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A COMPARATIVE ANALYSIS OF THE EFFECT
OF ORGANIZATIONAL STRUCTURE AND
RELATIONSHIPS ON INTEGRATED LOGISTICS
SUPPORT IN THE USAF AND THE RAAF

THESIS

Michael J. Kenny
Flight Lieutenant, RAAF
AFIT/GLM/LSM/89S-35

DEPARTMENT OF THE AIR FORCE
AIR UNIVERSITY
AIR FORCE INSTITUTE OF TECHNOLOGY

Wright-Patterson Air Force Base, Ohio

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ON INTEGRATED LOGISTICS SUPPORT IN THE USAF AND THE RAAF

THESIS

Presented to the Faculty of the School of Systems and Logistics
of the Air Force Institute of Technology

Air University

In Partial Fulfillment of the
Requirements for the Degree of
Master of Science in Logistics Management

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Flight Lieutenant, RAAF

September 1989

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Preface

The inspiration for this study came from Group Captain Peter Rusbridge, RAAF Director of Project Management and Acquisition, during a brief visit to Wright-Patterson AFB in November 1988. I wish to thank Group Captain Rusbridge for planting the germ of an idea, for his continued moral support, and his provision of much of the RAAF data used.

Many members of ALD assisted by sharing their time, their knowledge, and their documentary data. I am particularly indebted to Dr. Dean C. Kallander, ALD Historian, who gave willingly of his resources and acted as a sounding board for my musings.

Finally, I would like to thank my advisor, Lieutenant Colonel Robert D. Materna, for his guidance, support, and constant expressions of confidence and encouragement.

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Abstract

The purpose of this study was to compare the USAF and RAAF approaches to acquisition logistics, determine similarities and differences, and investigate the potential for using the USAF Acquisition Logistics Division (ALD) as a model for recommending a logistics oriented acquisition structure for the RAAF. The scope of the project was limited to studying the organizational structure and responsibilities of the ALD and the appropriate organizations of the RAAF.

The methodology used to make the comparison was historical analysis of the USAF and RAAF approaches to system acquisition logistics and the temporal development of acquisition logistics philosophies, roles, and responsibilities. This analysis shows many similarities in the USAF and RAAF approaches, including the roles and responsibilities of acquisition logistics organizations, recognition of the importance of life cycle cost, and the adoption of an ILS concept. It also shows the RAAF's lack of an organization like ALD to implement the ILS philosophy and help achieve its objectives.

By appointing DPMLs to manage ILS plans, and by various ILS management support activities, including the research and application of technology, the findings of the study suggest that ALD has been reasonably successful in ensuring that logistics supportability issues are adequately addressed early in system acquisition. The main conclusion from this research is that the RAAF should establish an acquisition logistics oriented organization, based on the proposed Directorate of ILS Management, incorporating elements and activities similar to those which have contributed to the success of ALD, and, in line with the increasing emphasis on decentralization in the Australian Defence Force, located in Headquarters Support Command's Logistics Branch. Further investigation of the current status and relevance in RAAF acquisition of ILS management support activities is recommended.

A COMPARATIVE ANALYSIS OF THE EFFECT
OF ORGANIZATIONAL STRUCTURE AND RELATIONSHIPS
ON INTEGRATED LOGISTICS SUPPORT IN THE USAF AND THE RAAF

I. Introduction

General Issue

The United States Air Force (USAF) has historically had difficulty in ensuring that new systems are designed for supportability and that all of the necessary support requirements are properly identified and acquired. The creation of the Acquisition Logistics Division (ALD) seems to have made a major contribution to the solution of this problem.

The Royal Australian Air Force (RAAF) has experienced similar problems regarding the implementation of an Integrated Logistics Support (ILS) philosophy, its elements and activities, in major weapon systems acquisition projects. An examination of the USAF approach to solving this problem may provide a model for the RAAF to follow.

A November, 1988 visit to the Air Force Institute of Technology (AFIT) and the Air Force Logistics Command (AFLC) by the Director of Project Management and Acquisition of the RAAF resulted in the identification of several significant similarities in the USAF approaches to major weapons systems

acquisition. During a briefing at the ALD it became apparent that this organization performs, amongst other things, the function of coordinating the efforts and directions of various organizations charged with the responsibility for ensuring that new systems being acquired are, in fact, supportable. A similar organization in the RAAF might help to promote the use of the RAAF's ILS philosophy during the entire tenure of its acquisition projects.

Specific Problem

An area of interest that appears to have little current knowledge is the impact that organizational structures and relationships have in ensuring that ILS issues are recognized and acted upon throughout the life of the project. Thus, the specific problem, or research question, being addressed is as follows:

What are ALD's roles and responsibilities for ensuring that logistics supportability issues are recognized and acted upon throughout the life of a project, and are comparable roles and responsibilities appropriate for the RAAF? If so, who should fulfil those roles, and how can such responsibilities be carried out?

Scope of Study

The scope of this project is limited to studying the organizational structure and responsibilities of the USAF Acquisition Logistics Division and the appropriate organizations of the Royal Australian Air Force.

Background

RAAF acquisition is both complex and dynamic. Responsibilities are divided between two Headquarters: the RAAF Headquarters, known as the Department of Defence (Air Force Office), or DEFAIR, located in Canberra, and the Support Command Headquarters (HQSC), which is located in Melbourne. DEFAIR includes a number of organizations which are mainly responsible for policy, command, and control; while the Capital Projects Division (CAPPROJD) at HQSC performs the actual work involved in acquisition.

In the first months of 1985 the Director General of Supply (now the Assistant Chief for Supply, or ACSUP) penned a discussion paper on these and other acquisition problems [53:Folio 1]. Of particular concern was the variation of organization structures implemented in several recent major acquisition projects, and the inadequacy of acquisition policy guidelines. The conclusion was that standardization was required, and that current guidelines would need to be altered. Several other Divisional and Directorate heads responded with discussion and position papers, reaching similar conclusions but differing on their approach to the solution. In March 1986, the Chief of the Air Staff (CAS) directed that a Working Party (WP) create a RAAF concept of ILS for implementation in future major acquisition projects. When the WP's business was completed 13 months later, the

most significant tangible result was a new policy statement on ILS. A copy of this policy statement is included at Appendix A. The WP also recommended the creation of a small organization, the Directorate of ILS Management, or DILSM, within DEFAIR to ensure the implementation of this ILS policy in major acquisition projects. However, at the present time, the DILSM has not received official support and the acquisition organization remains essentially unchanged.

Objective of the Study

The objective of this study is to compare the USAF and RAAF approaches to acquisition logistics, determine similarities and differences, and to investigate the potential for using the USAF Acquisition Logistics Division as a model for recommending a similar acquisition logistics oriented organizational structure for the RAAF.

Investigative Questions

To satisfy the above research objective and find a solution to the specific problem, the following investigative questions were identified:

1. When, why and how was ALD formed?
2. What is ALD's role, and what are its functional relationships to other organizations in the acquisition process?

3. How does ALD perform the management functions of planning, organizing, coordinating, directing, and controlling other organizations in the acquisition process?

4. What are the similarities and differences between the way the USAF and the RAAF manage acquisition logistics?

5. What other organizations are involved in USAF acquisition and what are their roles and responsibilities regarding acquisition logistics management?

The combined results of efforts to answer the investigative questions outlined above should result in a complete and authoritative answer to the research question.

Acronyms and Abbreviations

A complete Glossary of Acronyms and Abbreviations is included at Appendix C.

II. Literature Review

USAF Acquisition Logistics

Acquisition Logistics is defined as "the process of systematically identifying and assessing logistics alternatives, analyzing and resolving ILS deficiencies, and managing ILS throughout the acquisition process" [3:1-1].

The Acquisition Process. The system acquisition process, as defined by U.S. Department of Defense Directives, is a series of five phases of activity punctuated by reviews and direction-giving decisions at key milestones. The process, illustrated at Figure 1, flows in logical progression from problem identification to solution (or dissolution), with the milestones serving the purpose of reviewing problem solution progress against mission and fiscal considerations. The Mission Analysis process identifies security threats and seeks alternative ideas for solutions. This activity initiates the Operational Requirements process and remains an important consideration throughout subsequent acquisition life cycle phases.

In the operational requirements process, operational needs are identified, evaluated, validated, and stated, and system development (or improvement) is begun [48:8]. The first phase of the acquisition process, Concept Definition, seeks "only to identify and explore alternative solutions"

THE ACQUISITION CYCLE

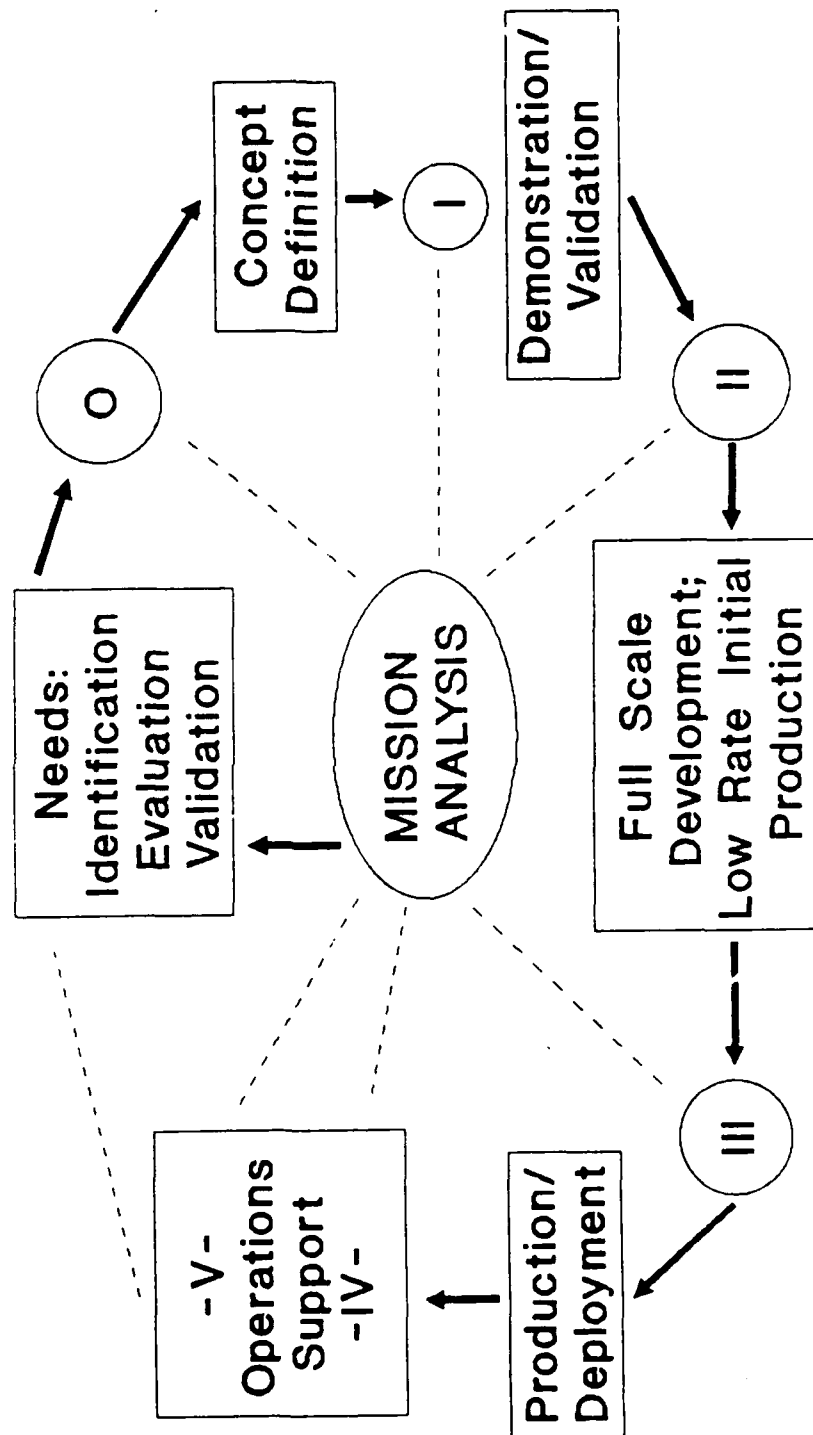


Figure 1. USAF System Acquisition Life Cycle [48:6]

[48:11]. Following definition the system concept requires demonstration and validation. This phase aims to reduce "technical risk and economic uncertainty through a more detailed definition of the new system" [48:17]. The third phase, Full Scale Development, involves the development and testing of all aspects of the system with the aim of producing a fully operational pre-production prototype [48:19]. After the reviewing authority's decision to proceed with production and deployment of the new system the fourth phase is begun. Program Management Responsibility Transfer (PMRT) also occurs during this phase. PMRT is the formal act of transferring program management responsibility from the implementing (acquiring) command to the supporting command [48:23]. The final phase, operational support, begins with deployment and continues through to system retirement. The fourth milestone review is conducted within a few years of deployment and covers the performance of the system and its support, capability, and readiness [48:24]. A similar review, conducted at a later date, concentrates on the system's "operational effectiveness, suitability, and readiness" [48:24]. When the system can no longer effectively counter a particular security threat it is retired, thus completing the system acquisition life cycle.

Acquisition Logistics Management. The Air Force usually separates weapon system implementation and support

responsibilities between Commands. Implementing Command responsibilities are normally assigned to AFSC, while AFLC takes on the Supporting Command responsibilities. AFSC identifies and designates an individual member as the Program Manager (PM) to be responsible for all aspects of the program until PMRT. The PM assigns responsibility for acquisition logistics in implementation to the DPML (Deputy Program Manager for Logistics) or Integrated Logistics Support Manager (ILSM) for less-than-major programs. The DPML sets up office at the AFSC System Program Office but is assigned to a program by ALD. Whilst his primary duty is to manage the acquisition logistics aspects of the program to which he is assigned, the DPML remains functionally responsible, through ALD, to AFLC. The DPML is an experienced logistician and the primary AFLC spokesperson for acquisition logistics prior to PMRT to an Air Logistics Center [3:1-2].

The Department of Defense Directive on Acquisition and Management of Integrated Logistics Support directs that

... acquisition programs shall include an ILS program that begins at program initiation and continues for the life of the system. The primary objective of the ILS program shall be to achieve system readiness objectives at an affordable life-cycle cost. [22:2]

It also states that

... the program manager shall establish and manage an adequately funded ILS program that relates support to system readiness objectives, system and equipment

design, support acquisition and operating cost, and acquisition strategy. [22:4]

DPMLs discharge their acquisition logistics management responsibilities on behalf of the PM by setting up and managing the ILS program. This program

... provides management and technical activities a disciplined, unified, and iterative approach (a) to integrate support requirements into system and equipment design; (b) to develop support requirements that are related consistently to readiness objectives, to design, and to each other; and (c) to acquire and provide the required support at an affordable life cycle cost. The ILS plan (ILSP) and the logistics support analysis (LSA) are the basic management tools of the ILS program used to integrate the support elements . . . and achieve program objectives. [16:1]

ILS and LSA. The Department of Defence definition of ILS is:

A disciplined, unified and iterative approach to the management and technical activities necessary to:

- a. integrate support considerations into system and equipment design;
- b. develop support requirements that are related consistently to readiness objectives, to design, and to each other;
- c. acquire the required support; and
- d. provide the support during the operational phase at minimum cost. [22:2-2]

Jones' concept of ILS and its goals is essentially the same [41:4].

The Department of Defense, the Air Force, and Jones each identify ten basic elements of ILS which, terminology apart, are very similar. These elements are:

Maintenance Planning;
Manpower and Personnel;
Supply Support;
Support Equipment;
Technical Data;
Training and Training Support;
Computer Resources Support;
Facilities;
Packaging, Handling, Storage and Transportation;
Design Interface.

In order for ILS goals to be met it is essential that all ILS elements (and aspects thereof) be considered throughout the entire acquisition cycle (that is, the life of the program). The elements may be seen as "functional areas" and may involve specialists with specialist knowledge and techniques, but the ILS concept brings them together under the umbrella of a common purpose: the best possible level of lifetime support for a new system.

Jones describes ILS as occurring in two phases: Pre-Delivery and Post-Delivery [41:4]. The pre-delivery phase corresponds roughly to the first four phases in the acquisition cycle: Concept Exploration, Demonstration and Validation, Full Scale Development, and Production. The post-delivery ILS phase corresponds to the final phase in the acquisition cycle (Deployment).

The program manager's main tool in meeting his ILS obligations is Logistics Support Analysis (LSA). A general purpose definition of LSA is "any analysis, however simple, that results in a decision on the scope and level of logistics support" [15:2]. Formally defined, it is the

... selective application of scientific and engineering efforts undertaken during the acquisition process, as part of the system engineering and design process, to assist in:

- a. causing support considerations to influence design,
- b. defining support requirements that are related optimally to design and to each other,
- c. acquiring the required support, and
- d. providing the required support during the operational phase at minimum cost. [22:2-2]

Put simply, LSA is a collection of tasks performed primarily by Contractors working for the Department of Defense to both coordinate and evaluate the ILS process. The involvement of Offices of Primary Responsibility (OPRs) from both parties is critical, as they work together as partners in ILS and LSA. The Air Force OPR for LSA is ALD's Directorate of Logistics Support Analysis.

Creation of the ALD

AFALD was formed on 1 July 1976, as a division of AFLC, with its mission:

... to reduce long term costs of ownership and operational support of weapon systems and related equipment . . . with the constructive advocacy for controlling life cycle costs through assistance to AFSC program managers during all phases of a system's design, validation, development and production. [42:1]

Although this change occurred rather suddenly, it was only the latest in a series of organizational changes as

acquisition logistics roles and responsibilities evolved over several decades.

Organization Problems. The initial organization had a dividing line between research and development (R&D) and production, with problems resulting because of lack of communication between the two organizations [50:24]. The Air Technical Service Command (ATSC) was formed on 31 August 1944 and assumed the functions of the two separate commands [42:1]. The ATSC had its name changed to Air Materiel Command (AMC) in 1946 but it was later split, with R&D responsibilities taken over by the new Air Research and Development Command (ARDC). AMC and ARDC had demarcation disputes in procurement versus development issues: AMC was concerned with cost and support aspects, while ARDC emphasized performance and technology [42:5]. The requirement for better cooperation and coordination led to the development of Weapons System Project Offices (WSPOs), staffed by representatives of both ARDC and AMC, in 1954 [42:5, 51:27]. The WSPOs helped in eliminating delays between the two organizations.

On 1 April 1961 the ARDC became AFSC, with responsibility for the entire weapon system acquisition process, taking over responsibility for procurement and production from AMC, which became AFLC [42:7]. On 20 June of the same year, responsibility for spares procurement was

transferred to AFLC, and AFLC set up detachments at various AFSC divisions on 1 July 1961 [42:8]. A year later, AFLC and AFSC agreed that logisticians from AFLC's AMAs (Air Materiel Areas, forerunners of today's Air Logistics Centers) should be located at the System Program Offices (SPOs) [42:9].

Recognition of Life Cycle Costs. AFLC Regulation 400-20 and AFSC Regulation 400-4, both issued 14 February 1964, directed that the total cost of weapon systems determine the procurement method [42:9]. Department of Defense Directive 4100-35, Integrated Logistics Support, issued 19 June 1964, sought to have logistics recognized and considered in weapon system design [42:10]. In May 1968, AFLC decided to assign a system manager at an AMA at the same time each SPO was formed, in an effort to improve the supportability of new systems [42:10-11]. On 16 April 1969 AFLC and AFSC directed that major SPOs have ILS divisions, to be managed by an AFLC logistician. This manager was the forerunner of the present DPML [42:11]. The reason for this increasing emphasis on logistics was the trend of increasing operating and support (O&S) costs, as a proportion of total costs, resulting in less money for new programs [42:11]. Air Force Regulation 800-8, issued 27 July 1972, made the DPML "official" and required him to prepare an Integrated Logistics Support Plan (ILSP) for all major systems. The ILSP would "outline the

tasks and set the schedule for each element of logistics for each phase of the development program" [42:12]. Air Force Regulation 400-17, Life Cycle Costing Procurement, issued 13 October 1972 directed AFSC to give more consideration to factors affecting life cycle costs when evaluating bids and awarding contracts [42:13].

More Organization Problems. As the organization now stood, AFLC still had problems. The DPML arrived at the SPO after support planning was completed and was faced with developing the ILSP without knowing what had transpired. In addition, several organizations within AFLC had their "fingers in the pie": DCS Plans, DCS Materiel Management, and the AMAs [42:13]. An AFLC briefing on the subject concluded that AFLC needed a DCS Acquisition organization responsible for all acquisition functions [14]. At about this time, the Air Force Auditor General audited the Air Force's management of ILS. As cited in the unpublished ten-year history of the ALD, the findings of the audit were as follows:

1. Insufficient guidance for the application of ILS;
2. Lack of established organizational responsibilities;
3. Lack of formal operating instructions;
4. Inadequate consideration of ILS planning and application;
5. Significant delays in staffing the ILS division;

6. lack of application of ILS to Less-Than Major programs;
7. failure to effectively use the Increased Reliability of Operational Systems program;
8. lack of positive guidance on funding of temporary duty costs; and
9. a lack of detailed guidance and required expertise. [42:14]

The report recommended that AFLC and AFSC publish and adopt measures to guide the application of ILS doctrine, and establish a management structure which could promote intercommand cooperation [42:15].

The DCS for Acquisition Logistics was established on 15 April 1974 with four directorates (Aeronautical Logistics, Electronic Logistics, Aerospace Logistics, and Integrated Logistics Management), with "overall AFLC responsibility for development and acquisition programs prior to the production decision" [42:16], as a result of recommendations by an AFLC task force chaired by Major General Robert E. Hails, Warner-Robins AMA Commander. Later, in a letter to the AFLC Commander, General Hails described this organization as essentially ineffectual and recommended the establishment of "an Air Force Systems Acquisition Center for Aeronautical Systems at Wright-Patterson AFB, OH, under the Air Force Logistics Command" [25]. General Hails also felt that the biggest problem was program management responsibility transfer (PMRT) process and recommended that PMRT occur

before the production phase instead of after it [25]. As a result of this letter, and others reacting to it, the Air Force Chief of Staff and the Secretary of the Air Force decided to establish the Air Force Acquisition Logistics Division [42:26].

ALD Mission and Organization

When it was formed on 1 July 1976 the ALD was known as the AFALD and "it was, in very general terms, charged with reducing long term costs of ownership and operational support of weapon systems and related equipment" [9:1]. In addition to this general guide, AFIC planners devised ten objectives for the new organization. As cited in the official AFALD history those objectives were:

1. To improve early support planning for weapon systems and equipment in the acquisition process.
2. To prepare an effective support base for fielding new weapon systems and equipment.
3. To emphasize availability, supportability and readiness for operational systems in Air Force program Management decision making.
4. To control and reduce life cycle operating and support costs for operational systems.
5. To improve systems support and procurement methodologies.
6. To emphasize logistics objectives in initial program development and business strategy planning in each phase of the acquisition process.
7. To improve contract administration concepts and procedures, providing a total spectrum approach to acquisition and support.

8. To increase the collection and effective application of product performance and support experience of the operating forces in support of research, design, and development activities of the Air Force and defense contractors.

9. To improve AFLC, AFSC, operating command and contractor communications and interactions on USAF, interservice and international programs.

10. To improve the overall quality and expertise of logisticians working in Air Force acquisition activities. [9:2-3]

In order to achieve its mission, the original ALD organization structure, shown at Figure 2, was specifically designed to allow direct interface with the AFSC divisions [9:3]. Two new Deputies, International Logistics and Tanker Cargo Aircraft, were established in the next few months; resulting in the revised structure shown at Figure 3. AFLC Programming Plan 76-17 outlined the functions and responsibilities of AFALD and, as cited in the official AFALD History, the responsibilities of the major areas in the Division were summarized as follows:

The Deputy for Plans and Analysis was responsible for overall acquisition logistics policies, plans, and procedures, and aeronautical techniques within the headquarters. [9:4]

The Deputy for Product Evaluation Engineering and Test was concerned primarily with existing weapon systems, including the exchange of information between operational commands, AFLC and AFSC, on matters of technical design and performance capabilities. [9:4]

The Deputy for Readiness Development represented the principal interface between AFLC and AFSC system program offices (SPOs) on the less-than-major programs and major programs during the conceptual phase. [9:4]

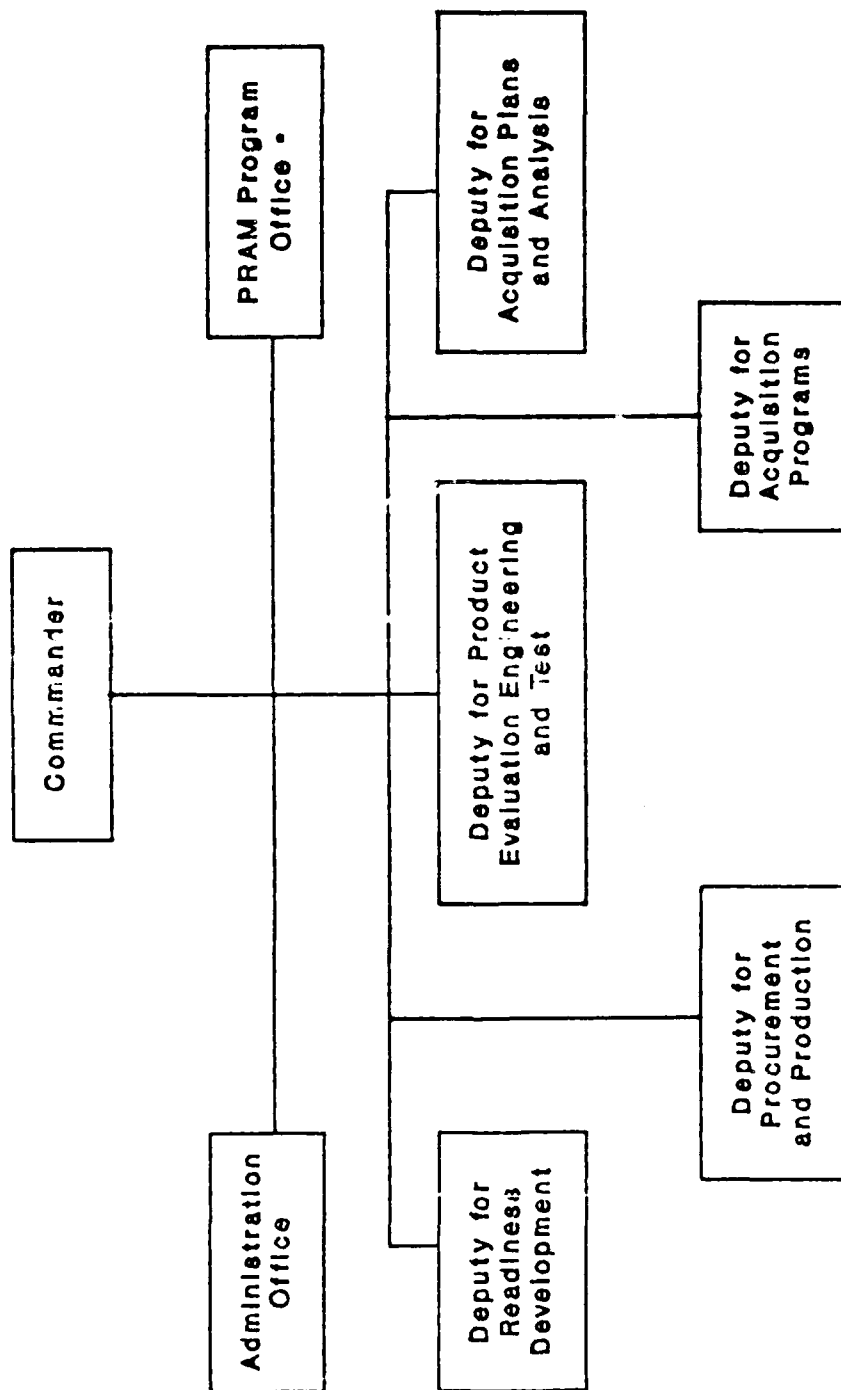
The Deputy for Acquisition Programs was the AFALD focal point for major weapon system acquisition management, integrating all logistics efforts of the AFALD to support each Deputy Program Manager for Logistics (DPML) at AFSC's system program offices. [9:5]

The Deputy for Procurement and Production was responsible for analyzing the procurement aspects of new Air Force systems and equipment. [9:5]

The Deputy for International Logistics was responsible for the management of all operationally oriented functions of AFLC's international programs. [9:5]

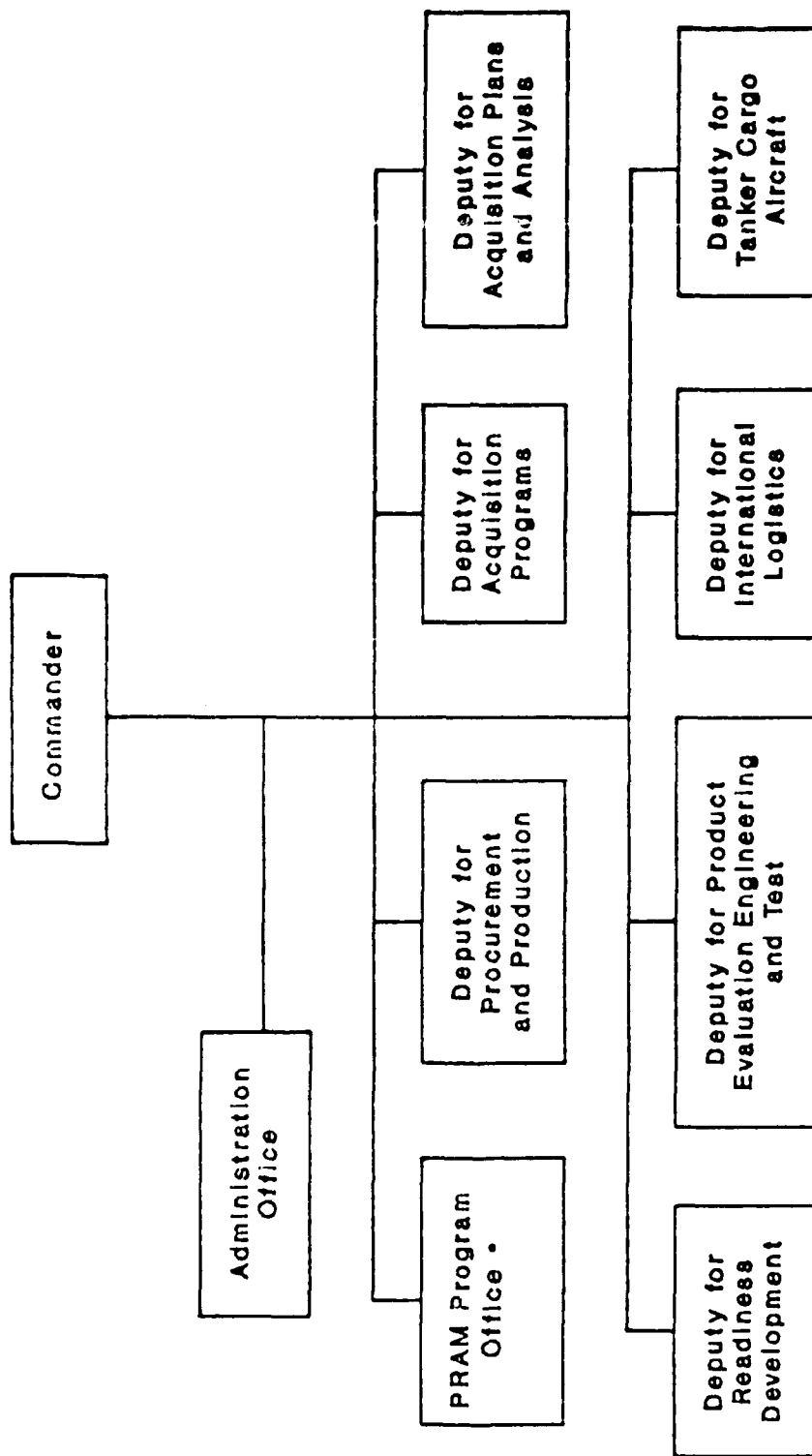
The Deputy for Tanker Cargo Aircraft was the original designation for what later became known as the Advanced Tanker Cargo Aircraft (ATCA) System Program Office. The ATCA assignment represented the first time AFLC had been designated as the implementing command on a major acquisition program. [9:6]

In addition to having the five DCS-level offices AFALD shared with ASD joint responsibility for the USAF Productivity - Reliability - Availability - Maintainability Program Office ... PRAM's mission was to reduce operating and support costs of weapon systems, sub-systems, and equipment already in the Air Force inventory. [9:6]



- co-managed by AFALD and ASD

Figure 2. AFALD Organization as of 1 July 1976

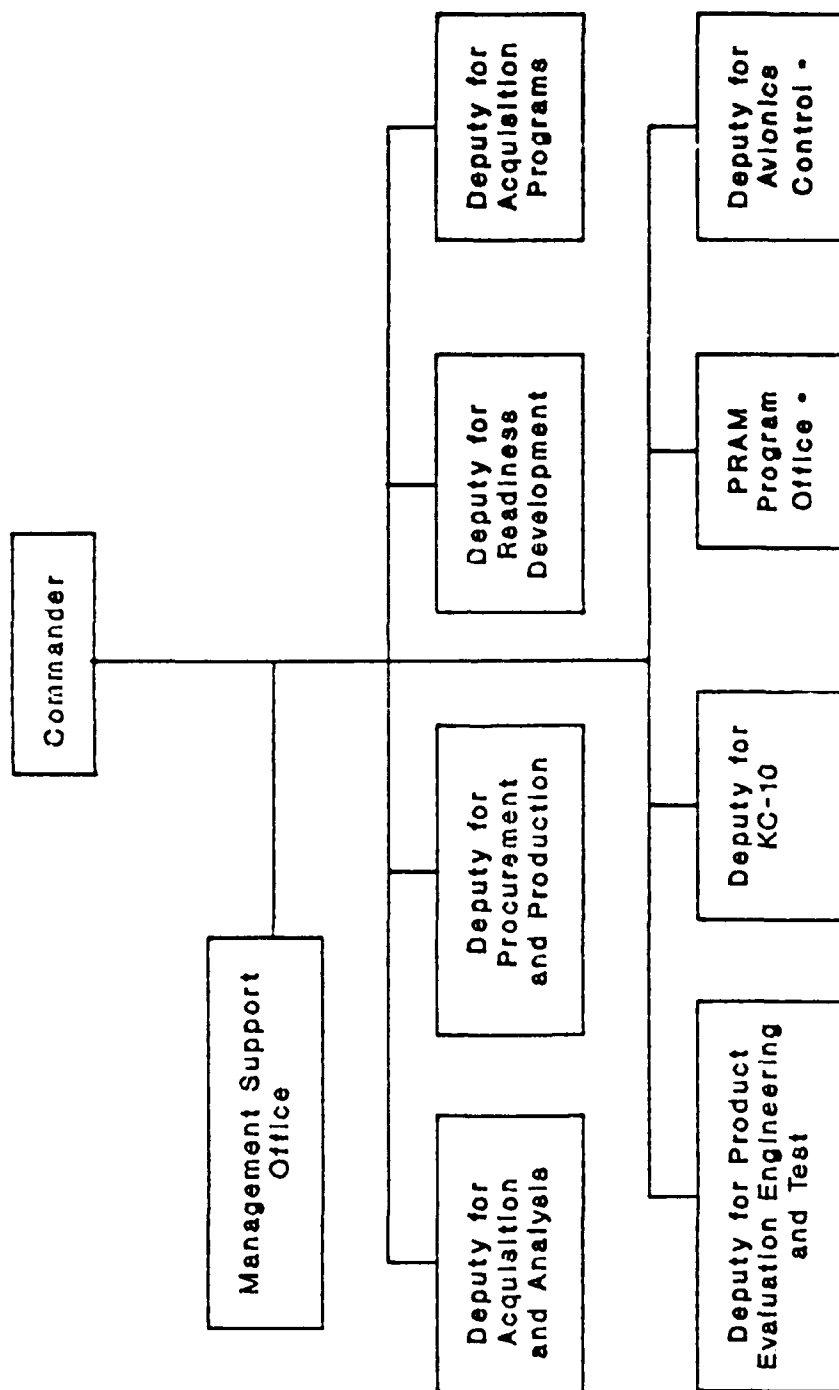


• co-managed by AFALD and ASD

Figure 3. AFALD Organization as of 1 November 1976

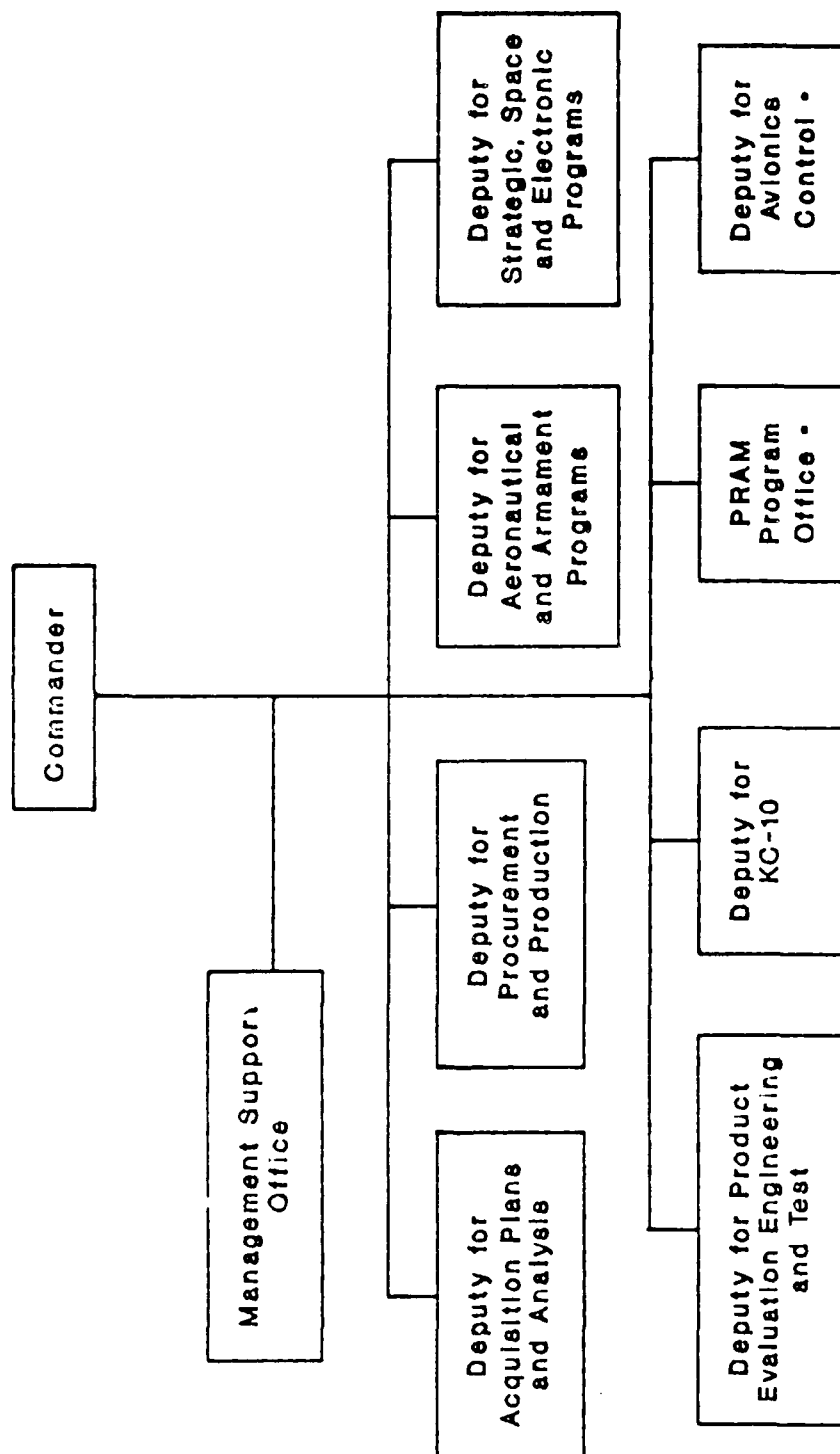
The importance of the new organization was emphasized by its being initially commanded by a Lieutenant General with a Major General Vice Commander.

In 1977 the question of organizational responsibility for acquisition logistics policy and procedures became an issue of debate for AFALD and AFLC executives [10:8-10]. This matter is still not resolved to the satisfaction of the ALD Commander [8:227-228]. Although ALD gained responsibility in 1977 for several other organizations not directly related to its primary mission (responsibility for all these organizations was divested by 1984), the next major organizational change occurred in the second half of 1978 when various functions in the Deputies for Readiness Development and Acquisition Programs were realigned to produce a structure parallel to the AFSC product divisions [11:17]. Figure 4 shows the organization structure before this change, and the situation after is represented by the chart at Figure 5. The Deputy for Readiness Development was renamed Deputy for Strategic, Space and Electronic Programs and lost two directorates (Armament Logistics and Equipment Support), but gained the DPMLs related to the newly named remaining directorates. Similarly, the Deputy for Acquisition Programs was renamed Deputy for Aeronautical and Armament Programs, lost several DPMLs and gained responsibility for two new directorates. This



• co-managed by AFALD and ASD

Figure 4. AFALD Organization as of 1 June 1978



• co-managed by AFALD and ASD

Figure 5. AFALD Organization as of 1 December 1978

reorganization was the first step towards developing the mature ALD organization of today.

AFALD's mission and organization remained essentially unchanged until the issue of AFLC Regulation 23-17 (Organization and Mission - Field, Air Force Acquisition Logistics Division) on 14 July 1980. As cited in the official history for the 1980 fiscal year, this regulation stated that AFALD's mission was:

... to improve USAF force readiness and reduce life cycle costs by challenging requirements and assuring consideration of supportability, reliability, and maintainability during the design, development, and production process of weapon system acquisition; and to direct acquisition programs which use already developed systems to meet operational needs. [12:1]

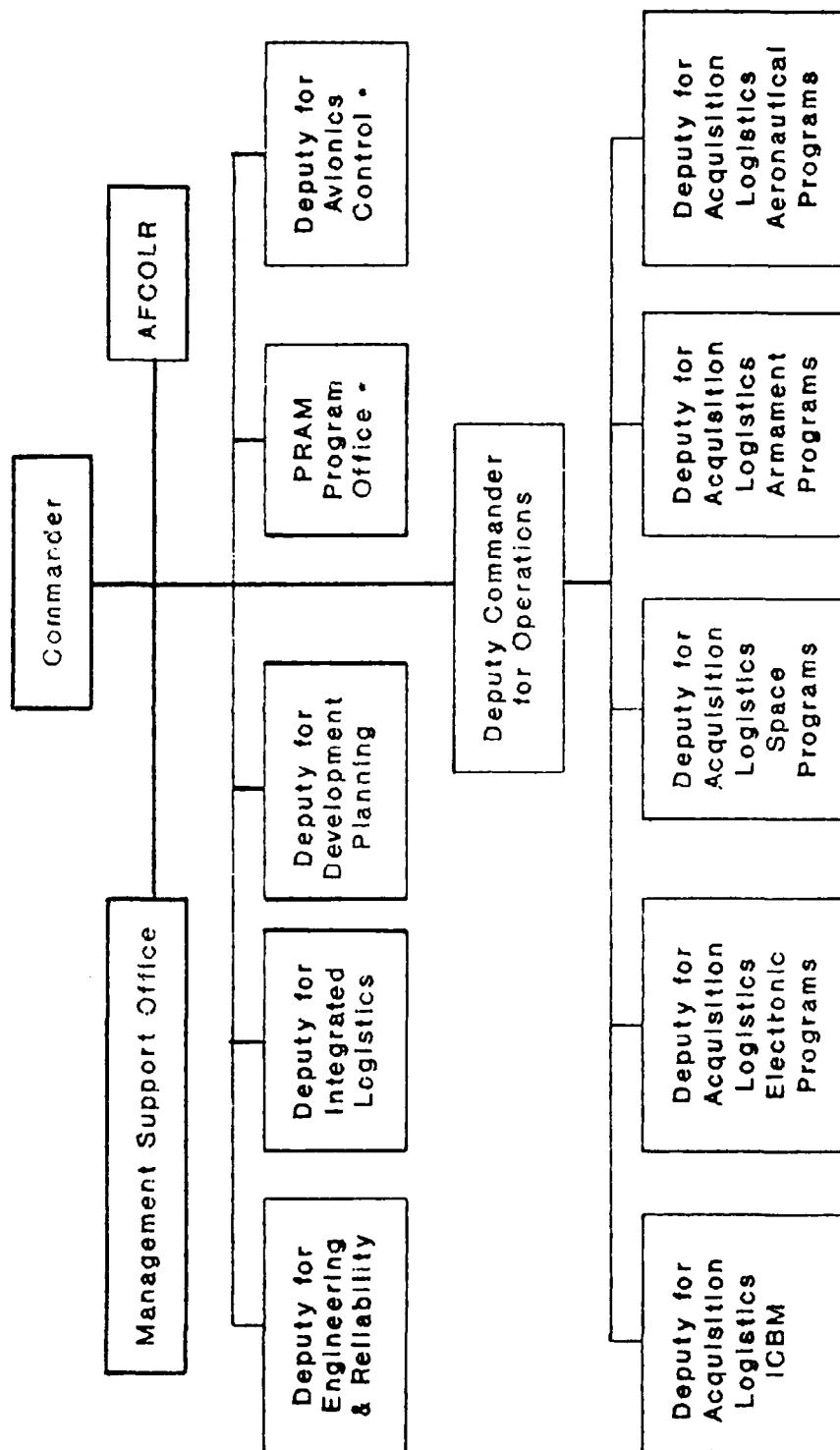
The TR-1 Program Office had recently been established, and this program, along with the program for the KC-10 system, were examples of AFALD performing the second part of this mission statement.

More changes occurred in 1982. The Commander's position was downgraded from Lieutenant General to Major General, responsibility for the KC-10 and TR-1 programs were transferred to ASD, and a DCS for Acquisition Logistics was established at both AFLC and AFSC [13:1]. This third event was the result of recognition, by both Commanders, of the need for more cooperation on acquisition logistics issues; a recognition which led to the establishment of AFALD as a Separate Operating Agency (SOA) answering to HQ USAF on

administrative matters and both AFLC and AFSC on functional matters [5:1-17]. Because it was no longer a division of AFLC, the organization's name was changed to "Air Force Acquisition Logistics Center" (AFALC) [4:18-22].

While this new name was to last several years, the SOA was destined for a rather short life. In the new spirit of acquisition logistics cooperation, the two Commands had agreed to provide equal manning for the center and to have a dual chain of command arrangement within the center. This dual command arrangement was impossible, however, because it was illegal under Air Force Law [43].

AFALC returned to being a subordinate organization of AFLC on 1 July 1985 [6:15]. A revised AFLCR 23-17, reflecting the new mission and organization structure, was issued on 29 January 1986. As the chart at Figure 6 shows, the new organization structure included another Deputy (Integrated Logistics), the Air Force Coordinating Office for Logistics Research (AFCOLR), and a Deputy Commander for Operations, who commanded the Deputies of the detachments linked to the AFSC Divisions [7:2]. The Deputy for Development Planning was disestablished later in the year, with its functions transferred to the two remaining core staff Deputies: Integrated Logistics and Engineering and Reliability.

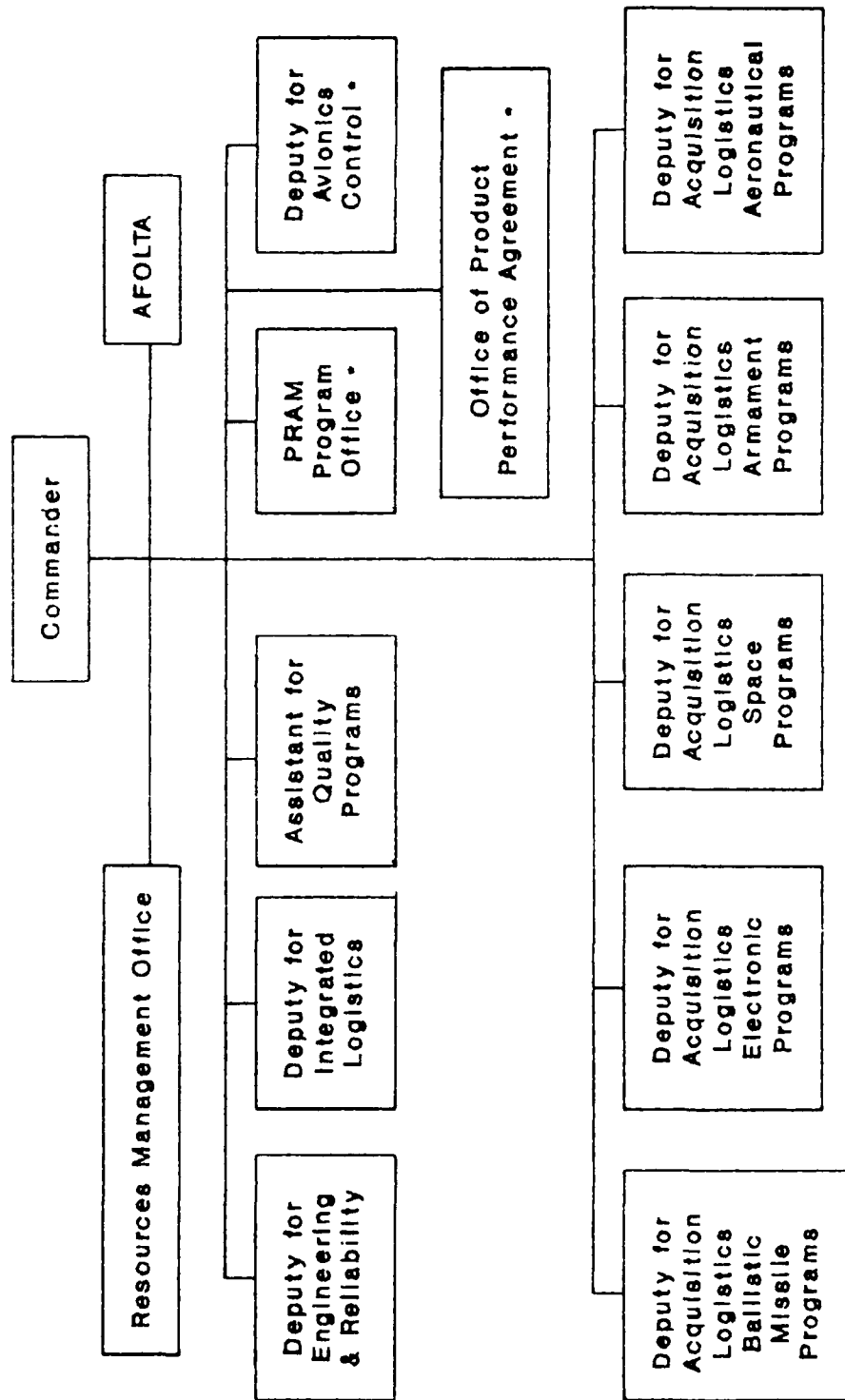


- co-managed by AFALC and ASD

Figure 6. AFALC Organization as of 15 September 1985

As of mid-1989 AFALC is known as the Acquisition Logistics Division, the Deputy Commander for Operations is disestablished and AFCOLR's name has been changed to Air Force Office of Logistics Technology Applications (AFOLTA) and is co-managed by ASD. Also co-managed by AFSC is the Office of Product Performance Agreement, which manages warranties, guarantees, and performance incentives [17:22]. The current organization structure is illustrated in Figure 7, and the most recent (draft) edition of AFLCR 23-17 is included as Appendix B. According to AFLCR 23-17, ALD's current mission statement is as follows:

... assuring that logistics considerations are injected into the acquisition process thus ensuring supportable and supported systems are deployed to the using commands. ALD supports MAJCOM acquisition efforts and provides logistics, engineering, and procurement expertise for national defense and research programs. In addition, ALD directs major activities in promulgating technology transfer/transition and logistics research requirements. [17:1]



• co-managed by ALD and AF8C

Figure 7. ALD Organization as of 1 June 1989

RAAF Acquisition Logistics

As with the USAF acquisition logistics process, the best point to begin to describe the Australian approach is with definitions. The Australian Joint Services Glossary includes acquisition as one of the aspects of military operations involved in logistics [18:L-11]. According to this glossary, acquisition is defined as:

The acquiring by contract of supplies or services Acquisition begins at the point when users' needs are perceived and includes the description of requirements to satisfy agency needs, solicitations and selection of sources, award of contracts, contract financing, contract performance, contract administration and those technical and management functions directly related to the process of fulfilling users' needs by contract. [18:A-2]

Acquisition is one of four processes involved in the determination and procurement of future requirements; the other three are assessment, requirements computation, and distribution [18:P-18]. This entire process, known as provisioning, more closely reflects the USAF concept of acquisition. The assessment process determines what items of supply are required in support of a particular force, and forecasts the quantities that will be required [18:A-28]. Requirements computation takes these forecasts and adjusts with regard to existing assets [18:R-14].

RAAF Acquisition Organization

General. The RAAF is headed by the Chief of the Air Staff (CAS) who commands the two functional Headquarters, Air Command and Support Command, and Air Force Office. Within Air Force Office are five functional Divisions: Development, Personnel, Materiel, Engineering, and Supply. Figure 8 shows the organizational relationships in Air Force Office. Materiel Division, shown at Figure 9, has overall control of, and responsibility for, the acquisition process. The Assistant Chief for Materiel (ACMAT-AF) is responsible for "the development of new . . . major equipment from the point of their endorsement within Air Force through . . . to the point of introduction into service" [19:261]. Much of this responsibility is delegated to Support Command's Logistics Branch and Directorates within Materiel Division.

Materiel Division. Once a proposal for major new capital equipment has been endorsed within the Air Force, the Directorate of Materiel Definition (DMATD) is responsible for the management of its direction through to Government decision [19:262]. At that point, the proposal becomes a project and management responsibility is transferred to the Directorate of Project Management and Acquisition (DPMA). DPMA is responsible for the management of projects until the major new capital equipment is introduced into service [19:262].

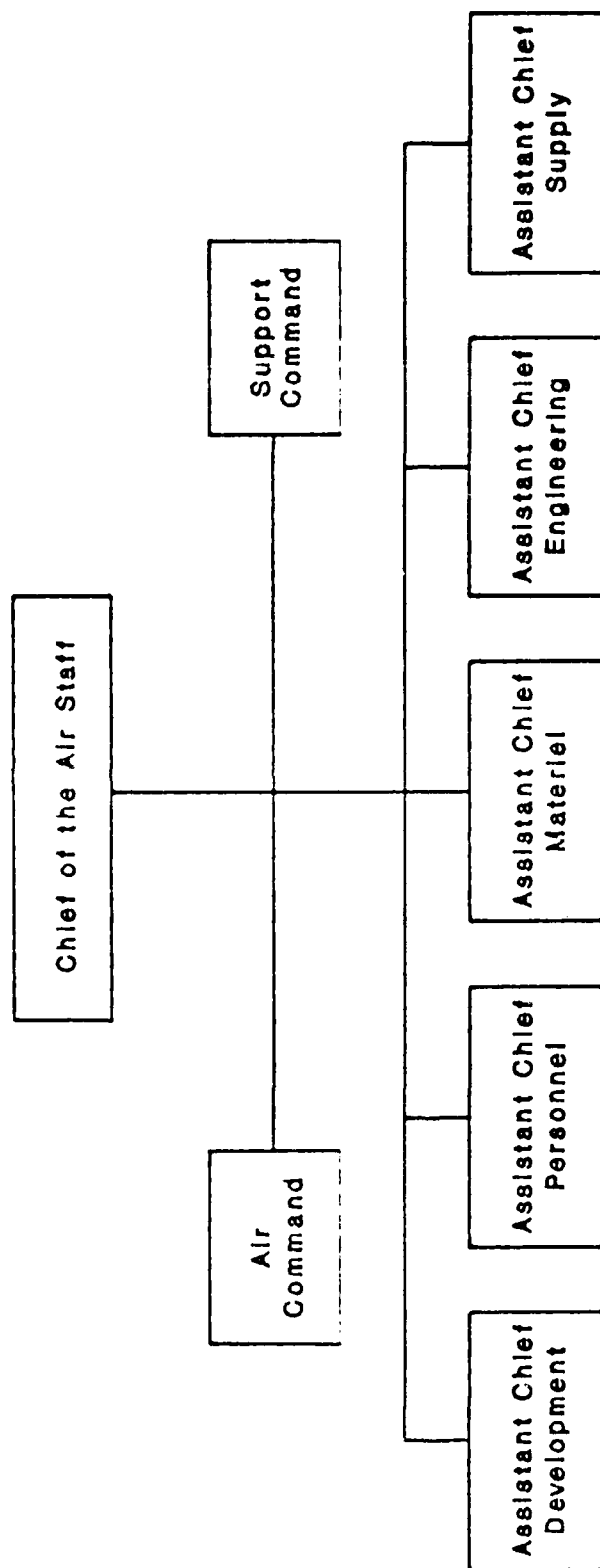


Figure 8. RAAF Command Organization (Abridged)

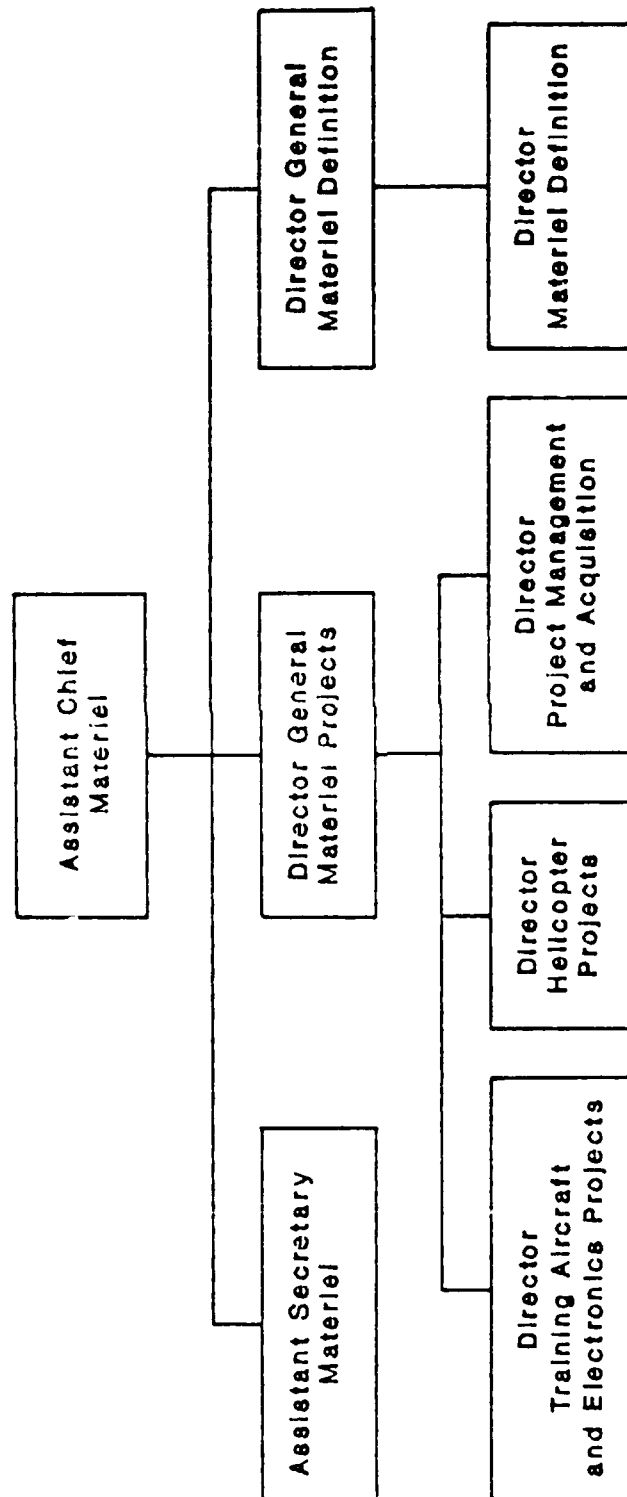


Figure 8. Materiel Division Organization (Abridged)

Support Command. Support Command's Logistics Branch, shown at Figure 10, includes two sub-branches involved in acquisition: Projects, and Logistics Support. The Projects Sub-Branch, also known as Capital Projects Division, is

... responsible for the management and co-ordination .
... of all aspects of capital projects acquisition for
which HQSC has been assigned responsibility by
Department of Defence and Air Force Office. [21:3]

It is divided into project areas for each capital project, and these project areas perform the tasks involved in the assessment, requirements computation, and acquisition processes of provisioning. Thus the Capital Projects Division functions in a similar fashion to the USAF Systems Command Systems Program Offices.

The Logistics Support Sub-Branch is "responsible for providing maintenance and supply support to the force-in-being" [21:14]. It has a similar supporting function to the USAF Logistics Command in that it supports operational systems through spares provisioning.

RAAF ILS Working Party

After several years of informal work had been completed, at both Air Force Office and Support Command, towards the development of a RAAF ILS philosophy, the CAS in early 1986 believed that the RAAF was ready to formulate a general policy on how ILS should be managed and directed that a Materiel Division working party be tasked with

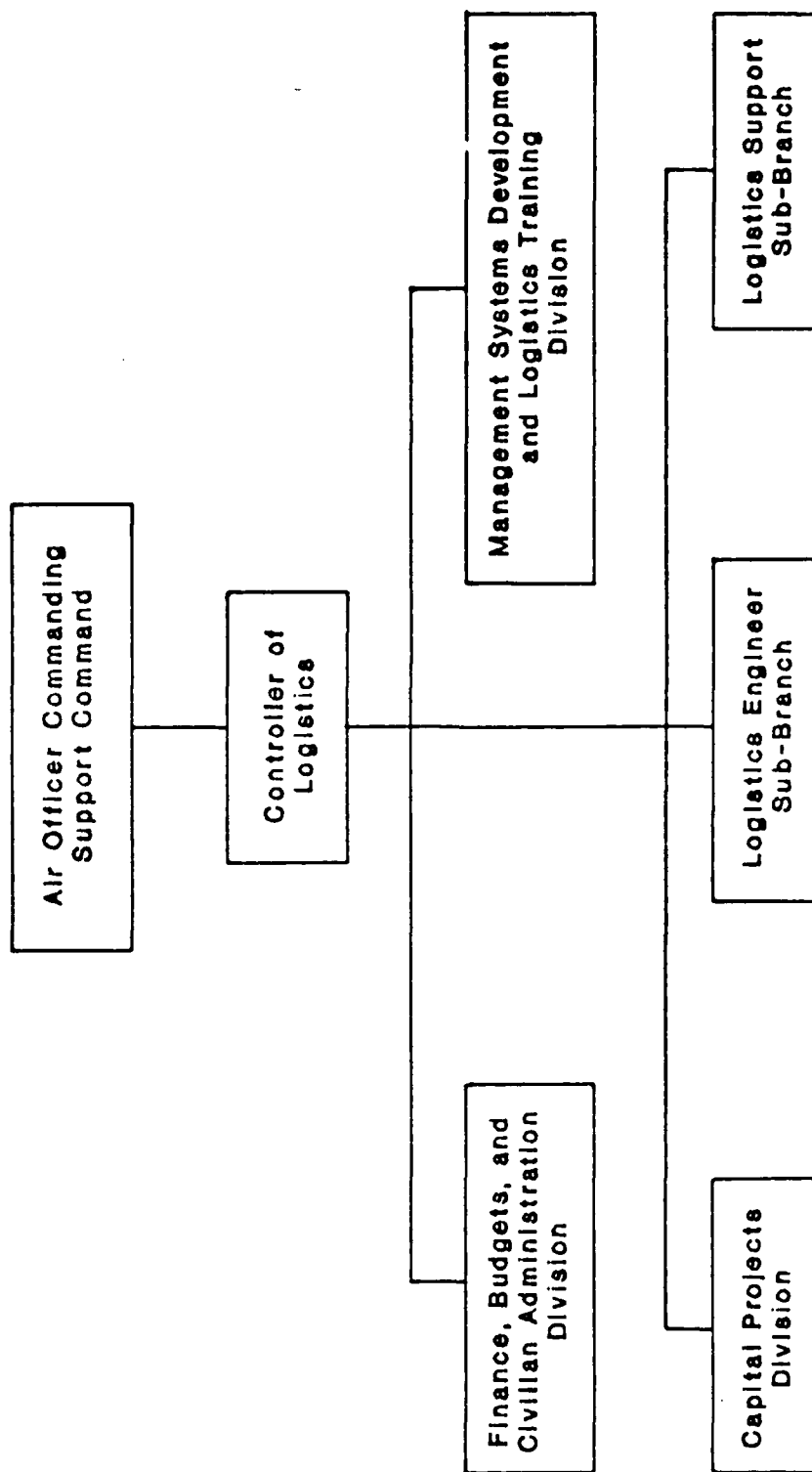


Figure 10. HQSC Logistics Branch Organization

generating an ILS philosophy and preparing the appropriate ILS management policy statements [49].

The ILS working party, comprised of representatives from the Projects Sub-Branch and Materiel, Supply, and Engineering (Technical Services) Divisions, first met on 6 February 1986 to define ILS, its goal, and its elements. The working party selected the USJCS definition as the initial definition for the RAAF and established the goal of ILS management as

... the introduction and sustaining of supportable materiel systems in current and projected operational environments to meet established operational readiness objectives at minimum life cycle cost. [26:2]

A list of eleven areas of activity, or elements, was compiled. Ten of the elements identified are essentially the same as those listed previously in regard to USAF acquisition logistics, and another area of activity, Logistics Funding, was also included. The working party was tasked with defining the elements, identifying the management activities involved in each, and assigning responsibility for those activities [26:2-3].

Initial efforts to define the elements and their activities took place over the ensuing five weeks. The primary sources for these definitions were MILSTD-1388-1A and Royal Australian Navy (RAN) definitions [33:1]. An "Engineering Support" element was included, the element

equivalent to Design Interface was deleted [34:1], and the Index of LSA tasks in MILSTD-1388-1A was considered as the basis for a logical sequence of ILS activities [35:2].

The working party next turned its attention to the question of implementing an ILS management structure. Whether to establish a new acquisition organization structure was debated against the alternative of issuing instructions to implement the ILS doctrine within the existing structure, followed by gradual evolution as decided by individual Functional Divisions [36:1]. It was generally agreed that a group dedicated to ILS policy and implementation, similar to the RAN's Directorate of ILS Management, was required, but agreement on the form and fit of this organization was not reached [36:2-3]. A "Logistics Management" element was added to the existing ILS description [36:3].

On 7 April 1986, the working party's initial report was sent to the CAS. It stated that the

... approach to logistics management can be applied to the RAAF without requiring any initial organizational changes or major re-allocation of responsibilities. However, it will highlight any existing organizational deficiencies and suggest possible changes to correct or alleviate those deficiencies. [31:4]

The report also recommended the creation of a Directorate of ILS Management within Materiel Division to "guide project managers and sponsors in the application of ILS and to

foster its further development in the RAAF" [31:7]. The Director, known as DILSM, would be "multi-hatted" in that he or she would be responsible to the Materiel Division Head for duties relating to policy, training, and ILS development, and to other relevant Division Heads, including Capital Projects, for duties involving those Divisions [27].

Although the organizational arrangements had not been finalized, the working party had made considerable progress in describing the ILS concept. In addition to the tasks of defining the scope and activities of the elements, element matrices were also developed [37]. The matrices indicate the stages in a project's life that each activity should be considered or performed. The CAS endorsed the working party's report as the way ahead for ILS management on 20 June 1986 and directed it continue its work, but insisted the DILSM establishment proposal compete for manpower resources in the normal manner [2]. The RAAF's establishment ceiling meant that new positions could be established only if offsets could be identified from within the present organization. A total of three positions were required, and the Materiel Division Head offered one offset and requested one each from the Engineering and Supply Divisions [28]. The other offsets failed to be identified, and the move to establish the new Directorate faltered [40].

The working party next set about reviewing the

matrices, examining alternatives for establishment of the Directorate of ILS Management, and reviewing and drafting ILS policy instructions [38]. DILSM's initial task had been identified as the development of a comprehensive set of ILS procedures to perform the activities in the ILS elements, and the working party sought to have this task completed by an external consultant [55]. This proposal failed because all bids received were for amounts greater than the funds available for the study [39:11].

The last recorded meeting of the ILS working party was on 11 September 1987 [39]. The group had succeeded in defining ILS, its goals, elements and activities, but had fallen short of establishing detailed procedures and areas of responsibility to ensure ILS during acquisition. It identified a need for a Directorate of ILS Management within Materiel Division to establish those procedures and areas of responsibility and coordinate ILS efforts in acquisition, but the Directorate failed to gain official establishment.

The Directorate of ILS Management

As previously stated, the idea of a Directorate of ILS Management resulted from the working party's discussions on the most appropriate organization structure to implement and manage its new ILS concept. Several views were considered, including:

- a. complete redesign of the entire project acquisition organization,
- b. creation of positions within the existing matrix style organization of the Functional Divisions, and
- c. the appointment of ILS Managers in each project, after the RAN fashion. [36:2]

The proposed Directorate of ILS Management was to be based on the RAN example, in so far as role and duties were concerned, but was to be appended to the existing acquisition organization in Materiel Division [27]. The Materiel Division's Head required the Director to advise him on

... logistic support matters relating to projects and to advise Functional Divisions, project sponsors and project directors on integrated logistics support planning for their projects. [32:2]

The Director would be responsible to the Head of the Materiel Division for:

- a. application of functional policies in relation to ILS for specific projects;
- b. co-ordination of in-country training, lectures, and presentations; and
- c. providing advice on the development and maintenance of ILS elements of policy instructions and manuals of procedures. [32:3]

In addition, he would be responsible to the Heads of Materiel, Engineering and Supply Divisions, and to the Air Officer Commanding Support Command, for:

- a. co-ordination and oversight of ILS procedures during the project phase;

b. preparing ILS plans for approval and issue as executive documents; and

c. auditing ILS aspects of project quarterly and special reports. [32:3]

The proposed cell was to include a member from each of the RAAF's General Duties, Engineering and Supply Branches, with at least one of the incumbents having formal logistics training and "the incumbents of the Engineer and Supply positions should have recent experience in logistics and/or project management at (Support Command or Air Force Office)" [32:3]. Although individual members debated whether the Director should be the Engineer Officer or the Supply Officer [54, 46, 24, 47], the Duty Statements drawn up by the working party concluded that the Director would preferably be from the Supply Branch [32: Annexes A - C]. There was also debate as to where the Directorate should be positioned within Materiel Division [44]. At the time of writing, this question has not yet been finally resolved.

III. Methodology

Particular Approach

The research methodology used was Historical Analysis. The primary sources of data were archival, with corroboration and/or completion of data obtained by informal interview. Care was taken to ensure the distinction between primary and secondary sources of data.

Discussion

Archival, or documentary, research is often held in low esteem by researchers, readers, and academics, apparently because no new data is generated. Data generation is not a necessary prerequisite for valid research, however, and a common fault in many research efforts is insufficient attention to existing archival data. Documentary research may be described as

... putting together in a logical way the evidence derived from documents and records, and from that evidence forming conclusions which either establish facts hitherto unknown or offer sound generalizations... [29:142]

Documentary research includes the examination of internal records and historical writings and studies [29:142]. In fact, "internal records are one of the first sources of information to which an investigator should turn in the search for the facts..." [1:69].

Thus there is a sound methodological basis for the use of archival research in a study such as this, where the data required concerns the respective organizations and is to be found in their archives. Generally, official documents have been taken at "face value" and accepted as containing valid data, except where conflicts of fact or other reasons for questioning the data occurred. In these situations, whenever possible, data corroboration and/or completion was obtained by informal interview with people who were there at the time.

Sources of Data

The following paragraphs detail, for each investigative question, which sources of data were interrogated and the reasoning for using those sources. The questions and sources of data are:

1. When, why and how was ALD formed? The prime source of information on this question was the ALD unit history, because it is written by those who were there at the time. Interviews with such people were used to corroborate and complete the data. Other sources include USAF documents on Organization Policy, and other ALD historical information.

2. What is ALD's role, and what are its functional relationships to other organizations in the acquisition

process? Prime sources here included ALD's organization files and USAF Organizational Policy Instructions. Additional sources included other studies of the USAF Acquisition Process which considered organizational structures and functional relationships, such as the thesis by Powers and Recktenwalt [50].

3. How does ALD perform the management functions of planning, organizing, coordinating, directing, and controlling other organizations in the acquisition process? Prime sources for answering this question included all those referred to above, plus interview data from knowledgeable members of ALD.

4. What are the similarities and differences in the way the USAF and the RAAF manage acquisition logistics? Department of Defense Directives and official documents from organization files were the primary sources of information used to answer this question. Secondary sources included books, pamphlets, academic lecture notes, and other unpublished documents. Regarding the RAAF, the only known source is the RAAF Air Force Office file number AF86/8952. It contains all the definitive RAAF documents on ILS.

5. What other organizations are involved in USAF acquisition and what are their roles and responsibilities regarding acquisition logistics management? Data was

obtained from sources for Questions 1 to 4 as they were addressed.

Data Analysis Plan

Once obtained, the data were analyzed using the following criteria:

1. Are the data relevant? This criterion was tested by comparing data to alternate sources, where they were available, in order to measure the consistency of the data. Additionally, any suspect data from written prime sources were discussed with ALD personnel to ascertain the relevance of that data.

2. Are the data reliable? Reliability testing, in the absence of quantitative data and any known methods, was a matter of personal judgement by the researcher. Given that data are relevant and consistent, it was assumed that they are factual, and therefore reliable.

IV. Discussion

ALD Accomplishments

The task of positively identifying and objectively measuring ALD's successes in reducing life cycle costs is very difficult. Nevertheless, throughout its thirteen year history ALD has made many significant contributions to acquisition logistics and those accomplishments, whilst not easily quantifiable, can be and have been described.

In their 1978 report on the creation and role of AFALD, Powers and Recktenwalt included a chapter summarizing its accomplishments in its first two years [50:Chapter 5]. Many of the accomplishments described at that early stage of the organization's life are still applicable and worthy of note today.

Importance of the DPML. DPMLs were not uncommon before the creation of ALD but its existence has strengthened their importance at the SPOs. Powers and Recktenwalt argued that DPMLs "had little or no authority or influence" [50:65], and that their support from a General level officer (the ALD Commander) in their direct reporting chain was responsible for increasing their influence [50:65-66]. It should also be noted that the publication of various directives, regulations, and pamphlets have legitimized the DPMLS' role

and importance. DODD 5000-39 directs the program manager to establish an ILS program [22:4], AFR 800-8 defines the DPML as "an experienced logistician assigned to a major program office to assist in executing ILS responsibilities throughout the acquisition program" [16:7], and AFLC/AFSCP 800-34 outlines the PM - DPML relationship [3:1-2]. Additionally, and perhaps most importantly, AFLCR 23-17 charges the DPMLs, through the Acquisition Logistics Deputies, with ensuring that "logistics supportability is effectively integrated into acquisition systems, equipment, and programs during all acquisition phases" [17:21].

The important role the DPML plays receives greater recognition from program managers, partly because of the issue of these duty-binding documents, but mainly because of the parallel ALD/AFSC organization structure which promotes better communication and understanding between Commands [43] and the willingness of DPMLs to interact with and integrate the activities of the various people involved in weapon system acquisition [51].

Program Reviews. Early in its life, AFALD established Program Assessment Reviews (PARs), attended by Divisional Commanders of the two Commands, to allow them to jointly resolve acquisition problems referred to them by the SPOs and DPMLs [50:66]. PARs continue to be held whenever necessary. Similarly, Logistics Program Assessment Reviews

for special management of high visibility major acquisition programs are held by HQ USAF and the Assistant Secretary of the Air Force (Acquisition and Logistics) twice each year, prior to the SAFPAR (Secretary of the Air Force PAR) [16:31]. These reviews cover problems the lower level commanders do not have the power to resolve and provide the DPML with greater exposure to higher levels of Air Force management [50:67].

Lessons Learned. Powers and Recktenwalt give several examples of programs which have reduced acquisition costs by utilizing lessons learned previously by personnel on other programs [50:71]. The Directorate of Systems Support maintains a data bank of more than two thousand acquisition lessons learned, and actively encourages all Air Force personnel, as well as private industry, to submit information about any lessons learned. Submissions are validated by supervisors or other knowledgeable sources and stored ready for use. The lessons learned cell also invites the acquisition community to access and use available lessons learned and to provide resultant feedback. The great advantage of this lessons learned capability is the expanded and extended corporate memory it provides, which thereby allows the acquisition community to avoid the costly consequences of "re-inventing the wheel" [45].

Technology Applications. The Air Force Office of Logistics Technology Applications is co-managed by AFLC/ALD and AFSC/ASD. Although it received this name recently it encompasses several directorates which have achieved significant accomplishments over many years. The PRAM (Productivity, Reliability, Availability, Maintainability) Office is one example. PRAM endeavors to "enhance combat capability and reduce the operational and support (O&S) costs of current and future AF weapon systems and equipment without sacrificing effectiveness" [8:175]. Another program with recorded success is the RAMTIP (Reliability and Maintainability Technology Insertion Program), by identifying particularly useful new reliability and maintainability technologies and accelerating their insertion into weapon systems in all phases of the acquisition cycle [8:179]. Both of these Directorates contribute significantly in ALD's efforts to reduce life cycle costs.

Other Accomplishments

Since the early years ALD has continued to develop new systems, tools, and techniques in support of acquisition logistics. Some of the developments which deserve description include the Acquisition Logistics Management Information System (ALMIS), Computer Supported Network

Analysis System (CSNAS), Life Cycle Cost (LCC) Management, and Logistics Support Analysis.

ALMIS. This is an automated data base management system which stores program status data and manipulates it to produce reports. The need for a program data bank and relevant program status reports was recognized in 1979 and ALMIS was first implemented in 1983. A number of changes, involving both software and hardware, have resulted in a powerful system used by many senior Air Force personnel to obtain current general information on program status. Programs covered by ALMIS are updated monthly, and whenever a significant program event occurs, by the DPML staff. General program reports, lists of key personnel, funds status, and ILS status reports are examples of some of the commonly available and frequently used reports ALMIS can produce [52].

CSNAS. Network analysis, a management technique used to plan, track, evaluate, and review the progress of large, complicated projects, is a critical aspect of any ILS effort [3:3-2]. CSNAS is a computer-based network analysis system developed by ALD to build networks representing active acquisition programs and produce useful reports on their progress. Typical users are the PM and DPML. The system package includes examples of typical major acquisition program networks, which users can tailor to their own needs,

and also allows users to build complete networks themselves [51]. CSNAS can produce charts that show the dependencies between tasks and milestone charts for use in program reviews [3:3-2].

Life Cycle Cost Management. ALD's Directorate of Studies and Analysis serves as OPR for LCC. Its responsibilities include the formulation and dissemination of LCC policy, and the development, maintenance, review, evaluation, and approval of LCC models [17:17]. Models developed for LCC estimation are used by program offices (either as provided, or tailored by the user) to establish an LCC management baseline, which is then used as the overall "road map" for the program [3:22-1]. The Directorate also participates in the very important process of LCC model validation [30]. Without validation the costs and benefits calculated by LCC models (and by extension the costs and benefits of a program which uses an unvalidated model for LCC estimation) cannot be accurately and objectively measured.

LSA. The Directorate of LSA is the LSA OPR and is responsible for developing and implementing LSA tools and analytical techniques [17:11]. Its involvement includes, but is not limited to, contractor supervision, program office assistance, LSA training, and LSA policy development. As stated earlier, LSA is the primary tool used by the PM to

design supportability into a system and thus reduce total life cycle costs. By playing such an important role in the LSA process the ALD has carved itself a very important niche in the acquisition logistics community.

Durability. The final accomplishment discussed by Powers and Recktenwalt was referred to by those researchers as "viability". They argued that AFALD had survived through a "creative chaos" stage in order to apply experience learned to achieve its goals [50:74-77]. This author believes that, in 1989, this is certainly true and furthermore, ALD has also accomplished significant durability. By durability it is meant that the conditions necessitating the continued existence of the organization have been present over an extended period of time. Those conditions are the importance of O&S cost (and therefore LCC and supportability) considerations, and the separation of Commands assigned implementing and supporting responsibilities. It is likely that the need for an organization like ALD will remain while these conditions exist.

ALD Role and Function

ALD has been in existence for thirteen years, but the conditions and forces prompting its creation were felt for several decades prior to 1 July 1976. During World War II

the Air Technical Services Command (later called Air Materiel Command) combined the functions of the two acquisition commands in existence at that time, but was later once again split into two (AMC and ARDC). AMC and ARDC later became, respectively, AFLC and AFSC. The two commands have traditionally had different views of their priorities and goals concerning acquisition logistics. AFSC SPOs with representatives from AFLC were set up in order to improve the performance of acquisition logistics, but the burden of increasing O&S costs continued.

The O&S cost trend was the catalyst for the formation of ALD. The only way to stop this phenomenon was to improve weapon system supportability by designing in reliability. In order to influence supportability aspects in this manner, AFLC needed people "inside" AFSC; AFLC needed people with legitimate authority from a support standpoint, but still capable of interfacing with AFSC. ALD was created to fill this need and has evolved into the organization of today which influences supportability and life cycle costs in three important ways, which may be summarized as follows:

1. DPMLs' management of ILS plans,
2. providing support to the acquisition community from the Deputy for Engineering and Reliability and the Deputy for Integrated Logistics, and
3. research and application of technology.

By serving in these ways, the personnel of ALD are able to carry out its primary mission of "assuring that logistics considerations are injected into the acquisition process thus ensuring that supportable and supported systems are deployed to the using commands" [17:1].

RAAF and USAF Approaches to Acquisition Logistics

In terms of the logical flow from problem identification to problem solution in the acquisition life cycle of a system, the RAAF and the USAF take a similar approach; but there are several RAAF-specific characteristics which result in a different approach to acquisition logistics management. Firstly, most major RAAF systems are fully developed and in operation with other Defense Forces before the RAAF considers acquiring them. Thus the conflict of objectives between development and support is not as evident as has frequently been the case with the USAF. Nevertheless, even these "off the shelf" systems are usually modified when being acquired by the RAAF, and the aim of designing for supportability in these projects must be paramount.

Secondly, the RAAF retains more responsibility and involvement in the acquisition effort at the Air Force Headquarters level. The Materiel Division of Air Force Office has overall responsibility for major project

acquisition, although it usually delegates the actual work involved in acquisition to Headquarters Support Command (Capital Projects Division). The work done by CAPPROJD is in the same vein as that of AFSC's SPOs, and the logistic support provided by the Logistics Support Sub-Branch is similar to the operational support provided by AFLC but, unlike the USAF, these two functions come under the umbrella of the same functional Command.

Finally, the RAAF has two PMRTs. The first occurs within Materiel Division, from DMATD to DPMA, when the Government decides to commit to the new system. This point coincides approximately with Milestone III in the USAF acquisition cycle. Responsibility is transferred once again, from DPMA to Support Command's Logistics Support Sub-Branch, at some point after introduction into service (Deployment) of the new system (depending on when DPMA's financial resources for the system project are fully expended).

ILS. Since the RAAF's approach to the acquisition cycle and acquisition logistics management is so similar to that of the USAF, one might wonder about the similarity of approach to ILS. The proposed official RAAF definition of ILS, on the first page of Appendix A, in fact, derived from the definition in DODD 5000-39. Appendix A goes on to list

and describe the elements of ILS, and outline general responsibilities for ILS management.

Organizing for Acquisition

In the scientific field of Organizational Behavior there is an abundance of research and literature regarding the nature of organizations. One of the generally accepted principles is that organizations are, by nature, dynamic; they are forced to change because of physical and temporal changes in the environment in which they exist. Schein calls this reactive process "adaptive coping" [56:233]. He asserts that "successful coping requires integration of and commitment to the multiple goals of the organization, from which comes the willingness to change when necessary" [56:249], and also argues that

... one of the most difficult aspects of the design of organizations is how to keep the right people communicating about the right tasks at the right time and with the right problem-solving and collaborative attitudes. [56:251]

For the USAF in the 1970s, the pressure of increasing O&S costs was the catalyst which made this happen and resulted in the ALD. For the RAAF in the 1980s, inadequate acquisition policy and a lack of acquisition organizational standardization resulted in the ILS Working Party: the right people communicating about the right tasks at the right time. The organization design, however, did not change.

Despite their differences, the dynamic nature of both acquisition organizations is still evident. In the USAF, one of the results of the Stevens Amendment may be the combining of AFLC and AFSC into a single Command [51]. In Australia, the Minister for Defence, Mr Kim Beazley, MP, announced plans for reorganization in the Defence Department, to be completed by February 1991 [20:1]. Regarding logistics (including acquisition), the news release stated that

. . . some of the Service Office functions will be devolved away from Canberra but policy direction will be centralized under a single officer . . . the latter arrangement, by bringing higher level management of both acquisition and logistics together, will give even greater emphasis to the importance of life cycle costing. [20:2-3]

One of the intentions of this reorganization is to combine the Supply, Engineering, and Materiel Divisions of Air Force Office into a single Acquisition/Logistics Division, but the final organization of that Division is to be determined by the CAS [20].

V. Findings, Conclusions and Recommendations

This research was initiated in an attempt to identify ALD's roles and responsibilities, and compare USAF and RAAF approaches to acquisition logistics. The principal findings of this research are discussed in the following paragraphs.

Findings

ALD was formed on 1 July 1986 "with the constructive advocacy for controlling life cycle costs through assistance to AFSC program managers . . . " [42:1] until PMRT. Decades of change in the acquisition organization structure had resulted in the separation of implementing and supporting Command functions, and the pressure of increasing O&S costs in the 1960s and 1970s demanded input of AFLC considerations in the early phases of a program in an effort to control life cycle costs.

As a functional division of AFLC, ALD is the primary instrument for that input. ALD ensures the early consideration of logistics supportability issues in three general ways:

1. appointing DPMLs to manage ILS plans,
2. providing ILS support to the acquisition community, and
3. research and application of technology.

The DPMLs' role is characterized by the legitimacy provided by the ALD organization and Air Force Regulations, and by integration of the activities and functions of others involved in acquisition, to field supportable weapon systems while controlling life cycle costs. The efforts of the DPMLs are complemented and supported by other ALD activities in providing lessons learned, management information systems, network analysis support, life cycle cost management, logistics support analysis, acquisition logistics training and education, technology application, PRAM program support, and many other forms of acquisition logistics support.

In terms of the acquisition life cycle, and ILS approach to controlling life cycle costs, the RAAF approach to acquisition logistics management is, in general, very similar to that encountered in the USAF. There are, however, several significant differences.

One significant difference is the greater responsibility for project acquisition management retained at Air Force Headquarters level in the RAAF. As a result, acquisition logistics personnel at Headquarters Support Command are sometimes uncertain about their roles and responsibilities in project acquisition.

Also absent are many of the supporting activities provided by the USAF's Acquisition Logistics Division.

Examples include lessons learned, ALMIS, CSNAS, LCC tools, LSA physical guidelines, logistics technology applications, and product performance agreements. The lack of these acquisition logistics supporting activities, and definitive, authoritative documents such as AFLC/AFSC Pamphlet 800-34, may be seen as effects resulting directly from the RAAF's present acquisition organizational structure. The RAAF expended considerable resources to identify, describe, and adopt an ILS philosophy, but thus far has failed to recognize and act upon all the elements necessary to successfully implement such a philosophy. This is because these elements are related to the nature of the organization, and the RAAF acquisition logistics organization remains effectively unchanged from that of the early 1980s.

Conclusions

Based on the demonstrated success and accomplishments of ALD, recommendations for improving acquisition logistics management in the RAAF are described in the following paragraphs.

Acquisition Logistics Organization. The RAAF should establish an ILS Management organization to implement RAAF ILS policy, prepare and manage project ILS plans, and

provide guidance and support for the control of life cycle costs in acquisition logistics.

ILS Policy. The ILS Management organization, as described above, is an instrument of ILS policy and not a "definer" of ILS policy. That function should remain the responsibility of Air Force Office. However, the ILS Management organization should have an input in any proposed changes to or development of the RAAF ILS policy.

Location. In view of other organizational changes likely to occur in RAAF management (and the decentralization philosophy behind them), and the fact that RAAF implementing and support responsibilities are centered in Support Command, this organization should be established as a separate authority responsible to the Controller of Logistics (CLOG) at Support Command.

Composition and Responsibilities. The composition and responsibilities of the ILS Management organization should be based on a combination of the recommendations of the ILS Working Party [32:Annexes A - C] and knowledge gained from studying the ALD experience. The Working Party recommendation for composition; an Officer from each of the General Duties, Engineering, and Supply Branches, should be the starting point for determining the final composition of this organization. In addition to the duties listed by the Working Party, consideration should be given to adding

responsibilities for aspects of acquisition logistics support such as life cycle cost modeling and management, lessons learned data bank, network analysis support, logistics support analysis, product performance agreements, technology applications, and acquisition logistics management information support.

Manning. The devolving of acquisition logistics management responsibility from Air Force Office to Support Command should produce the manpower available to staff the proposed ILS Management organization.

Recommended Areas for Further Research

Research efforts and their subsequent recommendations frequently uncover the need for more research. In this case, the additional acquisition support responsibilities recommended for consideration above, should be further investigated to determine their current status and relevance in RAAF acquisition logistics.

Appendix A: Proposed RAAF ILS Policy

INTEGRATED LOGISTICS SUPPORT

INTRODUCTION

1. Integrated Logistics Support (ILS) is defined as a unified and iterative approach to the management and technical activities necessary to:

- a. cause support considerations to influence requirements and design;
- b. define support requirements that are optimally related to the design and to each other.
- c. acquire the required support; and
- d. provide the required support during the Operational phase at minimum cost.

2. Thus, ILS is the composite of all the support considerations necessary to assure the effective and economic support of a system for its life cycle. It is an integral part of all other aspects of system acquisition and operations.

THE ILS APPROACH

3. The broad goals of ILS are:

- a. to develop the optimal logistics support strategy for materiel systems during the project definition phase to accord with the operational concept/requirements;
- b. to convert the logistics strategy into an ILS Plan for Implementation during the project acquisition and in-Service phases; and
- c. to manage the ILS activities required by the plan throughout the materiel system during

the project definition phase to accord with the operational concept/requirements.

4. The benefits which accrue from the application of ILS are difficult to quantify. However, the following benefits have been identified:

- a. logistics support aspects of new materiel systems are addressed in a planned and formalized manner and at the appropriate times;
- b. all ILS activities are effectively managed and integrated with adequate higher management visibility of plans, progress, status and costs;
- c. duplicated or nugatory activities are minimized or eliminated;
- d. more effective use and distribution of resources is possible;
- e. cost effectivity is a key factor in all logistics support considerations and decisions;
- f. organizational changes are clearly identified to facilitate more effective achievement of ILS goals; and
- g. development of standard procedures, guidelines, models and interfaces that will simplify the management, planning, processing and visibility of ILS and reduce resource requirements.

5. The acceptance of ILS imposes a disciplined approach to logistics management and a formal basis for planning and progressing the many ILS activities identified. The elements of ILS are as follows:

- a. Integrated Logistics Management, including:
 - (1) Logistics Support Funding, and
 - (2) Logistics Support Management Information Systems;
- b. Engineering Support;

- c. Maintenance Support;
- d. Technical Data;
- e. Supply Support;
- f. Packaging, Handling, Storage and Transport (PHST);
- g. Support Equipment;
- h. Manpower and Personnel;
- i. Training and Training Support; and
- j. Facilities.

Annex A provides definitions for each of the ILS elements, together with a statement of the scope of each element. Many of the responsibilities for the various elements will be shared across functional boundaries.

6. Acceptance of the ILS framework as a basis for identifying ILS activities and timings imposes at the very least a disciplined approach by all involved authorities. It will help ensure that all ILS aspects are addressed and resulting activities are managed in an integrated manner.

ILS METHODOLOGIES

7. Each materiel system will demand its own special or unique requirements and methodology. Consequently, it is desirable to develop flexible methodology models for ILS activity progression. It is possible to identify three different ILS environments as follows:

- a. projects involving full design, development and testing prior to production;
- b. projects involving major modification to existing in-Service systems; and
- c. projects involving acquisition of available 'off-the-shelf' materiel.

In the case of the first environment, ILS considerations will have considerable influence during the design, development and test phases in terms of reliability,

maintainability and supportability. The RAAF would probably employ the Logistics Support Analysis (LSA) methodology in accordance with US MILSTD 1388 in this type of environment. For 'off-the-shelf' materiel an entirely different methodology would be used.

8. ILS methodologies remain the responsibility of the functional authorities, but with a control and review mechanism in place to ensure that development of methodologies is initiated and progressed in a reasonable timeframe and in accordance with ILS goals.

ILS RESPONSIBILITIES

9. AOCSC is the Logistics Manager for in-Service equipment. Responsibilities for co-ordination of ILS activities during the project phase lies with the CAFM project manager. However, project managers are to seek input from relevant functional authorities to develop ILS strategies and plans, and issue executive documents that will initiate and progress ILS activities to a set timescale and within identified constraints. ILS activities must meet agreed logistics support requirements in an integrated manner and allow for transition of ILS responsibility to HQSC at appropriate milestones.

10. Within CAFM, DGMATD-AF or DGMATP-AF, as appropriate will be responsible for ILS management. During the definition phase, primary responsibility will rest with DGMATD-AF. During this phase, an ILS concept is to be prepared for all Year One and year Two projects. The format for the ILS strategy is at Annex B. The ILS Concept forms the basis for the development of the ILS Plan. The ILS Plan (ILSP) is prepared by DGMATP-AF as an integral part of the Project Management Directive (PMD). The format of the PMD is at Part 2, Chapter 4.

ILS ACTIVITIES

11. In preparing ILS Concepts and Plans, the project manager is to consider fully the ILS elements at Annex A. Each of these elements attract associated activities to be undertaken at specific times within the materiel system life cycle. In order to ensure that all relevant aspects are addressed, the activities at Annex C have been identified.

12. Annex C consists of a matrix showing the activities applicable to each ILS element and indicating the timeframe for consideration/performance of each activity. Not all activities will be applicable to every project; however, the applicability of each activity should be considered. The timeframes are indicative only and arrows indicate where an activity progressed over a number of stages in the life of the project.

MINOR PROJECTS

13. For minor projects, responsibilities for ILS management rests with the project manager or nominated ILS Manager (ILSM). The ILSM is responsible to the project manager for all integrated logistics support aspects of the project and for incorporation of an ILS Plan in the Air Force Project Directive (AFPD). The ILS Plan is an integral part of the AFPD format as specified in Part 3, Chapter 3.

Annex A: Elements of ILS

ELEMENTS OF ILS

1. Integrated Logistics Management
2. Engineering Support
3. Maintenance Support
4. Technical Data
5. Supply Support
6. Packaging, Handling, Storage and Transport (PHST)
7. Support Equipment
8. Manpower and Personnel
9. Training and Training Support
10. Facilities

INTEGRATED LOGISTICS MANAGEMENT

1. Integrated Logistics Management is the administrative process of planning, directing, controlling, co-ordinating and monitoring ILS elements and activities in a composite manner to provide logistics support for a materiel system throughout its life cycle at minimum overall cost commensurate with meeting the operational requirement.

Scope

2. The Management element of ILS is to address:
- a. developing the most cost effective integrated logistics management concept commensurate with RAAF requirements, goals and constraints;
 - b. developing the ILS Plans in conjunction with the functional authorities for each ILS element;
 - c. obtaining approval for and distributing the ILS Plan for implementation;
 - d. monitoring status and progress of the ILS Plans requirements and initiating corrective measures as necessary;
 - e. co-ordinating ILS financial requirements, estimates, approvals, and expenditures and maintaining associated financial records; and
 - f. transferring and transitioning management responsibilities for part or all ILS elements to nominated authorities on achievement of transition milestones.
3. Integrated Logistics Management also includes Logistics Support Funding and Logistics Support Management Information Systems.

Logistics Support Funding

4. Logistics Support Funding is the process which identifies records, classifies, programs, summarises and analyses, in monetary terms, estimates and expenditure for

logistic elements during the life cycle of a materiel system to provide financial information to interested parties.

Scope

5. Logistics Support Funding includes:
- a. determination of applicable cost estimates for project planning and financial programming purposes;
 - b. review and revision of cost estimated for currency and accuracy during project planning;
 - c. obtaining financial approvals;
 - d. maintenance of financial records; and
 - e. monitoring of financial progress.

Logistics Support Management Information Systems

6. The element of Logistics Support Management Information System is the identification, acquisition and management of the necessary information support to the operational, engineering, maintenance, supply, training and administrative requirements of a materiel system. The element also includes the management of procedures, and equipment necessary to train personnel and control the development and implementation of information updates throughout the system life cycle.

Scope

7. The scope of the logistics support management information systems element includes:
- a. determining the range and depth of information required to support the acquisition and follow on support of the materiel system;
 - b. determining the availability and source of the required information;

- c. determining the most cost effective method of storage, maintenance and recovery of information;
- d. specifying and evaluating information requirements in the contracting process;
- e. determining and specifying the medium in which information is to be supplied;
- f. developing distribution listings for dissemination of information;
- g. developing process for updating of information throughout the life of the materiel system;
- h. integrating the logistic support management information system into the existing infrastructure; and
- i. arranging and negotiating the necessary agreements to ensure availability of updated information throughout the life of the materiel system.

ENGINEERING SUPPORT

1. Engineering support is the process necessary to sustain the design of a materiel system throughout its life cycle at minimum cost commensurate with satisfying operational requirements. The process can be extended into the evolution of materiel from design criteria, using established engineering standards.

Scope

2. The scope of engineering support activities is as follows:

- a. developing objectives, concepts and specifications in the materiel definition process and conducting preliminary cost analyses;
- b. developing design requirements for maintainability and reliability;
- c. authorization of the design control procedures to be employed in the design and development of equipment;
- d. developing configuration management plans and procedures to be used in equipment design and development and in the in-service phase;
- e. evaluation of the technical features of equipment/systems and support procedures for compliance with RAAF requirements;
- f. reviewing equipment performance, both through routine performance reporting and through defect reports, to identify areas where improvement is desired;
- g. modification of technical equipment to meet operational and reliability/maintainability requirements;
- h. promulgating engineering standards germane to inspection, repair, rectification and rework of technical equipment;

- i. reviewing technology requirements and defining trade standards and training requirements to satisfy technology demand;
- j. bidding for resources required to implement engineering support requirements; and
- k. establishing DSTO support, through AFRRs etc, to support the technology in a Research and Development environment.

MAINTENANCE SUPPORT

1. Maintenance Support is the process necessary to evolve, establish and integrate into the existing infrastructure, a system capable of maintaining a materiel system throughout its life cycle at minimum overall cost commensurate with meeting the operational requirements.

Scope

2. The maintenance support activities during the materiel acquisition process include:

- a. examining mission area needs and alternatives for a pre-concept phase development, including analysis, assessment and verification tasks;
- b. a concept exploration phase to develop the optimum maintenance concept to satisfy the operational requirements and other project goals;
- c. establishing maintenance targets for inclusion in the design or selection process;
- d. developing maintenance policies;
- e. developing maintenance tasks using Maintenance Engineering Analysis (MEA) to determine scheduled maintenance requirements;
- f. developing Technical Maintenance Plans (TMPs);
- g. developing a training programme to ensure availability of skilled personnel to implement the maintenance support activities;
- h. evaluation of maintenance support aspects of tenderers responses;
- i. progressive monitoring of systems/equipment performance in the intended operational environment; and
- j. conducting requirements determination and computations.

TECHNICAL DATA

1. Technical Data is all forms of records, information, specifications, drawings, handbooks, indexes, lists etc of a technical nature. Also included are operating and maintenance instructions, overhaul and calibration procedures and data on all associated test, support, training and handling equipments. Computer programmes and related software are not technical data, although documentation of the programmes and related software are. Financial and contract administration data are excluded.

Scope

2. The scope of technical data activities is as follows:

- a. defining the technical data requirements necessary to satisfy operational, engineering, maintenance and supply activities;
- b. specifying and acquiring the equipment necessary to support the technical data media type;
- c. controlling the receipt and distribution of technical data to Air Force organizational elements;
- d. performing validation and verification as required by technical data plans;
- e. promulgating operating and maintenance elements of the technical data as Australian Air publications;
- f. arranging for the maintenance of technical data;
- g. producing specific service documents eg aircraft operating and maintenance release form FF500;
- h. arranging duplicate storage facilities for data requiring such policy application; and

- i. producing RAAF-prepared publications necessary for the support and operation of the materiel.

SUPPLY SUPPORT

1. Supply Support is the process necessary to evolve, establish and integrate into the existing infrastructure, a system capable of supporting a materiel system throughout its life cycle at minimum overall cost commensurate with meeting the operational and maintenance requirements.

Scope

2. The scope of supply support activities during the materiel acquisition process include:

- a. developing the supply support concept in conjunction with the operational and maintenance concept;
- b. identifying candidate items of supply;
- c. specifying and evaluating supply support deliverables in the contracting process;
- d. developing allowance documentation such as Unit Entitlements including Initial Outfitting Requirements;
- e. codifying and cataloguing items to be bought into the inventory;
- f. evaluating alternative supply methodologies and costing such alternatives;
- g. where necessary developing and providing interim supply support systems;
- h. providing items of supply (eg non-repairable parts, repairable parts, tools, raw materials, test equipment, ground support equipment, provisions, clothing, safety equipment, and general stores);
- i. contracting for alternative supply systems;
- j. integrating the developed supply support system into the existing infrastructure;
- k. arranging and negotiating the necessary agreements to ensure follow on support; and

1. consideration, and where applicable
initiation, of equipment disposal.

PACKAGING, HANDLING, STORAGE AND TRANSPORT (PHST)

1. The PHST element covers all processes, procedures, design considerations, methods, materiel and facilities necessary to ensure that all systems, equipment and support items are preserved and packaged to provide protection against environmental and physical damage through acquisition, storage, distribution and issue for use at a minimum life cycle cost commensurate with meeting operational, maintenance and safety requirements.

Scope

2. The scope of PHST requirements in the materiel acquisition process include:

- a. determining the PHST requirements necessary to support the operations, maintenance and supply requirements, taking particular account of items having shelf life limitations;
- b. evaluating alternative PHST concepts with a view to minimizing life cycle costs commensurate with meeting operational, maintenance and supply requirements;
- c. ensuring PHST proposals meet regulatory requirements for munitions, explosives, fuel, classified items etc);
- d. specifying PHST requirements and examining subsequent tenderer responses before contract negotiation;
- e. reviewing PHST with a view to achieving best utilization of existing storage facilities and transport resources;
- f. ensuring various aspects of PHST complement each other; and
- g. Special occupational safety and health measures to be observed when storing, handling and dispensing toxic materials.

SUPPORT EQUIPMENT

1. Support Equipment includes all equipment (mobile or fixed) required to support the operation and maintenance of a materiel system. This includes associated multi-use end items, ground handling and maintenance equipment, tools, metrology and calibration equipment, communications resources, test equipment and automated test equipment, with diagnostic software for both on and off equipment maintenance. It includes the determination of logistics support for the support and test equipment itself.

Scope

2. The support equipment activities in the materiel acquisition process include:

- a. ensuring the acquisition policy for support equipment is co-ordinated with the maintenance support activities;
- b. rationalizing general purpose support equipment within the environment of the materiel system and across the Service;
- c. determining the appropriate distribution of support equipment between differing levels of maintenance;
- d. establishing calibration standards and facilities;
- e. preparation of Unit Entitlements for Support Equipments; and
- f. ensuring support equipment is procured together with, if not before, the prime equipments and with the necessary technical documentation.

MANPOWER AND PERSONNEL

1. The 'Manpower and Personnel' element is the identification, rationalization and acquisition of the service and civilian personnel with the rank and skills necessary to acquire, install, test, operate and support a materiel system throughout its life cycle. This may include materiel being replaced. Specifically two groups are referred to, namely:

- a. Manpower, being the staff required to manage and execute the acquisition and integration of the materiel system into the infrastructure; including dedicated project staff and man-effort required from other authorities; and
- b. Personnel, being the people required to operate and sustain the materiel system in service throughout its life cycle.

Scope

2. The Manpower and Personnel element of ILS is to address:

- a. estimating manpower and personnel requirements for acquisition and in-service support of materiel systems for inclusion in requirements and planning documents, including offsets from phase-out of existing materiel systems;
- b. determining, with justification, dedicated manpower requirements for the acquisition phase in terms of numbers, timings, qualifications, training and location;
- c. developing the personnel concepts commensurate with the operational, maintenance, engineering and supply concepts;
- d. determining levels of participation by functional authorities and arranging the necessary man-effort;
- e. determining, with justification, personnel requirements for the in-service phase in

terms of numbers, timings, qualifications, training and location;

- f. initiating establishment action to cover manpower and personnel requirements;
- g. initiating posting action in co-ordination with the manpower and personnel plans; and
- h. periodic review of manpower and personnel requirements in conjunction with ILS Program reviews and instigate actions arising.

TRAINING AND TRAINING SUPPORT

1. Training is the system of processes, procedures, methods and resources used to teach or practice personnel in the operation and support of the materiel system introduced by the project. Training devices are any item developed or procured with the primary intent it assists in training.

Scope

2. The Training and Training Support element of ILS is to address:

- a. estimating training and training support requirements including costings for inclusion in requirements and planning documents;
- b. determining methodology for providing training, both initial and on-going, such as contractor training, in-house training or OJT;
- c. identifying training aids requirements;
- d. determining training facility requirements for inclusion as necessary in facilities design briefs;
- e. drafting of training facility requirements for inclusion as necessary in contracts or statement of works;
- f. co-ordinating training requirements with other ILS elements and schedules; and
- g. identifying, planning for and conducting training of acquisition manpower and in-service personnel including:
 - (1) supply support personnel,
 - (2) engineering support personnel,
 - (3) maintenance support personnel for the three levels of maintenance, and
 - (4) project manpower as necessary to facilitate fulfillment of their duties.

FACILITIES

1. Facilities are permanent and semi-permanent capital works, and associated machinery and plant, necessary to support and sustain a materiel system at minimum cost throughout its life cycle.

Scope

2. The facilities activities in the materiel acquisition process include:

- a. determining the facilities requirements of the proposed operational, maintenance, supply and training policies;
- b. evaluating alternative methods of satisfying the facilities requirement;
- c. specifying the functional requirements for facilities;
- d. providing information for the Parliamentary Works Committee; and
- e. providing facilities requirements in accordance with agreed project schedules.

3. This activity is performed by DGAW/WPROG staff annually to prepare FYDPs for Facilities Appropriations. The Project Manager is to ensure latest estimates and time frames are advised to WPROG.

4. Major new works over \$1.000m, or Medium New Works \$0.030m to \$1.000m, require AFWRs. Minor new works are requisitioned on DHC direct by DGAW, Command or Unit.

5. The progression of facilities requirements is the responsibility of DGAW-AF in conjunction with Defense Facilities Division, Commands, DHC and DOLGAS as applicable. A close working relationship must be maintained between the Project Manager (ILS) and DGAW staff. The Project Manager (ILS) is to ensure facility scheduling aspects are properly integrated into project schedules and Logistics Support Plans.

Appendix B: Draft AFLCR 23-17

Mission and Organization - Field
Headquarters Acquisition Logistics Division (ALD)

This regulation contains the mission, functions, and organization of the HQ ALD. It applies to all persons who require information about the organization and mission of ALD.

1. Mission of ALD:

a. General Information. The ALD is charged with assuring that logistics considerations are injected into the acquisition process thus ensuring supportable and supported systems are deployed to the using commands. ALD supports MAJCOM acquisition efforts and provides logistics, engineering, and procurement expertise for national defense and research programs. In addition, ALD directs major activities in promulgating technology transfer/transition and logistics research requirements.

b. Responsibilities Assigned to ALD:

(1) Developing and applying acquisition concepts, procedures, techniques, and operating policies in support of MAJCOM development and acquisition activities on USAI, interservice, and international programs.

(2) Introducing techniques and technologies for improving system availability, supportability, and life cycle costs.

(3) Assessing validity of stated requirements to assure cost effective and operationally supportable solutions.

(4) Developing, expanding, and improving all types of training programs to improve the technical qualifications of logisticians.

(5) Applying operational logistics experience in the engineering and technical fields to MAJCOM development and acquisition activities.

(6) Developing and maintaining an Air Force corporate memory for lessons learned and providing feedback to development agencies on known design deficiencies.

(7) Identifying operational and support problems and needs for which there are no current practical solutions and providing that information to the AFSC laboratories.

(8) Assuring the adequacy of test plans for achieving optimum logistics support of new systems.

(9) Translating general operational and support concepts into specific acquisition logistics support plans.

(10) Providing direct assistance to program offices to improve logistics supportability of systems and equipment from the conceptual through the deployment phases of the acquisition process.

(11) Advising AFLC, AFSC, AFCC, using commands, and the Air Staff of logistics status of acquisition programs.

(12) Assuring adequacy of budgeting for logistics requirements on all acquisition programs and planning for potential Security Assistance Program requirements.

(13) Initiating and participating in joint AFLC/AFSC activities to gain maximum effectiveness of business strategy planning in the acquisition process.

(14) Participating in early procurement planning and proposal preparation to ensure the adequacy of logistics provisions contained therein.

(15) Exploiting standardization, commonality and off-the shelf procurement within assigned acquisition programs.

(16) Facilitating and expediting Program management Responsibility Transfer (PMRT).

(17) Managing Air Force actions to reduce current and potential operations and support costs.

(18) Ensuring improved reliability and maintainability of systems, subsystems, and equipment.

(19) Ensuring improved productivity, effectiveness, and efficiency of maintenance and support organizations.

(20) Determining the adaptability of common equipment to multiple requirements and applications.

(21) Evaluating lower life cycle alternatives in system configuration.

(22) Ensuring improved specifications, standards, and testing techniques.

(23) Managing the full-scale development of mature, potential high payoff, laboratory R&M Technologies for timely insertion into developing or fielded systems and equipment.

(24) Enhancing Air Force awareness of combat support research and development activities; coordinating Air Force combat support requirements with technology base capabilities; and administering combat support research and development activities.

(25) Managing Air Force logistics participation in the independent research and development program.

(26) Stimulating Air Force transition/transfusion of technologies and information (industry and Air Force wide) by accomplishing the Air Force Logistics Technology Transfusion Program.

(27) Promoting achievement of Air Force R&M 2000 goals throughout the Air Force and defense industry.

(28) Establishing or participating in the establishment of AFLC policy, procedures, and techniques for execution of the elements of Integrated Logistics Support and associated discipline and specialties.

2. Relationships. As a Division of AFLC, the ALD is authorized direct communication with other governmental agencies as necessary to accomplish assigned responsibilities. Communications through command channels are required for matters of policy, resources, or adjustments in assigned responsibilities of the ALD.

3. Organization. The ALD is organized in such a manner that each organizational entity has a consistent and clear relationship to the Commander and to other elements of

the organization. The mission and functions of each ALD activity are contained in attachments to this regulation.

OFFICIAL
USAF

ALFRED G. HANSEN, General,

JAMES E. GIBBONS, Maj. USAF

10 Attachments

AFLCR 23-17 Attachment 1

COMMAND SECTION AND STAFF OFFICES, HQ, AFALC

A1-1. Commander (CC). Commands and operates the AFALC under the authority assigned by the Commander, AFLC>

a. Executive to the Commander (CCE). Assists the Commander in implementing, directing, and coordinating activities of the Commander's Office.

b. Specialized Management Office (CCJ). Provides acquisition logistics management expertise, at the AFALC Commander's direction; establishes and implements logistics support policy and requirements for sensitive, compartmentalized, high priority, HQ USAF directed specialized management programs; provides the Deputy Program Manager for Logistics to the appropriate AFSC System Program Office (SPO); provides logistics support guidance to the SPO and works jointly with the designated Air Logistics Center, Specialized Management Office; performs required Integrated Logistics Support (ILS) tasks; and assures specifically designated programs.

c. Military Personnel Liaison (CCQ). Manages the activities related to discipline and personnel counseling for all assigned military personnel; monitors unit leave program; processes request for subsistence; processes duty status change; participates in promotion and unit recognition programs; processes unfavorable information; participates in court-martial and Article 15 actions; manages the drug and alcohol misuse program; reviews training status; monitors physical fitness and weight control programs; monitors on-the-job training program; and assists in scheduling training; exercises technical control over military personnel activities; processes reports of audits and inspections; maintains military strength adjustment programs; manages military assignment actions; provides military personnel input to mobilization and contingency plans; manages the Officer Evaluation Report and Airman Performance Report Programs; monitors the Advanced Academic Degree and Special Experience Identifier program; manages the military awards and decoration programs, the military promotion program, the PALACE MODE job description audits.

d. Mobilization Assistant to the Commander (CCR). Manages all activities of individual mobilization augmentees assigned/attached to AFALC; directs technical reserve projects that support active force elements; recommends

program and policies for present and future documentation; provides briefings; and manages the recruitment and assignment of ready reserve officers.

e. Chief Scientist Office (CCN). Advises the Commander on the status of technology initiatives within the ALD and serves as the advocate for Scientific and Engineering career fields. Directs the corporate level planning and prioritization of technologies and initiatives for the ALD. Identifies technology baseline, its near-term extensions and assesses new and emerging technologies the ALD should pursue. Oversees the ALD scientific and engineering recruiting programs and manages initiatives supporting the professional growth, productivity enhancement and professional identity of the ALD scientific and engineering workforce.

A1-2. Vice Commander (CV). Assists the Commander in the performing command functions. Commands the organization during the absence of the Commander.

A1-3. Assistant to the Commander (CA). Serves as senior civilian logistician and assists the Commander in performing command functions.

A1-4. Chief of Staff (CS). Manages the staff support and administration of AFALC. Functional responsibilities:

a. Serves as principal staff advisor to the Commander; directs, supervises, and coordinates staff activities; formulates and issues staff operating policies; ensures the staff's compliance with orders and instructions issued by the Commander and Vice Commander; and ensures that all instructions issued are in agreement with the Commander's policies and plans.

b. Assists the Commander in discharging the responsibilities for equal employment opportunity; and serves as Inspector General.

c. Protocol Office (CSP). Performs protocol functions for visits by distinguished military and civilian personnel; manages all ceremonies that require Command Section participation; and advises all center personnel concerning matters of protocol.

A1-5. Foreign Disclosure Policy Office (FDPO). Manages all disclosure of military information activities to foreign countries. Establishes internal procedures; approves release of data/hardware to foreign countries through

foreign military sales, commercial manufacturing licenses, or technical agreements with industry; and serves as liaison for all foreign visitors to the organization.

A1-6. Office of History (HO). Directs and controls the historical activities of AFALC; develops procedures for the conduct of historical activities; compiles prepares, and disseminates organizational and operational annual history; maintains the historical archives; provides historical reference and information service; prepares historical monographs of major programs/projects; and provides brief histories or special studies to the Command Section; and manages the USAF heraldry and emblems program within AFALC.

A1-7. Office of Public Affairs (PA). Advises the Commander and staff of public affairs policies and impact of proposed actions; and develops, staff supervises, and implements public affairs program. Function responsibilities:

a. Develops plans and procedures for public affairs activities; provides responses to all local news media inquiries and coordinates responses going to USAF and DoD concerning inquiries from national news media; provides communications to the workforce through public affairs media, and provides advice and counsel to management on employee communications needs; serves as liaison with: civic organizations, scientific, professional, technical societies, and similar groups desiring community relations support; serves as OPR for the Commander's Call program; and prepares informational material for internal and external dissemination.

b. Provides staff supervision and evaluation of developing and implementing information program; coordinates the review and clearance of informational material or actions proposed for public release; and prepares Command Section written and oral presentations.

RESOURCES MANAGEMENT OFFICE (RO)

A2-1. Mission. Supervises and coordinates administrative services, operations, and manpower and personnel services for AFALC; serves as Deputy Chief of Staff in his absence; and provides administrative services to the Command Section.

A2-2. Functional Responsibilities:

a. Administrative Services Division (ROA):

(1) Provides administrative support to the Command Section under the technical direction of the RO Chief.

(2) Implements and controls the correspondence management, publications management, and forms management programs; develops and controls records management program and automated document storage and retrieval documentation system; provides records management training; and maintains functional publications reference library.

(3) Establishes and maintains system to pick up and dispatch classified and non-classified mail and messages; controls all classified material and international pact documents; and manages the electromail networking system.

(4) Provides for printing and duplicating services.

(5) Provides internal inventory, stockage and distribution of forms and publications; and manages the expendable supply stockroom.

(6) Manages the Privacy Act of 1974.

(7) Approves administrative orders (except P-Series); processes requests for overseas temporary duty and attendance at technical, scientific and professional meetings.

(8) Manages the Disaster Preparedness Program.

b. Management Operations and Training Division (ROJ):

(1) Ensures compliance with policies, systems, and controls of financial, physical plant, and equipment resources.

(2) Develops, monitors, and maintains policies, systems, and procedures for developing and executing each budget including civilian manpower and facilities.

(3) Prepares and conducts negotiations concerning support agreement procedures with external agencies and organizations; performs labor relations functions; and serves as Commander's representative for briefing civilian workforce information to the unions.

(4) Manages nontactical telecommunications operations and mobilization planning; develops policies, programs, and requirements to ensure communications-electronics support for command and control of the mission; reviews, coordinates and supports the annual program budget for telecommunication requirements.

(5) Provides general command safety policy guidance, and coordinates internal facilities and personnel programs; and manages security program to include; physical security, violations, distribution of data, law enforcement, and operational security.

(6) Implements the Inspector General complaint system; provides responses to General Accounting office and Congressional inquiries; consolidates responses for Command Section.

(7) Manages civilian awards programs; establishes goals and monitors compliance with directives concerning preparation and submission; provides staff assistance for functions such as performance standards, staffing, and preparation of civilian performance appraisals.

(8) Monitors the Suggestion Award Program.

(9) Performs building manager functions.

(10) Serves as OPR for all training (civilian and military) to include scheduling of formal and special training courses and given allocations.

(11) Develops and formulates centralized guidance and direction for operation of long-term and short-term training programs.

(12) Manages and develops policies and procedures for execution of training programs (CO-OP, WTOP, Career Intern, Schedule B, etc.).

(13) Supports Equal Employment Opportunity (EEO) programs; and develops the AFALC Affirmative Action Plan in accordance with established guidelines.

c. Resources Control Division (ROR):

(1) Establishes resource management goals and objectives; ensures compliance with policies, systems, and controls of manpower, and provides for comprehensive resource management data flow; analyzes and recommends improved efficient use of resources; and distributes resources; manages military and civilian grade programs; processes and monitors requirements for military and civilian manpower requests and actions.

(2) Coordinated with AFLC on matters relating to resource requirements, allocation, utilization, and disposition; coordinates input to AFLC management analysis activities; analyzes internal programs and operations; and recommends preparation of briefings or studies for presentation to command section.

(3) Provides staff assistance for civilian personnel functions such as classification and reduction-in-force; prepares statistical analysis of promotions, assignments, augmentation, grade point averages, high grades, and retirements.

(4) Provides command section presentations concerning manpower and personnel utilization/activities.

(5) Manages involvement in the USAF Planning, Programming, and Budgeting System (PPBS), the POM, and maintains official AFALC files of planning, programming, requirements and associated reference documents.

(6) Develops and defends Individual Mobilization Augmentee (IMA) wartime manpower requirements. Serves as OPR for wartime mission manpower planning.

(7) Serves as AFALC OPR for all manpower requirements issues; and performs special studies/projects to ensure validity of manpower requirements.

DEPUTY FOR ENGINEERING AND RELIABILITY (ER)

A3-1. Mission. Manages engineering and technical logistics support for emerging technologies and all phases of acquisition programs to influence design and to ensure the fielding of cost effective, reliable, maintainable, and logistically supportable equipment and systems; ensures coordination with the program offices to provide analysis and integrated logistics support for: computer resources support, reliability and maintainability (R & M), survivability, test and evaluation, energy management, manpower, personnel and training, and logistics support analysis. Promotes the transition of technology to new and fielded systems.

A3-2. Functional Responsibilities:

a. Directorate of Computer Resources (ERC):

(1) Provides logistics engineering direction and expertise in the area of Mission Critical Computer Resources (MCCR) acquisition and support planning. Develops and conducts training on acquisition management of MCCR.

(2) Assists in the development of DoD, AF, AFALC policies and procedures as they apply to the acquisition and support planning for MCCR. This includes such initiatives as the Computer Aided Logistics Support (CALS) effort and the Technical Area Program Managers (TAPMs).

(3) Provides direction on the development of Computer Resource Life Cycle Management Plans (CRLCMPs) and in the absence of a System Program Manager (SPM) reviews and coordinates on all CRLCMPs.

(4) Acts as the AFALC focal point for advanced computer technology insertion into the MCCR support planning process. Chairs the AFALC Artificial Intelligence Working Group (AIWG) and acts as the AFALC representative to the AFALC AIWG.

(5) Provides guidance and develops policy on acquisition logistics of computer resources support equipment; Automatic Test Equipment (ATE), Avionics Integration Support Facilities (AISEs), and other MCCR support equipment.

(6) Provides guidance on the preparation and application of computer resources support standards and specifications to acquisition documents.

(7) Evaluates MCCR supportability of selected weapon systems prior to review by the Air Force Weapon Systems Improvement Group (AFWSIG).

(8) Provides guidance on computer resources engineering data acquisition.

(9) Performs studies on software design for support, testability, and management as necessary to ensure efficient acquisition and support.

b. Directorate of Logistics Support Analysis (EHL)

(1) Serves as OPR for Logistics Support Analysis (LSA); and develops and implements LSA tools and analytical techniques.

(2) Reviews and provides LSA planning and management inputs to acquisition planning documentation; and provides Lessons learned (LL) concerning LSA.

(3) Provides technical advice to program/project offices in conducting guidance conference, technical reviews, and audits of contractor's analysis efforts.

(4) Reviews, analyzes, and evaluates proposed automatic data processing models or other techniques used for LSA and contractor's proposed data collection and documentation systems.

(5) Helps analyze and evaluate contractor independent research and development projects; and participates in on site reviews.

(6) Participates in Air Force Weapon Support Improvement Group (AFWSIG) and Logistics Supportability Review (LSR) assessments of LSA.

(7) Conducts surveys to determine LSA training requirement; and develops and implements AF-wide LSA training program.

(8) Performs analysis, and develops strategies, procedures, and management techniques to improve the application of LSA on research and development projects and systems/equipment acquisition programs; and sets up and maintains an LSA experience data base.

(9) Recommends, prepares, and issues guidance and procedures to implement LSA policy for program support.

(10) Serves as representative to join service working groups for development and maintenance of the DoD LSA program, software, and documentation.

(11) Serves as representative to DoD and intracommand work groups, panels, study teams, and other staff groups responsible for standardization efforts for LSA.

(12) Develops and maintains the Air Force requirements for the standard data element dictionary, record layout and element requirements for the Logistics Support Analysis Record (LSAR).

(13) Helps develop the interface between LSAR and AFMC internal data management systems.

(14) Manages the LSA Unified Data Base (UDB).

(15) Provides UDB user training.

c. Directorate of Reliability and Maintainability (ERR):

(1) Develops AFMC policies, guidance, procedures, and techniques for implementing acquisition related R&M concepts directed by higher authority.

(2) Provides upon request of the DPML/ILSM, R&M engineering and technical assistance to the acquisition logistics organization of AFSC program offices and laboratories. The assistance will include, but is not limited to:

(a) Provides R&M engineering analyses, technical reviews, and consultation in the development of weapon system acquisition documents.

(b) Provides R&M technical assistance in source selections.

(c) Provides technical assistance during the monitoring of contract progress by reviewing contractor data, test results, and attending technical meetings, design reviews, and audits.

(d) Defines and identifies data collection requirements to describe the equipment R&M status.

(3) Reviews higher headquarters acquisition directives and policy statements concerning R&M and recommends revisions as needed.

(4) Provides technical analyses of independent research and development (IR&D) efforts.

(5) Provides independent assessments of selected major programs to support the acquisition review process.

(6) Participates in or performs special studies and analyses of performance or logistics support deficiencies attributable to R&M problems.

(7) Develops training material and provides indoctrination training to acquisition logistics personnel.

(8) Reviews acquisition documents and provides assistance in R&M requirements development.

(9) Provides maintenance data and its interpretation to Program Offices, contractors, using commands, ALCs, subcontractors and AFALC personnel.

d. Directorate of Test, Manpower and Training (ERT):

(1) Provides acquisition policy and procedures support to HQ AFALC/MMA for Test and Evaluation (I&E), Manpower and Personnel (M&P), and Training and Training Support (ITS) issues.

(2) Acts as command POC and action office in support of HQ AFALC/MMA for planning, coordinating and managing AFALC resources in support of AFOTEC and MAJCOM conducted Operational I&E programs and Joint Services I&E programs.

(3) Provides direction and operational control of the AFALC I&E cadres located at Edwards and Kirtland Air Force Bases to provide technical support to DPMLs, Test Directors and HQ AFOTEC for logistics I&E issues, test planning, test team support, and supportability assessments and evaluations.

(4) Provides ITS related I&E, M&P, and ITS support to systems acquisition program offices and DPMLs.

(5) Accomplishes logistics assessments on acquisition programs in support of milestone decision as part of the AFWSIG process. ILS elements addressed are: M&P, TTS, and the T&E portion of Design Interface.

(6) Accomplishes special projects including logistics supportability analyses and evaluations on new and fielded systems to identify and quantify logistics support issues.

(7) Develops training material and conducts training for DPMLs and program offices T&E personnel.

DEPUTY FOR INTEGRATED LOGISTICS (LS)

A4-1. Mission: Manages the ILS elements of Maintenance Planning (MP), Supply Support (SS), Packaging, Handling, Storage, and Transportation (PHS&T), Facilities (FA), Technical Data (TD), and Support Equipment (SE). Manages the development and dissemination of ILS policies, procedures, implementation guidance and specialized training courses. Manages the development and implementation of automated management systems and network planning techniques. Develops specialized analytical techniques for logistics analysis; manages long range planning efforts; and manages business strategy functions. Maintains acquisition program oversight for the command section and schedules AFIC Logistics Reviews. (See note in LSM, below).

A4-2. Functional Responsibilities:

a. Directorate of Business Strategy (LSB):

(1) Provides acquisition strategy support and planning for Air Force laboratory, acquisition, and modification programs.

(2) Provides advice to HQ USAF, HQ AFIC, HQ AFSC, the ALCs, and the product divisions for developing and implementing AF acquisition and business strategies.

(3) Develops strategies, procedures, and techniques to ensure readiness, logistics supportability, and competition provisions are considered in contracts and source selections; and recommend strategies for incorporation into contract documents.

(4) Participates in preparation of acquisition documents: RFPs, source selections, work breakdown structures (WSR), statements of work (SOW), data requirements, instruction to offerors, and evaluation factors; and assesses planning results.

(5) Conducts analyses and evaluation of logistics supportability incentive arrangements.

(6) Participates/initiates panels, teams, and groups; and provides consultants and advisors to acquisition strategy panels (ASP) and solicitation review panels (SRP) for the Product divisions.

(7) Reviews and evaluates planning and programming documents to expand future competition, LCC avoidance and improvements in supportability. Reviews and evaluates SONs, SORDs, DSRDs, JSORs, baseline, and operational support requirements and planning processes.

(8) Provides the AFALC core with analyses of business strategy management information; and assists in identifying and applying acquisition requirements and strategies in RFPs and source selections.

(9) Initiates, conducts/monitors acquisition logistics contracting studies; develops and advocated innovative contract concepts; and implements and assesses impacts of new concepts.

(10) Develops instructional materials; conducts training for government and industry personnel in contracting, data management, contract support, planning/preparing RFPs, SOWs, Source Selection, Contract Administration, and model contracts.

(11) Serves as OPR for developing and applying contractual model networks for acquisition planning.

(12) Provides input to LL data bank; and issues LL contracting bulletins.

(13) Serves as the AFALC Advocate for Competition and Acquisition Streamlining.

(14) Provides staff and liaison support for the HQ AFLC/MMA.

b. Directorate of AF0SEM (LSE): Serves as OPR for the ILS element of Support Equipment.

(1) Formulates and implements support equipment acquisition policies and procedures.

(2) Performs staff surveillance over assigned ILS element for new and replacement SE.

(3) Advocate and recommends standardization of SE; recommends new common SE for development; initiates, recommends, and approves analysis and trade studies to identify cost effective candidates for SE standardization.

(4) Develops the tools, techniques, and methodologies for an SE data base of existing and planned weapon systems.

(5) Provides representation to study teams and special work groups; provides specialized expertise to organizations acquiring new or replacement SE.

c. Directorate of Supply Support and Maintenance (LSG): Serves as OPR for the ILS elements: Supply Support; Maintenance Planning; Packaging, handling, Storage, and Transportation; Facilities and Technical Data. Serves as OPR for Contractor Support (CS) to include Interim Contractor Support (ICS) and Contractor Logistics Support (CLS), Program Management Responsibility Transfer (PMRT), System/Equipment Turnover, Site Activation, and Post Production Support.

(1) Formulates and implements policies and procedures for assigned ILS elements.

(2) Performs staff surveillance over assigned ILS elements.

(3) Develops and provides guidance/direction for implementing policy and procedures to DPML/ILSM.

(4) Develops, advocates and applies innovative logistics support concepts and other acquisition tools and techniques.

(5) Participates in reviews, analyses and assessments of system/equipment requirements, contractual and other program documentation.

(6) Participates in Maintenance Posture Planning Work Groups, study teams, and other government/industry work groups.

(7) Provides consultants and advisors to Acquisition Strategy Panels (ASP) and program assessments and evaluations.

(8) Provides training and training materials to acquisition personnel.

(9) Provides input to IL data bank.

d. Directorate of Information Management (LSI): Serves as OPR for information systems hardware and software support.

(1) Serves as the interface with HQ AFLC and HQ AFSC for technical aspects of automated data systems management.

(2) Manages the acquisition of internal integrated information systems equipment requirements; prepares and processes necessary planning, programming, and funding documents; and reports progress of equipment related acquisition.

(3) Manages and operates system management functions for information system equipment to include physical and information security.

(4) Develops and maintains support software and analytical methodologies for logistics support planning and networking requirements.

(5) Develops application software and assures systems availability to support all AFALC ADP requirements.

e. Directorate of Systems Support (LSL): Serves as OPR for overall ILS policy, procedures, network analysis planning and acquisition logistics training. Serves as OPR for Acquisition Logistics Management Information System (ALMIS), Acquisition Logistics Portrayal (ALP), Air Force Lessons Learned (LL) Data Bank, and Computer Supported Network Analysis System (CSNAS).

(1) Initiates and recommends AFLC and joint AFLC/AFSC policies, procedures, and guidance for ILS. Maintains AFLC/AFSC Pamphlet 800-34, Acquisition Logistics Management.

(2) Serves as the AFLC representative to multi-command and service level development efforts. Recommends changes to DoD and USAF ILS and related disciplines/specialties policy.

(3) Serves as the OPR for ILS planning techniques; and participates in planning sessions, initial ILS planning, development, and assessment.

(4) Develops and applies "model networks" for ILS planning.

(5) Maintains CSNAS; and reviews and recommends system changes and enhancements.

(6) Develops and recommends AFLC and joint AFLC/AFSC policy, procedures, and guidance for LL.

(7) Manages the LL data bank; prepares LL packages; maintains distribution records; responds to inquiries; and issues periodic index of lessons (abstract) and LL bulletins.

(8) Maintains ALMIS; and reviews and recommends systems changes and enhancements.

(9) Manages the development of automated acquisition logistics management information and support systems.

(10) Provides training and training materials to acquisition personnel.

f. Directorate of Acquisition Policy (ISM): Serves in a dual capacity as AFLC/MMA (Acquisition Logistics Policy). In addition to the responsibilities identified in AFLCR 23-1, Appendix 17, performs policy making function in the subordinate elements of AFALC/LS and ER.

g. Directorate of Studies and Analysis (LSS): Serves as OPR for Life Cycle Cost (LCC) and Repair Level Analyses (RLA).

(1) Formulates and disseminates AFLC and AFALC policy and procedures for LCC and RLA; validates lessons learned; and provides training and training materials to acquisition personnel.

(2) Develops and maintains analytical models and methodologies to support logistics decision requirements and LCC management activities; and reviews, evaluates, and approves modeling techniques and modifications to models.

(3) Performs, assists, or monitors acquisition logistics studies for developing and implementing improvements, concepts, procedures, and technicians, and evaluates potential impacts of new concepts.

(4) Applies or assists in applying logistics analysis techniques to specific program/projects.

(5) Serves as OPR for acquisition logistics analysis; and coordinates with detachments to develop plans for analysis capability.

h. Directorate of Plans and Program (LSX): Serves as OPR for planning and acquisition logistics program planning and oversight.

(1) Program Division (LSXA):

(a) Serves as OPR for acquisition logistics information for assigned Air Force program and projects.

(b) Assesses program status; identifies actual or potential problem area; and coordinates with detachment and ALC personnel to develop and evaluate alternative solutions.

(c) Schedules program briefings and advises staff of briefings and program activities requiring their participation.

(d) Chairs Logistics Assessments (LAs) and Staff Assessments (SAs) on selected acquisition programs.

(e) Manages DPML course.

(f) Manages and conducts the DPML course.

(g) Provides dedicated support to AFALC MMM on the development and management of Summary Funding Profiles and Initial Spares computation policy and procedures.

(h) Manages the AFALC Foreign Disclosure Program.

(2) Plans Division (LSXP):

(a) Analyzes USAF, AFALC, and AFSC planning documents; assesses the impact on the AFALC mission; and publishes the assessments.

(b) Performs wartime mission and other contingency planning.

(c) Formulates and disseminates AFALC procedures for the evaluation of program documents including SONGs, SORDs, DSRDs, PMDs, and Acquisition Program Baselines.

(d) Formulates and disseminates AFALC procedures for AFLC Program Direction, Financial Management and LAs/SAs.

(e) Tracks and prepares AFALC position on acquisition program documents, such as PMDs, Program Action Directives (PADs), APBs, SONS, SORDs, and DSRDs.

(f) Serves as the AFALC interface with the Small Business Innovative Research Program.

(g) Serves as AFALC focal point for the development and management of Memorandums of Agreement (MOAs) for organizations requiring acquisition logistics support.

(h) Serves as the AFALC focal point for PACER INNOVATE.

(i) Maintains the AFALC Mission Briefing.

AFLCR 23-17 Attachment 5

ASSISTANT TO THE COMMANDER FOR QUALITY

A5-1. MISSION: Advises the Commander on quality issues and acts as the Commander's representative for structuring an AFALC quality program aimed at continuous quality improvements.

A5-2. FUNCTIONAL RESPONSIBILITIES

- a. Administers the AFALC-wide quality program.
- b. Chairs the AFALC Quality Working Group.
- c. Measures and reports to the Commander on the progress of AFALC quality improvements.
- d. Develops training materials and assist deputies in providing ongoing quality training.

DEPUTY FOR ACQUISITION LOGISTICS AERONAUTICAL PROGRAM (OA)
DEPUTY FOR ACQUISITION LOGISTICS BALLISTIC MISSILE PROGRAMS
(OB)
DEPUTY FOR ACQUISITION LOGISTICS ELECTRONIC PROGRAMS (OE)
DEPUTY FOR ACQUISITION LOGISTICS ARMAMENT PROGRAMS (OM)
DEPUTY FOR ACQUISITION LOGISTICS SPACE PROGRAMS (OS)

A6-1. Mission. Serves as the OPR to ensure that logistics supportability is effectively integrated into acquisition systems, equipment, and programs during all acquisition phases; executes control over program status and Program Management Responsibility Transfer (PMRT) requirements; and ensures applicable programs smoothly transition from AFSC to AFLC.

A6-2. Functional Responsibilities:

a. Provides logistics expertise and resources to support the product division program manager(s) in planning, coordinating, and directing all applicable integrated logistics support and acquisition logistics management activities in the program office.

b. Serves as the primary AFLC spokesperson until PMRT to an Air Logistics Center; plans for program transfer; and recommends mission assignment.

c. Initiates, reviews, conducts or ensures the accomplishment of LSA, trade-off studies, and other efforts designed to reduce life cycle costs and optimize readiness and supportability.

d. Participates in the program office configuration control board (CCB); and ensures participation in system design reviews, preliminary design reviews (PDR), critical design reviews (CDR), and functional and physical configuration audits.

e. Ensures logistics consideration are incorporated in program contractual documents and source selection evaluation plans and criteria; and participates in the source selection evaluations.

f. Ensures logistics support fund requirements are identified, programmed, and budgeted.

g. Evaluates, formulates, and implements product performance agreements (PPA) on assigned programs.

h. Maintains automates status of assigned programs; and provides program assessment reports.

i. Ensures security assistance considerations in program planning.

j. Participates in modification and post-production planning activities.

k. Participates with using commands, supporting and other agencies or working groups to field a supportable and supported system/equipment program.

l. Ensures assigned integrated logistics support personnel are trained and qualified to accomplish the mission.

OFFICE OF PRODUCT PERFORMANCE AGREEMENT (PP)

A7-1. Mission. Manages Air Force Product Performance Agreements (e.g., warranties, guarantees and performance incentives) program; and assist higher headquarters in the development and implementation of policy concerning Product Performance Agreements (PPAs).

a. Advises HQ AFSC, HQ AFLC, and HQ USAF in developing and implementing Air Force warranty policy.

b. Develops and provides analytical tools and criteria for selection and evaluation of PPA concepts to Air Force acquisition activities.

c. Provides technical assistance to all USAF acquisition activities in selection, application and management/administration of warranties, guarantees, and other incentives for improved product performance and supportability.

d. Provides technical interchange of warranty and product performance agreement information with other DoD components and industry.

e. Develops generic contract clauses and implementation procedures for product performance agreements.

f. Develops and maintains a central repository of PPA related data.

23-17 Attachment 8

DEPUTY FOR AVIONICS CONTROL (AX)
CO-MANAGED BY AFLC/AFALC AND AFSC/ASD

A8-1. Mission. Manages the development of policies and procedures to provide force-wide avionics investment strategy, reduce avionics proliferation, and promote rational standardization; manages the development and issuance of the AF Avionics Roadmap; manages the AF Avionics Data Base; participates in development of avionics investment strategy; participates in the identification and implementation of new technology, standard architectures, and application of standard avionics subsystems and related support equipment; ensures compliance with avionics acquisition policy; and ensures implementation of programming language compilers, computer hardware, and required support software.

A8-2. Functional Responsibilities:

a. Directorate of Acquisition Division (AXAC):

(1) System Control Division (AXAC):

(a) Evaluates Air Force avionics programs for adherence to and compatibility with avionics acquisition policy.

(b) Ensures consideration of standard avionics subsystems and related support equipment and application of avionics architectural standards in new/modified aircraft baselines.

(c) Initiates needed trade-offs, cost-benefit, or simulation studies; and recommends method of accomplishment concerning subsystem and architectural standards usage in aircraft baselines.

(d) Assists in the identification of new avionics programs to promote rational avionics standardization.

(e) Coordinates avionics activities with System Program Offices, support, and using commands.

(f) Ensures program strategy conforms with Air Force Avionics policies or documents justifiable deviations.

(g) Coordinates planning, development, acquisition, maintenance and modification of avionics for new/modified aircraft.

(2) Systems Assurance Division (AXAE):

(a) Develops criteria and conducts reviews for Air Force programs adherence to and compatibility with avionics acquisition policy.

(b) Ensures survivability, reliability, maintainability, quality assurance, and test and evaluation are properly incorporated into avionics subsystem acquisition and modification programs.

(c) Ensures consideration of standardization opportunities and compatibility of planned and existing subsystems.

(d) Coordinate planning, development, acquisition, maintenance, and modification of avionics under the Air Force Avionics Roadmap.

(e) Identifies and coordinates initiatives to develop new standard avionics subsystems and related support equipment.

(f) Ensures application of appropriate design standards in avionics subsystem programs.

(g) Ensures new avionics subsystem design include the flexibility to satisfy multiple applications, and avionics acquisition program strategy meets total Air Force requirements.

b. Directorate of Plans and Management Information (AXP):

(1) Develops an Air Force avionics data base for current and planned avionics programs, equipment, and standards to include data on system/subsystem cost, reliability, performance, and interfaces.

(2) Develops and publishes the Air Force Avionics Planning Baseline (APB); interfaces with MAJCOMs, AFSC Product Divisions, and AFIC Air Logistics Centers to support the development and updating of the APB.

(3) Provides Life Cycle Cost (LCC) guidance; maintains/enhances the Standardization Evaluation Program

(STEP) LCC model; and conducts/reviews LCC analyses of standardization in multiple weapon system applications.

(4) Conducts avionics studies to: assess feasibility of potential avionics standards (hardware or architectural) and evaluate continuing viability of existing standards; determine the impact of avionics on systems effectiveness; analyze avionics oriented threats; assess technological forecasts; and analyze economic and marketing trends.

(5) Serves as OPR for the Avionics Standardization Program Element; manages actions for the Program Objective Memorandum and Budget Estimate Submission processes; and accomplished associated financial management.

(6) Provides Air Force civilian representative to the Joint Service Review Committee for Avionics Standardization; directs actions to appropriate levels; and ensures dissemination of review committee initiatives.

(7) Develops reports on avionics standardization efforts.

(8) Develops, coordinates, and publishes the Air Force Avionics Roadmap.

(9) Serves as OPR for coordinating actions with AFSC Product Divisions and AFLC Air Logistics Centers to satisfy operational needs, correct deficiencies, and capitalize on technological and economic opportunities.

(10) Maintain repository of Avionics-related program documents.

(11) Serves as executive director of the Air Force Avionics Symposium; and develops and publishes the Symposium Proceedings.

(12) Provides support to the Avionics Review Board (the Air Force Avionics Symposium Executive Committee).

(13) Develops and implements operational and mission plans.

(14) reviews avionics and related plans in context with the Avionics Roadmap to ensure continuity and assure a coordinated orchestration of evolving programs; and participates in developing long range strategies for future avionics programs.

c. Directorate of Avionics Technology (AXT):

(1) Assists in identifying and monitoring initiatives involving new technology, new system architectures, architectural standards, and opportunities for common/standard application of equipment.

(2) Coordinates with other avionics organization to give guidance and assistance in the formative stages of avionics related programs.

(3) Develops and implements a technical review and coordination process of requirements, program definition, program justification, and procurement documentation for advanced development avionics new starts or changes to existing advanced development avionics program.

(4) Assesses proposed and ongoing avionics development plans for possible inclusion in the Air Force Avionics Roadmap.

(5) Evaluates waivers on Architectural Standards and Formulates recommendation for approval authorities.

(6) Reviews Avionics Technology Transition Plans to ensure they are adequate and to ensure the technology is ready for transition; and recommends and supports transition of newly developed technologies into production avionics systems, subsystems, and equipment.

(7) Establishing goals, policies, and procedures to assure force-wide definition and application of avionics, architecture, architectural standards, and standard equipment.

(8) Develops guidelines for design concepts, Computer Instruction Set Architectures and high order language utilization, and test procedures; and conducts or coordinates the tasking of other government organizations and contractors to conduct study analyses and engineering trade-offs of avionics designs and architecture.

(9) Provides acquisition and technical management for research and development projects which include:

(a) Modular Avionics Systems Architecture (MASA) - Examines the application of modular designs and required technologies to avionics for use throughout the Air Force. provides engineering, support, acquisition, and

management analysis of requirements, technology, and methodology leading to the development of draft guides, specifications, and standards.

(b) Embedded Computer Standardization Program Office (ECSP0) - Provides for implementation of programming language compilers and related support software. Plans Air Force-wide transition and support for promising computer resource standards. Accomplishes development, modification, configuration management, and distribution of software support tools for military standard (MIL-STD) languages and instruction set architectures.

(c) Standardization support - Includes the Air Force Language (JOVIAL) Control Facility and the Avionics Architecture Implementation and Support Project. Provides support for the testing and validation of hardware and software meeting military standards for languages, instruction set architectures, and data bases.

Proposed: AFLCR 23-17 Attachment 9

AIR FORCE OFFICE OF LOGISTICS TECHNOLOGY
APPLICATIONS (AFOLTA) (LT)
CO-MANAGED BY AFLC/ALD AND AFSC/ASD

A9-1. MISSION. Responsible for developing/consolidating Air Force logistics related technology requirements and ensuring that the requirements are matched by technology base capabilities. Manages Air Force Logistics participation in the Independent Research and Development (IR&D) program. Applies developed technologies to new and fielded Air Force weapon systems. Manages Air Force actions to reduce current and potential operations and support costs through improvements in: system reliability and maintainability; productibility; multi-use of Air Force equipment; and standardization. Manages the full-scale development of mature, potentially high payoff, laboratory R&M technologies for timely insertion into developing and fielded systems and equipment. Enhances Air Force awareness of combat support research and development efforts to achieve Air Force R&M 2000 goals throughout the Air Force and defense industry. Manages the development and use of specialized logistics related technologies such as artificial intelligence.

A9-2. Functional Responsibilities:

a. Directorate of Plans & Operations (LIX):

(1) Responsible for administrative functions, personnel and manpower documentation and actions, the safety program, the supplies and equipment accounts, and scheduling training for military and civilian personnel.

(2) Conducts Air Force Blue Two visit (BIV) Program; established teams of corporate program managers, design engineers, and Air Force and other DOD personnel; schedules field visits to expose them to the maintenance problems of current weapon systems and equipment.

(3) Manages the Air Force Senior Level Visit (SLV) program; schedules SLVs based upon corporate invitations; coordinates senior Air Force and DOD management of each visit.

(4) Provides analysis support to all directorates as required.

b. Directorate of Requirements (LIQ):

(1) Administers the Combat Support Research and Development Requirements (Logistics Needs) program; and compiles, validates, prioritizes combat support R&D requirements for action by Air Force organizations and publication in the Air Force Logistics Research and Development Program document.

(2) Administers/manages logisticians technical evaluation of company funded R&D under the DOD Independent Research and Development program (IR&D).

(3) Provides specialized advice to Air Staff directors and major commands on logistics research and development areas to enhance Air Force combat and combat support capability.

c. Directorate of Technology Transition (LTI):

(1) Acts as an action agency for logistics related technology transition for the Air Force.

(2) Maintains a wide overview of technology development efforts.

(3) Takes a broad and flexible approach to assure the timely transition of high pay back technologies to the Air Logistics Centers and System Program Offices from DOD labs, industry and others.

(4) Disseminates logistics related technology information to the widest forum of users. Works with Air Force and AFLC infrastructure to accomplish transition goals.

d. Directorate of Engineering (LTE):

(1) Responsible for technical evaluation of all projects and candidate projects, receiving and reviewing all contractor proposals for projects, selecting new technologies, and making recommendation to program managers in all of the preceding areas.

(2) Provides engineering support to ongoing projects and to other directorates as required.

e. Directorate of PRAM (LIP):

(1) Manages Air Force Productivity, Reliability, Availability and Maintainability (PRAM) program as specified in PMO.

(2) Manages the program using subordinate division each concentrating on a specific segment of the Air Force user community.

a) Tactical Systems Division (LTP1):

Function as interface with Tactical Air Command (TAC) and Tactical Air Forces (TAF) headquarters and subordinate units.

b) Strategic Systems Division (LTPS):

Functions as interface with Strategic Air Command (SAC) and other strategic forces headquarters and subordinate units.

c) Airlift Systems Division (LTPA):

Functions as interface with Military Airlift Command (MAC) and subordinate units.

f. Directorate of RAMTIP (LIR): Manages Air Force Reliability and Maintainability Technology Insertion Program (RAMTIP) as specified in PMD.

g. Program Support Office (LFO): Responsible for the administrative, graphic and reproduction, personnel, manpower, long-range plans and schedule for exhibits, displays and briefings, public relations, budgeting and funding status, training planning and execution, and travel planning and tracking supply and equipment accounts and safety support for the PRAM and RAMTIP programs.

h. Directorate of Artificial Intelligence (LII):

1) Managers the AFEC Artificial Intelligence Program. Develops long-range plans and budgeting requirements to accomplish the program.

2) Ensures that Artificial Intelligence information is transitioned to all elements of AFEC where benefits can be predicted.

AFLCR 23-17

Attachment 10

HQ ACQUISITION LOGISTICS DIVISION

ORGANIZATION CHART WILL BE GENERATED, AS IN THE PAST BY
HQ AFLC/IM.

Appendix C: Glossary of Acronyms and Abbreviations

ACMAT	Assistant Chief for Materiel
ACSUP	Assistant Chief for Supply
AFALC	Air Force Acquisition Logistics Center
AFALD	Air Force Acquisition Logistics Division
AFCOLR	Air Force Coordinating Office for Logistics Research
AFIT	Air Force Institute of Technology
AFLC	Air Force Logistics Command
AFSC	Air Force Systems Command
AFOLTA	Air Force Office of Logistics Technology Applications
ALC	Air Logistics Center
ALD	Acquisition Logistics Division
ALMIS	Acquisition Logistics Management Information System
AMA	Air Materiel Area
AMC	Air Materiel Command
ARDC	Air Research and Development Command
ATSC	Air Technical Services Command
CAPPROJD	Capital Projects Division
CAS	Chief of the Air Staff
CSNAS	Computer Supported Network Analysis System

DCS	Deputy Chief of Staff
DEFAIR	Department of Defence (Air Force Office)
DILSM	Directorate of Integrated Logistics Support Management
DOD	Department of Defense
DMATD	Directorate of Materiel Definition
DPMA	Director of Project Management and Acquisition
DPML	Deputy Program Manager for Logistics
HQSC	Headquarters Support Command
ILS	Integrated Logistics Support
ILSM	Integrated Logistics Support Manager
ILSP	Integrated Logistics Support Plan
LCC	Life Cycle Cost
LSA	Logistics Support Analysis
MAJCOM	Major Command
O&S	Operating and Support (costs)
OPR	Office of Primary Responsibility
PAR	Program Assessment Review
PM	Program Manager
PMRT	Program Management Responsibility Transfer
PRAM	Productivity, Reliability, Availability, Maintainability
R&D	Research and Development
RAAF	Royal Australian Air Force

RAMTIP	Reliability and Maintainability Technology Insertion Program
RAN	Royal Australian Navy
SAFPAR	Secretary of the Air Force Program Assessment Review
SOA	Separate Operating Agency
SPO	System Program Office
USAF	United States Air Force
WP	Working Party
WSPO	Weapon System Program Office

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Abstract

The purpose of this study was to compare the USAF and RAAF approaches to acquisition logistics, determine similarities and differences, and investigate the potential for using the USAF Acquisition Logistics Division (ALD) as a model for recommending a logistics oriented acquisition structure for the RAAF. The scope of the project was limited to studying the organizational structure and responsibilities of the ALD and the appropriate organizations of the RAAF.

The methodology used to make the comparison was historical analysis of the USAF and RAAF approaches to system acquisition logistics and the temporal development of acquisition logistics philosophies, roles, and responsibilities. This analysis shows many similarities in the USAF and RAAF approaches, including the roles and responsibilities of acquisition logistics organizations, recognition of the importance of life cycle cost, and the adoption of an ILS concept. It also shows the RAAF's lack of an organization like ALD to implement the ILS philosophy and help achieve its objectives.

By appointing DPMLs to manage ILS plans, and by various ILS management support activities, including the research and application of technology, the findings of the study suggest that ALD has been reasonably successful in ensuring that logistics supportability issues are adequately addressed early in system acquisition. The main conclusion from this research is that the RAAF should establish an acquisition logistics oriented organization, based on the proposed Directorate of ILS Management, incorporating elements and activities similar to those which have contributed to the success of ALD, and, in line with the increasing emphasis on decentralization in the Australian Defence Force, located in Headquarters Logistics Command's Logistics Branch. Further investigation of the current status and relevance in RAAF acquisition of ILS management support activities is recommended.

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