CHAPTER 12

In-Service Support Center (ISSC) Functions and Material Engineering Disposition Program (MEDP)

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12.1 In-Service Support Center (ISSC) Functions

12.1.1 In Service Support Center (ISSC) and Fleet Support Teams (FST)

12.1.1.1 Purpose. This paragraph provides the requirements for and the policies and procedures which will govern the ISSC construct, support to the fleet and Fleet Readiness Centers (FRC) and assignment of cognizance of service equipment, together with related functions from NAVAIR groups to selected FSTs within the ISSCs. It delineates the responsibilities assigned and the authority delegated to ISSCs for the performance of the assigned in-service functions. Figure 12-1 illustrates the ISSC and FST relationships.

12.1.1.2 Commander, Fleet Readiness Center (COMFRC) maintains specific relationships with COMNAVAIRSYSCOM Program Management and Acquisition (AIR-1.0), Research and Engineering (AIR-4.0), and Logistics And Industrial Operations (AIR-6.0) competencies in a shared and common management of the ISSCs co-located at the FRCs. The ISSCs include the Program Management (AIR-1.0), Engineering (AIR-4.0) and Logistics (AIR-6.0H) personnel and represent the technical authority of COMNAVAIRSYSCOM. They are operationally led and directed by their respective COMNAVAIRSYSCOM National Competencies. The ISSCs are administratively part of the FRC Area Commands at Fleet Readiness Center East (FRCE) (Cherry Point), Fleet Readiness Centers South East (FRCSE) (Jacksonville), and Fleet Readiness Centers South West (FRCSW) (North Island) and as such use local services within the commands, such as infrastructure, human resources, and information technology support (AIR-7.0), comptroller services (AIR-10.0), and legal counsel (AIR-11.0). The split chain of command exists to ensure that the operational control of the ISSCs and the application of technical oversight to all customers is maintained under COMNAVAIRSYSCOM control while ensuring the FRCs have sufficient administrative control to ensure it is a fiscally viable entity and maintains unity of command.

12.1.1.3 Program management, engineering, and logistics support will be provided to all FRCs and associated FRC sites through the three ISSCs. In the event the proper program or ISSC contact is known, the FRCs should contact them directly. In the event a proper point of contact is not known, contact the ISSC assigned coverage for the respective FRC. Cross platform support or permanent personnel assignment should be provided by the coverage ISSC. For business purposes these ISSCs are a part of the area command with which they are collocated but will provide objective support to all FRCs. The ISSC competencies will report through their respective COMNAVAIRSYSCOM (AIR-1.0, AIR-4.0, and AIR-6.0 National level 1) competency structure and the respective FRCs for administrative, budget, and FRC production support.

12.1.1.4 FSTs are the primary elements of the Program Manager-Air (PMA) Integrated Program Team (IPT) organizations chartered with ensuring effective fleet support is identified, implemented, analyzed/assessed, and sustained. The ISSCs house and staff FSTs for their assigned areas of equipment, systems, and platform cognizance as a primary mission element in support of fleet and FRC maintenance organizations. FSTs are assigned to various COMNAVAIRSYSCOM related weapons systems, such as aircraft, engines, and components, through the collaboration of the applicable PMA and COMNAVAIRSYSCOM (AIR-4.0 and AIR-6.0) under the Competency-Aligned Organization. The FSTs provide responsive support to fleet and FRC maintenance organizations when engineering and logistics technical support issues are encountered as well as providing acquisition support to the PMAs to ensure new equipment and modifications and upgrades to existing equipment are designed, tested and fielded with fleet support and in-service sustainment as a primary consideration.

12.1.1.5 An extension of fleet in-service support is also provided through the Naval Aviation Technical Data and Engineering Service Command (NATEC) Engineering and Technical Services (ETS) representatives. ETS provides advanced fault isolation and troubleshooting support; technical information research and advice; assistance in resolving complex problems; and training (on-the-job and formal) in conjunction with the installation, operation, maintenance, modification, and repair of applicable aircraft weapon systems. This includes both ashore and afloat activities. ETS are comprised of both organic Navy ETS and Contractor ETS. NATEC ETS personnel have the authority to provide on-site training and technical advice but do not inherently possess the technical authority to make engineering judgments that affect the safety or flight worthiness of a weapon system. Those decisions must be deferred to the designated FST or other appropriate technical authority for the weapons system, unless NATEC ETS personnel are granted this authority by name and position.

12.1.2 Reliability and Maintainability (R&M)/Reliability Centered Maintenance (RCM) Program

12.1.2.1 COMNAVAIRSYSCOM has directed the application of R&M/RCM to all in-service and future aircraft, engines, aircrew systems, weapon systems, aircraft launch and recovery equipment, and support equipment (SE), from technology development through disposal per NAVAIR 00-25-403 and NAVAIRINST 4790.20.

12.1.2.2 R&M/RCM must be applied as a continuous, integrated activity based on sound engineering and logistics principles for developing safe and affordable failure management strategies. Conduct of this analysis must be the basis for any effort that establishes or adjusts preventive maintenance (PM) tasks and intervals as an element of the overall maintenance planning process. Figure 12-2 illustrates the overall R&M or RCM Based Sustained Maintenance Planning Process.

12.1.2.3 R&M/RCM is a total ownership cost reduction process and must be applied throughout the entire acquisition life cycle to:

a. Influence design requirements during Phase A (Technology Development) and Phase B (Engineering and Manufacturing Development).

b. Develop initial PM requirements for test and evaluation events and update PM requirements for availability on first production units and subsequent major upgrades or modifications.

c. Sustain PM requirements and recommend design and maintenance improvements through continuous review and update during Phase C (Production and Deployment and Operations and Support phases).

d. Develop an R&M or RCM Program Plan for each end item.

e. Perform data collection and compilation of fleet, depot, age exploration, and vendor data to support development of each system’s failure management strategy.

f. Perform reliability analyses to determine failure distributions and trends based on operational, test and analytical data.

g. Perform decision logic analysis to determine failure management strategies such as PM and the need for redesign based on reliability and consequences of failure. Requirements and tasks will be either verified as valid, or be eliminated, modified, or adjusted to longer or shorter intervals based on the analysis. Efforts must be coordinated with cognizant design and in-service engineering (ISE) and logistics personnel knowledgeable of the design philosophy, functions, functional failures, failure modes, and reliability source data for the system analyzed.

h. Provide results for:

(1) Update of fleet level maintenance specifications, for example, Periodic Maintenance Information Cards (PMIC), Daily, Special, and Preservation Requirements, and Phased Maintenance Requirements.

(2) Update of D-level maintenance specifications, for example, integrated maintenance concept/program (IMC/P) Phased Maintenance Interval and aircraft service period adjustment (ASPA).

i. Provide continuous review of fleet local Maintenance Requirement Card (MRC) maintenance requirements, therefore directing the performance of only R&M/RCM justified fleet-wide maintenance to maintain a safe and economical maintenance program while ensuring optimum operational readiness.

j. Provide inputs to efforts, such as design changes, reliability testing, and obsolescence issues and parts substitutions.

12.1.3 Structural Life Limits Program

12.1.3.1 The Structural Life Limits Program provides policy and assigns responsibilities to ensure continuing structural safety of fixed and rotary wing aircraft throughout their assigned service life.

12.1.3.2 All levels of maintenance are responsible for ensuring structural life limited items and components do not exceed the specified limits per NAVAIRINST 13120.1 for fixed wing and NAVAIRINST 13130.1 for rotary wing aircraft and applicable Service Life Bulletins, PMICs, technical directives (TD), and interim rapid action changes (IRAC). Structural modification or alteration of life limited items and components may be changed by applicable TDs, but not without determining the effect on aircraft assigned service life and approval by COMNAVAIRSYSCOM (AIR-4.3.3).

12.1.3.3 Responsibilities:

a. ISSCs must verify all structural life limited items and dynamic components are incorporated in applicable aircraft PMICs.

b. FRCs must verify all individual aircraft logbooks reflect work accomplished by FRC that may affect the structural life limited items or dynamic components service life. For aircraft reworked on-site, reflect work accomplished in aircraft logbooks or provide the documentation for aircraft logbook entry by the operating activity (as applicable). The ISSC must include instructions for any required logbook or scheduled removal component (SRC) card entries with fleet engineering disposition (FED) dispositions.

12.1.4 Integrated Maintenance Concept/Program (IMC/P)

12.1.4.1 IMC/P is a multi-phased (Prototype-to-Implementation) program maintenance philosophy based on RCM analysis and focused on developing pro-active Preventive Maintenance Plans. The following are fundamental requirements of the IMC/P:

12.1.4.1.1 A comprehensive RCM analysis that includes the justification of all maintenance tasks without regard to specific levels of repair. It relies on decision logic for defining PM tasks that are applicable and effective for a specific set of failure modes and outcomes. RCM engineering analysis will be used to develop and identify PM tasks that will produce the highest degree of availability and readiness at the lowest overall life cycle cost. IMC/P targets improvement in the overall material condition of the aircraft, optimum life-cycle costs, and reduced out-of-service time while retaining safety considerations.

12.1.4.1.2 The consolidation of maintenance tasks that safely minimizes the duplication of effort among O-level, I-level, and D-level. Eliminating redundant tasks and combining multi-level artisan skill sets will allow programs to achieve a wider range of tasks without regard to location. This initiative allows programs

to move D-level skilled artisans closer to the warfighter, improves fleet readiness through personnel training, and reduces aircraft downtime.

12.1.4.1.3 Fixed Service Periods (FSP) are established by type/model/series (T/M/S) and are based on RCM analysis, operational requirements, safety, and economic considerations. Fixed Induction Dates (FID) for IMC/P events are set for the specific Month and Year. Planners may induct an IMC/P aircraft any time during that specified month, or up to 2 months earlier if required, for scheduling purposes to support operational requirements, promote level scheduling of D-level events, or compliment budget submission timelines.

12.1.4.2 The planned maintenance interval (PMI) Specification details inspection and processing specification requirements necessary to perform scheduled aircraft D-level maintenance. The PMI Specification is written per NAVAIRINST 13023.2 and can be used by both government and commercial contractor activities.

12.1.4.3 NAVAIR AL-081AO-IMC-000 is used by the PMA for planning to transition to the IMC/P and will be used in preparing for the prototype and final approval processes to ensure all programmatic requirements are anticipated and put in place prior to the commencement of the first PMI at the IMC/P site. This handbook contains the general requirements that must be met for the plan before seeking concurrence from the Integrated Maintenance Review Board and CNO (N980L). Figure 12-3 describes the IMC/P planning and approval process.

12.1.5 Aircraft Service Period Adjustment (ASPA) Program

12.1.5.1 The purpose of the ASPA Program is to establish a process to evaluate the material condition of fleet aircraft and use this information to more effectively plan FRC maintenance programs.

12.1.5.2 Specific objectives of the program are to:

a. Prescribe the operations, actions, and functions needed to:

(1) Make sound rework induction decisions.

(2) Identify and resolve material deficiencies that preclude adjusting an aircraft's service period.

b. Establish, validate, and redefine aircraft service periods. This portion of the process is covered by the RCM Program, NAVAIR 00-25-403, and the Age Exploration Program.

c. Collect and provide technical data for input into the CNOs ASPA Predictor Model.

12.1.5.2.1 Provide management planning and action necessary to:

a. Coordinate the various aspects of the ASPA process.

b. Verify process consistency and measure application performance.

c. Identify and resolve barriers to improvements of the ASPA Program and specific aircraft program applications.

d. Ensure ASPA requirements meet the needs of the FRC maintenance program.

e. Assess, with minimum readiness impact, the general material condition of aircraft rework candidates.

NOTE: Other aircraft T/M/S have developed special programs to address their specific standard rework needs. Integrated Maintenance Concept/Program (IMC/P)/Phased Depot Maintenance (PDM)/Enhanced Phase Maintenance (EPM)/Material Condition Inspection (MCI) replaces ASPA/SDLM and related program specifics by T/M/S.

12.1.5.2.2 ASPA Evaluation Document. The ISSC for each aircraft subject to ASPA will establish and maintain an evaluation document defining records analysis and physical examination tasks needed to determine general material condition of aircraft examined. The evaluation requirements will be developed considering all factors known to affect the material readiness of the aircraft during the potential adjustment period and indicators of material condition resulting in FRC rework and restoration workload. Requirements related to general condition assessment and evaluations are documented in the ASPA Local Engineering Specification (LES). They are not subject to major change due to age or design change. Items of specific concern affected by accumulated service time, management, or technical action are documented separately in companion inspections to permit focused management attention.

12.1.5.3 ASPA LES. General condition assessment tasks, rework induction criteria, and evaluation process requirements must be documented by an ASPA LES. Requirements for reporting custodian support of the ASPA evaluation will normally be documented by an ASPA conditional MRC. These requirements will not normally exceed that which would be provided for the Mobilization Material Condition Inspection. The LES will apply without regard to aircraft assigned service life or service tour since the induction criteria are based on general condition. The indicators, process, and results must be subject to continuous analysis and review. Periodic validation and improvements of the requirements must be performed documenting individual and collective effectiveness of the chosen condition indicators. An analytical review of scheduled O-level maintenance requirements must be conducted. This review will consider ASPA evaluation results, information contained in the maintenance data system (MDS), and information identified by the Naval Aviation Maintenance Discrepancy Reporting Program (NAMDRP). The review will also document effectiveness and identify needed change. ASPA is an aircraft material management program which uses RCM as its primary technical supporting program. Certified ASPA evaluators apply process, procedures, and criteria of the ASPA LES to determine aircraft general material condition. The LES establishes criteria upon which the ASPA evaluator bases recommendation that the aircraft:

a. Period End Date (PED) or Operating Service Month (OSM) may adjusted 12 months (or equivalent flight hours) beyond the current PED or 18 OSM from date of ASPA inspection, whichever is less.

b. Be inducted for rework or preservation not later than 90 days after the current PED.

c. Be inducted into rework immediately and the service tour be terminated.

12.1.5.3.1 Companion Requirements. Experience and technical data will establish certain items to be of significant airworthiness concern during the potential adjustment interval. Material impediments are classified as significant airworthiness concerns which are not present during each evaluation window and do not effectively contribute to the general condition assessment or require unequal man-hours and process time. Such items constitute an impediment to adjustment of PED/OSM without regard to general material condition. Material impediments should be established as individual companion requirements to the ASPA LES. Execution of the companion requirements must be predicated on both the preservation of airworthiness and conservation of resources. A companion requirement should be documented as a bulletin or a special MRC (often requiring D-level maintenance support) supported by RCM documentation.

12.1.5.4 ASPA Evaluator. The ISSC for each aircraft subject to ASPA will establish procedures and criteria to be used to certify ASPA evaluators. The ISSC will monitor the effectiveness of these procedures and criteria to maintain proficient, rapid, and objective assessments of the general material condition of aircraft candidates for rework. The ASPA evaluator will normally conduct a review of the aircraft maintenance history with the reporting custodian personnel prior to the physical examination. The ASPA evaluator must

conduct an exit brief with a designated representative of the reporting custodian during which the aircraft condition determination is discussed and the assessed maintenance level of discovered defects is agreed upon. As part of the exit brief, the reporting custodian will provide the ASPA evaluator with the job control number (JCN) assigned to the ASPA support maintenance action form (MAF) and the ASPA preparation man-hours expended. The ASPA evaluator will then provide the reporting custodian a countersigned copy of the ASPA Evaluation Record and serve as critical repair coordinator until relieved by the leader of the D-level repair team. The evaluation results in a statement of general material condition that must be published using the ASPA planner and estimator (P&E) report. The ASPA evaluator must ensure that the ASPA P&E report is released either from the reporting activity or released from the applicable D-level activity performing the evaluation.

12.1.5.5 ASPA Evaluation Scheduling. OPNAVINST 3110.11 requires an ASPA evaluation between 6 months prior to and 3 months after PED of each ASPA aircraft to determine its general material condition relative to established induction criteria. The 3-month window after PED can only be allowed when no D-level structural life limited item will expire during that period. This determination can be made by screening the aircraft logbook or by contacting the ISSC if information is not available locally. The criteria are based on general material condition and are applicable throughout aircraft service life without regard to duration of service tour. Any aircraft that receives an initial ASPA PED revision will require additional ASPA inspections as a minimum for any further PED revision. As a general guideline, no more than 18 months should elapse between the ASPA inspection and the resulting adjusted PED. Aircraft will not normally undergo an ASPA evaluation while embarked on a ship. A deviation may be authorized by CNO (N980L) with ACC concurrence. The reporting custodian must consider resource and readiness impacts of ASPA in executing these procedures. Total impact could include: maintenance man-hours required to support the evaluation; facility and equipment requirements of the ASPA evaluator; facilities and equipment needed to correct defects classified as Critical; availability of essential materials and aircraft out-of-service time for examination and repair. Emphasis must be given to minimizing these impacts during development of the evaluation schedule. Reporting custodians should attempt to schedule the ASPA evaluation to coincide with scheduled maintenance action(s) having disassembly requirements similar to ASPA. ACCs should establish procedures to coordinate the greatest practicable number of evaluations of similar aircraft at a site or region during an evaluator visit. However, not more than one aircraft should normally be scheduled per reporting activity in the event that a D-level critical defect is discovered and extensive maintenance is required. Those activities with complements of more than 30 aircraft may schedule up to 10 percent of total complement simultaneously for ASPA evaluations.

12.1.5.6 Repair of ASPA Defects. The ASPA evaluator will provide the reporting custodian a signed copy of the ASPA Evaluation Record. This record includes all discrepancies discovered during the evaluation, classified by assessed defect and maintenance level. An authorized representative of the reporting custodian signifies concurrence with these findings by signature. The reporting custodian will provide the evaluator, as part of the exit brief, with the JCN assigned to the ASPA support work order (WO)/maintenance action form (MAF) and the ASPA preparation man-hours expended. The reporting custodian will initiate WO/MAF (When Discovered Code U) to correct all O-level or I-level discrepancies. All Critical defects require correction prior to release for flight, regardless of assessed maintenance level or general material condition. The ASPA evaluator must act as critical repair coordinator until relieved by the leader of the D-level repair team. The ACC or TYCOM will direct and control procedures for requesting FRC emergency or field repair consistent with D-level management procedures established by COMNAVAIRSYSCOM. This may include repair of D-level Major defects on aircraft not recommended for SDLM/PDM induction. The ACC or TYCOM may decline a recommendation for PED adjustment considering operational and readiness impacts inherent in repair of identified defects. The ACC will render final induction decision based on operational needs and ASPA evaluation recommendation. OPNAVINST 3110.11 requires rework induction not later than 90 days after the current PED when the ASPA evaluation determines that aircraft general material condition satisfies rework induction criteria.

NOTE: The ASPA evaluator will only provide a recommendation to extend a PED. The ACC will authorize the adjustment and has the option to force induct the aircraft into SDLM regardless of extension recommendation.

12.1.5.7 ASPA Defect Definitions. The following discrepancy definitions are considered to be a subclass of the more general DEFECT definitions contained in Appendix A:

a. DEFECT, CRITICAL - A defect that constitutes a hazardous or unsafe conditions, or as determined by experience and judgment could conceivably become so, thus making the aircraft unsafe for flight or endangering operation personnel. The condition is such that corrective action is required prior to release of the aircraft for flight. Coordination with the PMA is required to establish restricted flight conditions and operating limitations which would permit safe flight of the aircraft to an FRC facility.

b. DEFECT, MAJOR - A defect that materially reduces the use of the unit or part for its intended purpose. Aircraft is safely flyable but requires major repair within a specified time frame.

c. DEFECT, MINOR - A defect that does not materially reduce the use of the unit or part for its intended purpose. Deferral of corrective action until the next D-level examination is not likely to impose an unequal economic penalty.

12.1.6 Automatic Test Equipment (ATE) and ATE Test Program Sets (TPS)

12.1.6.1 Introduction

12.1.6.1.1 ATE are required to support present and future complex aircraft weapon systems. The development of Navy organic capability to support these weapon systems includes the requirement to support the required ATE TPS. Functionally, the TPS computer program operates within an ATE system and is connected to a unit under test (UUT) in such a manner to isolate and detect faults within the UUT to its defective part(s). Such TPS support includes:

a. Management, generation, maintenance, analysis, correction, modification, updating, and replenishment of test programs and test program related documentation.

b. Establishment of organic support capability minimizes future costs while providing a vehicle for timely response to fleet requirements.

c. All ATE and ATE TPS used in common by I-level or D-level maintenance activities in support of designated airborne weapon systems, and all D-level only ATE and ATE TPSs funded and developed by COMNAVAIRSYSCOM.

12.1.6.1.2 The ISSC is the COMNAVAIRSYSCOM Technical and Certification Authority for designated ATE and ATE TPS. The ISSC has the responsibility and accountability to establish, monitor, certify, and approve technical products and processes in conformance to higher authority policy, requirements, architectures, and standards.

12.1.6.2 Automatic Test Equipment (ATE) Test Program Sets (TPS) Development

12.1.6.2.1 TPS Development is provided by COMNAVAIRSYSCOM. The TPSs provided by TPS Development are made up of hardware and software elements and all supporting documentation. The TPSs provide the fleet and FRCs the capability to maintain and repair complex aircraft weapon and avionic systems using ATE. COMNAVAIRSYSCOM furnishes organic TPS Development teams to provide fleet introductions and on site verifications of the TPSs.

12.1.6.2.2 Policy/Responsibility. Organic TPS Development Teams will be composed of ISSC professional scientists, engineers, logisticians, project managers and supervisors. These teams will be assigned by COMNAVAIRSYSCOM/PMAs.

12.1.6.2.3 Organic TPS Development Teams:

a. Design and develop TPSs for emerging aircraft weapon and avionics systems.

b. Design and develop TPSs to offload other legacy ATE TPSs to the Navy's latest ATE systems.

c. Design and develop test program system interfaces which include (but are not limited to) the following:

(1) Interconnecting devices.

(2) Load boxes.

(3) TPS ancillary equipment.

(4) Test adapters.

(5) Test fixtures.

(6) Holding fixtures.

(7) TPS accessory hardware.

d. Design and develop the test program software executed on the target ATE system.

e. Develop technical data packages and documentation for TPSs.

f. Develop and update TPSs to support new aircraft configurations of weapon/avionic systems.

g. Provide technical assistance for TPS design and development.

h. Provide fleet introduction/verification for new TPSs.

12.1.6.3 Automatic Test Equipment (ATE) Test Program Sets (TPS) In-Service Engineering (ISE)

Responsibilities and objectives are as follows:

a. Design corrections to ATE test programs via a Test Workaround Procedure or TD.

b. Develop new test programs or add new tests to existing test programs.

c. Update ATE TPS to maintain compatibility with modified ATE or airborne avionics.

d. Perform ATE test program software reprogramming, debugging, reproduction, distribution, and replenishment.

e. Prepare, sign, and distribute TDs for support software changes and kits for modifying test programs and related documentation.

12.1.6.4 Mobile Facility (MF)

12.1.6.4.1 COMNAVAIRSYSCOM is designated as the Technical and Certification Authority on MF used by the Navy and Marine Corps. The ISSC has the responsibility and accountability to establish, monitor, certify and approve technical products and processes in conformance to higher authority policy, requirements, architectures, and standards.

12.1.6.4.2 Responsibilities and objectives are as follows:

a. Responsible for providing engineering services per NAVAIR 13670.1.

b. Provide engineering services required to take "basic shell" mobile facility vans and modify designs to meet new customer requirements. Requirements are specified by the customer via a Facilities Requirements Document (FRD), formal written requirements letter, Table of Basic Allowance (TBA), or Weapons System Planning Document (WSPD).

c. Develop prototype designs for concept and convention for safe containers (CSC) testing (as required).

d. Maintain Configuration Control of Engineering Drawings for fielded MF configurations.

e. Ensure engineering designs and changes conform to CSC standards to ensure safe usage and transport of MF vans.

12.1.6.5 Automatic Test Equipment (ATE) Installation/Validation/Verification

12.1.6.5.1 Consolidated automated support system (CASS) and reconfigurable transportable (RT) CASS Installation/Validation/Verification support is provided by COMNAVAIRSYSCOM in the form of effective, reliable CASS and RTCASS testing and support to the naval aviation warfighter on all aircraft carriers and amphibious assault ships (CVNs, LHAs, and LHDs), Naval Air stations (NAS), and Marine Corps Air Stations (MCAS) per the requirements of PMA-260, COMNAVAIRSYSCOM, Patuxent River, MD.

12.1.6.5.2 COMNAVAIRSYSCOM responsibilities and objectives are as follows:

a. Perform Site Surveys to various NASs, MCASs, foreign military sales (FMS) sites, and private contractor facilities to verify that the site is ready to receive the ATE.

b. Perform station installations, removals and verifications. These tasks are performed on board carriers, in Marine MFs, and at naval bases CONUS and OCONUS.

c. Perform CASS station conversions to reconfigure stations to different configuration as needed by the fleet.

d. Coordinate shipping of ATE and ATE assets to effect required installations, reconfigurations and subsequent verifications.

e. Assemble installation kits to support installation and verification efforts at fleet and DOD engineering activities.

f. Provide inventory support, kitting, material restocking requirements, packaging, transportation, and receipt of material for CASS stations and all material handling equipment (MHE) for station installations.

g. Coordinate the scheduling of riggers to load and offload items from trucks and respond to emergent material requirements for offsite installation.

h. Maintain a station inventory for the West Coast and East Coast CASS storage facilities, identifying the CASS stations by type and serial number and showing transaction dates for receipts and transfers.

i. Perform technical assistance to the fleet to remedy, repair, assist with fleet station problems.

12.1.7 Joint Deficiency Reporting System (JDRS)

12.1.7.1 JDRS is a centralized Web enabled automated deficiency reporting information system used by COMNAVAIRSYSCOM, Air Force Systems Command, U.S. Coast Guard Command, and Defense Logistics Agency (DLA) that assists the warfighter and associated engineering, quality, and logistics support teams collect, report, investigate, and share deficiency data with the joint aeronautical community. COMNAVAIRSYSCOM uses JDRS to collect accurate critical data, perform timely and thorough investigations, facilitate communication, and share deficiency data with Navy and Marine Corps maintainers in support of NAMDRP, CIM, and P&E processes.

12.1.7.2 JDRS is used to report deficiencies concerning aircraft, systems, and equipment. The system provides notification to appropriate stakeholders and their support teams responsible for investigating and correcting the discrepancy, guides responses, compiles data, helps resolve problems, and serves as a historical resource to research prior occurrences. The goal is to resolve every safety deficiency promptly and to provide effective leading indicator metrics to prevent reoccurrence of safety, reliability, and maintainability issues.

a. Types of NAMDRP deficiency reports in the JDRS system include:

(1) CAT I Engineering Investigations (EI).

(2) CAT II Hazardous Material Reports (HMR).

(3) Product Quality Deficiency Reports (PQDR).

(4) Acceptance Inspection Discrepancy Reports (AIDR).

(5) Baseline Trouble Reports (BTR).

(6) Technical Publication Deficiency Reports (TPDR).

(7) Aircraft Delivery Deficiency Reports (ADDR).

b. Details of the reporting methods and processes for NAMDRP deficiencies are in paragraph 10.9.

c. The CIM module in JDRS is used to report and identify item criticality (critical safety item (CSI)/critical application item (CAI)). Details of the reporting methods and processes for CIM are in paragraph 12.1.12.

d. The P&E tool within JDRS is used to request D-level aircraft maintenance. Details of the reporting methods and processes for P&E requests are in paragraph 3.2.2.24.

12.1.8 Acquisition Logistics Support Plan (ALSP)

The ALSP is the process used to ensure all support elements are properly planned, acquired, and sustained for adequate support of weapon systems to maximize operational readiness. A well conducted ALSP causes support considerations to influence system design, ensures support requirements are related to design and to each other, ensures acquisition of required support, and provides required support to deployed systems at minimum cost to the government. The mechanism for integrating the individual integrated logistic support

(ILS) functional programs, such as maintenance planning, provisioning, personnel and training, SE, facilities, and technical publications into a total support system is an iterative process that continues over the life span of the acquisition or modification program. The Supportability Analysis Plan should be identified as input into the system engineering strategy. To ensure ILS is properly addressed, these processes should be evaluated during each milestone or operational phase by the ISSC personnel using the systems engineering process. The systems engineering and maintenance planning process identifies the initial logistics resource requirements within an ILS Program. Modifications or ECPs must also follow the—systems engineering/maintenance planning process to integrate additional ILS or modified support requirements into the Maintenance Plan. This process is a closed loop system which begins with early ILS planning, continuing within systems engineering, and does not end until disposal of the weapon system. The review of sustainment strategies comparing performance expectations as defined in performance agreements to actual performance results must be conducted on a continuing basis. Deficiencies must be continuously identified, monitored and addressed and the ALSP will be updated as necessary to meet system operating requirements.

12.1.9 System Safety Program

12.1.9.1 Purpose. The purpose of the System Safety Program is to identify, eliminate, or mitigate risks in the design of weapons systems to an acceptable level. This includes risks to hardware, software, and human systems interfaces and risks to the system, personnel and the environment.

12.1.9.2 Goal. The goal of this program is to ensure a system safety organization, supported by adequate resources, is in place and capable of effectively managing the System Safety Program.

12.1.9.3 Policy. DODINST 5000.02 requires program managers to establish a System Safety Program, regardless of ACAT category per the methodology in MIL-STD-882. The DODINST 5000.02 and SECNAVINST 5000.2 identify the risk acceptance authorities for System Safety Risks. COMNAVAIRSYSCOM (AIR-4.1.6) is the Technical Warrant Holder for the NAVAIR Risk Assessment and Acceptance process per NAVAIR SWP 4160-001.

12.1.9.4 The following apply to the System Safety Program and are defined in Appendix A:

a. System Safety.

b. System Safety Engineering.

c. System Safety Management.

d. Hazard. The Hazard Severity Definition levels are shown in Figure 12-4.

e. Hazard Control.

f. Hazard Probability. Use MIL-STD-882D, supplemented by the Hazard Risk Matrix example (Figure 12-5).

12.1.9.5 Responsibilities

12.1.9.5.1 ISSCs:

a. Review ISSC assigned projects and operations to determine the high priority projects that present the greatest cost mishaps, through EI files, incident and mishap reports, and PQDRs.

b. Conduct initial risk assessments of hazards identified as a screening process to determine if the EI is safety critical.

c. Maintain active liaison with COMNAVAIRSYSCOM (AIR-4.1.6) to communicate newly identified failure modes or hazards to equipment or personnel. Provide supporting documentation and data for the PFS to conduct the formal System Safety Risk Assessment (SSRA).

d. Ensure adequate funding is placed in the budget request to cover system safety requirements for ISSC assignments.

e. Gather, track, and trend safety data from OPNAVINST 3750.6, HAZREPs, EIs, PQDRs, and MIL-STD-882D reports.

12.1.9.5.2 COMNAVAIRSYSCOM (AIR-4.1.6) :

a. Conduct the COMNAVAIRSYSCOM System Safety Program per NAVAIRINST 5100.3, the approved System Safety Program Plan, and System Safety Management Plan.

b. Maintain active liaison with ISSC personnel so that newly discovered failure modes and hazards are properly characterized and assessed in terms of severity and frequency. Work closely with ISSC engineers to develop mitigation plans and recommendations to program management.

c. Develop the SSRA and ensure proper program level acquisition authority accepts the current risk and establishes mitigation plans to reduce the risk to an acceptable level.

12.1.10 Central Technical Publications Library (CTPL)

NOTE: Fleet Readiness Center Western Pacific (FRCWP) will manage CTPL per Chapter 7. All other D-level FRC activities will manage CTPL per this chapter.

12.1.10.1 The CTPL serves two important functions. It provides a central source of up-to-date aeronautical reference material and is a ready reference source for personnel training and individual improvement. To perform these functions, the Central Technical Publications Librarian must manage and control the distribution of technical publications for every T/M/S aircraft and related equipment in the organization's physical custody consistent with the maintenance level of responsibility involved. Retention of master copies of publications in the CTPL is optional if the same publications are held by one or more dispersed libraries.

12.1.10.2 Management of the CTPL includes determining which technical publications are needed to support the organization, controlling receipt and distribution, and ensuring all publications are current and in good condition. Internal control and distribution of this instruction is a Central Technical Publications Librarian’s responsibility.

12.1.10.3 NAVAIR 00-25-100 contains detailed information about establishing and operating a CTPL. It also describes the requirements, functions, and responsibilities of personnel assigned to maintain aeronautical technical publications.

12.1.11 Technical Authority, Certification, and Qualification

12.1.11.1 The COMNAVAIRSYSCOM (AIR-4.0) Chief Engineers at each ISSC are technical authority Deputy Warranting Officers for the support provided to their associated FRCs and FSTs.

12.2.11.2 The Chief Engineers:

a. Provide Safe for Flight requirements for FRC production and quality processes and FST one time flight recommendations.

b. Provide engineering and technical oversight, guidance, and assistance to Center for Naval Aviation and Technical Training (CENNAVAVNTECHTRA), COMFRC, and COMNAVAIRFOR in the training, qualification and certification of fleet and civilian personnel to:

(1) Develop and issue engineering requirements for special skill certifications for maintenance technologies, such as NDI, welding and brazing, and composite repair.

(2) Provide products and services in the establishment of training materials and methods, such as course content and testing and examination procedures, as requested by COMNAVAIRFOR, CENNAVAVNTECHTRA, and COMFRC.

c. Ensure that technology improvements within maintenance technologies are fully integrated within existing training, qualification and certification programs. Assist COMNAVAIRFOR, CENNAVAVN-TECHTRAU, and COMFRC in establishing new training programs (when requested).

d. Perform specialized testing and evaluation of proficiency test specimens as part of qualification and certification programs (when required).

e. Perform qualification or certification of maintenance personnel as required or requested by COMNAVAIRFOR and COMFRC.

12.1.11.3 Technology Transition. Provide engineering selection, evaluation and insertion of new maintenance technologies for COMNAVAIRFOR and COMFRC. Act to transition S&T and RDT&E technologies into maintenance operations performed by COMNAVAIRFOR and COMFRC including:

a. Select and identify advanced technologies necessary to provide improved ISE support of aircraft and engines and related systems.

b. Select and identify advanced technologies to affect new repair and maintenance capabilities, enhance production efficiency, reduce HAZMAT generation, or meet environmental or pollution prevention goals and requirements.

12.1.12 Critical Item Management (CIM)

12.1.12.1 FSTs are designated as the Engineering Support Activity (ESA) for each aircraft platform for which they are defined as the cognizant authority. The term ESA is synonymous with Design Control Activity. The ESA is responsible for CIM for their platform. CIM denotes the sourcing and manufacturing of naval aviation CAIs and CSIs, collectively referred to herein as CIs. CIs are items the failure of which has been determined to result in MIL-STD-882 severity Category I or Category II consequences.

12.1.12.2 The authority to work technical issues related to CIs is categorized by technical discipline and is delegated by the applicable COMNAVAIRSYSCOM engineering competency. Engineers within an ESA that have authority to officially sign off on completed work related to CIs within their purview are designated as basic design engineers (BDE). BDE tasking includes but is not limited to:

a. Item criticality determinations.

b. Development and approval of manufacturing plans for local one-time manufacture of CIs.

c. Disposition of DLA Form 339, Request for Engineering Support tasks.

d. Participation in the resolution of CIM policy issues related to the BDEs platform and area of competence.

e. Participation in the resolution of conflicting initial capabilities documents (ICD) for items that are used on multiple platforms.

f. Participation in the resolution of issues related to alternate sources for CIs.

g. Participation in site surveys for vendors applying to become alternate sources of CIs.

12.1.12.3 Each FRC has a Critical Items Management Coordinator (CIMCO). The CIMCO duties fall into the following categories:

a. CIM Oversight. The CIMCO is the local site process owner and functions as a liaison for COMNAVAIRSYSCOM (AIR-4.1), NAVSUP WSS, and DLA for emergency or problem issues with specific vendors. The CIMCO is a member of the Navy CIM Policy Team, and manages CIM funding and metrics for their FRC. The CIMCO maintains the CIM database inputs for their FRC.

b. Engineering Request Coordination. The CIMCO or their delegated representative coordinates DLA/NAVSUP WSS engineering requests to the ESAs at their FRC. This includes tracking and assigning tasks to the appropriate engineering teams, tracking and recording all engineering responses, and expediting turn-around times, questions, etc.

c. Source Approval Request (SAR) Package Review Coordination. SAR packages are formal proposals from vendors seeking to become alternate sources for items procured by the Government. The CIMCO receives all SAR packages from DLA and NAVSUP WSS that are sent to ESAs at their site. The CIMCO then verifies item criticality for the SAR packages received and then routes the SAR packages to the appropriate engineering team. Once completed, the CIMCO closes out the SAR packages per the SAR review process.

d. First Article Test and Production Lot Test Process. Each FRC performs First Article Testing and Production Lot Testing for items procured from alternate sources. Testing is performed as required by the contract, and typically includes some combination of dimensional validation, material property validation, and form/fit/function testing. Upon completion of testing, the FRC notifies the customer (NAVSUP WSS or DLA) of test results (pass, fail, or conditional acceptance).

e. Item Criticality Database System. The Navy has developed and implemented an ICD module into the JDRS (http://www.jdrs.mil/home.html). JDRS is the official database for item criticality determinations. In addition to an item's criticality, the database also contains information on an item's critical characteristics, its national stock number (if any), and approved sources.

12.1.13 Electronic Continual Analysis and Metrics (eCAM)

D-level FRCs must use the eCAM system for the following:

a. Document nonconfomrances, investigations, corrective and preventive actions, and root cause analysis.

b. Conduct quality, safety, environmental, and calibration out of tolerance investigations.

12.2 Material Engineering Disposition Program (MEDP)

12.2.1 The MEDP is used to systematically evaluate whether material that does not conform to specification can be reclaimed and used "as is", reworked, or repaired without compromising the end product's quality.

NOTE: Material disposition is performed by the cognizant Engineering Group.

12.2.2 The MEDP applies to all aeronautical material, including SE, when authorized repair has not been established. The MEDP may apply to material determined to be in critical supply. The MEDP does not apply to deficient material reported per paragraph 10.9.

12.2.3 D-level caused discrepancies that affect the conformity of material will be annotated as an ER/AR in eCAM. Engineering will provide Temporary Engineering Instructions (TEIs) for the disposition of the material.

12.2.4 When material departs from conformance specifications or procedural requirements and cannot be processed normally, the material will be identified, segregated, and stored in a designated MEDP holding area. If the item is too large to store in the designated area, it will be appropriately tagged.

12.2.5 The Depot Level Quality Program (DLQP) must include a control system for retaining MEDP data on file for a minimum of 1 year.

12.2.6 The MEDP Request for Engineering Information (REI) form must be prepared prior to submission of the material to the MEDP.

12.2.7 MEDP action must commence within 10 workdays of discovery. The ISSC will decide if the material will be used "as is", reworked, or scrapped. Decisions regarding acceptance of recurring discrepancies must consider corrective action, number of items involved, and frequency of recurrences. If material can be made acceptable by rework or repair, it will be reworked or repaired by specific procedures designated or provided by the MEDP and verified by Quality Assurance.

12.2.8 Material identified for scrap must be mutilated to prevent reuse, intermingling with conforming material, or future reclamation. D-level activities must develop disposition procedures.

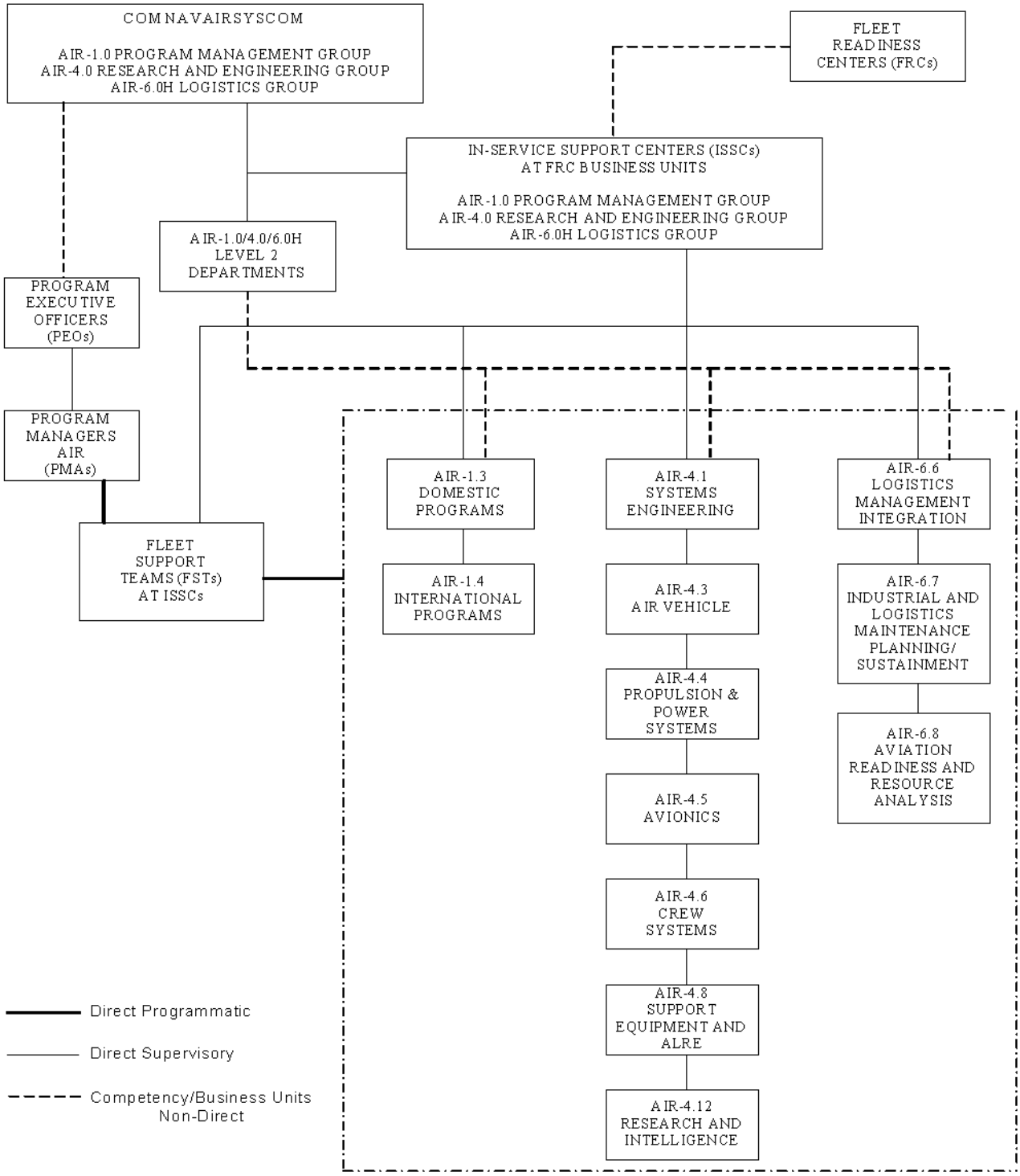

Figure 12-1: In-Service Support Center Relationship

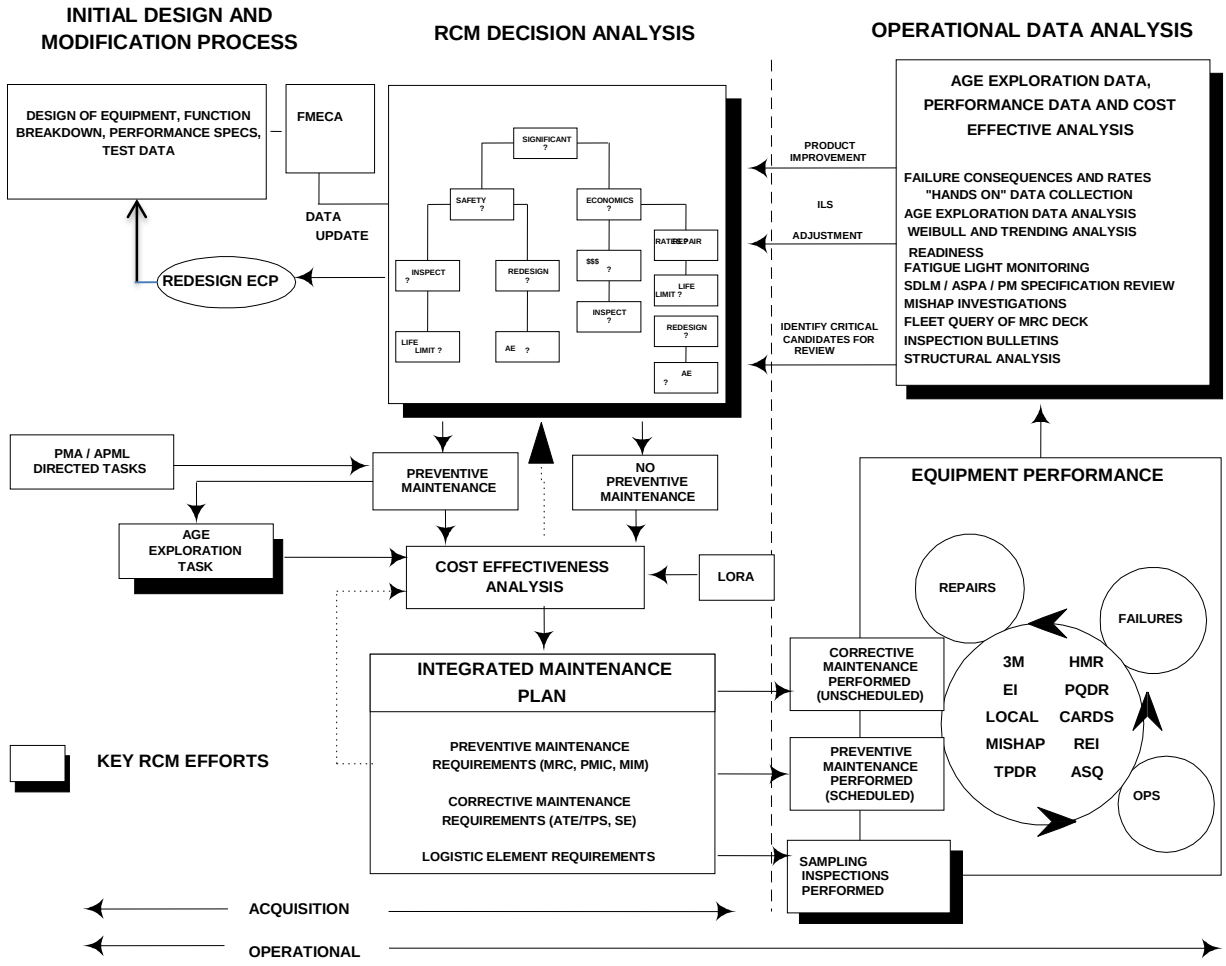

Figure 12-2: R&M/RCM Based Sustained Maintenance Planning Process

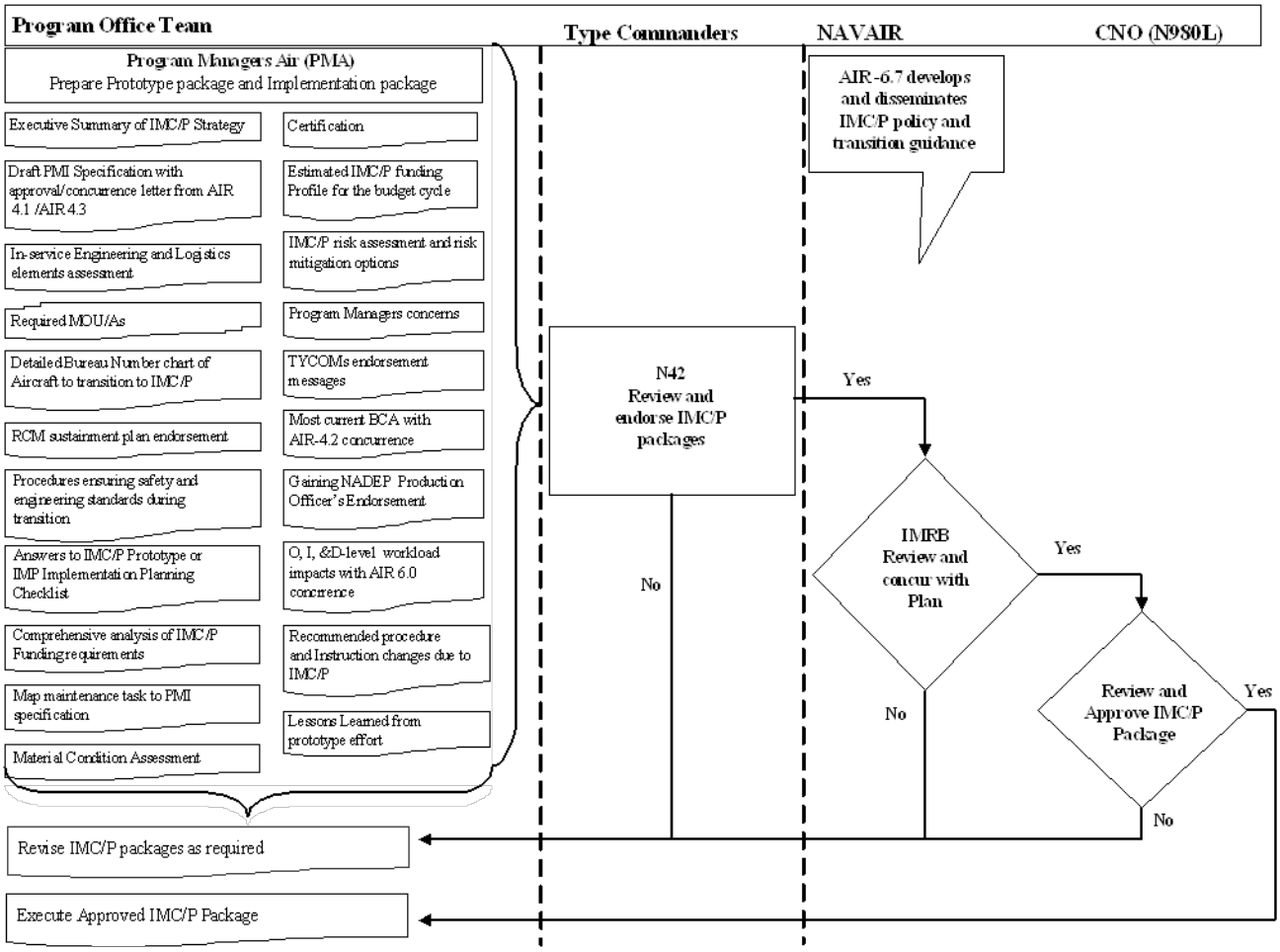

Figure 12-3: IMC/P Planning and Approval Process

Description	Category	Mishap Definition
CATASTROPHIC	I	Death or system loss.
CRITICAL	II	Severe injury, severe occupational illness, or major system damage.
MARGINAL	III	Minor injury, minor occupational illness, or minor system damage.
NEGLIGIBLE	IV	Less than minor injury, occupational illness, or system damage

Figure 12-4: Hazard Severity Definitions

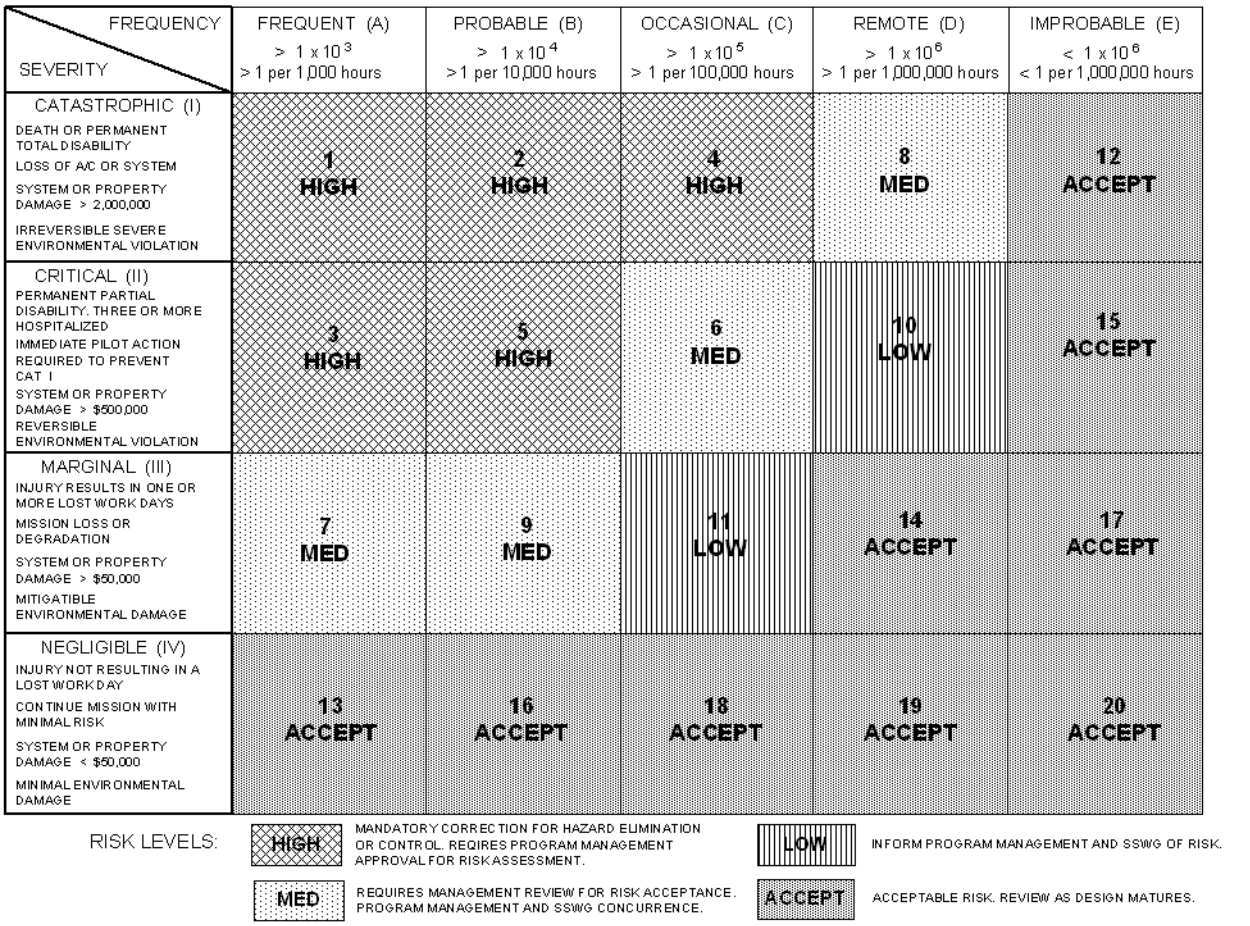

Figure 12-5: Hazard Risk Matrix Example