Department of the Army
Pamphlet 700–127

Logistics

Integrated Logistic Support (ILS) Manager's Guide

Headquarters
Department of the Army
Washington, DC
1 February 1989

UNCLASSIFIED

SUMMARY of CHANGE

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Integrated Logistic Support (ILS) Manager's Guide

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History. This publication has been reorganized to make it compatible with the Army electronic publishing database. No content has been changed.

Summary. Influencing materiel acquisition early on in the life cycle will materially affect the logistics support we will be providing in the future. The quality of support we can provide will greatly determine the outcome on the future battlefield. We owe it to our forces and the American people to provide the best possible logistics support at the lowest possible life cycle cost.
This latest version of DA PAM 700–127 provides the ways and means to do just that. Common sense ILS, through use of such techniques as Logistics Support Analysis, will allow us to influence design and supportability early on to ensure quality logistics support throughout the life cycle.

Applicability. Not applicable.

Proponent and exception authority. Not applicable.

Suggested Improvements. Not applicable.

Distribution. Not applicable.

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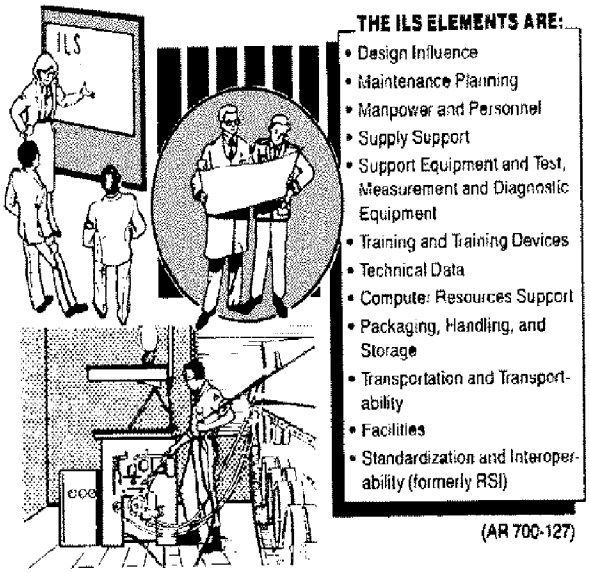
Chapter
Introduction

1. Integrated Logistic Support (ILS)
is the process through which the composite of management and analysis actions necessary to assure effective and economical support of a materiel system, both before and after fielding, are accomplished. The basic management principle of the ILS process is that logistic support resources must be developed, acquired, tested, and deployed as an integral part of the materiel acquisition process.

2. AR 700–127, Integrated Logistic Support, implements DoD Directive (DoDD) 5000.39, and defines the 12 elements of ILS listed below.
These elements represent the logistic support resources required by the Army in the field to maintain a materiel system in an operationally ready condition. Consideration of these support resources must influence materiel system requirements and design throughout the acquisition process where these resources are defined, acquired, and provided to the field.



3. In the practical application of the ILS process to an acquisition program, most ILS elements represent functional areas which are individually managed by technical specialists.
It is the role of the program's ILS Manager (ILSM) to coordinate and interface these functional areas to achieve a successful ILS program. Thus, the responsibilities of the program's ILS manager are to:

•. Plan, integrate, and monitor the efforts of the ILS element functional areas

•. Establish and update an ILS milestone schedule for planning, managing, testing, deploying, and monitoring the development and accomplishment of the ILS program

•. Oversee analytical efforts defining support requirements for comparative systems and defining alternative support concepts. Prepare logistic support input to requirements documents, Program Management Documentation (PMD), Requests for Proposal (RFP), and other program documents

•. Interface and coordinate logistic support activities with other organizations, commands, and military departments, e.g., Operational Test and Evaluation Agency (OTEA), U.S. Army Logistics Evaluation Activity (LEA), U.S. Army Training and Doctrine Command (TRADOC), U.S. Army Test and Evaluation Command (TECOM)

•. Coordinate logistic input to and output from project, product, and special item managers, international logistic managers, and internal functions (e.g., research, development, and engineering; plans and analysis; product assurance; management analysis; and procurement)

•. Coordinate preparation of the System Support Package (SSP) for system or equipment tests and ensure that supportability is evaluated

•. Coordinate a materiel fielding agreement with the gaining command and assure that the logistic support resources meet user satisfaction

•. Coordinate ILS efforts which influence materiel design and monitor accomplishments.

4. Contractors are usually strongly urged to adopt a parallel ILS organization to manage contractual activities.
The authority and responsibilities of the contractors' ILS manager should be similar to the government's manager. It may be said that an effective ILS program is unlikely without this centralized management approach. An ILS Management Team (ILSMT) is often formed to assist the government ILS manager in evaluating the contractor's ILS program and his compliance with contract requirements. The government's ILS manager is the team chairman and team members will be drawn from the Materiel Developers (MATDEV), Combat Developers (CBTDEV), Logistician, Tester, and other government activities which have specific logistics responsibilities (e.g., Military Traffic Management Command; Central Test, Measurement, and Diagnostic Equipment (TMDE) Activity, the TMDE Support Group; Materiel Readiness Support Activity, etc.). The ILSMT meets at scheduled intervals to receive contractor progress reports; evaluate contractor plans, schedules, and data; identify immediate or potential problems in the support system or materiel system; and assist the contractor where possible. The ILSMT provides the ILS manager with recommendations for corrective actions to:

•. Eliminate overlap and duplication
•. Reduce acquisition, operating and support costs
•. Improve integration of support elements
•. Resolve schedule and contract conflicts
•. Redirect contractor efforts

5. The prime tool employed in ILS is Logistic Support Analysis (LSA).

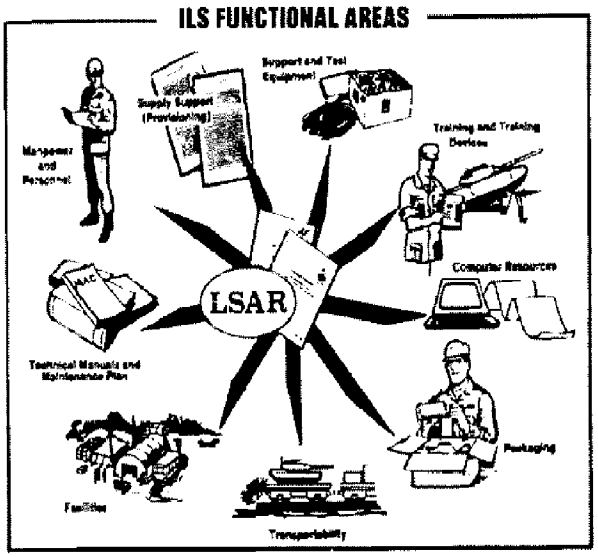
It is used to obtain a reliable, maintainable, transportable, and supportable materiel system at the least cost of ownership by integrating logistic support considerations into the system and detail design effort. LSA is the all–inclusive term that defines analytical efforts applied to identify logistic support goals and criteria, and to quantify the support system and its interface with the materiel system. Examples of LSA include such diverse efforts as manpower and logistics analysis, parametric estimates, requirements and trade–off analysis, establishment of logistic goals and effectiveness measures, use of mathematical techniques for projecting life cycle operating and support costs, making repair versus throwaway decisions, and optimizing repair levels. DoDD 5000.39 states that LSA will be formally implemented during the concept exploration phase.

6. The Logistic Support Analysis Record (LSAR) is a system of data records, computer programs, and output reports which has been developed to document portions of the LSA.

The LSAR provides a single logistic data base to input, store, process, and retrieve selected LSA data. All tasks required to operate and maintain a materiel system are entered on the LSAR data records and analyzed to identify the required logistic resources, including manpower and personnel. This data is then filed in the computer memory and, through the computer programs, may be retrieved and printed in standard output reports. Some of these output reports may directly satisfy contract data requirements, such as provisioning lists and maintenance allocation charts, while others are summaries of support resource requirements. These summaries are used to make design decisions, project operational and support costs, and define the logistic support system. A government LSA review team will regularly review the contractor's LSAR analysis worksheets and output reports to verify data accuracy and ensure that support system development is adhering to the established maintenance plan.

7. As required by DoDD 5000.1, and reaffirmed by AR 700–127, logistic supportability is considered as a principal design parameter and is considered equal in importance with cost, technical performance, and schedule.

Logistic support considerations are integrated into the design effort and the required support resources (the support system) are developed; acquired, tested, and deployed as an integral part of the materiel acquisition process. ILS is the process through which these requirements are achieved. Logistic considerations are included as design constraints throughout all phases of the materiel acquisition process.



8. All elements of ILS will be planned, programmed, scheduled, and produced for evaluation and validation of logistic supportability during scheduled developmental and operational tests.

A logistic demonstration will be conducted on an engineering development prototype (engineering design test model) and should be completed at least 6 months prior to the scheduled start of User Test (UT) to permit finalization of the SSP. A complete SSP, including all elements of the support system, will be provided for evaluation and validation during UT and Technical Test (TT). Failure to supply a complete SSP for UT follow–on testing is a bar to test initiation unless a waiver to proceed without it is obtained. Programs will not move into the production and deployment phase of the life cycle if there is a significant support deficiency that would make the materiel system unacceptable for deployment, or if the deficiency cannot be corrected through routine engineering actions. Program funding plans will provide for possible contingency testing following UT and TT in the event that planned tests are not successful. Prior to the release of the materiel to the field, a Materiel Fielding Plan and Materiel Fielding Agreement will be negotiated with each gaining command and a formal review board will verify that the materiel system and support system is adequate and suitable for issue. The materiel manager is required to personally certify, by a Materiel Release Record, that the materiel is suitable for issue, supportable, and that gaining commands are prepared to receive it.

9. After materiel fielding, ILS will continue for the entire life cycle of an item.

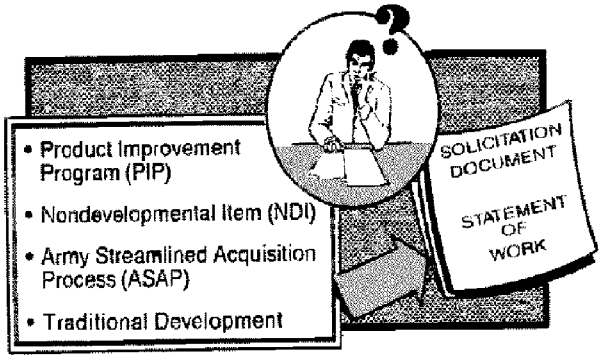
Although the program manager, ILS manager, and ILSMT may be discontinued, command ILS responsibility will continue. The ILS effort will include analyses and assessments of field data feedback related to materiel system and logistic support. ILS after fielding will also include identifying and developing readiness and life cycle cost improvements in fielded equipment and support systems. Likewise, the ILS aspects of Product Improvement Programs (PIPs) and Modification Work Orders (MWOs) will be included. Finally, the responsible command will periodically update the LSAR and compare the program LSA results with field experience.

Chapter 1

The Materiel Acquisition Process

1–1. ACQUISTION PROCESS AND STRATEGY.

The strategy for resolving a materiel need can take on several forms, ranging from a PIP for an existing system to an extensive research and development program for a totally new system. AR 70–1, System Acquisition Policy and Procedures, ranks the preference of the available strategies as follows:

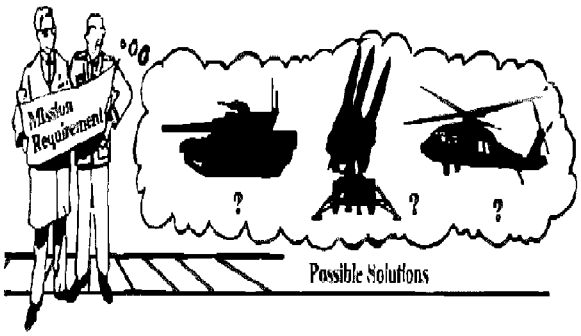


The traditional development is least preferred due to cost, time required, and technical risk typically associated with these programs. However, this process, defined by the Life Cycle System Management Model (LCSMM), is the baseline from which ASAP and NDI Programs are tailored. The PIP process is separately defined by AR 70–15.

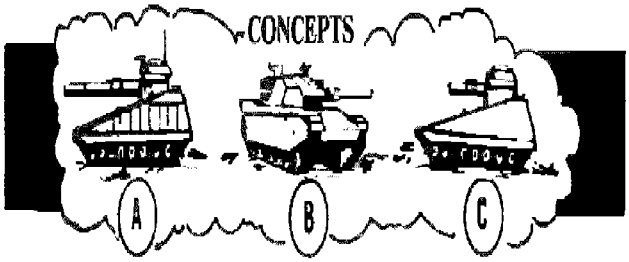
1–2. LIFE CYCLE SYSTEM MANAGEMENT MODEL (LCSMM).

The LCSMM is prescribed by DA Pamphlet 11–25. The LCSMM serves as a baseline for materiel system acquisition and tailoring to meet specific program needs is encouraged. The LCSMM defines four phases which apply to traditional programs.

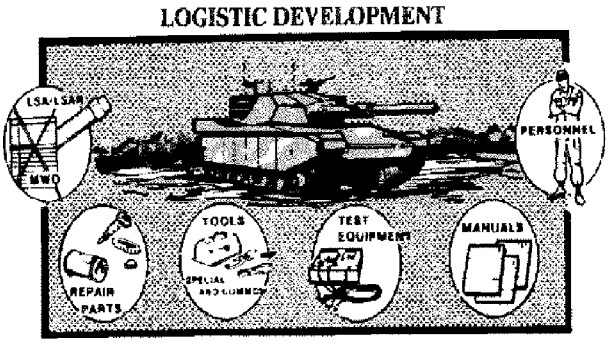
a. Concept Exploration Phase. This is the *first* phase of the LCSMM and is conducted to investigate the alternatives available to meet a stated requirement, defined in the Operational and Organizational (O&O) Plan. All possible solutions, to include improvement of existing materiel, acquisition of nondevelopmental items, or development of new equipment, are evaluated. The acquisition strategy is then developed to guide the program through subsequent phases, and a Test and Evaluation Master Plan (TEMP) is developed to document planned test activities. ILS activities within this phase include the definition of cost drivers for predecessor systems and logistic constraints that should be imposed on the new system. The ILS Plan is initiated by the MATDEV during this phase, documenting the results of early analytical efforts and describing actions that require ILS interface and assigning responsibilities to members of the ILSMT.



b. Demonstration and Validation Phase. This is the *second* phase of the LCSMM. During this phase, prototype systems representing alternative solutions to the materiel need are built and demonstrated. High risk areas are identified for subsequent evaluation, and cost projections established in the concept exploration phase are validated and updated based on the results of prototype demonstrations. Logistic constraints are imposed on design engineers to ensure proper tradeoffs are made. Engineering and early test data are used to project personnel and support equipment requirements. The Required Operational Capability (ROC) is finalized, defining system operational requirements, support strategies, funding implications, and system constraints.



c. Full Scale Development (FSD) Phase. This is the *third* phase of the LCSMM and is conducted to complete engineering development. The design is finalized, the system is thoroughly tested and evaluated in terms of technical requirements and suitability to the user, and logistic requirements are optimized and documented. Initial estimates of manpower and personnel requirements are refined and authorization documents are updated accordingly. Strategies for ensuring competition in acquisition of repair parts throughout the life cycle are established. Coordination with gaining commands is initiated through the Letter of Notification (LON) and draft Materiel Fielding Plan (MFP). Warranty requirements are considered and appropriate clauses are developed for inclusion in the solicitation for the production phase. The FSD phase culminates with the Type Classification (TC) Decision, which reflects the degree to which a system is suitable for entry into the Army inventory.

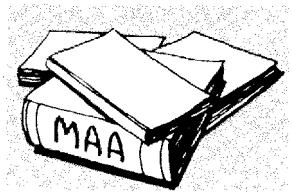


d. Low Rate Initial Production (LRIP) Phase. This is an *optional* phase of the LCSMM to be employed when design risks mandate additional testing of the system or to establish a production base prior to a decision to proceed with higher rate or full production. The decision to execute an LRIP is part of the Milestone III Decision Review and the TC Decision. the LRIP is concluded with a Milestone IIIA Decision Review to evaluate the results of the additional testing, determine whether to begin full production, and classify the item standard, if appropriate.

e. Production and Deployment Phase. This is the *final* LCSMM phase. Agreements with the gaining Major Army Command (MACOM) regarding fielding procedures are reflected in the signed Materiel Fielding Agreement (MFA) during this phase, and end items and required elements of support are acquired and fielded to the gaining units under the Total Package Fielding (TPF) concept. Receiving units are trained through the New Equipment Training (NET) process and institutional training facilities are established. Production acceptance test and evaluation is accomplished to verify contractual specifications are being met. Any required engineering changes will be controlled through the baselined Technical Data Package (TDP) and the Engineering Change Proposal (ECP) process. Data collection is initiated to provide a basis for updating projected parts consumption, manpower requirements, and other elements of the support structure.

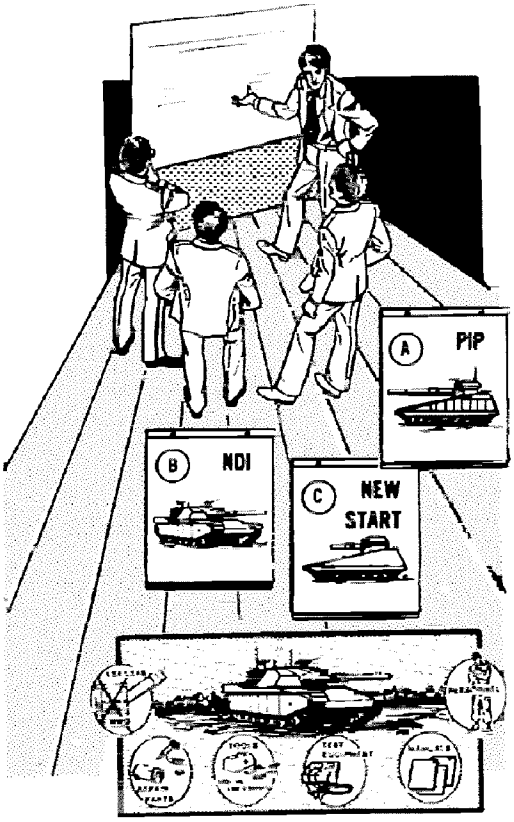
1–3. ARMY STREAMLINED ACQUISITION PROCESS (ASAP).

The ASAP has been institutionalized with the publication of AR 70–1, System Acquisition Policy and Procedures, 12 Nov 86. The ASAP is a *tailoring* of the traditional LCSMM and is the preferred strategy for new requirements which cannot be met through PIP or NDI. The ASAP procedures stress low risk development by using proven technology rather than pushing the state of the art.



a. Requirements/Technical Base Activities. The ASAP policy institutionalizes responsibilities for the *Requirements/Technical Base Activities* as a precursor to the 3 formal phases. It is during this time that existing and emerging technologies are considered. Draft requirements documents are coordinated with industry and allies to maximize the use of available items and components, and to steer independent research and development activities. The ILS responsibility at this time rests with the combat developer. The ILS activities during this time include development of initial concepts and identification of high cost drivers on predecessor systems, and definition of logistic constraints. The System Manpower and Personnel Integration (MANPRINT) Management Plan (SMMP) is initiated during this period, projecting demographics of using and supporting troops in the future. The ILS and MANPRINT initiatives are reflected in the O&O Plan which is approved at the conclusion of this activity.

b. Proof of Principle Phase. This is the *first formal phase of acquisition under ASAP*. A thorough market investigation is conducted to compare available products and technologies with the stated requirements. Surrogate or prototype systems are used in early demonstrations and experimentation. Materiel requirements are evaluated in terms of available technologies, and determined to be appropriate for development or for future technology insertion via Pre–Planned Product Improvement (P3I). The updated and approved ILS, MANPRINT and Reliability, Availability, and Maintainability (RAM) planning reflect findings from troop demonstrations and results are verified and contractually imposed. The requirements document and acquisition strategy are finalized based on the results of this phase. Milestone Decision Review I/II represents the program 'go–no go' decision.



c. Development Proveout Phase. This encompasses *full scale development and production of hard tooled prototypes* wherever possible. User and technical testing are conducted on a continuous test–analyze–and–fix basis to expedite hardware development. Testing includes the determination that ILS planning requirements have been updated, approved, and satisfied. Coordination with the ultimate user is initiated through the LON and draft MFP. Limited production measures will be employed to expedite production verification testing and overall lead time leading to First Unit Equipped Date (FUED).

d. Production and Deployment Phase. This phase includes First Article Testing (FAT) if not previously accomplished. Configuration control boards are established and include logistics and user representation. Provisioning is finalized as are all logistics deliverables. Utilization of the Spares Acquisition Integrated with Production (SAIP) strategy ensures sufficient parts for the production line and support structure. The system is fielded along with its required repair parts, tools, manuals, support equipment and new equipment training under the TPF procedures.

1–4. NONDEVELOPMENTAL ITEM (NDI).

The NDI process is the generic term that covers materiel available from a variety of sources with little or minimal development effort by the Army. Normally, NDIs are selected from the following sources:

•. Commercial products, commercial sources (may require ruggedization or militarization).

•. Materiel developed by and in use by other U.S. military services or governmental agencies.

•. Materiel developed by and in use by other countries.

a. ACQUISITION ALTERNATIVES. The acquisition alternatives available to satisfy requirements cover a full spectrum, from traditional development to classic 'off–the–shelf' NDI. Between the two extremes are 'tailored' acquisitions employing varying degrees of NDI. The NDI acquisition strategy minimizes Research, Development, Test and Evaluation (RDTE) expenditures and allows materiel requirements to be met in a more timely manner. The Army prefers to buy systems already designed, developed, tested, and in production, or at least, where principal components are in production as opposed to initiating a new developmental program.

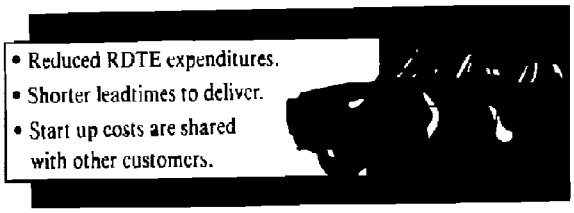
b. CATEGORIES. There are two general categories of NDI which are defined as follows:

•. **CATEGORY A –** Off–the–shelf items (commercial, foreign, other services) to be used in the same environment as that for which it was designed. No development or modification of hardware or operational software is required.

•. **CATEGORY B –** Off–the–shelf items (commercial, foreign, other services) to be used in an environment different from that for which the item was designed. These items (materiel system) require modification to hardware and/or operational software.

In addition to these two categories there is a third level of effort which emphasizes the integration of existing componentry and the essential engineering effort to accomplish system integration. This strategy requires a dedicated RDTE effort to allow for system engineering of existing components, software modifications or development, and to ensure the total materiel system meets stated requirements.

c. STRATEGY. The NDI Program is the Army's preferred acquisition strategy. When a need cannot be met through a PIP, an NDI provides the following advantages:



However, the NDI strategy also poses some unique challenges to the ILS manager:

•. Reduced leadtime means less time to prepare for organic support.

•. Supportability issues must influence source selection since design is already established.

•. Standardization goals may be adversely affected.

•. Suitability and adaptability of existing support elements must be determined.

•. Suitability of potential interim contractor support should be determined as part of the requirements formulation.

d. The execution of the NDI strategy is in essence a further tailoring of the ASAP process. The Proof of Principle Phase includes the market investigation. It is the results of this investigation that lead to the NDI acquisition strategy, which is formally decided at the MDR I/II Decision. All steps leading to the MDR I/II are the same for NDI and ASAP. The only difference would be the increased amount of detail in technical information available for NDI.

e. Subsequent to MDR I/II, the program structure for NDI will depend on the category to be procured. Category A Programs (off–the–shelf items) may proceed directly to the Production and Deployment Phase. Category B Programs (off–the–shelf items requiring modification) and programs requiring assemblage of existing componentry will require an abbreviated Development and Proveout Phase.

f. As with all acquisitions, the ILS Program for an NDI must be tailored to meet the acquisition strategy and the circumstances at hand. The ILS program strategy must be developed concurrently with the acquisition strategy, as with all programs, and must be sensitive to the source (commercial, foreign, other service) and the category (off–the–shelf, modified off–the–shelf, or assemblage).

1–5. PRODUCT IMPROVEMENT PROGRAM (PIP).

The PIP process will be considered as a strategy to meet materiel needs as part of the market analysis (market surveillance or market survey). This is the process by which new technology is applied to existing Army materiel to satisfy more stringent user requirements, provide improved performance, or significantly reduce logistic support costs. The PIP is basically an evolutionary development effort. Therefore, it is the preferred strategy in satisfying an approved operational requirement. The ILS process to include LSA, applies to PIPs to provide a means for evaluating potential cost impacts and performing tradeoffs to minimize these costs. The PIPs can take on several forms, ranging from the development and acquisition of new, improved components to the application of MWOs to individual items in the inventory.

1–6. OPERATING CONCEPT FOR THE MATERIEL ACQUISITION SYSTEM.

In compliance with the Packard Commission Report, the Army implemented the Program Executive Officer (PEO) Concept. The PEO will be an extension of the Army Acquisition Executive (AAE) management oversight for major and Designated Acquisition Program (DAP) systems. The PEO will report directly to the AAE on program matters and ensure the Program Manager (PM) is properly resourced with people, dollars, and facilities. The PEO will provide oversight of the resource allocation process for each assigned program. The PEO will be the In–Process Review (IPR) decision authority for assigned programs that are not managed at a higher level, and will represent programs to HQDA, Congress, and other organizations as appropriate. The PEO will enforce the program baseline, and will assist the PM and AAE on baseline development and monitor programs for baseline breaches. The PEO will interface with the CBTDEV to ensure the user's needs are considered in programmatic issues.

a. The PM will report directly to the PEO and the AAE on program matters under this new concept. The PM will execute the program within the guidelines established by the PEO and AAE, and per the approved program baseline. The PM will develop the acquisition strategy and the program baseline for PEO/AAE approval, and conduct the day–to–day management of the program per the most current Army policy and procedures. The PM will establish and maintain a direct line of communication with the CBTDEV system manager.

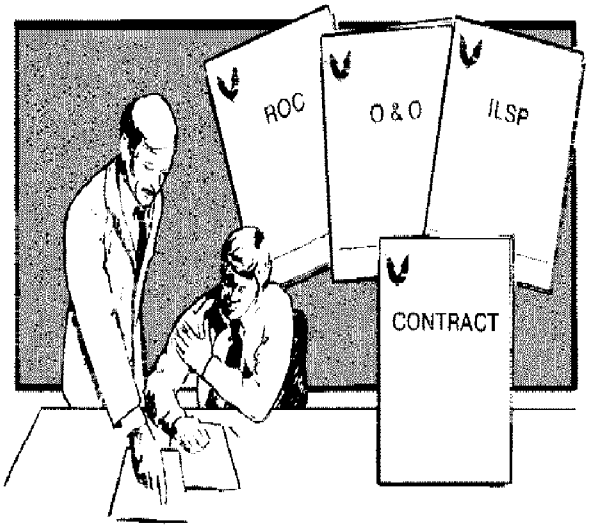
b. This new program represents a challenge and an opportunity to make significant improvements to the Army acquisition process. It represents a forward look and a vastly new and improved way of doing business in the process of providing soldiers with the best equipment in the shortest possible time (from Memorandum for the Chief of Staff, Army, by John O. Marsh, Jr.).

Chapter 2

Program Documentation

2–1. OPERATIONAL AND ORGANIZATIONAL (O&O) PLAN.

The O&O Plan is the program initiation document, prepared for all new materiel systems. The O&O Plan states: (1) The purpose of the system or equipment; (2) The types of units that will operate, maintain, and support it; and (3) Emerging materiel support concepts, organizations, and doctrine. The O&O Plan establishes required System Readiness Objectives (SRO) which emerge from the Mission Area Analysis (MAA) and other such assessments, and is the basis for early ILS planning. The O&O Plan provides a front–end agreement between the CBTDEV and MATDEV to initiate the materiel acquisition program and describes how the system will be integrated, deployed, operated, and supported in the force structure.



Required for: The O&O Plan is a mandatory element of all materiel acquisitions.

When required: an initial O&O Plan must be prepared prior to entry into the Concept Exploration or Proof of Principle Phase.

Responsibility: The O&O Plan is prepared by the CBTDEV, in coordination with the MATDEV, the trainer and logistician. If MATDEV review of the O&O Plan indicates that required resources will exceed Office of the Secretary of Defense (OSD) thresholds, a Mission Need Statement (MNS) must also be prepared.

Reference: AR 71–9, AR 700–127 and AMC/TRADOC PAM 70–2.

2–2. MISSION NEED STATEMENT (MNS).

An MNS defines battlefield deficiencies and supports the need for a major system new start or an improved mission capability. The MNS is based on an approved O&O Plan and constitutes the program initiation document, when cost estimates indicate the program has exceeded specified OSD cost thresholds. The MNS defines the battlefield deficiencies as narrowly as possible so that it (the deficiency) may be corrected by a single materiel system or family of systems.

Required for: The MNS is required for justifying the initiation of a new major acquisition which requires HQDA Deputy Chief of Staff for Operations and Plans (DCSOPS) approval. If the expected costs exceed $200 million in RDTE or $1 billion in procurement, (FY 1980 dollars) the MNS must be submitted to SECDEF OSD for approval. The MNS are not required for all technology base programs. (AR 71–9 fully explains this requirement and its applicability).

When required: The MNS is required for materiel systems decision, concurrent with O&O Plan approval.

Responsibility: The MNS is prepared by the CBTDEV in coordination with the MATDEV, training developer and logistician, and forwarded to DA (DCSOPS) for coordination with all Army System Acquisition Review Council (ASARC) members. It is then staffed with OSD by the ASARC Executive Secretary, and signed by the Under Secretary of the Army. It is then forwarded through the Defense Acquisition Executive (DAE) to the SECDEF, together with OSD comments.

Reference: DoDD 5000.2, AR 700–127, AR 15–14 and AR 71–9.

2–3. CONCEPT FORMULATION PACKAGE (CFP).

The CFP documents are the analyses and studies conducted during pre–MS I activities, and are prepared in support of Materiel Acquisition Decision Process (MADP) Review at MS I. The CFP has four elements:

- Tradeoff Determination (TOD)
- Tradeoff Analysis (TOA)
- Best Technical Approach (BTA)
- Cost and Operational Effectiveness Analysis. (COEA)

The TOD describes the technical approach that:(1) Provides evidence that the proposed approach is an engineering rather than an experimental process; and (2) States the recommended technical approach including technical analysis of tradeoffs, risks, capabilities needed, and costs. The TOD identifies apparent technical feasibility and potential risk associated with each alternative. Alternative support concepts (products of up front ILS and LSA planning) are identified for each design alternative. Advantages and disadvantages are enumerated along with ILS requirements, estimated manpower requirements and health, safety, environmental and ecological factors.

The TOA is the tool the CBTDEV uses to evaluate the TOD. The TOA is conducted within the framework of the mission requirements described in the requirements documents. The evaluation will indicate the design alternatives which meet the materiel System Readiness Objectives. TOA provides: (1) Mission and performance envelopes; (2) Analysis of the recommended technical approach stated in the TOD; and (3) Selects the best approach from an operational and ILS viewpoint.

The BTA provides: (1) A description of the BTA and ILS concepts based on the results of the TOD and TOA; (2) Evidence that the proposed BTA is an engineering approach rather than experimental; (3) Estimated cost and manpower requirements; (4) A recommendation on whether the developmental item should be project managed; and (5) Appropriate environmental documentation. The BTA, in summary, determines the best system alternatives based on the results of TOD, TOA, ILS concepts, Life Cycle Cost (LCC) estimates and schedules for each alternative.

The COEA provides information on the cost and effectiveness of materiel system alternatives. It identifies deficiencies, design alternatives which would correct the deficiency and the estimated cost of each alternative. The analysis evaluates the RAM impact on LCC and on operational effectiveness. In essence, the COEA justifies the cost of ownership in terms of enhanced capability and supports the decision to continue a program. The RDTE, procurement cost, and schedules are estimated and updated prior to later milestone decisions.

Required for: The CFP is required for all programs to support entry into each acquisition phase and is required to be refined and updated between milestones. It is also required to examine technical approaches for satisfying the materiel need and alternative logistic support concepts. It is always required to support a program initiation decision.

When required: When a PM designee has been selected, the CFP and final report of the Special Task Force (STF) or Special Study Group (SSG) (if convened) is provided for support of a program initiation decision. When a PM has not been designated, the CFP and final report will be provided by the organization exercising materiel development responsibility.

Responsibility: The TOD is prepared by the MATDEV with input from the CBTDEV. The TOA is the responsibility of the CBTDEV, jointly prepared with the MATDEV. The BTA is the responsibility of the MATDEV and jointly prepared with the CBTDEV. The COEA is always the responsibility of the CBTDEV.

Reference: AR 700–127, AR 70–1, AR 71–9 and AMC/TRADOC Pam 70–2.

2–4. MATERIEL ACQUISITION DECISION DOCUMENTATION (MADD).

The MADD is a group of documents designed to support the MADP Reviews. These documents provide the rationale for program initiation, continuing to the next phase, reorienting program structure, or terminating the program, as appropriate. These are summary level documents designed for the decision makers, as opposed to working level program documentation.

Required for: The System Concept Paper (SCP) is required for concept approval for major, DAP and IPR Programs. The Decision Coordinating Paper (DCP) is required for program go–ahead for these programs, and an updated DCP is required for the production decision for major, DAP, and IPR Programs. The SCP/DCP represents proposed program baseline (AR 70–1, Table 5–1 and Appendix B).

When required: Generally, decision documents are submitted to the decision authority at least 3 months prior to the formal decision review process.

Responsibility: The SCP is prepared by the STF/SSG or the CBTDEV. The DCP or Integrated Program Summary (IPS) is prepared by the MATDEV in preparation for the MADP review process. The decision memorandum(s)are developed by the decision authority. For major programs, the decision document is SECDEF Decision Memorandum; for DAP systems, the final decision document is a Secretary of the Army Decision Memorandum.

Reference: AR 700–127, AR 15–14, AR 70–1 and AR 71–9. (Other Program and Decision Documents will be explained in more detail in subsequent paragraphs.)

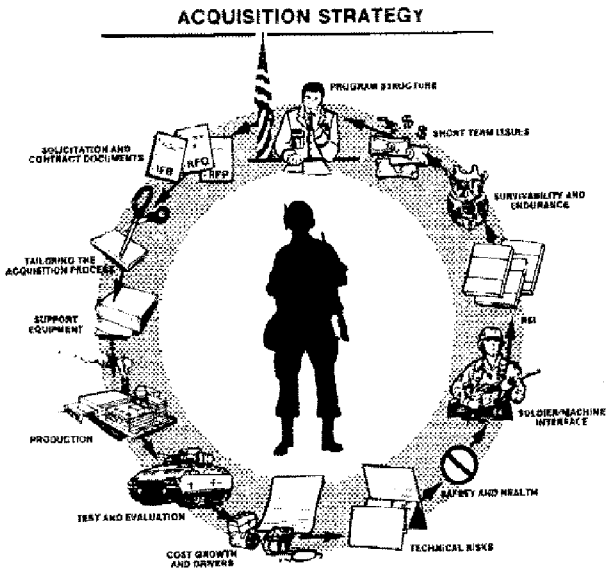
2–5. ACQUISITION STRATEGY (AS).

The AS is the set of broad concepts that provides direction and control for the overall development and production effort. It is part of the PMD and serves as a conceptual basis for formulating detailed strategies and functional plans (e.g., ILS Plan (ILSP), Acquisition Plan (AP)). The level of detail in the AS increases as the program matures. The AS is documented as part of the SCP in support of program initiation. As a minimum, it addresses the elements indicated:

- *Program Structure* – The management options which were considered contractor managed development, and those options which were government managed development.
- *Contracting Strategy* – The type(s) of contracts contemplated for succeeding phases.
- *Tailoring the Acquisition Process* – Major efforts to be accomplished during each phase of the acquisition process.
- *Supportability* – How the materiel system will be supported when fielded.
- *Manufacturing and Production* – The activities necessary to

bring the materiel system to a state of production readiness, ensuring a smooth transition to production.

•. *Test and Evaluation* – An overview of the test and evaluation planned for the program.



•. *Cost Growth and Drivers* – Readiness, O&S, and manpower cost drivers in predecessor systems, and a summary of plans for containing cost growth.

•. *Technical Risks* – The known technical risks and the plans to reduce or eliminate such risks in succeeding phases.

•. *Safety and Health* – Plans to ensure that safety and health hazard considerations are addressed throughout the design process. Discuss safety and health hazard lessons learned.

•. *Soldier – Machine Interface* – Plans to ensure soldier–machine interface considerations will be addressed during materiel system design.

•. *S&I* – Plans to ensure that standardization and interoperability goals are achieved.

•. *Survivability and Endurance* – What major survivability and endurance design goals require validation? Describe the validation methods to be used.

•. *Short–Term Issues* – Any issues which need to be resolved prior to the next milestone review, include any shortfalls in required funding. Provide a 'not–to–exceed' cost threshold which the system must stay within.

Required for: An AS is required for all programs and represent how the government plans to buy an item, system or equipment.

When required: An AS, as a subset to the SCP is required prior to Milestone I, or concept approval. A refined or updated AS is required prior to each successive life cycle phase.

Responsibility: The MATDEV is responsible for developing the AS as the guide for acquiring the materiel system, support requirements, and to document planned test and continuous evaluation. The initial AS and each update is coordinated with the CBTDEV, logistician, tester, evaluators, trainer, etc.

Reference: AR 70–1, AR 71–9, AR 700–127 and AMC/TRADOC PAM 70–2.

2–6. REQUIRED OPERATIONAL CAPABILITY (ROC).

The ROC is a formal requirement which when approved and funded commits a program to a development or production decision. Operational performance characteristics will normally be stated in bands of performance, with the exception of RAM, and will be adjusted only after the CBTDEV and MATDEV agree the changes are necessary. In addition to the operational capabilities, this includes assessments of technical issues, system support (ILS), MANPRINT, and LCC. The ROC is not to exceed six pages, plus annexes prescribed by AR 71–9.

Capstone ROCs are utilized for families of materiel. This family concept recognizes the relationship among groups and components of systems and promotes standardization. Family systems require a basic ROC plus definition of operational characteristics, Technical Assessment, System Support Assessment, MANPRINT Assessment, LCC Assessment, Milestone Schedule, and appropriate annexes for each family member.

Required for: An approved ROC is required for procurement of items to be type classified under the provisions of AR 70–61. Generally the ROC is not required if:

•. There is another valid requirements document, i.e., Joint Service Operational Requirements, Nonsystem Training Device Requirement, Telecommunications Requirement, Qualitative Construction Requirements, Quick Reaction Capabilities, Statement of Need–Clothing and Individual Equipment, or a System Specification for Equipment Rebuy.

•. Procurement is directed by HQDA or higher authority.

•. The acquisition is for product improvements of type classified standard equipment requiring less than $3 million RDTE and/or $10 million procurement.

When required: An approved ROC is required to enter the engineering development (6.4) and operational systems development (6.7) categories of the RDTE program.

Responsibilities: The CBTDEV is responsible for initiation and coordination of the ROC with industry and appropriate government agencies. The MATDEV is responsible for assisting in this process, particularly in areas addressing the technical and supportability aspects of the systems.

Reference: AR 71–9, AR 70–1 and AR 700–127.

2–7. SOLICITATION DOCUMENTS AND CONTRACTS.

The solicitation document is a formal instrument used to describe supplies and services the government wants to acquire, and to request an offer from qualified commercial concerns. It may include the system specification, Performance Work Statements (PWS) which make up the Statement of Work (SOW), delivery quantities, schedules, methods of shipment and packaging requirements, inspection and quality control or quality assurance requirements, general provisions, additional instruction to offerors, and data requirements. After the closing date for receipt of offers, a Source Selection Evaluation Board (SSEB), for major materiel system acquisitions, will be convened to evaluate the offers. These offers are scored by a Source Selection Advisory Council (SSAC), and one or more contractors are selected by the Source Selection Authority (SSA). A contract is normally awarded to the contractor(s) selected by the SSA. The contract is the legal agreement which specifies the supplies and services the contractor shall provide in return for specified government payment. Solicitation documents and contracts are required to obtain the supplies, materials, and services needed to meet readiness objectives and sustain Army forces or support activities. Solicitation documents, in whatever form, are required to provide information that describes the required supplies or services clearly and completely so that the requirement may be obtained under acceptable bids or offers for performance of the proposed procurement action, and support any contractual recommendations

or limitation contained in the contractual instrument.

Two broad categories of contracts are: (1) fixed–price; and, (2) cost–reimbursement. The fixed–price (sealed bid) contract is awarded under an Invitation for Bid (IFB) through the sealed bid process. The cost–reimbursement (negotiated) is normally awarded under a Request for Proposal (RFP) through the Competitive or Non–Competitive negotiated process. Cost–reimbursement contracts establish an estimate of total cost (target cost) for the purpose of obligating funds and establishing a cost ceiling which the contractor shall not exceed (except at his/her own expense) without the prior approval of the Contracting Officer. Cost–reimbursement type contracts are suitable for use when the nature and complexity of the acquisition are such that the costs of performance cannot be estimated with the accuracy necessary for scaled bid. Fixed price is suitable for use when the nature and complexity of an acquisition is known (a prime example is the production phase for NDI).

Required for: Solicitations and contracts are required for all supplies, services, and data required from industry.

When required: As materiel requirements are defined, contracts may be required to perform system concept studies and preliminary design efforts. During the development process contracts may be required to perform development engineering, develop prototypes and to perform initial ILS engineering or other development work. During the production process, contracts are required to produce the materiel system and selected ILS elements.

Responsibility: The MATDEV is responsible for the specifications and requirements of the technical part of the solicitation; the ILSM is responsible for the ILS, LSA, and data input to the solicitation. The contracting officer is responsible for the overall management of both the solicitation and the contract instrument. The ILSMT, engineers and other technical personnel are responsible for playing a support role.

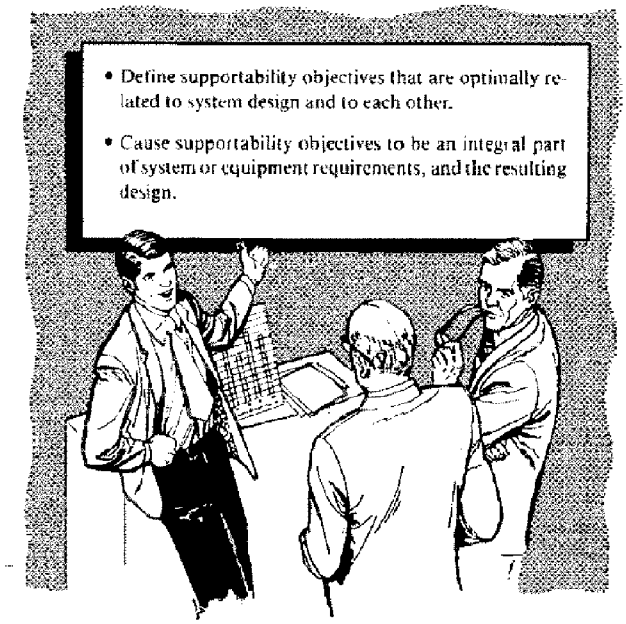
Reference: AR 70–1, AR 700–51, AR 700–127, AR 715–6, DARCOM–R 11–27, DARCOM–P 700–21, AMC Pam 715–3, Federal Acquisition Regulation(FAR) and the DoD supplements thereto.

Chapter 3

Program Goals and Thresholds

3–1. LOGISTIC SUPPORTABILITY.

Ultimately, supportability is the degree to which a materiel systems design characteristics and planned logistic resources, (including manpower), meet system peacetime readiness and wartime utilization requirements. Early logistic activities should:



These logistic supportability objectives prescribe *conditions* and *constraints* guiding the development of materiel system design and ILS. These objectives are related to the materiel system and to the overall support capability of the Army. Examples of logistic supportability issues upon which specific objectives are based, are as follows:

- Maintenance manpower or man–hour constraints.
- Personnel skill level constraints.
- Manpower and Personnel Integration (MANPRINT).
- O&S cost constraints.
- Target percentages of system or equipment failure, correctable at each maintenance level.
- Mean downtime and operational environments.

Required for: Logistic supportability requirements ensure that specific characteristics of a system and its inherent support system performance at a required readiness level are supported per specified concepts and procedures.

When required: Quantitative and qualitative logistic supportability issues and objectives are required to coincide with approval of the final requirements documents. Testing is conducted to confirm, evaluate and improve these concepts; 'critical supportability test issues' and deficiencies must be corrected prior to advancement into the next life cycle phase.

Responsibility: The CBTDEV, as the user representative, is responsible for defining supportability requirements. The MATDEV is ultimately responsible for achieving the logistic supportability of the system or equipment.

Reference: AR 700–127 and AR 70–1.

3–2. LOGISTIC CONSTRAINTS.

Integration of LSA, LSA Documentation (LSAD) and Configuration Management (CM) as a part of the ILS process ensures that logistic support considerations are integrated into the design effort, and that required support resources are developed, acquired, tested, and deployed as an integral part of the materiel acquisition process.

Required for: Logistic constraints are required to ensure logistic consideration effectively influence the ultimate design or

selection.

When required: Initial logistic constraints are identified through LSA efforts and are stated in the program initiation documents (O&O Plan and MNS). During the early concept evaluation phase, potential support problems and risks for each materiel system alternative and alternative support concept are identified. Logistic constraints such as: (1) Quantity, skill, and aptitude levels of personnel required, human engineering factors; (2) Capability and availability of existing test equipment; and (3) Transportability, maintenance, and facilities are identified and included as design constraints.

Responsibility: The CBTDEV is responsible for the initial identification of logistic constraints in requirements documents. The MATDEV is then responsible for the development of a system specification which includes the stated constraints as part of the contractual agreement.

Reference: AR 70–1, AR 71–9 and AR 700–127.

3–3. DESIGN TO COST (DTC).

This objective of DTC is establish cost of the materiel system as a factor equal in important with technical requirements, logistic supportability, and schedule throughout the life cycle of materiel system, subsystems, and components. Also, DTC establishes cost elements as management goat for acquisition mangers goal for acquisition manager and contractors. This ensures the be balance between LCC, acceptable performance band, reliability supportability characteristics, and schedule. Initially DTC activities focus on cost and performance tradeoffs early in the development process. The DTC process defines an affordable system that meet required performance levels. As development continues, DTC efforts focus on identifying areas requiring corrective action to avoid excessive costs. Cost reduction techniques such as: (1) Value Engineering (VE) or Value Engineering Change Proposals (VECP); (2) Alternative Operating and Maintenance (O&M) Concepts; (3) Manufacturing Methods and Technology (MM&T) Programs; and (4) Increased Use of Standardized Commercial Equipment; are used to keep cost goals. Engineers and managers must achieve a proper balance (in design to cost emphasis) between acquisition and operational support costs. To accomplish this, LCC estimates must be used to analyze cost effectiveness of tradeoffs when considering acquisition versus operational or support costs, comparing competing prototypes, or comparing current versus new materiel. A new requirement in the design and acquisition process is the utilization of modularization and design for discard criteria to save cost. There is an increasing trend toward partially reparable and nonreparable designs in both industrial (NDI) and military equipment's. Modular or disposal maintenance concepts cover the range of complete black–box equipment built on a single structure, to the smallest printed circuit insert. Discardable or disposable modules or parts denotes any unit to be thrown away rather than repaired after its first failure, assuming that the original diagnosis of failure is validated prior to disposal. The above should be considered as a designed in cost effective approach to maintenance. The tradeoffs, advantages, or disadvantages are analyzed through the LSA and maintenance planning tasks. Effective use of Design for Discard(DFD) will improve:

•. Design to cost (DTC) concepts

•. Standardization and interoperability (S&I)

•. Interchangeability of modules and assemblies

•. Maintenance development. The DFD or modularization program is mandatory for consideration on all programs.

Required for: The DTC and DFD concepts are required for all Army developmental materiel system or equipment under consideration for product improvement when the anticipated cost of the development or improvement exceeds the Other Procurement Army (OPA) and RDT&E dollar or threshold values.

When required: DTC is accomplished during design and development phases to evaluate cost requirements and cost effectiveness goals with the same emphasis as technical requirements and performance goals.

Responsibility: The MATDEV is responsible for the basic program and estimates. An independent parametric cost estimate (to include R&D, investment, and O&S cost) is prepared by the Army Comptroller or jointly by the comptroller and the MATDEV during the acquisition cycle. For selected system and equipment, independent cost estimates are the responsibility of and prepared by a joint team. Cost estimates for other major and non–major items are prepared by the MATDEV. The MATDEV continues to track O&S costs until the level of achievement can be determined in circumstances that approximate a mature operating environment.

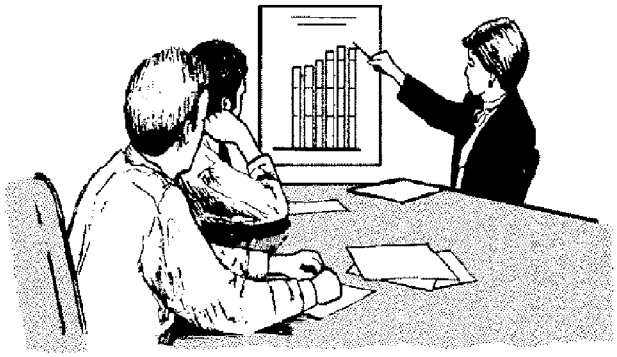
Reference: AR11–18, AR70–1, AR70–64, AR 700–127, AMCP 706–134 and MIL–STD–721(latest revision).

Chapter 4

ILS Program Components and Activities

4–1. SPECIAL TASK FORCE (STF) or SPECIAL STUDY GROUP (SSG).

An STF or SSG is convened to conduct analyses, ensure inclusion of all alternatives in the analysis, monitor experimentation, or undertake other such tasks that may require the concentration of special expertise for a short duration.



Required for: The requirement for an STF or SSG is established by the decision authority. For materiel systems which require HQDA decision on the O&O plan, the need for an STF or SSG is determined as part of the O&O Plan approval action. The STF or SSG products include the SCP, Concept Formulation Package (CFP), and a final report. The final report is provided to the convening authority when the STF or SSG is disbanded.

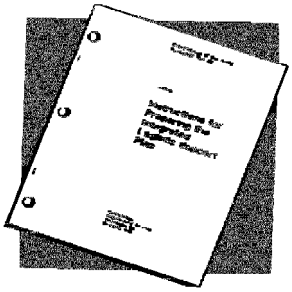
When required: The STF or SSG is normally formed at the time a major level O&O Plan is approved. The STF or SSG is convened when there is a need for special expertise for a designated period of time, technology is high risk or still developing, analytical techniques are evolving dynamically, alternatives involve other services, or there is a major resource impact in defining a need.

Responsibility: The STF or SSG is responsible for developing a charter that is tailor to the mission assigned to the work group, and the time phasing in the LCSMM. Approval of the charter is the responsibility of the decision authority when convened the group. After charter approval, the working group is responsible for reviewing the MNS, O&O Plan, other requirements and decision documents, and ensuring that there is a sure basis on which to proceed. This group is responsible for such items as the draft SCP, a CFP that supports the SCP, and the final report.

Reference: AR 70–1, AR 71–9, AMC/TRADOC Pam 70–2, AR 700–127 and MIL–STD–1388–2 (latest revision).

4–2. INTEGRATED LOGISTIC SUPPORT PLAN (ILSP).

The ILSP describes the overall ILS Program and includes all ILS program requirements, tasks, and milestones for the current acquisition phase. It also projects ILS program planning for succeeding phases. The ILSP, prepared during the Requirements/Technical Base Activities or Concept Exploration Phase and updated during succeeding phases describes the ILS program tasks that must be accomplished during the current phase and projects the ILS program tasks required during later phases. During any particular life cycle phase, the next immediate phase receives the greatest attention in the projected effort.



Required for: The ILSP is required for all systems except those with a minimal logistics impact (such as rebuys, reprocurements with no changes, etc.).

When required: The MATDEV is required to prepare, coordinate, and approve the initial ILSP at least 60 days prior to program initiation milestone review cycle. The CBTDEV, Logistician, and other program participants are included in the coordination process and provide initial inputs, considerations and constraints. The MATDEV, in close coordination with the other program participants, updates the ILSP prior to each milestone review cycle or when needed.

Responsibility: The MATDEV is responsible for ensuring that the approved ILSP becomes the ILS program implementation plan for all participating activities. The MATDEV includes the ILSP as part of the PMD, and ensures that the late approved ILSP is used as the working document by all ILS program participants. The CBTDEV and other program participants are responsible for providing specific inputs and requirements throughout the ILSP update process.

Reference: AR 700–127 and DA Pam 700–55.

4–3. LOGISTIC SUPPORT ANALYSIS (LSA).

The LSA is any analysis, however simple, that results in a decision on the scope and level of logistic support. The goal of LSA is to provide a single, uniform approach for the Services to conduct those activities necessary to:

•. Cause supportability requirements to be an integral part of materiel system requirements and design.

•. Define support requirements that are optimally related to the design and to each other.

•. Define the required support during the operational phase.

•. Prepare attendant data products.

The LSA process is structured to provide early ILS design influence to obtain a ready and supportable system at an affordable LCC. The LSA process also comprises a planned series of tasks performed under the direction of the ILSM. These include the examination of all elements of the materiel system to determine the logistic support required to make and to keep the materiel system usable for its intended purpose.

Required for: A comprehensive LSA is required for all major and non–major systems. The LSA is performed as an iterative process for definition, synthesis, tradeoff, test and evaluation of support alternatives.

When required: The requirements of LSA are applicable to major and non–major materiel system (s) acquisition programs, major modification programs and applicable research projects, as part of the scientific and engineering effort undertaken during the life of

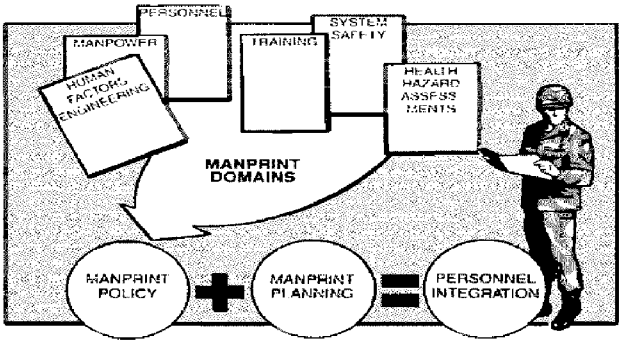
the acquisition process.

Responsibility: The CBTDEV is responsible for LSA prior to the designation of the ILS manager on the part of the MATDEV. The ILSM then has primary responsibility for the LSA program.

References: AR 700–127 and MIL–STD 1388–1 (latest revision).

4–4. MANPOWER AND PERSONNEL INTEGRATION (ManPrint).

Army ManPrint is a process oriented toward imposing human factors engineering, manpower, personnel, training, safety and health hazard assessments on the Materiel Acquisition Process (MAP).



The overall objective of MANPRINT is to influence materiel and support system design to ensure conformance with the capabilities and limitations of military and civilian personnel who will operate and maintain materiel systems. The AR 602–2, Manpower and Personnel Integration in the Materiel Acquisition Process, delineates policies, procedures and guidelines for integrating materiel development activities with the six domains of MANPRINT listed above. The focus of MANPRINT will be on constraining materiel systems design and associated support requirements so the materiel system can be effectively and safely operated and maintained within the existing Army structure. The MANPRINT and ILS processes are mutually supporting. They must be integrated to maximize their influence on materiel and support system design. The MANPRINT concept must be applied to each ILS element. In addition, LDA can be used to accomplish many MANPRINT objectives. Numerous LSA tasks establish the requirements for generating, analyzing, and documenting human factor; Manpower, Personnel, Training (MPT); and safety constraints and requirements for individual materiel development efforts (the MANPRINT critical LSA tasks).

Table 1
MANPRINT CRITICAL LSA Tasks

TASK 101: Development of an early logistic support analysis strategy
TASK 102: Logistic support analysis plan
TASK 103: Program and design reviews
TASK 201: Use study
TASK 202: Mission hardware, software and support system standardization
TASK 203: Comparative analysis
TASK 205: Supportability and supportability related design factors
TASK 301: Functional requirements identification
TASK 302: Support system alternatives
TASK 303: Evaluation of alternatives and tradeoff analysis
TASK 401: Task analysis
TASK 402: Early fielding analysis
TASK 501: Supportability test, evaluation and verification

Required for: Planning and accomplishment of MANPRINT objectives begins when the decision is made to meet a deficiency by improving or procuring equipment. At this point, SMMP is prepared. The MANPRINT constraints and requirements are incorporated into O&O Plan and MNS (if applicable). It is integrated into applicable technical and management plans (e.g., ILSP, LSA Plan, Human Factors Engineering Program Plan). MANPRINT continues to be applied throughout all phases.

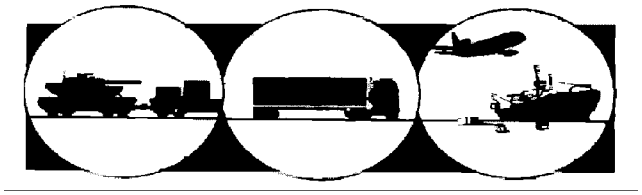
When required: The MANPRINT reviews are performed prior to major milestone decision points as a part of the ILS reviews.

Responsibility: After program initiation, the MATDEV has MANPRINT responsible. The PM or proponent MSC is ultimately responsible for applying MANPRINT; however, the ILSM, and the MANPRINT into the ILS/LSA Process. Additional information on MANPRINT is provided in AR 700–127 and AR 602–2. These documents provide policies, procedures, and responsibilities for MANPRINT.

Reference: AR602–2, AR700–127 and MIL–STD–1388–1.

4–5. ENGINEERING FOR TRANSPORTABILITY.

Engineering for transportability is the function which ensures that Army materiel is designed and constructed so it can be rapidly and efficiently moved to any place in the world, by all modes of transport (land, rail, water, and air). This formal program directs that a transportability engineering analysis be performed by the Military Traffic Management Command (MTMC) to verify that Army materiel can be rapidly moved to the battlefield. Transportability of a new system or equipment is analyzed in respect to the impact it has



on the total force transportation requirements. Although transportability is an ILS element, it is also a critical design element. Transportability, therefore must have a significant influence on the design or selection of an item being procured. This influence is greatest at the beginning of the acquisition process because the cost for design changes are minimum during the conceptual design process. The ILSM must ensure this ILS element is considered because once the conceptual design is converted to hardware, cost for changes increase dramatically.

Required for: This program is required for all end items of equipment that are obtained through the MAP for adoption into the military supply system.

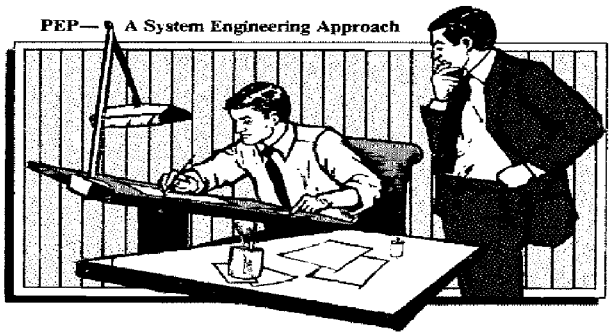
When required: Transportability approval is required prior to the production decision.

Responsibility: The MATDEV is responsible for submitting the transportability report on all problem items. An initial transportability report is submitted by the MATDEV as soon as the item's general configuration is established. The MATDEV is responsible for analyzing the transportability design of the developing materiel system. It is the responsibility of the MTMC to grant transportability approval , provided the system meets the requirements established by the requirements document. The MATDEV is responsible for notifying the MTMC of all subsequent changes after deployment. It is the ILSMs responsibility to ensure that MTMC is a functional member of the ILSMT.

Reference: DODD 3224.1, AR 70–44, AR 70–74, AR 700–127, MIL–STD–1388–1, MIL–STD–1366, MIL–HDBK–157, MIL–A–8421, MIL–STD–1388–2 (latest revisions) and MTMCP 70–1

4–6. PRODUCIBILITY ENGINEERING AND PLANNING (PEP).

A PEP is an evolutionary process which, to be effective, must begin early in the acquisition life cycle. It is conducted as an integrated and continuous part of the design process. The PEP process is applied to those Research and Development (R&D) funded planning and system production engineering tasks undertaken by the MATDEV on major and non–major materiel systems or their components to ensure a smooth transition form development Into production. The PEP is a System Engineering approach, ensuring that a system or equipment can be produced in the required quantities and in the specified timeframe, efficiently and economically, and will meet the necessary performance objective within its design and specification constraints. The PEP, as an essential part of all engineering design, is intended to identify potential manufacturing problems and suggest design and production changes or schedule tradeoffs which would facilitate the production process.



Reguired for: PEP is required for all major and non–major Army materiel system. It is also required for components under development even if there are no current plans to go into production. Additionally, PEP is an element of the market investigation for NDI.

When required: The PEP efforts normally commence with initiation of the Demonstration and Validation or Proof of Principle Phase and culminate with the validation of the system Technical Data Package (TDP), and with the plans and specifications for production.

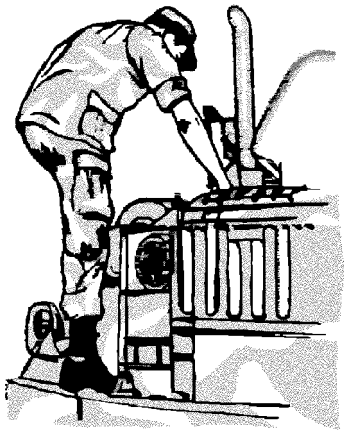
Responsibility: The MATDEV is responsible for PEP inclusions in development solicitations, contracts and subcontracts. These solicitations require that separate technical and cost sections of the contractors proposals be devoted to PEP, and the evaluation of a PEP be a factor for contract award. The MATDEV is responsible for ensuring that production plans, validated TDP (e.g., engineering drawings, specifications, tools list, equipment list, etc.) are included in the PEP plan and checked during periodic reviews. The PEP is an element of the MATDEV presentation at each design review, program review, production readiness review, configuration audit, etc., and throughout the development process.

References: AR 70–1 and AR 700–127.

4–7. RELIABILITY, AVAILABILITY AND MAINTAINABILITY (RAM).

Reliability is the probability that an item performs its intended function for the duration of a mission or a specific time interval, and is usually stated as a Mean Time (distance, rounds, etc.) Between Failure (MTBF). Availability is the percentage of time an item is in a mission committable status expressed as inherent, achieved, or operational availability. Maintainability is a measure of the ease with which as item may be maintained and repaired, and is usually stated as a Mean–Time–To–Repair (MTTR). Durability, a special case of reliability which quantifies life expectancy, may also be a stated requirement as RAM–D. In summary, RAM and RAM–D are the measure of system or equipment effectiveness and durability. The RAM and RAM–D requirements are those imposed to ensure that the system is operationally ready for use when needed; and that the system will successfully perform its assigned functions. The RAM program ensures that it can be economically operated and maintained within the scope of logistic concepts and policies.

Required for: A RAM program is required for all materiel system directed by requirements documents. The RAM programs are also required for TMDE, training devices, and facilities development.



When required: The RAM program is required for all phases of materiel acquisition. The tested and verified results of RAM certify that requirements have been met, and allow for passage through the next milestone gate.

Responsibility: The CBTDEV is responsible for establishing quantitative and qualitative RAM values and higher order effectiveness parameters (e.g., system and equipment effectiveness, annual support costs, or probability of single shot kill), and justify them in the RAM rationale annex for each ROC and other appropriate requirements document. This is accomplished in conjunction with the CBTDEV and other participants. The MATDEV includes RAM and RAM–D requirements in contract specifications, and testing criteria. The MATDEV establishes 'design to' goals for conducting the LSA and developing the support system as reflected in the LSA 'A' Record. The MATDEV is responsible for establishing and maintaining RAM programs and data base, ensuring that RAM is tested and evaluated, and ensuring the achievement of RAM requirements.

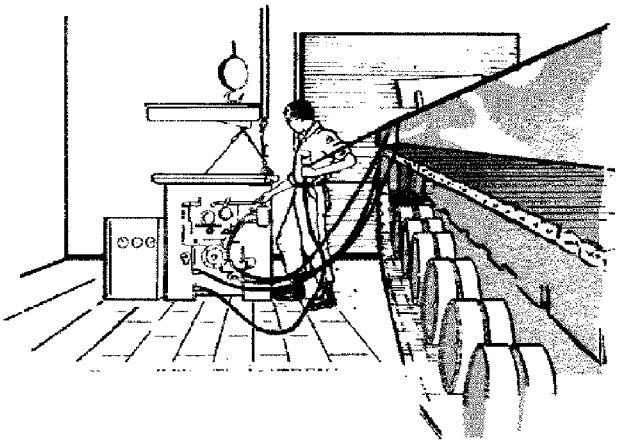
Reference: AR 702–3 and Military Standards 470, 471, 781 and 785 (latest revisions).

4–8. RELIABILITY CENTERED MAINTENANCE (RCM).

The RCM Program is a precept which uses an analytical methodology or logic to influence designed–in maintainability and reliability of material systems or equipment. The RCM analysis is used to obtain the detailed maintenance plan which provides the basis for the scheduled maintenance plan which provides the basis for the scheduled maintenance workload for the materiel system. It is an integral component of LSA and continues for the life of the materiel system. The results are normally recorded on the LSAR 'B' Record, and RCM logic is applied to selected fielded system or equipment in accordance with the Deputy Chief of Staff for Logistics (DCSLOG) approved schedules. This is being accomplished by revision of the Lubrication Orders (LOs) and Preventive Maintenance Checks and Services (PMCS) tables in Technical Manuals ('TMs) or authenticated commercial manuals. The Depot Maintenance Work Requirements (DMWRs) are written for a developmental system or equipment under the RCM concept. The DMWR for fielded systems and equipment under the RCM concept. The DMWR for fielded systems and equipment is revised, with RCM guidance, when it is necessary or cost effective to do so.

Required for: The RCM analysis is required in support of the ILSP and associated program management documentation. As the RCM and ILSP requirements are updated, the information is required to be transferred to solicitations and contracts during the remaining life cycle and acquisition phases.

When required: The RCM analysis, as one of may iterative analysis, as one of many iterative analysis processes, is required concurrent with the development of the maintenance concepts during the maintenance planning process. The RCM analysis applies for the life cycle of the materiel system.



Responsibility: The MATDEV is responsible for including RCM requirement in solicitation documents and contracts for all major and non–major systems. The MATDEV is also responsible for applying the RCM logic to fielded materiel. The ILSM is responsible for ensuring that RCM requirements appear in the ILSP, PMD, and are updated as the iterative processes continue.

Reference: DoDD 4151.16, AR 70–1, AR 700–127, AR 750–1, DA Pam 750–40, MIL–STD–1388–1 and MIL–SSTD 1388–2 (latest revision).

4–9. CONFIGURATION MANAGEMENT (CM).

Logistic supportability cannot be achieved without CM. The CM Identifies, controls, accounts for, and audits the functional and physical characteristics of a system or equipment. The program provides for two configuration control baselines;; the functional and the product. An allocated baseline, though not mandatory, may be established because of the complexity of the item, for ease of project management, for contractual integration, or for division of the total task. Baselines are initially established with the documentation of the involved configuration identification, and are approved by the government. The government approval of the baseline is recorded on the Engineering Release Record. This form is approved at the time the baseline is approved. This record is the medium by which initial release and changes to a baseline are provided to the status accounting system.

Required for: A tailored CM Program is required for each system or equipment Configuration Item (CI) or family of CIs. The approved program serves as a working document to guide the CM process. This discipline applies the technical and administrative direction and surveillance to: (1) Identify and document the functional and physical characteristics of a CI (2) Control changes to those characteristics; and (3) Record and report change processing and implementation status.

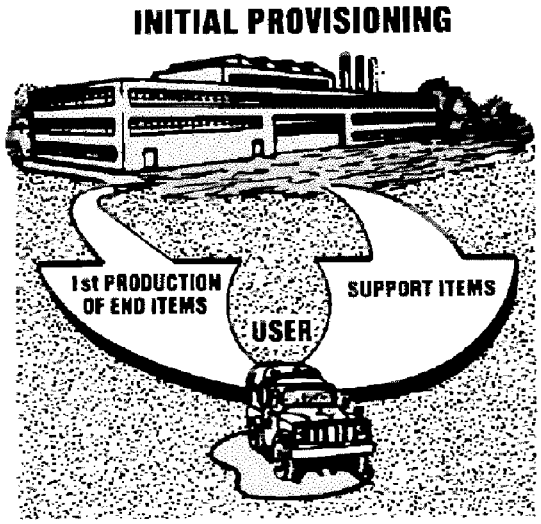
When required: A CM Plan, reflecting the governments intention during the Proof of Principle Phase.

Responsibility: The MATDEV is responsible for the supportability control applied in the program management process, as afforded by configuration control management. The requirement for CM is the responsibility of a contractor. The MATDEV is responsible for the establishment of CM, by contract. The ILSM is responsible for active participation on the Configuration Control Board (CCB).

Reference: DoDD 5000.1, AR 70–1, AR 70–37, AR 700–127 and MIL–STD–480 (latest revision).

4–10. PROVISIONING PLAN (PP).

The PP is a planning and management document prepared by the MATDEV to ensure provisioning integration, with the other logistic elements, to meet end item readiness objectives and schedules. (Provisioning, as an output, in discussed in Chapter 5).



A new, but extremely important, requirement in the provisioning process is 'Spares Acquisition Integrated with Production (SAIP)'. The SAIP is a formal acquisition strategy and provisioning management technique used to combine procurement of selected

spares and repair parts with identical items procured for installation on the primary materiel system, subsystems or equipment's to be delivered to the government. The provisioning advantages obtaining under SAIP are: (1) Timely availability of spares and repair parts; (2) Integrated configuration control and standardization; (3) Cost reduction due to economy of scale; and, (4) Quality control and quality price breaks.

Required for: The PP is prepared for each end item or system and support equipment which will require initial provisioning actions. The SAIP, like provisioning itself, is mandatory for consideration on all programs.

When required: The PP is prepared early in the Proof of Principle Phase and will be update throughout subsequent acquisition phases.

Responsibility: The MATDEV is the proponent for the PP.

Reference: AR 700–127, DoDI 4140.40 and MIL–STD–1561 (latest revision).

4–11. ILS MANAGEMENT TEAM (ILSMT).

An ILSMT is established, composed of functional and management personnel from the MATDEV, supporting MSCs, the designated CBTDEV, logistician, trainer, and other involved activities or agencies. The ILSMT is structured to advise and assist the programs ILSM with planning, requirements identification, documentation and logistic coordination. The ILSMT assists in monitoring schedules and contractor performance. The ILSMT also ensures the adequacy and timeliness of government in puts and ensures that the government and the contractor comply with applicable requirements, regulations, and guidelines for logistic materiel acquisition.

Required for: An ILSMT is required for all major systems and DAP. An ILSMT may also be established for non–major acquisition programs at the discretion of the MATDEV.

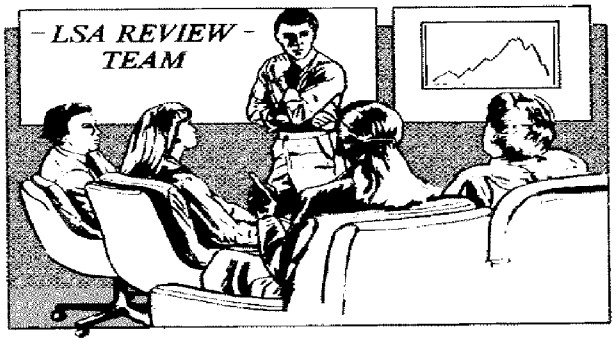
When required: An ILSMT is required prior to initiation of the market investigation.

Responsibility: The CBTDEV is responsible for establishing and chairing an ILSMT at program initiation. When ILS program responsibility transitions from the CBTDEV to the MATDEV, the MATDEV will assume chairmanship of the ILSMT. If not already established, the MATDEV will establish and chair the ILSMT upon transition of ILS program responsibility. The ILSM is responsible for the management and supervision of the ISMT. In addition to the activities enumerated above, the ILSMT is responsible for performance of LSA Review Team functions. The ILSMT is responsible for assisting in developing and analyzing the ILSP, reviewing and updating the ILS portion of the PMD, the planning addressed in this chapter, and for assisting in the development of the solicitation package and contract requirements.

Reference: AR 700–127.

4–12. LSA REVIEW TEAM.

As a sub–set of the ILSMT, an LSA Review Team conducts scheduled reviews to verify the accuracy and validity of contractor–produced LSA data, and monitor the contractor's use of this data. The primary data source is the LSAR, but the team will also examine design drawings, mockups, breadboard and brassboard prototypes, and developmental prototypes.



Required for: An LSA Review Team is required for review and verification of contractor data prior to government final acceptance. This team also guides the contractor in effective use of the LSAR. The team assures that maintenance task allocations are in compliance with the Army's logistic resource requirements. The team is required to verify that tasks are assigned to the most efficient maintenance level based on available resources and personnel skills, and that all tasks and task steps are properly accounted for. It ensures that the LSAR adequately integrated, documents, and provides traceability for logistic resources. A LSA Review Team is required for major development programs, non–major programs, NDIs, or PIPs, as a subfunction of the ILSMT.

When required: Reviews are required to be scheduled at regular intervals during the contractual effort or held, as required, whenever the volume of data to be reviewed is sufficient to warrant convening the team. Reviews are normally conducted at the contractor's facility. In such cases, the contract should specify the contractor or administrative support needed for the government reviews (e.g., facilities and office equipment; availability of drawings, mockups, and prototypes; technical and clerical assistance).

Responsibility: The MATDEV is responsible for chartering review teams and for planning, organizing, scheduling, and conducting team reviews. It is the MATDEVs responsibility to tailor team membership to program needs, and for it to be representative of the ILS functional areas. The CBTDEV, trainer, logistician, and other Army agencies and activities are responsible for active participation, when appropriate.

Reference: AR 700–127, DARCOM–P700–11, MIL–STD–1388–1 and MIL–STD–1388–2 (latest revision).

4–13. STANDARDIZATION AND INTEROPERABILITY (S&I).

The ILS element of S&I is an initiative for enhancing the total combat capability of the North Atlantic Treaty Organization (NATO) and American, British, Canadian, and Australian (ABCA) Alliance, through the cooperation of the individual alliance members use common doctrine, procedures, systems, equipment, supplies, and so forth, to sustain their resources. Interoperability is the ability of systems and military units to provide and accept common supplies and services. The S&I program enables the alliances to operate and interact with each other more effectively and efficiently, as well as reducing the support requirements and duplication.

Required for: The S&I objectives are required to be considered throughout the MAP (DoDD 2010.6). These objectives may be achieved by NATO and ABCA adoption of a United States (US) developed system and equipment or by US adoption of a NATO or

ABCA materiel system. The latter is required either by direct purchase, licensing arrangements, cooperative R&D, co–development, or co–production.

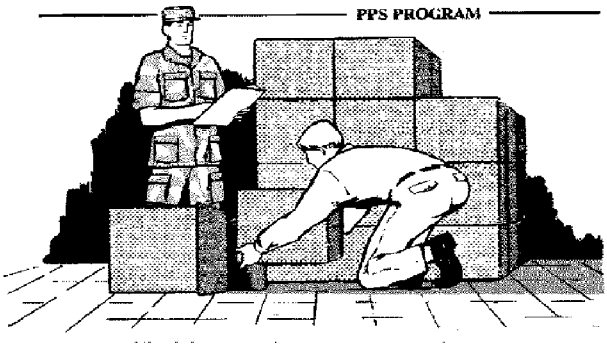
When required: The CBTDEV and MATDEV are required to investigate and incorporate S&I considerations into their program early in the acquisition cycle. The MATDEV is required to develop and maintain a detailed S&I plan which is presented at all MADP reviews.

Responsibility: The MATDEV and designated activities are responsible for establishment of S&I focal points in support of this element.

Reference: DoDD 2010.6, AR 700–127, AR 34–1, AR 34–2, AR 70–37, AR 70–1 and AR 70–10.

4–14. POST–PRODUCTION SUPPORT (PPS).

The PPS Program is the planning, management, and support activities necessary to ensure attainment of readiness and sustainability objectives with economical system support after cessation of the production phase for the materiel systems.



Required for: The PPS program and plan is required for ensuring continuity of the support concepts established during the materiel development or acquisition process. It is required for the documentation of resource and management actions necessary to ensure the sustainment of system readiness objectives and requirements, and, for all logistic support at all levels following the cessation of production.

When required: Initial PPs plans documenting resource and management actions required are included as an annex to the ILSP prior to requirements document approval.

Responsibility: The MATDEV is responsible for the development of and the ILSM for the inclusion of the PPS plan in the updated ILS prior to production and deployment decision.

Reference: AR 700–127 and DA Pam 700–55.

Chapter 5

Logistic Products, ILS Outputs

5–1. LOGISTIC SUPPORT ANALYSIS DOCUMENTATION

LSAD encompasses *all* information developed as a result of performing the tasks identified in MIL–STD–1388–1 (latest revision) as previously discussed. The LSAD, in whatever form, serves as the primary source of design related logistic support data for a given system acquisition. It provides a clear audit trail of actions taken and discussions made. Actions, decisions, and resultant products relating to logistic support of the material system are to be based on and supported by the LSAD.

The LSAR, per MIL–STD– 1388–2 (latest revision) is a subset of the LSAD. The LSAR is that data set which provides for the documentation of detailed engineering and logistic support requirement generated by the LSA process. Standard requirements, data element definitions, and LSAR data record formats are prescribe by this standard. The LSAR provides a uniform, organized, yet flexible technical data base which consolidates the engineering and logistic data necessary to identify the detailed logistic support requirements of a system or equipment.

Required for: LSAD is required for determining the impact of specific design features on logistic support, and identifying how the proposed logistic support, and identifying how the proposed logistic support system affects system RAM characteristics. The LSAD records the LSA influence on design, provides input data for tradeoff analysis, LCC studies, and logistic support modeling. The LSAD is required as a valid data exchange among functional organizations and ILS element development. The LSAD functional organizations and ILS element development. The LSAF provides the source data for the preparation of all logistic products.

When required: LSAD, to include LSAR, is required in support of the LSA program, and the LSA program in support of ILS LSAD is updated as data is specified, refined, tested, validate, and corrected.

Responsibility: The MATDEV is responsible for including LSAD in solicitation documents and contracts, and for ensuring the accuracy and validity of LSAR data prior to government acceptance. THE CBTDEV, trainer and others are responsible for providing feeder data. They are also responsible for ensuring the adequacy and validity of LSAD data by review team participation. The MRSA is the Army central design office for the LSA, LSAR computer programs, and utilization assistance.

Reference: AR700–127, AIL–STD–1388–1 and MIL–STD–1388–2 (latest revision) and AMC Pam 700–22.

5–2. BASIS OF ISSUE PLAN (BOIP).

The BOIP predicts the number of new items, personnel requirements, and Associated Support Items of Equipment (ASIOE), to be included in Tables of Organization and Equipment ((TOE), Common Tables of Allowances (CTA), Tables of Distribution and Allowance (TDA), Joint Tables of Allowances (JTA), and Additive Operational Projects (AOP) early in the acquisition cycle for planning purposes. It serves as the initial management tool used by the MATDEV for concept studies, program requirements, cost estimates, and TOA. It is the principle tool used by the CBTDEV to revise TOE, and by HQDA to forecast Initial Issue Quantity (IIQ), Army Acquisition Objectives (AAO), logistic support needs and distribution planning for proposed new items. The ILSM uses the BOIP feeder data to document support equipment requirements. Manpower requirements, in the form of Direct Productive Annual Maintenance Man–hours (DPA–MMH) requirements are established in the final BOIP through the Qualitative and Quantitative Personnel Requirements Information (QQPRI) process.

Required for: The BOIP is required for items to be procured in response to a requirements document that results in a new item requiring TC, PIPs (which greatly change the performance characteristics of the system or equipment), and major end item components (which are separately authorized items).

When required: A BOIP is required and submitted with the materiel system requirements document.

Responsibility: The MATDEV, in coordination without the

CBT–DEV, initiates the BOIP by preparing and submitting BOIP Feeder Data (BOIPED) (DA Form3362R). The CBTDEV is responsible for publishing the BOIP in the Consolidated TOE Update (CTU). The DA is responsible for approval of the BOIP prior to type classification.

Reference: AR 71–2 and AMC/TRADOC Pam 70–2.

5–3. QUALITATIVE AND QUANTITATIVE PERSONNEL REQUIREMENTS INFORMATION (QQPRI).

The QQPRI is a compilation of specified organizational, doctrinal, training, and personnel information on new or modified materiel items. This information is used to determined is used to determine the need for and the review of Military Occupational Specialty (MOS) documentation for Additional Skill Identifiers (ASI). It is needed to prepare plans that provide for the numbers of trained personnel required for operating and supporting a new or modified system, Where appropriate and feasible, the QQPRI describes personnel duties and tasks to include work units, performance standards or manpower authorization factors, recommended MS, ASI, skill levels and organization. The QQPRI should be done in conjunction with the Maintenance Allocation Chart (MAC) and the Depot Maintenance Support Plan (DMSP) in order to indicate where the support personnel will be located. This information will break down the maintenance cost by level of support.

Required for: The QQPRI data is required for projecting future manpower needs, personnel selection, training requirements for the Army, and for restructuring TOE units.

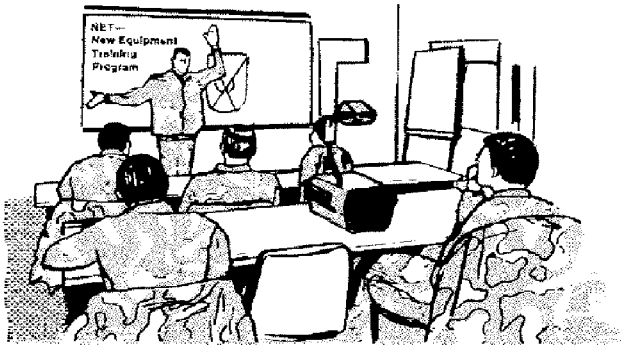
When required: An initial QQPRI is prepared and submitted with the BOIP at this time the materiel system requirements document is prepared.

Responsibility: The MATDEV is responsible for preparing the initial and final QQPRI.

Reference: AR 700–127 and AR 71–2.

5–4. NEW EQUIPMENT TRAINING (NET).

NET provides for the initial transfer of knowledge from the MATDEV or contractor to the tester and user. It represents that knowledge that is needed for operation, maintenance, and logistic support during testing and initial introduction of new materiel into the Army inventory.



Required for:
The NET Program is required for new developmental, NDI, and product improved materiel systems. NET is required only when the new materiel system has a significant personnel or training impact, and, when required, it provides the initial training.

When required: The NET Plan (NETP) is required from the MATDEV 30 days prior to the first QQPRI.

Responsibility: The MATDEV is responsible for preparing the NETP, and for providing, establishing, and conducting NET. When contractually required, contractor may administer NET for TT or UT testing (and during material fielding) when economically justified. Army schools are responsible for establishing training courses and revising them to incorporate information from the NET Program.

Reference: AR: 700–127, AR 71–3 and AR 350–35

5–5. EQUIPMENT PUBLICATIONS (EPs)

EPs include all official publications issued for the purpose of defining specific operational or maintenance requirements and limitations for a given system or equipment. They provide technical guidance for the installation, evaluation, operation, maintenance, spare and repair parts support, and disposal of Army materiel. They also are essential elements of training support for personnel operating and maintaining the equipment. An EP provides the necessary instructions for inclusion in TMs, LOs, Technical Bulletins (TBs), Supply Bulletins (SBs), Supply Catalogs (SCs), DMWR, firing tables, trajectory charts, and so on.

Required for: EPs are required for all materiel items (i.e., supportable end items), requiring operation and maintenance support at any level, which are intended for issue to the Army in the field. They are essential elements of logistic support date.

When required: EPs are essential elements of the System Support Package (SSP) and as such, draft Eps must be available for evaluation during TT/UT, and prior to the Logistic Demonstration (LD). DA equipment publications are required to be available concurrently with the materiel fielding and FUED, and must be maintained for the life of the materiel system and equipment.

Responsibility: EPs are the responsibility of the MATDEVs and are based on input requirements from the functional data requirements activities. The MATDEV is responsible for including EP requirements in the solicitation documents and contracts, and for ensuring the accuracy and validity of EP data and publications prior to government acceptance of the system or equipment.

Reference: AR 310–3, AR 700–127, AR 700–18 and AR 750–1.

5–6. MAINTENANCE ALLOCATION CHART (MAC).

The MAC reflects a materiel system's maintenance plan, and is the overall guide to the selection and allocation of maintenance functions, spare and repair parts, tools and test equipment to various maintenance levels. The MAC display a top down brake–out of functional group structure which establishes the interrelationship and relative importance of all repairable that make up the end item. The MAC identifies and authorizes specific maintenance functions (e.g., inspect, replace, repair, etc), for each maintenance level to perform. The MAC establishes a time standard for each authorized maintenance function as a functional group entry. The tools and test equipment required to perform the maintenance functions are also identified in the MAC.

Required for: The MAC is required for all systems with planned organic maintenance actions.

When required: The initial draft MAC is required as part of the preliminary SSP for TT/UT. The Draft MAC is validated during the LD and verified during TT/UT.

Responsibility: The MATDEV is responsible for MAC preparation and validation. The contractors are responsible for developing MAC requirements through LSA, based on the Army's maintenance concept.

Reference: AR 310–3, AR 750–1 and AR 700-127

5–7. REPAIR PARTS AND SPECIAL TOOLS LIST (RPSTL).

The RPSTL illustrates and list the spare and repair parts, special took, test equipment, and any other special support equipment required to use and maintain a system or equipment. It identifies the support material that is authorized for stockage at each level of maintenance. The initial draft RPSTL is derived from the allocation of maintenance tasks (reflected in the MAC) and the detailed task analyses conducted as part of the LSA. The load list and stockage list identify the items to be actually stocked by Unit and Intermediate Direct Support (DS) maintenance units, respectively. The Prescribed Load List (PLL) and Authorized Stockage List (ASL) do not necessary include all items authorized for stockage by the RPSTL. Other consideration are (1) Expected item usage; (2) Order and ship times from central supply sources; 3 Current stockage levels of common items; (4) Total quantity; (5) Budgetary restraints, influencing the PLL and ASL range and quantity. Repair parts that are depot coded may be included in a DMWR, published as separate DMWR and RPSTL, or as a TM and RPSTL.

Required for: The RPSTL may be published as separate manuals or as a combined TM and RPSTL may be published as separate manual or as a combined TM and RPSTL which may cover one or more levels of maintenance. The RPSTL supports the MAC, and is required in conjunction with the MAC to identify the maintenance functions or tasks, and the support materiel authorized for each level of maintenance.

When required: A published RPSL must be available for issue concurrently with a materiel system or equipment fielding. A draft RPSTL that is required in the SSP for, and verified during, TT/UT.

Responsibility: The MATDEV is responsible for RPSTL preparation and verification. Through LSA, the contractor develops a RPSTL that is structured in the same breakdown sequence as the MAC and the associated narrative maintenance manual repair a validated RPSTL to test agencies as part of the SSP for TT and UT.

Reference: AR 310–3, AR 750–1, MIL–STD –1388–1 and 2 (latest revisions).

5–8. DEPOT MAINTENANCE SUPPORT PLAN (DMSP).

The DMSP is prepared in coordination with US Army Depot System Command (DESCOM) to plan, coordinate, and schedule personnel requirements, TMDE, facilities, and equipment requirements. It provides a forecast of overhaul requirements, plans for testing, overhaul procedures, and procedures for conducting pilot overhaul. It also contains a time–phased schedule for the development and implementation of all planed tasks. The objective of this plan is to review and establish the logic, process, data, and methods to be used to formalize a decision regarding depot level maintenance and support services. This plan provides the recommendations required to implement the decision process. The outcome of this plan and its associated decision making process will affect the acquisition of the materiel system.

Required for: A DMSP is required for each item of equipment requiring deport maintenance tasks, as identified or defined during the maintenance support planning and analysis process.

When required: The DMSP is required during Development Proveout, and is validated by a pilot overhaul program following TT/UT

Responsibility: The MATDEV is responsible for developing the SMSP in coordination with DESCOM and the maintenance interservice support group.

Reference: DoDD 4151.1, AR 70–1, AR 700–127 and AR 750–1.

5–9. DEPOT MAINTENANCE WORK REQUIREMENTS (DMWR).

A DMWR is a TM which contains detailed instructions for the maintenance functions (e.g., calibration, overhaul, rebuild, etc.) allocated to a depot level of maintenance. The DMWR includes provisions for maintenance, testing, quality assurance, and quality control; also special equipment, tools, and test equipment. The DMWR contains forms and record keeping procedures, information on local fabrication and manufacture, procurement of parts, and other special instructions.

Required for: The DMWRs are required for each item of equipment for which depot maintenance tasks were identified and are assigned by the MAC.

When required: The DMWR is required for validation and verification prior to scheduled receipt of materiel by depot repair activities.

Responsiblity: The MATDEV is responsible for preparation and verification of the DMWR and conduct of pilot overhaul programs. Contractors are responsible, when required by contract, for identifying and analyzing depot level tasks and identifying pilot overhaul candidates.

Reference: AR 310–3, AR 750–1 MIL–STD–335, MIL–STD–1388 and MIL–M–63041 (latest revision).

5–10. SYSTEM SUPPORT PACKAGE (SSP).

The SSP is a composite of the optimum support resource which will be demonstrated during the LD and tested and evaluated during TT and UT. The SSP is a prototype of the planned system support, and should The SSP is a prototype of the planned system support, and should not be confused with the logistic support required to sustain the continuity of tests and demonstrations. The system support package is a representation of the system support structure being developed to support the new materiel system when fielded.

Required for: An SSP, in the form of a delivered component list and materiel, is required for TT, UT, first article test (when required by contract), and any subsequent tests with critical support test issues, for the test of developmental, non–development, and product improvement systems. This requirement is met by providing an SSP component list reflective of the supportability test issues. Logistic support elements are evaluated during the testing process to aid in the development of the final optimum SSP.

When required: The MATDEV prepares and forwards a preliminary SSP Component Listing (SSPCL) to the Materiel Readiness Support Activity (MRSA) and to the Test and Evaluation Command (TECOM) prior to the start of the upcoming test. The component listing required for each test includes qualities need at each test side, the dates of delivery, and who is responsible for delivering the following items:

SSP

•. Draft equipment publications, transportability guidance TMs, and other publications.

•. Personnel requirements (quantity by MOS).

•. Training requirements by MOS.

•. TMDE and support equipment (common, special, and peculiar)

•. Calibration requirements, spare and repair parts; training, training aids and devices; and instruction modules.

•. Tools (common, special and peculiar).

•. Description of the maintenance concept (including a validated MAC and draft RPSTL).

•. List of spare and repair parts prepared for the PLL, ASL, on–board spare and basic issue items.

•. Description of fixed and mobile facilities, including maintenance and calibration shop facilities.

Responsibility: The MATDEV is responsible for planning and developing the optimum SSP and for preparing an SSPCL or causing the SSPCL to be delivered by a contractor. The MATDEV is responsible for including SSPCL requirements in contractual documents, and for providing an approved SSP to test sites. The MATDEV provides those SSP and other test continuity items which are not available at the test site or from the Army inventory.

Reference: AR 70–1, AR 700–127 and AR 71–3.

5–11. PROVISIONING.

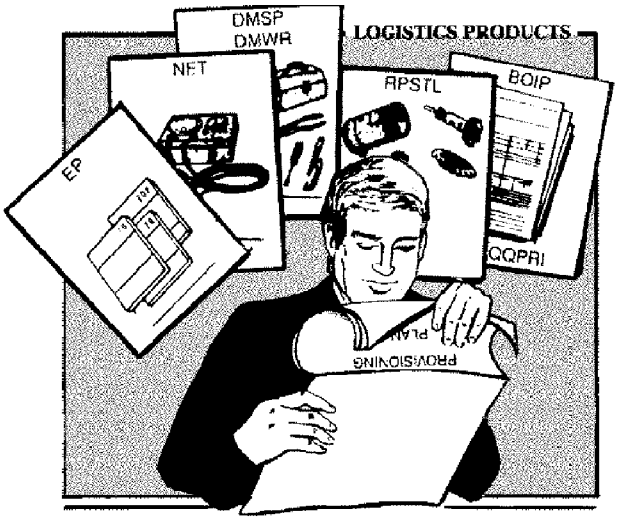
Provisioning is the process of determining and acquiring the range and quantity of support items (e.g., spares, repair parts, bulk materiel, tools and test equipment, etc.) necessary to operate and maintain a system for an initial period of time. Initial provisioning (first–time provisioning of a new end item), follow–on provisioning (subsequent provisioning of the same end item from the same contractor), and reprovisioning (subsequent provisioning of the same end item from a different contractor) are the three types of provisioning. The ILSP, when updated and expanded during Development Proveout, provides the major milestone used as the basis for updating the provisioning plan. The detailed support requirements, maintenance functions allocations, maintenance tasks, etc., are a matter of record in LSAR during development. The ILS requirements and technical data for provisioning are output of this LSA process; therefore, provisioning is a total life cycle function.

Required for: Provisioning is required for all systems and equipment's acquired or modified under the Army acquisition program, e.g., developmental, NDI PIOP, ASAP, and so on.

When required: Planning for supply support and provisioning and support is required to begin concurrently with the development of performance requirements for the materiel system or as early as possible in the Proof of Principle Phase. The Army requires that initial stockage quantities of support items be provided prior to or concurrent with the initial distribution of the materiel systems equipment.

Responsibility: Supply support and provisioning are the responsibility of the entire logistic community, CBTDEV early on, MATDEV during the acquisition program, and the CBTDEV after fielding. It is the responsibility of the PM, the ILSMT, and the ILSM to plan for provisioning prior to preparation of the MFP. It is also their responsibility to plan for provisioning in appropriate documents (i,e., standards and specification and solicitation documents) for the acquisition of materiel systems. It is the responsibility of the Army logistic community to provide timely and adequate initial support for all newly introduced materiel systems. The Army requires that initial stockage quantities of support items be provided prior to or concurrent with the initial distribution of the materiel system equipment.

Reference: AR 700–18, MIL–STD–1388–2, MIL–STD–1517, MIL–STD–1561 (latest revisions), DoDD 4140.40 and DoDI 4140.42.



Chapter 6

Test and Evaluation

6–1. TEST AND EVALUATION (T & E).

Technical Test and Evaluation (TT&E) is conducted to assist the engineering design and development process. It serves to validate attainment of technical performance specifications, to validate the adequacy of the optimum system support package, and the specific issues addressed in the TEMP. User Test and Evaluation (UT&E) is conducted to assess a system's operational effectiveness and the need for modifications. This includes compatibility, interoperability, RAM, logistic supportability, safety, health, human factors, transportability, and trainability. In addition, UT&E provides information on organization, personnel requirements, doctrine, and tactics. Development programs are so structured that the initial phase of user testing is accomplished prior to Requirements Document approval (Proof of Principle Phase) in order to meet and support the development of an AS. This activity provides a valid estimate of expected system operational effectiveness and suitability. The UT for NDI is conducted on a limited basis as determined necessary by the program participants.

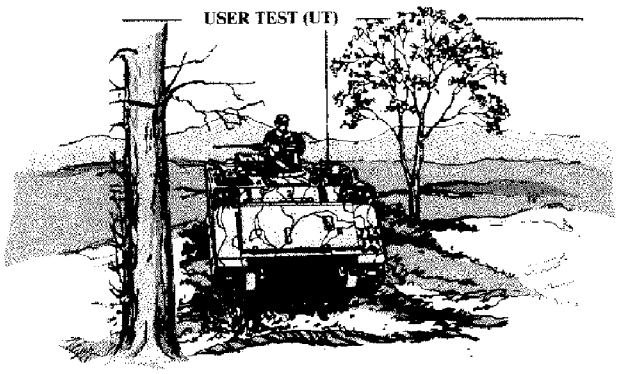
For a selected group of systems or equipment, a concept of Continuous Evaluations (CE) will be applied to user or Technical testing. This criteria requires that the operational evaluator: (1) Assess a materiel system continuously throughout the MAP; (2) Report periodically on its operational effectiveness and supportability; and (3) Monitor status of changes to ensure corrections have been made. This new program requires continuous support and monitoring by the MATDEV. Initial production testing is conducted to confirm that early production samples comply with design and performance specifications. The following types of test are typically conducted during the acquisition of a materiel system.

User Test (UT)

•. Estimate the prospective system's or item's military utility, operational effectiveness, and suitability.

•. Operationally assess the compatibility, interoperability, safety, health, RAM, logistic supportability, operational soldier–machine (materiel) interface, and need for modification.

•. Provide data to assess adequacy of doctrine, tactics, organization, training plans and instructions, publications and handbooks.



Technical Test (TT)

•. Engineering design and development have progressed satisfactorily.

•. All significant design problems have been identified.

•. Solutions to identified problems have been developed.

•. Design risks have been minimized.

•. A satisfactory degree of man–machine interface exists.

•. The system or equipment will meet its specification.

•. System technical capabilities considered critical to mission performance have been clearly demonstrated.

•. Reliability growth planning involves setting interim reliability goals to be met by the TT program.

•. The ultimate goal of a developmental program is to meet or exceed system reliability and performance requirements.

Concept Evaluation Program (CEP)

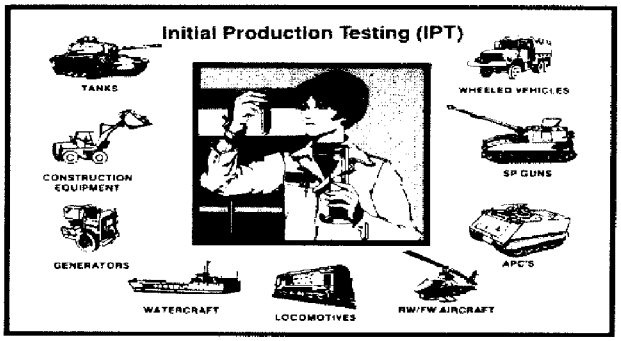
•. The CEP tests are innovative tests of new or modified hardware, managed by the CBTDEV. A CEP provides TRADOC a quick reaction and simplified process of resolving or solidifying CBTDEV requirements. The CEP test should not be used as a means of avoiding the normal testing programs.

Force Development Test and Experimentation (FDTE)

•. The FDTE is the responsibility of the user tester (e.g., TRADOC, INSCOM) and may be scheduled as needed during any phase of the MAP. The FDTE may be conducted for developing requirements documents or for developing operational issues, concepts of employment, training and support tactics and techniques which are to be evaluated for adequacy during UT of the system. A FDTE also includes field experiments which are designed to gather data through instrumentation to address a training development problem or to support simulations, models, or wargames.

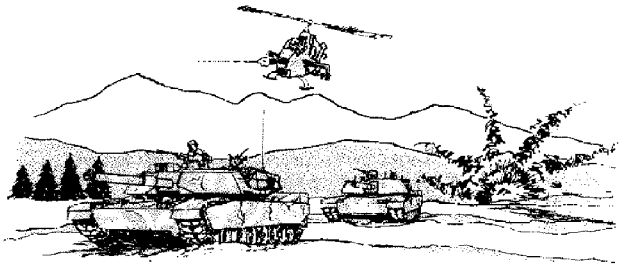
Initial Production Testing (IPT)

•. The IPT is conducted to determine the producer's performancein producing items that meet prescribed technical data package requirements and to ensure products continue to meet prescribed requirements.



Follow–On Evaluation (FOE)

•. The FOE is the responsibility of the user tester. It is testing conducted subsequent to the full production decision to provide data to answer issues that were not resolved by earlier operational testing. It is normally scheduled for programming purposes, but the decision review body or higher authority may waive the requirement to conduct an FOE. It is not used as a contract compliance tool to verify correction of deficiencies identified in earlier test and corrected in production.



Technical Feasibility Testing (TFT)

•. The TFT is the responsibility of the materiel developer and provides test data for a technical evaluation and assessment of items and systems developed by another service, a foreign nation, or a commercial firm. The results of this type of testing may provide input for a new requirements document, modification of program management documents, or initiation of a product improvement proposal.

Required for: Test and evaluation is required for the assessment of risks, evaluating operational effectiveness and suitability, ensuring the system meets required technical performance characteristics, and evaluating specific logistic support criteria.

When required: All the phases of TT/UT are required to be accomplished prior to the first major production decision. Testing requirements after that include initial production testing and may include follow–on evaluations. Testing of NDI is required to be tailored to the characteristics of the individual programs.

Responsibility: The MATDEV is responsible for technical (development)testing. The CBTDEV is responsible for user (operational) testing.

Reference: AR 70–1, AR 70–10, AR 71–3, AR 700–127, AR 702–9, AR 70–15, AR 70–61, AR 702–3, DA Pam 70–21, DA Pam 71–3. DA Pam 700–50 and DoDD 5000.3.

6–2. TEST AND EVALUATION MASTER PLAN (TEMP).

The TEMP is a management document for identifying required testing, test personnel and organizations, materiel, facilities, troop support, logistic support, and funds for implementing test programs. It replaces the Coordinated Test Program (CTP), It identifies the critical issues to be examined during testing and the planned testing to resolve these issues. It is used to plan, coordinate, integrate, and schedule all tests.

Required for: The TEMP is required for use in the PL decision review process and for the development of the development of any test and evaluation instructions as directed by the decision authority. It is updated as changes occur and may be required in support of requirements document and production decision. After incorporation of the decision authorities instructions and directions, the revised TEMP is required for the testing section of the solicitation documents, Test Design Plans (TDP), and Outline Test Plans (OTP).

When required: The TEMP is required prior to the PI decision, and is updated as changes occur to support each subsequent decision point.

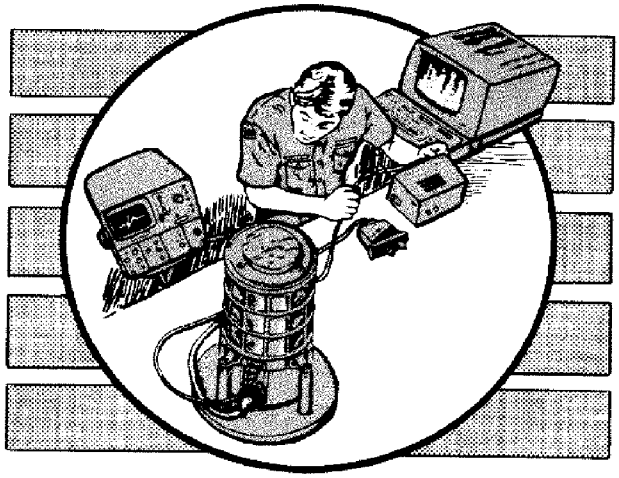
Responsibility: The MATDEV is responsible for preparing, coordinating, distributing, and updating the TEMP. The CBTDEV, tester, evaluator, trainer, MANPRINT Coordinator, and others are responsible for identifying test issues for inclusion in the TEMP.

Reference: AR 70–1, AR 70–10, AR 71–3, AMC/TRADOC Pam 70–2, DoDD 5000.3, AR 70–15, AR 702–3, AR 702–9, DA Pam 70–21, and DA Pam 71–3.

6–3. LOGISTIC DEMONSTRATION (LD).

The LD is a non–destructive disassembly and reassembly of an advanced engineering development prototype. It is performed to evaluate: (1) The achievement of maintainability goals; (2) The adequacy and suitability of tools, test equipment, technical publications, maintenance instructions, and personnel skill requirements; (3) The selection and allocation of repair parts, other equipment, and tasks to appropriate maintenance levels; and (4) The adequacy of maintenance time standards. Logistic support data and documentation, including the LSAR, are updated with the LD results. A transportability demonstration may be conducted in conjunction with the LD to ensure the materiel is transportable worldwide by any or all modes (land, rail, water, and air) of transportation. Personnel performing the LD are trained and equipped per the logistic support concepts being evaluated, and the personnel are representative of the ultimate user. Representatives of logistic and design functional disciplines, as well as maintainability, human factors and safety disciplines are participants in the LD. The LD results are recorded and maintained as part of the ILS life cycle and audit trail. A final report is prepared to analyze and summarize the findings and describe the corrective actions. Corrective actions are then taken these results are tested before the end of TT.

Required for: An LD is required for all development and product improved materiel, including any new or product improved support and test equipment intended in support of that specific materiel system. An LD is required unless it is formally waived by the appropriate decision review body.



When required: The LD is required and conducted during the Development and Proveout phase, prior to the scheduled start data of TT.

Responsibility: The MATDEV is responsible for and schedules the LD in the TEMP. In coordination with the TT and UT evaluators, the MATDEV is responsible for developing a detailed LD plan for inclusion in TDP for the engineering test phase of development test. The MATDEV is responsible for coordinating findings of the LD, and in presenting them at an appropriate command review. The MATDEV is responsible for implementing all appropriate corrective action(s) resulting from this logistic test.

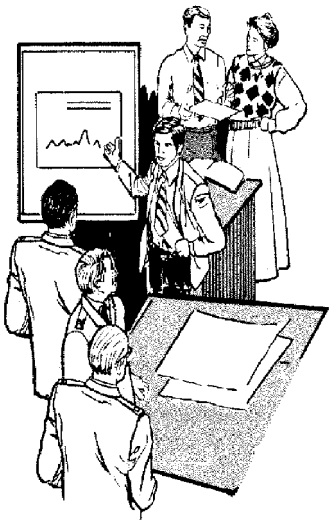
References: DoDD 5000.3, AR 750–1 and AR 700–127.

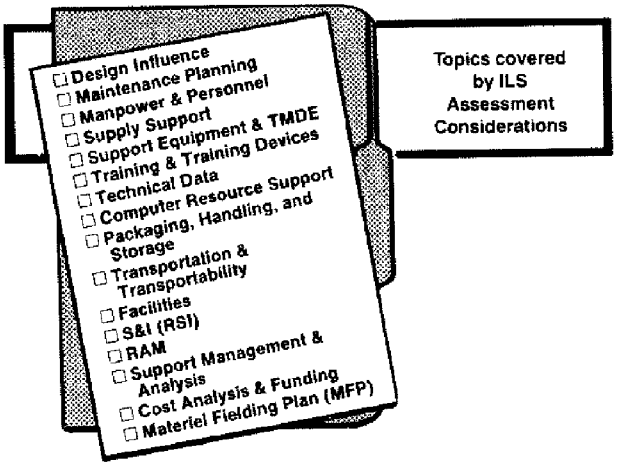
Chapter 7

Program Review, Surveillance and Control

7–1. MATERIEL ACQUISITION DECISION PROCESS (MADP) REVIEWS.

The MADP Reviews are conducted at specified major decision points (Milestones) during the acquisition process for all materiel systems. They serve as the forum to discuss critical issues that must be resolved before program decisions can be made, and to recommend alternatives to the appropriate decision authority. The MADP Reviews are scheduled so that all the decisions made can have the maximum impact on the resources that are expended in the next phase. Resources, therefore, are not obligated or otherwise committed before the MADP Review.





Required for: The MADP Review is required for all system acquisition programs. There are three levels of MADP Reviews that may be conducted. They are the Defense Acquisition Board (DAB), ASARC and the IPR. The DAB provides information and recommendations to the SECDEF when decisions are necessary on DoD major programs. The Secretary of the Army (SA) is a required member of the DAB. The ASARC is required to develop the Army's course of action on DoD major programs in preparation for a DAB Review, and envelops the basis for decision by the AAE on ASARC–approved programs. The IPR is required to make recommendations to the appropriate decision authority when milestone decisions are required for system or equipment under the IPR programs.

When required: The MADP review is required, under the traditional acquisition program, prior to the three major milestone reviews. Under the streamlined acquisition programs and NDI, the MADP review is tailored to the appropriate program decision point in the acquisition cycle.

Responsibility: The MADP review bodies are responsible for program decisions on initiation of, or changes in, program commitments. These decisions include transition to different acquisition phases and courses of action in response to an actual or imminent breach of an approved program threshold. The MATDEV/PM, CBTDEV, and TRADOC System Manager (TSM) are responsible for periodically presenting informational briefings to these members. The MATDEV is responsible for conducting the IPRs. The IPR membership includes the MATDEV, CBTDEV, logistician, and trainer. Conflicting positions are forwarded to higher levels for resolution, as appropriate.

Reference: AR 15–14, AR 70–1 and AMC/TRADOC Pam 70–2.

7–2. INTEGRATED LOGISTIC SUPPORT REVIEW (ILSR).

The main purpose of the ILSR assesses the ILS Program for a system or equipment before major decisions or as otherwise required. The ILSR is also designed for a systematic review by the DA staff members who have primary staff responsibility for plans and actions affecting the ILS of new equipment. The ILSRs are scheduled to identify, assess and resolve ILS risks and issues before the MADP Review. These ILS assessment considerations cover the following broad topics:

A general officer from DCSLOG chairs the ILSR. The other ILSR members will be general officer or equivalent civilian–level representatives from the Office of the Assistant Secretary of the Army, and the other appropriate HQDA offices and activities.

Required for: The ILSR is required and conducted on all major systems and DAP programs.

When required: The ILSR is scheduled before MADP Reviews, or as otherwise directed by ODCSLOG, in close coordination with the MATDEV, CBTDEV, and the other appropriate agencies. An ILSR may be conducted, in coordination with DCOPS after the Production and Deployment Decision, to evaluate the materiel system equipment fielding preparedness.

Responsibility: The MATDEV and CBTDEV are the responsible activities for conduction the review and providing the materiel system ILS assessment and considerations. The ILSR is scheduled by HQDA, ODCSLOG, in coordination with ODCSOPS, the MATDEV, the CBTDEV, pertinent HQDA staff agencies, and other appropriate activities.

Reference: AR 700–127.

7–3. TYPE CLASSIFICATION (TC).

The TC Designation (TCD) of an item officially reflects the degree to which it is considered operationally and logistically acceptable for its intended mission. The TCD also identifies its current life cycle status. Product improved or modified items are separately TC'd when they are significantly changed. The TC process for NDI is somewhat different. An NDI item can be TC'd in two different ways (1) If the item make and model numbers are known, the item can be TC'd by the IPR authority at the Milestone III decision review; and (2) If the item make and model numbers are not precisely known, the item can be generically TC'd if the items configuration is firmly established prior to formal solicitation. This classification is based on the specification or purchase description. The TCD is then defined (TC Standard) after source selection when the manufacturer's data is available.

Required for: The TC is required for all nonexpendable items of materiel separately authorized. This includes major materiel subsystem, components, special tools, and TMDE. The TC is required for all Class B materiel (ammunition) and certain other high–density military expendable used by the Army in the field and supported by the Army logistic system.

When required: The TC designation is required prior to procurement of the Production materiel system or equipment.

Responsibility: The TC of major system is the responsibility of the DAB.The MATDEV is delegated responsibility and authority to TC or reclassify a nonmajor system with the concurrence of all other IPR members, except those for which HQDA has specifically retained IPR approval.

Reference: AR 70–61 and AR 700–127.

7–4. MATERIEL RELEASE FOR ISSUE.

This is a formal and disciplined materiel release program and is a specific Army requirement. The program requires management controls for the review, evaluation, and certification that Army materiel is suitable for release for field issue. Materiel release occurs when it is determined that: (1) The materiel is suitable for issue in terms of quality, performance, safety, environmental requirements, reliability, maintainability, and supportability; and (2) that the required NET had been developed and that an MFP have been developed, coordinated with the gaining MACOM, and an MFA has been signed. The purpose of the materiel release, transfer, and certification program of the Army is to establish a formal process which ensures:

•. All materiel systems and equipment's deployed are suitable for fielding.
•. Materiel is supportable after fielding.
•. An audit trail is provided when full release is not met.

Army regulations require that MATDEVs maintain a formula program to include detailed planning and an audit trail which documents that all the materiel being released and transferred to the use satisfies all release requirements.. There are three types of releases:

FULL RELEASE – A full release is authorized when:

•. Materiel being released has demonstrated that it meets all system or equipment performance and safety requirement and is suitable for fielding.
•. All ILS requirements have been satisfied and the materiel is deemed fully supportable in the field.

CONDITIONAL RELEASE – Any release which does not meet one or more of the requirements of a full release is a conditional release. User acceptance and urgency statements are required for all conditional release. User acceptance and urgency statements are required for all conditional releases.

TRAINING RELEASE – A release for the purpose of training only. Training releases are not restricted to the trainer. Any receiving materiel for the sole purpose of training may be issued training release.Before equipment is used for tactical purposes, must be released by either a full or conditional release. The training release is a special case of the conditional release, there, the different release is a special case of the release, therefore, the different release authority is required.

Required for: Release certification is required for all new and follow–on acquisitions of materiel systems or equipment's. It is required for first time and follow–on reconditioning programs, selected secondary items, and for major configuration changes.

When required: Identification of materiel systems subject to release action is required early in the acquisition cycle (prior to first issue to the user) and reconditioning phase. This is required through a quarterly Materiel Release Forecast. A formal review board is required to verify that all materiel release requirements have been met, documented, and that an audit trail provided, as a 'handoff' to a gaining command.

Responsibility: The MATDEV is responsible for appointing a formal review board and certifying the release of materiel. The MATDEV is responsible for submitting the appropriate forms for materiel release and materiel release forecasts.

Reference: AR 700–127, AR 700–142 and DA Pam 700–142.

7–5. FIELDED SYSTEM REVIEW (FSR).

The primary objective of the FSR is to: (1) Access performance of a system in the field; (2) Ascertain user satisfaction regarding the newly fielded system or equipment; (3) Identify user problems in operating, maintaining, and supporting fielded equipment; and (4) Enhance operations, and correct and identify logistic related problem. The FSR is also used to obtain lessons learned and provide a mechanism for reporting findings and appropriate recommendations. As a management tool for improving materiel performance, ILS support and user data, an FSR provides a report of findings, accomplishments and recommendations. The FSRs are classified as follows:

FSR CLASSIFICATION

LEVEL I – Review of DOD major or DAP Systems. HQDA publishes a list of major and designated acquisition programs.

LEVEL II –Review of non major systems which require review at the HAEA level.

LEVEL III – Review conducted on a system designated by HQ U.S. Army Materiel Command (AMC) for command group attention or selected by the MSC commander. AMC MSC and PMs conducting a Level III FSR will arrange for participation by the USAMC Materiel Readiness Support Activity (MRSA) as an integral part of the FSR.

UPDATE – Applicable to either Level I, II, or III system reviews, product improvements and major modifications. Update reviews are initiated as a result of discrepancies reported on previous reviews, to provide an audit trail for follow up improvements and corrective actions. The update review assesses the present status of the fielded system against the baseline established by the previous FSR.

Required for: An FSR is required for all major systems and equipment's.The FSR is required to determine the level of support planned for the materiel system. The FSR is conducted at the system level, to include all subsystems, auxiliary equipment, stand alone or embedded computer software, firmware, and other logistical support elements.

When required: An FSR is required to be scheduled and approved by Higher Headquarters. Level I and Level II FSRs are required to be scheduled and conducted within 12–36 months after the fielding of the materiel system. Level III FSRs are required as specified by the MACOM. The MATDEV is responsible for the initial scheduling of the FSR. An FSR team consists of the MATDEV (assigned as team leader), and representatives for Product Assurance and Test Field Activity (PATFA), Materiel Readiness Support Activity (MRSA), U. S. Army Materiel Systems Analysis

Activity (AMSAA), and others as determining the need for an FSR, conducting the FSRs chairing the FSR team, and ensuring the FSR is properly evaluated. The MATDEV is responsible for the final report, in coordination with the CBTDEV, the user, and other appropriate activities.

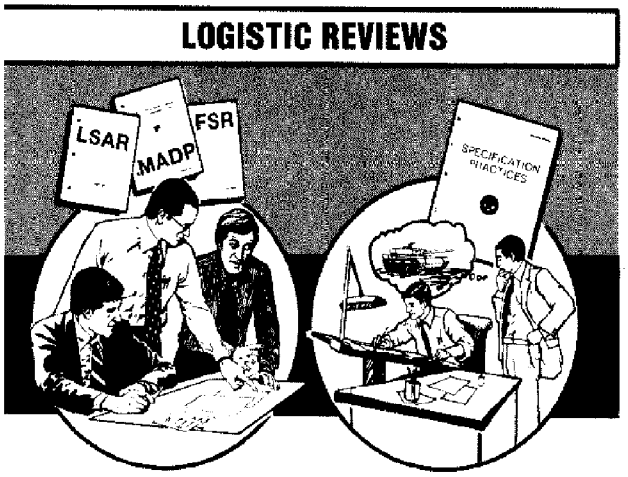
Reference: AR 700–127, AR 702–3, AR 700–18, AR 310–25 and AMC Circular No. 702–2 FSR Schedules.

7–6. SUPPORTABILITY ASSESSMENT.

ILS related assessments of supportability provide a logical thought process to assess the status of an ILS program and to address the specific supportability issues. These issues and considerations are broader in scope than the ILS elements. The supportability assessments evaluate the characteristics of a system and its support system design which provides for sustained system performance at its required levels of operation and maintenance. Supportability assessments are conducted to topical entries per specified concepts and procedures.

Required for: The supportability assessments are required for IPRs for systems so managed and to assist the DSCLOG in preparing for ASARC and DAP decision reviews, meeting DOD major system reviews (DAB), and other selected or designated programs.

When required: The supportability assessments are required to formulate and present the logistician's position regarding the materiel system, prior to each major decision review.



Responsibility: The U.S. Army Logistics Evaluation Agency (USALEA) serves as the Army Logistician, and is responsible for most supportability assessment.

Reference: AR 700–127 and DA Pam 700–28, Integrated Logistic Support Program Assessment Issues and Criteria.

Chapter 8

Coordination with the User

8–1. ARMY MODERNIZATION INFORMATION MEMORANDUM.

The Army is currently developing new materiel at a rate unprecedented in any period of peacetime in history. Fielding these new system and equipment's places a managerial burden on the entire Army, especially the gaining MACOM. The Army Force Modernization Program was established to assure effective fielding of the new materiel. One of the principal instruments for transmitting planning information to the gaining MACOM is the Army Modernization formation contained in the (AMIM). The general categories of information contained in the AMIM are: (1) System or equipment descriptions; (2) Organization, personnel, training, and doctrine; (3) Supply, transportation, and maintenance data; and (4) Facilities. Most of the data included in the AMIM are available in other sources. However, these sources are extremely varied. Some have different distributions, and the data are frequently not available in sufficient time for the gaining MACOM to plan and program appropriate actions. The AMIM is a 'requirements oriented' planning document, designed primarily for use by a gaining MACOM to develop their budgetary proposals through the Modernization Resource Information Submission (MRIS). System or equipment identified in the AMIM are categorized as: (1) Intensively Managed System; (2) Standard Form System; (3) Abbreviated Cost Form; and (4) Displaced Form Systems. The Intensively Managed System selection guidance requires the selection guidance require the selected systems to meet the following criteria:

•. Be a major modernization system or PIP which requires personnel, new or modified training, supply and maintenance support, or facilities above that required by the system and equipment being replaced.

•. An item or equipment which requires intensive and detained planning, programming and budgeting for receipt and support of the system and equipment.

•. A system or equipment which requires detailed intensive planning by virtue of the quantity of to be fielded.

•. System and equipment with comprise 80 percent of Army modernization operating and support are designated intensively managed AMIM systems, as are comptroller selected acquisition report systems.

The Standard Form Systems are modernization systems and equipment or a PIP requiring detailed planning due to impacts in the area of maintenance, supply, training, facilities, and personnel. Abbreviated Cost Form Systems are modernization items or a PIP which impact a gaining MACOM in the areas of stock fund costs Petroleum, Oils and Lubricants (POL), or NET. Displaced Form Systems are those being replaced by a Standard Form System which will be redistributed to a MACOM for the first time. The format for displaced systems is similar to that of the Standard Form System, but in somewhat lesser detail.

Required for: The AMIM is required for development of documentation in support of the Program Objective Memorandum.

When required: The AMIM is updated biennially and published in March.

Responsibility: The MATDEV and the CBTDEV are responsible for the completeness and quality of the AMIM data. The DESOPS is responsible for identifying the materiel system to be reported in the AMIM. Each MACOM or agency is responsible to designate a Force Modernization Pint of Contact for this effort Input data for AMIM is collected from the Army command to agency which is responsible for the corresponding actions, thus providing first–hand reporting.

Reference: AR 700–127, DA Pam 5–25 and DA Pam 700–126

8–2. MATERIEL FIELDING PLAN (MFP).

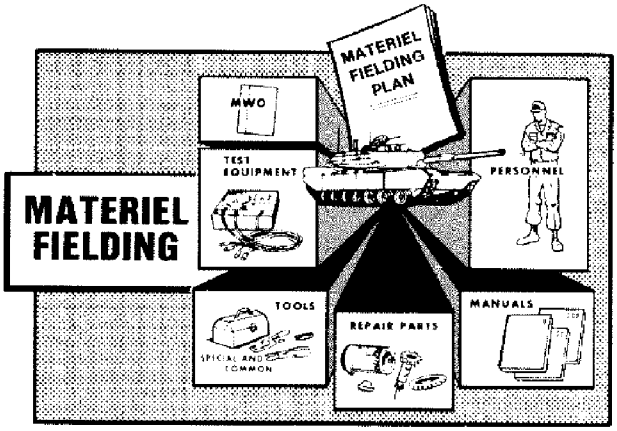
The MFP serve as the single, stand–alone document which contains plans, schedules procedures, and materiel fielder and gaining MACOM actions necessary to successfully ship, deprocess, deploy, and sustain materiel being fielded for the first time within a gaining MACOM.

Required for: A separate tailored plan is required and prepared for deploying new materiel to each MACOM (to include the Army Reserves, National Guard, and other Services and Defense Agencies); or, at the option of the MATDEV, a single MFP may be prepared with appendices adapted to each gaining MACOM.

When required: The MFP is required as determined between MATDEV and gaining command.

Responsibility: The MATDEV is responsible for LON and MFP preparation and coordination with other ILS program participants.

Reference: AR 700–120, AR 700–142, DA Pam 700–142 and AMC/TRADOC Pam 70–2.



8–3. MATERIEL TRANSFER PLAN (MTP).

The MTP is a stand–alone document which consolidates all Fielding Command, gaining MACOM, and losing MACOM actions, schedules, and procedures needed to transfer and sustain a displaced system. Detailed plans and actions required for transfer of a materiel system or equipment are described in the MTP.

Required for: A separate tailored MTP is required for all materiel transfers where the system or equipment is included in the displaced system section of the AMIM and transferred to a MACOM within which it has not been previously deployed. A Materiel Transfer Agreement (MTA) is required as part of the MTP coordination and indicates agreement by the losing and gaining MACOM. A gaining MACOM may recommend a system or equipment not meeting the above criteria be included in the materiel transfer process by forwarding the recommendation to HQDA (DCSLOG) or by using a memorandum of agreement (MOA) between the gaining and losing MACOM.

When required: The materiel transfer process is required and initiated at least 780 days prior to FUED by the materiel fielder sending and initial draft MTP to each gaining and losing MACOM as Identified in the AMIM. Key milestones for the materiel transfer process are basically the same as the fielding processes addressed above.

Responsibility: The materiel proponent for the displaced system is responsible for MTP preparation, negotiation, coordination, and for the transfer operations. It is the responsibility of the MATDEV to ensure that a fully operational and logistically supportable system or equipment is available at initial displacement. Displaced systems are redistributed under current DA distribution procedures, and system and equipment's returned to an Army depot for overhaul and refurbishment will be fielded under the TPF concept, when completed.

Reference: AR 700–120, AR 700–127, AR 350–35, DA Pam 700–142 and AMC/TRADOC Pam 70–2.

8–4. MISSION SUPPORT PLAN (MSP).

An MSP is prepared by the gaining command to define the planned maintenance and supply support structure for the new materiel system or equipment. The MSP identifies all using units, support units, and appropriate data. The MSP is prepared in close coordination with the MATDEV.

Required for: The MSP is required for all new systems and equipment's with require organic support.

When required: The MSP is required to be prepared and submitted to the fielding command in response to the initial notification of fielding.

Responsibility: The user is responsible for the MSP; and for keeping it current.

Reference: AR 700–127 and AR 700–142.

Chapter 9

Sustained Logistic Support

9–1. SAMPLE DATA COLLECTION (SDC).

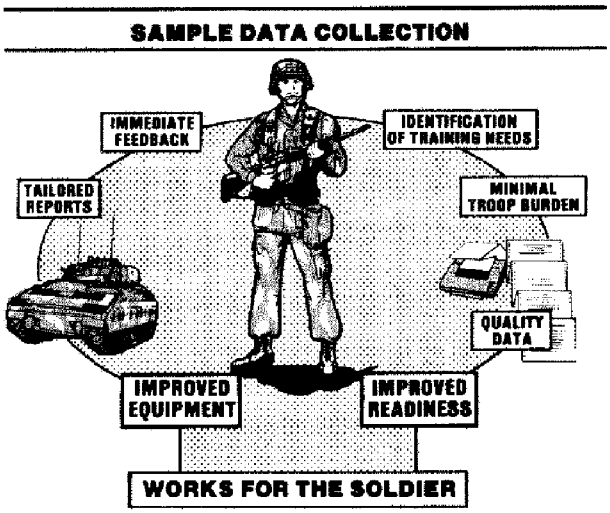
The SDC provides for the collection of maintenance data using sampling techniques on specific selected items, in specific units, for specific objectives. It is currently the only data base that provides performance and consumption data of sufficient accuracy and detail to measure fielded equipment performance and its support costs.

METHODS OF SDC:

USER PARTICIPANTS – Unit personnel record the data per the approved field procedure guide. Unit personnel record on a standard Army form and forward that data to a source designated by the proponent activity.

LEVEL I – Per the approved field procedure guide, unit personnel record the data on standard, modified standard, or approved unique forms. On–site proponent agency members or representatives collect the data forms, obtain additional information, conduct edit routines, perform quality checks, and forward data to a source designated by the proponent activity.

LEVEL II – Per the approved guide, proponent agency members or representatives record data as events occur, collect SDC data forms completed by unit personnel, and conduct on–site observations and verbal inquiries. Data are assembled, edited, quality checked, and forwarded to the proponent activity.



Required for: The SDC Program is required for selected systems as directed by higher headquarters.

When required: The SDC is performed as designated. For those materiel systems requiring SDC, the data collection effort begins at FUED.

Responsibility: The designation of SDC requirements are a shared responsibility. However, DSCLOG is responsible for the general staff supervision of this program. With MRSA as the executive agent for the program, they develop policy guidance and direction for management of program, approve concept papers and plans for staffing, staff and coordinate required SDC documentation, and manage the evaluation program.

Reference: AR 700–127 and AR 750–37.

9–2. MATERIEL CONDITION STATUS REPORT (MCSR).

The MCSR provides: (1) The DA staff with a collection of readiness information on those systems which are considered essential and require a significant amount of logistics support in both supply and maintenance areas to ensure operational reliability; (2) Commanders at all levels with a means of forecasting equipment availability based upon current and historical data; (3) Unit commanders who are required to report unit status per Unit Status Reporting, with a worksheet for computing equipment status and equipment readiness rates; and (4) Commanders of logistic support activities with the readiness posture of equipment within the reporting Divisions, Brigades, Regiments, and parent units.

Required for: The MCSR is required for all Army units having the following on hand at any time during the reporting period: (1) A piece of equipment designated as reportable within Chapter 4, Appendix B, Section 1 of DA Pam 738–750, The Army Maintenance Management System (TAMMS); and, (2) Operating under one or more of the utilization codes having an asterisk as listed in Table A–7, Appendix A, DA Pam 783–750, TAMMS.

When required: All active Army units are required to make a monthly DA From 2406 MCSR. The monthly DA Form 2406 Report covers a 1 month period, and is submitted by the fifteenth day of the following month.

Responsibility: The DCSLOG is responsible for and serves as the proponent for DA Form. The DCSOPS is responsible for and serves as the proponent for the unit status feeder data on DA Form 2715.

Reference: AR 11–14, AR 220–1 and DA Pam 738–750.

9–3. PRODUCT IMPROVEMENT PROGRAM (PIP).

The PIP is the first preference in meeting a materiel system need, and is the process by which: (1) Existing Army materiel is improved to the extent that is satisfies more stringent user requirements; (2) It provides improved performance and significantly reduces logistic support and operating costs. The PIP is basically an evolutionary development effort. It also can be a p3I, planned for future evolutionary improvement of developmental systems for which design considerations are effected during development to enhance future application of projected technology. This effort includes improvements planned for ongoing systems that go beyond the current performance envelop to achieve a needed operational capability. Therefore, it is preferred over the development and NDI alternatives that may also satisfy and approved operational requirement.

Required for: The PIP is required for configuration change or modification of a materiel type classified Limited Procurement (LP) or Standard (STD) System. They are not required for redesign of standard items of materiel or a development effort that leads to a new item and is supported by a materiel requirements document. An LSA Program is required on PIPs to evaluate the logistic and associated cost impacts of proposed changes.

When required: A PIP may take one of several forms, ranging from acquisition of improved components to the application of MWOs on individual items in the inventory. A PIP is required for and justified by a product improvement proposal (DA Form 3701–R). Until proven other wise, product improvement is required to be considered during the Requirements and Technical Base Activities and during the Proof of Principle Phase as a feasible alternative to undertaking new RDTE or NDI acquisition efforts.

Responsibility: The MATDEV is responsible for determining the need for a PIP, coordinating requirements with Assistant Secretary of the Army for Research, Development and Acquisition (ASARDA), CBTDEV, and United States Army Safety Center (USASC). The MATDEV must also justify the effectiveness of a PIP, and ensure that PIPs are tested and evaluated.

Reference: AR 70–2, AR 70–15, AR 70–37, AR 750–10 and AR 700–127.

9–4. PRE–PLANNED PRODUCT IMPROVEMENT (P31).

A P3I is a planned future evolutionary improvement for a system under development. Design considerations are effected during the development to enhance future application of a projected technology. A P3I includes, but is not limited to: (1) Improvements planned

for an existing item which go beyond the current performance envelope to achieve a needed operational capability consistent with the MAAs; (2) The reduction of near–term requirements and the addition of growth provisions to achieve full capability over time through phased 'block improvements.' A P3I minimizes technology through planned upgrades to deployed subsystems which offer the greatest benefits. The basic objectives of P3I are to:

•. Shorten the acquisition and development time.
•. Extend the useful lie of a materiel system.
•. Reduce technical, cost, and schedule risks.
•. Reduce the requirements for major system new start.
•. Improve materiel system survivability, capability and endurance.

Required for: A P3I Program may be required for a system where requirements documents do not contain provisions for future growth, or that must be revised to support a basic or improved configuration which facilitates future product improvements. A P3I Program may be derived from a marginally developed technology, anticipated funding constraints, projected threat changes, and various other reasons.

When required: A P3I Program is not required for just any system. It is utilized to take advantage of new technology, which will increase capability or survivability of a system. It is applied as the technology becomes mature.

Responsibility: The MATDEV is responsible for determining the need for and justifying the effectiveness of a P3I Program.

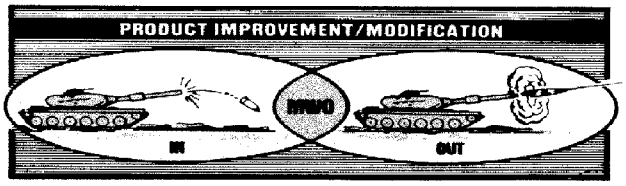
Reference: AR 700–127 and AR 70–1.

9–5. MODIFICATION WORK ORDER (MWO).

All proposed modifications to Army type classified equipment are prepared, submitted, and approved under a PIP and normally accomplished via an MWO. As stated above, the objectives of the PIP are to extend the useful like of existing materiel. The MWO tends to: (1) Increase safety of personnel; (2) Reduce damage to equipment during use; (3) Reduce the cost of production operational support; (4) Improve RAM; (5) Correct performance deficiencies and improve standardization, compatibility, or simplification; (6) Comply with legislative requirements; or (7) Conserve energy.

Required for: Authenticated and published MWOs or Conversion Work Orders (CWO), supported by a PIP, are required as authorizing documents to install mandatory modifications or conversions to equipment after production. This is required and applied regardless of where the application is to be performed (in the field, depot, contractor plant). The only exception (not requiring a published MWO or CWO) is when application funds are not programmed through a PIP, but programmed through other depot maintenance programs.

When required: Mandatory modifications required to be developed as an approved PIP to meet one or more of the objectives listed in the PIP Program guidance. Improvements under the POP must involve an engineering effort such as design, evaluation, test, documentation, and must apply to the operational inventory as well. Mandatory configuration changes resulting from safety–of–use messages and the commercial Vehicle Safety Recall Campaign Directive also require a published mandatory MWO. The changes resulting from the MWO are referred to as mandatory modifications and are classified as Urgent, Limited Urgent, or Normal.



Responsibility: The MATDEV is responsible for initiating, developing, budgeting, funding, and scheduling an MWO for their assigned materiel. The MATDEV is responsible for negotiating a Memorandum of Understand (MOU) with materiel users for installation of modifications kits.

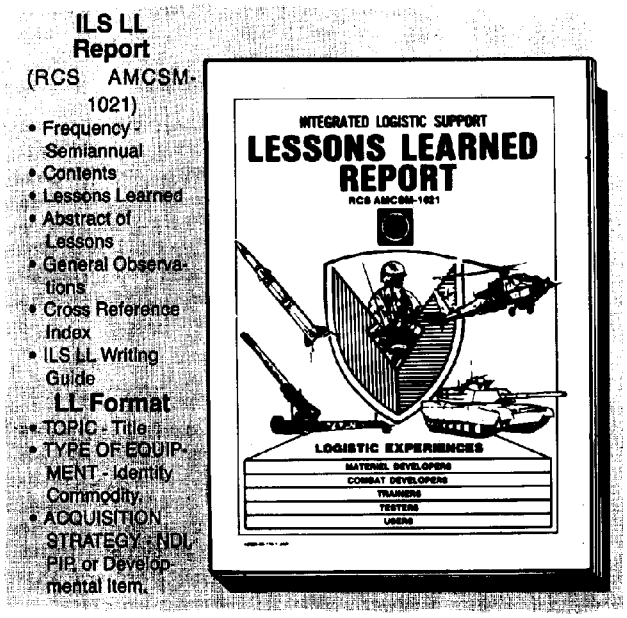
Reference: Public Law Title 15 (USC Section 1402), DoDI 7220.29H, AR 70–15, AR 70–37, AR 700–127, AR 750–1, AR 750–10 and MIL–M–63002 (tm).

Chapter 10

ILS Management Aids

10–1. INTEGRATED LOGISTIC SUPPORT (ILS) LESSONS LEARNED (LL).

The ILS LL Program provides a forum for MATDEV, CBTDEV, trainers, testers, independent evaluators, contractors, users, and other agencies involved in the MAP to disseminate factual experience of proven value in the conduct of ongoing and future program. A 'LL' provides the reader with a working knowledge of real or potential problems and how a problems and how a problem was overcome, or serves to introduce new and innovative ideas. An LL may foster improvements in ILS and MANPRINT policies and procedures, enhance materiel supportability, facilitate program management, or minimize LCC. Documented LL are published and distributed semi-annually in the ILS LL Report. Tailored reports van be provided by MRSA, on request, covering specific aspects of ILS management.



•. *LIFE CYCLE PHASE:* When Problem Will Most Likely Occur.
•. *LL* Describe Briefly the Primary LL.
•. *PROBLEM* State the Problem Encountered or Avoided.
•. *DISCUSSION* Provide Detailed Discussion of Problem.
•. *ACTION TAKEN/APPROPRIATE ACTION* Describe solutions or Proposed Solutions.
•. *CROSS REFERENCE* List ILS and Management Areas Affected.
•. *REFERENCE* List Publications That Apply
•. *ORIGINATOR* Identify the Submitting Command and Designated POC.
•. *COORDINATION* Identify, by Activity, All Coordination Accomplished.

Required for: The ILS LL are required for any materiel acquisition, developmental, or NDI that may be a source of an ILS, or MANPRINT LL.

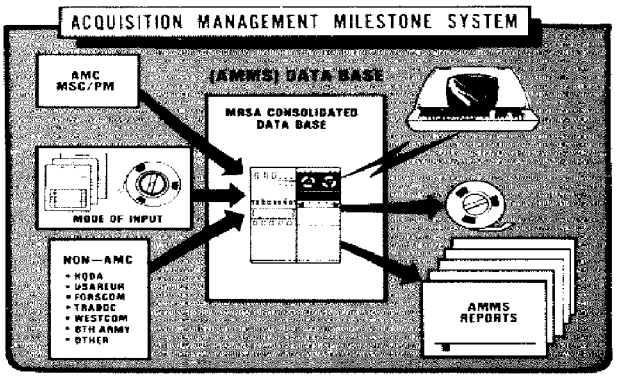
When required: The ILS LL are required to be documented and submitted to USAMC Materiel Readiness Support Activity, AMXMD–EI, Lexington, KY 40511–5101, as they occur. An 'LL' may occur at any time during the acquisition cycle, but is more likely to occur in the early or late stages of the acquisition cycle.

Responsibility: The agency or organization experiencing the 'LL' should document and provide the information to Materiel Readiness Support Activity (MRSA), the address shown above. Functional personnel within MRSA, and other AMC organizations as necessary, review, analyze, and research the 'LL' to determine its validity. Validated 'lessons learned' are published and distributed biannually DA ILS LL Report (RCS AMCSM–1021). The ILS LL submissions should include the information depicted. Requests for these reports may be submitted to the address above.

Reference: AR 700–127 and AR 750–1

10–2. ACQUISITION MANAGEMENT MILESTONE SYSTEM (AMMS).

AMMS is an automated management information system designed to provide the DA community with a standard system for scheduling the major milestone events throughout the acquisition cycle for developing, testing, and fielding a total system. AMMS provides the DA community with a tool for managing and evaluating the accomplishment and progress of the acquisition program. The use of a standard set of program milestones and definitions permits an interchange of information between MACOMs for integrated acquisition programs. An AMMS milestone schedule is maintained by system and equipment proponents at the central database at MRSA.



Required for: AMMS milestone reporting is required for all funded materiel system or equipment acquisitions leading to TC.

When required: The AMMS reporting requirements are initiated by the CBTDEV upon the start of O&O Plan development.

Responsibility: The materiel system or equipment proponent is responsible for the development and updating of each milestone schedule. This includes system peculiar data as contained in the header section, milestone dates, and narrative explanations relative to missing or non–schedules dates for AMMS. The ILS office within the proponent command is responsible for maintaining accurate data and the timely forwarding of data to the AMMS central database with the exception of certain milestones for AMIM Intensively Managed, Standard Form, and Displaced Systems. MRSA is responsible for maintaining the central data file and publishing quarterly reports.

Reference: AR 700–127 and DA Pam 700–26.

10–3. COMPUTER AIDED MILESTONE SCHEDULE (CAMS) MODEL.

CAMS is an AMMS management tool designed to assist the materiel system and equipment proponent for new and current acquisition programs in establishing an AMMS milestone schedule. This program, through the identification of significant life cycle dates, determines the scheduled dates for the remaining AMMS milestones. The milestones for which dates can be entered (depending on the life cycle phases desired), are Program Initiation (O&O or MNS), the MDRs I, II, and III, and the initial FUED. Based on these dates, the milestone schedule is produced and provided to the materiel system manager. The ILS or materiel system manager may revise the schedule to better align the materiel system and equipment schedule with the program requirements. Upon entry into the development process, the automated program reschedules milestones to compensate for changes tot he overall materiel system development.

Required for: CAMS can be used to compare a current schedule to a proposed schedule, assist in ILSP preparation and IPRs. CAMS is a management tool, not a requirement, and is available upon request from MRSA. Output from the CAMS Model can be used to provide required input to AMMS central database.

When required: The milestone schedule is required when the O&O Plan is approved and materiel system program is funded.

Responsibility: The MATDEV is responsible for establishing the milestone schedule and ensuring it is consistent with current policy. CAMS is available to MATDEVs through on–line access or by a written request to MRSA for assistance. The MATDEV is responsible for validating CAMS output and entering and maintaining the resulting AMMS schedule.

Reference: AR 700–127.

10–4. LOGISTIC SUPPORT ANALYSIS APPLICATION STATUS SYSTEM (LASS).

LASS is designed to provide and automated means of maintaining and retrieving application status information on LSA and LSAR requirements during all life cycle phases of a materiel system or equipment acquisition.

Required for: LASS provides for a centralize source of LSA and LSAR status information which is used by the system or equipment proponent to: (1) Assess the adequacy of CBTDEV and MATDEV LSA and LSAR application; (2) Identify problem areas and corrective actions required for resolution; (3) Evaluate cost effectiveness of the total LSA program; and (4) Determine the degree of compliance with DoD and DA regulatory requirements. LASS is used to: (1) Track the status of LSAR and attendance report; and (3) Utilization of the data are record, card, and element levels. In addition, LASS provides for the documentation of associated LSA and LSAR cost and schedule information, narrative resulting from LSA technical reviews, applicable Data Item Descriptions (DIDs) and appropriate tailoring codes (e.g., hardware indenture, maintenance levels, and related program requirements). (The MRSA LASS database utilizes a Hewlett Packard 3000 Computer.) The system is user–friendly with menu driven data terminal screens for presentation of information and prompting.

When required: Initial header data may be entered into LASS when the materiel system is first identified the concept phase of the life cycle. As detailed LSA and LSAR requirements are identified, they may likewise be entered and updated. The system provides an audit trail of information through all life cycle phases.

Responsibility: MRSA is responsible for maintaining the LASS database and establishing weapon system header information. The materiel system proponents are responsible for submission of accurate, complete, and timely LSA and LSAR management data that is normally included in the system or equipment solicitation document and resultant contract.The MATDEV and MRSA monitor the database for management purposes.

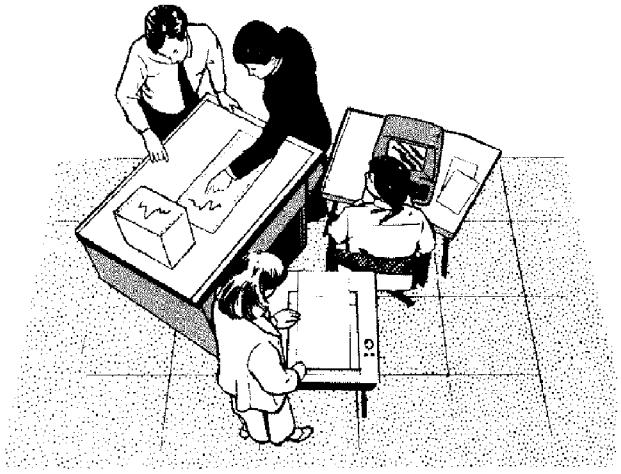
Reference: MIL–STD–1388–1, MIL–STD–1388–2 and AR 700–127.

10–5. FORCE MODERNIZATION REPORT (FMR).

A FMR is collection of system specific LL during the initial materiel fielding and use of a new system or equipment. The purpose of the FMR is twofold: (1) provides information to all using units regarding significant successes and problems encountered by previously equipped units; and (2) It allows advanced planning by future gaining units in preparation for logistic support requirements, to include training, requisitioning, funding, deprocessing, and safety. The FMRs are prepared under the purview of the DA ILS Lessons Learned Program.

Required for: The FMRs are prepared on an 'as required' basis.

When required: Although not specified by regulation, to be of maximum benefit, FMRs should be distributed to using units within 12 months after completion of the FSR. The major determining factors are: (1) Availability of a FSR which serves as the basic source of FMR information (FRSs are conducted between 12 and 36 months after the FUED for selected systems); and (2) Timeframe for remaining fieldings of the new materiel system.



Responsibility: The AMC Deputy Chief of Staff for Supply. Maintenance, and Transportation is the DA Executive Agent for the ILS LL Program. Within AMC, MRSA is responsible for preparation, coordination, and distribution of FMRs.

Reference: AR 700–127.

Appendix A

Typical or Suggested Responsibilities of MATDEV ILS Offices

A–1.
Establish local command ILS policies and procedures for implementing AR700–127 and other ILS requirements.

A–2.
Provide ILSMs for programs not managed by a PEO/PM, prior to the designation of a PEO/PM or where the PEO/PM requests an ILSM form the ILS office. These ILSM responsibilities are described in Appendix B.

A–3.
Support and provide technical assistance to all ILSMs and PMs in the execution of ILS responsibilities. This support and assistance will include participating with other functional elements in the preparation of ILSPs, MFPs, and ILS aspects of system development specifications, solicitation documents, source selection factors, contract evaluation, and funding.

A–4.
Manage the accomplishment of ILS requirements and ensure coordination with all ILS participants, both internal and external, to include the STF or SSGs prior to PY or until designation of a materiel system manager or PEO/PM.

A–5.
Review and provide ILS input to the MNS, requirement documents, and other ILS and acquisition program documents.

A–6.
Provide central control of the BOIPFD and QQPRI, and ensure processing and follow–up of data interchange requirements.

A–7.
Provide for central control of the AMMS and the AMIM information.

A–8.
Provide a focal point for force modernization actions.

A–9.
Perform periodic ILSRs of all assigned acquisition programs.

A–10.
Provide expertise for LSA and LSAR, to include participation in the application to materiel acquisition programs. Exercise overall command management and control of LSA and LSAR and provide technical assistance to materiel proponents.

A–11.
Provide the logistic skills necessary to evaluate the adequacy of logistic design requirements and ensure incorporation of these requirements into the system development specification.

A–12.
Provide an ILS impact assessment of ECPs, and other proposed materiel system changes.

A–13.
Serve as the command manager for the overall initial provisioning process, and identify, and provide for resolution of systemic problems.

A–14.
Participate in ILSMTs, TIWGs, MADP Reviews, and other program reviews, to include the materiel release decision process. Provide an ILS member to the MRRB.

A–15.
Develop plans, policies, and procedures necessary to acquire, catalog, store, manipulate, analyze, and retrieve field feedback on logistic design shortcomings.

A–16.
Establish ILS agreements (e.g., MOUs) as required to assure adequacy of support and clarification of mutual roles and responsibilities.

A–17.
Ensure utilization of latest state–of–the–art ILS techniques in the evaluation of the ILS program.

A–18.
When not the materiel proponent, provide an associate ILSM to support the materiel proponent ILSM.

A–19.
Establish and manage a command ILS training program and ILS career development program.

A–20.
Provide familiarization and orientation ILS training to all command personnel involved in the MAP.

A–21.
Provide command POC for the ILS LL Program.

Appendix B

Typical of Suggested Responsibilities of an ILS Manager

B–1.
Be responsible to the materiel proponent for the overall management and execution of ILS.

B–2.
Establish and chair ILSMTs, LSA and LSAR Review Teams, for accomplishing total system ILS objectives and tasks.

B–3.
Manage the overall ILS effort for the assigned materiel program, and ensure integration of logistics related efforts of the various participating functional organizational elements. (NOTE: Specialized functional work element and staff guidance will continue to be the responsibility of the appropriate functional directorate or office, which will be exercised through the ILSM for total system ILS related direction).

B–4.
Ensure ILS representation from other commands or activities(e.g., readiness elements, TECOM, DESCOM, MRSA, USACTA, MTMC, AMSAA and others to participate in TIWG meetings command reviews decision review meeting such as MADP reviews and MRRB, and configuration audit reviews.

B–5.
Establish working interface and provide assistance, guidance, and coordination with other Army organizations and activities (e.g., CBTDEV, trainer, tester, USALEA, and participating Military Services).

B–6.
Participate in the development of AS, solicitation documents, source selection criteria, and resulting contracts.

B–7.
Accomplish the integration of the logistic portion of the materiel

system description or specification section of solicitation documents, to include ILS related PWS in contract SOW, and ensure compatibility with other portions of the description or specification section.

B–8.
Prepare, coordinate, update, and manage the ILSP. Ensure the ILSP serves as a stand–alone document for overall ILS program management and execution.

B–9.
Manage the development of the QQPRI and BOIP feeder data (BOIPFD).

B–10.
Effect timely identification of ASIOE tied to the BOIP and component end items, and ensure necessary follow–up for timely delivery. Maintain visibility and status of BOIPFD, ASIOE residing in the developmental system's BOIP file record, component major items identified in the Standard Study Number (SSN) file and Interchange of Procurement Appropriation Item Data transactions. Ensure compatibility of BOIP/SSN files with both MFPs and data interchange.

B–11.
Provide ILS input to requirement documents, PMS, Program Management Control System (PMCP), and Baseline Cost Estimate (BCE), and ensure coordination with appropriate ILS office.

B–12.
Provide overall direction for initial provisioning actions.

B–13.
Participate in the overall coordinated test program process. Provide ILS aspects of materiel system test and evaluation, to include test issues and objectives for supportability test and evaluation. Direct the development of the SSP (develop or cause to be developed the SSP Component List) and ensure compatibility with ILS test and evaluation requirements.

B–14.
Through the ILSP, establish and coordinate (with participating commands and agencies) total ILS funding requirements and maintain visibility of funding status. Where shortages exist, ensure program impacts are documents and coordinated.

B–15.
Establish necessary agreements (e.g., MOUs) with supporting ILS offices.

B–16.
Coordinate the development and selection of preferred logistic support alternatives for proposed materiel systems design.

B–17.
Manage the overall LSA and LSAR effort including overall management of LSA review team functions, and coordination of LSA and LSAR contract data requirements.

B–18.
Participate with development engineering functional elements to provide for influence on materiel design and ensure emphasis on maintainability engineering and logistic–related RAM and RAM–D aspects of the program. Participate in the preparation of maintainability planning.

B–19.
Plan and schedule overall ILS execution to include integration of ILS into the MAPs.

B–20.
Establish tasks, milestones, and management controls of planning, acquiring, and verifying the overall ILS program and logistic support element availability for new or product improved materiel system, and ensure compatibility with the overall acquisition program schedule.

B–21.
Document the status of the ILS program for each MADP Review to ensure the passage of materiel system and equipment from one life cycle phase to the next occurs only when all essential ILS milestones and requirements have been satisfactorily accomplished or that provisions have been made for their accomplishment.

B–22.
Provide for preparation, coordination, and execution of the MFP, and manage the materiel fielding process.

B–23.
Assist in establishing, within the appropriate readiness element, the logistic technical data base (acquisition data and field data collected after deployment) required for post–deployment assessments and logistic support.

B–24.
Validate and certify materiel system supportability prior to release of materiel for fielding.

B–25.
Participate in Logistic Status Reviews, FSRs and Post Provisioning Reviews (PPRs).

Appendix C

Bibliography of Principal Reference Materials

ARMY REGULATIONS

11–18.
The Cost Analysis Program

25–1.
The Army Information Management Program

25–5.
Information Management for the Sustaining Base

34–1.
U.S. Army Participation in International Military Rationalization, Standardization and Interoperability Policy

34–2.
Rationalization, Standardization, and Interoperability Policy

37–100.
The Army Management Structure (Series)

37–100XX.
Account/Code Structure

37–111.
Working Capital Funds–Army Stock Fund: Uniform Policies, Principles, and Procedures Governing Army Stock Fund Operations Army Procurement Appropriation (PA) Management Accounting and Reporting System (APARS)

37–151.
Accounting and Reporting for Operating Agencies

40–10.
Health Hazard Assessment Program in Support of the Materiel Acquisition Decision Process

70–1.
Systems Acquisition Policy and Procedure

70–2.
Materiel Status Recording

70–10.
Test and Evaluation During Development and Acquisition of Materiel

70–11.
Defense Documentation Center (DDC) for Scientific and Technical Information

70–15.
Product Improvement of Materiel

70–37.
Configuration Management

70–44.
DoD Engineering for Transportability

70–47.
Engineering for Transportability

70–61.
Type Classification of Army Materiel

70–64.
Design to Cost

70–67.
Production Readiness Review

70–2.
Basis of Issue Plans (BOIP), Qualitative and Quantitative Personnel Requirements Information (QQPRI)

70–3.
User Testing

71–9.
Materiel Objectives and Requirements

1050–7.
Quick Reaction Capability (QRC) for Electronic Warfare

200–1.
Environmental Protection and Enhancement

200–2.
Environmental Effects of Army Actions

220–1.
Unit Status Reporting

310–3.
Preparation, Coordination, and Approval of Department of the Army Publications

310–25.
Dictionary of United States Army Terms

350–10.
Army Safety Program

385–16.
System Safety Engineering and Management

602–1.
Human factors Engineering Program

602–2.
Manpower and Personnel Integration in the Materiel Acquisition Process

700–9.
Policies of the Army Logistic System

700–15.
Packaging of Materiel

700–18.
Provisioning of U.S. Army Equipment

700–47.
Defense Standardization and Specifications Programs

700–51.
Army Data Management Program

700–60.
Department of Defense Parts Control Program

700–90.
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700–120.
Materiel Distribution Management for Major Items

700–127.
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700–128.
Management and Execution of Integrated Logistic Support (ILS) Program for Multiservice Acquisitions

702–3.
Army Materiel System Reliability, Availability, and Maintainability (RAM)

702–9.
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715–6.
Proposal Evaluation and Source Selection

750–1.
Army Materiel Maintenance Concepts and Policies

750–7.
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750–10.
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750–37.
Sample Data Collection: The Army Maintenance Management System

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Materiel Acquisition Handbook (AMC/TRADOCP)

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700–11.
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Life Cycle Management of DARCOM (AMC) Materiel

70–6.
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700–15.
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DA PAMPHLETS

11–25.
Life Cycle System Management Model for Army Systems

70–21.
The Coordinated Test Program (CTP)

71–3.
Operational Testing and Evaluation Methodology and Procedure Guide

700–26.
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700–28.
Integrated Logistic Support Program Assessment Issues and Criteria

700–50.
Integrated Logistic Support: Developmental Supportability Test and Evaluation Guide

700–55.
Instructions for Preparing the Integrated Logistic Support

738–750.
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DOD DIRECTIVES

2010.6
Standardization and Interoperability of Weapon Systems and Equipment within the North Atlantic Treaty Organization

3224.1
Engineering for Transportability

4140.40
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4245.3.
Design to Cost

5000.1.
Major and Non–Major System Acquisition

5000.3.
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Acquisition and Management of Integrated Logistic Support for System and Equipment

DOD INSTRUCTIONS

DODI 4140.45.
Standard Stockage Policy for Consumable Secondary Items at the Intermediate and Consumer Level of Inventory

DODI 4230.4.
Standard Method for Development of Spare Requirements

DODI 5000.2.
Defense Acquisition Program Procedure

MILITARY STANDARDS, SPECIFICATIONS, HANDBOOKS, MANUALS (Assume Latest Revision)

MIL–STD–335.
Manuals, Technical: Repair Parts and Special Tools List

MIL–STD–470.
Maintainability Program Requirements (For System and Equipment)

MIL–STD–480.
Configuration Control Engineering Changes, Deviation and Waivers

MIL–STD–781.
Reliability Design Qualifications and Production Acceptance Test; Exponential Distribution

MIL–STD–882.
System Safety Program Requirements

MIL–STD–1388–1.
Support Analysis

MIL–STD–1388–2.
Department of Defense Requirements for Logistic Support Analysis Record

MIL–STD–1456
Contractor Configuration Management Plans

MIL–STD–1517.
Phased Provisioning

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OTHER REFERENCE MATERIALS

TRADOC P 70–2.
Materiel Acquisition Handbook (CBTDEV/MATDEV HDBK)

TRADOC R 700–1
Integrated Logistic Support

MTMCP 70–1.
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Public Law Title 15.
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FAR–FEDERAL ACQUISITION
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NOTE: For additional Titles and a more comprehensive ILS Bibliography, Consult AMC P7000–8, Bibliography for Logistic Support Planning.

Appendix D

List of Principal Acronyms

AAE
Army Acquisition Executive

ABCA
America, British, Canadian, and Australian

AAO
Army Acquisition Objective

AMC
US Army Materiel Command

AMIM
Army Modernization Information Memorandum

AMSAA
Army Materiel Systems Analysis Activity

AOP
Additive Operational Projects

AP
Acquisition Plan

AR
Army Regulation

AS
Acquisition Strategy

ASAP
Army Streamlined Acquisition Process

ASARC
Army Systems Acquisition Review Council

ASARC/
Army Systems Acquisition Review Council/

DSARC
Defense Systems Acquisition Review Council

ASARDA
Assistant Secretary of the Army for Research, Development, and Acquisition

ASL
Authorized Stockage List

ASI
Additional Skill Identifier

ASIOE
Associated Support Items of Equipment

BDP
Battlefield Development Plan

BOIP
Basis of Issue Plan

BOIPFD
Basis of Issue Pan Feeder Data

BTA
Best Technical Approach

CAMS
Computer Aided Milestone Schedule

CBTDEV
Combat Developer

CDRL
Contract Data Requirements List

CEP
Concept Evaluation Program

CFP
Concept Formulation Package

CI
Configuration Item

CTP
Coordinated Test Program

CM
Configuration Management

CMP
Configuration Management Plan

COEA
Cost and Operational Effectiveness Analysis

CPAF
Cost Plus Award Fee

CPF
Cost Plus Fee

CPFF
Cost Plus Fixed Fee

CPIF
Cost Plus Incentive Fee

CRMP
Computer Resource Management Plan

CTA
US Army Central TMDE Activity

CTA
Common Table of Allowances

CTDR
Commercial Training Device Requirement

CTU
Consolidated TOE Update

CWO
Conversion Work Order

C2E
Continuous Comprehensive Evaluation

DA
Department of the Army

DAB
Defense Acquisition Board (was DSARC and JRMB)

DAE
Defense Acquisition Executive

DAP
Designated Acquisition Programs

DARCOM
See AMC

DCG
Deputy Commanding General

DCP
Decision Coordinating Paper

DCP/IPS
Decision Coordinating Paper/Integrated Program Summary

DCSLOG
Deputy Chief of Staff for Logistics

DCSOPS
Deputy Chief of Staff for Operations and Plans

DCSPER
Deputy Chief of Staff for Personnel

DCSRDA
Deputy Chief of Staff for Research, Development and Acquisition (now ASARDA)

DESCOM
US Army Dept Systems Command

DID
Data Item Description

DMSP
Depot Maintenance Support Plan

DMWR
Depot Maintenance Work Requirements

DoD
Department of Defense

DoDD
Department of Defense Directive

DoDI
Department of Defense Instruction

DPAMMH
Direct Productive Annual Maintenance Man–hours

DS
Direct Support

DTC
Design to Cost

EA
Environmental Assessment

EIS
Environmental Impact Statement

EP
Equipment Publications

FTA
First Article Testing

FPR
Fixed Price Redetermination

FDTE
Force Development Testing and Experimentation

FFP
Firm Fixed Price

FMR
Force Modernization Report

FOE
Follow–on Evaluation

FP/E
Fixed Price with Escalation

FPI
Fixed Price Incentive

FSR
Fielded System Reviews

FUED
First Unit Equipped Date

HQDA
Headquarters, Department of the Army

HFEA
Human Factors Engineering Analysis

IDS
Intermediate Direct Support

IER
Independent Evaluation Report

IFB
Invitation for Bids

IIQ
Initial Issue Quantity

ILS
Integrated Logistic Support

ILSM
Integrated Logistic Support Manager

ILSMT
Integrated Logistic Support Management Team

ILSP
Integrated Logistic Support Plan

ILSR
Integrated Logistic Support Review

IPR
In–Process Review

IPS
Integrated Program Summary

ISP
Integrated Support Plan

JTA
Joint Table of Allowances

JRMB
Joint Resources Management Board (now DAB)

JSOR
Joint Service Operational Requirement

LASS
Logistic Support Analysis Application Status System

LCC
Life Cycle Cost

LCSMM
Life Cycle System Management Model

LD
Logistic Demonstration

LEA
US Army Logistic Evaluation Agency

LO
Lubrication Order

LOA
Letter of Agreement

LON
Letter of Notification

LP
Limited Procurement (type classification)

LR
Letter Requirement

LRRDAP
Long Range Research, Development and Acquisition Plan

LSA
Logistic Support Analysis

LSAD
Logistic Support Analysis Documentation

LSAR
Logistic Support Analysis Record

LSR
Logistic Status Review

MAA
Mission Area Analysis

MAC
Maintenance Allocation Chart

MACOM
Major Army Command

MADP
Materiel Acquisition Decision Process

MADPR
Materiel Acquisition Decision Process Review

MANPRINT
Manpower and Personnel Integration

MAP
Materiel Acquisition Process

MATDEV
Materiel Developer

MCSR
Materiel Condition Status Report

MDR
Milestone Decision Review

MFA
Materiel Fielding Agreement

MFP
Materiel Fielding Plan

MFT
Materiel Fielding Team

M&T
Manufacturing Methods and Technology

MNS
Mission Need Statement

MOA
Memorandum of Agreement

MOS
Military Occupational Specialty

MOU
Memorandum of Understanding

MPT
Manpower, Personnel and Training

MRIS
Modernization Resource Information Submission

MRSA
USAMC Materiel Readiness Support Activity

MSC
Major Subordinate Command

MSP
Mission Support Plan

MTA
Materiel Transfer Agreement

MTBF
Mean–Time–Between–Failure

MTMC
US Army Military Traffic Management Command

MTMCTEA
Military Traffic Management Command–Transportation Engineering Agency

MTP
Materiel Transfer Plan

MTTR
Mean–Time–To–Repair

MWO
Modification Work Order

NATO
North Atlantic Treaty Organization

NDI
Nondevelopmental Item

NET
New Equipment Training

NETP
New Equipment Training Plan

NETT
New Equipment Training Team

OBS
Obsolete (type classification)

O&M
Operation and Maintenance

O&O
Operation and Organizational

O&S
Operating and Support (costs)

OPA
Other Procurement Army

OSD
Office of Secretary of Defense

OT
Operational Test

OT&E
Operational Test and Evaluation

OTEA
Operational Test and Evaluation Agency

OTP
Outline Test Plan

P31
Preplanned Product

PAM
Pamphlet

PATFA
Product Assurance Test Field Activity

PCO
Procurement Contracting Officer

PEP
Producibility Engineering and Planning

PFR
Post Fielding Review

PI
Program Initiation

PIP
Product Improvement Program

PLL
Prescribed Load List

PM
Program/Project/Product Manger

PMCS
Program Management Control System

PMCS
In RCM) Preventive Maintenance Checks and Services

PMO
Program/Project/Product Manager Office

PMSR
Program Management Status Report

POL
Petroleum, Oils and Lubricants

PP
Provisioning Plan

PPS
Post–Production Support

PT
Production Testing

PWS
Performance Work Statement

QQPRI
Qualitative and Quantitative Personnel Requirements Information

R&D
Research and Development

RAM
Reliability, Availability, and Maintainability

RAM–D
Reliability, Availability, and Maintainability–Durability

RCM
Reliability Centered Maintenance

RDTE
Research, Development, Test, and Evaluation

RFP
Request for Proposal

RFQ
Request for Quotation

ROC
Required Operational Capability

RPSTL
Repair Parts and Special Tools List

RSI
Rationalization, Standardization, and Interoperability

SA
Secretary of the Army

SADM
Secretary of the Army Decision Memorandum

SAIP
Spares Acquisition Integrated with Production

SB
Supply Bulletins

S&I
Standardization and Interoperability

SC
Supply Catalogs

SCP
System Concept Paper

SDC
Sample Data Collection

SDDM
Secretary of Defense Decision Memorandum

SECDEF
Secretary of Defense

SOW
Statement of Work

SSA
Source Selection Authority

SSAC
Source Selection Advisory Council

SSEB
Source Selection Evaluation Board

SSG
Special Study Group

SSP
System Support Package

SSPCL
System Support Package Component List

STD
Standard (type classification)

STF
Special Task Force

T&E
Test and Evaluation

TAMMS
The Army Maintenance Management System

TB
Technical Bulletin

TC
Type Classification/Type Classify/Type Classified

TDA
Tables of Distribution and Allowance

TDNS
Training Device Need Statement

TDP
Technical Data Package

TDR
Training Device Requirements

TECOM
US Army Test and Evaluation Command

TELER
Tele–communications Requirements

TEMP
Test and Evaluation Master Plan

TFT
Technical Feasibility Testing

TIWG
Test Integration Working Group

TM
Technical Manual

TMDE
Test, Measurement, and Diagnostic Equipment

TOA
Tradeoff Analysis

TOD
Tradeoff Determination

TOE
Table of Organization and Equipment

TOF
Total Package Fielding

TR
Test Report

TRADOC
US Army Training and Doctrine Command

TSG
US Army TMDE Support Group

TSM
TRADOC System Manager

T&T
Transportation and Transportability

TT
Technical Test

TT&E
Technical Test and Evaluation

USASC
United States Army Safety Center

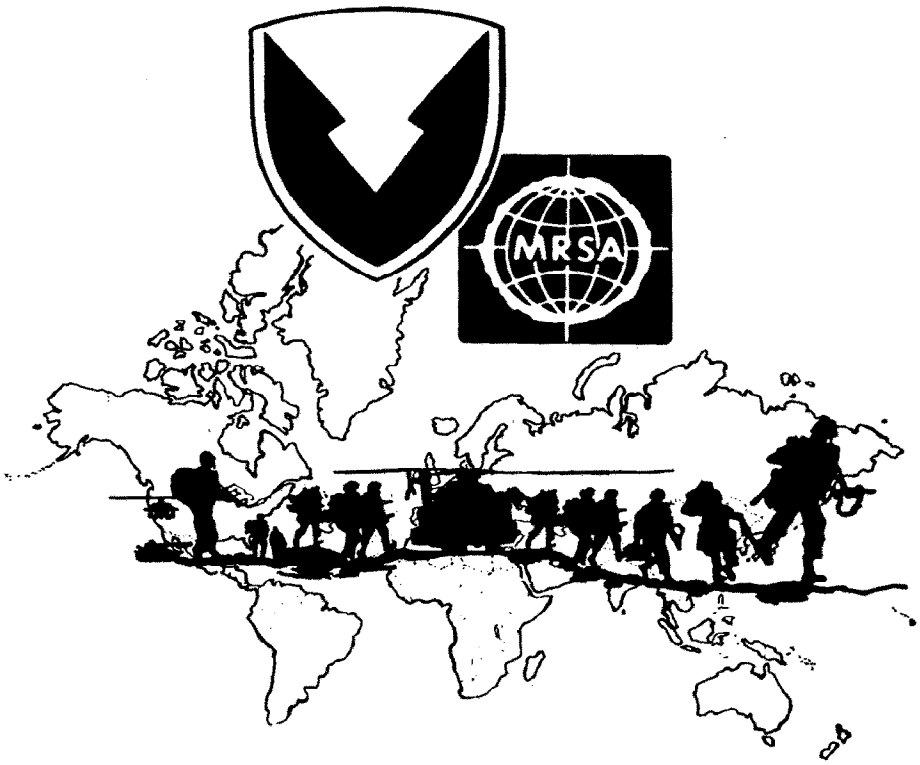
UT
User Test (formally Operational Test)

UT&E
User Test and evaluation

VCSA
Vice Chief of Staff of the Army

VE
Value Engineering

VECP
Value Engineering Change Proposals



USAMC Materiel Readiness Support Activity (MRSA)
Lexington, KY 40511-5101

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