Army Regulation 700-127

Logistics

Integrated Logistics Support

Headquarters
Department of the Army
Washington, DC
10 November 1999

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Effective 10 December 1999

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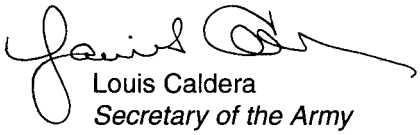

Louis Caldera
Secretary of the Army

History. This printing publishes a revision of this publication. Because the publication has been extensively revised, the changed portions have not been highlighted.

Summary. This regulation on integrated logistic support implements DOD Directive 5000.1 and DOD 5000.2-R. This regulation has been revised to provide improved integrated logistics support policies and procedures.

Applicability. This regulation applies to the Active Army, the Army National Guard, and the U.S. Army Reserve.

Proponent and exception authority. The proponent of this regulation is the Deputy Chief of Staff for Logistics (DCSLOG). The proponent has the authority to approve exceptions to this regulation that are consistent with controlling law and regulation. The DCSLOG may delegate the approval authority, in writing, to a civilian chief with the proponent agency in the grade of colonel or the civilian equivalent.

Army management control process. This regulation contains management control provisions in accordance with AR 11-2 and identifies key management controls that must be evaluated.

Supplementation. Supplementation of this regulation and establishment of command and local forms are prohibited without prior approval from HQDA (DALO-SMR), Washington, DC 20310-0547.

Suggested improvements. Users are invited to send comments and suggested improvements on DA Form 2028 (recommended Changes to Publication and Blank Forms) directly to Department of the Army (DALO-SMR), 500 Army Pentagon, Washington, DC 20310-0547.

Distribution. This publication is available in electronic media only and is intended for command levels D and E for Active Army, Army National Guard and U.S. Army Reserve.

*****This Army regulation supersedes AR 700-127, 17 July 1990.

Table of Contents

Summary of Change

Army Regulation 700-127
Integrated Logistics Support

This revision—

- Eliminates Acquisition Management Milestone System (chap 2)
- Eliminates DA request for mandatory integrated logistics support (ILS) review to as-required basis only (para 2-1)
- Adds responsibilities where Deputy Chief of Staff for Logistics (DCSLOG) is independent logistician (para 2-5)
- Changes ILS plan to supportability strategy (para 3-2)
- Eliminates integrated support plans (para 3-11)
- Changes ILS management team to supportability integrated product team (IPT) (para 3-18)
- Eliminates ILS Lessons Learned (para 3-20)
- Eliminates fielded systems review (para 3-23)
- Revises policy for contractor support (para 4-1)

Chapter 1
General

1-1. Purpose
This regulation prescribes Department of the Army (DA) policies and assigns responsibilities for the management of acquisition logistics (ACQ LOG) as authorized by Department of Defense Directive (DOD) 5000.1 and DOD Regulation 5000.2. Integrated logistics support (ILS) is the process used by the Army to implement these mandatory ACQ LOG procedures and includes all elements of planning, developing, acquiring, and sustaining Army materiel throughout its life cycle.

1-2. References
Required and related publications and prescribed and referenced forms are listed in appendix A.

1-3. Explanation of abbreviations and terms
Abbreviations and special terms used in this regulation are explained in the glossary.

1-4. Application of the ILS process
The ILS process applies to all materiel systems procured under the provisions of AR 70-1, including associated software procured or modified for use by Army units.

1-5. ILS vision
A lean (streamlined, proactive), agile (flexible, tailorable), and responsive (right product/service, on-time) process to provide the best, most affordable (lowest life-cycle cost (LCC)) logistic support, power projection, and sustainment (high readiness) of the soldier, all Army systems, and equipment well into the 21st century.

1-6. ILS management goals and objectives
a. The ILS program objectives will be established with an overall objective of reducing total ownership cost (TOC) within the mission area. The specific goal/objective of the ILS program is to introduce and sustain fully supportable materiel systems in current and projected environments that meet established operational and system readiness objectives (SRO) at minimum LCC. Integrated logistics support is an inherent part of the system engineering process. It includes efforts to design, introduce, and sustain materiel systems that conform to the capabilities and limitations of military and civilian personnel who operate and maintain those systems. This also includes improving logistics standardization and interoperability (S&I) of materiel within DA, other Services, and Allied Nations.

b. The ILS is defined as a unified and iterative approach to the management and technical activities needed to—

(1) Influence operational and materiel requirements, system specifications, and ultimate design or selection (in the case of commercial and NDI). This includes minimizing environmental impact and complying with environmental regulations.

(2) Define the support requirements best related to system design and to each other.

(3) Develop and acquire the required support.

(4) Provide required operational phase support for best value.

(5) Seek readiness and LCC improvements in the materiel system and support systems throughout the operational life-cycle.

1-7. Elements of ILS

a. The ILS is the management process to facilitate development and integration of the 10 individual logistic support elements to acquire, field, and support Army systems. The ILS elements are—

(1) Maintenance planning.

(2) Manpower and personnel.

(3) Supply support.

(4) Equipment support.

(5) Technical data.

(6) Training and training support.

(7) Computer resources support.

(8) Facilities.

(9) Packaging, handling, storage, and transportation.

(10) Design interface.

b. All elements of ILS must be developed in coordination with the system engineering effort and with each other. Tradeoffs may be required between elements in order to acquire a system that is affordable (lowest LCC), operable, supportable, sustainable, transportable, and environmentally sound within the resources available. Elements of ILS are defined and discussed in appendix B.

1-8. Acquisition tailoring

a. All programs, including highly sensitive classified, cryptologic, and intelligence programs, shall accomplish certain core activities as described in DOD 5000.1 and DOD 5000.2. These activities will be tailored to minimize the time it takes to satisfy an identified need consistent with common sense and sound business practice. Tailoring will give full consideration to applicable statutes. The number of phases and decision points will be tailored to meet the specific needs of individual programs, based on objective assessments of a program's category status, risks, the adequacy of proposed risk management plans, and the urgency of the user's needs. Tailored acquisition strategies may vary in the way that core activities are to be conducted, the formality of reviews and documentation, and the need for other supporting activities.

b. When contracting for ILS, the ILS requirements will be tailored according to the acquisition strategy and included in solicitation documents. The contractor will be required to define his approach to meeting the stated ILS requirements in the proposal developed in response to the solicitation. Military handbook (MIL-HDBK) 502 may be used as guidance for supportability analysis, and the logistics management information (LMI) performance specification (MIL-PRF-49506) prescribes data formats for LMI. The ILS program, including related analytical efforts, will be addressed as an element of program management/system engineering, and progress will be assessed during periodic integrated functional reviews.

c. The work breakdown structure (WBS) will provide itemized costing data of the ILS program contract items. Program offices will tailor a program WBS for each program using the guidance in MIL-HDBK-881. MIL-HDBK-881 will be cited in solicitations and contracts, for guidance only, extending the program WBS to develop the complete contract WBS. When multiple contractors are providing ILS program contract items, their specific responsibilities will be clearly delineated.

Chapter 2
Responsibilities

2-1. Headquarters, Department of the Army (HQDA)

a. *The Assistant Secretary of the Army (Financial Management and Comptroller) (ASA (FM&C)). The ASA (FM&C) will—*

(1) Develop and prescribe financial guidance and procedures on the use of funds for all matters relating to programming and budgeting for contractor logistic support (CLS) of Army training devices except Class VIII medical training devices (including embedded training devices).

(2) Review program and budget requests supporting life-cycle contractor support (LCCS) for training devices.

(3) Integrate weapons systems into working capital funds as appropriate.

b. *The Assistant Secretary of the Army (Acquisition, Logistics, and Technology) (ASA (ALT)). The ASA (ALT) will—*

(1) Oversee the research, development, testing, and evaluation of the acquisition of materiel systems (including ILS for these systems). (See AR 70-1.)

(2) Establish policy and oversee the development in execution of logistics management programs.

(3) Oversee logistical acceptability and supportability of materiel systems, including ILS, in coordination with the Deputy Chief of Staff for Logistics (DCSLOG).

(4) Establish reliability, availability, and maintainability (RAM) policy.

(5) Oversee establishment of the HQDA logistics position concerning the acceptability, deployability, and supportability of all programs.

(6) Provide policy on and approve requests for type classification of materiel.

(7) Participate in DA ILS reviews (ILSR)

(8) Ensure that logistics considerations are incorporated in the war-fighting analysis and in coordination with the DCSLOG.

c. *The Assistant Secretary of the Army (Installations and Environment) (ASA (I&E)). The ASA (I&E) will—*

(1) Establish environmental policy and procedures

(2) Ensure that environmental considerations, including environmental compliance, hazardous materiel use, and pollution-prevention opportunities, are incorporated into the supportability analyses, in coordination with the DCSLOG.

(3) Establish and maintain an organization to manage environmental assessment and supportability of materiel systems, in coordination with the ASA (ALT).

d. *The Deputy Chief of Staff for Logistics (DCSLOG). The Deputy Chief of Staff for Logistics is responsible for the DA ILS program. The DCSLOG will—*

(1) Establish ILS and CLS program policy and guidance.

(2) Support the ILS management structure in the budget and in the program objective memorandum (POM).

(3) Appoint a Department of the Army logistics support officer (DALSO) for each acquisition category (ACAT) I, IA, II, and selected III/IV systems. The DALSO will participate on the overarching integrated product team (OIPT).

(4) Convene and chair Headquarters, Department of the Army ILS reviews (ILSR) for systems approaching a milestone decision review (MDR), as required due to impasse within the OIPT.

(5) Monitor the Army ILS and manpower and personnel effective integration (MANPRINT) effort, in coordination with other Army staff agencies, to ensure effective implementation in accordance with DA and Department of Defense (DOD) requirements.

(6) Serve as the DA functional manager for the acquisition/logistics category of the Army Acquisition Corps/workforce.

(7) Serve as the DA proponent for the system supportability analysis process and the resulting logistics management information (LMI) program.

(8) Serve as the DA proponent for the DOD ACQ LOG standardization program.

(9) Serve as the DA proponent and chairman for the Army ILS executive committee (AILSEC).

(10) Establish and manage the ILS Achievement of the Year awards program to recognize achievements in ILS.

(11) Serve as the Army logistician for new, modified, upgraded, and displaced systems, except for Class VIII, medical materiel, and strategic communications systems; serve as the voting logistician, in coordination with the DA Deputy ASA for Logistics and the Deputy ASA for Environment, Safety, and Occupational Health, at in-progress review (IPR) and MDR; and sign test and evaluation master plan (TEMP) and other documents as the Army logistician.

(12) Monitor the Army ILS effort, in coordination with other staff agencies, to ensure effective implementation in accordance with DA and DOD requirements.

e. The Deputy Chief of Staff for Operations and Plans (DCSOPS). The DCSOPS is responsible for force development and establishment of priorities for the employment of Army forces. The DCSOPS will—

(1) Ensure that the first production or procurement items of new equipment, including support equipment, are issued to the training base for timely training development and establishment of functional training.

(2) Participate in DA ILSRs.

(3) Serve as the functional proponent for the Army operating and support cost reduction (OSCR) program.

f. The Assistant Chief of Staff for Installation Management (ACSIM). The ACSIM will—

(1) Coordinate facility construction program.

(2) Monitor ILS process for environmental and facility implications.

(3) Participate in DA ILSRs as necessary.

g. The Deputy Chief of Staff for Personnel (DCSPER). The DCSPER will—

(1) Ensure maximum utilization of SA in meeting MANPRINT objectives.

(2) Participate in DA ILSRs.

(3) Establish and disseminate MANPRINT program policies and guidance and ensure adequate integration of ILS and MANPRINT efforts.

(4) Provide a member to the AILSEC.

h. The Surgeon General (TSG). The TSG will—

(1) Provide advice and consultation to material developers (MATDEVs) and combat developers (CBTDEVs) on potential health hazards and problems associated with the medical aspects of all materiel acquisition programs.

(2) Develop the ILS program for medical (class VIII) materiel, including designation of the logistician in accordance with AR 40-60 and AR 40-61.

(3) Participate in DA ILSRs, as appropriate.

(4) Provide a member to the AILSEC.

i. The Office of the Chief of Engineers (OCE). The OCE is responsible for the facilities construction program and land acquisition requirements for the Active Army. The OCE will—

(1) Advise the MATDEV of the facility implications of system design to minimize support facility costs and impact on the Army's facilities standardization program.

(2) Identify facility requirements of the materiel system for the gaining major commands (MACOMs), with formal input from the MATDEV, trainer/training developer (T/TD) and CBTDEV.

(3) Participate in all support integrated product teams (SIPTs) for all ACAT-level programs for which an SIPT has been established, when there are facility requirements.

(4) Coordinate facility requirements with the CBTDEV, MATDEV, ACSIM, gaining MACOMs, logistician, and T/TD.

(5) Assist in preparation of the support facility annex (SFA) of selected supportability strategies, fielding documentation, and applicable test plans; provide formal coordination and update, as necessary, on the SFA to the supportability strategy; provide a copy of the SFA to ACSIM (DAIM-MD), gaining MACOMs, and installations.

(6) Manage and execute ILS for systems for which the OCE has acquisition or life-cycle management responsibility.

(7) Participate in DA ILSRs.

(8) Provide a member to the AILSEC.

(9) Assist in development of facilities needed to support CLS for training devices.

j. Other HQDA agency heads. Other HDQA agency heads will—

(1) Provide policies, program guidance, and support of the DA ILS program within their areas of responsibility.

(2) Participate in DA ILSRs, as required.

(3) Review and discuss key ILS risks and issues at milestone reviews.

2-2. Materiel developers

Materiel developers (MATDEVs) have overall responsibility for planning and implementing ILS as an integral part of assigned materiel acquisition programs. The MATDEVs are assigned in accordance with AR 70-1. Materiel developers will—

a. Establish internal policies and procedures to implement this regulation.

b. Ensure that passage of a system from one life-cycle phase to the next occurs only when all ILS requirements have been satisfactorily accomplished or when provisions have been made for their accomplishment. Deviations will be approved by the appropriate decision body and reflected in the supportability strategy and other appropriate documents.

c. Prior to Milestone I—

(1) Designate an ILSM to participate in pre-Milestone I activities with the CBTDEV/integrated concept teams (ICTs). The MATDEV, in coordination with the ICT, will conduct concept studies to examine the feasibility of different technology solutions and to refine technology concepts. Requirements tradeoffs and analyses will be conducted to support decisions regarding acceptable materiel alternatives. The MATDEV will ensure that ILS, logistics, facility, and environmental concerns are addressed during this process.

(2) Develop and coordinate the initial supportability strategy, and maintain the supportability strategy throughout the acquisition process.

(3) Develop and coordinate appropriate ILS studies and analyses with the CBTDEV, participate in the development requirements documents, and prepare or review other acquisition program documentation to ensure that logistic support considerations are adequately addressed.

(4) Participate on SIPTs chaired by the CBTDEV.

d. At Milestone I, or when the product manager (PM) is appointed, if earlier (AR 70-1), assign an ILSM (preferably the Pre-MDR I ILSM designated to work with the CBTDEV) to the system acquisition program. The ILSM will establish or assume the chair of the SIPT at that time. The ILS manager will also serve as the MANPRINT manager when the size and complexity of the program permit.

e. Ensure that CLS is considered as a support alternative and utilized when determined to be effective in terms of life-cycle cost and operational performance.

f. Implement and manage an effective ILS program as part of the assigned system acquisition (including early supportability analysis); ensure that ILS deficiencies are identified and corrected during testing prior to initial system fielding; and ensure that previously unidentified deficiencies discovered during and after initial fielding are corrected.

g. Coordinate materiel fielding requirements with the supporting command to ensure that items required to support system fielding will be available at the time and place agreed upon with the gaining MACOMs. (See AR 700-142.)

h. Ensure that ILS goals, thresholds, and other considerations from all sources are integrated into program decisions and documented throughout the acquisition process.

i. Ensure that ILS and environmental engineering are recognized functions of system engineering and are addressed during materiel system design reviews.

j. Develop a nuclear hardness program for systems designated as requiring resistance to nuclear effects that will ensure that ILS actions do not degrade designated hardness requirements; coordinate hardness requirements with the U.S. Army Nuclear and Chemical Agency; ensure maintenance procedures do not degrade the nuclear hardness requirements (such as resistance to electromagnetic pulse, initial nuclear radiation, thermal radiation, and/or blast effects) below specified levels; and ensure preservation of nuclear biological and chemical (NBC) survivability characteristics during the system life-cycle will be fully recognized in all ILS planning.

k. Coordinate ILS and environmental planning, requirements, studies, analyses, and implementation with the CBTDEV, OCE, logistician, trainer, testers, independent evaluators, supporting commands, and other applicable military services and agencies. As part of the requirements development process, and in coordination with the combat developer, develop a detailed maintenance concept (for all levels of maintenance) for use in developing the supportability strategy and other program management documentation (PMD), the qualitative and quantitative personnel requirement information (QQPRI), the basis of issue plan feeder data (BOIPFD), and the ILS portions of the solicitation package.

l. Coordinate the development and update of the support facilities annex to the supportability strategy with the Office, Chief of Engineers (CEEC-EA).

m. Utilize standard Army data systems to collect and maintain logistics data regarding similar systems for use by ILS program participants in performing supportability analyses.

n. Prepare and coordinate inter-service support agreements (ISSA), initiate depot new start requirements, and determine whether the materiel system has a mobilization or surge requirement and document in the supportability strategy and other PMD.

o. Include sufficient funding for ILS requirements in budget submissions; identify the effects of reduced funds on achieving projected system readiness levels, life-cycle cost goals, and overall ILS program execution.

p. Ensure that the acquisition program provides sufficient materiel system prototypes or commercial and non-developmental items (NDI) and production items for logistic demonstration (LD) and supportability test and evaluation.

q. Ensure that ILS products are evaluated during the LD and user testing and validation, and ensure that deficiencies are identified and corrected prior to initial system fielding.

r. Ensure that the depot maintenance inter-service study, when required, is initiated as early as possible but no later than 90 days after engineering and manufacturing development (EMD), or equivalent, contract award. Consider host-nation support (HNS) in developing logistic support plans.

s. Include MANPRINT and environmental requirements in developing logistic support strategies, concepts, and plans and assist the CBTDEV in developing the system MANPRINT management plan (SMMP) and integrating the ILS aspects of the SMMP into the supportability strategy.

t. Designate a post-production software support (PPSS) activity to ensure ILS principles are also applied to software development; monitor software development to ensure supportability; and plan for software support after fielding.

u. Support ODCSLOG DA ILS reviews as appropriate.

v. Centralize management of life-cycle contractor support (LCCS) for tables of distribution and allowances (TDA) training devices when the devices will be authorized at more than one location. Centralized management includes—

(1) Planning, programming, and budgeting for resources to support LCCS and to upgrade training devices as tactics and associated weapon systems change.

(2) Negotiating, awarding, and administering contracts for LCCS.

w. Employ an approved level of repair analysis (LORA) methodology to develop the initial maintenance concept based on economic and non-economic constraints and readiness requirements; emphasize repair strategy for printed circuit boards, establishing the capability as far forward as possible based on operational requirements and cost impacts; and conduct the LORA interactively throughout the life-cycle as engineering estimates are refined and field experience with the system is gained.

x. Coordinate all maintenance allocation charts (MAC) with the proponent schools.

y. Ensure Class V (munitions) items and explosive ordnance disposal (EOD) materiel are coordinated with the Armament, Research, Development, and Engineering Center (ARDEC), EOD Office (AMSTA-AR-FSX), Picatinney Arsenal, NJ 07806, for development of hardware and/or EOD procedures.

z. Ensure that industrial preparedness goals, thresholds, and considerations are integrated into program decisions and documents throughout the acquisition process.

aa. Consider the use of the spares acquisition integrated with production (SAIP) strategy. (SAIP is a strategy to reduce the impact of design changes on procurement of spares and repair parts, incorporating their purchase in the contract for the purchase of the end item.)

ab. Ensure technical publications (new, revised, changes) are acquired in digital form in the portable document format (PDF). Exceptions to this policy must be granted by the U.S. Army Materiel Command (USAMC) Logistics Support Agency. These exceptions will be limited to systems under development as Class III or higher interactive electronic technical manuals.

ac. Ensure that a hazardous materiel program and a pollution prevention program are developed and implemented in accordance with DOD 5000.2

ad. Implement a modernization through spares (MTS) strategy to assure the leveraged use of spares procurement funds. MTS focuses on reduction of sustainment costs and insertion of technological improvements. The MTS strategy for each system will be included in the acquisition strategy and also reflected in the supportability strategy and in the post production support (PPS) plan.

2-3. Materiel commands

a. Materiel commands. The principal materiel command is the U.S. Army Materiel Command (AMC). Other materiel commands include the U.S. Army Intelligence and Security Command (INSCOM); the U.S. Army Corps of Engineers (USACE); the U.S. Army Medical Research and Materiel Command (USAMRMC); and the U.S. Army Space and Strategic Defense Command (USASSDC). In some cases, materiel commands may have management responsibilities for development of materiel systems and, therefore, will serve as MATDEVs. In those cases, materiel commands have the responsibilities stated in paragraph 2-2. Materiel commands will—

(1) Establish an identifiable ILS/logistics organization to ensure compliance with primary ILS policies and procedures, and provide matrix support for ILS to aligned MATDEV.

(2) Implement and manage an effective ILS program as part of the assigned system acquisition, and participate in decision and program reviews.

(3) Function as the materiel developer during the requirements generation process and in support of advanced technical demonstrations prior to the assignment of a PM.

(4) Continue applying ILS principles throughout the life cycle of the system and utilizing data collected during field exercises as well as during peacetime operations to continue the analytical effort necessary to optimize the support structure and minimize life-cycle costs.

b. The commanding general, AMC. In addition to the responsibilities in paragraph 2-3.a, the commanding general, AMC will—

(1) Be the DA executive agent for the supportability analysis (including level of repair analysis) process and the logistics management information (LMI) program.

(2) Provide SA technical assistance as required to ensure that ILS considerations are applied to the design of new and modified/upgraded systems and are considered in the selection of commercial and NDI.

(3) Serve as the DOD SA support activity.

(4) Establish and support military and civilian career development programs for logisticians (ILS managers and specialists), and ILS-related engineers, in coordination with DA ODCSLOG,

(5) Provide functional support to the PEO/PM and other MATDEVs/materiel commands as requested and agreed to in a Memorandum of Agreement (MOA), which details support to be provided.

(6) Provide an ILSM to the PEO/PM and other MATDEVs as requested and agreed to in an MOA, which will reflect the details of the ILSM support.

(7) Participate in the Joint-Service Acquisition Logistics Standardization Program.

(8) Provide a representative to the AILSEC.

(9) Provide logistics analysis support through Army Materiel Systems Analysis Agency to the Evaluation Analysis Center (EAC) and ODCSLOG/OASA/(I&E) for the evaluation of logistics supportability of all ACAT level programs.

2-4. Combat developers

The Training and Doctrine Command (TRADOC) is the Army's principal combat developer (CBTDEV). The CBTDEV for Class VIII (medical materiel) is the U.S. Army Medical Command (MEDCOM). Other CBTDEVs include the Intelligence and Security Command (INSCOM) and the Criminal Investigation Command (CIC). The CBTDEV is responsible for developing operational and support concepts; doctrine, organization, and force structures; and determining materiel requirements for equipping these force structures. As the user representative, the CBTDEV will ensure that system developmental efforts consider field user requirements. To ensure that the ILS program fulfills the needs of the materiel user, CBTDEVs will—

a. Assign a command office with the primary responsibility for ILS policy implementation.

b. Establish internal policies, procedures, and techniques for implementing this regulation.

c. Develop funding estimates for accomplishing ILS planning, management, and tasks.

d. Ensure performance of applicable supportability analyses as a function of developing materiel requirements documents. This will be accomplished by—

(1) Establishing logistics requirements, constraints, system design parameters, and system readiness objectives (SROs).

(2) Assessing alternative ways to operate and support a materiel system in the current and projected force structure.

(3) Developing specific, measurable, and testable support-related materiel requirements or parameters based on required logistics, operational performance, life-cycle cost goals, and readiness requirements.

e. Ensure that ILS considerations are incorporated into all materiel system requirements documents and integrated into the supportability strategy developed by the SIPT.

f. Assign an ILS point of contact (POC) for each acquisition program after Milestone I (preferably the ILS program planner designated for pre-milestone I activities).

g. Include logistics considerations in the evaluation of alternative system support concepts, including the concept of contractor support.

h. Establish/chair SIPT prior to milestone I for all ACAT I/II and selected ACAT III/IV systems. (Chairmanship will transition to MATDEV upon appointment of a PM or at Milestone I.) As an SIPT member, CBTDEV will—

(1) Plan and implement ILS concerns with the MATDEV.

(2) Provide input to the supportability strategy.

(3) Develop supportability testing issues in coordination with the training developer, tester, evaluator, logistician, and other program participants.

i. Use historical data from fielded systems when developing requirements documents and ILS program objectives.

j. Participate in decision and program reviews, and DA ILSRs.

k. Inform the MATDEV, logistician, and other program participants of changes affecting the ILS and environmental program planning, and fully consider emerging logistics policies.

l. Incorporate/define system operability considerations into requirements documents.

m. Ensure establishment and implementation of training programs by the trainer to develop the skills needed for the operation and support of newly fielded systems and for sustained support.

n. With the MATDEV, ensure that user ILS requirements and constraints are coordinated and included in materiel system contractual, solicitation, and source selection documents.

o. Define transportability and mobility requirements of the materiel system and assess the unit mobility impact during the development process.

p. Establish support conditions and requirements for initial operational capability (IOC) date in coordination with the MATDEV and gaining MACOMs.

q. Coordinate with the MATDEV in determining the use of contractor support in developing the support concept; and coordinate, with the supporting and gaining commands, the necessary procedures to implement contractor support, if required.

r. Provide a representative to support the AILSEC.

2-5. Logistician

The DCSLOG is the Army independent logistician for new, modified, upgraded, and displaced systems. For Class VIII, medical materiel, the logistician is the U.S. Army Medical Materiel Agency (USAMMA). (See AR 40-60 and AR 40-61.) For strategic communications systems, the logistician is the U.S. Army Signal Command (ASC). The logistician will—

a. Establish internal procedures and techniques to assess ILS and environmental program management and execution for all assigned acquisition programs.

b. Participate in developing requirements documents, acquisition plans, supportability strategies, test plans, materiel fielding documents, contract and solicitation documents.

c. Participate in AILSEC, OIPT, PM integrated product team (IPT)/working integrated product team (WIPT), SIPT, and test integration working group (TIWG) and DA ILSR activities for all assigned materiel systems.

d. Inform the MATDEV, CBTDEV, materiel command, and other program participants of ILS and environmental planning deficiencies. Unresolved issues will be elevated to the OIPT through the DALSO.

e. Monitor supportability and environmental testing on an exception basis.

f. Provide available experience or data to the CBTDEV and MATDEV to influence the system design and ILS program development.

g. Participate in decision and program reviews.

2-6. Testers and evaluators

a. Testers and evaluators will—

(1) Include all applicable support requirements and concepts in test and evaluation programs and plans.

(2) Test and evaluate the support and environmental requirements and concepts in accordance with approved test and evaluation programs and plans.

(3) Develop the logistics supportability test and evaluation concept, objectives, scope, and ILS issues (These issues address the total system including manpower, support item training, provisioning, facilities, test resources, unique concepts, and milestones.) and coordinate these with the CBTDEV, logistician, and the independent operational and technical evaluator.

(4) Provide the MATDEV and other program participants with data on similar fielded systems that could influence the ILS and environmental program requirements.

(5) Participate in the TIWG, OIPT, SIPT, and DA ILSR activities.

(6) Provide a copy of test and evaluation plans and reports (except class VIII, medical materiel) to ODCSLOG (DALO-SMR) and other SIPT members. For class VIII medical materiel, copies will be submitted to USAMMA, (MCMR-MMT-E), Frederick, MD 21701-5001. When test reports are not available in time to permit a DA DCSLOG or USAMMA assessment for decision and program reviews, preliminary test data will be provided.

(7) Review and comment on technical data received from manufacturers in regard to the acquisition of commercial and NDI, where this data may be used to satisfy abbreviated or waiver of formal testing.

b. The Evaluation Analysis Center of Operational Test and Evaluation Command (OPTEC) will perform the following ILS functions:

(1) Assess ILS program management and execution for all assigned acquisition programs and perform ILS evaluation in accordance with DA PAM 700-28, ILS Program Assessment Issues and Criteria.

(2) Review and recommend changes to requirement documents, acquisition plans, supportability strategies, test plans, materiel fielding documents, and integrated program summaries.

(3) Represent ILS and environmental issues at IPT meetings, IPR meetings, and other meetings.

(4) Monitor supportability, operational, and environmental testing.

(5) Identify supportability and environmental problems and their impact and assist in finding a resolution; influence system design to enhancing supportability; and elevate unresolved issues to the OIPT.

(6) Ensure that TEMP and Army evaluation plan adequately address ILS issues.

(7) Provide ILS evaluation input to the ODCSLOG and coordinate ILS and environmental findings and positions if ODCSLOG agrees with OPTEC position.

(8) Provide representatives to the AILSEC.

2-7. Military Traffic Management Command Transportation Engineering Agency

The commander, Military Traffic Management Command Transportation Engineering (MTMCTEA) will—

a. Provide transportability engineering assistance, design guidance, and required approvals to MATDEVs, CBTDEVs, and other participants during system acquisition.

b. Provide transportability engineering analyses and assessments.

c. Ensure liaison with all services and the Defense Logistics Agency (DLA) in all transportability matters.

d. Perform unit transportability analyses for new systems presenting major mobility impacts.

e. Participate in SIPTs as required.

f. Assist in developing and approving all required transportability guidance technical manuals (TGTMs) and other manuals as required, in coordination with the MATDEV,

g. Participate in ILSRs as requested.

h. Provide members to support the AILSEC.

i. Provide final transportability approval, or provide corrective actions needed to obtain approval.

2-8. Trainer/Training developer

The principal trainer/training developer (T/TD) is the U.S. Army Training and Doctrine Command. Other T/TDs include the U.S. Army Materiel Command, the U.S. Army Medical Command (MEDCOM), the U.S. Army Intelligence and Security Command (INSCOM), and the U.S. Army Corps of Engineers (USACE). To ensure the ILS program fulfills T/TD needs, the T/TD will—

a. Participate in the SIPT.

b. Determine training (including embedded training) and training device requirements.

c. Develop or acquire the training capabilities and coordinate analysis and data requirements with other SIPT members to ensure integration.

d. Provide complete initial and/or follow-on training for operation and support of newly fielded systems and for sustained support of fielded systems.

e. Determine and submit system training plans (STRAP) to Office of the Chief of Engineers (OCE) (CEEB-EA) and gaining MACOMs for development of training facility requirements.

f. Conduct training evaluations to assess compatibility between field operations and training, doctrine, organizations, and fielded systems.

g. Provide evaluation, feedback, and lessons learned to doctrine, training and combat developers, and other appropriate action elements.

h. Prepare new equipment training plans (NETPs) for planning and conducting initial operation and maintaining new and modified systems.

2-9. Other participants

Other participants in the system acquisition process are responsible, within their functional areas, for policy, program guidance, support, review, and analysis related to the requirements of this regulation. This includes the timely review, approval, or submission of applicable ILS or ILS-related documents and accomplishment and report of the status of tasks identified in the supportability strategy and associated fielding documents.

2-10. Gaining major Army commands

Commanders of gaining MACOMs participate in the ILS and environmental processes by planning for receipt of new, modified/upgraded, and displaced systems. The commanders of gaining MACOMS will—

a. Provide advice to logistician, MATDEV, and CBTDEV on matters pertaining to the expected system operational employment and support.

b. Perform the necessary advance planning and programming for receipt of new, modified/upgraded, or displaced systems, including programming at the gaining installations for new or modified facilities, if any, needed to meet the facility requirements identified in the support facility annex (SFA) by the OCE.

c. Ensure unit/activity (modified table of organization and equipment (MTOE))/table of distribution and allowances (TDA) authorization documents are updated to enable timely requisitioning of personnel, supplies, and equipment.

Chapter 3
ILS Management

Section I
General

3-1. ILS manager

a. The ILS manager (ILSM) will be the focal point for all ILS actions related to the acquisition program and will be chairman of the SIPT established by the materiel developer to support the program.

b. Prior to Milestone I, or appointment of a PM, a MATDEV ILSM will be appointed to work in coordination with the CBTDEV. The ILSM will lead in developing the supportability strategy, will participate in early ILS and environmental program decisions, and will be a member of the CBTDEV ICT.

c. The materiel command supporting PEO/PM-managed programs will also designate an ILSM to co-chair the SIPT and participate with an equal voice in program decisions, reviews, and assessments.

d. The ILSM will participate in the market investigation performed to support development of the acquisition strategy.

e. The ILSM will also serve as the MANPRINT manager when program size, complexity, or other factors permit. When it is not practical for the ILSM to serve as the MANPRINT manager, the two will be aligned to serve mutually supporting roles to prevent duplication of effort.

f. The ILSM will attend preliminary design review (PDR) and critical design review (CDR) to ensure that logistics requirements and constraints are considered.

g. The ILSM will coordinate test, measurement, and diagnostic equipment (TMDE) support requirements with the U.S. Army Test Measurement and Diagnostic Activity prior to Milestone II. (See AR 750-43)

h. The ILSM will participate in the source selection process. The source selection process is used to evaluate the merits of each proposal relative to the established selection criteria. Proposed logistics concepts and processes will be evaluated in terms of effectiveness (from the user's perspective) and cost, with the ultimate objective being to obtain best value.

3-2. Supportability strategy (formerly ILSP)

The supportability strategy is a Government-prepared working document that defines the complete ILS strategy for a materiel system.

a. The initial supportability strategy will be prepared by the MATDEV, coordinated with the CBTDEV, materiel command, logistician, the technical and operational evaluators, and other program participants and will be available 60 days prior to Milestone I. The supportability strategy will be updated—

(1) Before milestone decision reviews (MDR).

(2) When new program direction is received.

(3) When changes occur that warrant realigning the logistic support planning.

(4) Prior to development of solicitation documents.

(5) Prior to convening a materiel release board.

b. A supportability strategy is not required for—

(1) Reprocurement of systems for which a supportability strategy has been previously developed and is still current, except when there is a new make, model, or manufacturer.

(2) Engineering change proposals resulting in modification work orders that do not change system configuration.

(3) Components having minor logistic impact.

c. Agreement to the supportability strategy by SIPT representatives from the program participants represents concurrence by their parent organizations. The supportability strategy is then submitted to the PM IPT for approval.

d. The minutes of the SIPT meetings will serve as interim updates to the supportability strategy. The approved supportability strategy, together with the SIPT minutes, will be the action guide for all ILS program participants. It will be used for assigning action items and scheduling completion dates as well as for prescribing system acquisition events and processes (such as system engineering, contracting, and MANPRINT) requiring ILS action, interface, or support and requirements for support and sustainment of the system after fielding.

e. The supportability strategy will be used by the MATDEV to maintain an audit trail of changes that affect—

(1) Support planning.

(2) Budgets, including the baseline cost estimate (BCE).

(3) Support concepts, support-related goals, and thresholds (including changes in definition).

f. The supportability strategy will show the impact of changes on system readiness objective (SRO), support costs and ILS, and environmental milestones and objectives.

g. The supportability strategy will document status of logistic issues relative to type classification and materiel release.

h. For joint service acquisition programs for which the Army has lead responsibility, the ILSM will develop a supportability strategy in coordination with all participating services. For other programs, the Army representative on the SIPT will coordinate Army input to the supportability strategy.

3-3. Supportability analyses

Supportability is a design characteristic. The early focus of supportability analyses should result in establishment of support-related parameters or specification requirements. As system design progresses, supportability analyses will address supportability requirements and provide a means to perform tradeoffs among these requirements and the system design. In order to be effective, supportability analyses should be conducted within the framework of the systems engineering process. Examples of these analyses are analysis-use studies, repair-level analysis, task analysis, reliability predictions, reliability-centered maintenance (RCM) analysis, and life-cycle cost analysis.

3-4. Logistic management information

Logistic management information (LMI) is the support and support-related engineering and logistic data acquired from contractors. MIL-PRF-49506 is the specification that provides DOD with a contractual method for acquiring these data. DOD uses these data in existing DOD materiel management processes such as those for initial provisioning, cataloging, and item management.

3-5. Implementation of the integrated product team concept

a. *The overarching integrated product team (OIPT).* The OIPT will be established by the appropriate staff element of the Office of the Secretary of Defense (OSD) as an integral part of the oversight and review process for ACAT ID and IAM programs. The Army acquisition executive (AAE) will designate other systems for which the OIPT concept will be employed and designate the lead office. The DALSO will participate in OIPT activities to ensure that supportability is a consideration in all program activities and that issues are addressed in the real time operations of the OIPT.

b. *The product manager (PM).* The PM will establish an integrated product team (IPT) to support development of program strategies, to develop program documentation, and to conduct appropriate tradeoff analyses. The ILSM will participate in the PM IPT activities in support of the PM.

c. *The supportability integrated product team (SIPT).*

(1) The SIPT will be established as a working-level IPT to support the requirements generation and acquisition processes. The proponent school will establish an SIPT at Milestone I for all ACAT I/II and selected ACAT III/IV acquisition programs to coordinate overall ILS planning and execution. Members of the SIPT should include representatives of the PEO/PM Materiel Command, CBTDEV of all TRADOC schools impacted by the supportability strategy, USACE, logistician, DT and OT testers, MTMC, trainer, and DT and OT evaluators. Membership may be limited due to the scope of the program at this time. Chairmanship will transition upon designation of an ILSM by the MATDEV, and the SIPT membership will expand as necessary. Others, such as DLA or Army staff agencies, should be considered for special membership. When the Army is the lead Service in multi-service acquisition programs, the SIPT will include a designated representative from each of the participating Services.

(2) The SIPT is a working body, and the roles and responsibilities of members will be prescribed in the supportability strategy. The SIPT must work with other functional groups, such as the TIWG and the training support work group (TSWG), to ensure an integrated effort.

(3) For non-ACAT I/II or PEO-managed systems, participation of appropriate commands and agencies will be determined based upon system complexity and requirements.

(4) The SIPT members responsible for performing the overall assessment will maximize the use of quantitative techniques and methods.

(5) For ACAT I, II and III, the designated MATDEV ILSM will chair the SIPT.

d. *The DA integrated logistics support review (ILSR).* The ILSR will serve as a final preparation for the DCSLOG or the appropriate representative for program MDR. The ILSR will be convened to resolve issues left open through the OIPT process.

3-6. ILS planning considerations

Cost as an independent variable (CAIV) is the cornerstone of the Army's strategy to set aggressive but realistic cost objectives for new and fielded systems early in the acquisition cycle. The CAIV provides that once system performance and objective cost are decided, the process will make cost a constraint while assuring performance requirements. It motivates achievement of performance objectives while providing incentive for operation support cost reduction (OSCR). Application of ILS principles early in the requirements determination and acquisition processes leads to the development of operation and support (O&S) cost projections and supports the CAIV objective of establishing life-cycle cost (LCC) goals prior to MDR I. The LCC should be the principal cost criterion and weighted accordingly in materiel and support system selection.

a. ILS program objectives will be established that will reduce total ownership cost (TOC) of the system. A TOC reduction program will be established to identify a system's TOC/O&S cost target, cost drivers, and metrics to measure cost-reduction progress. The ILS program costs will be controlled and managed to ensure visibility of initiatives that offer reductions in TOC/O&S costs. Design interface and other initiatives will be applied to reduce TOC/O&S costs through—

(1) Improved reliability and maintainability on systems and components.

(2) Increased use of system diagnostic and prognostic aids.

(3) Use of embedded training for operators, maintainers, and support personnel.

(4) Use of simulators, simulations, and innovative training strategies.

(5) Use of commercial products and processes.

(6) Increased standardization.

(7) Energy-efficient power sources.

(8) Decreased use of hazardous materials and generation of waste streams.

(9) Use of data-collection programs to verify reliability and maintainability performance.

b. The ILS planning activities must coincide with development of the acquisition strategy, and the program will be tailored accordingly. Infinite variations exist that mandate alternative approaches. However, the key objective of the ILS program—providing an effective support structure at the time of fielding—will not change.

c. All participants will consider the widest range of feasible support alternatives (organic or contractor, including use of joint resources through the depot level), tradeoffs, and analyses, including new approaches in support concepts and design. Emerging support organizations, doctrine, and concepts projected for the operational phase timeframe are of primary importance within the constraints of manpower, maintenance, supply, and other logistics system concepts and doctrine.

d. Each materiel program will have an established and documented support concept no later than Milestone II (or to coincide with approval of the final requirement document).

e. For proposed support alternatives, consideration will be given to the effects on the total Army manpower, personnel, training, facilities, and logistics system established or planned for the deployment timeframe of the materiel system.

f. Technology insertion strategies will be developed to minimize support burdens, reduce resource requirements, and reduce the supportability risks related to potentially unstable designs.

g. Methods will be developed to overcome or reduce constraints that would inhibit capability to provide system and components to support surge and mobilization needs (such as rolling inventory, production equipment, and manufacturing facilities).

h. Supportability planning will address program plans for technology insertion, modifications, and upgrades.

3-7. ILS funding

The costs associated with ILS execution will be planned, programmed, budgeted, funded, and monitored as an integral part of the acquisition program. Starting with the BCE, and as part of the program baseline documentation, the ILS program and ILS element development requirements will be identified as definitive contract line items. Program budgets will include sufficient funds for ILS planning, analysis, test and evaluation, facilities, depot maintenance plant equipment (DMPE), and cost avoidance efforts; both contractor- and Government-conducted efforts will be included. The MATDEV will include costs of matrix support from materiel commands and other agencies and will allocate funds as appropriate.

3-8. Environmental impact

a. The requirements for hazardous material (HAZMAT) in system designs will be kept to an absolute minimum to reduce hazards associated with transportation, storage, operation, maintenance, handling, and future disposal requirements. Materiel maintenance planning will consider, to the maximum extent practicable, the following factors:

(1) Elimination of virgin materiel requirements.

(2) Use of recovered materials.

(3) Reuse of product.

(4) Recyclability.

(5) Use of environmentally preferable products

(6) Waste prevention (including toxicity reduction or elimination).

(7) Ultimate disposal.

b. ILS program participants will ensure that all aspects of the program address HAZMAT potential and minimize all environmental impacts. Potential hazards resulting from the operation, maintenance, and support of the system will be documented on a materiel safety data sheet (MSDS). The MSDS for items to be procured or adopted as standard items will be processed in accordance with AR 700-141.

c. Costs associated with handling and disposition of HAZMAT will be reflected in LCC estimates. The requirement to reduce the environmental impact of systems applies to both the system's design and supportability of the fielded systems. This requirement is to be satisfied in a manner that minimizes the associated life-cycle costs. Three areas will be addressed by ILS program participants as part of the minimization process:

(1) Pollution prevention.

(2) Environmental compliance.

(3) Hazardous material use.

d. The focus of pollution prevention will be on elimination or reduction of all forms of pollution at the source. Pollution prevention must be addressed during the designing, manufacturing, testing, operating, maintaining, and disposing of systems. Environmental regulations—Federal, state, local, and in some cases international—are a source of external constraints that must be complied with. This involves identifying and integrating them into program execution. Their major impact will occur during the testing, manufacturing, and operation and support of systems.

3-9. System survivability

a. A key element of system survivability is ease of repair in the forward battlefield area. The ILS design interface must emphasize—

(1) Minimizing requirements for tools and test equipment.

(2) Reducing required maintenance skill levels.

(3) Designing for rapid repair.

(4) Redundancy of mission essential functions.

(5) Ease of implementing battlefield damage assessment and repair (BDAR) techniques.

b. Technical data will be properly coded or marked to identify parts or processes that are critical to system survivability. Support equipment needed to test and verify survivability features must be developed and available for use throughout the life cycle of the materiel system. (See AR 70-75.)

c. Nuclear survivability and nuclear, biological, and chemical (NBC) contamination survivability will be primary considerations in the ILS program for each Army system required to withstand the effects of nuclear weapons effects and NBC contamination. Preservation of survivability features during the entire life cycle is an essential part of ILS planning and will receive full recognition in all aspects of the ILS program.

3-10. Materiel release

Materiel release process (AR 700-142) will be used to ensure that materiel issued to the active Army, reserve components (RC), other services/Federal agencies, and security assistance programs is safe, operates as designed, and is logistically supportable.

3-11. Materiel fielding

Materiel fielding is a critical portion of each ILS program. Planning for materiel fielding will begin as early as practicable, but before signing a production contract as a minimum. (See AR 700-142 and DA PAM 700-142.) The RC forces will be included in planning for wartime support. The need for sample data collection (SDC) will be considered for each materiel acquisition, and the resulting determination will be incorporated in the supportability strategy and the materiel fielding plan (MFP).

3-12. Commercial and non-developmental items

Commercial and non-developmental Items (NDI) is the preferred acquisition strategy, as stated in DOD 5000.2, and effective implementation mandates innovation in developing support concepts. The primary objective is to provide a system that meets the mission need and is supportable at the lowest life-cycle cost.

a. The market investigation (MI) is used to evaluate the potential use of commercial and NDI in response to the user's need as stated in the mission need statement (MNS) and to develop suitability criteria. The ILSM will participate in the MI to gather information relative to the support concepts in use for an item and to gather data to support O&S cost projections. The request for information that supports the MI will include data required to perform a simplified LORA and logistics products such as technical manuals, training aids, parts lists, and warranty program descriptions. The MI results will be used to refine requirements in the operational requirements document (ORD) and to formulate the acquisition strategy and associate support concepts. Participation by the ILSM allows supportability issues to properly be considered as a function of performance and part of the total system concept.

b. The traditional approach of influencing design to minimize support requirements is not generally available for commercial and NDI. The ILSM must be effective in quantifying supportability goals and constraints and including them in the performance specification to properly influence source selection. The source selection evaluation board (SSEB) will evaluate the proposals in terms of the specification and determine the cost realism of each. Commercial logistics products and processes will be evaluated during the source selection process to determine their utility to the user and data requirements for the production contract.

c. Timelines and costs associated with support processes often prohibit establishing organic support in time for fielding commercial and NDI. Commercial support systems will be utilized to the maximum extent possible, taking into consideration cost, readiness, and wartime sustainability. Utilization of interim contractor support (ICS) as discussed in Chapter 4 provides an alternative that should be evaluated in terms of cost/benefit of delivering the mission capability at the earlier date. The ICS requires proper planning and is a strategy that must be approved by the milestone decision authority (MDA).

3-13. Advanced technology demonstrations/war-fighting rapid acquisition programs

a. The advanced technology demonstrations (ATDs) are conducted to facilitate technology transition and should assist the user/operator to better understand the technology and to formulate better requirements before entering development. The war-fighting rapid acquisition programs (WRAPs) are battle laboratory experiments that have had compelling success and for which there is an urgent war-fighting need. The MATDEV ILSM will participate in demonstration/experiment, development/formulation to enable support concepts to be developed as experience with the technology is gained and to properly influence resulting requirements documents.

b. Experimental/demonstration items used in the ATD will, at times, be retained for use by field units while an objective system is either procured or developed. These items remain the responsibility of the MATDEV for management purposes, and interim support measures must be developed, funded, and put in place based upon the use of the system.

3-14. Software

Software associated with a materiel system is an integral component of that system, and software support will be addressed through the ILS program. System modernization involves software upgrades or changes, and post deployment software support costs can be significant over the course of the system's life. The effectiveness of system software has a direct impact on system readiness. Planning related to software management and support will be detailed in the computer resources life-cycle management plan (CRLCMP) and summarized in the computer resources section of the supportability strategy. Interrelationships with the other ILS elements will be addressed through the SA process.

3-15. MANPRINT integration with ILS

The ILS and MANPRINT processes are mutually supporting and will be integrated in materiel development and acquisition efforts. The MANPRINT is a mandatory consideration for attaining the desired level of supportability. A fundamental precept of ILS is that each element will be integrated with every other element. The MANPRINT considerations must be afforded this same management integration.

3-16. Depot planning

Depot maintenance planning is an integral function of the ILS process. The MATDEV will determine the source of repair by utilizing the decision-tree logic defined in AR 750-1. The supportability strategy will reflect depot planning actions that include conducting a source of repair core analysis. This analysis will be documented in the Acquisition Decision Memorandum. The source of depot maintenance should be determined based upon mission and economic considerations. The MATDEV will remain cognizant of the national depot policy regarding utilization of joint service and commercial resources.

3-17. Post-Production support planning

Post-production support (PPS) includes management and support activities necessary to ensure attainment of readiness and sustainability objectives with economical logistic support after cessation of the production phase for a system.

a. The PPS planning will be based upon support requirements and concepts established during the materiel development or acquisition phase.

b. The PPS planning will be a joint effort involving Government and contractor agencies. Requirements for PPS planning must be placed in the engineering and manufacturing development (EMD) SOW for the contractor to include PPS considerations in source selection authority (SSA) tradeoff activities.

c. An initial PPS plan documenting resources and management actions will be completed and included as an annex to the supportability strategy by Milestone III.

d. A final PPS plan will be completed prior to production phase-out and schedules will be established for reviewing and updating PPS planning throughout the life cycle.

e. Post production software support (PPSS) will commence prior to the beginning of the EMD phase. This planning will address software change distribution, downloading, installation, and training after system deployment. These considerations will be addressed in the PPS plan.

f. Modernization through spares (MTS) will be addressed as part of the PPS strategy to provide a means to acquire technologically improved replacement parts and to reduce ownership costs.

3-18. ILS after fielding

The ILS process will continue after fielding by utilizing data collected from the field and by field-training exercises continuing the supportability process to optimize the support structure and reduce O&S costs. This effort will continue to be conducted through the SIPT under the lead of the system proponent (for example, MATDEV or materiel command). Efforts will include identifying cost drivers due to failure rates that exceeded or increased costs of replacement parts, and performing LORA to validate the established support structure.

Section II
Supportability Testing

3-19. Supportability test and evaluation

The MATDEV must confirm adequacy of the proposed support concept and programmed support resources prior to system acquisition and associated resources. Supportability and environmental test and evaluation are integral parts of both developmental and operational testing and evaluation. Evaluation of system supportability issues will be performed using data from contractor, Government testing, and other sources and comparing results of the evaluation analysis against criteria based on stated system requirements and goals. Supportability testing is conducted in the controlled conditions of developmental test (DT) and in the representative field conditions of operational test (OT). (See AR 73-1.) Supportability testing will stress use of Army personnel skills, support equipment, technical manuals, tools, and TMDE, including test program sets (TPSs), projected for the operational environment of the organization to which the system will be assigned. (This includes each level of maintenance below depot.) Supportability and environmental issues and requirements will be included in the TEMP.

3-20. System support package

The system support package (SSP) is a composite of the support resources that will be evaluated during logistical demonstration and tested and validated during technical and user tests. (The SSP includes items such as spare and repair parts, manuals, training package, special tools and TMDE, and unique software.) The SSP, used to validate the support system, is to be differentiated from other logistic support resources and services required for initiating the test and maintaining test continuity. The SSP must be stressed as a flexible instrument, tailored to the system-peculiar requirements and related to supportability testing issues. However, once the SSP for any testing phase is developed and coordinated, it should not be compromised. The SSP component list (SSPCL) is provided 60 days before testing begins. The SSP will be delivered to the test site not later than 30 days before testing begins.

3-21. Supportability testing restrictions

10 U.S.C. 2399 places specific restrictions on the use of contractor support during operational testing and evaluation of military systems. Contractor support during tests may be utilized only to the extent that it is planned to be used when the system is deployed in combat. This restriction on the use of contractor support during operational testing and evaluation may not be waived.

3-22. Logistic demonstration

a. A logistic demonstration (LD) is the nondestructive disassembly and re-assembly of a system using its related peculiar/specific TMDE, training devices, and support equipment. The system, its peculiar tools and TMDE, selected TPSs, associated support items of equipment (ASIOE), and its SSP will be evaluated as a system. The LD combines selected analysis, evaluations, demonstrations, and tests tailored to each acquisition program. The MATDEV will conduct an LD on all acquisition programs. Normally an LD will be conducted prior to the production decision. However, an LD may be conducted during production and deployment for commercial NDIs or other programs where an LD has not been previously conducted, unless the LD requirement is specifically waived. If exceptions are required, a request for waiver will be submitted by the MATDEV to ODCSLOG, (DALO-SMR-C) with supporting rationale and an alternate plan for accomplishing the LD. The purpose of the LD is to—

(1) Evaluate the supportability of the materiel design.

(2) Evaluate the adequacy of maintenance planning for the system (such as maintenance concept, task allocation, troubleshooting procedures, and so forth) and its peculiar support equipment.

(3) Evaluate the preliminary SSP, including interface compatibility of the TMDE and the support equipment with the materiel system.

(4) Review the technical publications.

(5) Validate and update LMI data.

(6) Evaluate the embedded diagnostics (BIT/BITE), TMDE, TPS, and diagnostic procedures in the TM, including detection of faults inserted in the system components.

b. A materiel system prototype or NDI production item will be provided for LD purposes. In coordination with the SIPT, the MATDEV will develop a detailed LD plan. The LD requirements will be summarized in the TEMP. The PEO/PM/MATDEV have overall responsibility for preparing of the final LD report after coordination with SIPT members. The LD report is generally completed 45 days prior to the next decision review.

3-23. BIT/BITE demonstration

The BIT/BITE demonstration is used to show that the self-testing capabilities of the equipment will meet system specifications when fielded. A set of faults will be selected through a random process weighted to represent predicted failure rates. The faults will be introduced into production configuration equipment and the results evaluated. BIT/BITE will be used to the maximum extent where cost effective. BIT/BITE requirements will be included in the ORD.

Chapter 4
Contractor Logistics Support

4-1. General

a. Any logistics support performed by a military department under military control, using Government-owned or controlled facilities, tools, test equipment, spares, repair parts, and military or civilian personnel, is considered organic support. Logistic support provided by one Military Service to another is considered organic within the DOD.

b. Logistic support of Army materiel performed under contract by commercial organizations (including the original manufacturer) is considered contractor logistics support (CLS). Support provided may include materiel and facilities, as well as services, in the following areas:

(1) Supply and distribution.

(2) Maintenance.

(3) Training.

(4) Software support.

(5) Rebuild/overhaul.

c. Technical data will be acquired to permit competitive procurement of CLS whenever feasible. Requirements for continuation of contractor support in wartime scenarios and contingency operations will be assured through inclusion of a wartime contingency clause in the support contract.

d. The MATDEV, in coordination with the materiel command, is responsible for centralized contractor support management, including programming, budgeting, contract negotiations awarding, and administration.

4-2. Types of CLS

The CLS may be performed as a planned interim contractor support (ICS) or as a planned life-cycle contractor support (LCCS). These types of support are defined as follows:

a. The ICS is the use of commercial support resources in lieu of organic capability for a predetermined amount of time (not to exceed three years). This includes the use of contractor support for initial fielding.

b. The LCCS is a method of providing all or part of a system's logistic support by contract, with the intention of continuing this support throughout its life cycle. The LCCS differs from ICS in that it is a support concept rather than an acquisition technique.

4-3. The CLS planning

a. The decision to use CLS will be based upon analyses of tradeoffs of alternative support concepts that were performed as part of the early development or support system analysis process (rather than to limit or reduce the level of ILS effort in any phase of an acquisition). These support analyses must show that CLS—

(1) Is the optimum among feasible alternatives.

(2) Will provide the required support in both peacetime and wartime scenarios.

(3) Is the most cost-effective method.

(4) Is clearly in the Government's best interest.

b. The CLS decision will be based upon an evaluation of the following:

(1) Wartime operational readiness supportability.

(2) Need to maintain a peacetime training and rotational base for military technical personnel (manpower requirement data).

(3) Security implications.

(4) Cost effectiveness.

(5) Availability of TPS and TMDE.

(6) Availability of the technical data package (TDP) suitable for competitive procurement under contractor and/or organic support.

(7) Availability of repair parts and costs required to maintain stock levels to meet readiness requirements.

(8) Timeframe for fielding the system.

(9) Warranties under the acquisition contract.

(10) Spare parts pricing.

(11) Commercial activities program.

(12) Density of equipment and geographical dispersion.

(13) Training costs.

(14) Personnel skills required/available.

(15) Force structure.

(16) Maintenance levels utilized.

(17) Contractors on the battlefield. Civilian contractors may be employed in an area of operations (AO), as required, to support U.S. Army operations and/or weapons systems. Generally, civilian contractors will be assigned duties at echelons-above-division (EAD). Should the senior military commander determine that civilian contractor services are required at lower echelons, they may be temporarily deployed as far forward as needed, consistent with the terms of the contract and the tactical situation. (See AR 750-1.)

(18) Administrative and support workload.

(19) Design stability.

(20) Risk of commercial or military obsolescence.

(21) Availability of contractors to support the system over its expected life at all proposed locations (including mobilization conditions).

(22) Use of operational readiness float/repair cycle float.

c. The LCCS considerations will be based upon readiness and availability requirements, LCC, support risks, design maturity, planned useful life, materiel system complexity, available manpower and personnel, and other acquisition and support issues. Wartime mission and deployment requirements will be the primary considerations on which support risks are based.

d. The ICS will be considered when desired military support capability cannot be fully provided by first unit equipped date (FUED) because of time or acquisition program constraints. As shown below, ICS should be used only for the length of time specified in the supportability strategy.

(1) Plans and justification for ICS should be identified, fully documented in the supportability strategy and the decision memorandum, and coordinated before Milestone II. When program issues or constraints requiring the use of ICS arise after Milestone II, the ILS manager will obtain the necessary documentation and coordinate required actions as soon as possible. All plans for ICS must be completed before the Milestone III production decision to allow for necessary budgetary lead times.

(2) The ICS considerations will not cause a reduction of the level of ILS effort in any phase of materiel acquisition. Priority efforts will be directed toward meeting the required support posture for system deployment.

(3) The ICS planning will include plans and milestones for transition to organic support, contingency plans for operation in a hostile environment, and will define administration and funding procedures. The transition plans/milestones will be documented in the supportability strategy.

(4) The ICS contract will identify minimum data to be provided to the Government by the contractor (such as defective or nonconforming parts, task frequency, parts usage, and repair times at each maintenance level, mean units between maintenance events, skills, and training needed).

(5) Requests for extending use of ICS beyond the approved transition date will be forwarded by the MATDEV through the materiel command to HQDA (DALO-SM), after coordination with gaining major Army commands (MACOMs), CBTDEV, and logistician. Documentation will include justification for extension, revised milestones for transition, impact, additional funding requirements, appropriate coordination, and concurrence and nonconcurrence.

4-4. Funding considerations

a. Contractor support required when fielding a new end item will be achieved within existing appropriation guidelines using the same accounts that would be charged if the work was performed organically by the Army elements normally involved in such fielding to activity. Appropriation requests to support such activity are structured and approved based on the nature of the different functions performed, not on the basis of who performed the work.

b. The manager of each item being fielded is responsible for programming, budgeting, and funding CS requirements pertaining thereto during the period in which the item remains under his/her management control. In the event that more than one end item is being supported by the same contractor, each end item manager will be responsible for programming, budgeting, and accounting for those dollar resources associated with CS requirements pertaining to his/her end item. Where possible, multiple contractor support efforts should be consolidated into one contract. The dollar resources required to fund a specific functional service or effort performed under contract will be reflected in the applicable command operating budgets and monthly/annual accounting and manpower reports based upon the reporting level indications shown by the Army management structure (AMS) for each AMS code involved.

4-5. The CLS for table of distribution and allowance unit training devices

a. Contractor logistic support is the preferred concept for supporting table of distribution and allowance (TDA) unit training devices (TDs). An in-depth analysis will be conducted to determine if CLS is the most effective concept using the factors in para 4-3b.

b. All other TDs authorized by a common table of allowances (CTA) or modified table of organization and equipment (MTOE) will be acquired and supported under the policies in AR 750-1.

c. When CLS is chosen, Army organic maintenance will be limited to operator maintenance at the using TDA or MTOE activity.

d. The support concept decision will be made as early as possible during the requirements document staffing process and will be reflected in the approved document. The support concept will be developed based upon an analysis of alternatives available and the performance of tradeoff analysis to optimize the selected approach.

e. The TEMP and the supportability strategy of the system program management documentation will be used to describe the actions required to provide CLS capability.

Appendix A
References

Section I
Required Publications

DOD 5000.1
Defense Acquisition (Cited in chap 1)

DOD 5000.2
Mandatory Procedures for Major Defense Acquisition Programs (MDAPs) and Major Automated Information System (MAIS) Acquisition Programs (Cited throughout)

AR 70-1
Army Acquisition Policy (Cited throughout)

Section II
Related Publications
A related publication is a source of additional information. The user does not have to read it to understand this publication.

AR 37-100
Account/Code Structure

AR 40-10
Health Hazard Assessment Program in Support of the Army Materiel Acquisition Decision Process

AR 40-60
Policies and Procedures for the Acquisition of Medical Materiel

AR 70-75
Survivability of Army Personnel and Materiel

AR 71-9
Materiel Requirements

AR 71-13
The Department of the Army Equipment Authorization and Usage Program

AR 71-32
Force Development and Documentation—Consolidated Policies

AR 73-1
Test and Evaluation Policy

AR 200-1
Environmental Protection and Enhancement

AR 200-2
Environmental Effects of Army Actions

AR 350-35
Army Modernization Training

AR 350-38
Training Device Policies and Procedures

AR 385-16
System Safety Engineering and Management

AR 602-1
Human Factors Engineering Program

AR 602-2
Manpower and Personnel Integration (MANPRINT) in the System Acquisition Process

AR 700-15
Packaging of Materiel

AR 700-18
Provisioning of U.S. Army Equipment, Internal Control System

AR 700-47
Defense Standardization and Specification Program

AR 700-60
Department of Defense Parts Control Program

AR 700-90
Army Industrial Base Program

AR 700-139
Army Warranty Program Concepts and Policies

AR 700-141
Hazardous Materials Information System

AR 700-142
Materiel Release, Fielding, and Transfer

AR 702-7-1
Reporting of Product Quality Deficiencies Within the U.S. Army

AR 710-1
Centralized Inventory Management of the Army Supply System

AR 750-1
Army Materiel Maintenance Policy and Retail Maintenance Operations

AR 750-43
Army Test, Measurement and Diagnostic Equipment Program

DA PAM 700-28
Integrated Logistic Support Program Assessment Issues and Criteria

DA PAM 700-55
Instructions for Preparing the Integrated Logistic Support Plan

MIL-PERF 49506
Logistics Management Information

Section III
Prescribed Forms
This section contains no entries.

Section IV
Referenced Forms

DA Form 11-2-R
Management Control Review Checklist

Appendix B
Integrated Logistic Support Elements

B-1. Maintenance planning
Maintenance planning begins early in the acquisition process with development of the maintenance concept. It is conducted to evolve and establish requirements and tasks to be accomplished for achieving, restoring, and maintaining the operational capability for the life of the materiel system. Maintenance planning relies on level of repair analysis (LORA) as a function of the SA process. Maintenance planning will—

a. Define the actions and support necessary to ensure that the system attains the specified SRO within minimum LCC.

b. Set up specific criteria for repair (in terms of time and accuracy, and repair levels; BDAR; BITE; testability, reliability, and maintainability; nuclear hardening; support equipment requirements (including automatic test equipment); and manpower skills and facility requirements for peacetime and wartime environments.

c. State specific maintenance tasks, including BDAR procedures, to be performed on the materiel system.

d. State any Interservice maintenance requirements, proposed organic and contractor mix, projected workloads, and time phasing for accomplishing depot maintenance requirements.

e. State the extent, duration, and use of interim contractor support (when applicable) and plans for transition to organic support.

f. Define actions and support required for materiel fielding.

g. Address warranty considerations. (See AR 700-139.)

h. Define host nation support requirements.

i. Ensure that MANPRINT considerations are included in emerging maintenance concepts when determining maintenance requirements and development. The maintenance concept must ensure prudent use of manpower and resources. Performance of maintenance tasks must not exceed available or achievable soldier capabilities. Skill-level relationships must be optimized. When formulating the maintenance concept, analysis of the proposed work environment on the health and safety of maintenance personnel must be considered.

j. Identify nuclear hardness surveillance procedures to monitor and preserve the nuclear hardness of the materiel system.

k. Establish necessary precautions to identify nuclear hardness features during maintenance operations on the equipment and/or to restore the nuclear hardness features of the equipment when they are disturbed as a result of maintenance actions.

l. Ensure that maintenance planning incorporates criteria of AR 40-61, AR 750-1, and AR 750-2 and that the use of maintenance floats (operational readiness float (ORF)/repair cycle float (RCF)/war reserve float (WARF)) is approved by HQDA (ODCSLOG).

m. Conduct a LORA to optimize the support system, in terms of LCC, SRO, design for discard, maintenance task distribution, support equipment and ATE, workload distribution, and manpower and personnel requirements.

n. Minimize the use of hazardous materials and the generation of waste.

B-2. Manpower and personnel

Manpower and personnel involves identification and acquisition of military and civilian personnel with skills and grades required to operate and maintain a materiel system over its lifetime at peacetime and wartime rates. Manpower requirements are developed and personnel assignments are made to meet mission support demands throughout the life cycle of the materiel system. Manpower requirements are based on related ILS elements and MANPRINT considerations. Human factors engineering (HFE) or behavioral research will be applied to ensure optimum soldier-machine interface. Manpower requirements are predicated on accomplishing the logistics support mission in the most efficient and economical way. This element includes requirements during the planning and decision process to optimize numbers, skills, and grades.

a. Soldier-machine and environmental interface.

b. Special skills.

c. Security clearance.

d. Human factors considerations during the planning and decision process.

B-3. Supply support

a. Supply support encompasses all management actions, procedures, and techniques used to determine requirements to—

(1) Acquire.

(2) Catalog.

(3) Receive.

(4) Store.

(5) Transfer.

(6) Issue.

(7) Dispose of secondary items.

(8) Provide for initial support.

(9) Acquire, distribute, and replenish inventory.

b. The MANPRINT impacts of alternative supply support concepts must be assessed to ensure efficient use of manpower resources. Maintaining system readiness under the diverse conditions of military use depends directly on the availability of principal and secondary items (including repair parts) and basic sustainment materiel (BSM) at the time and place it is needed. BSM includes materials such as petroleum, oil, and lubricants (POL), ammunition, and other consumables in sufficient quantities to support initial familiarization training and sustainable quantities to enable the fielded system to perform its intended mission. Parts control and standardization are controlled by AR 40-61, AR 700-60, and AR 700-47. Also included are the requirements for any special disposal or demilitarization information or instructions.

c. For nuclear survivable Army materiel systems, hardness critical items (HCIs) required for initial provisioning and replenishment of stocks will be specifically identified and specially managed. This is to ensure that the items procured meet the nuclear survivability criteria established for the system and that unauthorized items will not be used to replace HCIs built into the system.

B-4. Support equipment

a. Support equipment includes all equipment (mobile and fixed) required to perform the support functions except that which is an integral part of the materiel system. Support equipment categories include—

(1) Handling and maintenance equipment.

(2) Tools.

(3) Metrology.

(4) Calibration equipment.

(5) Test equipment.

(6) Automatic test equipment.

(7) Support equipment for on- and off-equipment maintenance.

(8) Special inspection equipment/depot maintenance plant equipment, which includes all equipment and tools required to assemble, disassemble, test, maintain, and support the production and/or depot repair of end items or components.

b. This element also encompasses planning and acquisition of logistic support for this equipment. MANPRINT-related design, acquisition and employment constraints, and environmental considerations must influence support equipment design and selection.

B-5. Technical data

a. Technical data consists of scientific or technical information necessary to translate materiel system requirements into discrete engineering and logistic support documentation. Technical data includes—

(1) Technical manuals.

(2) Technical and supply bulletins.

(3) Transportability guidance technical manuals.

(4) Maintenance expenditure limits and calibration procedures.

(5) Repair parts and special tools lists.

(6) Maintenance allocation charts.

(7) Lubrication orders.

(8) Drawings/specifications/technical data package (TDP).

(9) Software documentation.

(10) Provisioning documentation.

(11) Depot maintenance work requirements.

(12) Identification lists.

(13) Component lists.

(14) Product support data.

(15) Flight safety critical parts list.

(16) EOD render safe procedure information for explosives.

(17) MTMCTEA lifting and tie down pamphlet/references.

(18) Hazardous material documentation.

b. Technical data includes data derived from basic and applied research in MANPRINT-related areas such as HFE, soldier-machine interface, and psychophysiology. MANPRINT data must be considered in establishing ILS-related design requirements and identifying ILS resource requirements. It is also applied in developing technical manuals and other publications to ensure that they conform to established user capabilities.

B-6. Training and training support

a. Training and training devices support encompasses the processes, procedures, techniques, training devices, and equipment used to train civilian and military personnel to operate and support a materiel system. This element defines qualitative and quantitative requirements for the training of operating and support personnel throughout the life cycle of the system. It includes requirements for—

(1) Factory training.

(2) Instructor and key personnel training.

(3) New equipment training team.

(4) Resident training.

(5) Sustainment training at gaining installations.

(6) Joint Service training.

(7) EOD/render safe procedures training.

b. Embedded training devices, features, and components are designed and built into a specific end item or system to provide training in the use of the item or system. The design, development, delivery, installation, and logistic support of required embedded training features, mockups, simulators, and training aids are also included. (Detailed guidance on training devices, simulators, and simulations is in AR 71-9, chap 3.)

c. MANPRINT must be considered to—

(1) Describe and assess the feasibility of human performance requirements.

(2) Assess the training burden associated with competing materiel designs.

(3) Develop an effective training program.

(4) Design training devices that effectively replicate the end item and minimize the training burden.

B-7. Computer resources support

a. Computer resources support includes the facilities, hardware, software, documentation, manpower, and personnel needed to operate and support computer systems. Computer resources include both stand-alone and embedded systems. This element is usually planned, developed, implemented, and monitored by a computer resources working group that documents the approach and tracks progress via a computer resources management plan (CRMP). Combat and materiel developers will ensure that planning actions and strategies contained in the ILSP and CRMP are complementary and that computer resources support (materiel system operational software, ATE operational software, and post-deployment software support (PDSS)) is available where and when needed.

b. MANPRINT must be considered to ease hardware and maintenance burden while balancing software support requirements. MANPRINT consideration should be applied to ensure that TPS, PDSS, embedded diagnostic or prognostic devices, and stand-alone computer resource requirements do not exceed available or achievable manpower resources and personnel capabilities.

B-8. Facilities

a. The facilities element is composed of a variety of planning activities all of which are directed toward ensuring that all required permanent or semipermanent operating and support facilities (for instance, training, field and depot maintenance, storage, operational, and testing) are available concurrently with system fielding. Planning must be comprehensive and include the need for new construction as well as construction modifications to existing facilities. Typically, facility construction takes from 5 to 7 years from concept formulation to user occupancy. It also includes studies to define and establish impacts on LCC, MCA funding requirements, facility locations and improvements, space requirements, environmental impacts, duration or frequency of use, safety and health standards requirements, and security restrictions. Also included are any utility requirements, for both fixed and mobile facilities, with emphasis on limiting requirements of scarce or unique utilities.

b. MANPRINT must be considered to ensure that operational, training, and support-facility design are consistent with safety, work environment, and health standards.

B-9. Packaging, handling, storage, and transportation

This element includes resources and procedures to ensure that all system equipment and support items are preserved, packaged, packed, marked, handled, transported, and stored properly for short- and long-term requirements. It includes materiel-handling equipment and packaging, handling and storage requirements of pre-positioning of materiel configured to unit sets (POMCUS) stocks. It also includes preservation and packaging level requirements and storage requirements (for example, classified, sensitive, and controlled). This element includes planning and programming the details associated with movement of the system in its shipping configuration to the ultimate destination via transportation modes and networks available and authorized for use. It further encompasses establishment of critical engineering design parameters and constraints (width, length, height, component and system rating, and weight) that must be considered during system development. Customs requirements, airdrop requirements, container considerations, special movement precautions, unit mobility (including prescribed load list/authorized stockage list (PLL/ASL)), and theater transportation asset impact must be carefully assessed. (See AR 700-47.) ILS planning must consider—

a. System constraints (such as design specifications, item configuration, and safety precautions for hazardous materiel).

b. Special security requirements applicable to ammunition and sensitive materiel.

c. Geographic and environmental restrictions.

d. Special handling equipment and procedures.

e. Impact on spare or repair parts and basic issue item (BII) storage requirements.

f. Emerging packaging, handling, storage, and transportation (PHST) technologies and resource-intensive PHST procedures.

g. MANPRINT requirements and constraints.

h. Environmental impacts and constraints.

B-10. Design interface

a. Design interface is the relationship of logistics-related design parameters of the system to its projected or actual readiness support resource requirements. These design parameters are expressed in operational terms rather than as inherent values and specifically relate to SRO and support costs of the system. Programs such as design for testability and design for discard must be considered during system design.

b. Reliability, availability, and maintainability (RAM) are key design parameters that influence both the performance (mission effectiveness and system availability) and economics (support requirements and LCC) of the materiel system. RAM are true engineering design parameters and are usually managed as engineering disciplines. However, the performance aspects of RAM must be balanced with the economic aspects of the element. Quantitative limitations must be included when determining maintainability constraints. Detailed guidance on RAM management is contained in AR 702-3.

c. Standardization and interoperability requirements are necessary to ensure interservice and allied North Atlantic Treaty Organization (NATO); American, British, Canadian, and Australian (ABCA); member countries'; and other countries' standardization and interoperability potential is fully explored during system design. Maximum use will be made of standard items (such as fasteners, components, ammunition, POL and POL equipment, loading and handling equipment, procedures) and support equipment.

d. MANPRINT influences the initial functional allocation of tasks between people, hardware, and software. MANPRINT must also be considered in establishing logistics-related design constraints and readiness requirements. Human performance capabilities must be considered when determining system performance requirements.

e. Environmental impacts must be considered in establishing environmental and logistics-related design constraints and performance and readiness requirements.

Appendix C
Management Control Evaluation Checklist for the Integrated Logistics Support Program

C-1. Function
The function covered by this checklist is the conduct of the integrated logistics support (ILS) program by ILS managers and other functional specialists supporting the ILS program.

C-2. Purpose
The purpose of this checklist is to assist the senior acquisition logistics personnel within the ILS community in evaluating the application of ILS principles during the acquisition and fielding process.

C-3. Instructions

Answers must be based upon the actual testing of controls (for example, document analysis, direct observation, interviewing, sampling, simulation, and/or others). Answers that indicate deficiencies must be explained and the corrective action indicated in the supporting documentation. These management controls must be evaluated at least once every five years and then certified on DA Form 11-2-R (Management Control Evaluation Certification Statement). A copy of DA Form 11-2-R is available on the army electronic Library CD-ROM (EM0001) and on the USAPA web page (www.usapa.army.mil).

C-4. Test questions

a. System acquisition planning.

(1) Are resource constraints considered in development of requirements documents (such as manpower and personnel integration (MANPRINT) constraints and technology limitations)?

(2) Are system design requirements and constraints considered in program reviews?

(3) Is system design considered in source selection to ensure reduction in resource requirements?

b. Determination and acquisition of logistics support for Army systems before fielding.

(1) *Maintenance concept*.

(*a*) Was the maintenance concept developed during program initiation?

(*b*) Was the maintenance planning developed during system development?

(*c*) Was the system support package tested and found to be adequate in determining initial fielding requirements?

(*d*) Was maintenance support available at system fielding?

(2) *Supportability*.

(*a*) Can the proposed selected system be operated and maintained by the quantity and skills of people that will be available?

(*b*) Has a spare and repair parts determination been made?

(*c*) Are parts being procured or are they now available?

(*d*) Have spare and repair parts packaging, handling, and storage requirements been met?

(*e*) Do these requirements support the capabilities needed in the requirements documents?

(3) *Support requirements*.

(*a*) Have all the needed support requirements been identified?

(*b*) Are they being requested?

(*c*) Has the required test, measurement, and diagnostic equipment been identified?

(*d*) Is it being requested or is it under development?

(4) *Training*.

(*a*) Has the need for training been determined?

(*b*) Are the training needs within the capabilities of the personnel who will operate and repair the equipment?

(*c*) Has institutional training capability been established to support initial and follow-on fielding?

(*d*) Has the need for training devices been determined? Will the required training devices accurately replicate the system's operation?

(5) *Technical documents*.

(*a*) Has a determination been made on what technical documents are needed?

(*b*) Are these documents being developed or acquired?

(*c*) Is the technical data level needed to permit competitive procurement being developed?

(*d*) Is the data being purchased?

(*e*) Is the data being reviewed to ensure accuracy?

(6) *Computer resources*.

(*a*) Have system hardware and software computer resources been determined?

(*b*) Are these resources now available to support the system?

(*c*) Have post-deployment software support (PDSS) plans been developed and approved?

(*d*) Was PDSS available at fielding?

(*e*) Was PDSS verified?

(*f*) Will PDSS be available for the planned life of the system?

(7) *Transportability*.

(*a*) Has the system been given transportability approval?

(*b*) Will the system, as finalized, meet the transportability requirements document?

(8) *Facility requirements*.

(*a*) Have all facility requirements (training, maintenance, test, and storage) been identified ?

(*b*) Have the requirements been provided to the Office of the Chief of Engineers (OCE) for construction or renovation actions?

(*c*) Is the facility process being tracked to ensure that facilities will not delay fielding or support?

(9) *Interoperability*. Are standardization and interoperability constraints and implications considered in the development and acquisition of the system*?*

(10) *Program documents*.

(*a*) Are required program documents developed to provide sufficient data for making decisions regarding system structure and directions?

(*b*) Are test and evaluation data sufficient to make program decisions regarding system capabilities or deficiency corrections?

(11) *Funding*. Is sufficient funding programmed to perform the acquisition and logistic support actions planned?

c. Logistics support after fielding.

(1) Are materiel fielding actions adequate to field and support the system on schedule?

(2) Is a system post-fielding assessment planned (or was one conducted) to ensure adequate logistics support is available?

C-5. Comments

Help make this a better review tool. Submit comments to HQDA (DALO-SMM), 500 Army Pentagon, Washington, DC 20310-0500.

Glossary

Section I
Abbreviations

AAE
Army acquisition executive

ABCA
American, British, Canadian, and Australian

ACAT
acquisition category

ACQ LOG
acquisition logistics

ACSIM
Assistant Chief of Staff for Installation Management

ADM
acquisition decision memorandum

ADPE
automatic data processing equipment

AILSEC
Army Integrated Logistics Support Executive Committee

AMC
U.S. Army Materiel Command

AMS
Army management structure

AMSDL
acquisition management system and data requirements control list

AP
acquisition plan

ARDEC
Armament, Research, Development, and Engineering Center

ASA (ALT)
Assistant Secretary of the Army (Acquisition, Logistics, and Technology)

ASA (I&E)
Assistant Secretary of the Army (Installations and Environment)

ASC
U.S. Army Signal Command

ASIOE
associated support items of equipment

ASL
authorized stockage list

ATD
advanced technology demonstrations

ATE
automatic test equipment

BDAR
battlefield assessment and repair

BIT
built-in test

BITE
built-in test equipment

BOIP
basis-of-issue plan

BOIPFD
basis-of-issue-plan feeder data

BSM
basic sustainment materiel

CAIV
cost as independent variable

CBTDEV
combat developer

CDR
critical design review

CIC
Criminal Investigation Command

CLS
contractor logistic support

CM
configuration management

COE
Chief of Engineers

CRLCMP
computer resources life-cycle management plan

CRMP
computer resources management plan

CTA
common table of allowances

DA
Department of the Army

DALSO
DA logistics support officer

DCSLOG
Deputy Chief of Staff for Logistics

DCSOPS
Deputy Chief of Staff for Operations and Plans

DCSPER
Deputy Chief of Staff for Personnel

DLA
Defense Logistics Agency

DMPE
depot maintenance plant equipment

DOD
Department of Defense

DS
direct support

DT
developmental test

DT&E
developmental test and evaluation

EAC
Evaluation Analysis Center

EAD
echelons-above-division

ECP
engineering change proposal

EMD
engineering, manufacturing, development

EOD
explosive ordnance disposal

FMECA
failure modes, effects, and critical analysis

GFE
Government-furnished equipment

GS
general support

GSA
General Services Administration

HAZMAT
hazardous materiel

HCI
hardness critical item

HFE
human factors engineering

HNS
Host-nation support

HQDA
Headquarters, Department of the Army

HSC
U.S. Army Health Services Command

ICS
interim contractor support

ICT
integrated concept team

IPT
integrated product team

ILS
integrated logistics support

ILSM
integrated logistics support manager

ILSR
Integrated logistics support review

INSCOM
U.S. Army Intelligence and Security Command

IOC
initial operational capability

IPR
in-process review

IPT
integrated product team

ISC
Information Systems Command

ISSA
inter/intra-Service support agreement

IU
installation units

LCC
life-cycle cost

LCCS
life-cycle contractor support

LD
logistics demonstration

LMI
logistics management information

LORA
level of repair analysis

LRU
line replaceable unit

MAC
maintenance allocation chart

MACOM
major Army command

MADP
materiel acquisition decision process

MANPRINT
manpower and personnel integration

MATDEV
materiel developer

MCA
Military Construction, Army

MDA
milestone decision authority

MDR
milestone decision review

MEDCOM
U.S. Army Medical Command

MFP
materiel fielding plan

MHE
materiel handling equipment

MI
market investigation

MIL-HDBK
military handbook

MNS
mission need statement

MOA
Memorandum of Agreement

MSDS
materiel safety data sheet

MTMCTEA
Military Traffic Management Command Transportation Engineering Agency

MTOE
modified table of organization and equipment

MTS
modernization through spares

MWO
modification work order
NBC
nuclear, biological, chemical

NDI
non-developmental item

NET
new equipment training

NETP
new equipment training plan

OASA
Office of the Assistant Secretary of the Army

OCE
Office of the Chief of Engineers

ODCSLOG
Office of the Deputy Chief of Staff for Logistics

OIPT
overarching integrated product team

OMA
Operation and Maintenance, Army

ORD
operational requirements document

ORF
operational readiness float

O&S
operation and support

OSCR
operation support cost reduction

OSD
Office of the Secretary of Defense

OT
operational test

OT&E
operational test and evaluation

OTSG
Office of the Surgeon General

PDF
portable document format

PDR
preliminary design review

PDSS
post-deployment software support

PEO
program executive officer/office

PHST
packaging, handling, storage, and transportation

PLL
prescribed load list

PM
program manager/project manager/product manager

POC
point of contact

POL
petroleum, oil, and lubricants

POMCUS
prepositioning of materiel configured to unit sets

PPBES
planning, programming, budget, and execution system

PPS
post-production support

PPSS
post-production software support

QQPRI
qualitative and quantitative personnel requirements information

RAM
reliability, availability, and maintainability

RC
reserve component

RCF
repair cycle float

RCM
reliability centered maintenance

RDTE
research, development, test, and evaluation

SA
support analysis

SAIP
spares acquisition integrated with production

SCP
system concept paper

SDC
sample data collection

SFA
support facility annex

S&I
standardization and interoperability

SIPT
support integrated product team

SMMP
system MANPRINT management plan

SOW
statement of work

SRO
system readiness objective

SSA
source selection authority

SSEB
source selection evaluation board

SSP
system support package

SSPCL
SSP component list

STE
special test equipment

STRAP
system training plans

TDA
table of distribution and allowances

T/TD
trainer/training developer

TEMP
test and evaluation master plan

TGTM
transportability guidance technical manuals

TIWG
test integration working group

TMDE
test, measurement, and diagnostic equipment

TOE
table of organization and equipment

TDP
technical data package

TPF
total package fielding

TOC
total ownership cost

TPS
test program set

TRADOC
U.S. Army Training and Doctrine Command

TSG
the Surgeon General

TSWG
training support work group

USACE
U.S. Army Corps of Engineers

USAMC
U.S. Army Materiel Command

USAMMA
U.S. Army Medical Materiel Agency

USAMRMC
U.S. Army Medical Research and Materiel Command

USASSDC
U.S. Army Space and Strategic Defense Command

WBS
work breakdown structure

WRAP
war-fighting rapid acquisition programs

Section II
Terms

Acquisition strategy
A plan that documents the acquisition planning process and provides a comprehensive approach for achieving goals established in materiel requirements. It summarizes other management planning documents (including the ILSP), Government-furnished materiel to be provided, the acquisition strategy, organizational resources (money, time, people), and schedule.

Assessment rating definitions
Department of the Army definitions to be used Army-wide in assessing ILS elements that will contribute to the successful cost-effective acquisition, type classification, production, fielding, sustainment, and repair of operationally ready, mission-essential systems are as follows: (Any substitution for or deviation from the following definitions is prohibited.)

a. *GREEN (G):* No problems. All actions on schedule.

b. *AMBER (A):* Significant or minor problems identified, with a solution or work-around plan expected to be completed by the next major milestone date.

c. *RED (R):* Major problems identified (show stopper) with no solution identified or solution being implemented with less than satisfactory results projected by the next major milestone date.

Automatic test equipment
Equipment that measures functional or static parameters to evaluate system performance. May be designed to perform fault isolation to piece-part level. The decision-making, control, or assessment functions are performed with minimal human intervention.

Basic sustainment materiel
Materiel consumed in initial fielding, in follow-on training, and in performing the system-stated mission for a specified time. BSM includes such items as ammunition, POL, batteries, and bulk supplies.

Battlefield damage assessment and repair
A wartime procedure to rapidly return disabled equipment to the operational commander by expediently fixing, by-passing, or jury-rigging components to restore the minimum essential components required for performing a specific combat mission or to enable the equipment to self-recover.

Built-in test equipment
Any identifiable device that is a part of a system whose purpose is used in testing the system.

Collective training
Training either in an institution or in units to prepare a group (crew, team, squad, or platoon) for tasks required of the group.

Combat developer
The command or agency responsible for concepts, doctrine, organization (excluding Army wholesale logistics), and system objectives and requirements.

Computer resources support
Facilities, hardware, software, and manpower needed to operate and support embedded and stand-alone computer systems, including post-deployment software support requirements and planning.

Contractor logistic support
Utilization of a commercial source to provide support for materiel employed by Army field units in the form of—

a. Maintenance.

b. Supply and distribution.

c. Training.

d. Software support.

e. Rebuild/overhaul.

Displaced system
A system that is redistributed from one MACOM to another because of the fielding of a new or improved system.

Environmentally preferable
Products or services that have a lesser or reduced effect on human health and the environment when compared with competing products or services that serve the same purpose. This comparison may consider raw materiel acquisition, production, manufacturing, packaging, distribution, reuse, operation, maintenance, or disposal of the product or service.

Facilities
The permanent or semi-permanent real property assets specifically required to support the system, including facilities for training, equipment storage, maintenance, contractor, ammunition storage, mobile shop storage, classified storage, troop housing, fuels and lubricant storage, and special facility requirements.

Facility planning
An early, systematic evaluation of the effect of the introduction of a new materiel system on fixed facilities in the peacetime scenario. This is required because of the long and constrained MCA process (5 to 7 years from requirements determination to having a usable facility).

First unit equipped date
The first scheduled date for handoff of a new materiel system in a MACOM.

Human factors engineering
The systematic application to system design and engineering of relevant factors concerning human characteristics. These factors include skill capabilities; performance; anthropometric data; biomedical factors; and training implications to system development, design, acquisition strategy, and manning.

Individual training
The instructions given to qualify an individual for a needed skill or to increase a skill through practice.

Initial operational capability
The first attainment by a MTOE unit of the capability to operate and support effectively in the operational environment a new, improved or displaced Army materiel system.

Installation units
Mounts, cables, brackets, and other hardware required to physically interface a device (such as a radio, weapon, smoke generator, decontamination device/detector) with an Army vehicle. The vehicle may be for air, land, or water use. The IU may be installed by a contractor or depot, during vehicle production or overhaul/rebuild, or may be installed by a field unit.

Integrated diagnostics
A structured process that maximizes the effectiveness of diagnostics by including pertinent elements such as testability, automatic and manual testing, training maintenance aids, and computer-aided engineering as a means of providing a cost-effective capability to detect and unambiguously isolate all faults known or expected to occur.

Integrated logistic support
A unified and iterative approach to the management and technical activities needed to—

a. Influence operational and materiel requirements and design specifications.
b. Define the support requirements best related to system design and to each other.
c. Develop and acquire the required support.
d. Provide required operational phase support at lowest cost.

e. Seek readiness and LCC improvements in the materiel system and support systems during the operational life cycle.

f. Repeatedly examine support requirements throughout the service life of the system.

Interim contractor support
A method of support used in compressed or accelerated acquisition programs, or when design is not sufficiently stabilized. Provides all or part of a materiel system support by contract for a specified interim period after initial deployment to allow organic support capability to be phased in. A support acquisition technique rather than a support concept.

Logistician
A command or agency other than the MATDEV, CBTDEV, trainer, or user representative, responsible for ILS program surveillance and evaluation in the acquisition process.

Logistics management information
Logistics management information comprises the support and support-related engineering and logistics data acquired from contractors for use in materiel management processes such as those for initial provisioning, cataloging, and item management. Depending upon specific program requirements, this information may be in the form of summary reports, a set of specific data products, or both.

Maintainability
A characteristic of design and installation that provides inherently for the system to be retained or restored to a specified condition within a given time when the maintenance is performed using prescribed procedures and resources.

Maintenance planning
Establishing a maintenance structure for a system. Source selection authority (including RCM) and maintenance engineering are used to provide an effective and economical framework for the specific maintenance requirements of the system.

Manpower
The personnel strength (military and civilian) as expressed in terms of the number of men and women available to the Army.

MANPRINT
The entire process of integrating the full range of human-factor engineering, manpower, personnel, training, health hazard assessment, system safety, and soldier survivability throughout the materiel development and acquisition process to ensure optimum total system performance.

Materiel change
All efforts to incorporate a hardware or software change to a system or end item in production and/or in the field, involving engineering, testing, manufacture, acquisition, and application to improve or enhance its capability to perform its mission, to be produced more effectively, or to better achieve the design-to-cost goal. These changes have historically been referred to as product improvements, modifications, conversions, reconfiguration, or retrofits.

Materiel command
MACOM is responsible for national-level (for example, wholesale) logistic support of fielded systems. This includes national maintenance point, national inventory control point, depot, and technical assistance functions. In most instances, the support command is AMC.

Materiel developer
The command, organization, or agency responsible for accomplishing the research, development, production, and fielding of a materiel system that fulfills DA-approved system requirements.

Materiel system
An all-inclusive term used to describe the total aggregate of equipment being developed, acquired, and managed by a materiel proponent. The materiel system includes the logistic support hardware and software being developed and acquired to support the mission-performing equipment.

Operational availability
A measure of the degree to which a system is either operating or is capable of operating at any time when used in its typical operational and support environment.

Packaging, handling, and storage
The resources, techniques, and methods required for preserving, transporting, loading and unloading, and storing materiel systems, their support equipment, BSM (for example, ammunition, batteries, and POL), and associated supplies of all classes. Includes the procedures, environmental considerations, and equipment preservation requirements for both short- and long-term storage.

Personnel
Military and civilian persons of the skill level and grade required to operate and support a system, in peacetime and wartime.

Post-Production support
The management and support activities necessary to ensure continued attainment of readiness and sustainability objectives with economical logistic support after the cessation of the production phase for the acquisition or modernization of a system or equipment.

Preplanned product improvement
Planned future evolutionary improvement of developmental systems for which design considerations are effected during development to enhance future application of projected technology, including improvements planned for ongoing systems that go beyond the current performance envelope to achieve a needed operational capability.

Prognostics
The use of data in the evaluation of a system or component for determining the potential for impending failures.

Program management documentation (formerly development/program management plan)
Documents prepared by the CBTDEV and MATDEV that record program decisions; contain the user's requirement; provide the life-cycle plans for development, testing, production, and support of the materiel system. Used for all acquisitions. An audit trail provided by documents of record that shows all phases of planning and program execution.

Reliability
A fundamental characteristic of a system expressed as the probability that an item will perform its intended functions for a specified time under stated conditions.

Reliability-centered maintenance
A disciplined logic or methodology used to identify preventive maintenance tasks to realize the inherent reliability of equipment at a minimum expenditure of resources.

Render safe procedures
The application of special explosive ordnance disposal methods and tools to provide for the interruption of functions or separation of essential components of unexploded explosive ordnance to prevent an unacceptable detonation.

Standardization and interoperability

a. *Standardization*. The process of developing concepts, doctrines, procedures, and designs to achieve and maintain the most effective levels of compatibility, interoperability, interchangeability, and commonality in the fields of operations, administration, and materiel.

b. *Interoperability*. The ability of materiel systems, units, or forces to provide services to, and accept services from, other systems, units, or forces and to use the services so exchanged to enable them to operate effectively together.

Supply support
Management actions, procedures, and techniques required to determine, acquire, catalog, receive, store, transfer, issue, and dispose of principal and secondary items. Includes provisioning for initial support as well as for replenishment supply support.

Supportability
That characteristic of a system and its support system design that provides for sustained system performance at a required readiness level when supported in accordance with specified concepts and procedures.

Supportability analyses
A wide range of related analyses that should be conducted within the system's engineering process. The goals of supportability analyses are to ensure that supportability is included as a system performance requirement and to ensure that the system is concurrently developed or acquired with the optimal support system and infrastructure. Examples of these analyses are repair level analysis, reliability predictions, reliability-centered maintenance (RCM) analysis, failure modes, effects and criticality analysis (FMECA), and life-cycle cost analysis.

Support equipment
All ancillary and associated equipment (mobile or fixed) required to operate and support a materiel system, including ASIOE and component items such as trucks, air conditioners, generators, ground-handling and maintenance equipment, tools, metrology, calibration and communications equipment, test equipment, and automatic test equipment with diagnostic software for both on- and off-equipment maintenance. Incorporates the planning and acquisition of support necessary for the operation and sustainment of the support and test equipment itself. Also includes additional support equipment required due to the aggregation of the new system into high organizational-level densities, such as additional line haul fuel trucks or ammunition carriers.

System readiness objectives
Measures relating to the effectiveness of an operational unit to meet peacetime deployability and wartime mission requirements. Considers the unit set of equipages and the potential logistic support assets and resources available to influence the system operational readiness and sustainability. Peacetime and wartime SRO will differ due to usage rate, operational modes, mission profiles, and operational environments. Examples of SRO include operational availability at peacetime usage rates, operational availability at wartime usage rates, sortie generations per given timeframe (aircraft), and maximum administrative and logistics downtime (intermittent missions). Relates quantitatively to materiel system design parameters and to system support resource requirements.

System support package
The set of support elements planned for a system in the operational (deployed) environment, provided before and tested and evaluated during technical testing and evaluation (TT&E) and user testing and evaluation (UT&E) to determine the adequacy of the planned support capability.

Technical data
The communications link between people and equipment. Specifications, standards, engineering drawings, task analysis instructions, data item descriptions, reports, equipment publications, tabular data, computer software documentation, and test results used in the development, production, testing, use, maintenance, demilitarization, detoxification, and disposal of military components and systems. Used in designing and executing an ILS program. Computer programs, related software, financial data, and other information relating to contract administration are not technical data.

Testability
A design characteristic that allows the functional or operational status of a unit and the location of any faults within the unit to be confidently determined in a timely fashion. The status of a unit refers to whether the unit is operable, inoperable, or degraded. Testability applies to all hardware levels of indenture (device, board, equipment, or system). To achieve testability goals, attention must be paid to all design indenture levels and to the integration of test and diagnostic strategies between these levels. The application of testability to the design has impacts in all test activities—manufacturing test in the factory environment, operational test during mission phases to determine overall mission capability, and maintenance testing at all maintenance levels or echelons as driven by the maintenance concept requirements.

Test, measurement, and diagnostic equipment
A system or device that can be used to evaluate the operational condition of a system or component to identify or isolate any actual or potential malfunction. Diagnostic and prognostic equipment, automatic and semiautomatic equipment, and calibration test and measurement equipment, whether identifiable as a separate end item or contained within the system.

Total ownership cost
The sum of all financial resources necessary to organize, equip, and sustain military forces sufficient to meet national goals in compliance with all laws, DOD policies, all standards in effect for readiness, safety and quality of life, and all other official measures of performance for DOD and its components. (This includes costs to research, develop, acquire, own, operate, and dispose of defense systems, other equipment and real property; costs to recruit, retain, separate, and support military/civilian personnel; and all other DOD business operations costs.)

Training aid
Generic term referring to any item developed, procured, or fabricated for the purpose of assisting in the conduct of training and process of learning (for example, models, displays, slides, books, and pictures).

Training and training devices
The processes, procedures, techniques, and equipment used to train personnel to operate and support a system, including individual and crew training, new equipment training, sustainment training at gaining installations, and support for the TDs themselves.

Training device
A three dimensional object and associated computer software developed, fabricated, or procured specifically for improving the learning process. Training devices are justified, developed, and acquired to support designated tasks in developmental or approved individual and collective training programs, soldier manuals, military qualification standards, or Army training and evaluation programs. Training devices are categorized as either system or non-system devices.

a. A system training device is designed for use with one system.

b. A non-system training device is designed for general military training or for use with more than one system.

Transportation and transportability
The capability of materiel and units to be efficiently moved by towing, by self-propulsion, or by carrier via railways, highways, waterways, pipelines, oceans, and airways using existing modal or intermodal transportation equipment.

User
The MACOM designated to receive the system from the MATDEV for accomplishing an assigned operational mission under a TOE, TDA, or other enabling document.

Section III
Special abbreviations and terms
This section contains no entries.