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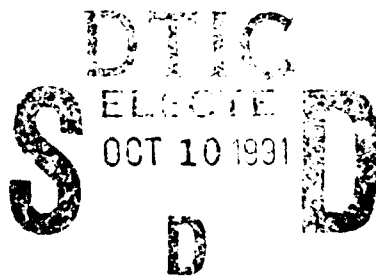
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FROM CONCEPTS TO PROGRAMS:
THE ARMY'S LONG RANGE RESEARCH, DEVELOPMENT, AND ACQUISITION PLAN

A thesis presented to the Faculty of the U.S. Army
Command and General Staff College in partial
fulfillment of the requirements for the
degree

MASTER OF MILITARY ART AND SCIENCE

by



GARY A. LEE, MAJ, USA
M.S., Naval Postgraduate School, 1987

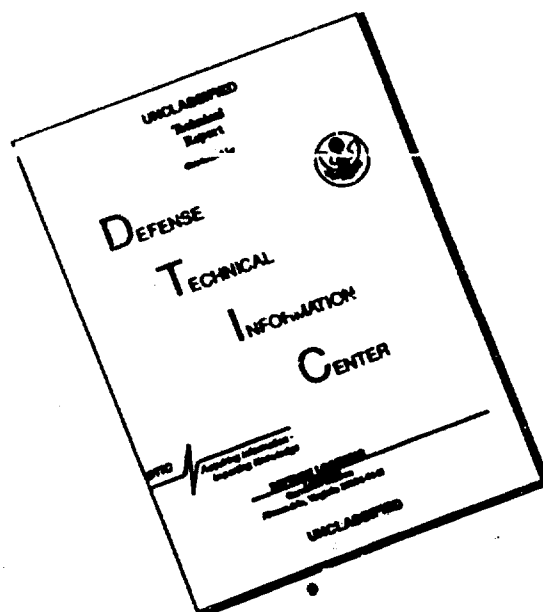
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ABSTRACT

FROM CONCEPTS TO PROGRAMS:

THE ARMY'S LONG RANGE RESEARCH, DEVELOPMENT, AND ACQUISITION PLAN

Gary A. Lee, USA, 101 pages.

This thesis investigates the Army's Long Range Research, Development, and Acquisition Plan (LRRDAP) -- a key product of the Army's Planning, Programming, Budgeting, and Execution System (PPBES) -- to determine its future utility to PPBES and the Army's senior decision-makers. This thesis provides a direction for continued research or debate by addressing issues that have been experienced during previous planning phases.

The LRRDAP focuses Research, Development, and Acquisition programs on solving future battlefield needs derived from warfighting concepts. To be credible, the LRRDAP must meet the need to relate anticipated battlefield materiel requirements to requested resources competing for appropriations. To this end, the requirements must be packaged into affordable and defensible programs to survive the exhaustive PPBES reviews.

The issues include how fiscal guidance should be applied to planning assumptions; an evaluation of the vertical interdependency within the planning phase of PPBES and PPBS; an evaluation of the horizontal interdependency between the planning and programming phases of PPBES; and, a review of the Army Acquisition Executive's and Program Executive Officers' roles during the planning phase of PPBES for compliance with the Goldwater-Nichols Department of Defense Reorganization Act of 1986.

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CHAPTER 1

INTRODUCTION

" . . . In striving to achieve the objectives of our defense program within a constrained resource environment, the requirement for stable and effective planning is becoming even more important. . . ."

-- President's Blue Ribbon Commission
on Defense Management (June 1986)

FOCUS

The President's Blue Ribbon Commission on Defense Management underscored the significance of this thesis. Stable and effective planning is a requisite to ensure future Army concepts are programmed to compete for constrained resources. This thesis focused on one product, the Long Range Research, Development, and Acquisition Plan (LRRDAP), critical to the Planning, Programming, Budgeting, and Execution System (PPBES). Research was conducted to determine the LRRDAP's future utility to PPBES and the Army's senior decision-makers.

The LRRDAP -- a key product of the Army's PPBES -- focuses Research, Development, and Acquisition (RDA) programs on solving future battlefield needs derived from

warfighting concepts. To be credible, it is necessary that the LRRDAP relates anticipated battlefield materiel requirements to requested resources that will compete for appropriations.

To achieve its purpose, the LRRDAP requires reliable inputs and outputs, coupled with participatory processes that coincide with the critical milestones of PPBES.

Does this mean that the current PPBES is unsuccessful in planning and programming for future military materiel requirements? NO! The military success in the Persian Gulf revealed an extremely effective array of technically and functionally advanced weaponry that validated the success of PPBES and the decisions of our preceding senior military leadership. What it does mean is that further constraints on and more public awareness of defense spending pressures the Army to continue to improve its ability to procure the most economical mix of technology and materiel to meet the needs of the future battlefield.

PURPOSE

The purpose of this thesis is to research the inputs, outputs, processes and legislation effecting the development of the LRRDAP.

First, this thesis analyzes how fiscal guidance is applied to planning assumptions. It resolves whether the fiscal guidance that is included in the top-down planning

instructions should be unconstrained for an unabridged assessment or constrained for an affordable assessment of the Army's future materiel needs. Decisions based on deficient fiscal guidance tend to be reactionary, made on an issue-by-issue basis not well-suited to optimizing the use of available Army resources for research, development, and acquisition of future materiel needs.¹

Second, this thesis evaluates the relationship that the LRRDAP has between the Army's PPBES and the Department of Defense's PPBS -- referred to as the vertical interdependency between PPBS and PPBES. The events and processes of the Army's planning phase are chronologically aligned with other PPBS and PPBES milestones to provide proper review of the Army's future battlefield materiel requirements prior to the programming phase. However, if the process-oriented PPBES does not remain properly synchronized, the delays are accumulative and the time available to analysts will be constricted. The LRRDAP development is restricted by a rigid set of deadlines driven by this very complex PPBES infrastructure. Any delays in approving the LRRDAP will correspondingly effect the building of the Program Objective Memorandum (POM). This results in the Secretariat and Army Staffs (ARSTAF) having minimal time to perform necessary analyses of anticipated battlefield materiel requirements vis-à-vis constrained resources. Consequently, the Army's senior decision-makers

are provided fewer alternative solutions for many issues competing for limited resources.

Third, this thesis evaluates the transition of the LRRDAP from the planning phase to the programming phase -- referred to as horizontal interdependency between the Army's Planning and programming phases of PPBES. The planning phase culminates in planning decisions that articulate future materiel requirements. The LRRDAP serves as the EDA input to the programming phase and, therefore, its priorities and decision packages are used by the Army programmers to begin building the Army's POM. During the programming phase of PPBES, the programmers begin the arduous task of translating planning decisions and programming guidance to structure materiel programs that will vie for constrained appropriations. Planning decisions that are not consistent with programming guidance or are misinterpreted by programmers may be lost during subsequent PPBES phases making the programs more difficult to justify.

Fourth, this thesis examines the roles of the Army Acquisition Executive (AAE) and Program Executive Officers (PEOs) during the planning phase of PPBES for compliance with the Goldwater-Nichols Act. The Defense Management Review led by Secretary of Defense Cheney, assigned to the Assistant Secretary of Army (Research, Development, and Acquisition) the additional responsibility to perform the duties of the AAE and created a separate chain of command

for PEOs. Within the responsibilities set forth in the Goldwater-Nichols Act, the roles of the AAE and PEOs, during the planning phase, require further definition to ensure active, streamlined participation in the early phases of LRRDAP development.

In summary, the approach to acquiring materiel to fulfill future battlefield needs will be deficient if the planning decisions aren't based upon cogent planning assumptions and fiscal guidance; if planning decisions aren't available at the beginning of the programming phase; and, if planning decisions aren't translated properly by programmers throughout the Program building process. Collectively, within a constrained fiscal environment, managing these variables results in an effective resource management system with credible materiel programs that support the Army leadership's vision of the future battlefield and will be defensible during legislative debate for limited resources.

This thesis provides recommendations for future planning phases that are defined with constrained resources. Finally, this thesis provides a direction for continued analysis and debate of these issues and other issues that are beyond the scope of this research that effect the development of the Army's LRRDAP.

ASSUMPTIONS

The Army continues to review its PPBES process according to the guidelines of the Goldwater-Nichols Act to bring about further reforms. These reforms will achieve the objectives of the Packard Commission's Report:

"... Reforms must deal with three major problems in the current national security planning and budgeting process: the need to relate military plans more adequately to available resources; the instability of the defense budget process in both the Executive Branch and Congress; and the inefficient role of Congress in the review of the defense budget . . ."

The analyses contained in this thesis used unclassified extracts from the most recent PPBES cycle as a case study. This case study includes the development of the fiscal years (FY) 1990-2004 and 1992-2006 LRRDAPs to represent the planning phase and the building of the FY 1990-1994 and 1992-1997 POM to represent the programming phase.

The timing of the last PPBES cycle and the procedures for each phase accurately captured the rigid phasing of events and procedures for future PPBES cycles. All funding numbers and trends came from sources available for public review.

In addition, fiscal resources will remain constrained over the terms that include the budget and program years. Therefore, the PPBES processes and military leadership

assume the Army will not fully fund their requirements given a fiscally constrained environment.

LIMITATIONS

This thesis avoided classification matters by focusing on issues and mechanics. Where appropriate, an aggregate examination of funding levels showed planning, programming, and budgeting trends.

Furthermore, the level of analyses focused primarily on HQDA actions within the PPBES phases. The roles of the combat developer, materiel developer, AAE and PEOs, and players above HQDA level are discussed or analyzed to the extent that they clarify the issues in developing the LRRDAP.

The PPBES processes and products are still under critical examination and changes are ongoing. Therefore, recent changes that are not a matter of public record may be excluded from this thesis.

DELIMITATIONS

The scope of this thesis, coupled with a limited time constraint, prevented developing recommendations for a revised PPBES schedule of events.

Furthermore, technical and automation interfaces were not addressed. The historical analyses focused on Presidential administrations that cover the years 1980-1990.

There was no attempt to discuss policies or procedures prior to the creation of the PPBS process in 1962.

In the analysis, the documents that were inputs to or outputs from the planning phase were not investigated for causal factors in great detail. Rather, they were used as examples or cited as references to underscore a circumstance surrounding a specific issue. Furthermore, the scope of this thesis included the impact on the planning and programming phases, more specifically the LRRDAP, that these documents had when they were delayed. Why the documents were delayed contributed little to the thesis. This assumes that each phase of PPBES will encounter delays for some reason with varying magnitude.

¹Government Executive, The Problem the Packard Commission Missed, (April 1987), 38.

CHAPTER 2

LITERATURE REVIEW

"Literature is the effort of man to indemnify himself for the wrongs of his condition."

-- Walter Savage Landor, 1841

The best way to correct mistakes of the past is to learn about them from the experiences of others. There are numerous publications written on the subjects of PPBS and PPBES that discuss these experiences. However, little has been written with a primary focus on the planning phase of these two systems. Of the literature reviewed, two schools of thought were prevalent. One school of thought focused on processes (or mechanics) and the other focused on strategy (or guidance).

Advocates on one side claim the problems encountered with PPBS and PPBES are the result of complicated processes. These publications suggest that the processes were not synchronized, contained redundant functions, or were too rigid.

Advocates on the other side, assert that too much effort already is invested in correcting the mechanics of

PPBS and PPBES. They insist that the processes represent proven frameworks to align resources with requirements. Therefore, this position presumes that attempts to improve the processes of PPBS and PPBES are only temporary corrections. The real problem, stated or implied in these documents, is the quality of the strategy used to guide the processes. Stated in other terms, these authors believe the ability to develop military strategic objectives and infuse these objectives into the phases of PPBS and PPBES was deficient.

Creating an opportunity for new research and analysis, recent Congressional legislation and DoD reforms affect the current PPBS and PPBES. Therefore, debate focused on the different aspects of PPBS and PPBES in response to this legislation is beneficial.

This chapter provides a review of the literature that was useful in the data collection phase of this thesis. The various sources provided a general background review of PPBS and PPBES. Additionally, some literature provided new references for study or cataloging in the bibliography. Furthermore, selected articles researched previous problems that were generated during the PPBS or PPBES process and yielded recommendations that were useful for further analysis. This chapter does not review pertinent regulations, manuals, and handbooks that were required to frame the parameters of the thesis in terms of doctrine or

policy which are provided in the bibliography. The bibliography serves as an expansion of the literature in this chapter. For future research, the extensive bibliography list provides an advantage for initial data collection efforts in the areas of PPBS or PPBES.

In summary, background information is abundant on the planning, programming, and budgeting process. However, there exists a new frontier to be explored in the area of resource allocation reforms in view of recent legislation.

PPBS LITERATURE

Planning, Programming, Budgeting System (PPBS): A Historical Perspective. Study project.

This study reviewed the development of the Department of Defense's Planning, Programming, and Budgeting System from a historical perspective in order to gain a better understanding of the evolutionary development in PPBS, not only as a resource allocation and decisionmaking process, but also as a vehicle for achieving organizational change.

This study is a valuable reference for developing a PPBS background for most reports or essays. It supports the information provided in Chapter 4, Background Review. It condenses information from several sources for a collective commentary of the PPBS. However, it was not referenced directly in the background discussion.

Should the Defense Reorganization Act of 1986 be Amended to Improve Resource Allocation. Study report.

This study explored the background of why the Congress felt a need to reorganize the Department of Defense and specifically evaluated the impact that the Act had on budgeting. Finally, this study provided recommendations and a conclusion about whether the budgeting aspects of the Act need further refinement to accomplish the goals Congress envisioned.

This study is recommended for the novice who desires an understanding of the reorganization within the Department of Defense. The study provides additional depth to the background discussions in Chapter 4, Background Review. Notwithstanding, reports by the President's Blue Ribbon Commission on Defense Management and the House of Representatives Conference Report on the Goldwater-Nichols Department of Defense Reorganization Act of 1986 were used to expand the discussion in Chapter 4, Background Review, pertaining to changes in the PPBS and PPBES.

Historical Linkages between DoD Resource Allocation and Army Capability to Support Warfighting CINCs (Commanders in Chief). Final report.

The purpose of this study was to show the historical context in which the roles of the CINCs have changed, with emphasis on the last ten years.

CINCS (Commander-in-Chief) and PPBS (Planning, Programming, and Budgeting System): Participation or Influence. Research report.

Following a review of the historical evolution of PPBS, this report described the participants from the Military Departments and the OSD staff, to Congressional committees. Then the entire process was reviewed in sequential steps with emphasis on what needs to be done by CINC staffs to influence the outcome of their programs. The report was structured to provide a background knowledge to the staff action officers working PPBS related activities for the CINC. Four specific recommendations were presented to assist the CINC staffs in setting up the environment to influence the Planning, Programming and Budgeting System.

Review of the Increased Participation of the Commanders-in-Chief (CINCS) in the Planning, Programing, and Budgeting System (PPBS). Master's thesis.

This thesis provided an analysis of the causal factors leading to the increased influence of the CINCS in the defense resource decision and allocation process. A discussion was provided on the various Joint Chiefs of Staff (JCS) reforms which lead to the enhancement of the CINCS' role in the Planning, Programming, and Budgeting System. Major issues, constraints, control and implementation problems currently confronting the CINCS were explored. A

brief summary of the initiatives begun by Deputy Secretary of Defense (DEPSECDEF) Taft to increase the involvement of the CINCs in the defense programming process also was provided. The policy issues related to implementation of the Goldwater-Nichols Department of Defense (DoD) Reorganization Act of 1986 were reviewed along with some of the positive and negative aspects of the increased demand for CINC participation in PPBS. Conclusions and recommendations for further study were furnished.

This thesis, coupled with the two reports preceding it, was outside the scope of research in Chapter 5, Long-Range Planning Analysis. For future research in the CINC's role in PPBS, they are very useful documents that provide further insight to the roles of the CINC's staff in PPBS. Inasmuch, they expand the brief discussion in Chapter 4, Background Review, concerning the CINC's increasing role in the PPBS process.

Constraints Placed on Marine Corps Ammunition Requirements by the PPBS (Planning, Programming and Budgeting System). Master's thesis.

The purpose of this thesis was to determine whether the products of the Planning, Programming and Budgeting System (PPBS) are worthwhile, they must be measured against some form of output. The Prepositioned War Reserve (PWR) of the Marine Corps is a measure of sustainability: a desired

output of the PPBS. This thesis investigated the PPBS, the Marine Corps programming methodology and ammunition requirement development to determine whether these processes artificially constrain ammunition purchases. This thesis suggested that the constraints placed on ammunition requirements are related to the lack of long-range strategic goals, inadequate planning in the PPBS and the inherent weaknesses of program budgeting.

This thesis was included in the literature review because its conclusion supports the summary and recommendations provided in Chapter 6, Conclusion, that constraints on requirements are related to the lack of long-range strategic goals and inadequate planning in the PPBS.

Planning, Programming and Budgeting System (PPBS). A Primer. Interim report.

This report provided insights to the factors that generate change within PPBS. It maintained that the system is dynamic and evolves continually for many reasons ranging from changes in key personnel to shifts in policy direction. One of the greatest single sources of change is the seating of a new political administration. Each new Secretary of Defense adjusts the system to reflect his style of management. The current: A continuation of centralized policy direction at the Office of the Secretary of Defense (OSD) level; a move to return execution authority and

responsibility from the OSD staff to the Services; a desire to include all DOD 'players' fully in the decision-making process. Previously the process was characterized by Service Headquarters-OSD dialogue. Now the inputs of the operational commanders-in-chief (CINCs) and the Joint Staff are being incorporated. The key documents in the annual cycle leading to the President's Budget Submission to Congress each January are covered.

This report underscores the mitigating circumstances surrounding the case study used to analyze the problems researched in Chapter 5, Long-Range Planning Analysis. It is a fact that the procedures followed and the guidance provided during each cycle of PPBES are subject to adjustments that reflect the current leadership's style of management.

Planning and Analysis: Where's the Beef. Student report.

This report provided an Air Force perspective of the Planning, Programming, and Budgeting System (PPBS). It identified the Air Force's need to place increased emphasis on systems analysis as it plans, inside and outside PPBS. It further concluded that the current antipathy between military planners (operational judgment school) and systems analysts (quantitative analysis school) must be resolved using the mission area analysis (MAA) concept to integrate

the two schools of thought and produce meaningful analysis. This report discussed three rules that must be observed. First, the analysis must be understandable (the Aunt Martha test); second, objective (no advocacy); and third, thorough (pros and cons).

This report provides another service's perspective to similar problems researched in Chapter 5, Long-Range Planning Analysis. The rules provided in this report are common sense. Inasmuch, they still appear deficient within PPBS and PPBES.

Study of the Practical Problems of the Department of Defense's Planning, Programming, and Budgeting System (PPBS). Master's thesis.

This thesis offered a broader understanding of the significant and subtle factors of PPBS success in the DOD by examining both the problems of the systems which lead to the introduction of PPBS and also the problems created as a result of PPBS and its evolution of changes. This thesis' focus on the PPBS infrastructure provides supporting research to the issues in Chapter 5, Long-Range Planning Analysis.

Planning Within the Planning, Programming, and Budget Process. Master's thesis.

This thesis evaluated the Planning Phase of the Planning, Programming, and Budgeting System (PPBS) used in the Department of Defense (DOD). The evaluation included the evolution of the PPBS and the participants in the Planning Phase used in the DOD budget process. Conclusions were that the Planning Phase of PPBS was the least studied or understood of all the Department of Defense budgeting system phases. Also, public opinion, the intelligence services, and the final budget could cause the National Security Council (NSC) and the Joint Chiefs of Staff (JCS) to modify their planning, but the major influence was the NSC and JCS appraisal of the enemy threat and assets needed to ensure national security.

This thesis provides complimentary research by analyzing the planning phase of DoD's PPBS which was beyond the research conducted in Chapter 5, Long-Range Planning Analysis.

JCS (Joint Chiefs of Staff) Role in Planning, Programming and Budgeting. Research report.

This report provided a description of current Joint Chiefs of Staff activities in planning and programming which contribute to the resource allocation decision making process. In the author's view, the lack of fiscal reality

throughout the planning effort created conditions which denigrate the planners product during subsequent resource allocation phases. Two changes to enhance the role of the JCS in the planning and programming phases were suggested.

This report was outside the scope of research conducted in Chapter 5, Long-Range Planning Analysis. However, it does provide a more detailed discussion of the JCS role in PPBS that was briefly covered in Chapter 4, Background review.

Impact of Congressional Proposals to Reorganize the Department of Defense on the Unified Command Role in the Resource Allocation Process. Research report.

This report provided an introductory review of the current unified command role in the planning, programming and budgeting system (PPBS). A discussion of resource allocation problem areas identified in the Senate Armed Services Committee Staff Report, "DoD Organization: The Need for Change", set up an assessment of potential impact if the Senate Staff report recommendations were implemented. The analysis included a comparison of current procedures and methodology with proposed changes. Conclusions on the pros and cons of these proposals were summarized, and an overall assessment of the unified commander's role in the PPBS was offered.

This report was beyond the scope of Chapter 5, Long-Range Planning Analysis. But, the report does provide an analysis that compliments the brief discussion in Chapter 4, Background Review, concerning the CINC's role in PPBS.

Planning and Budget Linkage in the Department of Defense's Resource Allocation Process. Unpublished White Paper.

This paper identified problems that plague the current PPBS system with an additional focus on the impact of the Goldwater-Nichols Act. The paper was written by a former Director for Plans and Programs within the Office of the Assistant Secretary of the Army (Research, Development, and Acquisition) in response to a tasking to analyze problems with the Programming phase of PPBES. This paper was the catalyst for the need to research the planning phase of PPBES and is vital to the discussion in Chapter 4, Background review. Furthermore, it helped frame some of the issues that are analyzed in Chapter 5, Long-Range Planning Analysis.

PPBES LITERATURE

Giving a New Focus to Resource Management.

This article discussed the problems with PPBES. It maintained that we moved through the Planning, Programming, Budget and Execution System (PPBES) process without the

continuity necessary to find out how well our decisions in the earlier phases of the process actually turned out. Furthermore, we have allowed this key management process to exist without any formal, systematic feedback loop -- the key step necessary to evaluate the quality of our decisions and to improve the quality of our future decision making. The article stated that during the planning phase of the management process, we develop The Army Plan by function. We establish our overall priorities and make decisions for the future in terms of those functions and their relationship to the overall goals of the Army's leadership for the next five and following ten years.

This article supports the issue made in Chapter 5, Long-Range Planning Analysis, concerning horizontal synchronization of the LRRDAP between the planning phase and the Programming phase of PPBES. This is a critical step in translating long-range RDA plans into programs that move through subsequent phases competing for constrained resources.

Implications of the Military Reform Movement for the Army's PPBES (Planning Programming Budgeting and Execution Systems). Study project report.

This study discussed the Clausewitzian notion of the Center of Gravity approach to solving PPBES problems. The study contended that the military reform movement in the

United States involved several problems with the US military establishment. These problems were in the broad areas of organization, warfighting concepts, and technology and equipment. In all of these areas, money was considered a major issue and thus inherently interesting to PPBES. Many of the problems identified by the movement and the misconceptions held by them and others could be traced to the instability inherent in an objectives based national planning system with a short term perspective. A superior mental construct would be the Clausewitzian notion of the Center of Gravity. From Center of Gravity based reasoning can be derived clear, stable and persuasive concepts which would serve over the long term to provide criteria for force design decisions. The same concepts provided the basis for influencing the political consensus which was decisive in getting balanced resource programs funded. With Center of Gravity analysis as a continuing thread, the reform movements major themes are dealt with in terms of history, national values, the national planning system, development of strategy, the Congress, the bureaucracy, and PPBES itself.

This report provides a different approach to determining some of the same issues within the planning phase of PPBES. Its focus was on applying theory at a strategic level to link planning to budgeting. It was

insightful reading, but, was not used in support of the analysis in Chapter 5, Long-Range Planning Analysis.

Using Resources (Inputs) to Achieve Desired Army Results (Outputs). Student paper.

This paper identified a problem of linking all phases of the Planning, Programming, Budgeting, and Execution System (PPBES) and tying resource consumption to output. It discusses the mechanism that PPBES required to provide feedback in order to evaluate execution of a program. The objective of this study project was twofold: (1) to develop, in conjunction with COA personnel, the use of the Output Oriented Resource Management System (OORMS) and its PPBES linkage mechanism -- the Mission Decision Package (MDEP) -- within the Army's resource management systems so that the data captured and reported will provide a horizontal view of all resources associated within discrete Army programs; (2) to identify how the Finance and Accounting community can support this process with more in-depth analysis and evaluation. The OORMS, which utilized microcomputers and diskettes to flow information from HQDA, MACOMs, and their subordinate installations and units, and data from standard Army financial systems, would provide the continuity necessary to evaluate whether input resources achieved the desired output. The MDEP would be the linkage mechanism for the full eight-year PPBES cycle. To support

this process, the Finance and Accounting community had the necessary tools and data to perform resource analysis.

Although this paper focused on the Programming and Budgeting phases of PPBES, it supports the issue of horizontal synchronization of the LRRDAP between the planning phase and the Programming phase. The mechanism for maintaining program integrity during each phase of PPBES is the Management Decision Package (MDEP). The MDEP is further analyzed in Chapter 5, Long-Range Planning Analysis.

CHAPTER 3

RESEARCH REVIEW STUDY DESIGN AND PLANS

This thesis used several research approaches to analyze the PPBES process. These various approaches were necessary to develop the background of the research topic, the LRRDAP, and discuss issues associated with the LRRDAP development process to arrive at recommendations that are useful for future endeavors. The recent FY92-06 PPBES cycle was used as a case study to emphasize critical points of the analysis in Chapter 5.

An historical approach provided the background information in Chapter 4, concerning the inception of PPBES, the important products of PPBES, and framing the case study. A descriptive comparison clarified each phase and their relative importance to other phases at the various levels of the Army. Furthermore, this method examined the purpose, inputs, and outputs between the various planning and programming documents.

An analytical approach in Chapter 5, based upon the last FY92-06 PPBES Cycle, as a case study, researched the

issues associated with the LRRDAP, interdependent processes of the planning and programming phases, and critical events within PPBES.

DATA COLLECTION METHODS

Interviews with current subject matter experts within PPBES and LRRDAP development were coupled with personal experiences and observations to form the basis of this thesis.

Research literature, providing analyses from different perspectives, were used to support the points discussed. The primary source for previous research material was the Combined Arms Research Library (CARL). The CARL was the start for retrieving background information on PPBES. Additionally, CARL's source for Masters Theses provided the beginning for retrieving procedural and theoretical problems identified with PPBES. The unclassified HQDA interoffice reference material distributed as guidance for the development of the LRRDAP, POM, and Budget supplemented the research literature.

PROCEDURES FOR ANALYZING EVIDENCE COLLECTED

There were several tests established to determine the accuracy of the evidence. These tests eliminated the common problems, within reason, of incompetent reporting and

assessment, involuntary bias, deliberate distortion, and unavailability of facts.

Categories were developed to group evidence from the least incompetent to the most incompetent degrees of reporting and assessment:

- 1) Government Regulations and Research Evidence.
- 2) Independent Research Evidence.
- 3) Personal Experience Evidence.

The groups listed above were further subdivided into levels of bias categories:

- 1) Factual.
- 2) Questionable.
- 3) Deliberate distortion or unavailable facts.

As a further test of the data, unclassified thesis evidence was routinely shared with committee members, MMAS group members and, when possible, PPBS and PPBES subject matter experts.

CHAPTER 4

BACKGROUND REVIEW

"He smote the rock of the national resources, and abundant streams of revenue gushed forth."

-- Daniel Webster, 1831

Daniel Webster described a near perfect resource management process. In reality, the systems used to plan, program, budget, and execute resources have evolved into a complex and disciplined framework.

PPBS

In 1961, Secretary of Defense (SECDEF) Robert McNamara identified a weakness in how the Department of Defense (DoD) budgeted and allocated resources. He recognized that budgeting should focus on forces, systems and programs rather than resource categories. Secretary McNamara established the Planning, Programming, and Budgeting System (PPBS) in 1962 to correct this weakness. Moreover, PPBS was designed to synchronize the Services' different approaches to the defense resource allocation process.¹ Since its inception, PPBS has evolved into DoD's

primary formal strategic management system for matching constrained resources with materiel requirements and force structure.

LEGISLATION AND MILITARY REFORMS

From 1962 to present, PPBS went through substantial changes to facilitate budgeting of forces, systems, and programs.

In 1969, participatory management was initiated allowing the Services to put forward program proposals by using specific budgetary ceilings. In 1977, Zero-Based Budgeting was instituted to more clearly identify marginal programs through "Decision Packages." In 1979, the forerunner of the Defense Resources and Planning Board was formed to manage the PPBS process more effectively.²

In 1981, initiatives were introduced to revitalize American military strength in the most effective and economical manner which included greater emphasis on long-range planning. Commanders-in-Chief (CINCs) of unified and specified commands were invited twice a year to participate in the initial DRPB deliberations of planning and programming phases of PPBS. In 1984, a Joint Memorandum of Agreement between the Army and Air Force Chiefs of Staff was signed. The memorandum was an effort to reduce resource redundancy and interservice rivalry for limited resources. Furthermore, the CINC's role in PPBS was enhanced allowing

more participation. In 1986, in response to the President's Blue Ribbon Commission, the PPBS Cycle was converted from annual to biennial. In 1989, a Defense Management Review was conducted by the Secretary of Defense to improve the defense management process and management at the Pentagon.³

Recent legislation effecting the PPBS evolves around the recommendations of the Packard Commission, also known as the President's Blue Ribbon Commission, which resulted in the passing of the Goldwater-Nichols Act. This legislation provided the guidance for overhauling both the PPBS and PPBES to improve the efficiency of the overall acquisition system.

On July 15, 1985, President Reagan signed Executive Order 12526, creating the President's Blue Ribbon Commission on Defense Management. The Commission emphasized the importance of connecting the nation's security objectives with the appropriate level of resources to acquire the means to accomplish those objectives. ". . . the Commission found that there is a need for more and better long-range planning to bring together the nation's security objectives, the forces needed to achieve them, and the resources available to support those forces."⁴

Public knowledge of defense spending and increased public debate over the defense budget publicized important procurement policy issues. The drive for better procurement procedures increased until, finally, these issues attracted

executive and legislative review of the DoD's resource procurement and allocation process.

Consequently, a chain of events was initiated leading to the most extensive audit of the Defense's strategic resource management system since the early 1960's. In February 1986, the Commission submitted an Interim Report to the President. As a result of the Commission's report, National Security Decision Directive (NSDD) 219, dated April 1, 1986, "Implementation of the Recommendations of the President's Commission on Defense Management," was immediately published.⁵

On April 24, 1986, President Reagan sent a special message to Congress addressing the Commission's recommendations. The message contained his proposals for specific legislation to implement many of the recommendations, including a two-year defense budget. Congress responded by passing the "Goldwater-Nichols Department of Defense Reorganization Act of 1986." The Goldwater-Nichols Act provides the guidelines for improving the current resource management systems. Thus, the entire DoD has undergone substantial reorganization and realignment since the Goldwater-Nichols Act was signed into law.⁶

As a result of this legislation and military reforms, the involvement of the CINCs to provide input and influence the PPBS process was expanded and a new process was outlined for planning national military strategy.

National military strategic planning evaluates the threat and develops the military strategy and related force requirements to attain national security objectives. It underlines the military advice provided by the CJCS to the President and SECDEF.⁷

The new planning process requires the SECDEF, following receipt of Presidential guidance, to direct the CJCS, with the advice of the other members of the JCS and the CINCs of the Unified and Specified Commands to appraise the complete range of military threats to U.S. interests and objectives worldwide; derive national military objectives and priorities from the national security objectives, major defense policies, and priorities received from the President; and provide the SECDEF a recommended national military strategy.⁸

Strategic planning documents within PPBS include the Chairman's Guidance (CG), the National Military Strategy Document (NMSD), the Joint Strategic Capabilities Plan (JSCP), and the Defense Planning Guidance (DPG).⁹ The review and analyses that accompany their development help shape the outcome for resource allocation and management.

Joint strategic planning is conducted within the framework of the Joint Strategic Planning System (JSPS). The JSPS establishes the administrative framework for JCS to advise the National Command Authority and provide strategic and operational guidance to unified, specified and combatant

commanders. The JSPS addresses the mid-term Defense planning period two to eight years in the future.

Within the JSPS, the Joint Strategy Review (JSR) initiates the planning cycle. The JSR helps integrate strategy, operational planning, and program assessments. The review's final product is the Chairman's Guidance (CG). The CG serves as a bridge between the initial assessments and conclusions reached during the JSR. Furthermore, CG sets the framework for building the National Military Strategy Document (NMSD). The NMSD presents the military strategy advice of the CJCS to the SECDEF, to the President, and National Security Council. The NMSD evaluates the threat and recommends military objectives to support national security objectives. It recommends a military strategy and force structure that conforms with National Command Authorities (NCA) Fiscal Guidance. The NMSD is completed in time to influence the Defense Planning Guidance (DPG).¹⁰

The DPG, prepared by OSD, is the principal product of PPBS planning and reflects military advice and information recommended by the CJCS; Service long-range plans and Service positions on policy and related matters contributed by Service Secretaries; and CINC appraisals of major issues and problems bearing on command missions. In the DPG, the SECDEF provides a summary of the threat; articulates strategic objectives and the national military strategy; and

provides force and resources guidance to the military departments, other DoD agencies, and to the unified and specified combatant commanders. The DPG is an indispensable source document for both planning and programming. The most definitive statement of national military strategy is found in the DPG.¹¹

The JSCP provides strategic guidance to the CINCs, JCS members, and defense agencies based upon NCA decisions. The JSCP apportions resources to the CINCs. It then tasks the CINCs to develop global and regional plans, employing the force in place at the end of the following fiscal year.

Figure 1 provides a summary of the JSR and resulting planning documents -- CG, NMSD, and DPG. The chart identifies when the documents are prepared, what planning period they cover, who is responsible for their preparation, and the purpose for each document. The information is based on the Draft AR 1-1, PPBES, dated January 1991.

DOCUMENT	JSR	CG	NMSD	DPG
WHEN	EVEN FY1 (OCT)	EVEN FY1 (DEC)	ODD FY2 (JUL)	ODD FY2 (OCT)
WHAT	6 YEARS	6 YEARS	6 YEARS	6 YEARS
WHO	CJCS	CJCS	CJCS	DPRB
PURPOSE	☛ Initiates PPBS planning phase ☛ Assesses threat/current strategy ☛ Service/CINC coordination ☛ Admin guidance	☛ CJCS (top down) guidance memo on strategy & priorities ☛ Provides framework for NMSD, DPG, & DPRB issues ☛ JCS views considered	☛ Military strategy ☛ Recommended force ☛ Military options ☛ Fiscally constrained ☛ Strategy assessment (risk) ☛ Service & CINC coord	☛ Provides policy, strategy, and force guidance to Services ☛ Provides constraints: --- dollars -- manpower -- force levels ☛ Contains specified & implied missions for Services ☛ Contains CINC high-priority mission ☛ Provides 20-year plan for modernization ☛ Contains POM guidance ☛ Conduct of programming phase

Figure 1. PPBS Planning Document Summary

PPBES

The Army responded to DoD's PPBS by developing the framework for PPBES. PPBES is the Army's primary strategic management system used to allocate and manage resources. The interrelated phases of the PPBES provide for an orderly progression from national security objectives, policies, and

strategies to the development of force requirements; establishment of force structure and programs within resource constraints; and finally to preparation, execution, and review of the budget.¹²

Like PPBS, the PPBES is undergoing change as a result of recent legislation and military reforms to improve Army acquisition. The major changes redefine the responsibilities of the Army Secretariat and Staff, reduce the number of reports required by the Congress, reduce the number of personnel serving on the lower-level headquarters staffs of the Army and the unified and specified commands.¹³

Initiating the PPBES cycle, long-range planning establishes a vision of the Army 10 to 30 years into the future. Long-range macro estimates give way in the mid-term to a specified size, composition, and quality of divisional and support forces. This base force -- derived from joint strategic planning and intermediate objectives to achieve long-range functional goals -- provides the planning foundation for program requirements.¹⁴

Guided by base force requirements and still in the mid-term, programming allocates available resources to achieve balance among Army organizations, systems and functions to support Army priorities and policies.¹⁵

In the near-term, budgeting converts program requirements into requests for manpower and dollars, which,

when enacted into appropriations, become available to carry out approved programs.¹⁶

The "Execution" phase of PPBES emphasizes the Army's accountability and responsibility for day-to-day management. Formally adding execution to traditional emphasis on planning, programming, and budgeting stressing Army concern for how well program performance and financial execution apply allocated resources to meet established requirements.¹⁷

As illustrated in Figure 2, the PPBES cycle ties the strategy, programs, and budgets all together. It helps build a comprehensive plan in which budgets flow from programs, programs from requirements, requirements from missions, and missions from national security objectives.¹⁸ Execution is continuous and encompasses the PPBES process.

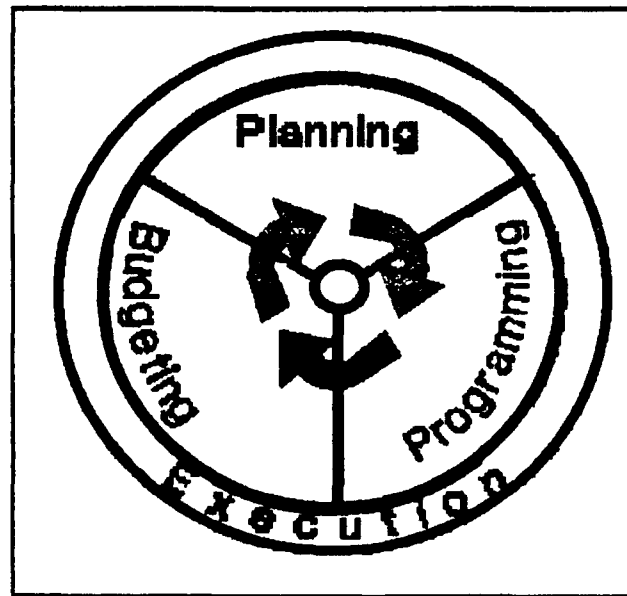


Figure 2. The PPBES Cycle

PPBES PLANNING AND PROGRAMMING

PPBES planning helps the senior leadership determine Army force requirements and objectives and set Army priorities. It provides the basis for positions and comments supporting Army participation in OSD and joint processes.¹⁹

Army planning examines national objectives and enemy capabilities; identifies the military strategy needed to maintain national security and support U.S. foreign policy; determines what integrated and balanced military forces are needed to support that strategy; and establishes a basis for managing DoD resources effectively and efficiently to accomplish its mission, consistent with the resource constraints.

The Army's planning system is a part of the DoD PPBS and Joint Strategic Planning System (JSPS). Army long-range planning responds to and complements DoD's PPBS and the Joint Strategic Planning System. By looking 10 to 30 years ahead, in the process, the senior leadership of the Army creates a vision of the future Army.

The challenge that faces the Army planners is how to plan dollars, manpower, and force structure requirements over the long-term by anticipating national security risks 10-30 years into the future. Outlining the vision of the senior leadership, the Army Long-Range Planning Guidance

(ALRPG) describes a framework for defining future requirements. The document analyzes national security objectives against a range of potential threats; it lays out planning assumptions; and it lists underlying conditions likely to hold true over the 30-year period.

The ALRPG goes on to examine political, economic, military, and technological events. The examination identifies trends and determines a range of possible results that bound the future operating environment. The ALRPG then draws the implications for future missions and obtaining required capabilities. The products of OSD's, OJCS's, and Army's long-range planning guide the midterm vision used in developing the force and setting program requirements.²⁰

The ALRPG, together with command and agency long-range plans guide the preliminary Army Plan (TAP). The preliminary TAP sets the course for requirements determination and force development for the following PPBES cycle by codifying planning assumptions and setting parameters for modeling and structuring the program force. The forces required to implement the CINCs' wartime strategy are documented in the TAP.

Covering the mid-term, the final TAP integrates the preliminary TAP -- following updates from the Total Army Analysis and Force Integration Analysis, ALRPG, and the President's Budget from the previous cycle. Inasmuch, the final TAP documents Army leadership policy. In formulating

LRRDAP Guidance, the Final TAP is a source for resource guidance. The LRRDAP stands out as a key product of the planning phase of PPBES. The LRRDAP process systematically focuses RDA programs on solving battlefield needs derived from warfighting concepts.²¹ The LRRDAP document maps this effort by reflecting the technology and equipment to be developed and produced for the Army's modernization program.

The PPBES has four formal phases. Three it shares with the DoD PPBS: planning, programming, and budgeting. The fourth, execution, applies uniquely to the Army as a distinct phase. PPBES cycles overlap as do the four phases within each cycle. Figure 3 illustrates the sequence and interrelationship of the PPBES planning events and a portion of the programming events with their respective critical documents. In citing the fiscal year quarter of a base line event, the figure specifies whether the event occurs in an odd or even year. The terms refer to the calendar year rather than fiscal year. The portion of the process that concentrates on the issues addressed in this thesis is highlighted.²²

Army planning system establishes the planning basis for the Army program. Information concerning the early planning years provides RDA input to PPBES programming and the POM -- the product of the programming phase.²³ Specifically, the initial RDA position for the Army POM is

obtained from the mid-term years (six program years) of the LRRDAP.

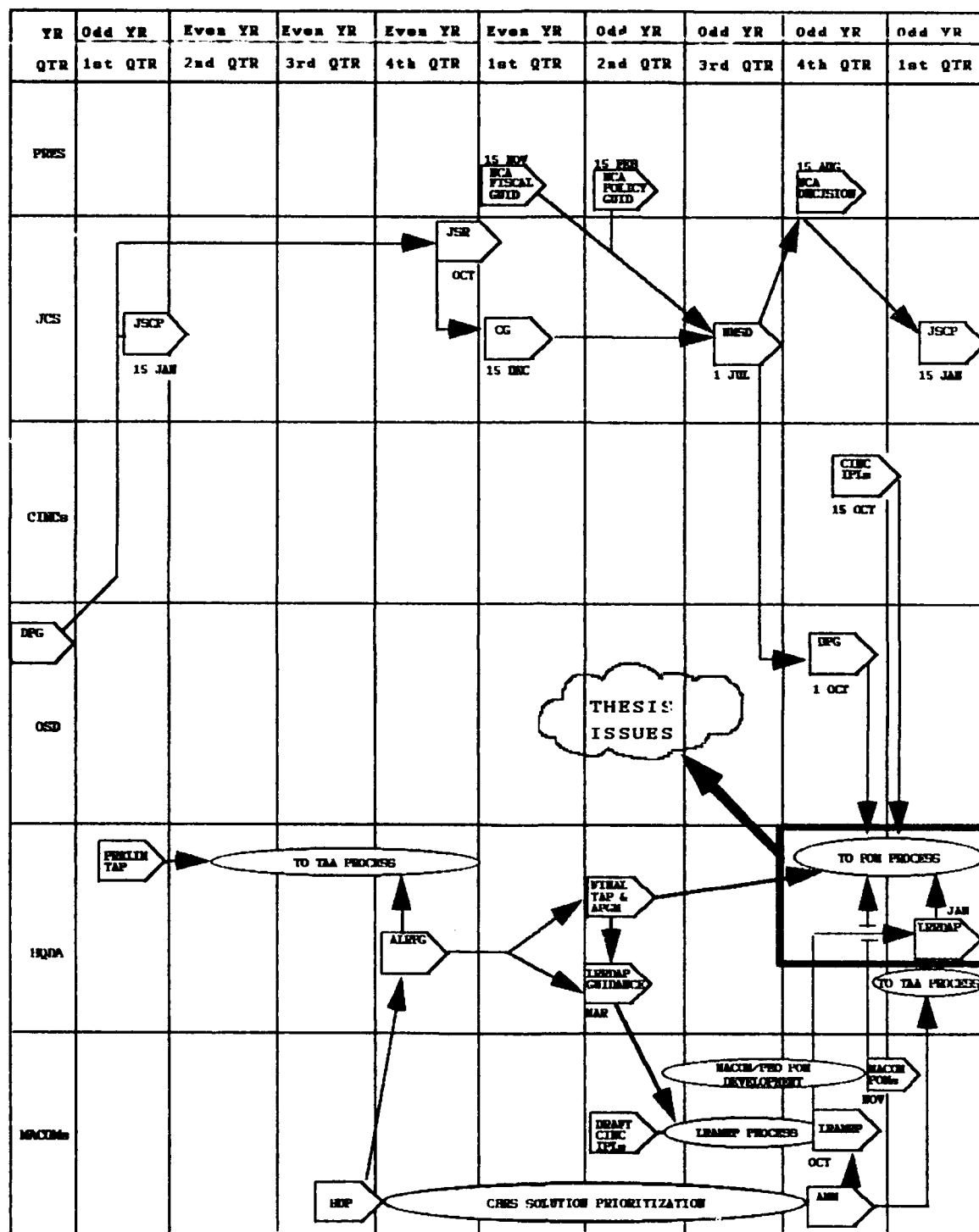


Figure 3. Major Events of the Army Planning System 24

The PPBES Programming is the primary process to link Army materiel requirements to requested resources within the PPBES process. In other words, Army programming translates DoD and Army planning guidance into a comprehensive and detailed allocation of forces, manpower, and dollars for a six-year period and general allocation for an additional ten years.²⁵

After the guidance has been provided and the plans developed, manpower and materiel must be programmed in accordance with the priorities established by the Army's senior leadership. These programs, designed to reduce the risks to U.S. interests, will go through comprehensive reviews during the programming phase of PPBES prior to the Budget Reviews.

The challenge that faces the Army programmers is how to allocate dollars, manpower, and force structure that best attains the guidance stated in the TAP. For RDA, programmers integrate mid-range plans derived from the TAP and represented in the LRRDAP with a projected level of resources during the programming phase to forecast the proper mix of programs that is consistent with planning guidance. The product of the programming phase of PPBES -- the Army POM -- presents the Army's proposal for a balanced allocation of its resources within specified constraints.

While it may be unreasonable to assume all long range RDA requirements can be funded, the integration of the DPG,

APGM, and TAP serve as a framework to strengthen program development and provide quality products to the Army's senior level leadership.

LRRDAP DEVELOPMENT

The LRRDAP and its associated decisions from the planning phase support the disciplined process of relating the future needs of the warfighting CINCs to constrained fiscal resources to procure the most economical mix of materiel.

The Training and Doctrine Command (TRADOC) and, jointly, the PEOs, Army Materiel Command (AMC), and Information Systems Command (ISC) consider LRRDAP Guidance and battlefield deficiencies identified in the Concept Based Requirements System (CBRS) to propose materiel solutions that enhance warfighting capabilities.

The CBRS is designed to introduce order into the decision-making process that determines how the Army will fight on future battlefields. Figure 4 displays the process flow of CBRS. The CBRS methodology used to identify doctrine, equipment, organizations, and training requirements is called the mission area analysis (MAA). All MAA results are assembled by proponent into a Mission Area Development Plan (MADP) that lays out the proponents' strategy for solving mission area problems. The deficiencies the MAA identifies are integrated and

prioritized into the Battlefield Development Plan (BDP). The BDP provides guidance to focus, prioritize, and integrate TRADOC efforts in support of current and future Army missions. Under TRADOC lead, the MACOMs and PEOs evaluate, rank, and integrate the CBRS solutions into the Army Modernization Memorandum (AMM). The AMM's proposed solutions are then considered during the next Total Army Analysis (TAA) and integrated into the Long-Range Army Materiel Requirements Plan (LRAMRP).²⁶

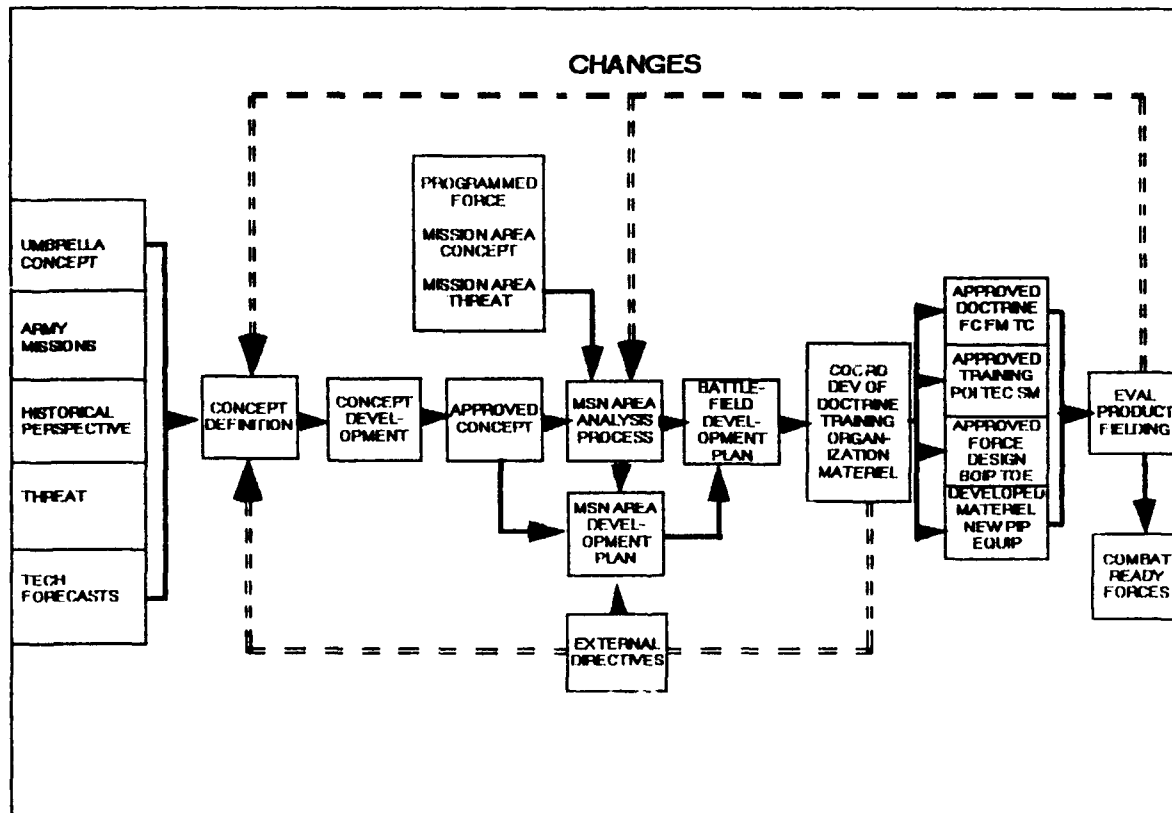


Figure 4. Concept-Based Requirements Systems 27

Making necessary adjustments to the LRAMRP submitted from the field, HQDA reviews its requirements and

acquisition alternatives. As approved by the Army leadership, the modified LRAMRP becomes the Army LRRDAP. Responding to force structure and sustainability guidance, the LRRDAP identifies specific RDA programs planned for the Army modernization program. Upon approval, the mid-term period of the LRRDAP constitutes the Modernization Program Evaluation Group's input to the POM. Therefore, the LRRDAP and its associated decisions from the planning phase support the process of relating the CINCs' needs to constrained fiscal resources.

Because of its impact on the CINCs' warfighting requirements, the LRRDAP process calls for constant evaluation with corrective action taken. To be a useful product for PPBES and the Army's senior decision-makers, the LRRDAP requires well defined fiscal guidance, planning synchronization, programming integration, and AAE/PEO involvement.

Figure 5 provides a summary of the Army's integrated planning system. It identifies in broad terms who the players are (both direct and indirect), the actions or events that occur, and the time frame that encompasses Army planning.

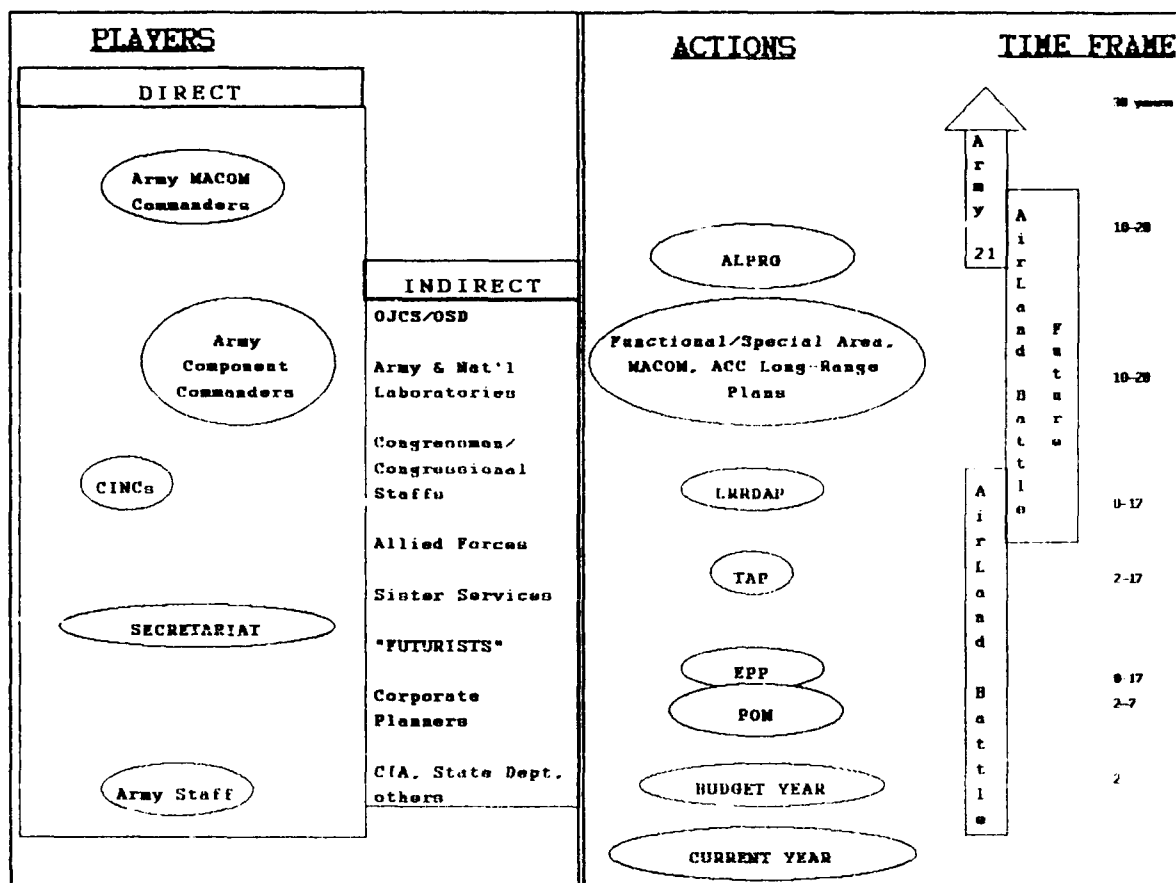


Figure 5. The Army Integrated Planning System

Since the LRRDAP is a top-down planning process, policy and guidance promulgates change from cycle to cycle. The procedural changes, generally, result from the lessons learned from previous cycles or based on the different management philosophies of the leadership tasked to develop the LRRDAP. The mitigating circumstances behind the case study used in this thesis provide an understanding of the turmoil that is introduced into each PPBES cycle. Furthermore, the differences between the cycles in the case

study underscores the human elements involved in reaching decisions that will impact on the future of the Army.

CASE STUDY

The case study, used in Chapter 5 as the basis for examining the LRRDAP issues, consists of the FY 90-04 LRRDAP, the FY 90-94 POM, the FY 92-97 POM, and the FY 92-06 LRRDAP. Each of these documents were prepared using substantially different procedures effected by both internal (management philosophy) and external (resource constraints, force reductions, legislation, etc.) conditions. Figure 6 provides a comparison of the documents used in the case study. The criteria for comparison is based on the areas that experienced the most significant changes. More importantly, these changes highlight the attempts by Army leadership to correct deficiencies noted during previous planning and programming cycles.

In a September 1989 memorandum to the Program and Budget Committee, the Director for Program Analysis and Evaluation (PAE) identified key problems from previous POM and budget building periods and outlined his vision for correcting these problems during the next cycle. He noted that the key area of concern was instability of the staff support structure for POM building, budget analysis and program/budget defense. Specifically, he noted that most POM building was done in the panel structure; but, the

decision process that emerged at the end of the programming phase was changed to an appropriation and subprogram structure. Therefore, the responsibility fell to the Program Sponsor for Requirements Determination (PSRD) to make decisions on programs he had not necessarily built.

CRITERIA	FY 90 - 04 LRRDAP	FY 90 - 04 POM	FY 92 - 08 LRRDAP	FY 92 - 97 POM
COMMITTEE	PANEL/FUNCT	PANEL/FUNCT	PEG/FUNCT	PEG/APPN
INTERFACE	MAINFRAME	MAINFRAME	PC	PC
PROGRAM ID	TURBULENT	STABLE	TURBULENT	TURBULENT
DETAIL LEVEL	SSN/PROJ	FDP	MDEP	SSN/PROJ
HQDA SUBMIT	PRIORITY ACROSS BANDS	PRIORITY ACROSS BANDS	PRIORITY BY BAND/CAP PKG	PRIORITY BY BANDS
TOA	BY BAND	BY PANEL/APPN	BY MSN AREA	BY APPN

Figure 6. Case Study — Document Comparison

The PAE Director's solution was to make the PSRD accountable for resources allocated to his program to support mission execution in the Army. This included responsibility for building the program that must be defended with OSD/OMB. Furthermore, the PSRD would be postured to recognize the operational impact of all fiscal decisions.²⁸ This action was debated by some members of the OASA(RDA) as an effort to move the responsibility of

building RDA programs from the Secretariat staff level back to the Army staff level.

The PAE Director's memorandum generated significant changes to LRRDAP development and POM building at the HQDA level. Efforts focused on implementing the memorandum's initiatives during the planning phase to accommodate building the Army program. As a result of the memorandum, the Program Evaluation Group (PEG) was formed, with a new charter, replacing the old Panel committee. For RDA, the Equipping Panel was replaced by the Modernization PEG.

The Equipping Panel reviewed RDA programs by functional area and was co-chaired by ODCSOPS and OASA(RDA). Both the LRRDAP and POM databases were maintained by OASA(RDA). The new Modernization PEG reviewed RDA programs by appropriation and was chaired by ODCSOPS. Only the POM database was maintained by OASA(RDA).

The Equipping Panel submitted their RDA database directly to PAE's database (PROBE) through a mainframe interface. The Modernization PEG submitted their RDA database indirectly to PROBE via personal computers.

The Modernization PEG had to consider turbulence with the Management Decision Packages (MDEP). The process of integrating PEO MDEPs began after the FY 92-06 LRRDAP Guidance was formulated and the LRRDAP development initiated. This created a situation whereby MDEP reorganization continued throughout the LRRDAP and POM

reviews. Both the Equipping Panel and Modernization PEG managed only a portion of their programs which were assigned based on the predominant resource level in the MDEP.

The Equipping Panel macromanaged program building with a focus at the decision package and Program Element level for data calls. The Modernization PEG micromanaged program building with a focus at the decision package, Standard Study Number and Project level for data calls.

The Equipping Panel was provided funding totals by Panel prior to Panel reviews and then by Appropriation after Panel reviews. The Modernization PEG was provided funding totals by appropriation only. The Equipping Panel's POM input was treated separately from MACOM POM submissions. The Modernization PEG submitted the mid-term portion of the LRRDAP which was treated as a MACOM POM submission.

In response to the FY 92-06 LRRDAP development, more modifications are being implemented for the next LRRDAP cycle. These most recent changes to the LRRDAP process focus on the MACOM-level and below. They include a change of identity from the Field Long-Range Research, Development, and Acquisition Plan (FLRRDAP) to the Long-Range Army Materiel Requirements Plan (LRAMRP). In addition, rather than a joint TRADOC/AMC lead for developing the FLRRDAP, TRADOC has been assigned the mission of LRAMRP proponent directing the overall process. And lastly, instead of AMC maintaining the RDA database, the database will be centrally

maintained by the Research, Development, and Acquisition Information Systems Agency (RDAISA).²⁹ These current changes are incorporated into the analysis in Chapter 5 to reduce the scope of the issues.

This background review of the PPBS, PPBES, and specifically, the LRRDAP development establishes the foundation with regards to recent legislation and military reforms for investigating important issues that effect the planning of RDA within PPBES. As stated in Chapter 1, the PPBES is a viable process validated by successful employment of military systems during recent military operations. However, the planning phase of PPBES is the least documented and most subjective of the phases as indicated in Chapter 2. Therefore, considering the lack of documentation and new legislation on the matter, it is time for this phase to be analyzed in greater depth using the case study described in Chapter 4.

Within the planning phase, RDA planning, averaging approximately 25 percent of the Army's budget³⁰, requires thorough analysis and vigilant monitoring. Therefore, the LRRDAP, as a key product of the planning phase, is the focus for the examination in Chapter 5.

¹Army Command and Management: Theory and Practice, (Carlisle Barracks, PA: U.S. Army War College, 1989-1990), 14-2ff.

²Ibid., 14-1ff.

³Ibid.

⁴Charles Suttan, Planning and Budget Linkage in the Department of Defense's Resource Allocation Process, (Unpublished White Paper), 1988, 4.

⁵Ibid., 3.

⁶Ibid.

⁷Army Command and Management: Theory and Practice, (Carlisle Barracks, PA: U.S. Army War College, 1990-1991), 14-5.

⁸President's Blue Ribbon Commission on Defense Management, Final Report, A Quest for Excellence, Washington, D.C., June 1986, 6.

⁹Army Regulation 1-1, Planning, Programming, Budgeting, and Execution System, (Washington, D.C.: Headquarters, Department of the Army, January 1991), 18.

¹⁰Ibid.

¹¹Army Command and Management: Theory and Practice, (Carlisle Barracks, PA: U.S. Army War College, 1990-1991), 14-5ff.

¹²Ibid., 14-1.

¹³House of Representatives, 99th Congress, 2d Session, Conference Report 99-824, Goldwater-Nichols Department of Defense Reorganization Act of 1986, September 1986, 92-98.

¹⁴Army Regulation 1-1, Planning, Programming, Budgeting, and Execution System, (Washington, D.C.: Headquarters, Department of the Army, January 1991), 10.

¹⁵Ibid.

¹⁶Ibid.

¹⁷Ibid.

¹⁸Ibid.

¹⁹Ibid., 18.

²⁰Army Command and Management: Theory and Practice, (Carlisle Barracks, PA: U.S. Army War College, 1990-1991), 14-16ff.

²¹Ibid., 14-17.

²²Army Regulation 1-1, Planning, Programming, Budgeting, and Execution System, extract, (Washington, D.C.: Headquarters, Department of the Army, January 1991), 13.

²³Army Command and Management: Theory and Practice, (Carlisle Barracks, PA: U.S. Army War College, 1990-1991), 14-17.

²⁴Army Regulation 1-1, Planning, Programming, Budgeting, and Execution System, extract, (Washington, D.C.: Headquarters, Department of the Army, January 1991), 17.

²⁵Army Command and Management: Theory and Practice, (Carlisle Barracks, PA: U.S. Army War College, 1989-1990), 14-15ff.

²⁶Ibid., 14-17.

²⁷FM 100-11, Force Integration, (Washington, D.C.: Headquarters, Department of the Army, September 1988), 9.

²⁸Director, PAE, POM Building Structure, Memorandum for Members of the Program and Budget Committee, (HQDA, 21 September 1989).

²⁹Jo Ann Hathaway, a personal interview held at the Plans and Programs Directorate, Pentagon, Washington, D.C., December 1990.

³⁰Assistant Secretary of the Army for Financial Management, The Army Budget, FY 1991 Budget Estimates, March 1990, 36.

CHAPTER 5

LRRDAP ANALYSIS

" . . . realization of the President's full objectives for management of DoD . . . will require sound, longer-range planning and better means for managing available resources"

-- Secretary of Defense's Defense Management
Report to the President, July 1989

The Army's approach to acquiring materiel for the future battlefield requires cogent planning assumptions and fiscal guidance; planning events that are synchronized at all levels of the PPBES; programming guidance that supports the Army leadership's vision of the future battlefield; and programs that are defensible during legislative debate for constrained resources.

Chapter 1 identified four issues that effect each of these areas during LRRDAP development. This chapter analyzes those issues in greater detail within the parameters of the case study discussed in Chapter 4. The analysis yields recommendations for developing the LRRDAP that comply with the SECDEF's Management Report to the President and the Goldwater-Nichols Department of Defense

Reorganization Act of 1986. Figure 7 outlines the portion of PPBES that is the focus of this chapter.

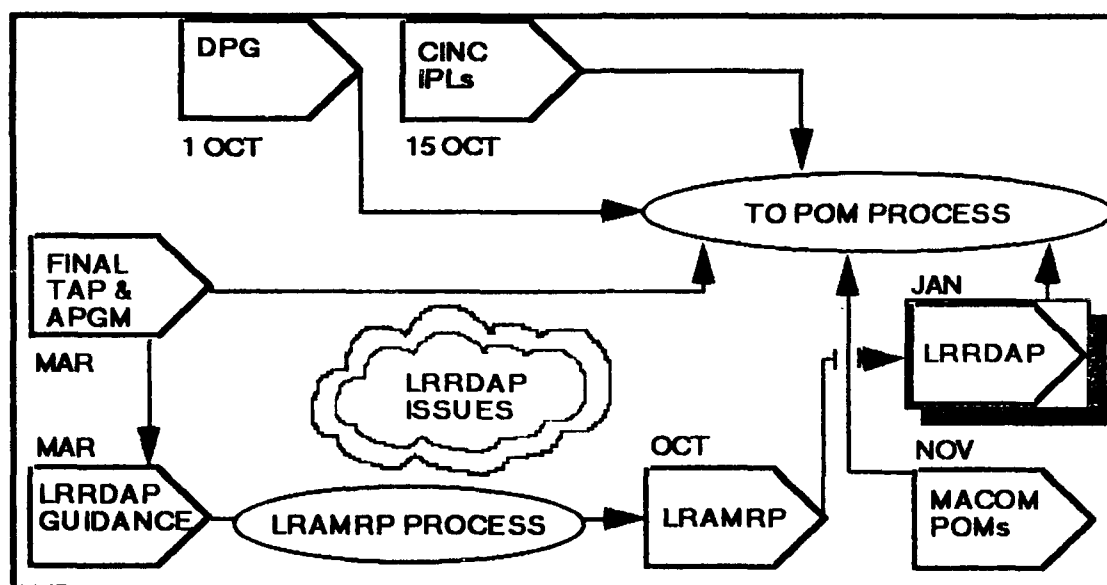


Figure 7. LRRDAP Issues

FISCAL GUIDANCE

ANALYZE HOW FISCAL GUIDANCE SHOULD BE APPLIED TO PLANNING ASSUMPTIONS TO DEVELOP THE LRRDAP.

The first issue analyzes how fiscal guidance, which is included in the top-down planning process, should be applied to planning assumptions used during LRRDAP development. While the planning phase is governed by an objective process, the fiscal guidance that governs this process is subjective by virtue of the unknown "future." Simply stated, there is no scientific method to determine

of probability.

Politically, the rapid disintegration of the Warsaw Pact and the end of the "Cold War," during the late 1980s and early 1990s, was not envisioned 10 to 30 years ago. Economically, as late as the mid-1980s, planning guidance reflected growth and the military was involved in an historical buildup of weapon systems to protect against national security risks. Militarily, on the heels of this massive buildup and a series of military victories, the Department of Defense is confronted with significant force structure reductions and constrained resources in the late 1980s and 1990s.¹

These examples underscore the fact that a significant change in political, economic, or military conditions can render some planning assumptions invalid. Given the uncertainty of future events, planning assumptions are revised continuously for each cycle based on the most current assessments.

The PPBES processes and military leadership assume the Army will not fully fund their requirements given a fiscally constrained environment. While nothing is inherently wrong with establishing specific objectives prescribed by the DPG and TAP, the resources routinely are inadequate to achieve all objectives. Therefore, the condition exists to package requirements into executable

increments. The prioritization of these increments begins during the planning phase. Increments that survive the planning reviews compete as programs during the next phase.

Two principal committees responsible to ensure the Army meets the need for future battlefield materiel requirements within a fiscally constrained environment are the Strategy and Planning Committee (SPC) and the Program and Budget Committee (PBC). The SPC is chaired by the Assistant Deputy Chief of Staff for Operations. SPC membership includes the Director for Program Analysis and Evaluation (DPAE) and the Deputy Assistant Secretary of the Army for Army Budget (DAB). The SPC provides an integrating forum for Army planning. It recommends force structure guidance to the Army's senior leadership and monitors force development to be sure the program force meets requirements identified through the ALRPG and CBRS. Following approval of the Final TAP, the SPC as coordinating body for the TAP relinquishes control of the PPBES cycle to the PBC. The PBC is co-chaired by the DPAE and DAB, each presiding according to the subject under consideration. The PBC oversees the Army's programming, budgeting, and execution. An aim of the PBC is to ensure the internal consistency and support of Army policy.²

Guided by these two oversight committees, the PPBES cycle provides the processes to package requirements into the executable increments discussed earlier.

In planning for RDA, fiscal constraints are included in the LRRDAP Guidance to provide focus for developing executable increments of requested resources. Fiscal guidance may be provided by mission area or total RDA. Although requirements are planned by mission area, programs are built and defended by appropriation. The planning period for the LRRDAP encompasses three terms -- the near-, mid-, and long-term. Fiscal guidance can be provided singularly covering the entire period or separately for each term. In addition, fiscal guidance may be unconstrained (requirements-oriented) for a complete assessment of the Army's future materiel needs; or, fiscal guidance may be constrained (business-oriented) for an affordable assessment of the Army's future materiel needs.

Figure 8 provides a simple decision tree that portrays these options and provides the framework for analysis of this issue.

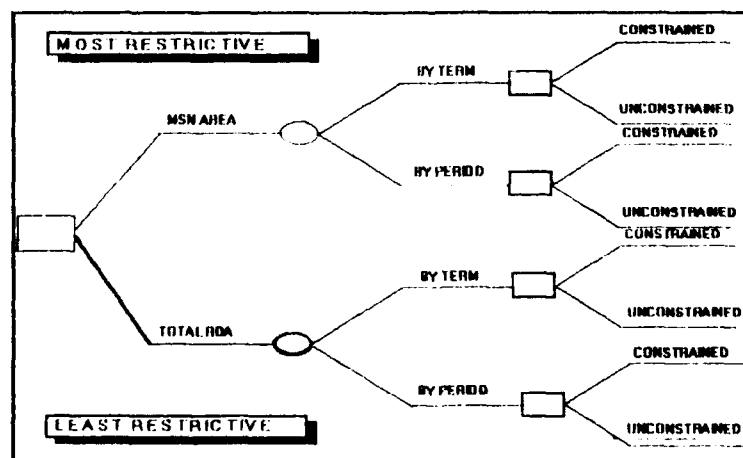


Figure 8. Fiscal Guidance Decision Tree

A comparison of the FY 90-04 LRRDAP Guidance and the FY 92-06 LRRDAP Guidance highlights the subjective nature of the planning guidance. In addition to the contrasts already discussed in Chapter 4, the FY 90-04 LRRDAP Guidance provided the MACOMs with a growth rate over the entire period of the LRRDAP by funding band. The FY 92-06 LRRDAP Guidance established constrained (zero to negative growth) mission area totals to the MACOMs for all years in the LRRDAP. One of the objectives of the FY 92-06 LRRDAP was to procure to the Army Acquisition Objective (AAO) over the period of the LRRDAP. In addition, capability packages were designed early in the FY 92-06 LRRDAP development. Capability packages grouped various materiel systems together to achieve a certain result on the battlefield. This allowed tradeoffs within packages that ensured the capability still existed.³ These factors impacted the ability of the combat developers and materiel developers to match materiel solutions against prioritized requirements.

The fiscal guidance provided for these two cycles had different effects on the Army's procurement programs for the near- and mid-term. Fiscal guidance issued by mission area restricted the combat developers' and materiel developers' flexibility to match materiel solutions to battlefield requirements. For example, some mission areas such as Aviation and Close Combat Heavy have very few and very expensive systems. This created an unique situation where a

negative growth rate, applied uniformly across all mission areas, literally meant killing programs and leaving these expensive mission areas with few, if any, systems. Other mission areas could absorb the negative growth, because, their systems were relatively inexpensive.

Constrained growth rates applied independently for each mission area created a similar dilemma. This approach limits the options available to the combat developer and the materiel developer. By providing adequate growth to high dollar mission areas, other mission areas receive few, if any, materiel solutions.

This example, represents a problem associated with proportioning the funding guidance. Furthermore, by providing mission area constraints, HQDA restricts the bottom-up generated solutions available to the combat developer and materiel developer who have all the means at their disposal to achieve an economical mix of materiel that meet the requirements of the future battlefield.

If fiscal guidance applied by mission area is restrictive and represents less than optimal situations; then, fiscal guidance applied as a total funding level for RDA is less restrictive and offers greater flexibility to the combat developer and materiel developer. To achieve the total RDA funding level, each mission area receives the funding as determined by the combat developer and materiel developer. The decision to not fund systems or assign lower

priorities is retained at the lowest level. This bottom-up approach is consistent with the purpose of LRRDAP development.

Once the level of funding guidance has been established, the next strategy is to determine the range of guidance. The FY 92-06 LRRDAP Guidance established a specified rate that was equally applied to each term of the LRRDAP. This approach assumes that current fiscal constraints will remain constant over the entire period of the LRRDAP. This is a subjective decision that is just as accurate as predicting the funding levels by term. Nevertheless, there are pros and cons to each approach.

The FY 92-06 LRRDAP Guidance provided a specified funding rate over all terms of the LRRDAP. As the LRRDAP went through the various layers of review, programs were often constrained further. The focus of this additional constraint was the near- and mid-terms in preparation for the POM building phase. Unfortunately, this left a LRRDAP product that was constrained over the long-term, but, wasn't consistent with the adjustments made in the near- and mid-terms.

By constraining, the funding levels of the near- and mid-terms, HQDA is articulating to the combat developers and materiel developers the fiscal reality for these terms. This provides the maximum opportunity to develop economical solutions for battlefield requirements over these terms that

are consistent with planning factors, such as, current budget levels. However, over the long-term, unconstrained fiscal guidance permits combat developers and materiel developers to develop battlefield requirements and materiel solutions that are defined by risks to National security and not by monetary boundaries.

In referring back to figure 8, two distinct options were provided. One strategy yields a more restrictive fiscal guidance and generates a top-down solution to determining battlefield requirements. The other strategy reflects a less restrictive fiscal guidance and supports a bottom-up solution to meeting battlefield needs. Regardless of the strategy, the subsequent HQDA LRRDAP reviews ultimately determine the final LRRDAP product. The FY 90-04 LRRDAP went through relatively few priority changes to conform to DoD's appropriation funding levels. Rather, programs were reduced or stretched to accommodate appropriation funding levels in the near- and mid-terms. This resulted primarily in unacceptable cost overruns. Dissimilarly, the FY 92-06 LRRDAP reviews, recognized that growth over the mid-term was doubtful, reprioritized (unfunded) or killed programs to achieve the appropriation funding constraints imposed by DoD. This required some manufacturers to shut down assembly lines, incurring shutdown and startup costs.

The preceding analysis shows the subjectivity in developing fiscal guidance. Depending on the amount of influence HQDA desires to inject early in the LRRDAP development process and the anticipated outcome, either strategy is acceptable. However, the less restrictive approach is most consistent with the objectives of the LRRDAP by providing top-down guidance and bottom-up solutions. Specifically, fiscal guidance structured with total funding for RDA that is constrained over the near- and mid-term and unconstrained over the long-term optimizes the combat developers' and materiel developers' control over the determination of battlefield requirements and materiel solutions.

Additionally, the fiscal guidance for LRRDAP development requires the recommendations of recent legislation. As discussed in Chapter 4, the Goldwater-Nichols Act created the framework for acquisition reform. Accepting the recommendations of the President's Blue Ribbon Commission on Defense Management, the Goldwater-Nichols Act focused on acquisition reform. Long-term planning guidance that adheres to the Commission's recommendations stands to improve the Army's research, development, and acquisition efforts. Among these recommendations were the use of technology to reduce cost, balance cost and performance, expand the use of commercial products, increase the use of commercial-style competition, clarify the need for technical

data rights, and improve the capability for industrial mobilization.³

Again, the greatest opportunity for ensuring these recommendations are achieved, without diminishing the CINC's warfighting ability, is during the LRAMRP development or early phases of the LRRDAP development. This provides the combat developers and materiel developers an opportunity to mutually formulate the Army's future needs even under conditions of constrained resources.

In preparing for the FY 94-08 Long Range Army Materiel Requirements Plan, the long-term strategy and trends support the Commission's recommendations. The RDA strategy for long-term investment focuses on protecting key components for future modernization, increasing levels of near- and mid-term risk to enhance long range modernization (far less Preplanned Product Improvement efforts with limited increase in capability), foregoing maintenance intensive systems, and retiring systems that are no longer due to threat or economics. The RDA trends for long-term investment is towards procuring fewer major programs, procuring under a single-source, foregoing Product Improvement Programs for objective systems, protecting the Technology Base and infrastructure, incrementing modernization plans to provide flexibility, and limiting Multi-Year Procurements to those with significant payoff for high volume.⁴

PLANNING SYNCHRONIZATION

EVALUATE THE SYNCHRONIZATION OF PLANNING EVENTS WITHIN THE PLANNING PHASE OF PPBES.

The second issue focuses on the events and documents effecting the Army during the planning phase of PPBS and PPBES. Specifically, the linkage between the PPBS and PPBES planning processes requires a front-end effort to synchronize events and documents to allow thorough reviews in accordance with established policy and guidance prior to the programming phase. The timeliness of planning events, or vertical interdependency, within the planning phase of PPBES is necessary to successfully bridge the planning and programming phases for the Army.

Dr. Lawrence J. Korb, then Assistant Secretary of Defense (Manpower, Reserve Affairs, and Logistics) identified two fundamental problems that support the issue of synchronization. First, the process did not provide final budget totals for program reviews in a timely manner. Second, the process did not provide enough time to perform program reviews.

During a 1982 conference, entitled "The Defense Planning, and Programing, and Budgeting System (PPBS): Past, Present, and Future", Dr. Korb remarked:

" . . . It seems to me we have the worst of all possible worlds. We do the program reviews when we are not quite sure what the final budget total will be, and we don't have enough time to do the program review right because we have got to get it over in time to do the budget review . . . "

Although Dr. Korb's comments were focused on the timing of the programming phase in relation to the budgeting phase, lessons can be derived from his observations that can be applied to the planning phase.

The effectiveness of PPBES, with its complex structure and disciplined processes, is dependent upon timely submission and distribution of planning and programming documents. The LRRDAP, coupled with the Final TAP, APGM, CINCs' Integrated Priority Lists, and MACOM POMs are the critical inputs to building the Army's Program. Consequently, the lack of synchronization with any of these documents results in mounting delays for subsequent PPBES events.

Of these documents, the LRRDAP provides the Modernization PEG's portion (Aircraft, Missiles, Wheeled and Tracked Combat Vehicles, Ammunition, Other Procurement, and Research, Development, Testing and Evaluation appropriations) of the Army's POM. Therefore, a delay in the submission of the POM portion (mid-term or program years) of the LRRDAP leaves a void in the Army's total

program. This situation occurred at the end of the FY 92-06 LRRDAP development cycle.

Figure 9 compares the timing of planning events of the FY 92-06 LRRDAP development in relation to the FY 92-97 POM build within PPBES. The comparison is made between PAED's initial milestone schedule and the actual occurrence of each event.

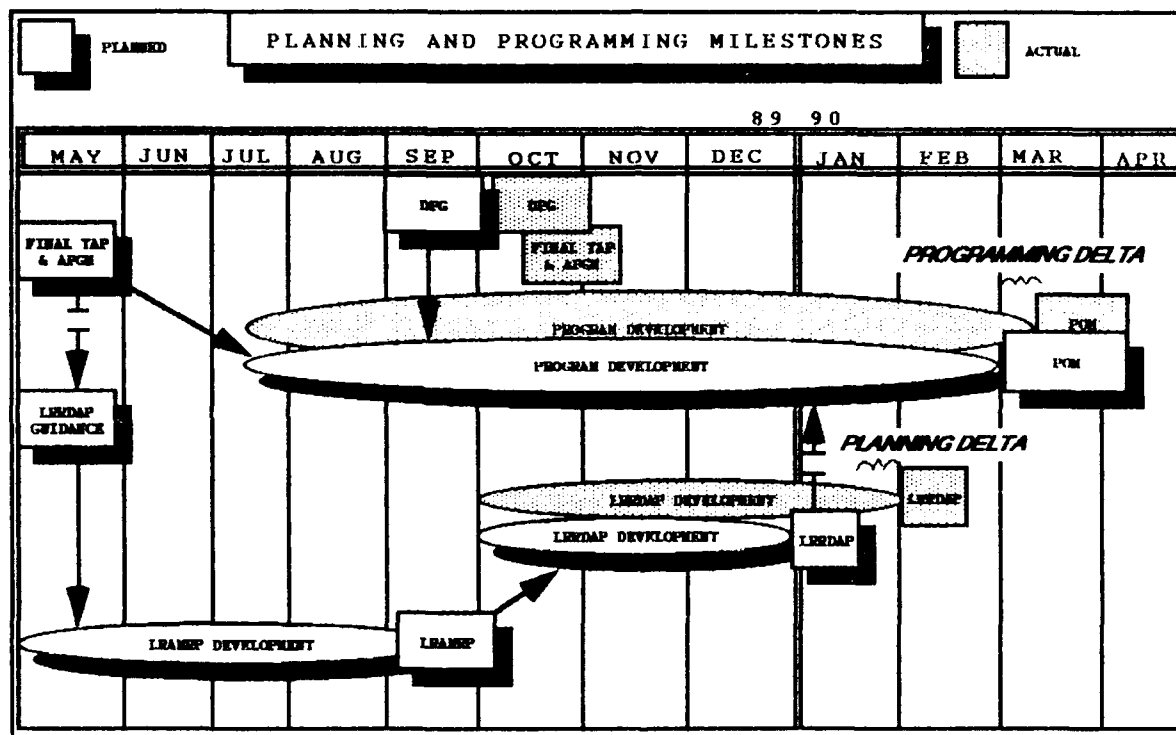


Figure 9. Vertical Synchronization of PPBES Planning Events

During the FY 92-06 planning cycle, the Army's leadership was confronted with the problem, among others, of shaping the Army of the future in regard to force reductions. While DoD and JCS pondered their solutions to this problem, the Army leadership delayed publication of the

Final TAP and the APM. Therefore, the LRRDAP Guidance was formulated and transmitted, deficient of the Final TAP and APM⁵, to the combat developers and materiel developers to begin the LRRDAP development.

Note that the force reduction problem and other causal factors that delayed the TAP and APM is beyond the scope of this thesis. Rather, the delay of these documents is only one of a series of missed milestones that caused a degradation in the timing of PPBES events. Therefore, the FY 92-06 LRRDAP underscores the difficulty of maintaining synchronized events in all phases of PPBES and serves as an example to analyze the consequences that arise from planning events that aren't synchronized at each level within PPBES.

The circumstances that defined the FY 92-06 LRRDAP and FY 92-97 POM development process were unique. However, potential delays arise in each phase of PPBES from cycle to cycle. Understanding the impact that unsynchronized events have on the quality of the planning and programming efforts is vital to eliminating this issue for future cycles.

In accordance with the LRRDAP Guidance, the MACOMs/PEOs developed and submitted the LRAMRP to HQDA in October. Once received by HQDA, the LRRDAP continued through scheduled reviews as planners and leaders attempted to integrate the delayed DPG and TAP strategies into the LRRDAP.

During the HQDA LRRDAP reviews, additional fiscal constraints that effected the budget and program years of the LRRDAP were received. The additional fiscal constraints were significant -- approximately 20 percent of the requested resources submitted in the LRAMRP would be taken out of the RDA accounts. Restructuring the LRRDAP programs and priorities to accommodate the new fiscal guidance resulted in additional LRRDAP reviews within the Modernization PEG.

The issue of vertical synchronization of planning events was highlighted by the timing of the HQDA LRRDAP reviews. The regular LRRDAP reviews are scheduled to be completed prior to the programming phase for the critical decisions of the LRRDAP to be useful for the program development. However, the additional LRRDAP reviews did not accommodate the Army Staff's POM building milestones. Therefore, the early programming events continued towards a "POM Lock"⁶ position without the Modernization PEG's input to the POM. The FY 92-97 POM submission deadline was established by OSD and, therefore, created the time constraints that encompassed the program building process. As a result, the additional LRRDAP reviews adversely effected the synchronization of the planning events with the programming events within PPBES. Without the mid-term portion of the LRRDAP, PAED was required to delay data calls and selected programming events. Since the OSD submission

was a fixed event, subsequent event delays constricted the amount of time analysts had to evaluate programs and restricted the number of options offered to Army leadership.

The delays created a conflict between the planners and programmers who were focused on achieving a comprehensive product for their respective phase. During the FY 92-06 LRRDAP development, the planners wanted to retain the flexibility of building their RDA programs and postpone their inputs to the POM development process as long as the LRRDAP had not been approved by the Army's senior leadership. Ultimately, decisions were made to accept a level of risk in some programs to proceed with the reviews and the required POM input, albeit delayed by a month.

Another factor contributing to the problems associated with the synchronization of the planning phase was the transition to PEO/PM MDEPs. To comply with the Goldwater-Nichols Department of Defense Reorganization Act of 1986, the Army staff created MDEPs that would contain the direct funding resources programmed for PEO/PM execution.

The transition to PEO MDEPs for RDA resources was difficult. The PEO structure was changing, adding and deleting PEOs and direct reporting PMs; a naming convention for the PEO MDEPs was not agreed upon and published until after LRRDAP Guidance was distributed; the determination, at the Standard Study Number level of detail, of which programs would transfer to the PEO MDEP and which

programs would remain with the old program MDEP was still being debated. As a result, the integration of PEO/PM MDEPs began after HQDA received the LRAMRP when these issues were closer to a solution.

The impact of delaying the transition to PEO MDEPs created a data management problem within the Modernization PEG. The Modernization PEG normally reviewed programs at the MDEP level of detail which were changing in both name and content as a result of this action. Therefore, the combination of moving resources between MDEPs and attempting to constrain the resources in accordance with new fiscal guidance generated a volatile situation that degraded the LRRDAP review process and complicated the analysts assessment of the programs. Actions to correct the initial problems encountered of programs between the old program MDEPs and the new PEO MDEPs continued over the entire planning and programming phases. This is a recurring problem that takes on other forms such as "rolls and splits" that is discussed in greater detail later in this chapter.

Therefore, a primary obstacle to synchronizing the planning phase of PPBES is unforecasted circumstances, underscored by these examples, that don't adhere to the rigid deadlines established for each phase of the PPBES cycle and undermine efficient management. This issue is compounded by the increasing complexity of program and budget building processes. Therefore, the alteration of

this delicate balance of event timing results in the Secretariat and Army Staffs having minimal time to perform analyses and recommend alternatives on the myriad of issues competing for limited resources. Further research, beyond the scope of this thesis, is necessary to determine which noncritical or redundant events require modification or elimination.

PROGRAMMING INTEGRATION

EVALUATE THE INTEGRATION OF LONG-RANGE RDA REQUIREMENTS INTO THE ARMY'S PROGRAMMING PHASE.

The third issue pertains to the integration of the long-range RDA requirements into the Army's programming phase. Planning decisions are required to articulate materiel requirements to the Army programmers. By recognizing the materiel needs and priorities established by the Army leadership during the planning phase, the Army programmers begin to structure programs that will compete for constrained appropriations. This is achieved by integrating planning decisions with OSD programming guidance and congressional guidance into a comprehensive and detailed six year program that reflects the allocation of forces, manpower, and funds.

An analysis of the horizontal interdependency between the planning and programming phases of PPBES addresses problems that degrades the transition from long-range plans to mid-range programs. It has already been established that the LRRDAP serves as the Modernization PEG's link between the planning and programming phases of PPBES. Therefore, how the LRRDAP is developed during the planning phase and integrated into the programming phase of PPEES directly impacts on the survivability of programs required to fulfill the CINC's future warfighting needs.

Priorities established during LRAMRP development and LRRDAP reviews provide the insight to the needs of the Army. The continuity of these priorities through subsequent PPBES phases is required. The translation of plans to programs is a difficult task that requires the timely integration of products, guidance, and decisions with routine management procedures.

Figure 10 illustrates the issue of continuity across the three terms of the LRRDAP. If the funding streams become disjointed, the RDA programs become difficult to manage. There are several reasons that discontinuity occurs within programs. There are three primary causes for discontinuity. First, programs developed by function or mission during the planning phase must be translated into programs aligned by appropriation. This means programs within a management decision package may cross several

appropriations. Second, a method designed to align resources into management decision packages known as "rolls and splits" frequently causes programs to become misaligned. Third, planning decisions and program guidance that is not properly integrated creates conflicts with programs.

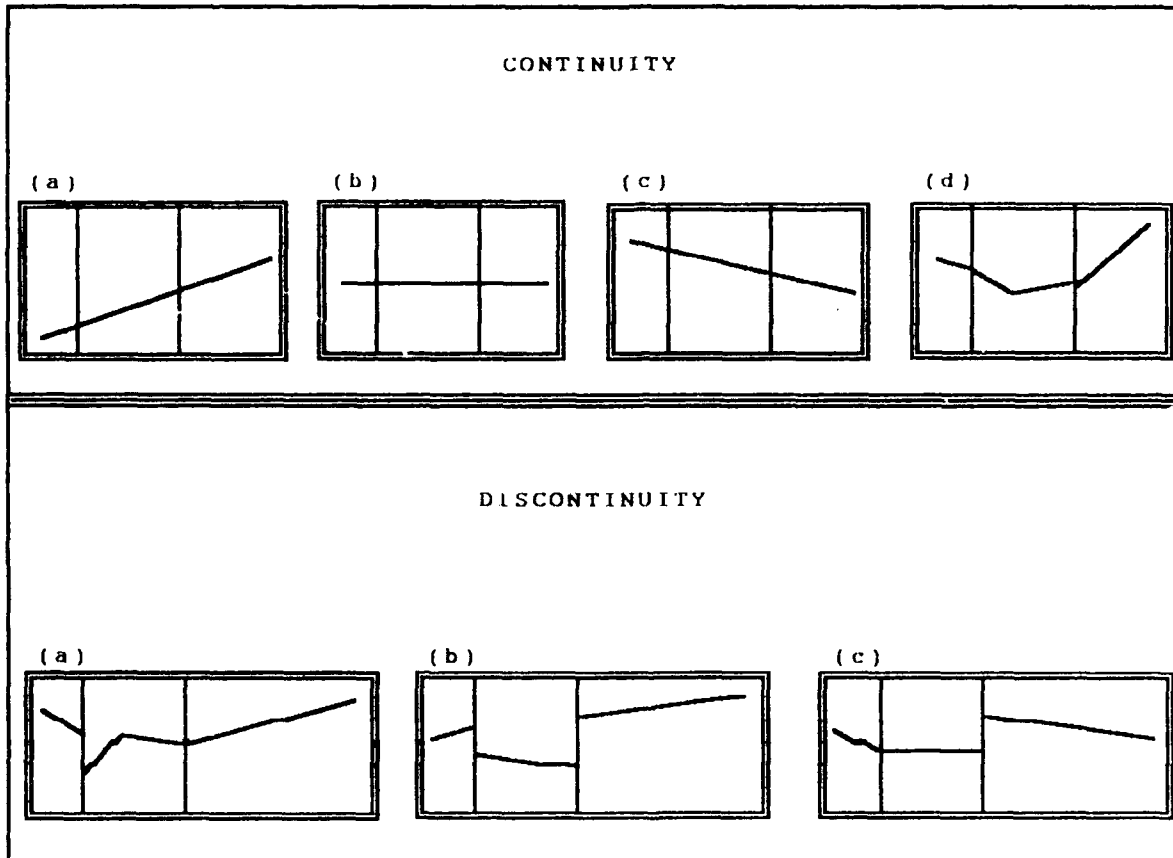


Figure 10. Continuity of RDA Programs

Figure 10 identifies the various forms of continuity and discontinuity. The graphs at the top of the figure illustrates continuity in funding streams. From left to right they show a steady growth, no growth as steady negative growth, and, finally, a combination of each. These

graphs represent a synchronization of programs over each period of the LRRDAP. Because continuity portrays an acceptable result of integration, the following analysis focuses on discontinuity to derive recommendations.

Discontinuity exists when funding stream appear broken. The graphs at the bottom of the figure displays examples of discontinuity -- a failure to integrate congressional guidance into the mid-term and long-term; an attempt to change the contents of management decision packages by switching programs between MDEPs; and an attempt to apply constraints to the long-term that are not consistent with the constraints in the near- and mid-term. The FY 92-06 LRRDAP is an example of discontinuity where a combination of these occurred.

Once the LRAMRP was submitted to HQDA, it was separated and distributed by function or mission area to the Army staff. Throughout LRRDAP development, the programs were reviewed and decisions were made by function or mission area. Once the LRRDAP was approved, the programs were then restructured by appropriation.

A problem that causes discontinuity arises when the total of the RDA mission areas set forth by DAMO-FD (the Army's Force Developers) and SARD-ZR (the Army Secretariat's Planners and Programmers) are not equal to the new RDA funding levels established by DACS-DPZ (the Army's Programmers). This was the case with the FY 92-06 LRRDAP.

When the programs were realigned by appropriation for the programming phase, it became the task of the programmers within the Modernization PEG to maintain continuity with the decisions and priorities of the planning phase while adjusting resource levels to be consistent with the fiscal guidance provided by OSD. During the FY 92-06 LRRDAP and FY 92-97 POM development, the Modernization PEG functioned in a similar mode as the old Equipping Panel. Specifically, DAMO-FD lead the mission area reviews of the LRRDAP and SARD-RI lead the appropriation reviews of the POM. As the Modernization PEG matures and performs its functions in accordance with the intentions of the Director for PAE, this conflict of management will diminish.

Another significant problem that creates discontinuity occurs when the contents of management decision packages are switched between packages. This is commonly referred to as "rolls and splits". Rolls and Splits are simple concepts to understand, but, extremely difficult to manage. Figure 11 illustrates the rolls and splits concept.

A "roll" groups like programs or management decision packages into one program or management decision package. A "split" separates programs or management decision packages from one program or management decision package to form others.

During the FY92-04 LRRDAP development and FY92-97 POM build, the Management Decision Packages (MDEPs) were redefined to better align programs and to direct funding to PEO/PMs. The ability to maintain crosswalks between programs that were split into multiple programs, or rolled into one program, or reassigned to PEO/PM MDEPs was degraded significantly.

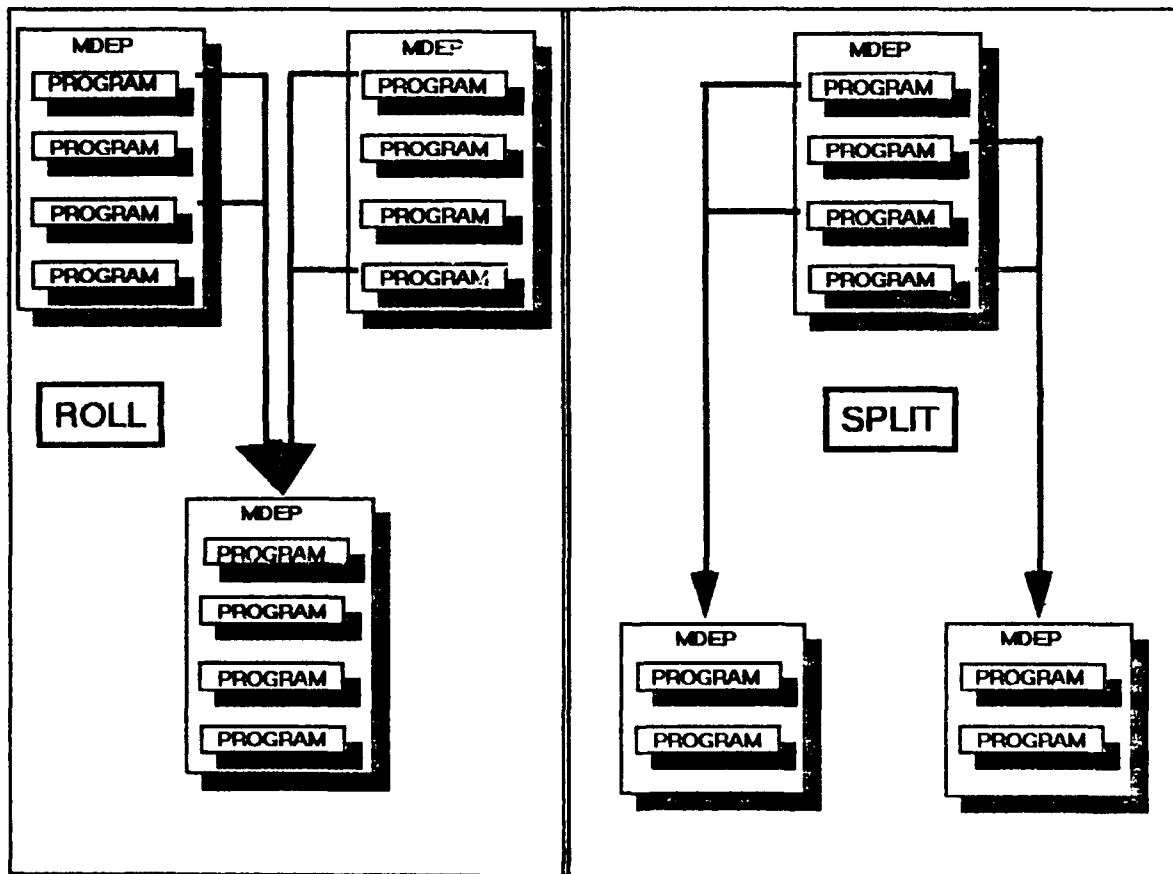


Figure 11. Rolls and Splits

The accumulation of program changes between packages and resource changes within packages became unmanageable over time. Efforts to sequentially handle administrative

changes, such as rolls and splits, before or after funding adjustments will reduce the discontinuity created by this problem.

The final problem addresses the importance of maintaining continuity of programs between the planning and programming phases. The opportunity for discontinuity increases during cycles that are fiscally constrained or experience changes in accounting procedures. If planning guidance or decisions differ from programming guidance, then discontinuity is likely to occur. As analyzed earlier, the FY 92-06 LRRDAP Guidance was formulated and published prior to the Final TAP and APM. Furthermore, the FY 92-06 LRRDAP Guidance was distributed prior to the development of PEO/PM direct funding MDEPs. Collectively, both situations created continuity problems with the resource levels of the LRRDAP.

The timing of programming guidance to coincide with planning guidance or the integration of planning decisions into programming guidance prior to the programming phase reduces the problem of discontinuity. The extensive reviews conducted during the planning and programming phases provide several opportunities to correct conditions that might cause discontinuity before it occurs.

AAE/PEO INVOLVEMENT

EXAMINE THE AAE's AND PEOs' ROLES DURING THE PLANNING PHASE OF PPBES FOR COMPLIANCE WITH THE GOLDWATER-NICHOLS DEPARTMENT OF DEFENSE REORGANIZATION ACT OF 1986.

The final issue pertaining to LRRDAP development applies to the new roles of the Army Acquisition Executive (AAE) and Program Executive Officers (PEOs) established by the Goldwater-Nichols Act. Specifically, the role of the AAE and PEOs require further definition to ensure active, streamlined participation in the early phases of LRRDAP development.

Since the Goldwater-Nichols Act, the roles of the PEOs and PMs have been well established and thoroughly documented for the budgeting and execution phases of PPBES. However, their roles during the planning and programming phases have not been as well developed. Figure 12 provides a relationship between the Army Secretariat and Staff linkages and the AAE/PEO/PM linkages.

During the FY92-04 LRRDAP and FY92-97 POM reviews, both the MACOMs and HQDA experienced confusion in exchanging information in a timely and consistent manner. With an intent to correct deficiencies before the next PPBES cycle, standard procedures were developed to correct problems as they arose. A review of these problems is required to identify recommendations, in accordance with the Goldwater-

Nichols Act, that will better define the roles of the PEOs and PMs.

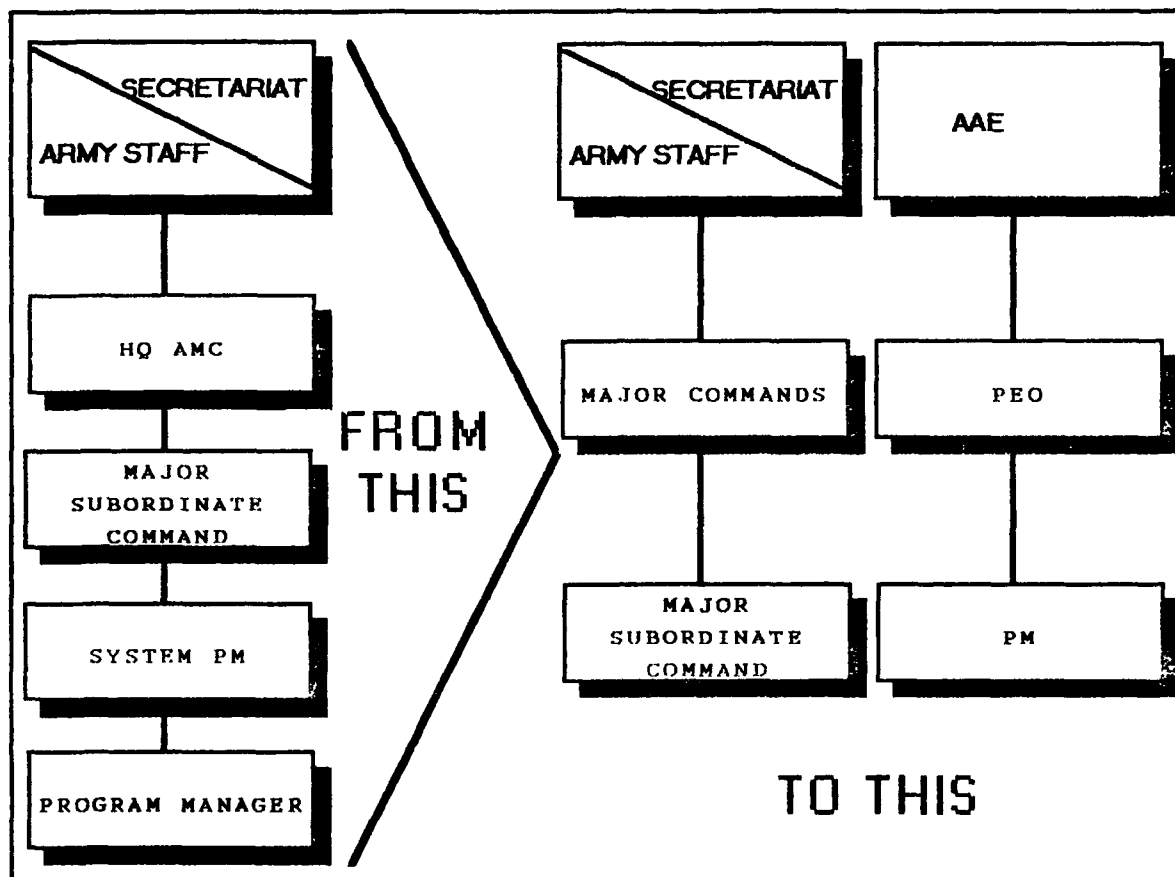


Figure 12. Acquisition Management Structure

Figure 12 portrays two distinct structures. The Army Staff/Secretariat structure is responsible for planning, programming, and budgeting RDA programs. The AAE structure is responsible for the acquisition of systems. In other words, the PEOs and PMs are responsible for program cost, schedule and performance.⁷

The key players for the LRAMRP process are the Requirements Managers: TRADOC (lead proponent), and the

Materiel Managers: AMC, ISC, and PEOs/PMs. The role of the PEOs and PMs in the LRRDAP development process is still vague. During the FY92-07 LRRDAP development, there were few established procedures setup to exchange information with PEOs and PMs. Problems included: Who received information? What information did they receive? And, how was the information to be transmitted? Solutions usually were derived and implemented on a crisis basis. Expedient procedures were established for the PEOs and PMs to obtain planning and programming information from their co-located MSCs. PEO representatives were used with some degree of success. Generally, routing planning and programming information through an intermediate source degraded the responsiveness of the PEOs and PMs to program issues that arose during LRRDAP and POM development.

During recent PPBES cycles, the PEOs and PMs have assisted the Army and Secretariat staffs in building sound "business sense" programs (which are executable); provided the AAE with flexibility to execute his acquisition program (e.g., build viable incremental packages); and maintained an active dialogue/role with the combat and materiel developers, HQDA functional proponents, and PEO liaison officers. PEOs and PMs have provided the most recent Baseline Cost Estimate (BCE) O&S data on weapon systems to the Requirements Managers, as requested. Furthermore, they have provided technical risk assessment to proponents and

integration review boards, as required.⁸ Beyond these tasks, their roles require further definition.

In the final analysis, HQDA is charged with the responsibility to provide adjusted funding data, changes in military strategy, reconciled priorities, among others, to the combat developers, materiel developers, and PEOs/PMs to ensure a "one voice" approach to justify programs.

Issues that impact on development of the Army's long-range research, development, and acquisition plan arise in each planning phase and, if not resolved, they degrade the responsiveness of the remaining PPBES phases and degrade the quality of PPBES documents. Chapter 6 provides recommendations to the issues analyzed in this chapter.

¹Assistant Secretary of the Army for Financial Management, The Army Budget, FY 1991 Budget Estimates, March 1990, 6.

²Based on FY 90-04 LRRDAP Guidance and FY 92-06 LRRDAP Guidance.

³The President's Blue Ribbon Commission on Defense Management, A Quest for Excellence, Final Report, Washington, D.C., June 1986, 13-16.

⁴Jo Ann Hathaway, a personal interview held at the Plans and Programs Directorate, Pentagon, Washington, D.C., December 1990, and the Long Range Army Materiel Requirements Plan, The RDA Blueprint for Fiscal Years 94-08, draft.

⁵DAMO-FDR, Modernization PEG / LRRDAP Milestones, A/O 21 Sep 89.

⁶"POM Lock" refers to the final milestone of the Programming phase of PPBES before the Program Objective Memorandum (POM) is published.

⁷Secretary of Defense Dick Cheney, DEFENSE MANAGEMENT Report to the President, July 1989, 9.

⁸U.S. Combined Arms Command and Ft. Leavenworth, FY 94-08 Long Range Army Materiel Requirements Plan (LRAMRP), Memorandum, 21 Nov 1990, A-3.

CHAPTER 6

CONCLUSION

"Our objective is to improve and stabilize strategic planning at the highest level, so that public and congressional debate can be elevated and brought to bear on these larger questions of defense policy."

-- Summary of a Directive Implementing the Recommendations of the Blue Ribbon Commission on Defense Management

SUMMARY

This thesis investigated the Army's Long Range Research, Development, and Acquisition Plan (LRRDAP) -- a key product of the Army's Planning, Programming, Budgeting, and Execution System (PPBES) -- to determine its future utility to PPBES and the Army's senior decision-makers. In addition, this thesis provided a direction for continued research or debate by analyzing issues that have been experienced during previous planning phases. It was structured with the assumption that fiscal resources will remain constrained over the near- and mid-terms.

The LRRDAP focuses Research, Development, and Acquisition programs on solving future battlefield needs derived from warfighting concepts. The credibility of the

LRRDAP is based upon its ability to relate anticipated battlefield materiel requirements to requested resources that compete for appropriations. To this end, the requirements that are packaged into affordable and defensible programs have a greater degree of success during the exhaustive PPBES reviews.

The issues analyzed in this thesis include how fiscal guidance should be applied to planning assumptions; an evaluation of the vertical interdependency within the planning phase of PPBES and PFES; an evaluation of the horizontal interdependency between the planning and programming phases of PPBES; and, an examination of the Army Acquisition Executive's and Program Executive Officers' roles during the planning phase of PPBES for compliance with the Goldwater-Nichols Department of Defense Reorganization Act of 1986.

The recommendations provided in this chapter support the analysis conducted in Chapter 5. Recommendations for each of the four major LRRDAP issues are provided. Furthermore, the issues that lend themselves to further research and new issues that emerged as a result of the analysis are identified later in this chapter.

RECOMMENDATIONS

The first issue was analyzed to determine how the Army should apply fiscal guidance with planning assumptions

to the LRRDAP development process. The solution to this issue is inconclusive because of the subjective nature of anticipating future events. However, the analysis of the last two LRRDAP cycles conducted in Chapter 5, coupled with the assumption that fiscal resources will remain constrained over near- and mid-terms, supports a recommendation on how to apply fiscal guidance for the LRRDAP.

The recommendation for applying fiscal guidance with planning assumptions to the LRRDAP development is to:

**STRUCTURE THE FISCAL GUIDANCE WITH TOTAL RDA FUNDING
THAT IS CONSTRAINED OVER THE NEAR- AND MID-TERM
AND UNCONSTRAINED OVER THE LONG-TERM.**

This recommendation supports a philosophy of top-down guidance and bottom-up solutions enabling the combat developers and materiel developers to maximize all the means at their disposal to achieve an economical mix of materiel that meets the requirements of the future battlefield. Furthermore, this recommendation advocates providing maximum flexibility to the Army leadership decision-making process through the elevated importance of incremental packaging of programs.

In addition, this strategy provides the least restriction to combat developers and materiel developers while achieving some control over the near- and mid-term. The long-term remains unconstrained or is allowed to grow

with respect to future battlefield requirements and not fiscal limitations. Unconstrained long-term planning is vital to research and development efforts that focus on materiel solutions on the future, modern and high technological, battlefield. Figure 13 illustrates the generic concept of this recommendation. The LRAMRP would be submitted to HQDA as a separate proposal for each option provided in the HQDA's LRRDAP Guidance. In addition, the objective of this recommendation to constrain the near- and mid-terms with an unconstrained long-term is generically depicted. Note that there are no unfunded requirements in the planning years.

To accommodate the fiscal constraining of near- and mid-term programs, the use of incremental packages is vital to the LRRDAP reviews. The current practice of packaging materiel solutions into executable increments over the near- and mid-term provides the Army leadership with maximum flexibility to adjust programs within the priorities determined by the combat developers and the additional fiscal constraints imposed by OSD after receipt of the LRAMRP. This approach requires renewed emphasis from Army leadership.

LRAMRP -- OPTION 1 (2 % GROWTH)												
LRAMRP -- OPTION 2 (ZERO GROWTH)												
LRAMRP -- OPTION 1 (NEGATIVE 2 % GROWTH)												
PRI	HUD	CUR	PGM1	PGM2	PGM3	PGM4	PGM5	PGM6	PLAN1	PLAN2	...	PLAN9 PLAN10
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Figure 13. Fiscal Guidance -- LRAMRP Submission

The second issue pertaining to vertical synchronization of planning events and documents between PPBS and PPBES was examined by comparing planned events with actual events from the last LRRDAP cycle. The evidence revealed that delays did reduce the amount of time that planning and programming analysts had to develop optional dollar, manpower, and force solutions for the Army leadership. The unique circumstances, addressed in Chapter 4, that characterized the FY 92-06 LRRDAP development and

analyzed in Chapter 5 validated the need to discipline the linkages between PPBES and PPBS inputs and outputs.

The synchronization of the Army's planning phase with other PPBS and PPBES milestones is critical to the decision-making process. Proper synchronization provides timely planning products to the Army's leadership for their reviews. The availability of these products provide the leadership with the required information to base their decisions on the future battlefield materiel requirements prior to the programming phase.

The analysis of this issue generates two recommendations for improving the synchronization of the Army's planning events. They are:

ESTABLISH A JOINT CONFERENCE BETWEEN THE SPC AND PBC TO APPROVE A SCHEDULE OF PPBES EVENTS FOR THE FOLLOWING CYCLE. MONITOR THE SYNCHRONIZATION OF EVENTS, AND VALIDATE OR MODIFY EVENT MILESTONES PRIOR TO EACH PHASE OF THE CYCLE.

The SPC and PBC become the joint caretakers of the PPBES schedule of events. They are the final approval authority for PPBES events and are responsible to deconflict events with regard to the remaining PPBES cycle. Proponents of the Secretariat, Army, and MACOM Staffs conduct their internal decision generating reviews within these time constraints. Next,

UPON RECEIPT OF THE LRAMRP, THE MODERNIZATION PEG FOCUSES ON NEAR- AND MID-TERM RDA REVIEWS AND DECISIONS THAT IMPACT THE ARMY'S POM. RESCHEDULE LONG-TERM RDA REVIEWS AND DECISIONS DURING THE BUDGET PHASE IN PREPARATION FOR THE NEXT CYCLE.

The discussion in Chapter 4, coupled with the analysis in Chapter 5, support the shifting of long-term (beyond the program years) RDA reviews and decisions into the Budget phase -- 4th fiscal quarter of the next odd calendar year. Figure 14 graphically portrays this recommendation. Note that shifting the long-term RDA reviews into the budget phase does not conflict with any other major event.

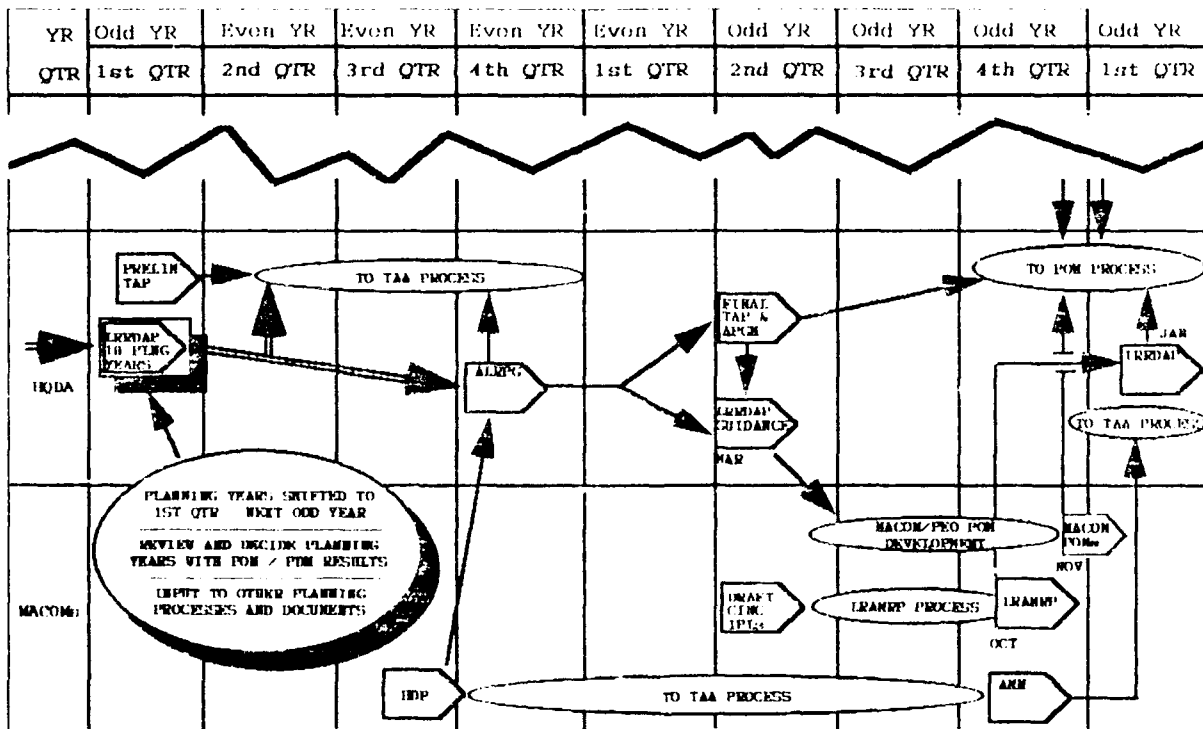


Figure 14. Vertical Synchronization -- LRRDAP Long-Term Review Shift

This recommendation provides a less time sensitive window to debate the long-term RDA requirements and fiscal constraints. This strategy allows the long-term programs to be reviewed in the context of an approved Army POM. The resulting long-term RDA decisions are then current for input to update the TAA in preparation for the next LRRDAP cycle. This recommendation yields a more current and useful long-term RDA strategy that is consistent with current leadership philosophies and provides a more dependable product for the TAA process and subsequent LRRDAP development cycle.

The conclusions drawn from the conflicting events between the FY 92-06 LRRDAP and the FY 92-97 POM reveal that events become more rigid and disciplined as they move towards submission of the President's Budget. The recommendations support this prioritization of events.

The third issue was evaluated to determine effectiveness of the horizontal interdependency between the planning and programming phases of PPBES. This analysis compared the FY 92-06 LRRDAP and the FY 92-97 POM to establish the continuity between products and programs.

The conclusion of this analysis is evident. The Army programmers require planning decisions prior to the programming phase. Furthermore, the continuity of programs is critical throughout PPBES as they are translated from mission-oriented to appropriation-oriented programs. As a result of the analysis, the recommendation is to:

COMPLETE ALL ADMINISTRATIVE TRANSACTIONS PRIOR TO THE FORMULATION OF LRRDAP GUIDANCE OR FOLLOWING SUBMISSION OF THE ARMY'S BUDGET ESTIMATE.

Administrative transactions include the refinement of MDEP packages such as MDEP title designations, HQDA directed MDEPs, and rolls and splits, among others.

This recommendation reduces the turbulent and difficult management of programs that are already compounded by the ongoing application of fiscal constraints.

Efforts to maintain visibility of the rolls and splits during the FY92-06 LRRDAP cycle required extensive automation support and resulted in minimal success. Therefore, the management of rolls and splits warrant further research beyond the recommendation of this issue.

To facilitate the PEGs' review of RDA programs within their purview at the appropriation level and maintain continuity between programs as they transition from mission areas to appropriations:

ISSUE RDA PROGRAM TO THE PEGs FOR PROGRAM REVIEWS AT THE STANDARD STUDY NUMBER AND PROGRAM ELEMENT LEVEL OF DETAIL.

As discussed in Chapter 4 and analyzed in Chapter 5, an MDEP may contain several programs that may be funded by several appropriations. If the PEGs are to effectively

review and make complete program decisions vis-à-vis appropriations, then allocate the RDA programs by Standard Study Number and Program Element (item level detail) rather than by MDEPs. The item level of detail relates to appropriations. This establishes more meaningful program reviews for the PEGs' respective Program Sponsor for Budgeting and Performance Evaluation and Appropriation Director.

The best opportunity to suballocate programs at the item level is following the submission of the RDA program years and prior to the programming phase

The fourth and final issue examined the roles of the AAE and PEOs in accordance with the Goldwater-Nichols Act. This examination assessed the current AAE and PEO structure the new roles of the Army Acquisition Executive (AAE). Additionally, the examination addressed areas where AAE and PEO involvement in the planning phase would improve the products of the planning phase. The solution to this issue is inconclusive and warrants further research beyond the scope of this thesis. The issue requiring addition analysis is to:

FURTHER DEFINE THE ROLES OF THE AAE AND PEOs TO ENSURE ACTIVE, STREAMLINED PARTICIPATION IN THE EARLY PHASES OF LRRDAP DEVELOPMENT IN ACCORDANCE WITH THE GOLDWATER-NICHOLS DEPARTMENT OF DEFENSE REORGANIZATION ACT OF 1986.

The PEOs' direct link to the AAE provides them with immediate feedback on materiel solutions at the strategic level. Therefore, it is imperative that the PEOs are provided information separate from MACOMs and unique to their areas of responsibility. This will support their requirements to be responsive to the AAE (in accordance with the Goldwater-Nichols Act). In return, the PEOs provide timely business-oriented assessment of programs being reviewed; and provide justification for the actions of the planners prior to committing the leadership to fiscal decisions.

Included in future research is the roles of the PEO representative. Unless the PEO representative is knowledgeable of all the PEO's programs, time and accuracy is sacrificed in program assessment. By improving their relationship with the Secretariat and Army Staffs, the PEO representatives become a valuable and knowledgeable asset to both PEOs and HQDA staffs.

FUTURE RESEARCH

The following is a list of issues that are related to this thesis and warrant further research.

Database/Automation Interfaces(RDAISA\PROBE\OSD) --

Additional research should be conducted on the data elements, attributes, mediums required to transfer Modernization programs from RDAISA to PROBE and from PROBE

to OSD while maintaining data integrity. What is required to streamline the transfer and improve the accuracy of data between these different databases and operating systems?

■Role of the AAE/PEO in planning and programming phases of PPBES--

This thesis did not fully develop their roles in light of recent legislation. This thesis also fell short in determining which events the PEOs should be an active participant. What should their roles be during the planning and programming phases?

■Functions of Program Evaluation Group and On-Line POM --

LRRDAP data are maintained on the RDAISA mainframe. POM data are maintained on the On-line POM system. While connectivity has been established with On-Line POM system, there are communication problems that hamper or degrade the performance of the hardware and analysts within OASA(RDA). What are the solutions (may require justifying equipment upgrades or alternative approaches to automated POM building, among others)?

■Relationship of the System Integrators and PEO Representatives --

What is the relationship between system integrators and PEO representatives? How can they best integrate requirement-oriented solutions with business-oriented solutions for use by Army leadership?

■ Role of the CINC in planning and programming --

The limited influence of the CINC (two budgeting years) may need to be expanded to include the program years. Every two years their vision of the mid-term requirements can be updated during LRRDAP and POM cycles. What is the impact on how Congress views DoD's Program?

■ External Factors Influencing PPBES --

What role does politics play (Congressional Decisions, leadership philosophies, etc.) after the national strategy and military strategy has been formulated for the next PPBES cycle?

■ Integration of LRRDAP with POM at the Office of the Secretary of Defense, Office of Management and Budget, and Congress levels --

Will providing each resource management level a copy of the Services' long-range plans minimize the fiscal and philosophical differences between these layers of review? Will understanding the Services' long-range strategy help clarify the Services' intent/justification for certain programs in the budget?

■ Timing of the PPBES Processes, Guidance, and Products --

Which events or products are critical? redundant? extraneous?

■ Integration of Congressional Decisions and Long-Range Plans --

What impact will constraining fiscal guidance consistent with Congressional Decisions from the previous cycle have on Army planning?

In conclusion, fiscal guidance properly applied to develop planning strategies is the foundation for a valid LRRDAP which conveys the planning decisions necessary for the programmers to build competitive materiel programs. Also, proper synchronization of the LRRDAP within the PPBES is a requisite for improving the system. Collectively, the result is an effective resource management system with credible materiel programs that support the Army leadership's vision of the future battlefield, by providing for the CINC's warfighting needs, and will be defensible during legislative debate for limited resources.

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