDTINST M16475.1 (series), Figure 2-1. An Environmental Checklist and Categorical Exclusion Determination (CED) are not required.
14. FORMS/REPORTS. None.

R. J. RÁBAGO /s/
Rear Admiral, U.S. Coast Guard
Assistant Commandant for Engineering and
Logistics

- Encl: (1) DMSMS Management Plan Template
(2) Bill Of Material Data Elements
(3) Acronyms
(4) Definitions

DIMINISHING MANUFACTURING SOURCES AND MATERIAL SHORTAGES (DMSMS)
MANAGEMENT PLAN TEMPLATE

1. **Purpose.** The purpose of the DMSMS Management Plan Template is to provide a guide for prime contractors, DMSMS Managers, Logistics Element Managers, logisticians, and other acquisition professionals, to develop DMSMS Management Plans. Management plans are key to successful, proactive and reactive DMSMS management programs. This plan is a strategy document that explains how DMSMS management will be conducted for a particular project or asset for its entire life cycle. It is an attachment to the ILSP and updated when significant DMSMS changes occur. DMSMS management is an essential part of the system's total life cycle support concept. Development and implementation of the DMSMS management plan must begin during the concept design phase of a program, and continue throughout its entire life cycle. Technical information about DMSMS can be obtained from the Defense Acquisition University (DAU) (www.dau.mil) or the Department of Defense (DoD) DMSMS Center of Excellence (www.dmsms.org).
2. **Sample.** Exhibit 1 is a sample DMSMS Management Plan cover page, a sample table of contents, and the basic plain text content and format requirements. The management plan should address all items listed in the exhibit. If a particular section is not applicable to the project, then that section should state such with a short rationale. Additional information pertinent to a particular system or platform can be incorporated as required.

Sample DMSMS Management Plan

Cover Page

Diminishing Manufacturing Sources
and Material Shortages (DMSMS)
Management Plan for the

PROJECT TITLE

Submitted by: _____
Project Manager

Date

Endorsed by: _____
Project Director

Date

Sample DMSMS Management Plan

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6. Identification and Prioritization of DMSMS Issues
7. Prediction Tools

Section E. Case Mitigation and Resolution

1. Case Management
2. Shared Data
3. Metrics

*Sample DMSMS Management Plan
Content Requirements*

Executive Summary

Provide a one to two page summary of the project and its DMSMS strategy. Make sure to include both proactive and reactive processes, partnerships for sharing DMSMS information or solutions, and names of tools used. Also, discuss how DMSMS fits into the overall integrated logistics support strategy.

Section A. Introduction

1. Purpose and Objectives

State the purpose and objectives for establishing a DMSMS management program, for the entire life of the system.

2. System Description

Provide a brief description of the system if needed to understand the program. Specify the system or platform that this plan is applicable to, such as the system, sub-system, block or upgrade, the primary office of responsibility, the transition of responsibilities from acquisition to the sustainment organization, and interrelated systems and their DMSMS management plans.

Section B. Management

1. Approach

Explain the DMSMS management approach and strategy. At what level of indenture is management aimed for (box level, assembly level, part level, integrated circuit level, wafer level)? What support strategy will be used? All organic support and at what level? All commercial support? A mix of organic and commercial support? Will concepts like Performance Based Logistics or Technology Refreshment be employed?

2. Cost and Funding

Address how DMSMS management will be funded, the level of funding required, and the methodology used to develop the budget cost estimate.

3. Contractual Requirements

For acquisition programs, describe how the contract addresses DMSMS. State whether it is the prime contractor's responsibility to perform DMSMS management or the USCG's, or both. Describe what tasks are addressed in the contract, and who is responsible for them. For any other DMSMS tasks not

Sample DMSMS Management Plan Content Requirements

addressed but still required, state who is responsible. Address any proprietary data rights and issues, and the type and level of data being purchased.

4. Schedule

State how key DMSMS activities are integrated into project master planning schedules. Examples of such activities include a review of the DMSMS management program at each project milestone, the start of technology refresh cycles, key project decision dates, design reviews, and Bill of Material (BOM) loads, reviews, and updates.

5. Risk Assessment

Identify current and future risks to the DMSMS management program, and strategies to manage or mitigate each risk.

Section C. DMSMS Management Team

1. Team Composition

A DMSMS Management Team is made up of members from the USCG, prime contractor, sub-contractors, or component and parts vendors. The team consists of a team leader, a systems engineer, a logistician, project office liaison if a separate organization outside the project office, and other specialists such as Logistics Element Managers, Item Managers, or Budget Analysts, as required. List each team member and a brief description of their responsibilities.

2. Liaison

If DMSMS Management is provided by a subcontractor or Government organization outside of the project office and prime contractor, a project office representative will act as a liaison member and will participate on the subcontractor or Government organization DMSMS Management Team. List the liaison member and respective responsibilities and duties.

Section D. Process

1. Technology Roadmap

DMSMS forecasts and mitigation strategies are an integral part of the development of the program's technology roadmap for technology refreshment and/or insertion. DMSMS issues may drive the need for or affect the timing of technology refreshment and/or technology insertion. Roadmaps should be periodically updated throughout the system's life cycle. Briefly describe the system equipment's Technology Roadmap. It should include:

*Sample DMSMS Management Plan
Content Requirements*

- a. The identification of critical items and technologies, including those that are emerging or planned, to meet project/customer needs.
 - b. DMSMS forecasts and impacts to such things as supportability, the supply chain, Total Ownership Costs (TOC), performance, etc., at the applicable system integration levels, such as platform, system/subsystem, equipment, assemblies and parts.
 - c. Results of Business Case Analyses (BCAs) and decision criteria for employing technology insertion and/or technology refreshment opportunities and the associated lifecycles and schedules.
 - d. Technology refreshment and/or technology insertion implementation plans.
 - e. Applicable Resource Proposal (RP) requirements and TOC estimates.
 - f. Results of market research.
- 2. System Architecture**
- Provide a breakdown of the system architecture as it pertains to DMSMS management. Indicate parts or assemblies that are COTS, Military Specification (MILSPEC), specially developed for the system, supported by the USCG, DoD, or other branches of the Federal Government, supported by a contractor, or not considered to be a DMSMS risk.
- 3. Parts and Materials Selection**
- Describe how DMSMS is considered during parts selection, integration, test and design reviews.
- 4. Configuration Identification and Data Capture**
- Describe the methodology for obtaining and documenting the BOM/piece-part level configuration for input into a DMSMS management database and a predictive tool. Describe the process for continuous BOM review and update. Identify BOM data elements, including level of indenture, source(s), and repository. Provide rationale, BCA, or tradeoff analysis, if the system cannot be supported at the piece-part level.

*Sample DMSMS Management Plan
Content Requirements*

5. Design

Describe the process used during design to forecast, review and mitigate DMSMS impacts to the system.

6. Identification and Prioritization of DMSMS Issues

Describe the methodology for prioritization and mitigation of DMSMS issues. Describe how the DMSMS risks are integrated in the overall Risk Management Program.

7. Prediction Tools

Identify all prediction tools used to forecast DMSMS, and their relationships with any other tools/databases.

Section E. Case Mitigation and Resolution Process

1. Case Management

Describe the case mitigation and resolution process. A sample process is as follows:

- a. Receive an alert.
- b. Verify the applicability (across system/platforms)
- c. Open case
- d. Look for research in progress/completed solutions (Shared Data Warehouse)
- e. Determine/evaluate mitigation options
- f. Approve resolutions
- g. Fund and implement resolutions
- h. Resolve/close case
- i. Update resolution to project database/Shared Data Warehouse

2. Shared Data

Describe the process for archiving and sharing DMSMS case and resolution data within the project, throughout the prime contractor's and sub tier vendor's efforts, and with the rest of the USCG and the Government.

3. Metrics

Describe project metrics used for managing DMSMS.

BILL OF MATERIAL DATA ELEMENTS

1. **DMSMS Source Data**

- a. The contractor or manufacturer shall identify, as applicable, all parts planned for use in the product at all indented levels. The data may be obtained progressively during any program life-cycle phase, using sources such as the preferred parts list, Electronic Bill of Material (E-BOM), vendor surveys, inspections, etc. The information documented at the part level shall be updated as the design progresses or changes, and be sufficient to enable forecasting and management of any associated DMSMS issues. The USCG shall receive or purchase this data, and maintain it for the life of the system or equipment, in accordance with reference (h). The DMSMS Source Data shall be in an editable electronic format using XML data standards, or a commercially available and widely accepted database or spreadsheet product such as MS Excel and Access. Database or spreadsheet product (MS Excel and Access) must be migrated to new product/version whenever the USCG standard system software is updated, to ensure retrievability and usability of data for the life of the system or equipment.
- b. The Source Data shall include the following minimum information for the indented level(s) specified by the contract or the support strategy:

E-BOM Data Fields for System Level

Original Equipment Manufacturer (OEM)
OEM Commercial and Government Entity (CAGE) Code
OEM Part Number
Revision Level
Firmware Version
Next Higher Assembly
Reference Designator
Nomenclature
Noun Name
Quantity on Platform
National Stock Number/National Item Identification Number (NIIN)

E-BOM Data Fields for Line Replaceable Unit (LRU) Level

OEM
OEM CAGE
OEM Part Number
Known Alternate Part Numbers
Revision Level
Firmware Version
Next Higher Assembly
Reference Designator
Nomenclature
Quantity used in System
National Stock Number/NIIN

E-BOM Data Fields for LRU Component Level

OEM

OEM CAGE

OEM/Source Control Drawings (SCD) Piece-Part Numbers

Next Higher Assembly

OEM/SCD Piece-Part Reference Designator

OEM/SCD Piece-Part Nomenclature

OEM/SCD Piece Part Quantity on LRU

OEM/SCD Piece Part Revision Level

OEM/SCD Piece Part Firmware Version

Actual Vendor Piece-Part Numbers

Actual Vendor Piece-Part Cage

Known Alternate Piece-Part Numbers & Cages

National Stock Number/NIIN

ACRONYMS

ALC	Aviation Logistics Center
BCA	Business Case Analysis
BOM	Bill of Material
C3CEN	Command and Control Engineering Center
C4&IT	Command, Control, Communications, Computers, and Information
CAGE	Commercial and Government Entity
COMDTINST	Commandant Instruction
COTS	Commercial Off-the-Shelf
DAU	Defense Acquisition University
DHS	Department of Homeland Security
DLA	Defense Logistics Agency
DMSMS	Diminishing Manufacturing Sources and Material Shortages
DoD	Department of Defense
E-BOM	Electronic Bill of Material
FAR	Federal Acquisition Regulations
FMS	Foreign Military Sales
FSC	Federal Stock Classification
GEM	Generalized Emulation of Microcircuits
GFM	Government Furnished Material
GIDEP	Government-Industry Data Exchange Program
ICP	Inventory Control Point
IM	Item Manager
IPT	Integrated Product Team
LCC	Life-Cycle Cost
LEM	Logistics Element Manager
LOT	Life of Type
LRU	Line Replaceable Unit
MILSPEC	Military Specification
MSAM	Major Systems Acquisition Manual
MSD	Material Support Date
NIIN	National Item Identification Number
OE	Operating Expenses
OEM	Original Equipment Manufacturer
PEO	Program Executive Officer
PM	Project Manager
RAM	Reliability, Availability & Maintainability
RP	Resource Proposal
SAP	Simplified Acquisition Procedures
SCD	Source Control Drawings
SDLC	Systems Development Life Cycle
SILS	Systems Integrated Logistics Support
SFLC	Surface Forces Logistics Center
TISCOM	Telecommunication and Information Systems Command

Enclosure (3) to COMDTINST 4105.12

TOC	Total Ownership Cost
USCG	United States Coast Guard
VHDL	Very High Speed Integrated Circuit Hardware Description Language

DEFINITIONS

1. **Diminishing Manufacturing Sources and Material Shortages (DMSMS).** The loss or impending loss of the last known manufacturers of an item or supplier of an item or raw material. DMSMS is caused when manufacturers of items or raw material suppliers discontinue production, or modify an existing item such that it no longer meets form, fit, and function for USCG applications.
2. **DMSMS Manager.** The individual or organization that implements a DMSMS program. Implementation consists of taking timely actions to proactively resolve obsolescence, coordinating with other organizations, as appropriate, to make certain the continued availability of DMSMS end items, parts, and essential materials needed to support current systems and planned acquisitions, the prediction of future obsolescence, and the determination of future item requirements.
3. **DMSMS Point of Contact.** The individual that acts as the “single face” of their organization to Commandant (CG-441), other USCG activities, DoD and Government agencies and private industry. They make sure that DMSMS management is coordinated within their organization, and communicate with Commandant (CG-441) if changes to policy, processes or tools are necessary.
4. **DMSMS Resolutions.** Approved solution strategies for items that are DMSMS. They include Reclamation, Substitution, Limited Substitution, Aftermarket Manufacturer or Supplier, Bridge Buy, Emulation (Generalized Emulation of Microcircuits (GEM)), Redesign, LOT Buy, Existing Source, New Source, System Replacement, Excess Assets Source (Contractor Assets), Production Warranty, and Reverse Engineering.
5. **Government/Industry Data Exchange Program (GIDEP).** An organization with a web-based database for the sharing of information between industry and the Government, on the acquisition, storage, retrieval and dissemination of parts and components, reliability-test and failure analysis, hardware systems reliability and maintainability data from development, test, and operational use, test equipment calibration procedures and metrology information, user information on problems and the availability of parts, components and systems (DMSMS), and other technical data of interest to the GIDEP membership.
6. **Inventory Control Point (ICP).** The individual or organization responsible for the materiel management of a group of items either for a particular USCG component or for the USCG as a whole. Materiel inventory management includes cataloging direction, requirements computation, procurement direction, distribution management, disposal direction, and generally, rebuild direction. USCG items can be managed by the USCG, DOD, or other Government agencies.
7. **Item.** (Interchangeable with component, material, service, part, and process) Any raw, in-process, or manufactured commodity, material, article, piece, part, assembly, component, product, or accessory, including services, processes, technical data, software, or equipment, whether from a prime contractor, subcontractor, foreign or domestic source.

8. **Legacy Architecture.** The specifications or technology standards and guidelines used to develop a system already in existence.
9. **Legacy System.** A system or piece of equipment currently fielded by the USCG.
10. **Life of Type (LOT) Buy (Lifetime Buy, Last Time Buy, Extended Buy).** The purchase of enough of an obsolete item to meet the projected demands of the supported equipment for the rest of its operational lifetime. A one-time procurement, when all cost-effective and prudent alternatives have been exhausted, for the total future requirements of an item no longer to be produced. The procurement quantity shall be based upon demand or engineering estimates of mortality sufficient to support the applicable equipment until phased out.
11. **Logistics Element Manager (LEM).** A subject matter expert, usually certified, for one or more logistics elements. The LEM's primary responsibility is to manage one or more logistics elements plus other key elements in an acquisition project or as part of a sustainment team/product line. The LEM's role is to make certain that their cognizant logistics' element(s) is fully covered and funded, and that tasks pertaining to cognizant elements are being accomplished in a complete and timely manner. A LEM usually works for the Integrated Logistics Support Manager.
12. **Market Research.** An analytical process used to collect, organize, maintain, analyze and present data for the purpose of maximizing the capabilities, technology and competitive forces of the marketplace to meet an organization's requirements for supplies or services.
13. **Material Support Date.** The date when the Government Supply System assumes responsibility for all spares and repair parts support of a new system, subsystem, boat, engine or support equipment end item at USCG operational sites.
14. **Obsolete.** The state in which an item is no longer available, or available in sufficient quantity, due to planned discontinuance driven by marketplace factors, outmoded design, construction, or composition rendering its usefulness impracticable, inefficient, ineffective, or unmarketable.
15. **Open Systems Architecture.** Systems designed to improve performance and lower cost by taking advantage of competition and innovation in the commercial marketplace. They can mitigate obsolescence by facilitating technology insertion. Open systems are characterized by:
 - a. Well-defined, widely used, preferably nonproprietary interfaces and/or protocols.
 - b. Use of well-documented standards for defining those interfaces.
 - c. Provisions for expansion or upgrade through incorporation or addition of new technology.
 - d. Performance-based specifications to spell out what the system should do.
16. **Performance Based Requirement.** A requirement stated in terms of performance (speed, altitude, reliability, interfaces, etc.) versus build-to-print requirements. Describing the requirement in terms of performance provides flexibility for the supplier to provide any design which meets that performance.

17. **Production Warranty.** A written promise or affirmation given by a contractor regarding the nature, usefulness, or condition of the end items or supplies, or the performance of services furnished under a contract. Warranty has two distinct meanings. It can be a specific remedy provision in a contract, or it can be more broadly applied as a promise concerning quality.