A MANAGERS GUIDE TO THE ACQUISITION OF DoD SYSTEMS AND EQUIPMENT

LMI TASK 68-13

January 1969

LOGISTICS MANAGEMENT INSTITUTE
4701 Sangamore Road
Washington, D. C. 20016

A MANAGERS GUIDE TO THE ACQUISITION OF DoD SYSTEMS AND EQUIPMENT

LMI TASK 68-13

January 1969

Prepared pursuant to Department of Defense Contract No. SD-271. Views or conclusions contained in this document should not be interpreted as representing official opinion or policy of the Department of Defense.

LOGISTICS MANAGEMENT INSTITUTE
4701 Sangamore Road
Washington, D. C. 20016

FOREWORD

This guide was developed at the request of the Assistant Secretary of Defense (Installations and Logistics). Logistics Management Institute performed the task in close coordination with the DoD/Industry Advisory Committee for Integrated Logistics Support.

The guide identifies and provides summary descriptions of the key activities, decision points, and responsibilities essential to effective acquisition management. It is oriented toward identifying the management functions that are needed to successfully accomplish most acquisition programs, whether or not these functions are currently being performed or are assigned. It is not oriented to any specific organizational structure. Such structuring to accomplish acquisition is the responsibility of appropriate government and contractor management levels.

The guide is compatible with the "Integrated Logistics Support Planning Guide for DoD Systems and Equipment," 4100.35-G October 1968, and the "Production Planning Guide for DoD Systems and Equipment"[1] which was prepared under LMI Task 68-14. It describes the interrelationships among system design, production, and logistics support that must be established as well as maintained to provide a basis for acquiring the most effective systems and equipment in terms of performance, readiness, and cost. It

---

[1]Those readers who desire a more detailed treatment of acquisition activities in the area of Logistics and Production are invited to review the Logistics and Production Planning Guides.

emphasizes the conduct of tradeoffs and the recording of alternative approaches and supporting rationale for the selected concepts and plans. These are essential to assure that proper consideration is given to systems and equipment performance, technical risk, producibility, supportability, and total cost to the government.

The guide is designed as an executive brief for both government and industry. It emphasizes the need for plans and implementing actions which will assure that system design, logistics support, and production are managed as an integrated whole during the acquisition process. Its use should also increase the likelihood of realistic budgets and schedules to permit effective life cycle costing and help prevent overruns.

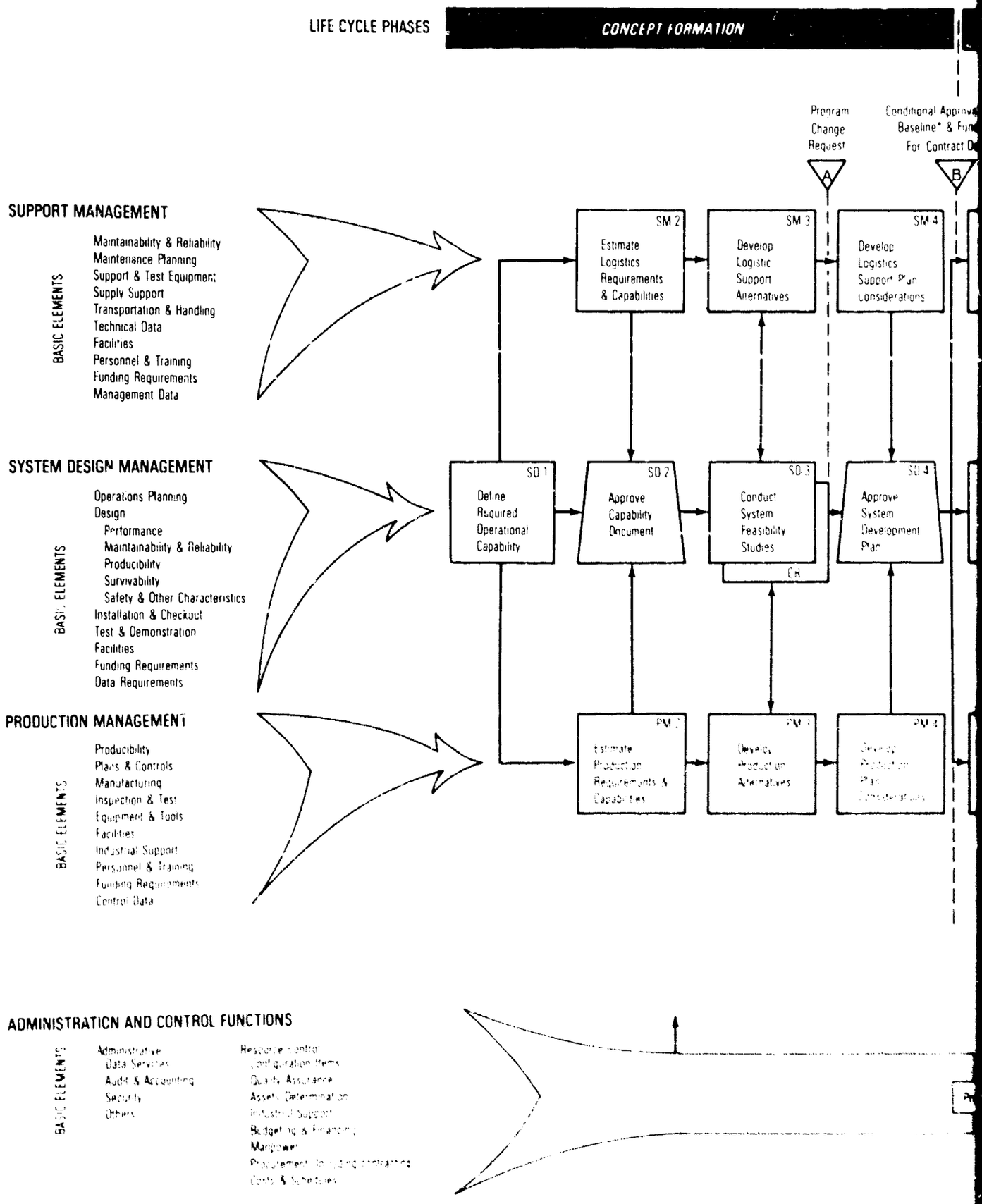
CONTENTS

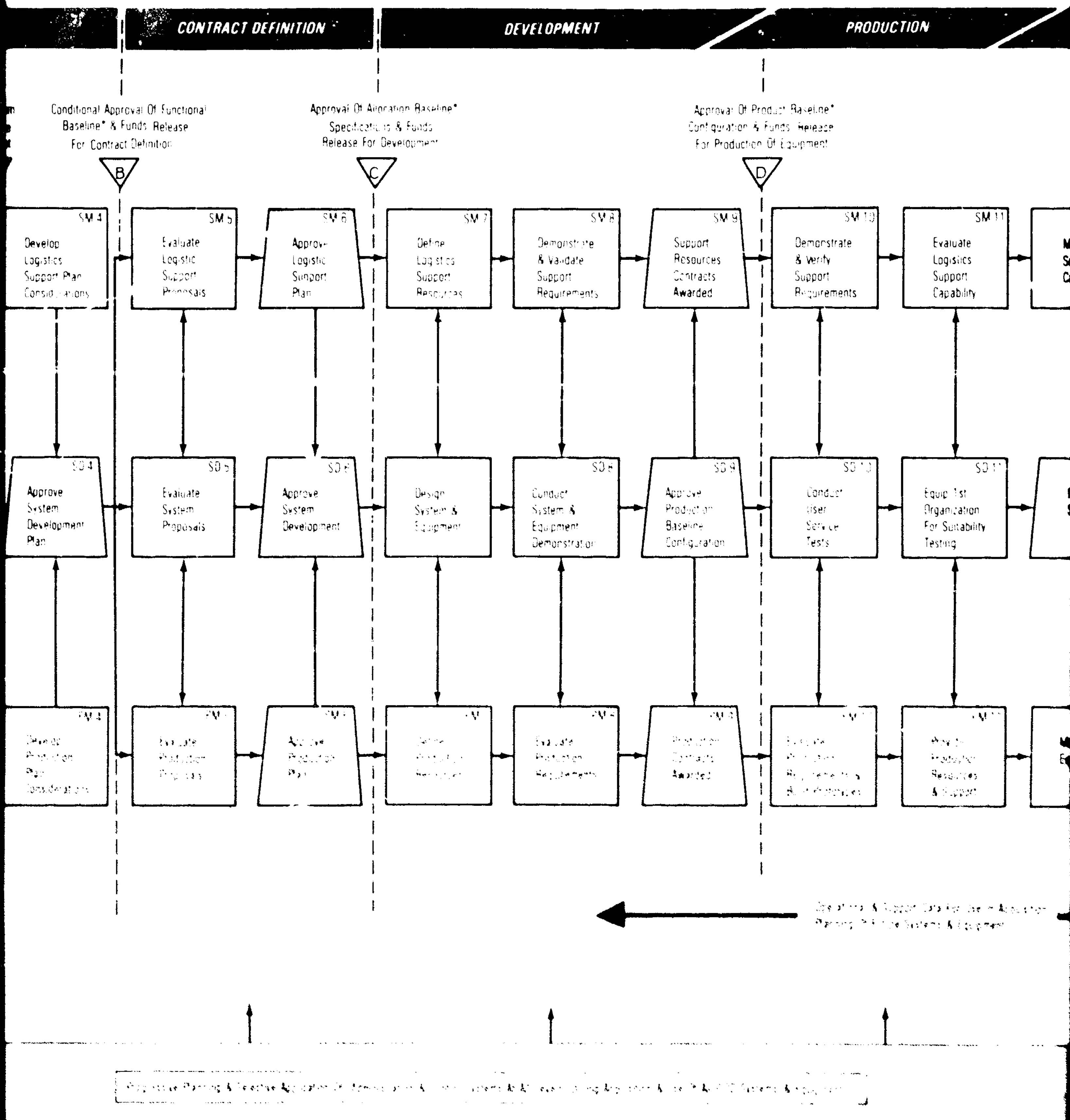
1. INTRODUCTION

The purpose of this guide is to identify and describe the major events, decision points, responsibilities, and interrelationships among system design, logistics support, and production that are necessary for an effective acquisition management program for DoD systems and equipment. The guide is designed as an executive brief for both government and industry. It covers plans and implementing actions which will assure that system design, logistics support, and production are managed as an integrated whole during the acquisition process. Its use should also increase the likelihood of more realistic budgets and schedules to permit effective life cycle costing and help prevent overruns.

Acquisition management is the integration of system design, logistics support, production, administration, and control activities and responsibilities necessary to conceive, define, develop, and produce systems and equipment and provide plans for their operation and support. Figure 1 portrays an overview of the acquisition management concept. It lists representative elements management should consider in defining, optimizing, planning, and implementing the requirements essential to achieve proper balance among equipment operations, performance, readiness, producibility, and total cost. The administrative and control functions essential to managing the acquisition and which support use of systems and equipment also are shown.

In addition to the descriptions within this guide, further information is included in DoD directives, instructions, and guides referenced on page 17. Those documents include definitions


LIFE CYCLE PHASES
CONCEPT FORMATION
Program Change Request
A
B
SUPPORT MANAGEMENT
BASIC ELEMENTS
Maintainability & Reliability
Maintenance Planning
Support & Test Equipment
Supply Support
Transportation & Handling
Technical Data
Facilities
Personnel & Training
Funding Requirements
Management Data
SM 2
Estimate Logistics Requirements & Capabilities
SM 3
Develop Logistic Support Alternatives
SM 4
Develop Logistics Support Plan considerations
SYSTEM DESIGN MANAGEMENT
BASIC ELEMENTS
Operations Planning
Design
Performance
Maintainability & Reliability
Producibility
Survivability
Safety & Other Characteristics
Installation & Checkout
Test & Demonstration
Facilities
Funding Requirements
Data Requirements
SD 1
Define Required Operational Capability
SD 2
Approve Capability Document
SD 3
Conduct System Feasibility Studies
CR
SD 4
Approve System Development Plan
PRODUCTION MANAGEMENT
BASIC ELEMENTS
Producibility
Plans & Controls
Manufacturing
Inspection & Test
Equipment & Tools
Facilities
Industrial Support
Personnel & Training
Funding Requirements
Control Data
PM 2
Estimate Production Requirements & Capabilities
PM 3
Develop Production Alternatives
PM 4
ADMINISTRATION AND CONTROL FUNCTIONS
BASIC ELEMENTS
Administrative
Data Services
Audit & Accounting
Security
Others
Resource Control
Configuration Items
Quality Assurance
Asset Determination
Industrial Support
Budgeting & Financing
Manpower
Procurement
Costs & Schedules



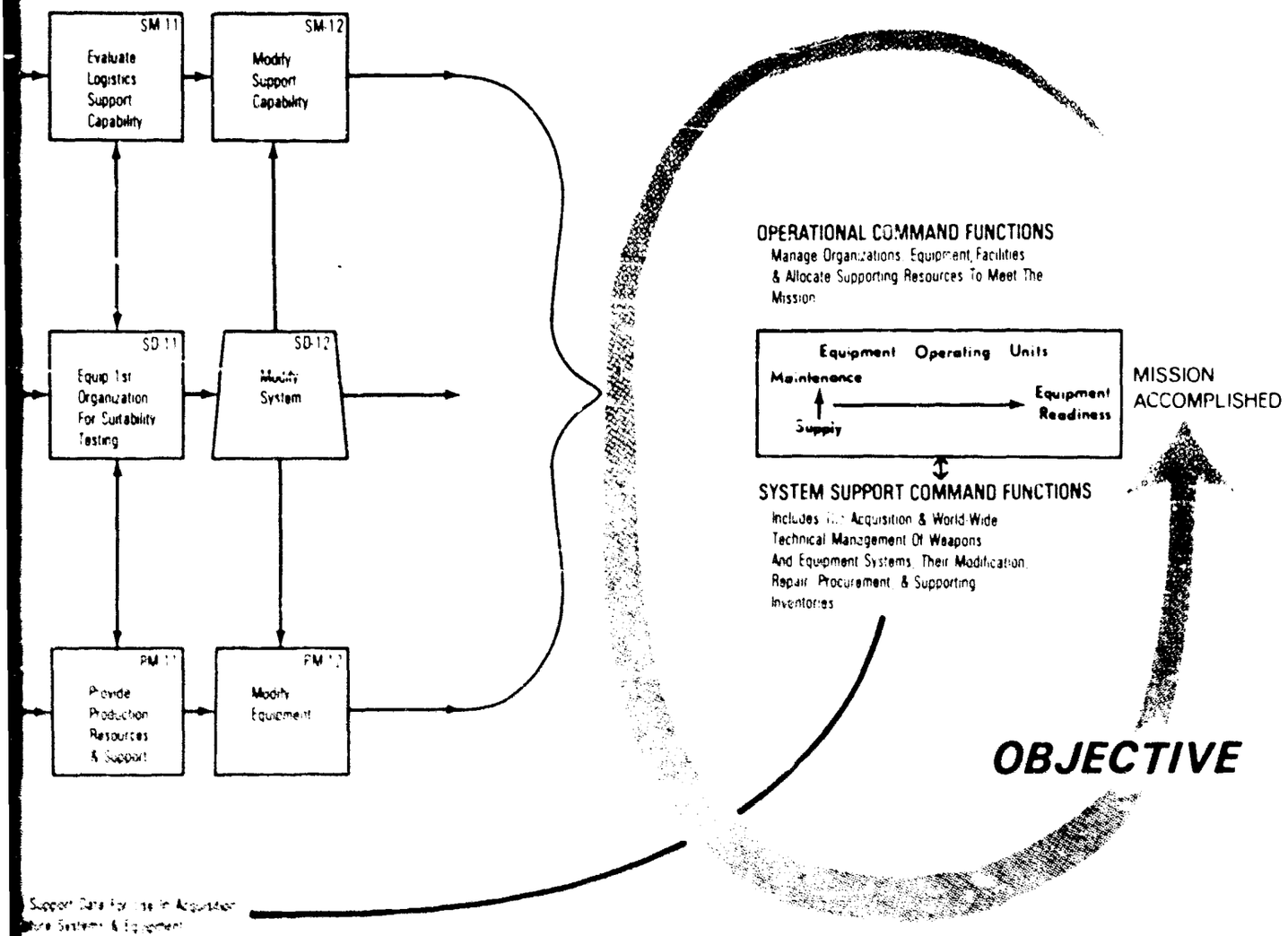
CONTRACT DEFINITION
DEVELOPMENT
PRODUCTION
Conditional Approval Of Functional Baseline* & Funds Release For Contract Definition
Approval Of Allocation Baseline* Specifications & Funds Release For Development
Approval Of Product Baseline* Configuration & Funds Release For Production Of Equipment
B
C
D
SM 4
Develop Logistics Support Plan Considerations
SM 5
Evaluate Logistic Support Proposals
SM 6
Approve Logistic Support Plan
SM 7
Define Logistics Support Resources
SM 8
Demonstrate & Validate Support Requirements
SM 9
Support Resources Contracts Awarded
SM 10
Demonstrate & Verify Support Requirements
SM 11
Evaluate Logistics Support Capability
SD 4
Approve System Development Plan
SD 5
Evaluate System Proposals
SD 6
Approve System Development
Design System & Equipment
SD 8
Conduct System & Equipment Demonstration
SD 9
Approve Production Baseline Configuration
SD 10
Conduct User Service Tests
SD 11
Equip 1st Organization For Suitability Testing
PM 4
Contracts Awarded

Figure 1

OPERATIONAL

DoD SYSTEMS & EQUIPMENT ACQUISITION MANAGEMENT

A Systems Approach To The Integrated Planning Of System Design, Logistic Support, Production, Administration, & Control Actions For Acquisition Management



KEY

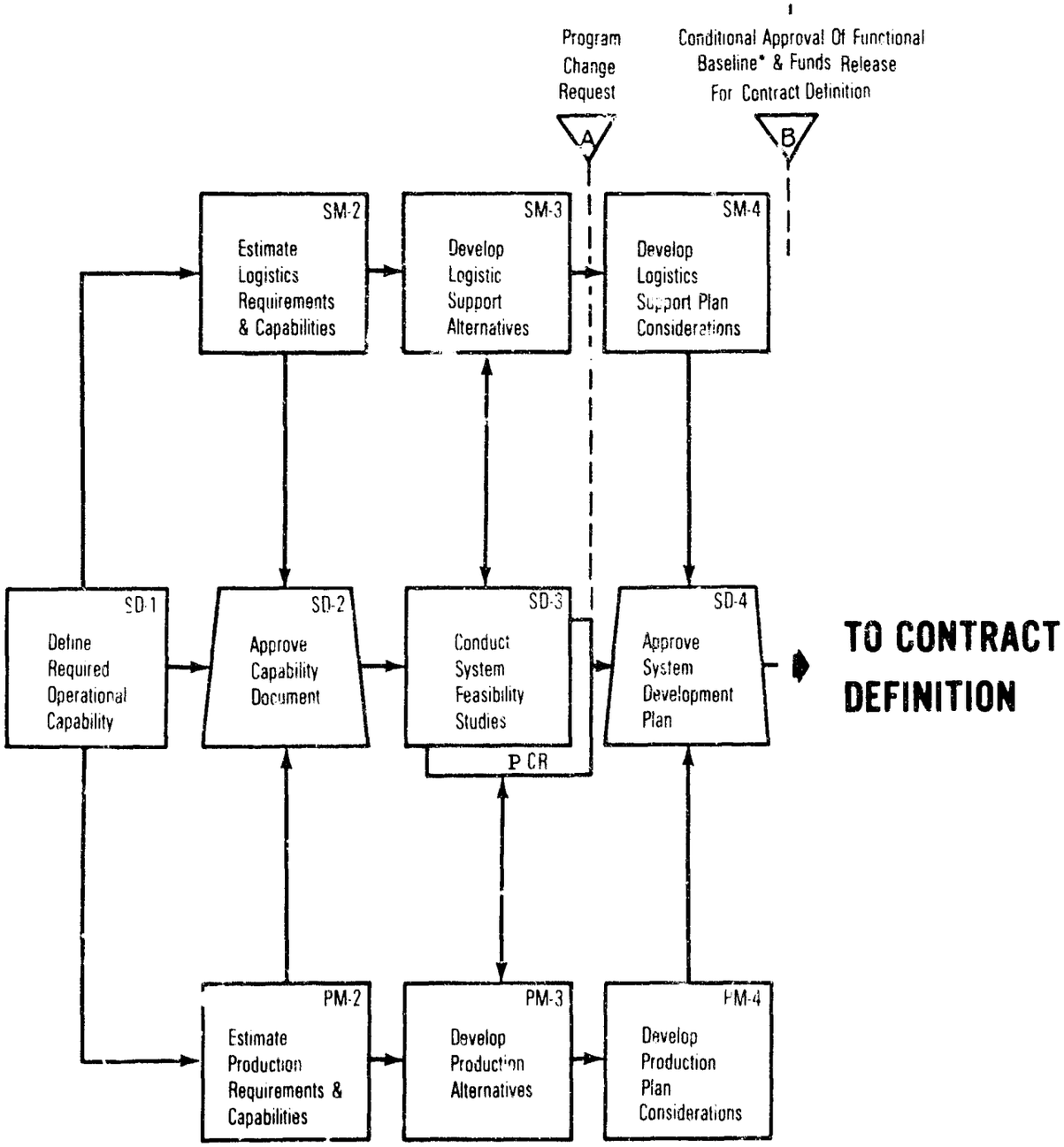
Event

Approval Required

KEY REVIEW AND APPROVAL ACTION At The DOD Decision Level Established By Policy On Weapons Technology & Dollar Thresholds. Participation By Systems Design, Logistics Support & Production Staff Members At The Appropriate Decision Level Is Required To Assure The Adequacy Of Total Acquisition Planning For MISSION ACCOMPLISHMENT

of the terms used in this guide. Although this document uses established DoD terminology common to the acquisition of major programs, this does not imply that it is intended for use solely during such acquisitions. This guide is oriented toward identifying the management functions that are required to successfully accomplish most acquisition programs. Managers concerned with large or small programs, new procurements or reprocurements and DoD, Service, or Program levels should benefit from the use of this guide in managing acquisition activities. Each specific acquisition will require intelligent tailoring to match the needs of the application. Additionally, the guide is not oriented to any specific organizational structure. Such structuring is the responsibility of appropriate levels of government and contractor management.

CONCEPT FORMATION



2. EVENTS, DECISIONS, AND RESPONSIBILITIES FOR SYSTEM DESIGN, PRODUCTION AND SUPPORT MANAGEMENT

Concept Formulation

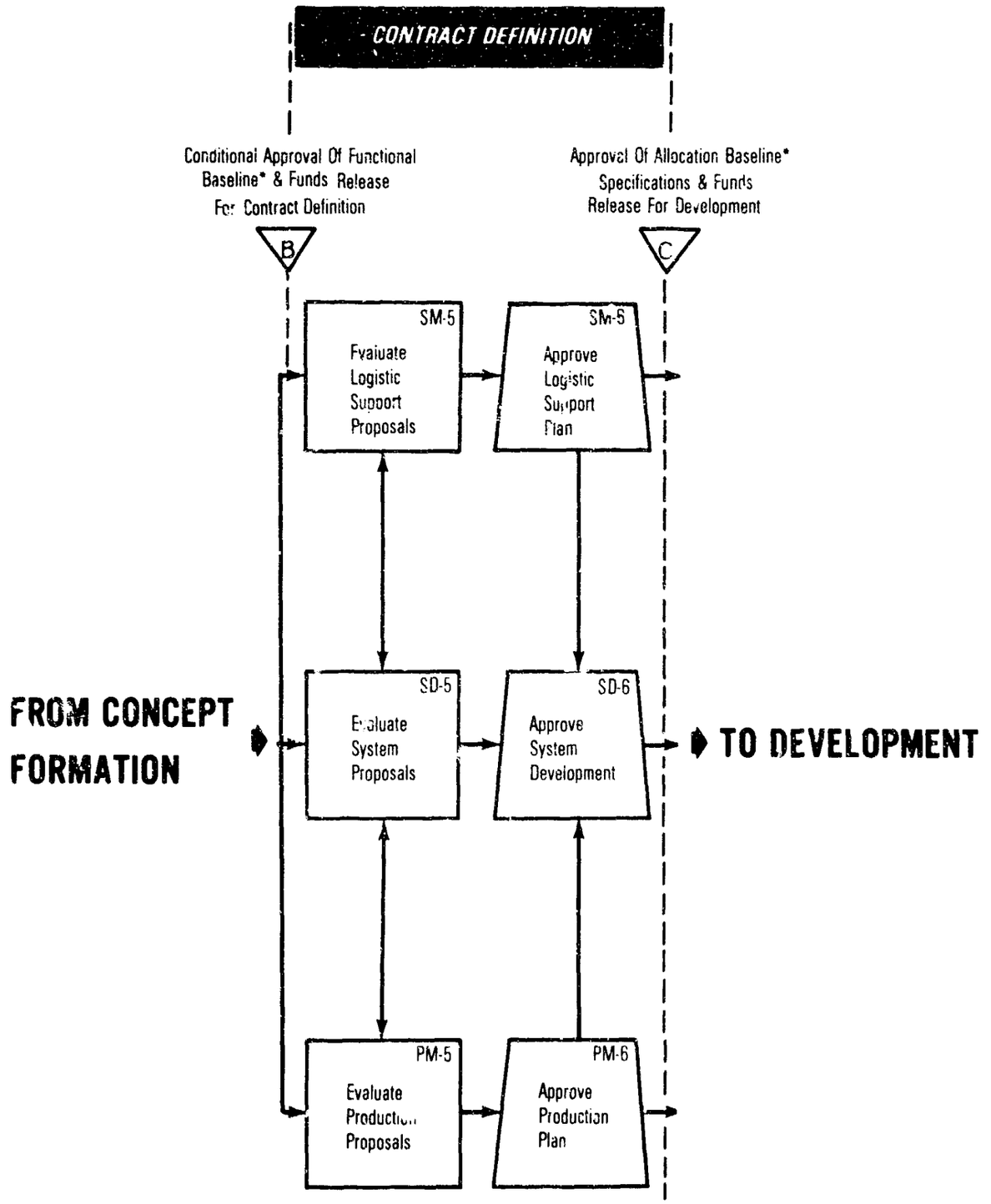
The primary purpose of the concept formulation effort is to define the technical, economic, and military requirements for system and support specifications needed to satisfy a forecasted operational capability (SD-1). As a first step in Concept Formulation, a new operational capability requirement is identified to meet a possible military threat or other government need such as treaty obligations or rescue capabilities. The requirement is then analyzed to develop preliminary estimates of system design, logistics, and production requirements.[6] These preliminary estimates are compared with current government and industry capabilities to identify the additional capability to be developed (SD-2, SM-2, PM-2).

Government or contractor feasibility studies of several system design, support, and production approaches are conducted (SD-3, SM-3, PM-3). The impacts of accelerated or slowed schedules and the availability of more or less money are considered. A best concept is selected. A Program Change Request (A) may be required for any program that changes the Five-Year Defense Program.[2] The technical requirements essential to further definition of the system concept are included in a system development plan (SD-4). The considerations and concepts to be covered in logistics support and production plans are included (SM-4 and PM-4). A Request for Proposals should be prepared concurrently with the

---

[2] See Program Change Request, Appendix C, "Amplification on Programming and Budgeting Cycle."

[6] The system design efforts will normally be completed through functional configuration identification and a reasonable assurance of program feasibility before initiation of production and logistics

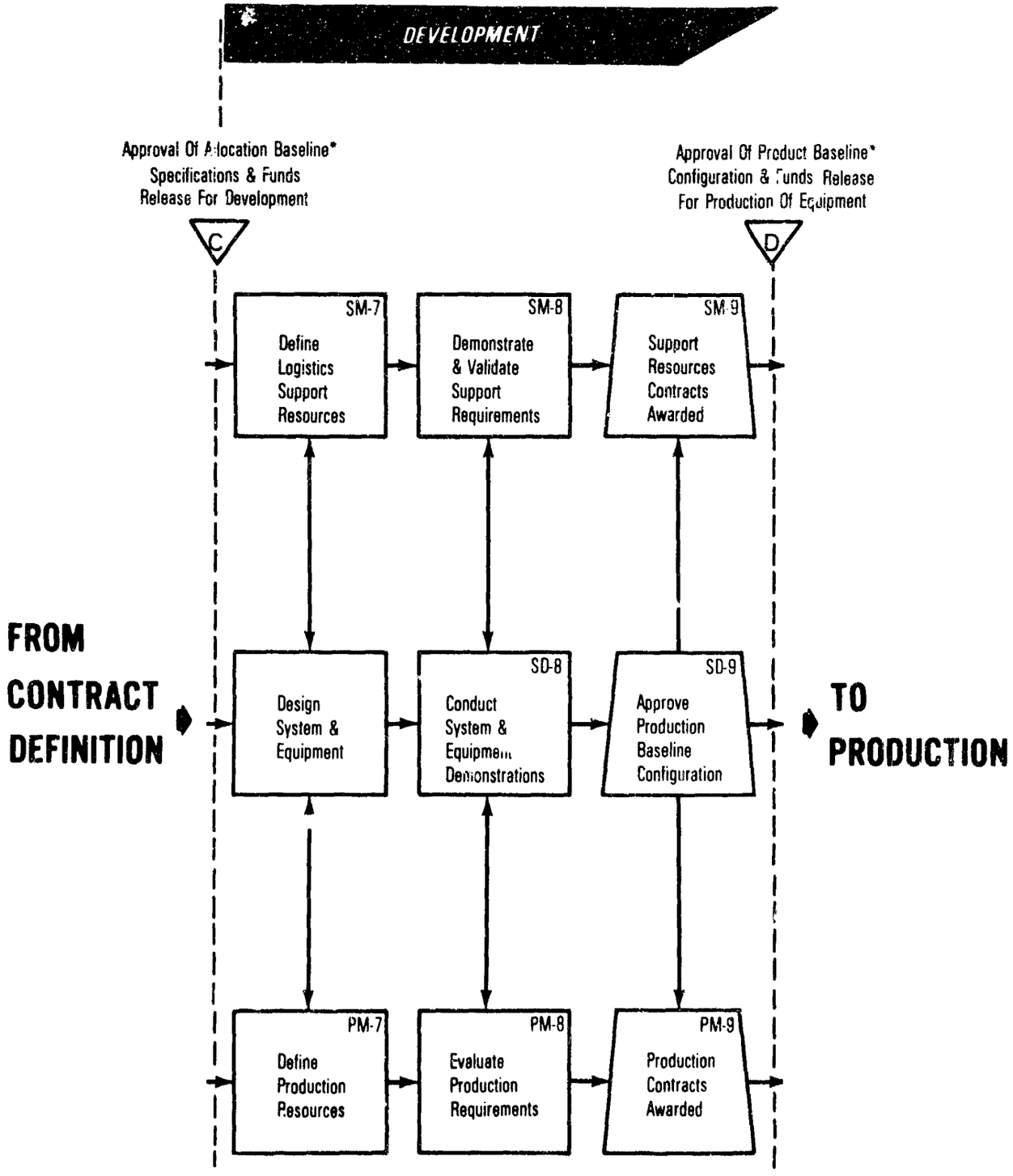

CONTRACT DEFINITION
Conditional Approval Of Functional Baseline* & Funds Release For Contract Definition
Approval Of Allocation Baseline* Specifications & Funds Release For Development
B
C
SM-5
Evaluate Logistic Support Proposals
SM-5
Approve Logistic Support Plan
FROM CONCEPT FORMATION
SD-5
Evaluate System Proposals
SD-6
Approve System Development
TO DEVELOPMENT
PM-5
Evaluate Production Proposals
PM-6
Approve Production Plan

system development plan. Upon satisfactory completion of the concept formulation events, Conditional Approval for Engineering Development (B) is given by the DoD management level appropriate to the complexity, expected cost, and scope of the system. For major procurements the approval level may be the Secretary of Defense. The approval decision is based not only upon the estimated performance and readiness requirements and the equipment practicability, but also on the supportability, producibility, life cycle cost estimate, availability of funds, and relationships to and impacts upon other DoD systems. Logistics support and production staff personnel participation in this decision is a mandatory DoD requirement. This action assures that all requirements needed to define specifications for production and support resources, refine the equipment life cycle cost estimate, and identify procurement plans are included in the system development plan, request for proposal, budgets, and, eventually, contracts.

Contract Definition

Contract definition events are directed toward evaluation of proposed systems and the approval of one for development (SD-5, SM-5, and PM-5). The approval action for system design (SD-6) should include specific coverage, contractual where necessary, for logistics support and production programs (SM-6 and P..-6) which are established as a result of contract definition. The Approval of Allocation Baseline (C) at the completion of contract definition is the equipment specification base for the contracts. Subsequent detailed development of equipment design, production, and logistic support are all accomplished in accordance with the allocation baseline.

6 (Cont'd) activities. During concept formulation, the production and logistics activities are directed toward identifying concepts, ground rules, and requirements to be included in RFPs.

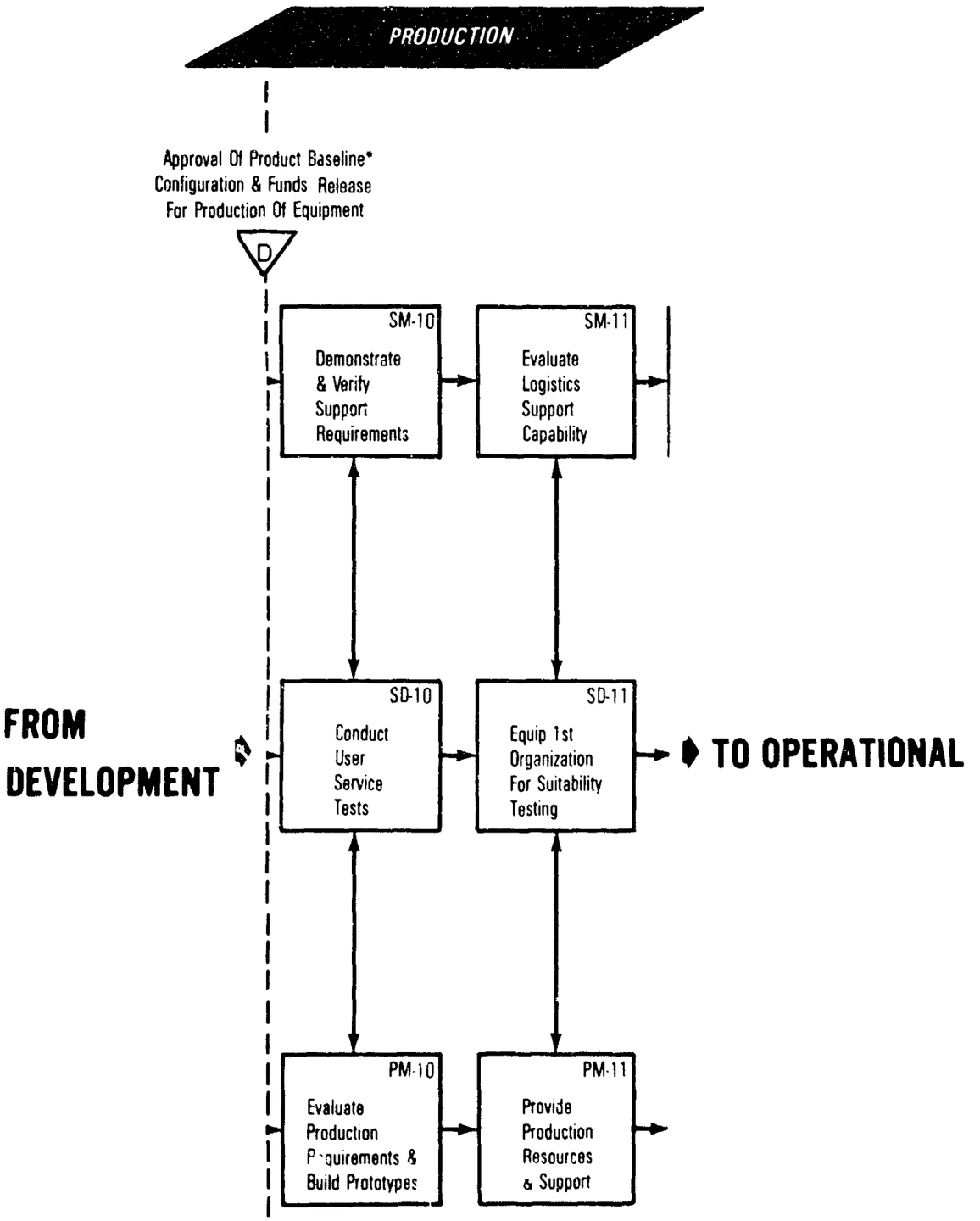

DEVELOPMENT
Approval Of Allocation Baseline*
Specifications & Funds
Release For Development
C
Approval Of Product Baseline*
Configuration & Funds Release
For Production Of Equipment
D
FROM
CONTRACT
DEFINITION
SM-7
Define
Logistics
Support
Resources
SM-8
Demonstrate
& Validate
Support
Requirements
SM-9
Support
Resources
Contracts
Awarded
Design
System &
Equipment
SD-8
Conduct
System &
Equipment
Demonstrations
SD-9
Approve
Production
Baseline
Configuration
TO
PRODUCTION
PM-7
Define
Production
Resources
PM-8
Evaluate
Production
Requirements
PM-9
Production
Contracts
Awarded

In some cases, approval may only be for completion of design development and limited production for operational test. In others, it may be for total package procurement of specified defense materiel items. In the latter case, detailed knowledge of the production and support plans is required for complete costing and contracting of the system through all phases. In all cases, follow-on surveillance and decision points must be established to assure that systems, logistics, and production resources will satisfy the operational requirements.

Reviews leading to Approval for Development ▽ require the participation of system design, logistics support, production and operations staff members at the appropriate DoD decision level to assure the adequacy of their plans. The plans must include the detailed specifications for all resources, definitive cost estimates, and pricing for development. Detailed production and logistics support plans are included. The plans also must include the expected schedules, test and demonstration plans, and management responsibilities for all subsequent actions. Contracts must be considered concurrently with the technical plans to assure their compatibility and consistency, especially with regard to predetermined program schedules.

Development

Development events involve the detailed design (SD-7) of equipment to satisfy the specifications. Early in this phase, detailed design, supportability, and producibility trade-offs are conducted to refine previously selected concepts. Logistics support and production resources (SM-7 and PM-7) are identified to support the manufacture and demonstration tests of prototype system equipment (SD-8). The system demonstrations are used to


PRODUCTION
Approval Of Product Baseline* Configuration & Funds Release For Production Of Equipment
D
SM-10
Demonstrate & Verify Support Requirements
SM-11
Evaluate Logistics Support Capability
FROM DEVELOPMENT
SD-10
Conduct User Service Tests
SD-11
Equip 1st Organization For Suitability Testing
TO OPERATIONAL
PM-10
Evaluate Production Requirements & Build Prototypes
PM-11
Provide Production Resources & Support

evaluate how well the equipment meets contract engineering test requirements. They also are used to evaluate the adequacy of production and logistics planning and support (PM-8 and SM-8). The results of the development effort become the proposed product baseline for initial production. Initial production may be part of the previous development contracts or require new contracts stemming from the proposed product baseline. In all cases, design, production, and logistics staff member participation is required by the DoD in reviews leading to approval and release of initial production.

Of particular importance during this phase and succeeding phases is a continuous closed loop feedback correction system. Such a system must exist to insure the identification and solution of system problems such as failure to meet system objectives and specifications, schedule delays, and test failures. The closed loop feedback correction system must consider the impact of system problems on design, support, and production activities and must develop solutions that consider appropriate trade-offs among design, support, and production capabilities.

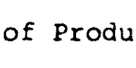
Production

Development and Production often overlap. Production events frequently begin late in the development phase with the actual manufacture, inspection, and test of equipment for initial operational testing. First article inspections and tests are conducted to the "build-to"[3] specifications and drawings. Acceptance

---

[3] "Build-to" specifications and drawings are the documents which describe in detailed technical terms the form, fit, and functional requirements that the system/equipment was built to meet. These requirements are very wide and complete in scope. They include such considerations as mechanical and electrical

of the first article and its specifications by system design, production, and logistics management is a key approval action. Implicit in this action is the recognition that the equipment meets all specification requirements and, in turn, the specification requirements are themselves sufficient to assure achieving the desired operational capability. Acceptance of the first article and specifications provides the product baseline configuration (SD-9) for funds release and further production of all required items. Logistics support and production contracts (SM-9 and PM-9) are approved and released in accord with defined schedules.

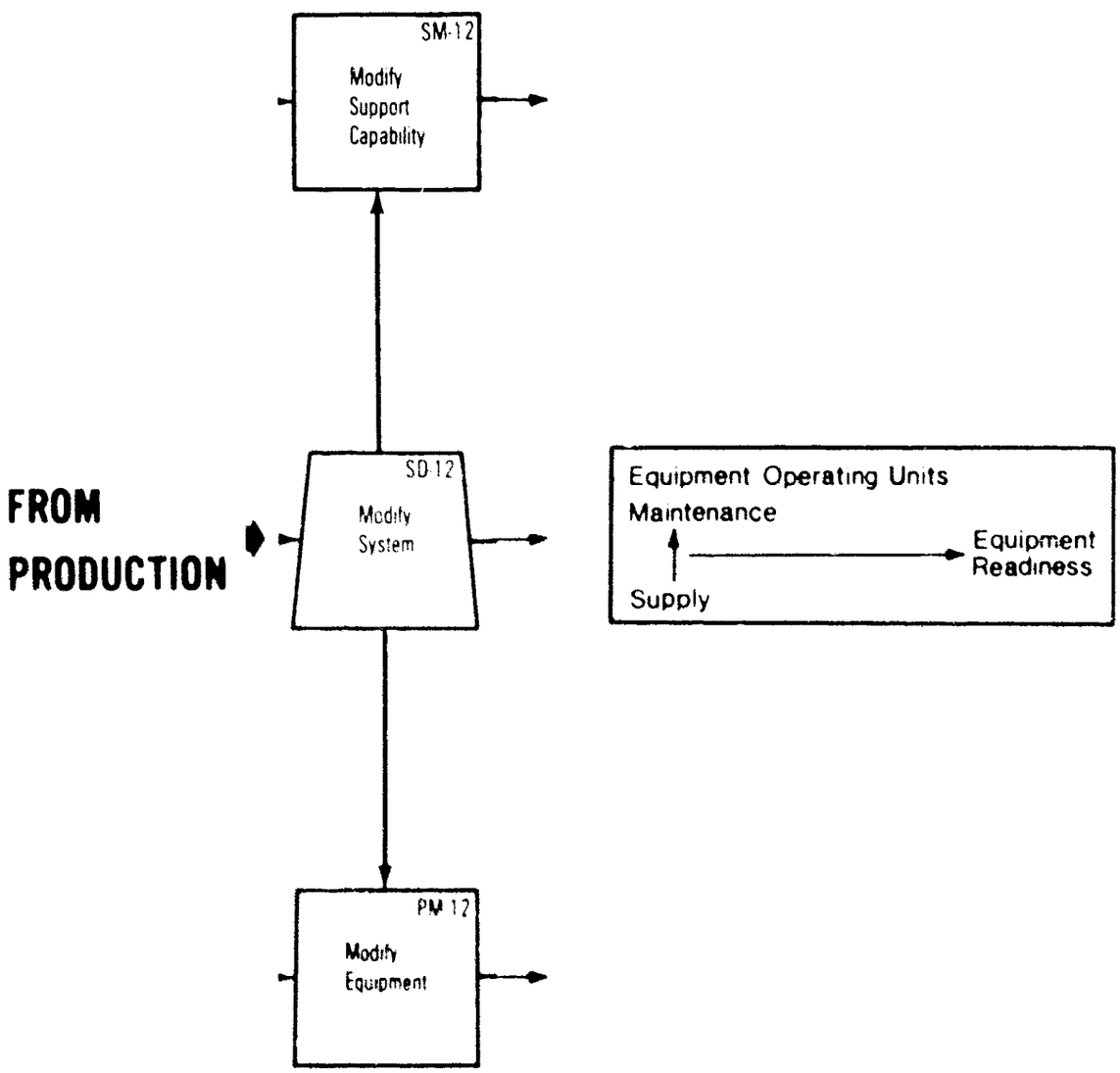
Reviews leading to the Approval of Product Baseline  , a key production approval action, requires the participation of system design, logistics support, and production staff members at the appropriate DoD decision level. This review assures that production specifications and related government planning for all items to be acquired are complete and still timely, and that requirements for change, quality, cost, and schedule control are included in all contracts. These requirements must meet previously established DoD performance, readiness, and producibility objectives.

The balance of the Production events are concerned with the manufacture, contractor tests, service tests, and evaluation of production equipment (SD-10, PM-10, and SM-10). Installation, checkout, demonstration, and acceptance tasks are conducted in accord with previously negotiated contracts (PM-11, SD-11, and SM-11). These contracts should include appropriate plans and

---

[3] (Cont'd)
characteristics, reliability, maintainability, materiels, processes, human engineering, packaging and marking, corrosion control, safety, interchangeability, etc.

OPERATIONAL



schedules for the phaseover of the system from the development agency to the using agency. They should result in the most effective and economical mix of government and contractor support. Production activities equip operating units and provide technical and resources upport to the operating and maintenance organizations throughout the remainder of the production phase and into the early operational phase.

Operational

Delivery of initial units to the first service activity marks the beginning of the operational phase. Operational and support command functions are responsible for final acceptance of the system and equipment when demonstrations of these initial units show they meet operational and support objectives. Once accepted, all completed system design, support, and production documentation is made available for combined services preparedness and mobilization planning.

Operational and support demonstration deficiencies provide the basis for management decisions to modify the operational units or commit to later changes to production contracts. Participation in and review of demonstration activities by system design, logistics support, and production staff members is required by the DoD. Operational and support change recommendations (SD-12, PM-12, SM-12) resulting from operational suitability testing are reviewed for their impact upon system design, support, and production. Fixes for identified deficiencies should be evaluated through trade-offs among design, production, and support alternatives prior to making modification decisions.

3. THE BASIC ELEMENTS

The basic elements of system design, logistics support, and production management must be considered in each acquisition project. For example, in Figure 1 the basic elements for the integrated planning of logistics support include maintainability and reliability, maintenance planning, support and test equipment, etc. Similarly, basic elements for planning system design and production activities are listed in Figure 1. These basic elements apply to projects within both government and industry. Their events, decision points, and responsibilities are directly related to those management events described for system design, support, and production in Chapter 2 of the report. They are interrelated to each other, and this relationship must be maintained throughout the system and equipment life cycle. Their concepts and qualitative and quantitative requirements must be defined in concept formulation and progressively refined throughout the remaining phases so that equipment performance, readiness, support, and production can be demonstrated and evaluated.

Examples are given below of the interrelationships among basic elements and design, logistics, and production management activities that should be considered in acquisition management.

Facilities Requirements

Beginning in the concept formulation phase, facilities requirements and capabilities should be jointly analyzed and identified by system design, logistics, production, and administration and control activities. As the program acquisition

process continues, these activities should continue the facilities analysis to develop increasingly detailed facilities requirements. As requirements in sufficient detail are identified, a corresponding continuous series of trade-off studies should be made to plan optimum utilization of existing DoD resources, joint utilization, and downstream utilization. This early, continuous, series of trade-off studies is intended to insure timely release of fully coordinated facilities requirements. The requirements and trade-off studies should be reviewed and evaluated at such key events as SD-2, -4, -6, and -8, and corresponding SM-2, -4, -6, and -8 and PM-2, -4, -6, and -8 events (see Figure 1). Where trade-off studies indicate existing facilities will fill a program requirement, either "as is" or modified, existing facilities should be used. Where new facilities must be developed, downstream use should be considered. A new production facility might be designed for use later as a depot facility; an instrumentation laboratory used during base installation and checkout might be used later as a base calibration laboratory.

It should be noted that in defining the complete facilities requirements, the actual analysis will take place at the basic element level. For system design, facilities requirements for the engineering force, test and demonstration, and installation and checkout must be established. For logistics support, facilities requirements for maintenance, supply support, and transportation and handling must be established. For production, facilities requirements for manufacturing and inspection and test must be established. These listed basic elements are only a partial list. They would be included in the exhaustive list that must be established for each individual acquisition program.

Support Equipment and Technical Data

Support equipment and technical data are similar to facilities in that each of the management activities requires some type of support equipment and technical data, as well as some type of facilities, to accomplish an effective acquisition program. Continuous coordinated analysis and trade-off studies should be conducted beginning in the concept formulation phase and extending through all phases of the acquisition program. Early, joint consideration of program requirements for these basic elements by system design, logistics, production, and administration and control should result in plans for optimum joint and downstream utilization. Areas worthy of special attention that might contribute substantially to an efficient program include: production tooling and test equipment which can be used later as base or depot maintenance equipment; system design test procedures that are directly convertible to maintenance checkout procedures; management reporting systems used during the acquisition phase that are readily usable during the operating phase, containing all elements of data needed by administration and control activities.

Reliability and Maintainability

Reliability and maintainability are basic elements of both system design and logistic support management. A balanced set of goals, stated in meaningful and measurable terms, should be assigned for these elements during the concept formulation phase. These goals should be compatible with the assigned total system effectiveness goals and may be in terms of availability, failure rate, mean time to repair, maintenance man-hours per sortie, materiel useage rates, etc. A continuous program covering

all acquisition program phases is needed to perform adequate system trade-off studies and reliability and maintainability evaluation. The trade-offs should be directed toward developing optimum approaches considering system effectiveness goals, design costs, production costs, and logistic support costs over the system life cycle. Sub-optimizations resulting in lower design and production costs during the acquisition program at the expense of greater program life cycle costs are to be avoided.

The reliability and maintainability evaluation program should be developed to use the best system data available. Early in the program this will consist mainly of "paper analyses." As equipment designs become firm, prototype equipment is built and tested, and test data become available, these paper analyses should be validated against the test results. Later, as operational equipment is tested during production and field tests, the paper analyses and the prototype test results should again be verified. At each step of the evaluation, where assigned goals are not met, system trade-off studies should be conducted to develop appropriate corrections, workarounds, or reallocation of apportioned goals. An effective continuous closed loop feedback correction system should exist for the entire system life cycle.

4. BUDGETING AND FUNDING REQUIREMENTS

In addition to the examples of interrelationship considerations among basic elements provided above, funding requirements deserve special attention. This is especially true of funding for concept formulation. The conceptual phase of military programs is budgeted and funded under Program IV, RDT&E. Historically, this phase has consisted of comprehensive system studies and experimental hardware efforts under exploratory development and advanced development, as a prerequisite to a decision to carry out engineering development.

Budgeting and funding requirements for the balance of the acquisition program covering the contract definition, development, production and operations phases are also of prime concern. Budgets and funds for system design, production, and logistics should be identified separately for each program phase to provide management with cost visibility necessary to evaluate program trade-offs and insure adequate funding for the total acquisition program.[4]

---

[4] See Budgeting Cycle, Appendix C, "Amplification on Programming and Budgeting Cycle."

5. ADMINISTRATION AND CONTROL FUNCTIONS

Administration and control functions provide the common management tools which support all DoD activities, ranging from basic scientific research through hardware acquisition, operation, and phaseout. They provide the working guidelines common to all programs and management levels. They are essential to the integration of existing capabilities and new requirements into the national capability needed to accomplish present and forecasted DoD missions.

The administration and control elements shown in Figure 1 provide for the planning of administrative and control systems for selective application in acquiring and using systems and equipment. To assure efficiency and economy, these elements must provide mutually compatible procedures and controls for selective use by all elements of acquisition management. Policy, guidance, directives, instructions, specifications, orders, plans, records, reports, and other management decision information should be carefully tailored to accomplish specific acquisitions. They must provide sufficient visibility for both program level and higher level administration and control activities without incurring high costs or hampering the smooth flow of acquisition activities.

6. IMPLEMENTATION OF THE GUIDE

The major events, decision points, responsibilities, and interrelationships described within this guide are essential to effective acquisition of DoD systems and equipment.[5] DoD management issues appropriate implementing acquisition policies, directives, instructions, and guidance, and delegates responsibilities accordingly. The policies, directives, instructions, and guidance should provide an integrated system to guide project and functional managers in establishing their own detailed action program. The Integrated Logistics Support Guide and Production Planning Guide referenced in the bibliography and Appendix A cover a portion of the needed guidance. In addition, to achieve the necessary degree of integration and consistency among the policies and directives, responsible organizations in DoD have established a program to review existing acquisition, control, and administration documentation on a continuing basis. The review considers the consistency among that documentation and also between it and this guide.

Plans, contracts, and decision criteria for each acquisition should be tailored as required to meet life cycle cost, total package procurement, configuration item management, assets determination, and other control requirements.

---

[5] Appendix B describes the normal relationships that exist between government and industry during the various phases of an acquisition program.

BIBLIOGRAPHY

DoD Directive 3200.9, "Initiation of Engineering and Operational Systems Development."

DoD Instruction 3200.6, "Reporting of Research, Development and Engineering Program Information."

DoD Directive 5010.14, "System/Project Management."

DoD Directive 4100.35, "Development of Integrated Logistics Support for Systems and Equipments."

DoD Directive 4105.62, "Proposal Evaluation and Source Selection."

DoD Instruction 7045.7, "Review and Approval of Changes to the Five-Year Defense Program."

DoD Directive 5010.19, "Configuration Management."

DoD Directive 5010.20, "Work Breakdown Structures for Defense Materiel Items."

DoD Directive 7000.1, "Resource Management Systems of the Department of Defense."

DoD Instruction 7000.2, "Performance Measurement for Selected Acquisitions."

DoD Instruction 7000.6, "The Development of Management Control Systems for Use in the Acquisition Process."

DoD Instruction 5126.37, "DoD Technical Logistics Data and Information Program."

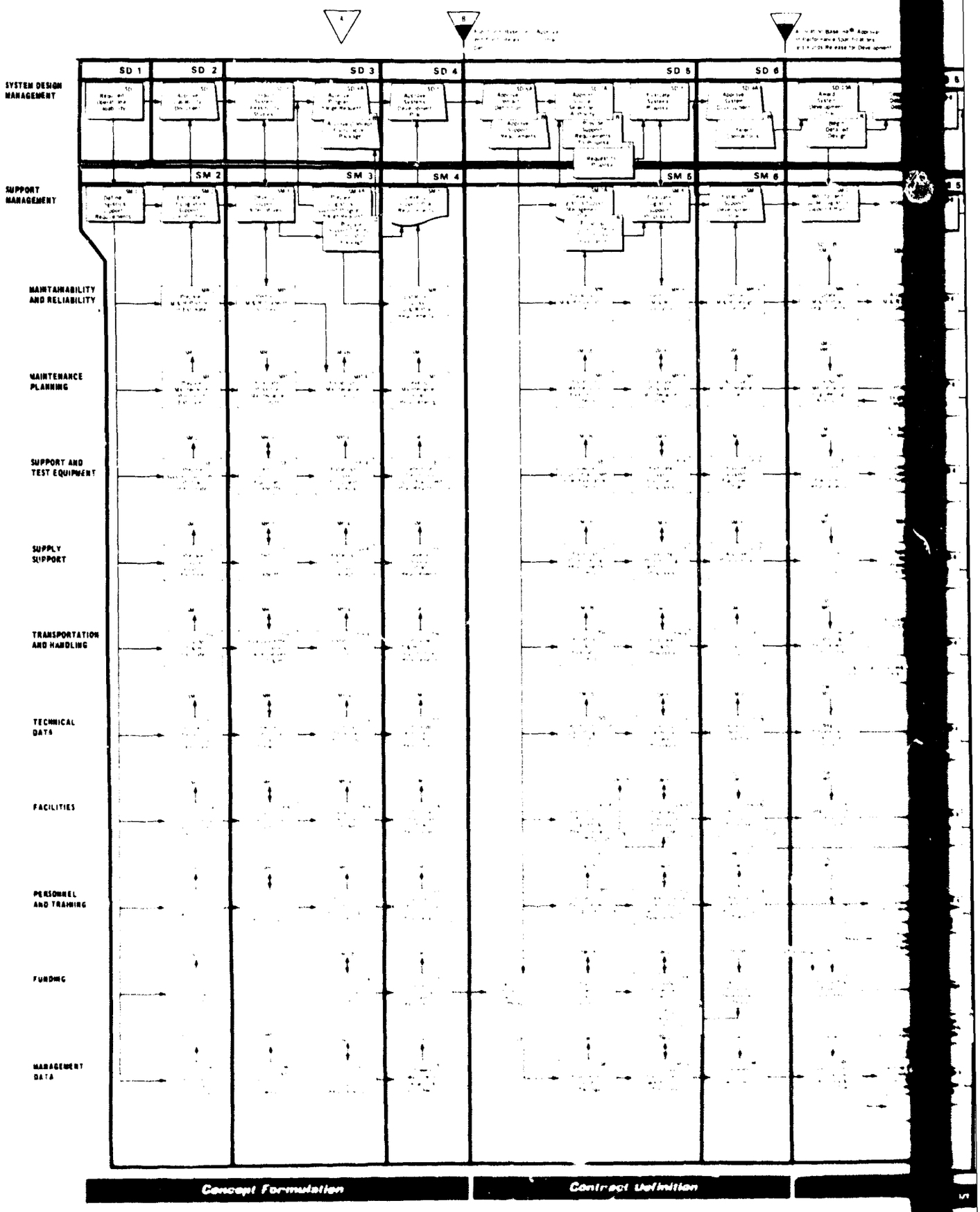
DoD Guide 4100.35-G, "Integrated Logistics Support Planning Guide for DoD Systems and Equipment."

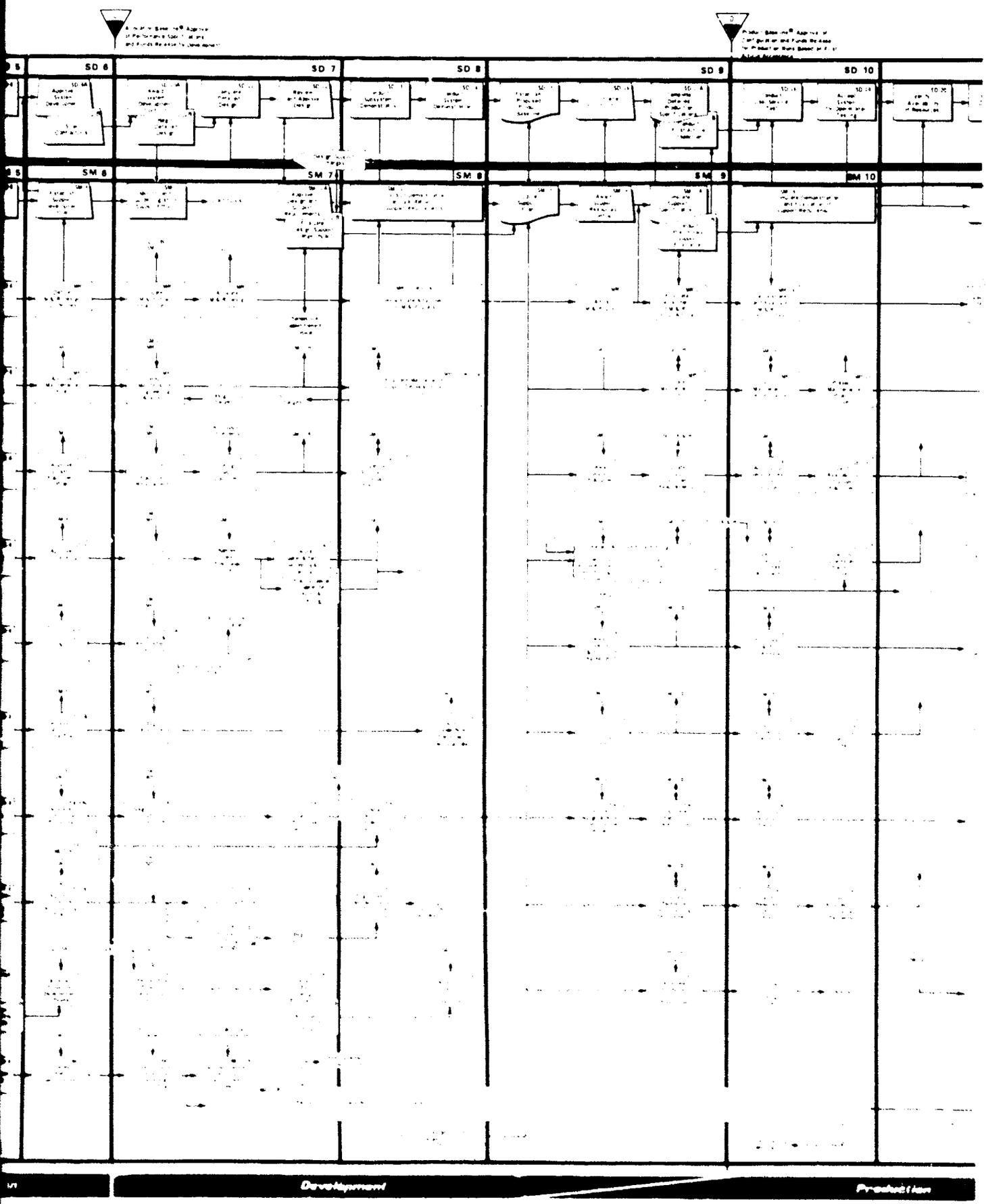
(To be issued). "Production Planning Guide for DoD Systems and Equipment."

APPENDIX A

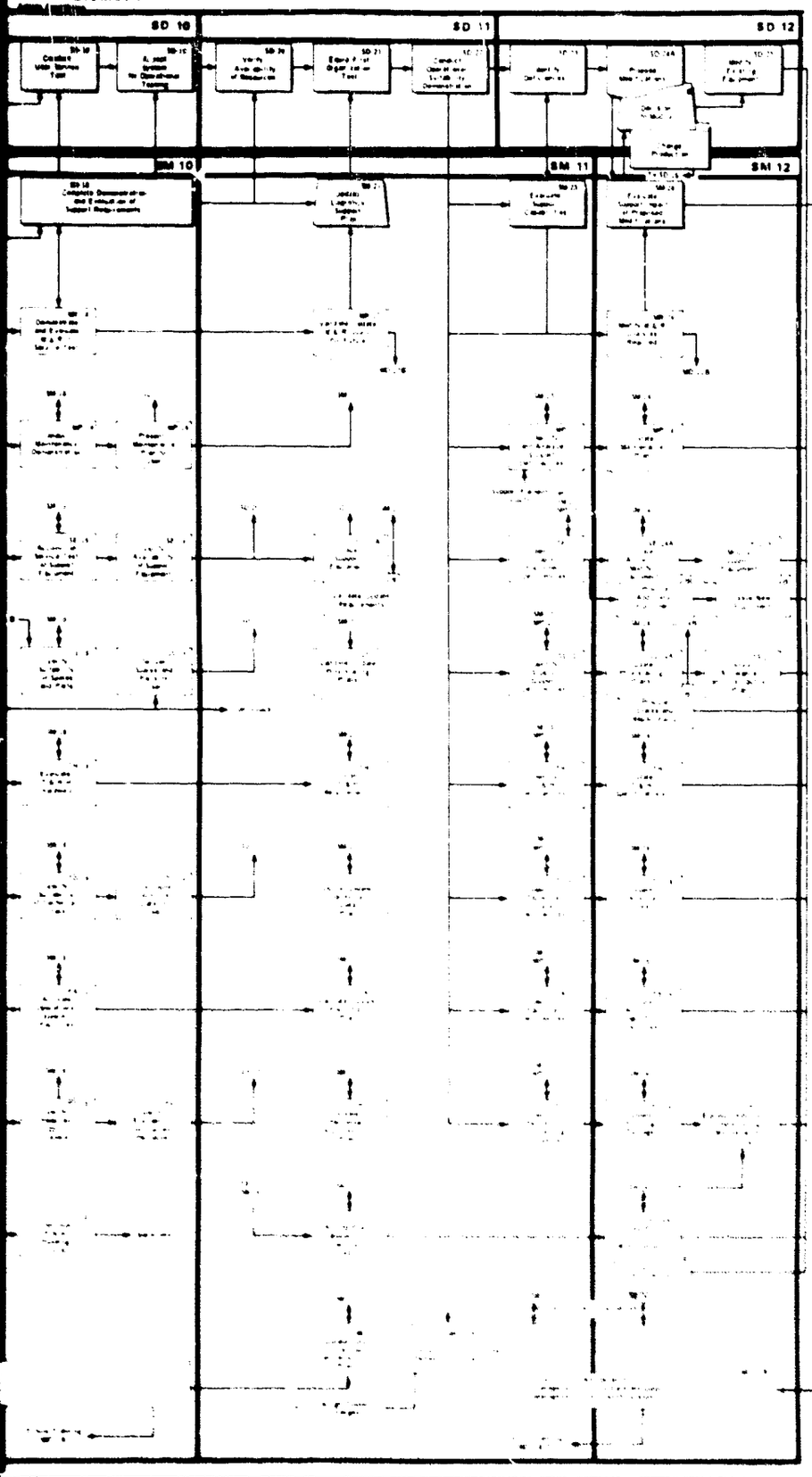
CROSS REFERENCE AMONG INTEGRATED LOGISTICS SUPPORT PLANNING GUIDE, INTEGRATED PRODUCTION PLANNING GUIDE, AND MANAGERS GUIDE TO ACQUISITION OF SYSTEM AND EQUIPMENT

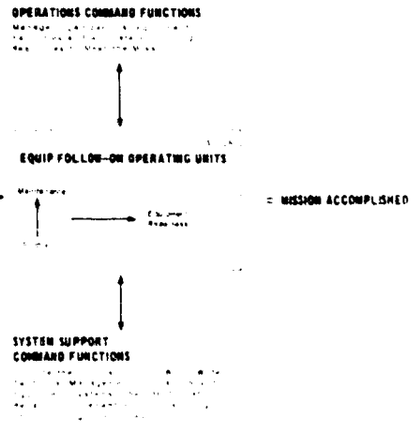
The following flow diagrams provide a cross-reference among the events shown in the detailed Logistics and Production Guides and those shown in the more general Manager's Acquisition Guide. The management flows from both the Logistics Guide and the Production Guide have been reproduced on the following pages exactly as published in the respective guides. The manner in which the detailed events in the Logistics and Production Guides combine to form the general events in the acquisition guide is shown in heavy box outline. The corresponding event numbers in the Acquisition Guide are shown in the box headings.


SD 1
SD 2
SD 3
SD 4
SD 5
SD 6
SYSTEM DESIGN MANAGEMENT
SM 2
SM 3
SM 4
SM 5
SM 6
SUPPORT MANAGEMENT
MAINTAINABILITY AND RELIABILITY
MAINTENANCE PLANNING
SUPPORT AND TEST EQUIPMENT
SUPPLY SUPPORT
TRANSPORTATION AND HANDLING
TECHNICAL DATA
FACILITIES
PERSONNEL AND TRAINING
FUNDING
MANAGEMENT DATA
Concept Formulation
Contract Definition

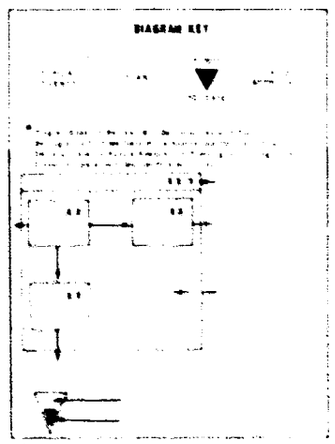

SD 6
SD 7
SD 8
SD 9
SD 10
SM 6
SM 7
SM 8
SM 9
SM 10
Development
Production

INTEGRATING LOGISTICS SUPPORT PLANNING EVENTS





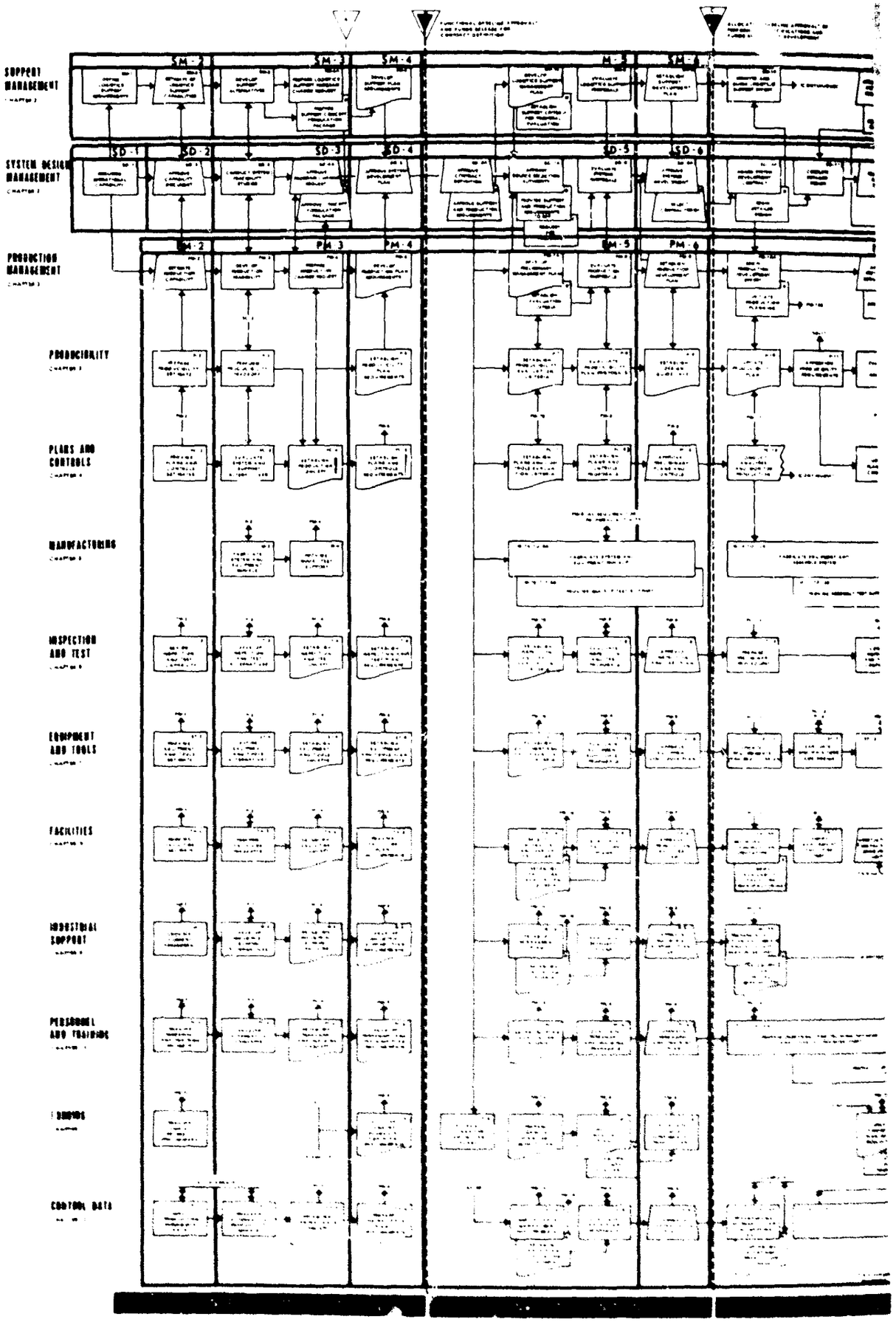
THE SUPPORT OBJECTIVE

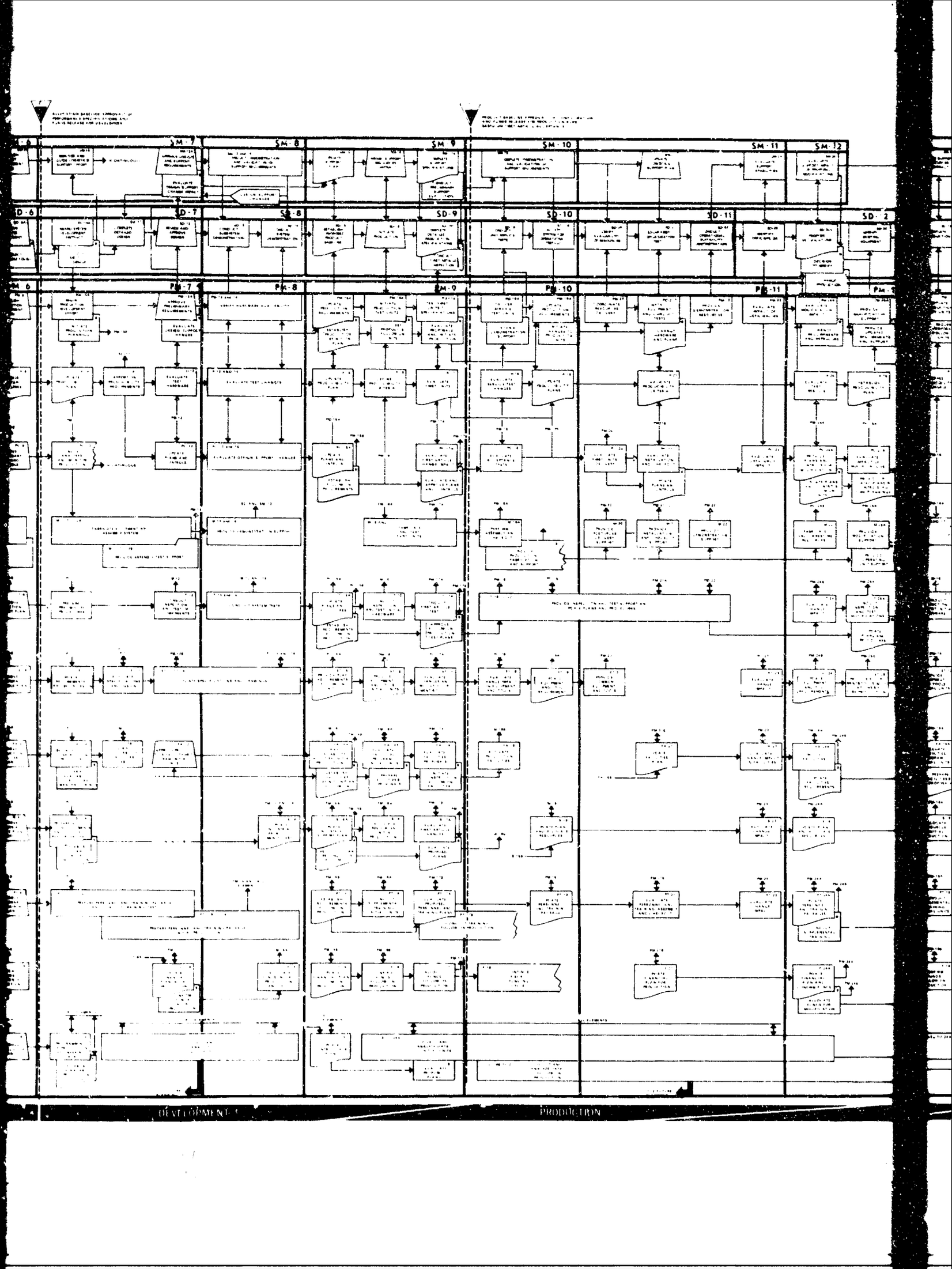


Production

Operational

Figure 16


SUPPORT MANAGEMENT
SYSTEM DESIGN MANAGEMENT
PRODUCTION MANAGEMENT
PRODUCIBILITY
PLANS AND CONTROLS
MANUFACTURING
INSPECTION AND TEST
EQUIPMENT AND TOOLS
FACILITIES
INDUSTRIAL SUPPORT
PERSONNEL AND TRAINING
DATA
CONTROL DATA


SM-7
SM-8
SM-9
SM-10
SM-11
SM-12
SD-6
SD-7
SD-8
SD-9
SD-10
SD-11
SD-2
PM-6
PM-7
PM-8
PM-9
PM-10
PM-11
PM-12
DÉVELOPPEMENT
PRODUCTION

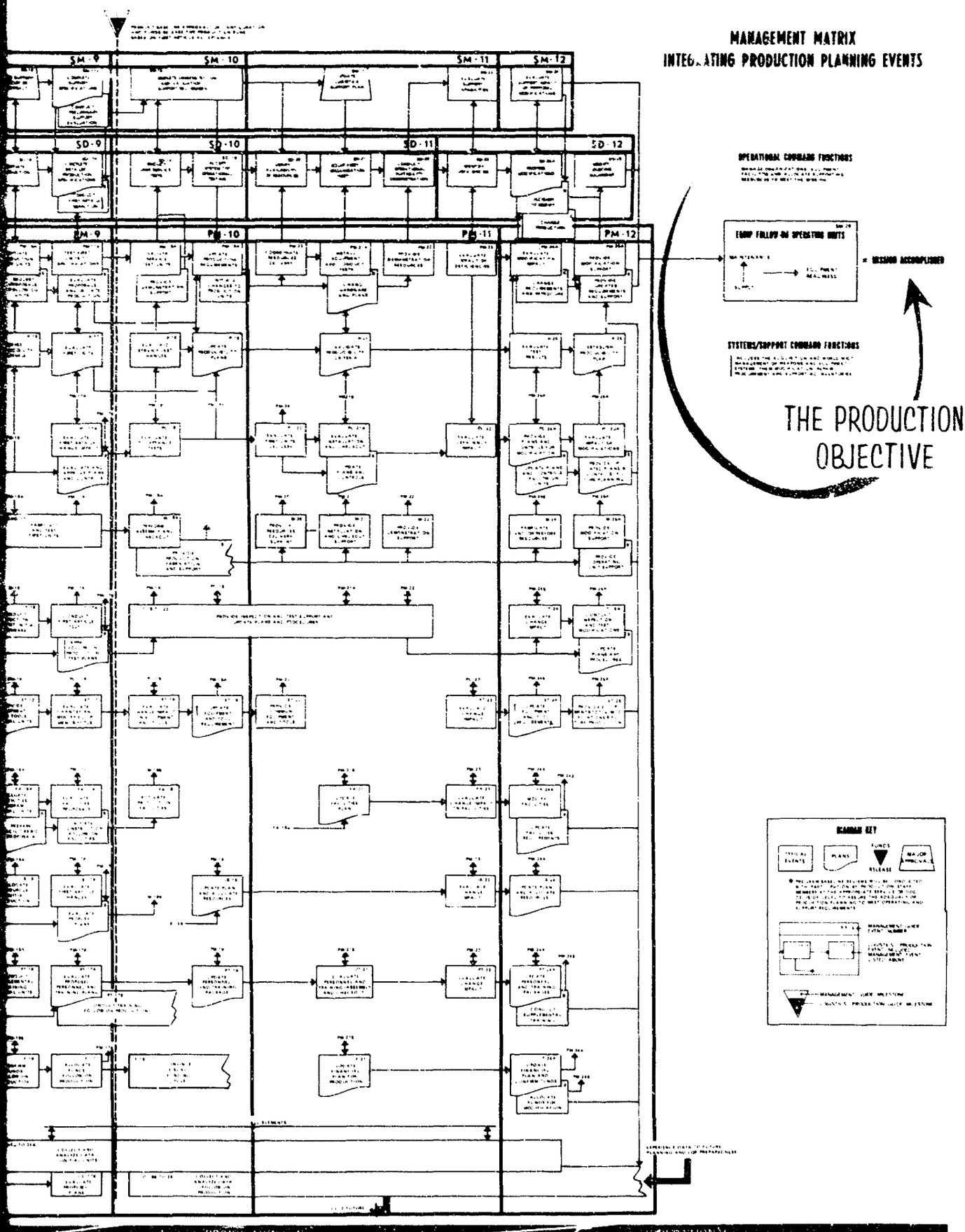
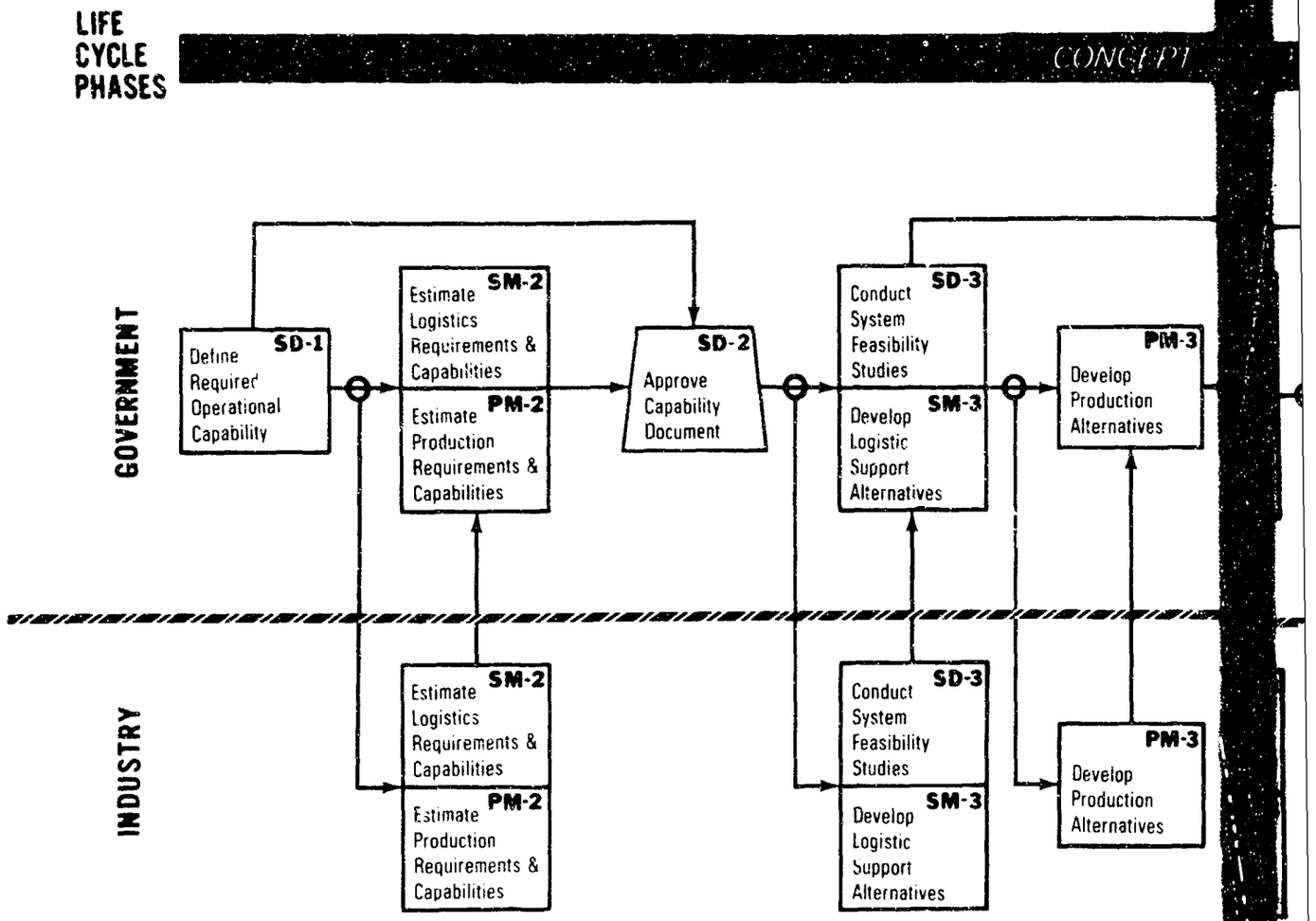
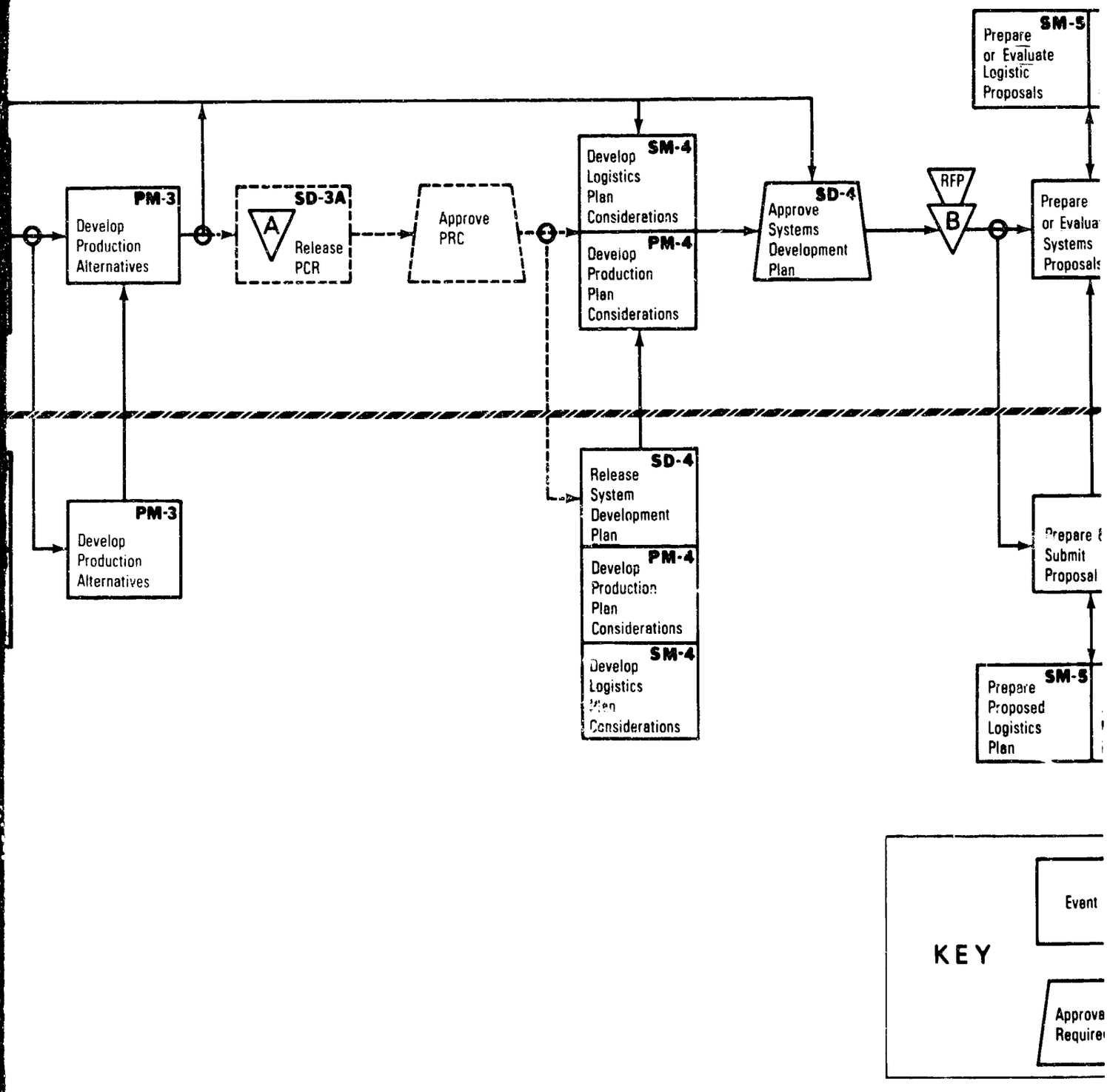
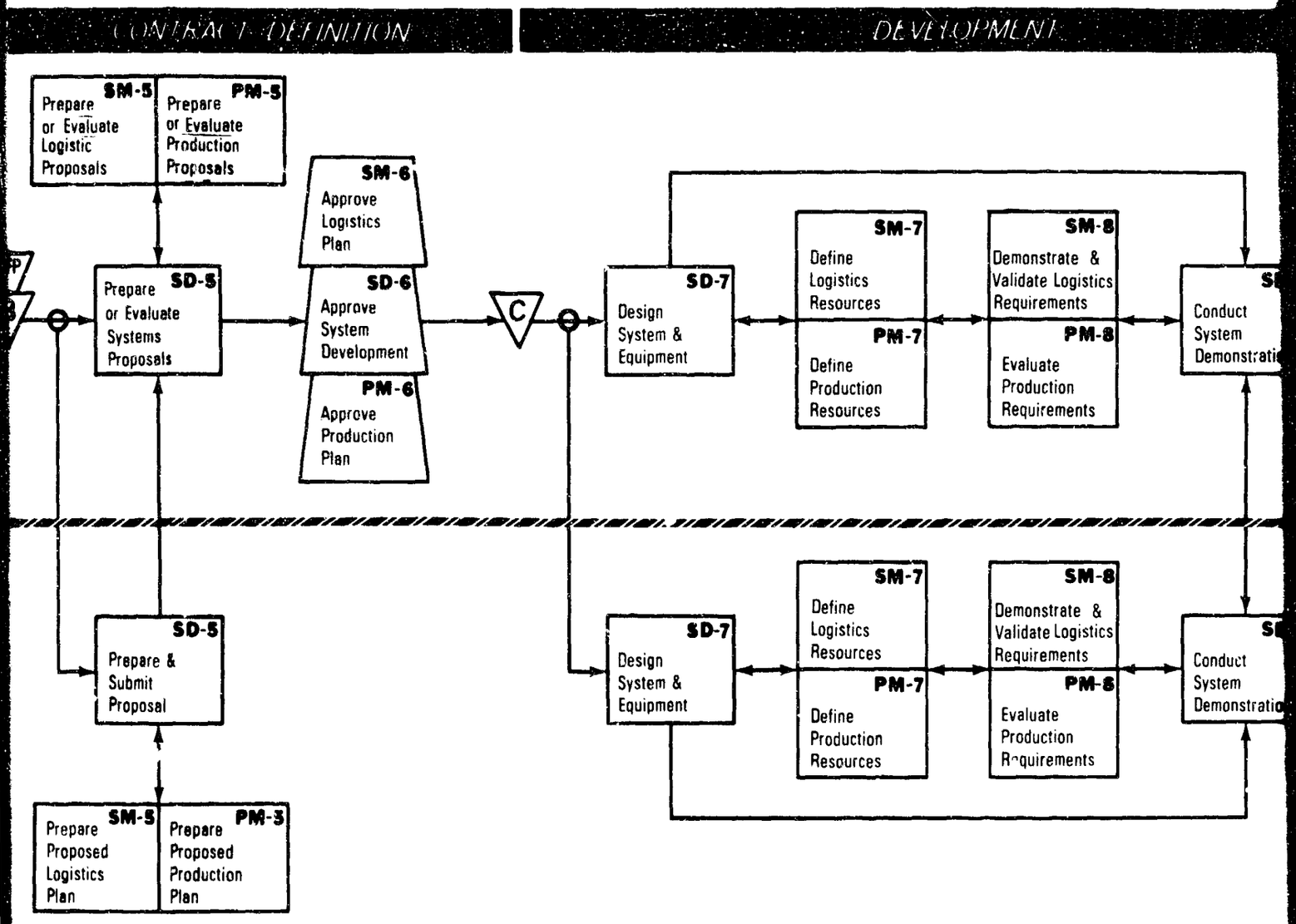

MANAGEMENT MATRIX
INTEGRATING PRODUCTION PLANNING EVENTS
SM-9
SM-10
SM-11
SM-12
SD-9
SD-10
SD-11
SD-12
PM-9
PM-10
PM-11
PM-12
OPERATIONAL COMMAND FUNCTIONS
EQUIP FOLLOW-ON OPERATING UNITS
= MISSION ACCOMPLISHED
SYSTEMS/SUPPORT COMMAND FUNCTIONS
THE PRODUCTION OBJECTIVE
DIAGRAM KEY
PLANS
RELEASE
PRODUCTION
OPERATIONAL

Figure 6


LIFE CYCLE PHASES
CONCEPT
GOVERNMENT
INDUSTRY
SD-1
Define Required Operational Capability
SM-2
Estimate Logistics Requirements & Capabilities
PM-2
Estimate Production Requirements & Capabilities
SD-2
Approve Capability Document
SD-3
Conduct System Feasibility Studies
SM-3
Develop Logistic Support Alternatives
PM-3
Develop Production Alternatives
SM-2
Estimate Logistics Requirements & Capabilities
PM-2
Estimate Production Requirements & Capabilities
SD-3
Conduct System Feasibility Studies
SM-3
Develop Logistic Support Alternatives
PM-3
Develop Production Alternatives


SM-5
Prepare or Evaluate Logistic Proposals
PM-3
Develop Production Alternatives
SD-3A
A
Release PCR
Approve PRC
SM-4
Develop Logistics Plan Considerations
PM-4
Develop Production Plan Considerations
SD-4
Approve Systems Development Plan
RFP
B
Prepare or Evalua Systems Proposals
SD-4
Release System Development Plan
PM-4
Develop Production Plan Considerations
SM-4
Develop Logistics Plan Considerations
PM-3
Develop Production Alternatives
Prepare & Submit Proposal
SM-5
Prepare Proposed Logistics Plan
KEY
Event
Approva
Require



Event

Either One Of Two Alternate Paths May Be Taken Depending Upon Whether System Is To Be Developed By Government Or Industry (Complex Systems May Require Both.)

Approval Required

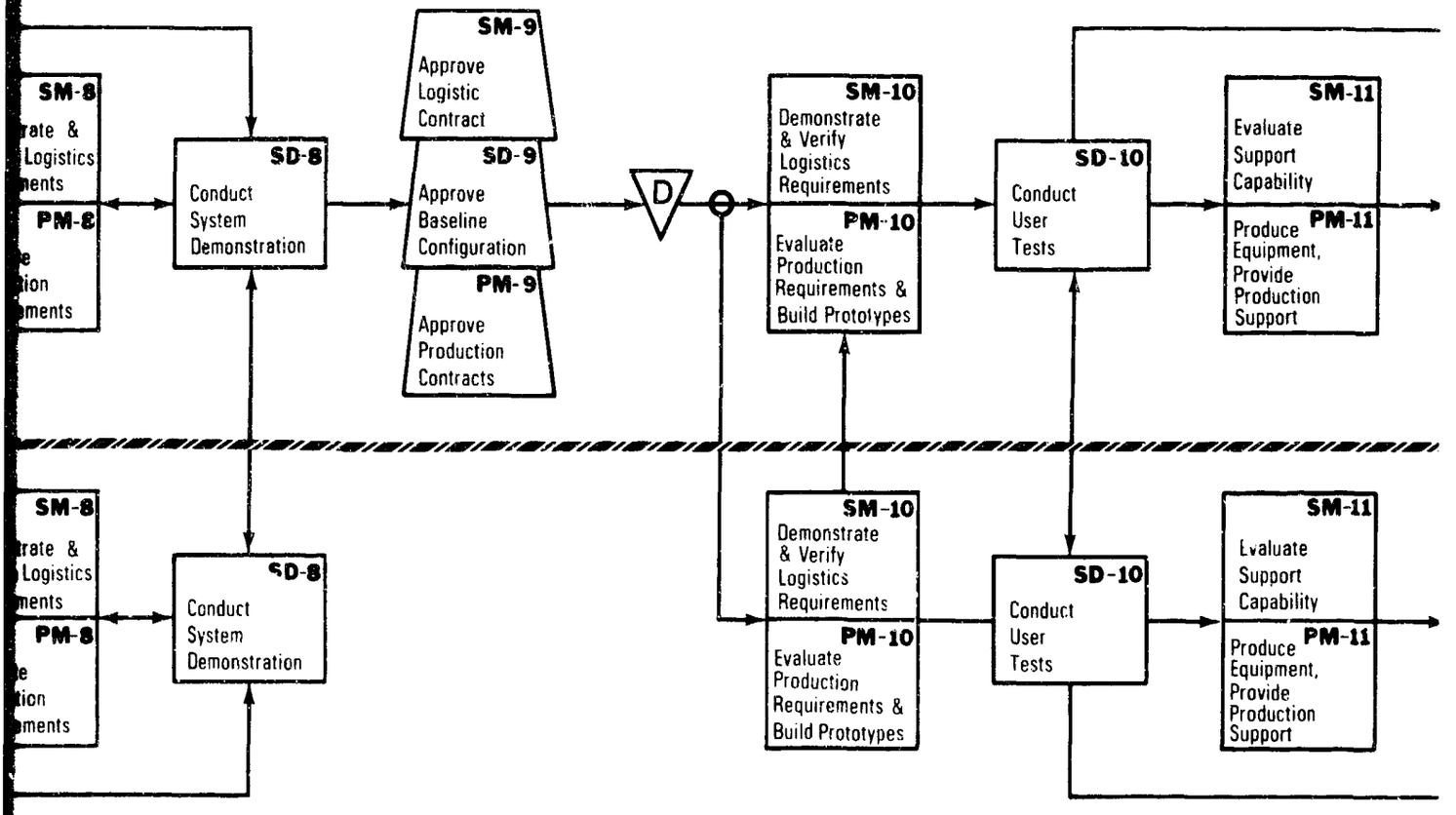
May Be Required For Changes To FYDP

A — Program Change Request

B — Conditional Approval of Functional Baseline & Funds Release For Contract Definition

C — Approval of Allocation B Specifications & Funds R For Development

D — Approval Of Product Bas Configuration & Funds R For Production Of Equip

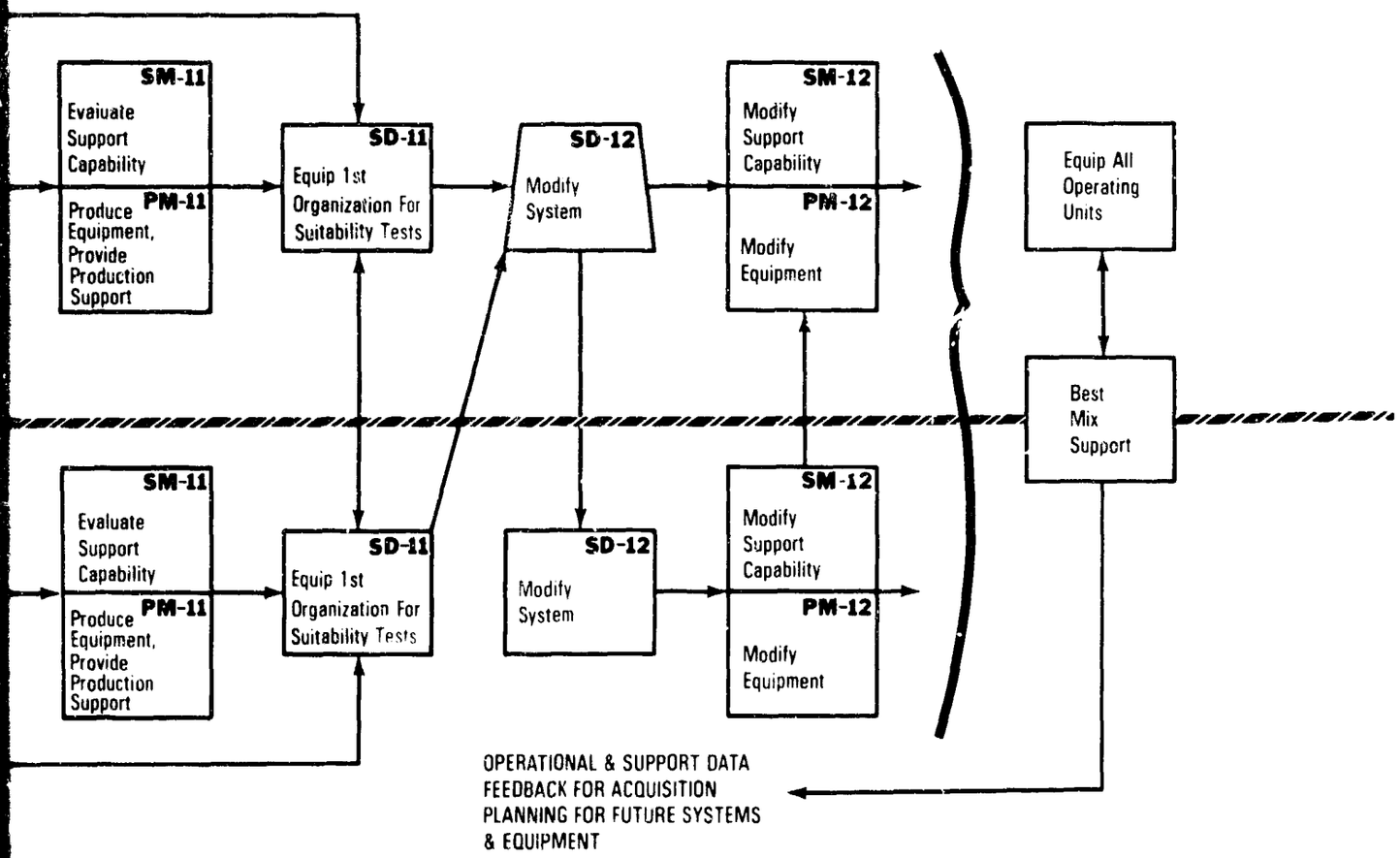


C — Approval of Allocation Baseline Specifications & Funds Release For Development

D — Approval Of Product Baseline Configuration & Funds Release For Production Of Equipment

APPENDIX B

GOVERNMENT / INDUSTRY ACTION ASSIGNMENTS & FLOW FOR ACQUISITION



APPENDIX C

AMPLIFICATION ON PROGRAMMING AND BUDGETING CYCLE

1. Program Change Request

The Five-Year Defense Program (FYDP) is an eight-year projection of forces and a five-year projection of costs and manpower arranged in mission-oriented program packages. The FYDP projects approved programs for the current fiscal year, the base fiscal year, and the succeeding four fiscal years. Changes to the FYDP program which result in changes of forces total obligational authority, or personnel assignments to individual programs are made by submitting a Program Change Request (PCR). A PCR is also used to "price out" proposed Secretary of Defense decisions and to support Service secretaries' positions in response to Initial Draft Presidential Memorandums. In addition, reclamas to Secretary of Defense decisions are submitted on the PCR format.

2. Budgeting Cycle

Preparation of service budget estimates normally begins twelve months prior to the applicable fiscal year. Budget submissions by the Service secretaries to the Secretary of Defense are normally made nine months prior to the applicable fiscal year.

Budget review takes place at Service and OSD levels. The OSD level review is usually conducted with the Bureau of the Budget (BoB) analysts participating. The DoD budgets are then

submitted to the BoB for inclusion in the President's budget. Presentation of this budget is then made to the Congress by the President in January of each year. The budget is reviewed by Congress and when approved is signed by the President and becomes public law.

When the appropriation bill becomes law, release of funds is accomplished by the apportionment process. This process requires Service distribution of funds from BoB down through the same channels as budget submissions. Limitations or controls on funds to be apportioned are instituted by the OSD or Service as required. OSD and Service executives are charged with the legal responsibility for the administration of appropriations or budget activities of appropriations. This allocation process provides the financial means by which the Service controls the funding of departmental programs throughout the course of the fiscal year. Periodic reports (at least monthly) of obligations and expenditures are provided, and more frequent briefings for the Service secretaries by the Comptroller are conducted.

Changes to appropriated funds are made through reprogramming actions. Such actions are initiated by submission and subsequent approval of a PCR unless a Program Change Decision has been issued.

UNCLASSIFIED
Security Classification

DOCUMENT CONTROL DATA - R&D
(Security classification of title, body of abstract and indexing annotation must be entered when the overall report is classified)

1 ORIGINATING ACTIVITY (Corporate author) Logistics Management Institute 4701 Sangamore Road Washington, D. C. 20016	2a. REPORT SECURITY CLASSIFICATION UNCLASSIFIED 2b GROUP

3 REPORT TITLE

A Managers Guide to the Acquisition of DoD Systems and Equipment

4 DESCRIPTIVE NOTES (Type of report and inclusive dates)

5 AUTHOR(S) (Last name, first name, initial)

6. REPORT DATE	7a. TOTAL NO. OF PAGES	7b. NO. OF REFS
January 1969	27	6

8a CONTRACT OR GRANT NO. SD-271 b. PROJECT NO. SD-271-87 c. d.	9a. ORIGINATOR'S REPORT NUMBER(S) 68-13 (Rev.) 9b OTHER REPORT NO(S) (Any other numbers that may be assigned this report)

10 AVAILABILITY/LIMITATION NOTICES

Distribution of this document is unlimited.

11 SUPPLEMENTARY NOTES	12 SPONSORING MILITARY ACTIVITY OSD (I&L)

13 ABSTRACT

The guide identifies and provides summary descriptions of the key activities, decision points, and responsibilities essential to effective acquisition management. It is oriented toward identifying the management functions that are needed to successfully accomplish most acquisition programs. It is not oriented to any specific organizational structure. It describes the interrelationships among system design, production, and logistics support that must be established and maintained to provide a basis for acquiring the most effective systems and equipment in terms of performance, readiness, and cost. It emphasizes the conduct of trade-offs and the recording of alternative approaches and supporting rationale for the selected concepts and plans. These actions are considered essential to assure that proper consideration is given to systems and equipment performance, technical risk, producibility, supportability, and total cost to the government. The guide is designed as an executive brief for both government and industry. It emphasizes the need for plans and implementing actions which will assure that system design, logistics support, and production are managed as an integrated whole during the acquisition process.

DD FORM 1473

UNCLASSIFIED
Security Classification