



## DEFENSE INFORMATION SYSTEMS AGENCY

P. O. BOX 4502  
ARLINGTON, VIRGINIA 22204-4502

DISA INSTRUCTION 270-50-9\*

23 Apr 2010

### POLICIES

#### Life-Cycle Sustainment Planning

1. **Purpose.** This Instruction prescribes policy and assigns responsibilities for life-cycle sustainment planning. It also describes life-cycle sustainment activities for acquisition category (ACAT) level programs and projects.
2. **Applicability.** This Instruction applies to Defense Information Systems Agency (DISA) activities.
3. **Authority.** This Instruction is published in accordance with the authority contained in DoD Directive 5000.01, The Defense Acquisition System, 12 May 2003; DoD Instruction 5000.02, Operation of the Defense Acquisition System, 8 December 2008; DoD Directive 4630.05, Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS), 5 May 2004; DoD Instruction 8100.3, Department of Defense (DoD) Voice Networks, 16 January 2004; DoD Instruction 8520.2, Public Key Infrastructure (PKI) and Public Key (PK) Enabling, 1 April 2004; DoD Instruction 8523.01, Communications Security (COMSEC), 22 April 2008; CJCS Instruction 3170.01G, Joint Capabilities Integration and Development System, 1 March 2009; CJCS Instruction 6212.01E, Interoperability and Supportability of Information Technology and National Security Systems, 15 December 2008; and DoD Directive 5105.19, Defense Information Systems Agency (DISA), 25 July 2006.
4. **Definitions.** Definitions are provided in the [enclosure](#).
5. **Policy.**
  - 5.1 DISA ACAT level programs shall be structured in a tailored, responsive, and innovative manner. Life-cycle sustainment planning shall be applied from the Materiel Solution Analysis Phase to disposal for ACAT level programs, as directed in DISAI 610-225-2, Acquisition Oversight and Management. The planning shall be flexible and performance-oriented; reflect an evolutionary approach; and accommodate modifications, upgrades, and reprocurement. Projects shall be structured

in a tailored, responsive, and innovative manner. Life-cycle sustainment planning shall be tailored and applied from initiation to disposal for projects. The planning shall be flexible and performance-oriented; reflect an evolutionary approach; and accommodate modifications, upgrades, and reprocurement. (Component Acquisition Executive (CAE) Guideline Number 004 on Projects provides detailed procedures on managing projects.)

5.2 The planning for the Operations and Support Phase shall begin prior to program initiation and shall be documented in the Life-Cycle Sustainment Plan (LCSP). Life-cycle sustainment planning shall mature throughout the Technology Development Phase. An LCSP shall be prepared for Milestone B. The LCSP shall be a part of the program's Acquisition Strategy and integrated with other key program planning documents. The LCSP shall be updated and executed during the Production and Deployment and the Operations and Support Phases. For projects, life-cycle sustainment planning shall be applied from initiation through the successive phases of Planning, Acquisition, Testing and Deployment, and Sustainment and shall be properly documented.

5.3 If an ACAT program capability is going to be delivered to the warfighter by an evolutionary strategy, the initial capability represents only partial fulfillment of the overall capability described in the Initial Capabilities Document, and successive technology development efforts shall continue until all capabilities have been achieved. The LCSP and sustainment cost shall evolve commensurate with the evolution of the capability. In an evolutionary acquisition, the identification and development of the technologies necessary for follow-on increments shall continue in parallel with the acquisition of preceding increments, allowing the mature technologies to more rapidly proceed into the Engineering and Manufacturing Development Phase. Each increment of an evolutionary acquisition program that includes a Milestone A shall have a Milestone Decision Authority (MDA)-approved Technology Development Strategy.

5.4 For ACAT programs, the LCSP shall be tailored to meet program needs, documenting the overall support concept and a performance-based sustainment strategy. For projects, the LCSP or equivalent shall evolve and be updated at key decision points with life-cycle sustainment cost estimates, evolving plans for the transition to sustainment, and guidance for the disposal of the capability when no longer needed.

## **6. Responsibilities.**

**6.1 Component Acquisition Executive (CAE).** The CAE will:

6.1.1 Provide oversight and support of life-cycle sustainment planning and implementation for ACAT programs and projects.

6.1.2 Ensure periodic reviews are scheduled that incorporate life-cycle sustainment planning for the purpose of portfolio management and support for MDA and Decision Authority (DA) acquisition life-cycle oversight.

6.1.3 Ensure life-cycle sustainment and logistics planning is conducted as early as possible in the life cycle for all programs and assessed to support progression to deployment and sustainment.

6.1.4 Approve life-cycle sustainment planning and implementation during milestone reviews for ACAT IAC and ACAT III programs for which the CAE is the MDA.

6.1.5 Publish guidelines and procedural level guides regarding sustainment and life-cycle support and provide logistics and sustainment tools and templates to assist the Program Manager (PM) and Project Leader (PL).

6.1.6 Provide viable, value added, content focused Independent Logistics Assessment (ILA) and Supportability Assessment (SA) processes and consider the use of an ILA or SA to assess the sustainment posture of an ACAT program or a project throughout the acquisition life cycle.

6.1.7 Provide appropriate organizational logistics representation to various acquisition Integrated Product Teams (IPTs) and provide experts in the functional area of life-cycle sustainment planning and implementation for preparation of program documentation (e.g. LCSP).

6.1.8 Ensure all acquisition personnel including senior leadership involved in logistics planning, evaluation, and implementation are provided acquisition life-cycle training.

6.1.9 Provide management and oversight to track the accession, training, education, career development, and enhancement of the logistics workforce.

6.1.10 Review acquisition and procurement documentation for logistics and sustainment compliance (e.g., schedules, requests for proposals, test plans, etc.).

6.1.11 Ensure program acquisition documentation (e.g., Acquisition Strategy, Acquisition Plan, etc.) complies with sustainability requirements (e.g. sustainment, Reliability Availability, and Maintainability (RAM), Item Unique Identification (IUID), Performance-Based Logistics (PBL), and property accountability policies), as appropriate.

6.1.12 Develop appropriate metrics to assess the sustainment posture of the capability throughout the acquisition life cycle and report the status in appropriate venues.

6.1.13 Assess life-cycle sustainment documentation and ensure the documentation reflects the assessment and is updated throughout the life cycle.

**6.2 Program Executive Officer (PEO).** A PEO will:

6.2.1 Implement life-cycle sustainment and logistics oversight and management processes that are in accordance with DoD, DISA, and CAE policies and guidance.

6.2.2 Provide oversight and support of life-cycle sustainment planning and implementation for assigned ACAT programs and projects.

6.2.3 Ensure periodic reviews are scheduled that incorporate life-cycle sustainment planning for the purpose of portfolio management and support for MDA and DA management oversight.

6.2.4 Approve life-cycle sustainment planning and implementation during milestone reviews for ACAT programs and projects for which the PEO has been designated the DA.

6.2.5 Consider the use of an ILA or SA to assess the sustainment posture of an ACAT program or a project throughout the acquisition life cycle.

6.2.6 Ensure life-cycle sustainment and logistics planning is conducted as early as possible in the life cycle for all programs and assessed to support progression to deployment and sustainment.

6.2.7 Ensure program acquisition documentation (e.g., Acquisition Strategy, Acquisition Plan, etc.) complies with sustainability requirements (e.g. sustainment, RAM, IUID, PBL, and property accountability policies), as appropriate.

6.2.8 Develop appropriate metrics to assess the sustainment posture of the capability throughout the acquisition life cycle and report the status in appropriate venues.

6.2.9 Assess life-cycle sustainment documentation and ensure the documentation reflects the assessment and is updated throughout the life cycle.

**6.3 Senior Decision Authority (SDA).** An SDA will:

6.3.1 Implement supportability and sustainment oversight management processes that are in accordance with DoD, DISA, and CAE policies and guidance.

6.3.2 Provide oversight and support of life-cycle sustainment planning and implementation for assigned projects.

6.3.3 Ensure periodic reviews are scheduled that incorporate life-cycle logistics planning for the purpose of portfolio management and support for decisions regarding projects.

6.3.4 Approve supportability and sustainment planning and implementation during decision reviews for select projects for which the SDA has been designated the DA.

6.3.5 Consider the use of an SA to assess the sustainment posture of a project throughout the acquisition life cycle.

6.3.6 Ensure life-cycle sustainment and logistics planning is conducted as early as possible in the life cycle for a project and assessed to support progression to deployment and sustainment.

6.3.7 Ensure program acquisition documentation (e.g. Acquisition Strategy, Acquisition Plan, etc.) complies with sustainability requirements (e.g. sustainment, RAM, IUID, PBL, and property accountability policies), as appropriate.

6.3.8 Develop appropriate metrics to assess the sustainment posture of the capability throughout the acquisition life cycle and report the status in appropriate venues.

6.3.9 Assess life-cycle sustainment documentation and ensure the documentation reflects the assessment and is updated throughout the life cycle.

**6.4 Portfolio Manager, Program Manager (PM), Project Leader (PL), and Service Manager (SM).** A Portfolio Manager, PM, PL, and SM for an ACAT program or a project will:

- 6.4.1 Initiate life-cycle sustainment planning as early as possible for all programs, address the life-cycle sustainment planning considerations up front, and implement the plan and deliver an effectively sustained capability.
- 6.4.2 Design a maintenance program to minimize total life-cycle cost while optimizing operational readiness and sustainability objectives.
- 6.4.3 Employ effective PBL planning, development, implementation, and management.
- 6.4.4 Develop appropriate documentation and ensure it is updated throughout the acquisition life-cycle.
- 6.4.5 Demonstrate adequate supportability and sustainability planning for an ACAT program or a project to the MDA or DA at key decision points.
- 6.4.6 Collaborate with the user to document performance and sustainment requirements in performance agreements specifying objective outcomes, measures, resource commitments, and stakeholder responsibilities.
- 6.4.7 Consider the use of an ILA for an ACAT program or an SA for a project to assess the sustainment posture of a program throughout the acquisition life cycle.
- 6.4.8 Develop a viable RAM strategy that includes a reliability growth program as part of design and development, includes RAM requirements for an ACAT program in the Systems Engineering Plan (SEP) and LCSP, includes RAM requirements for a project in the LCSP or equivalent, and ensures RAM is adequately addressed in acquisition strategies and contracts.
- 6.4.9 Plan for and implement IUID to identify and track applicable major end items, configuration-controlled items, and government-furnished property.
- 6.4.10 Ensure program acquisition documentation (e.g. Acquisition Strategy, Acquisition Plan, etc.) complies with sustainability requirements (e.g., sustainment, RAM, IUID, PBL, and property accountability policies), as appropriate.
- 6.4.11 Develop appropriate metrics to assess the sustainment posture of the capability throughout the acquisition life cycle and report the status in appropriate venues.

6.4.12 Assess life-cycle sustainment documentation and ensure the documentation reflects the assessment and is updated throughout the life cycle.

**6.5 Chief Financial Executive/Comptroller (CFE); Chief Technical Officer (CTO); Chief Information Officer (CIO); Director, Strategic Planning and Information (SPI); Director for Global Information Grid (GIG) Operations (GO); General Counsel (GC); and Director, Small Business Programs (SBP).** These individuals will provide functional area support for the execution of policy within this Instruction.

**6.6 Principal Director for Global Information Grid (GIG) Enterprise Services Engineering (GE).** The Principal Director, GE, will ensure RAM is integrated in system engineering processes and documented in the SEP.

**6.7 Director for Procurement (PLD)/Chief, Defense Information Technology Contracting Organization (DITCO).** The Director, PLD/Chief, DITCO, will:

6.7.1 Review acquisition packages to determine if IUID requirements, as identified by the requirements office, are in the solicitation.

6.7.2 Review statements of work, statement of objectives, and performance work statements to determine if the requirements office addresses supportability, life-cycle sustainment planning, and other logistical requirements.

6.7.3 Consider the appropriate use of contract incentives to achieve the RAM objectives of the requirements office.

**6.8 Director for Manpower, Personnel, and Security (MPS).** The Director, MPS, will:

6.8.1 Ensure compliance with IUID requirements.

6.8.2 Oversee property operations to include accountability and ensure accountability measures are developed and maintained.

**6.9 Chief Information Assurance Executive (CIAE).** The CIAE will:

6.9.1 Assist the PMs and PLs in addressing the information assurance logistics support elements up front and early for ACAT projects or programs in development or sustainment planning.

6.9.2 Provide appropriate organizational information assurance representation and support to various acquisition IPTs.

6.9.3 Provide appropriate organizational information assurance supportability and sustainment planning and implementation support for ACAT programs during key milestone reviews.

**6.10 Director for Test and Evaluation Management Center (TEMC).** The Director, TEMC, will conduct RAM improvement studies and assist in developing RAM metrics.

**6.11 Commander, Joint Interoperability and Test Command (JITC).** The Commander, JITC, while serving as the Operational Test Agency for a program, will assess and report on RAM objectives, key performance parameters (KPPs), and key system attributes (KSAs) described in the LCSP and SEP during operational test events.

**7. Life-Cycle Sustainment Activities for Programs and Projects.** The following activities shall be considered and tailored as appropriate for an ACAT program and a project.

7.1 Life-cycle sustainment planning shall include the considerations of sustaining engineering; supply support; maintenance planning; data management; packaging, handling, storage, transportation; technical data; manpower and personnel; training and training support; configuration management; human systems integration; environment, interoperability, safety, and occupational health; support and test equipment; facilities; computer resources support; protection of critical program information and antitamper provisions; supportability; and property accountability. (Interoperability considerations shall conform to guidance in DISAI 300-130-1, Interoperability and Supportability (IS) Assessment of Information Technology (IT) and National Security Systems (NSS) Documents.)

7.2 Life-cycle costs for sustainment shall be developed in the Materiel Solution Analysis Phase and updated throughout the acquisition life cycle. (The DISA Cost Analysis Manual is the source document for cost estimating guidance.)

7.3 PBL planning, development, implementation, and management shall be employed to provide the best strategic approach for delivering required life-cycle readiness, reliability, and reduced ownership costs. Sources of support may be organic, commercial, or a combination with the primary focus of optimizing customer support.

7.4 A robust systems engineering methodology shall be applied to produce an effectively sustained system. Systems and software engineering shall be embedded in all programs and projects; performed across the entire acquisition life cycle; and conducted in accordance with the DISA Systems Engineering Process.

7.5 A viable RAM strategy shall be formulated that includes a reliability growth program as an integral part of design and development. RAM shall be integrated within systems engineering processes; documented in the ACAT program's SEP and LCSP; and assessed during technical reviews, test and evaluation, and Program Support Reviews. RAM objectives shall address materiel availability, KPPs, materiel reliability, ownership cost, and KSAs and shall be included as design parameters throughout the acquisition process. If a capability requires performing design and development activities, a viable RAM strategy shall be captured in appropriate documentation. If the capability is comprised of commercial off-the-shelf components, the RAM of the components is to be reflected in appropriate documentation and the effects of the RAM at the systems level are also to be addressed. (Guidance on RAM is provided in subparagraph 4.4.15, chapter 4, of the Defense Acquisition Guidebook.)

7.6 IUID shall be used to enhance life-cycle management of assets and sustainment and to provide more accurate asset valuation. IUID planning and implementation shall be documented in appropriate documentation.

7.7 Life-cycle sustainment planning shall be considered during each acquisition phase. During each phase, the elements in subparagraph 7.1 shall be considered and assessed. Life-cycle sustainment cost estimates shall be developed following program or project initiation and updated at each acquisition phase.

7.7.1 During the Materiel Solution Analysis Phase, the maintenance environment, functional characteristics, and maintenance enablers shall also be considered. Life-cycle sustainment cost estimates shall be developed to ensure initial supportability considerations are being identified and evaluated.

7.7.2 During the Technology Development Phase, maintenance capabilities, preliminary manpower and personnel requirements and constraints, operational concepts, reliability objectives, and sustainment shall also be considered. Life-cycle sustainment of proposed technologies shall be planned. Critical program information shall be identified and shall be used in preparing the Program Protection Plan.

7.7.3 During the Engineering and Manufacturing Development Phase, technology maturity (including software), approved requirements, full funding for sustainment, and operational supportability with particular attention to minimizing the logistics footprint, shall also be considered.

7.7.4 During the Production and Deployment Phase, the LCSP will be approved and finalized at Full Operational Capability for transition to sustainment.

7.7.5 During the Operations and Support Phase, guidance in the LCSP to allow for a system to be effectively utilized and sustained and guidance in the LCSP which will be used to effectively demilitarize and dispose of the system when it is no longer required shall be considered. (Guidance on developing the LCSP for each acquisition phase is provided in subparagraph 5.1.2.2, chapter 5, of the Defense Acquisition Guidebook.

7.8 An ILA process shall be available to assess an ACAT program's sustainment posture throughout the acquisition life-cycle. An SA process shall be available to assess the sustainment posture of a project throughout the acquisition life cycle.

FOR THE DIRECTOR:

  
JOSEPH A. BRENDLER  
Colonel, USA  
Chief of Staff

SUMMARY OF SIGNIFICANT CHANGES. This Instruction has undergone a complete revision and the reader is encouraged to review in its entirety.

---

\*This Instruction cancels DISAI 270-50-9, 12 September 1995.  
OPR: CAE  
DISTRIBUTION: Y

---

**Return to:**

[Top of Document](#)  
[DISA Publications Listing](#)  
[DISA Home Page](#)

---

*pubs@ncr.disa.mil* - Last change: 14 April 2010

---

## DEFINITIONS

**Acquisition.** The planning, design, development, testing, contracting, production or construction, introduction, acquisition logistics support, modification, and acceptance or disposal of systems, capabilities, equipment, facilities, supplies, or services that are intended for use or support of Agency missions.

**Acquisition Category (ACAT).** Program categories established to facilitate decentralized decisionmaking, execution, and compliance with statutorily imposed requirements. The categories determine the level of review, decision authority, and applicable procedures.

**Decision Authority (DA).** The individual with review and approval responsibility.

**Evolutionary Approach.** The preferred DoD approach that delivers capability in increments, recognizing, up front, the need for future capability increments. For the purposes of this Instruction, an evolutionary approach, evolutionary acquisition, and evolutionary strategy may be used interchangeably.

**Independent Logistics Assessment (ILA).** A tool to facilitate a program's overall life-cycle sustainment assessment by identifying logistics element shortfalls with next-step solutions.

**Life-Cycle Sustainment Plan (LCSP).** An evolutionary document for ACAT programs that is begun during the Material Solution Analysis Phase as a strategic framework for obtaining optimal sustainment at minimal life-cycle cost. An LCSP evolves into an execution plan for how sustainment is applied, measured, managed, assessed, and reported after system fielding. By Milestone C, it should contain details on how the program is fielding integrated logistics elements to meet readiness targets, sustaining system performance capability threshold criteria, mitigating operating and support costs, reducing the logistics footprint, and complying with environmental and other logistics related regulations.

**Milestone Decision Authority (MDA).** The designated individual with overall responsibility for a program. The MDA shall have

authority to approve entry of an acquisition program into the next phase of the acquisition process and shall be accountable for cost, schedule, and performance reporting to higher authority, including Congressional reporting.

**Portfolio Manager.** A manager of a portfolio of selected groupings of information technology investments (e.g. projects) that provide mission capability. (This is a nonstandard term applicable to DISA.)

**Program.** A directed effort that provides a new, improved, or continuing material, weapon, or information system or service capability in response to an approved need.

**Program Manager (PM).** The designated individual with responsibility for and authority to accomplish program objectives for development, production, and sustainment (while in the development phase) to meet the user's operational needs. The PM shall be accountable for credible cost, schedule, and performance reporting to the Milestone Decision Authority (MDA).

**Project.** A planned undertaking, independent of or part of a program, having a finite beginning and ending that involves definition, development, production, and logistics support of an information technology system or systems. A project may be a technology insertion initiative, an internal process improvement, a technology demonstration, or a stand-alone effort.

**Project Leader (PL).** The individual responsible for managing a project to include accountability for capability execution and meeting the needs of the customer in terms of planning and rapidly delivering information technology (IT) capabilities. A PL shall have the acquisition skills and experience consistent with the size, complexity, scope, and risk of the project.

**Supportability Assessment (SA).** An SA is a tool to facilitate an overall life-cycle sustainment assessment for a project by identifying logistics element shortfalls with next-step solutions.

**Sustainment.** Sustainment involves the supportability of fielded systems and their subsequent life-cycle product support from initial procurement to supply chain management (including maintenance) to reutilization and disposal. Sustainment begins when any portion of the production quantity has been fielded for operational use. Sustainment includes assessment, execution and oversight of performance-based logistics initiatives,

including management of performance agreements with force and support providers; oversight of implementation of support systems integration strategies; coordination of logistics information technology and other enterprise integration efforts; implementation of logistics footprint reduction strategies; coordination of mission area integration; identification of technology insertion opportunities; identification of operations; and support cost reduction opportunities and monitoring of key support metrics.