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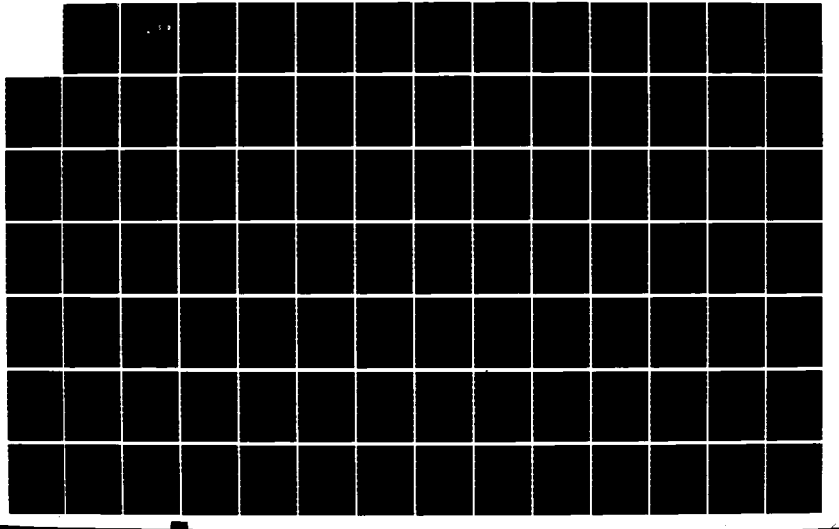

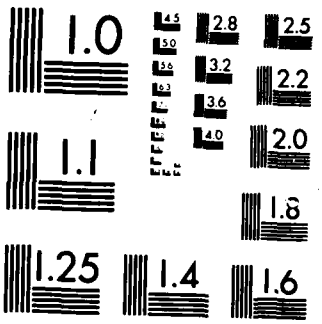

NAVAL POSTGRADUATE SCHOOL
Monterey, California

THESIS

THE FEASIBILITY OF SHIFTING
SMALL PURCHASE WORKLOAD BETWEEN
NAVY FIELD CONTRACTING ACTIVITIES

by

Geoffrey M. Gannaway

December 1985

Thesis Advisor: R. W. Smith

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The Feasibility of Shifting Small Purchase Workload Between Navy Field Contracting Activities

by

Geoffrey M. Gannaway
Lieutenant Commander, United States Navy
B.A., College of Artesia, 1970

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Author: Geoffrey M. Gannaway
Geoffrey M. Gannaway

Approved by:
R.W. Smith, Thesis Advisor

David V. Lamm, Second Reader

Willis R. Greer, Jr., Chairman,
Department of Administrative Sciences

Kneale T. Marshall,
Dean of Information and Policy Sciences

ABSTRACT

The research focused on those factors considered critical to making a decision for shifting small purchase workload between contracting activities of the Naval Supply Systems Command. The results of this study indicate that it is feasible to transfer small purchase workload under certain conditions. The primary factors to optimize customer response time are: (1) can the requirement be procured through an existing Basic Ordering Agreement (BOA), Blanket Purchasing Agreement (BPA), or automated Request For Quotations (RFQ); (2) technical complexity; (3) purchase priority; (4) receiver of the shifted workload; (5) customer; (6) proximity of the contracting activity to the customer and supplier; and, (7) age of the document. It is recommended that small purchase documents be shifted among Navy Field Contracting System activities as a viable means for improving overall customer response time.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

I. INTRODUCTION

A. OBJECTIVES OF THE RESEARCH

> Major directions are to reduce fleet workload while increasing the quality of fleet support, manage information as a resource, manage items by weapon systems, reduce response time, and improve the quality of delivered materials and services.---Introduction to the Naval Supply Systems Command, Strategic Plan, June 1985.

The basic purpose of this study is to discuss the feasibility of shifting contract workload for small purchases within the Navy Field Contracting System (NFCS), as a means of improving customer response time. In order to discuss this possibility, it is necessary to identify and analyze the most important issues in the decision-making process.

The need for reducing customer response time for small purchase processing has never before been so deeply felt in the United States Navy during peacetime conditions, than the present. High technology weapon systems are rapidly being deployed onboard our modern 600 ship fleet, while logistic support for repair parts and spares to maintain these new systems has become more extensive.

This situation has been exacerbated by many factors. Most U.S. Navy ships are getting an extended life, which is giving rise to considerable numbers of failures occurring on the aging, original equipment. At the same time, more and

more parts have been dropped from support in the Department of Defense (DOD) supply system because there was no demand during the first 10 or more years of the equipment's life cycle. On the other hand, a research study by the Logistics Management Institute (LMI) of Bethesda, Maryland, stated,

> . . . the Department of Defense (DOD) has experienced a significant growth in inventories relative to customer demands. . . . About one-half of this growth in DOD peacetime inventories may be directly attributed to force structure expansion and modernization and to long-needed readiness enhancements based on life cycle equipment support costs. [Ref. 1: p. ii]

According to this study, DOD peacetime spares and repair parts inventory increased approximately 46 percent between Fiscal Year (FY) 1979 and FY 1984.

Mechanical failure problems are placing first-time demands on the supply system for material which is no longer manufactured and, for which, in many instances, the original manufacturer no longer exists. This obsolescence dilemma, coupled with such new maintenance initiatives as micro-miniature repair (vice replacing whole circuit boards and "black boxes"), has forced the afloat Supply Officer, as well as the Navy Field Contracting System, to open purchase more items. Even though the afloat Supply Officer does not have adequate personnel resources to properly prepare open purchases, he is often compelled to do so in order to meet his ship's demanding operating schedule. This critical issue has been repeatedly addressed, because of lengthy

response times being experienced with the major field contracting activities.

During the summer of 1985, consternation over heavily publicized incidents of apparent improper purchase actions, as well as, incidents of overpricing within the Navy's supply system, drew considerable public attention. As a result, the top Naval Supply Corps officers convened in Washington, D.C. to accept a challenge from the Chief of Naval Operations: to immediately initiate measures that would improve the Navy's image on supply-related matters. At issue was the serious need for the Naval Supply Systems Command (NAVSUP) to improve customer response time at all levels in the acquisition process, while increasing management control of fraud, waste and abuse. Each delegate to the conference was tasked with providing realistic ideas for decreasing the amount of time required from the initial receipt of the procurement action to the delivery of the material or service. This worsening trend for longer customer response time has been the result of many factors, but can primarily be attributed to concerted efforts to increase competition, the increasing number of federal acquisition rules and regulations, and the increasing number of purchase requests.

In a recent follow-up study by LMI, a comparison was made between the DOD and the private sector approaches to a reduction of procurement leadtime. This study discovered

that, "The administrative leadtime experienced at a Service or Defense Logistics Agency (DLA) inventory control point (ICP) has grown from 90 days to between 120 and 150 days, and it is still growing." [Ref. 2: p.1-2] On the other hand, the study found that, "private sector administrative leadtimes range from 15 to 30 days...for like items being procured from the same supplier." [Ref. 2: pp. 1-3 & 1-4] Even more distressing was the fact that from a group sample of the same 149 aviation items, the private sector "procurement leadtime (administrative and production) averaged 94 days, while the DOD procurement leadtime was 436 days." [Ref. 2: p. 1-6] No matter what the reason, the fact still exists, that customer response time is a major procurement problem.

Following the Washington conference, the Naval Supply Systems Command performed additional research on small purchase problems and action was initiated to obviate any further frustration for the afloat supply officer. One significant result of this research was the tasking for a complete revision of the Naval Supply Systems Command Publication 467 (NAVSUP Publication 467), Field Purchasing. The NAVSUP Publication 560, Navy Supply Acquisition Regulation Supplement (SUPARS), replaces the NAVSUP Publication 467 and Chapter 3, Part B of the NAVSUP Publication 485, Afloat Supply Procedures. The NAVSUP Publication 560 is a revolutionary concept for purchasing

instructions. It is written as an all-inclusive procurement reference with "step-by-step" purchase procedures, which can be understood at even the introductory procurement level.

This study will focus primarily on that portion of the small purchasing operation when the procurement requests remain idle because of large backlogs of contract workload. This is a significant problem which could possibly be alleviated by shifting the contract workload between field contracting activities in a logical and sensible manner. While improving customer response time, it would simultaneously increase the overall efficiency of the Navy Field Contracting System acquisition performance.

According to current NAVSUP procurement leadtime statistics, the increasing contract backlog is becoming unacceptable and is having a significant impact on response time to customer requirements. Even relatively simple procurement actions are contributing to the overall leadtime because of backlog delays preventing their being processed and the subsequent delivery of goods and services.

It is the intent of the researcher to analyze the unique properties of small purchases and the importance of those basic factors to assist the Naval Supply Systems Command in determining the feasibility and implementation procedures for shifting contract workload. The need to shift small purchase requests exists whenever reported backlogs at NFCS activities become unsatisfactory or a substantial imbalance

prevails between activities. This study will deal with potential problems as well as those problems inherent in implementing this possible alternative for improving customer requisition response time.

It is also intended that this study will provide some insight into those factors which should be considered by the receiving activity (as well as the transferring activity) whenever the decision has been made to shift the contract workload.

One of the primary objectives of the Naval Supply Systems Command, is to, "Define initiatives to reduce fleet procurement workload through more responsive shore small purchasing." [Ref. 3: p. 6-6]

B. RESEARCH QUESTIONS

The basic research question for this study is, "What would be the key factors and variables to be considered in shifting contract workload between Navy Field Contracting System activities?" In other words, "What key factors should be considered by the Naval Supply Systems Command, the transferring activity, and the receiving activity, in shifting small purchase workload between Navy Field Contracting System activities (i.e., priority of the purchase request, age of the document, complexity of the requirement, customer, etc.)?

In order to provide a better understanding of how and why these key factors and variables impact on the

decision-making process for the basic research question, the following subsidiary questions were posed to each interviewee and examined during the research:

- What primary reasons make these the key factors which should be considered in the decision-making process?
- How is the small purchase workload functionally organized and distributed among the buyers (by commodity, customer, workload, weapon system, etc.)?
- How is the small purchase workload presently being measured?
- How is productivity measured?

C. SCOPE, LIMITATIONS AND ASSUMPTIONS

The scope of this thesis is to identify and analyze the contributory factors to consider in making a logical and sensible decision for shifting contract workload between NFCS activities. It is not the intent of the researcher to develop a universal system for measuring workload at each activity, but rather, to study the various procurement organizations and the criteria which they utilize in managing and organizing their small purchase workload. The research is intended to develop a list of the key factors, evaluate their interrelationships and provide recommendations for their application in the decision-making process.

This study is limited to the identification of the key factors and variables to consider in shifting workload. It does not attempt to develop a standard checklist to be utilized as a guide or directive for transferring small

purchase requests from one activity to another. To do so, would require assigning weighting factors for each variable, which are unique to each activity. Nor does this thesis attempt to analyze the merits of a centralized procurement activity, although the key factors and variables identified herein, will probably be similar to those that should be considered for both studies.

The research is designed to identify those unique problems inherent in situations when it is more efficient for the contracting officer to interact directly with customers and/or contractors on a continual basis. It also considers whether or not these problems are compounded when the contracting officer is geographically separated from the customer and vendor contacts. Such related problems are an intrinsic part of this research and discussion in ascertaining what is necessary to make a logical and sensible decision for shifting contract workload within the Navy Field Contracting System. It is assumed that the reader has a vocabulary and basic knowledge of procurement operations.

D. RESEARCH METHODOLOGY

Data were obtained from several sources. First, a review of the existing literature base was conducted to obtain a basic understanding of how workload is organized and how productivity is being measured in procurement organizations. The literature search was conducted primarily through the Defense Logistic Studies Information Exchange

(DLSIE) data base for subjects on "acquisition" and "workload." Additional information was obtained from other research studies and thesis, as well as current Federal directives and instructions listed in the bibliography.

Secondly, research data were assimilated from information obtained through direct questioning and discussions at Navy Field Contracting System activities, in addition to telephone interviews. The interviews were purposefully conducted to obtain responses from each of the following types of Navy Field Contracting System activities: Inventory Control Points, Navy Regional Contracting Centers, Naval Supply Centers, and Naval Research Laboratories. A total of 41 key purchasing individuals from 13 major field contracting activities were visited or contacted in the performance of this research.

Interview procedures were conducted to differentiate between responses from those individuals with supervisory positions of contracting personnel (such as the Field Contracting Office Directors and their top-level supervisors) and those responses from personnel at the small purchase working level. This procedure was designed to determine if there were opposing opinions between supervisors and workers. Any contrast between management and the contract working level could provide an important role in the decision-making process prior to any shifting of workload.

Each interview was prefaced with a fictitious situation in which the interviewee had been directed by the Naval Supply Systems Command to transfer a portion of their small purchase workload. They were further instructed that this imaginary action was being taken to alleviate the current backlog with the primary purpose of improving the customer response time. Each person being interviewed was expected to provide his own spontaneous opinions for performing this transfer of workload.

The research questions elicited personal opinions on those specific factors and variables that the interviewee felt should be considered to accomplish the shifting of contract workload. Additional questions addressed potential problems associated with the shifting of contract workload and the issue of either retaining or transferring ownership. It is important to reiterate at this point that consideration for improving customer satisfaction should be the major driving force at all times. Finally, the interviewee was asked to address whether or not shifting the work force along with the workload was a necessity.

E. ORGANIZATION OF THE STUDY

Chapter II is a study of the Navy Field Contracting Activity organization and the existing relationship between each of the different types of contract processing organizations. A brief review of purchase procedures is essential to appreciate the unique aspects of each organization and is

presented here to provide the reader with a basic understanding for each activity. The remainder of the chapter deals with measuring small purchase productivity at NFCS activities. Chapter III is a discussion of the data gathered during the interviews and is a presentation of the key factors to be considered in shifting contract workload between Navy Field Contracting System activities. These key factors are presented to the reader as the responses made during the personal interviews and addresses their reasoning for these responses. Chapter IV provides a review and analysis of the "lessons learned" from four recent cases, where an attempt had been made to reduce the small purchase backlog at various NFCS activities. Chapter V is an analysis and compilation of these key factors and variables and their significance in the decision-making process for ascertaining the feasibility of shifting contract workload. The decision whether the workload should be transferred is the first part of the analysis. Chapter VI is the second part of the analysis and discusses the implementation requirements for shifting contract workload. Finally, Chapter VII provides the conclusions and recommendations for utilizing these key factors and variables in making a sensible decision for the feasibility of shifting contract workload between Navy Field Contracting System activities.

II. FRAMEWORK AND BACKGROUND

A. INTRODUCTION

The area of small purchase in federal procurement has been the target of both congressional and public criticism in recent years. The increase in highly-publicized allegations of contracting inefficiencies, has elicited close scrutiny of Government purchases and is gaining considerable momentum.

The latest figures from the Procurement Management Reporting System (PMRS) reveal that within the Navy Field Contracting System, small purchases accounted for 2,650,542 procurement actions during Fiscal Year 1985. This figure represents over 98 percent of the 2,698,868 combined Navy total of small purchases and large contracts. To put this in terms of dollar values, small purchases of $2,754,174,000 represented over 22 percent of the $12,468,027,000 total Fiscal Year 1985 procurement dollars. These procurement statistics provide insight into the significant and incredible role that small purchases play in Government spending.

A clear understanding of pertinent terms and concepts is essential prior to any meaningful discussion of shifting contract workload. First of all, a definition of small purchase is in order to clarify which purchase requests are being addressed. Secondly, a broad conceptual picture of

the Navy Field Contracting System and how it functions, will be provided to enable the reader to understand and appreciate the unique qualities of each type of contracting activity and its impact on small purchases.

B. SMALL PURCHASE

What is small purchase? Small purchase as defined by the NAVSUP Publication 560, Navy Supply Acquisition Regulation Supplement (SUPARS) is:

> . . . an acquisition of supplies or nonpersonal services, in the amount of $25,000 or less using the procedures set forth in this part (NAVSUP Publication 560, part 13). [Ref. 4: p. 13.1-1]

The myriad of mandatory procurement rules and regulations for contracts which exceed the $25,000 threshold, require the skills and experience of qualified purchase agents which are quite different from those required for small purchase. Nevertheless, whenever one considers the magnitude of the number of small purchase requests as a composite in relation to total U.S. Navy procurement actions, the small purchase figures clearly dominate all others.

At this point, the reader should not overlook the fact that these statistics are not what the average American sees, nor are the majority of our citizens involved in the acquisition of major weapon systems. Instead, it is critical to remember that:

> Perhaps the most significant thing about small purchasing is the fact that it is federal procurement to the overwhelming majority of private concerns that do business directly with the government. The local firms that supply the nearby military installation or national park or federal building deal with small purchase organizations and their employees. [Ref. 5: p. 9]

C. NAVY FIELD CONTRACTING SYSTEM

Who are the Navy Field Contracting System activities? In a recent speech, Captain C.A. Jarman, SC, USN, (Naval Supply Systems Command (SUP-02)), stated, "there are presently 967 field contracting activities reporting to NAVSUP." The largest activities which make up the major portion of the Navy Field Contracting System are the Navy Regional Contracting Centers, Naval Research Laboratories, Naval Supply Centers, Naval Supply Depots, the Ships Parts Control Center, and the Aviation Supply Office. In accordance with the new NAVSUP Publication 560,

> The Navy Field Contracting System consists of all contracting offices of naval activities, including fleet units, except for the following contracting and contract administration offices:
>
> 1. Automatic Data Processing Selection Office;
> 2. Office of the Naval Research, its Branch Offices and its Resident Representatives;
> 3. Military Sealift Command and its field activities;
> 4. Marine Corps and its field activities; except for Marine Corps Air Stations which are part of NFCS;
> 5. Headquarters, Naval Air Systems Command, its Naval Plant Representative Offices and its Naval Aviation Logistics Center;

6. Headquarters, Naval Sea Systems Command, its Naval Plant Representative Offices and its Supervisors of Shipbuilding, Conversion and Repair;

7. Headquarters, Space and Naval Warfare Systems Command; and,

8. Headquarters, Naval Facilities Engineering Command and its field activities. [Ref. 4: p. 1.6-1]

The Naval Supply System Command provides procurement policies and administrative guidelines for field contracting activities as the Head of the Contracting Activity (HCA) for the Navy Field Contracting System (NFCS).

D. CONTRACT WORKLOAD AND PRODUCTIVITY

1. Organizing Workload

Prior to any attempt to determine the status of an activity's small purchase workload, it is first necessary to understand how it is organized. Each activity was questioned as to how its small purchase division was functionally organized. As was evident in other optional organizational areas of the Navy Field Contracting System activities, there was no one organizational structure that typified all activities in handling the small purchase workload.

The two arrangements most often reported for small purchase organizations were those organized by commodity or workload, and, in most cases, a combination of the two. Each buyer would be responsible for certain types of commodities and purchase requests would be distributed equitably

based on the buyers pending workload. The primary intent of this strategy is to increase the proficiency of the purchase agents, which would have long term effects for increasing efficiency and productivity. Other small purchase branches were organized by customer, complexity and weapon system.

For the purpose of this study, activities with the same type of operations were grouped together for comparison against each other (i.e., ICP against ICP, NRCC against NRCC and NSC against NSC). This was done with the objective to evaluate whether there was any similarity in how the activities were functionally organized. Unfortunately, there was only one group, the NSCs, with apparent similiarities.

The different types of organizational structures are presented below in the groups used previously for comparison. The activities will not be identified by name, primarily, because to do so would not provide any additional information pertinent to this study. Instead, the individual activities will be lettered within each group for discussion purposes only.

a. Inventory Control Points

Within the two Inventory Control Points (ICPs), one was organized by commodity, while the other was arranged by weapon system. In both instances, the organizational structure had changed several times during the recent past and the current supervisors defended their particular system as being best-suited to meet their own needs. However, both

ICPs freely admitted that there were still some aspects of their division of workload which could be improved.

It should be noted that both ICPs possess an automated Supply Demand Review (SDR) system in conjunction with inventory control. The SDR system reviews those items which are managed at the ICPs and automatically generates the inventory requirements. The inventory package produced by the SDR system contains an automated Request For Quotations (RFQ) document. Once the inventory manager has validated and approved the requirement, the automated RFQ is forwarded to specific purchasing sections based primarily on the Federal Supply Classification (FSC) code or commodity.

The buyer receives a preprinted purchase request accompanied by a preprinted RFQ. The automated RFQ indicates the material requirements with all of the applicable accounting data, material description data, and all known sources. In order to initiate the action, the buyer must simply mail the RFQ to the vendor.

Approximately 65 percent of the small purchase requests processed at ICP-A are computer-generated automated RFQs. Any RFQ which requires the inclusion of technical data will not be generated automatically. These will require conventional small purchase procedures, whereby the purchase documents are prepared manually and the buyer must identify possible vendor sources.

ICP-A exercises the management of small purchase primarily by commodity, and dedicates the procurement of individual stock-numbered items to specific item managers. Inventory requirements are usually assigned to a select group of buyers by FSC code. There are several advantages to the commodity approach, but a primary advantage lies in maintaining continuity of the material's purchase history, which is retained within a select group. The assigned buyers for specific commodities or FSCs, have the resources available to identify trends in procurement leadtimes and are more apt to be knowledgeable about their specific materials. There is a major definite advantage in the buyer being technically conversant with the vendor about his particular requirement. More importantly, the individual buyer will be more qualified to know what the item "should cost" when the order is placed, than someone with no technical knowledge or access to its procurement history. This knowledge drastically decreases the probability of wasteful spending and identifies those who are responsible.

Finally, there is another advantage to the same group of individuals performing all purchase requirements for a particular commodity. With this type of organization, the purchase agents are able to consolidate multiple purchase requests for the same material into a single purchase action and requisition the items more efficiently through economic ordering quantities (EOQ).

ICP-B assigns both large contracts (greater than $25,000) and small purchase requests by weapon system. A group of 10 to 20 buyers are dedicated to all procurement actions for specific weapon systems. Each individual in the group shares in the responsiblities for performing both small and large purchases. This type of matrix organization allows the weapon system's program manager to have all procurement centralized in a few individuals. One advantage for the ICP with this type of organization, is found in buyers remaining proficient at performing both large and small purchases. A disadvantage occurs when the workload is greater for some weapon systems than it is for others. This could prove to be detrimental to the overall productivity of the contracting organization.

b. Naval Supply Centers

The Naval Supply Centers were the only group with an apparent similiarity for organizing workload. Blanket Purchase Agreements (BPAs) for certain products, rental agreements and electronic parts were just a few of the categories dividing small purchases by commodity or FSC code. However, NSC-A organizes small purchase requests first by either aviation or non-aviation categories before being assigned to the buyers by commodity. NSC-A, NSC-B and NSC-C have more than one purchasing agent for the same type of commodity or FSC, which allows a more equitable distribution of the workload.

NSC-D is organized differently than the other three NSCs, but is remarkably similar to NRCC-C and ICP-B. Each of these major field contracting activities are organized by "teams," which deal with either a specific customer or weapon system. NSC-D maintains seven teams that are primarily "customer-oriented." These teams are composed of both small purchase and large contract personnel.

c. Navy Regional Contracting Centers

Navy Regional Contracting Centers are different than most other NFCS activities, because they do not maintain an extensive technical section, nor are they procuring items for their own inventory management. Instead, they provide procurement services for a wide-range of requirements from several different types of naval commands.

NRCC-A was unique in that it did not perform any small purchases that were less than $10,000. These were all handled by the local purchase shop and appeared to be quite successful in relieving the NRCC of a considerable number of time-consuming small purchase requests. Those small purchases less than $25,000 are distributed according to the buyer's workload and personal experience for the particular requirement.

NRCC-B was organized by workload. The intent of not organizing by commodity or any other category is to encourage maintaining proficiency of all purchasing agents, by causing them to handle all types of purchases for

services and commodities. It was also felt that this ensured a more equitable distribution of the workload.

NRCC-C on the other hand, is organized by customer. Like NRCC-B, this ensures that purchasing agents maintain proficiency in handling all types of small purchases, but goes a step further, by providing better control of outstanding purchase documents. This managerial control is accomplished through identifying the head of the group for a particular customer, whose responsibility is to keep track of that customer's documents, thereby providing a single point of contact.

d. Naval Research Laboratories

Naval Research Laboratories are unique, because the majority of their workload is non-repetitive procurement for various Research and Development projects. Most of these "spot buys" are for small quantities. The Naval Laboratories are similar to the ICP grouping, because their own command is their biggest customer. Like many major field contracting activities, LAB-A is organized by complexity and workload. The purchase requests are first screened for technical complexity in deciding which of their buyers have the experience and knowledge to handle each of the small purchase requests. Once this has been determined, the purchase request is assigned based on each of the qualified buyers' pending workload.

LAB-B on the other hand, is partially organized by commodity, like NSC-A, NSC-B and NSC-C. The remainder of their small purchase sections are organized by specialized divisions, such as electro-optical procurement. This is basically a "customer-oriented" organization.

2. Measuring Productivity

The measurement of productivity plays an integral part in the decision-making process of whether or not small purchase workload should be shifted. However, productivity rates alone, cannot provide an adequate basis for justifying the transfer. These rates must be used in conjunction with the volume of workload and associated backlogs with each activity. Without ample forethought, a reasonable assumption to make is that workload should be shifted from an activity with a low productivity rate to one with a higher productivity rate. Optimization is only achieved whenever there is an improvement in the overall response time. Suboptimization would result if the highly productive organization already had a substantial backlog, which would preclude the purchase action from being accomplished more expeditiously than it would have, if it had never been transferred.

On the other hand, a decision to shift small purchase workload from an activity with a high productivity rate to one with a lesser productivity rate could be considered a sensible alternative if the receiving activity's

backlog is substantially less than that of the transferring activity. In other words, just because one activity has a higher productivity rate, does not necessarily mean that they can accomplish the purchase action in a shorter period of time. The higher productivity rate simply means that more actions can be accomplished in a shorter period of time. The overall outcome of a workload transfer, in this particular instance, can easily be negated by an insurmountable backlog.

Finally, there is the situation where both the transferring activity and the receiving activity have comparable backlogs. Unless the receiving activity has a considerably "higher" productivity rate than the transferring organization, it would be senseless to attempt to transfer purchase requests between the two activities.

The productivity rate is extremely useful in determining whether a particular field contracting activity is facing serious workload problems and to what extent their rate is trending in either direction. It also provides information that can be useful in comparing the various field contracting activities. However, the point to be made is that productivity rates cannot be the sole indicator for determining the feasibility of shifting contract workload between two activities.

How is productivity measured in NFCS small purchase organizations? The measure of small purchase productivity

is basically the ratio of the output of small purchase requests to the amount of input necessary to accomplish that output. Unfortunately, this measurement appears to be much easier than it really is.

Just as each activity is unique in how they organize their small purchase workload, so are they different in how they measure their productivity. "No one best method of measuring purchasing performance presently exists in either Government or Industry." [Ref. 6: p. 76] Herein lies one of the greatest weaknesses of the procurement system.

Without a uniform means for measuring productivity or contract workload, management will continue to be limited in its ability to: (1) assess the performance of the organization, (2) project personnel requirements, (3) forecast workload requirements, or (4) prepare budgets and improve productivity [Ref. 6: p. 75]. It will be near to impossible to measure backlog or to develop guidelines for shifting contract workload when there are no established measurements.

As a possible solution to this problem, all activities within the Navy Field Contracting System, are required to submit a monthly advance supply message with various purchasing statistics. A portion of this message provides a detailed report of total monthly receipts, completions and current backlog for purchase requests within each command. The Naval Supply System Command performs various assessments

of these statistics, in accordance with Navy Comptroller Notice (NAVCOMPTNOTE) 7200 of 29 October 1976. These monthly figures are compiled into a single report called the Uniform Management Report (UMR), which is used for comparing each field contracting activity.

One such measure of the Uniform Management Report, is the Daily Average Work Unit (DAWU). The DAWU is a measure of each command's daily productivity based on the total number of work units accomplished during the reported month divided by the number of work days in that month. See Figure 2.1. In this particular context, a work unit is defined as any small purchase action, regardless of the complexity, dollar value, or time required to perform that action. In other words, a field contracting activity will be credited with a single work unit for accomplishing a simple $5 procurement, the same as it will be credited for completing a complex $25,000 purchase action. Each Navy Field Contracting System activity's productivity statistics are compared utilizing this same work measurement process.

Prior to FY 1986, the DAWU was computed by simply using the amount of time expended by the buyer in performing the purchase action. The DAWU computations were misleading, because they excluded the amount of time that was expended in performing the clerical, administrative and supervisory functions. Beginning with FY 1986, the small purchase productivity rate includes the time expended for support

$$\text{Daily Average Work Units} = \frac{\text{Total Work Units Accomplished for the Period}}{\text{Total Number of Work Days In the Reporting Period}}$$

Figure 2.1 Daily Average Work Unit.

functions. NAVSUP is now resourcing its NFCS activities based on a "cost per work unit." This budgeting procedure incorporates FY 1984 and FY 1985 historical costs for performing both large and small purchases. Each NFCS activity will be funded based on estimates of workload for the coming year and the two separate rates for large and small purchases.

The Uniform Management Report also identifies the number of purchase requests pending at each contracting site at the end of the monthly reporting period. These purchase actions, or procurement backlog statistics, are then divided by the DAWU to ascertain the "Crew Days of Backlog (CDB)." See Figure 2.2. In other words, this estimate is the number of days (on the average) that would be required to complete that activity's purchase request backlog if no additional requests were received.

Performance estimates for Daily Average Work Units are extremely important to each command's survivability. As previously mentioned, these estimates are utilized by the

$$\text{Crew Days of Backlog} = \frac{\text{Purchase Request Backlog for Reporting Period}}{\text{Daily Average Work Units}}$$

Figure 2.2 Crew Days of Backlog.

Naval Supply System Command to determine future projections for personnel quotas and annual financial budgets. It should be emphasized that the staffing alogrithm for personnel quotas, utilized by NAVSUP, is extremely sensitive to production rates and requires caution to ensure the results are interpreted correctly. Otherwise, an activity could be "rewarded" with larger budgets and personnel quotas based on low productivity and a large backlog of purchase requests. However, it must be understood that low productivity can also be the result of more complex purchase actions and, not simply, the result of poor management of procurement resources.

E. SUMMARY

With well over 98 percent of all procurement actions in the Navy Field Contracting System falling in the category of small purchases, there is little doubt that more and more emphasis will be placed on optimization of assets and customer response time. Each NFCS activity already provides statistical information to NAVSUP, which is being

continually monitored for productivity rates, backlogs, trends and various potential problem areas. Such information allows comparison of each activity based on DAWU, CDB and other managerial evaluations, to ascertain if any imbalances exist in the system.

The figures presently derived from the UMR are NAVSUP's best available means for comparing field contracting activities' productivity rates. Even with the disparities previously mentioned, in the measurement of small purchase workload, the figures do provide a uniform basis for comparison. Until a better system for measuring and reporting procurement productivity has been established and universally accepted, it will be difficult to compare the performance of various activities. Those who will be utimately responsible for determining when it is necessary to shift contract workload must consider these inherent disparities between activities and their reported productivity rates.

III. KEY FACTORS TO BE CONSIDERED IN SHIFTING CONTRACT WORKLOAD

A. INTRODUCTION

Data were collected for this research through interviews with both supervisors and working level personnel at the Navy Field Contracting System activities. These personal interviews and phone conversations intentionally allowed each individual to respond independently. The interviews with the Supply Officer or Director of the field contracting organization and those with their contracting personnel, were designed to ensure their responses were obtained without being influenced by the presence of others or from hearing other personal opinions. Surprisingly, there were no obvious differences between the responses of the supervisors and those at the actual working level as a result of this procedure.

During the analysis of the data, it was discovered that this particular approach provided the researcher with information relevant to the interviewee's perception of their organization's objectives. Although this was not the original intent of the research, it did provide valuable information as to what motivates that person in the performance of his work, and why he emphasized specific factors to be considered in shifting the small purchase workload. These

data were found to be quite helpful in a discussion of productivity and are addressed later in this study.

Another interesting point was, prior to most of the interviewees responding to the basic research question, they wanted to know if the transfer would be on a permanent or temporary basis. The primary reason for asking this question, was their concern for providing the best possible service to their customers. They had several mental reservations about transferring the workload of their biggest customers.

The majority of the interviewees indicated that their selection of purchase requests would be predicated on whether they would have to maintain the purchase history, administer the contract, perform contract follow-ups, or provide requisition status. This question was particulary important to the ICPs, because they use the purchase history on a daily basis as recurring demands for stocked material initiated multiple requirements for the same item. The purchase history provides the buyer with vital information that can reduce administrative processing through consolidation of the inventory requirements.

Other field contracting activities had asked if the transfer would be permanent. They wanted to know if they would have to administer the contract and follow-up on the requirement, if the purchase was transferred to another activity. If the transfer was only temporary, then they

would not want to transfer complex purchase requests that are apt to have administration problems after receipt and inspection. Also, if the transfer is only temporary, then the original procurement activity will still be responsible for providing and updating the requisition status for a purchase action that they had not made.

It should be noted that the researcher refused to limit their responses by indicating whether the transfer would be on a permanent or a temporary basis. Instead, those being interviewed were instructed to respond to both situations, if they felt there would be a difference in their opinion.

B. PRESENTATION OF THE RESEARCH DATA

The research uncovered many opinions on what key factors should be considered. However, only those factors and variables which were mentioned most often and were perceived to make a meaningful contribution towards the decision-making process, will be discussed.

The research data collected during the interviews represent a wide-range of opinions regarding the key factors and variables which should be considered in the decision-making process. It would be too difficult and inaccurate to prioritize each opinion, because they were presented as basically those factors to be considered by the individual transferring the purchase requests. With few exceptions, the interviewees did not attempt to prioritize their responses to the basic research question.

The research data in Table I are presented in order of responses most frequently received during the interviews. This frequency listing does not necessarily equate to a prioritization of the responses. In addition to this listing of the responses for key factors and variables, an explanation and summary of the interviewees' reasons for their responses are given. These summaries provide insight into why they felt these reasons were critical to their decisions on how to shift workload in a sensible manner to improve customer response time for small purchases.

1. Existing BOA, BPA or Automated RFQ

The most frequent response received from those interviewed was to screen all small purchase requests and segregate those which could be procured under an existing Basic Ordering Agreement (BOA) or Blanket Purchase Agreement (BPA). These documents would not be transferred to another activity because of the relative ease with which the purchase order can be placed. Each person readily admitted that the reason they would not transfer these, was because they were the major contributor to increasing their activity's procurement productivity. Furthermore, this was a sensitive issue for most, because the field contracting activity does not obtain credit for the relatively greater amount of time and effort required to prepare the annual renewals of BOAs and BPAs. It is only when orders are placed against a particular BOA or BPA that the activity

TABLE I

RESPONSES FOR KEY FACTORS

KEY FACTOR	DESCRIPTION	RESPONSE RATE
BOA, BPA OR AUTOMATED RFQ	Keep Purchase Requests (PRs) which can be procured with these methods.	21.4%
COMPLEXITY	Transfer only non-technical PRs.	16.1%
UMMIPS PRIORITY (LOW)	Transfer low priority PRs.	10.7%
RECEIVING NFCS ACTIVITY	Keep PRs that are apt to be handled better by present NFCS activity.	10.7%
CUSTOMER	Keep PRs for special customers.	8.9%
PROXIMITY	Keep PRs that require being able to maintain contact with customer or vendor.	8.9%
AGE OF DOCUMENT (NEWEST)	Transfer newest PRs.	7.1%
COMMODITY	Transfer PRs for commodities.	5.4%
"SHOULD COST" KNOWLEDGE	Keep PRs for "speciality" items that will require "should cost knowledge.	5.4%
AGE OF DOCUMENT (OLDEST)	Transfer oldest PRs.	3.6%
SERVICE	Transfer PRs for services.	1.8%

gets credit from the Naval Supply Systems Command for work units.

In addition to segregating small purchase request workload for BOAs and BPAs, the ICPs would also screen for all requirements that can be initiated through the Supply Demand Review (SDR) system. Any procurement action accomplished through the SDR, which produces an automated RFQ, counts as a work unit for productivity purposes, the same as a manual purchase order, but only requires minimal effort.

2. Complexity

The second most often received response to the basic research question, was that of complexity being a key factor in the transfer decision. For those who felt that the technical nature of the purchase action was one of the key factors to be considered, they stated that they would retain the complex purchase requests.

Several of these interviewees argued that the customer becomes accustomed to the administrative requirements at their "normal requisition point of entry," and their small purchase requests have become "personalized." The inherent familiarity of this relationship between the two, provides the buyer with a sensitivity for "what the customer really wants." Furthermore, they felt that the more complex the specifications for the purchase requirement, the higher the probablity of the buyer having to maintain close liaison with the requestor. By retaining the

document in the vicinity of the requestor, costs for communications would be held to a minimum.

Both ICPs felt that they would have to retain specific types of material procurement, because of their unique technical knowledge for the complex properties of "SUBSAFE," "LEVEL ONE," and "FLIGHT SAFETY" material. They firmly believed that it would be too difficult for another field contracting activity to procure these types of requirements without extensive indoctrination and training.

On the other hand, there were those interviewed who believed that unique technical properties should not be used as a key factor in the selection criteria. They believed the argument that no one else could handle "SUBSAFE" and "FLIGHT SAFETY" actions, is not valid. Instead, they postulated that such arguments are the product of a "cult" created by those who buy these unique commodities. They believed the only democratic way of transferring purchase requests from one activity to another, is to exclude any pre-selection of documents.

3. Priority Of The Requirement

Another frequent response regarding key factors to be considered in shifting small purchase workload was that of the priority of the requirement. Most purchasing agents and supervisors felt that this was a critical issue. The majority felt that only low priority documents should be considered and that the high priority purchase requests

would probably never develop into a backlog problem. However, this was not a universal opinion. Some felt that the priority should be irrelevant in this type of situation, when customer requisition response time was becoming unsatisfactory. They felt that they should retain all of their "aged" documents and that they would transfer all new purchase requests, as they are received, regardless of their priority.

4. Who The Purchase Request Is Going To

Perhaps one of the most unusual responses received, was that of having to consider, "Who is the purchase request going to?" When those who made this response were asked to clarify what was meant, they stated that they would never transfer certain types of documents to certain activities. The most frequent explanation of this, was that they would never forward a purchase request for services to an activity on another Coast (i.e., from the West Coast to the East Coast of the United States and vice versa). Furthermore, they would not transfer a document to the other Coast if it was obvious the purchase action would require the buyer and the requestor to maintain close communications in order to perform the procurement action. Finally, they stated that they would have to consider whether or not the distance of the activity from the requestor might result in exorbitant transportation charges if the material were to be procured near the activity performing the purchase action.

5. Customer

Some of those interviewed, maintained an allegiance to their biggest customers, while many held the same allegiance to all of their "regular" local customers. Each of the ICPs and the Naval Research Laboratories stated that for the majority of their workload, they were their own customer. For this reason, they would retain the high priority documents and the speciality items, that were unique to their activity. This was also an important factor to the Navy Regional Contracting Centers and to some of the Naval Supply Centers.

6. Proximity Of The Customer And The Vendor

Proximity of the customer and the vendor was only a minor variable mentioned during the interviews, but was related to the consideration of the customer. As previously mentioned, some felt that the proximity of the customer to the buyer could be significant, if the purchase document appeared to be complex and would require the buyer to be able to contact the requisitioner or vendor during the course of the purchase.

Another reason for consideration of the proximity, is the ability to use the activity's local BOAs or BPAs. In most instances, it would be more economical for communication and transportation expenses, if the field contracting activity, who makes the purchase, were in the same geographical proximity of the requestor. This would be particularly

relevant, if the procuring activity were to utilize its current BOAs and BPAs with local vendors.

7. Age Of The Purchase Request

A few of the individuals stated that the age of the purchase request should be considered. When asked if age of the document should be a factor, almost every interviewee mentioned that they would not transfer any purchase request that had been held over approximately 20 days, for at least two reasons. First it was felt that if they were to shift small purchase requests that were "aged," it would reflect poor management on the part of their organization. These individuals clearly exhibited a sense of pride and integrity in their work and no matter how large their backlog might be, they felt responsible for handling these documents until their completion. However, this was not unanimous.

Secondly, some stated that "aged" procurement actions could come back to "haunt" them, if passed to another activity. They felt that if they passed purchase requests that were difficult to process or to obtain sources for quotes, then the receiver might reciprocate in the future under the opposite circumstances. Furthermore, such action would lack professional integrity and could prompt some form of negative response from the receiver in the form of a report to the Naval Supply Systems Command.

It should be noted, that "aged" documents, as referred to above, pertains only to those purchase requests

which are frustrated because of some form of difficulty, aside from a quantity backlog. These problems could originate from a need for better material specifications, more technical data, identification of a source for the material, or any number of other technical reasons. In most cases, the interviewee was not referring to small purchase requests which were "aged" or "backlogged," simply because the buyers were too busy with other purchases to get to the document to perform the action. Almost everyone agreed that if the situation occurred, where their small purchase backlog became too large and was creating an unsatisfactory customer response time, they would willingly shift the workload, regardless of its age.

8. Miscellaneous Key Factors

Finally, the few remaining responses included such key factors as: commodity or service and "should cost" knowledge. Some of the interviewees believed that only commodities should be transferred, while a few believed only services should be shifted. Others were concerned about "should cost" knowledge being non-transferrable and such knowledge is a critical part of the purchasing process. Although only a few mentioned "should cost," they were extremely adamant about this being a key factor to be considered.

C. SUMMARY

This Chapter examined the factors and variables that key purchasing personnel, throughtout the major NFCS activities, considered to be their highest priorities in shifting small purchase workload. The responses which were received most frequently were perceived to be the most relevant to the basic research question.

The majority of those interviewed felt that prior to transferring any small purchase workload, they would screen the documents to exclude most items which are:

a. Readily available through an existing BOA or BPA;

b. Complex or technical in nature.

c. High priority requisitions;

d. Being transferred to a NFCS activity on the opposite Coast.

e. Important to certain customers and within the local area; and,

f. Overaged documents (greater than 20 days);

Although these represent only a portion of the responses, they were common to almost every interview.

Another common feature to most of the responses, was the concern of each individual to provide the best service possible to the customer. It is readily apparent that many are highly concerned about their personal productivity rate, but rarely would they consider transferring their workload, unless, it would improve the procurement leadtime for the customer.

IV. PREVIOUS ACTIONS TO REDUCE SMALL PURCHASE BACKLOG

A. INTRODUCTION

Over the past five years, there have been occasions when backlogs of small purchase requests at various NFCS activities have become quite large. A few of these became so great, that a decision was made to seek assistance from other field contracting activities outside of the organization holding the backlog. In almost every case, a portion of the backlog documents were collected and transferred to another NFCS activity to be processed. One exception to this strategy occurred when a group of experienced procurement personnel were sent to the activity holding the backlog to supplement the existing procurement workforce.

A review and analysis of some of these previous actions to reduce small purchase backlogs is extremely relevant to this research. The lessons learned from the transfer of procurement workload or work force, provides valuable information for the development of a list of key factors and their relative importance in making future decisions of this nature. As in the previous Chapters, the activities which are being discussed will not be revealed, because to do so would not provide any information pertinent to this study.

B. LESSONS FROM TRANSFER OF SMALL PURCHASE WORKLOAD

The following three cases outlined below were actual situations where small purchase workload was transferred from one NFCS activity to another in an attempt to reduce purchasing backlog. Each case provides certain aspects of shifting contract workload that is worthy of mention and consideration in this study.

1. Case #1

a. Discussion.

Case #1 involved a transfer of several hundred purchase requests from a major Naval Supply Center to a Navy Regional Contracting Center and another Naval Supply Center. The small purchase documents were screened and segregated by commodity. Primarily public works-type material requirements were being sent to the NRCC and most shipboard requirements were sent to the NSC.

b. Lessons Learned.

There were significant lessons learned from the problems encountered by both the receiving activity and the transferring activity. The most important were:

- Confusion was created by different types of requisition documents.
- Not all NFCS activities have ability to provide requistion status.
- Routing and shipping instructions are required.

Customer requistions received from the fleet, which were subsequently transferred from the NSC to the

NRCC, were different from what the NRCC buyers were trained to process. The NRCC was accustomed to receiving open purchase requisitions on the NAVCOMPT Form 2276 from their regular customers, vice the NAVSUP Form 1348-6 received from fleet customers. This problem reduced the productivity rate at the NRCC, because it took time for the buyers to become proficient at using the different forms. Also, the NAVSUP Form 1348-6 requisition form did not contain all of the data required by the NRCC.

Another problem arose in providing the customer with requisition status for the purchase requests. The NRCC does not utilize the Uniform Automated Data Processing System - Stock Point (UADPS-SP) computer system, which normally provides the fleet customer with access to requisition status. Instead, the NRCC returned the entire package to the NSC after the procurement action had been completed. This action meant that the NSC maintained ownership of the documents and was responsible for updating the requisition status in the UADPS-SP system. It should be noted that the majority of the purchase requests were relatively simple which made it highly unlikely that the NSC would be required to provide further assistance.

One of the greatest problems noted was arranging for the transportation of the material. Since the NRCCs are not used to dealing with fleet activities, and do not have access to UADPS-SP, they had no means for obtaining

transportation routing instructions for the various fleet customers which were deployed and moving from one location to another. They also had no "ship to" instructions provided with the documentation. To resolve the problem, the NRCC's purchasing agents arbitrarily decided to ship all material to the orginal holder of the requisitions. This logistics problem was further exacerbated when some of the material was received at the NSC, because the routing instructions indicated the NSC as the ultimate destination. Once the material was received by the NSC, it was inadvertently diverted to their stock.

2. Case #2

a. Discussion.

Case #2 involved the transfer of purchase requests from a small NFCS activity to a NRCC. These documents were not screened or segregated beforehand, but were basically for the procurement of commercial, "off-the-shelf" commodities.

b. Lessons Learned.

- Pre-screening required.
- Point of Contact (POC) required.
- Providing vendor lists increases costs.

The primary lesson learned from Case #2, was the necessity of performing some type of pre-screening process. The NRCC recommended that documents be screened for transferring non-technical items that can be easily awarded and

the completed documentation returned to the original contracting activity for administration. The documents should also be screened to ensure all data are entered on the requisition and a point of contact identified to resolve any discrepancies or related questions.

In this particular case, the transferring activity provided a list of their active BPAs with the purchase requests. Furthermore, they provided a series of BPA "call numbers" to be used by the receiving contract activity to make the awards. Their motive was an attempt to reduce transportation costs from the supplier to the customer. They believed this procedure would also simplify performing corrective action, in the event there were any shipping discrepancies. However, the cost of communications proved to be extremely expensive and their reasonable intentions resulted in additional effort being exerted by the NRCC.

3. Case #3

a. Discussion.

Case #3 was quite similar to Case #2. This case involved the transfer of purchase requests from a small NFCS activity to a large NSC. However, once the smaller activity requested procurement assistance from the NSC, a meeting was scheduled at the activity by the director of small purchase at the supply center. During this meeting, the director outlined the requirements for the transfer by delineating

what type of procurement actions he was willing to accept. In this particular instance, the major restriction was for all purchase requests to be primarily "off-the-shelf" commercial-type items. Individual purchase requests were to have an extended value of less than $10,000. In addition to these restrictions, the transferring activity was requested to ensure their documents were screened for completeness of all applicable data.

b. Lessons Learned.

- Pre-transfer liaison critical.
- Necessity for completeness of documentation.

This case is particularly noteworthy, because unlike the previous two cases, this transfer was considered highly successful by both participants. The pre-transfer liaison with the transferring activity was the contributing factor that made this a successful evolution. By meeting with the transferring activity and outlining the conditions of the transfer, the receiving activity did not have to cope with any "surprises." They knew just exactly what they were going to get, and the transfer package was prepared in a manner that would optimize their processing time. Furthermore, by their stipulation that they would not accept any purchase requests in excess of $10,000, the contracting activity limited the purchase actions to those which could be readily awarded.

The necessity for uniformity of the requisitions and completeness of the data cannot be over-emphasized. This key issue surfaced in most of the interviews as one of the primary causes of decreases in the productivity rate of the receiving activity. Whenever the requisition is incomplete or lacks a proper technical description of the requested item, the buyer must either expend extra time to contact the requestor or must return the document. In the previous two cases, there was seldom a point of contact provided on the requistion. This resulted in the automatic termination of the procurement action whenever the information on the document was insufficient or inadequate to make the award.

C. LESSONS FROM SHIFTING OF WORK FORCE

Only one case was examined where the remedial action for the small purchase backlog was to temporarily supplement the work force of the holding activity with additional buyers from other NFCS activities. This particular case involved experienced purchasing agents from several different NFCS activities. These buyers were organized into a large team dedicated to the completion of several thousand small purchase actions.

1. Discussion.

This unique case represents an entirely different approach in making a concerted effort to reduce a small purchase backlog. As mentioned in the previous cases, the common approach, until now, was to transfer the workload to another NFCS activity. In this situation, the workload would remain stationary, while work force would be shifted. A considerable amount of time was involved in planning and organizing this major evolution.

A primary consideration for augmenting the work force was the main intention of retaining ownership of the purchase requests at the original holding activity. The plan was based on the premise that experienced buyers could easily adapt to any new location. The organizers believed small purchase procedures were similar at all activities. They also believed that the purchasing agents would only require the use of a vendor list provided by the host activity and would only be performing the same tasks that they were already accustomed to (with some minor modifications). The selected purchase requests were considered to be relatively simple, because the RFQs had been previously forwarded to vendors and adequate time had elapsed for their responses. The planners anticipated a rapid completion of the project, because they thought the augment team would only have to review the responses and make the appropriate

purchase award. Furthermore, all clerical functions were to be performed by the host activity.

Unfortunately, the effort was not that simple and the results were somewhat disappointing. However, there were some very beneficial lessons learned as the result of this different approach to reducing small purchase backlog.

2. Lessons Learned.

- Pre-transfer liaison critical
- Advance planning imperative.
- Screening of requirements mandatory.
- Coordination of team is extemely important.
- Requires uniform procedures.
- Adequate clerical and technical support is critical.
- Quality and personal initiative difficult to maintain.

This particular case emphasized, above all else, the extreme importance of screening and validating requirements, prior to taking any remedial action. This issue is important in considering either the transfer of purchase requests from one NFCS activity to another or the temporary transfer of work force to supplement another NFCS activity's present purchasing organization. First, the purchase requests should be screened to validate the requirement with the customer. In many cases, the presence of a backlog could mean that some requirements have become dated and might no longer be needed. There were many examples of outstanding purchase requests that were never cancelled by the

requisitioner, even though the requirement had already been satisfied or simply no longer existed.

Second, the documents should be screened for those which have received a "no bid" response from bidders and even those with no response at all. Some of the "no bid" or no response RFQs were the result of inadequate technical information. Some of the vendors who returned the RFQs with a "no bid," did so because they either no longer handled the requested item, or, in some instances, had never marketed the material and had received the RFQ in error.

There are several reasons for screening a backlog of documents before initiating any remedial action, but the point to be made, is that it must be done! The costs associated with temporarily supplementing another activity's work force is one of the most expensive strategies for reducing small purchase backlog. It is imperative that the workload be screened and organized prior to the arrival of the augment team.

Once the augument team arrives at another activity, it is critical that they be provided adequate indoctrination and training in the unique aspects of the host organization. Without proper guidance and coordination, the effort will be futile and the work force will become less motivated and, subsequently, less productive.

Those responsible for supervising the evolution must be proficient and knowledgeable in their activity's policies

and procedures. The host activity must be at least as experienced in small purchase procedures as those assigned to the augment team. They must be able to respond quickly to any queries from the purchasing agents. One of the biggest problems in this particular evolution was the confusion that was created from conflicting responses of different team coordinators to procedural questions. Such confusion was attributed to the coordinator's lack of experience, differing procurement techniques within the host activity's separate small purchase sections, and ineffective communication of team procedures from the organizers down to the individual visiting purchase agents.

A final lesson learned from transferring purchasing agents to supplement another activity's work force is the need to ensure adequate administrative support. If a large augument team is anticipated, then an equitable support force is a necessity for performing document production and technical support. Once the small purchases have been awarded, it is critical for the documentation to be completed in a timely manner. The completion of portions of the workload reinforces the team's morale. In some cases, the vendor's proposal might expire or the requirement's deadline might become overdue and the material may no longer be needed before the documentation has been completed. If this occurs, the special efforts of the augument team will not only be wasted, but will become anti-climatic.

During the course of the interviews, several of those who were members of the augument team expressed their lack of motivation for performing another activity's workload. They were very candid about their self-initiative being considerably less than what they usually felt for workload for which they would be held responsible. They professed this was because they realized that their activity was not going to get credit for their productivity. Furthermore, they knew that they would never have to see these purchases again and would never have to administer them. Some felt that these were not their initial feelings, but evolved after they became frustrated from the problems previously mentioned. This frustration was compounded after the first month, because of personal feelings experienced from being away from their families and permanent desks.

D. SUMMARY

This Chapter discussed the major lessons learned from previous actions which were attempted within the Navy Field Contracting System to reduce small purchase backlog at various activities. Table II provides a listing of the key factors noted in the previous actions to reduce small purchase backlogs. The lessons learned from these four cases provide valuable data that can be applied to resolving the basic research question, "What key factors should be considered in shifting small purchase workload between the Navy Field Contracting System activities?"

TABLE II

KEY FACTORS FROM LESSONS LEARNED

- Uniformity required for requisition documents.
- Necessity for requisition status.
- Routing and shipping instructions required.
- Point of Contact required.
- Providing vendor lists increases costs.
- Pre-transfer liaison is critical.
- Necessity for completeness of documentation.
- Advance planning imperative.
- Screening of requisitions mandatory.
- Coordination of team is extremely important.
- Requires uniform procedures.
- Provide adequate clerical and technical support.
- Maintain quality and personal initiative.

Perhaps one of the most important lessons learned from all of these previous attempts to reduce small purchase backlogs is the need to screen documentation. This not only holds true for transferring small purchase workload or supplementing the procurement work force, but in maintaining workload on a routine basis. Validation of outstanding

requirements can often be the best means for either handling or preventing a backlog.

The following Chapter will apply the lessons learned presented in this section in analyzing the responses of key factors to consider in the transfer of small purchase workload. The lessons learned are essential to a discussion of the feasibility of workload transfer, as well as ensuring the transfer is done properly.

V. ANALYSIS OF REQUIREMENTS FOR SHIFTING SMALL PURCHASE WORKLOAD

A. INTRODUCTION

The previous Chapters addressed the primary factors and variables that interviewees believed would play a significant role in the shifting of small purchase workload. This information was obtained from two different sources: (1) a review of the wide range of responses from various NFCS activities, and (2) the lessons learned from previous actions to either shift the purchase requests to another NFCS activity or to augment the existing work force of the activity holding the backlog.

Based on this research, it was evident that there was a need to analyze each factor for its individual impact on improving customer response time for the overall system. It is not sufficient to accept each of these simply because some individual considered them significant in the decision-making process. In other words, utilizing some of the recommended key variables to decide which purchase documents should be shifted, would probably have a positive impact on reducing only one activity's backlog. On the other hand, that same transfer of small purchase documents might have a negative impact on customer response time for the overall Navy Field Contracting System. This particular point was emphasized previously in the discussion of the measurement

of productivity, and will continue to play a significant role in this analysis.

B. OPTIMIZATION VS SUBOPTIMIZATION

This study discovered that all of the personnel interviewed during the research agreed, to differing extents, that it is feasible for small purchase workload to be transferred. Although there was substantial agreement that the workload could be shifted, there was considerable disagreement on how the decision-making process should be performed. This disagreement stems in part from the fact that personal opinions sometimes lack adequate knowledge and a thorough understanding of the many problems inherent in considering an untested alternative action.

The analysis is intended to resolve which particular factors should be considered in the transfer that will contribute to optimization of the Navy Field Contracting System's overall customer response time. Only those factors that will optimize the entire system are to be considered in shifting the small purchase workload. The following definitions of optimization and suboptimization are tailored to this study and are provided to clarify the objectives of the analysis.

1. Optimization

Optimization is achieved whenever the effects of the managerial action result in improved customer response times for the entire Navy Field Contracting System. This optimization can be attributed to greater efficiency if there is a decrease in the amount of time required to complete the small purchase action. Whether a key factor has a positive impact is based on its effect on increasing efficiency throughout the system, not at just one particular activity.

2. Suboptimization

Suboptimization of the system is achieved whenever the action results in a positive impact on only a portion of the field contracting activities affected by the transfer. The natural tendency of any manager is to make a decision to transfer workload which will have optimal results for the decision-maker. Unfortunately, the overall effect can be suboptimal, primarily, because management's motivation doesn't lend itself to optimization. The transferring activity in most cases is only going to be concerned with optimizing its own productivity and will ignore considering whether optimization is achieved for the entire system. This is a prime example of how suboptimization can occur because of a lack of analytical thinking on the part of the transferring activity. The final outcome could result in a negative impact on the overall customer response time.

C. MANGERIAL ANALYSIS

Due to the nature of this research, this Chapter will provide a managerial analysis of the various responses discussed in previous Chapters and their impact on both the transferring and the receiving activity. It is intended that such an analysis will provide the reader with a logical thought process to utilize in contemplating the transfer of small purchase workload. The thought process will require a thorough identification and evaluation of the various circumstances pertaining to the workload transfer under consideration. Finally, a successful thought process for shifting of contract workload will require the inclusion of the lessons learned, which were identified previously.

1. When Should The Decision Process Begin?

The thought process for determining if workload should be transferred, begins once the decision-maker has determined that the customer response time for a particular activity (called Activity-A for purposes of this analysis) is significantly greater than other activities. Presently, there is no gauge within the Navy Field Contracting System which acts to indicate when a particular activity has an unsatisfactory response time. An unsatisfactory response time exists when the requirement has not been filled by the customer's required delivery date. Due to this shortcoming in the system, those who are reviewing and evaluating the management reports, must make an arbitrary decision, based

on their experience, in determining when a particular field contracting activity requires external assistance.

It would be too onerous, and beyond the scope of this study, to develop a matrix of parameters for defining an "unsatisfactory condition." Therefore, for this analysis, it has been determined that the decision process should be initiated whenever there are certain conditions which prevail at a field contracting activity. These conditions are those that would preclude the activity with the greater customer response time, from taking any remedial action which would effectively improve the conditions within a reasonable period of time. The effects of the "prevailing conditions" are primarily measured by the activity's statistics for Daily Average Work Units (DAWU) and Crew Days of Backlog (CDB).

Following a review of the monthly trends in productivity rates and current backlogs, those individuals who perform the analysis of the field contracting activities are able to identify trends as they occur. In addition to having the information available for recognizing the trends in productivity rates, it is also possible to determine if disparities in small purchase backlogs exist between the NFCS activities. The culmination of these comparisons of various productivity rates and backlogs provides a logical foundation for selecting potential candidates for

transferring workload and those activities to receive the small purchase documents.

For instance, consider the situation where a particular activity (Activity-A) has maintained a relatively stable productivity rate and has recorded a performance of one hundred DAWUs over the past fiscal year. However, it is also noted that Activity-A's CDB has continually increased during this same period. When compared with the other NFCS activities, the increasing CDB of Activity-A is discovered to be relatively higher. At this point, it is extremely important to emphasize that this portion of the evaluation, alone, does not justify the transfer of small purchase workload. Once Activity-A's CDB becomes significantly greater than the others, this is simply considered an indication that a shift in workload should be contemplated. It should also be noted, that there are several internal management actions for a field contracting activity to pursue for maximizing its efficiency. However, this study will only focus on the transfer of the workload or work force as a means for improving customer response time.

2. Potential Candidates for Transferring and Receiving Workload

The decision to transfer workload should only be made when the action is anticipated to result in a noticeable improvement in the overall response time for the entire system. Therefore, the next step in the analysis is to determine which activities could perform the procurement

action and which of those activities would optimize the NFCS's customer response time. The effects of a transfer of workload from Activity-A to all potential receiving activities will have to be evaluated on an individual basis, in order to respond to these questions.

First of all, those activities with a greater CDB and a lower productivity rate than Activity-A should be eliminated immediately. To transfer the workload to these activities would improve the backlog of Activity-A, but would worsen the customer response time for accomplishing the purchase actions. The outcome for this extreme is rather obvious. Secondly, a little less obvious, would be the possible outcome for those activities whose CDB or productivity rate is comparable to Activity-A. If another activity has the same CDB as Activity-A, but a lower productivity rate, then the response time will be longer if the workload is transferred. However, the same results will not be true in the opposite situation, where Activity-B has a smaller CDB, but the same productivity rate. This decision would be more efficient and would result in better response time, than if left to Activity-A to perform the purchase action.

There are still two less obvious and even more extreme options remaining. One alternative would be to shift the workload to those activities with smaller CDB and a lower productivity rate. The other would be to transfer

small purchase actions to another activity with a higher CDB, but with a higher productivity rate. These two options would require much more scrutiny to ascertain whether the response time could actually be improved by the transfer. The point to be made here, is that both of these options represent other viable alternatives, which are available to the decision-maker.

Finally, there is one more obvious outcome, but one which can normally be expected to improve the customer response time. In almost all instances, the response time will improve when workload is transferred from Activity-A to an activity with a smaller CDB and a higher productivity rate. This action will almost assuredly have an optimal impact on improving the overall customer response time for the entire Navy Field Contracting System.

D. SUMMARY

In summary, the first portion of the analysis has dealt with the primary evaluations which must be made in deciding to transfer small purchase workload. The two primary questions are:

1. When should the decision process begin?
2. How should potential activities for transferring and receiving small purchase requests be selected?

The identification of trends in any NFCS activity's DAWU and CDB, provides the impetus for initiating some logical thought process for the transfer of small purchase workload.

An adverse trend simply means that prevailing conditions are creating an unsatisfactory customer response time. Once the trend is identified, then each activity's productivity rate should be analyzed and compared to select potential receivers for the unsatisfactory backlog. Following this comparison, the analyst should be able to select those activities which will provide optimization of resources in the event of a transfer.

Optimization of the system's resources is achieved when the shifting of contract workload from Activity-A to Activity-B, results in achieving an overall improvement in the customer response time for the entire Navy Field Contracting System. The greatest potential for achieving optimization exists when Activity-B exhibits the following characteristics:

1. Smaller CDB and a higher productivity rate.
2. Smaller CDB and the same productivity rate;
3. Higher CDB but a higher productivity rate; and,
4. Smaller CDB and a lower productivity rate;

In the next Chapter, the remainder of the analysis will concentrate on selecting the evaluating criteria for determining how small purchase documents should be screened for the transfer of workload.

VI. ANALYSIS OF SCREENING SMALL PURCHASE REQUESTS FOR TRANSFER

A. INTRODUCTION

The second portion of the analysis concentrates on the document screening process. Once the decisions have been made that shifting of the contract workload is feasible and the optimal transferring and receiving activities have been selected, then, potential small purchase documents must be screened for the transfer. This screening is critical to the success of the transfer and requires full and active participation by all activities involved in the evolution.

B. THREE GENERAL CATEGORIES OF PURCHASE REQUESTS

The achievement of this success involves the utmost of logical thought processes in the selective screening of the small purchase requests. It requires evaluating the various types of purchase documents, which up until the time of the screening, have probably never been reviewed and categorized. Nevertheless, each document should be evaluated as a potential purchase action to be transferred.

In order to perform the screening, it is imperative that specific criteria be determined for the three general categories of documents. The three general types (in most cases) are those documents which: (1) should be transferred, (2) should not be transferred, and, (3) could

possibly be transferred. The order of their selection is irrelevant as long as the first two types of documents are selected first. Once these two categories have been segregated, the third category of documents will logically be the remaining small purchase actions, which are those which could possibly be transferred.

1. Documents Which Should Not Be Transferred

For purposes of this analysis, the first general category to be discussed will be those documents that should not be transferred. In other words, these are the documents that, in most instances, can be accomplished more efficiently by Activity-A. This efficiency could be gained from retaining either those documents Activity-A is most adept at performing, or those that would require more effort to prepare for transferring than would be required to perform the purchase. The primary intent for not transferring these selected documents, is to achieve optimization of NFCS contracting resources. This general category may be further divided into three different areas of requirements:

1. Specialization
2. Established BOA, BPA or Automated RFQ
3. Complexity

a. Specialization

One means for achieving optimization is through the retention of those documents which the transferring activity is most adept at performing. If an activity is

noted for specializing in the procurement of certain requirements, then that activity should be evaluated for retaining versus transferring those purchase actions that pertain to their specialization. Those activities which have experience in the procurement of certain items and are routinely purchased by their personnel, will usually maintain a record of the purchase actions which is extremely valuable. These records provide information for what the items "should cost." Many interviewees believed this to be a critical argument for retaining certain documents during the decision-making process.

An optimal approach should consider the retention of all documents for requirements that Activity-A is most knowledgeable of and is conversant in the technical aspects of that particular commodity. However, retention would not be optimal unless the evaluation, simultaneously, considers the present backlog and productivity rates of both the transferring and the receiving activity. If Activity-A's backlog is too great to ensure the most expeditious procurement of those items they are proficient in buying, then and only then, should they be transferred.

b. Established BOA, BPA, or Automated RFQ

Once Activity-A has screened potential documents for transfer to another NFCS activity, optimization of system assets can be realized from the retention of those requirements which can be quickly satisfied. One of the

simplest and most expeditious means for performing a procurement action is through the use of existing BOAs, BPAs or automated RFQs. These small purchase requests require minimal additional processing by Activity-A's purchase agent and, therefore, should not be transferred. Furthermore, efficiency dictates ensuring there is little or no duplication of effort, if at all possible. If the documents were transferred, then Activity-B would be duplicating the same document review effort already accomplished by Activity-A. While the initial effort is being expended on screening documents for possible transfer, a simultaneous screening should be performed against those requirements for which Activity-A already has established BOAs or BPAs which can be utilized for procuring the requirement.

This same, logical thought process holds true for automated RFQs. If an automated RFQ has already been issued to the perspective suppliers and their proposals have been received, time can usually be optimized if Activity-A completes the action, rather than transferring it.

Admittedly, in both of the above illustrations, it is possible for BOAs, BPAs and automated RFQs to be transferred. The receiving activity could exercise the BOAs and BPAs of the transferring activity, as well as award a contract on the transferring activity's automated RFQ. However, the point to be made, is that the amount of time expended in transferring the documents might very well

exceed the time expended before the transferring activity could make the award. This alternative issue must be considered for each of these type of purchase actions.

Although not an issue in this study, it probably seems obvious to the reader, that an argument for centralized procurement can be supported by the above illustration. Perhaps centralized procurement is one of the most efficient means of procurement available. If a particular activity has a BOA or BPA already established for specific commodities, it is usually due to a heavy demand for that commodity which could possibly be better served by this means.

c. Complexity

Those small purchase requests which are considered relatively complex, should fall into the category of documents which should be retained. Although slightly less definitive, this excludes those complex documents which meet the criteria for specialization. During the screening process, a certain number of documents will obviously be more complex, due to the very technical nature of the requirement. These particular documents are inherently difficult to process and equally difficult to administer once the contract has been awarded. The more complex purchase requests will usually have a higher potential for post-award, follow-up action. These unique characteristics demand considerably more coordination between the purchase agent and the suppliers. Furthermore, they require a

relatively greater amount of communication between the purchase agent and the customer.

The more complex small purchase document presents a somewhat different type of dilemma for the decision-maker. Primarily, it requires a greater analysis of the impact on the receiving activity. This in-depth analysis should include the amount of time required for the purchase agent to deal directly with the supplier and the customer for resolving technical issues. If the engineering expertise is a part of Activity-A's organization, as in the case of the Navy Laboratories and Inventory Control Points, then a transfer should only be attempted in the most extreme situations. In most instances, complex documents should not be transferred.

Before proceeding with defining those types of documents which fall into the next category, the reader should realize that any of the above documents should be transferred, if the transfer action will result in an improvement in the overall customer response time. However, for this category of documents, the possibility of this occurring is rather remote.

2. Documents Which Should Be Transferred

The second category of small purchase documents to be segregated should be those which could easily be transferred to another NFCS activity.

a. Commercial Products

These requirements are relatively generic in comparison to those which should not be transferred. This category is typically composed of commercial, "off-the-shelf" products. In other words, these are items which are readily available in the economy and can be obtained with very little technical description. It should be noted that many of the commercial products are available through established BOAs and BPAs. This particular category consists of those commercial items which are excluded from current BOAs and BPAs, and will require a separate purchase order.

The researcher is aware of the similarity of these two areas, which have been assigned to two separate categories. The primary difference is based almost entirely on the requirement to issue a separate purchase order in making the award. The shifting of these commercial, off-the-shelf products, should be the greatest source of transfer documents for optimizing the system's assets.

b. Low UMMIPS Priority

Once Activity-A has been selected to transfer small purchase workload, it is advantageous for the Navy Field Contracting System to continue shifting a sufficient number of purchase actions until the adverse situation has either been corrected or the disparity between the NFCS organizations no longer exits. A considerable number of potential documents will be eliminated after being screened

for the previous types of documents. However, if the remaining number of documents is insufficient for optimizing the transfer, then any of the previous requirements, with a low UMMIPS priority should be selected.

For instance, it would probably be more sensible to transfer a low priority document, even though it is a highly complex purchase action, in order to ensure optimization is achieved. Transferring low priority documents will not always be the most efficient use of the system's assets, even though customer response time will be improved. The decision-maker will have to consider this point before making the ultimate decision.

c. Specialization Available at Activity-B

The last type of document to be considered in the category of those small purchase requests which should be transferred, are those where the procurement specialization is available at Activity-B. This strategy is basically one of promoting centralized procurement, because it takes advantage of the expertise of Activity-B and consolidates purchase actions by commodity. The more technically complex the requirement, the greater the benefits to be reaped from this type of transfer. It would not be sensible to retain those purchase actions with which Activity-A has had no previous experience in procuring.

3. Documents Which Could Be Transferred

The final category of documents is, primarily, those small purchase documents remaining after completing all of the above screening. Documents which could be transferred are also composed of those which should not be transferred, except under certain circumstances which increase efficiency if transferred to Activity-B. Once again, the overriding factor in the thought process is whether it would be more efficient for Activity-A to retain the documents or to transfer them to Activity-B, all things being considered.

C. SELECTION CRITERIA FOR SCREENING PROCESS

Once the screening for documents to be transferred has been completed, there are still several requirements to be met before they may physically be transferred. The lessons learned from previous shifts of contract workload and work force, provide several experience factors to support this portion of the analysis. These requirements are basically sound, managerial traits which have proven to be successful in previous situations.

1. Screening of Requisitions

The success of any transfer is almost totally dependent on the completeness and uniformity of the small purchase requests. No matter how proficient an activity might be, if the information is inadequate on the purchase document, then the requirement will probably be delayed. The success of the transfer of contract workload is

predicated on increased efficiency which will result in an overall improvement in the Navy Field Contracting System's customer response time. No matter how optimal the transfer might appear, based on the previous discussion of the three general categories, any unnecessary delay due to inadequate information, will ultimately negate the apparent success. Although the information should be verified for completeness prior to the transfer, each document should provide a point of contact to be reached in the event of a problem.

2. Advance Planning

Equally important to the success of the transfer is the need for advance planning. Both transferring activities and receiving activities must play an equal role in the advance planning process. This can be accomplished by a pre-transfer liaison between both activities. The advance planning process should outline every imaginable situation, down to the most minute detail, including at least the following:

1. What types of documents will the receiving activity be able to accept?
2. What commodities is the receiving activity most proficient at performing (including established BOAs and BPAs)?
3. What dollar threshold should be maintained (if deemed necessary)?
4. How many documents can be accommodated by the receiving activity?

In the case of a transfer of work force, the advance planning should also incorporate the development of a set of

uniform procurement procedures to be communicated, simultaneously, to the entire assemblage of the augment force. The coordination of the team is not only critical for ensuring efficiency in production, but will benefit the promotion of quality and personal initiative.

Finally, the planning should incorporate the requirements for adequate clerical and technical support to sustain the additional work force. Each of these must be mandatory requirements, once the decision has been made to augment the work force.

D. SUMMARY

The previous two Chapters have provided an analysis of the logical thought process necessary to implement a successful transfer of small purchase workload. The first portion of the analysis was concerned with those requirements which play a critical role in deciding if there is a significant adverse trend in any activity's productivity rate, which might subsequently, be detrimental to their customer response time. Once this trend has been identified, the analysis must evaluate each NFCS activity as a potential candidate to receive the shifted contract workload.

The second portion of the analysis concentrated on the evaluation criteria for screening potential small purchase documents for an optimal transfer. Once the decisions have been made that optimization can be achieved by a transfer

and which activities will be involved, each document must be screened and categorized. The three basic categories provide a foundation for selecting which documents can be transferred and will optimize the system's assets. In most instances, the majority of documents can be categorically identified as to whether they should be transferred. However, each of these categories of documents can be reevaluated in different circumstances, when the disparity of backlogs and response times between NFCS activities is so great as to change the results of the original analysis.

VII. CONCLUSIONS AND RECOMMENDATIONS

A. SUMMARY

From 1980 to the present, the U.S. Navy has enjoyed a rapid expansion of its force structure with highly sophisticated weapon systems. However, along with this advancement there has been a commensurate increase in demand for spares and repair parts to maintain these new assets. The logistic problems associated with this demand have generated considerable consternation over longer customer response times. One option for decreasing customer response time is to distribute small purchase workload equitably among field contracting activities.

The principal reason for undertaking this research effort was to determine the feasibility of shifting small purchase workload. Once this was ascertained, the study concentrated on how to develop a logical thought process for transferring the documents. Suggestions from key contracting personnel were encouraged for implementing a plan for transferring small purchase requirements. These suggestions were identified as the key factors and variables which should be considered in the decision-making process.

The biggest obstacle encountered was attempting to factor out those suggestions which would only result in suboptimization for the Navy Field Contracting System

(NFCS). This problem was resolved by defining a logical thought process for selecting various types of workload. The process was basically one of analyzing each factor for its impact on efficiency.

As a result of this study, conclusions were reached regarding the present situation for small purchase backlog. Along with these conclusions, some recommendations are made concerning the development of selection criteria for making a sensible decision for shifting contract workload between Navy Field Contracting System activities.

B. CONCLUSIONS

Conclusion #1. It is feasible to shift contract workload between Navy Field Contracting System activities. This study found that all personnel interviewed during the research agreed, to differing extents, that it is feasible for small purchase workload to be transferred. Although there was substantial agreement that the workload could be shifted, there was considerable disagreement on how the decision-making process should be performed. The feasibility of the decision is based on the ability to achieve greater efficiency and improved customer response time through the transfer of small purchase workload.

Conclusion #2. According to the most frequent responses of key contracting personnel interviewed, there are specific key factors and variables to be considered in the decision to shift small purchase workload among Navy Field

Contracting System activities. As discussed in Chapter III, many of the activities contacted stated that the primary factors they believed should be considered in the decision to shift small purchase workload are: (1) whether the requirement can be procured through an existing Basic Ordering Agreement (BOA), Blanket Purchasing Agreement (BPA), or automated Request For Quotations (RFQ); (2) the technical complexity of the requirement; (3) the Uniform Material Movement and Issue Priority System (UMMIPS) priority; (4) the receiver of the shifted workload; (5) the customer; (6) proximity of the contracting activity to the customer and supplier; and, (7) the age of the document.

Conclusion #3. The primary objective in transferring small purchase workload should be to improve customer response time. In Chapters V and VI, the analysis of requirements to consider for shifting small purchase workload emphasized the need to determine which factors would optimize the efficiency of the entire Navy Field Contracting System. The necessity for screening purchase actions for possible transfer requires a substantial amount of time and manpower. In order to ensure that these significant expenditures are justified, the decision to transfer workload should only be made in those situations when the remedial action has the greatest probability for improving the overall customer response time.

Conclusion #4. The type of purchase actions which would be the most susceptible to transfer between field contracting activities are commercial, "off-the-shelf" requirements. As discussed in Chapter VI, small purchase requests for commercial items are the simpliest types of documents to transfer. This can be attributed to the least amount of technical information being required on the document and the relative ease with which any purchase agent with minimal buying skills can make the award. In other words, these types of documents require little preparation for transfer and can be shifted to almost any purchasing agent or activity.

Conclusion #5. The type of purchase actions which are the least susceptible to transfer between field contracting activities are those which are complex, high priority requirements which are likely to be difficult to administer and have a greater probability for follow-up action. Chapter VI outlined the characteristics of purchase documents which tend to require the maximum amount of time to prepare for transfer. A considerable amount of time is required to screen complex documents for completeness and to ensure they are properly prepared for the transfer. The same time can be used in preparing the purchase actions for solicitation and can save valuable time in expediting the requirement to meet the desired delivery date. Finally, it is better to retain documents at the contracting activity

which is nearest the customer, if there is a high probability for significant follow-up action. The logic of this statement is based on the relative ease in contacting both customers and suppliers who are in the same proximity as the field contracting activity.

Conclusion #6. This study found no evidence to support the contention that a principal customer is a key factor to be considered in the transfer decision. The principal customer was mentioned frequently by interviewees as a key factor to be considered in the workload transfer decision. Although this was discussed in Chapter III as one of the key responses, no substantiating evidence surfaced during this research which solidly supported this item as a key factor. It is understandable that the Inventory Control Points and Naval Research Laboratories will have a natural tendency to want to retain their own documents, since they are their biggest customer. However, if the analysis of the particular situation has determined that a shifting of the workload will optimize the overall customer response time for the entire Navy Field Contracting System, then there is little justification for retaining these documents.

Conclusion #7. There are no significant differences of opinion between small purchase supervisors and their purchase agents concerning the key factors and variables in transferring workload. Individual interviews were conducted to differentiate between responses from those individuals

with supervisory positions of contract personnel and those responses from personnel at the small purchase working level. A review of these responses reveals that both groups had similar views concerning what factors should be considered in transferring small purchase workload.

Conclusion #8. Presently, Daily Average Work Units (DAWU) and Crew Days of Backlog (CDB) are the most common methods of measuring productivity in the Navy Field Contracting System (NFCS). Even though there is a considerable disparity between the different types of documents which represent a single work unit, these measurements of productivity are significant indicators for comparing procurement trends in the NFCS. However, an argument can be made that small purchase work units have not been defined adequately.

Conclusion #9. Most Navy Field Contracting System activities are functionally organized by commodity to accomplish small purchase actions. Each major field contracting activity in this study was categorized into specific groups according to their functional organization and was evaluated for other possible similarities within these special groups. However, there were no additional organizational similarities discovered as a result of this strategy and, therefore, no further conclusions can be drawn from this information.

C. RECOMMENDATIONS

Recommendation #1. Small purchase documents should be shifted between Navy Field Contracting System activities as a viable means for improving overall customer response time. A mass transfer of small purchase workload is not recommended because such an action would probably not automatically improve customer response time. Any remedial action incorporating a shifting of workload will require a logical thought process which considers the prevailing conditions of each activity involved in the transfer evolution.

Recommendation #2. The decision to transfer workload should be predicated on optimizing customer response time for the entire Navy Field Contracting System. The Naval Supply Systems Command should continue to monitor and compare the productivity rates and backlogs of each field contracting activity. Along with this, it is also recommended that a more equitable measure of productivity be developed to enhance the analysis. Comparisons should continue to be made to identify adverse trends in procurement productivity for each field contracting activity. These indicators should be the impetus for initiating an evaluation process for potential transfer. The shifting of contract workload should only be made once the decision-maker has determined that optimization can be achieved from the workload transfer.

Recommendation #3. The decision to transfer small purchase workload should be a two step process. As discussed in Chapter V, the first step in the decision to transfer small purchase workload is to decide if a shift in a backlog from one field contracting activity to another will result in an improvement in overall customer response time. This decision will require a determination of which activities should transfer their workload and which activities are able to receive the workload and capable of completing the action in a shorter period of time. The greatest potential for achieving optimization exists when the receiving activity exhibits one of the following characteristics: (1) smaller Crew Days of Backlog (CDB) and a higher productivity rate; (2) smaller CDB and the same productivity rate; (3) higher CDB but a higher productivity rate; and, (4) smaller CDB and a lower productivity rate.

The second step, which is discussed in Chapter VI, is the selection of documents to be transferred. The selection process must determine which documents should be transferred, which cannot be transferred and which could possibly be transferred. It is recommended that commercial, "off-the-shelf" requirements be considered first for transfer, while technically complex, high priority documents be considered for retention. The most important consideration in any situation, is whether the transfer will result in an optimization of the system's assets.

D. REVIEW OF RESEARCH QUESTIONS

Question #1. Is it feasible to shift contract workload between Navy Field Contracting System activities? The results of this study were conclusive in ascertaining that it is feasible to shift contract workload between the Navy Field Contracting System activities. Almost every individual who was interviewed, stated that at least some portion of their small purchase workload could be transferred. However, there was considerable disagreement on how the workload should be transferred and what types of documents could be shifted.

Question #2. What would be the key factors and variables to be considered in shifting contract workload between Navy Field Contracting System activities? As discussed in Chapters III through VI, this study found that the Daily Average Work Units (DAWU) and the Crew Days of Backlog (CDB) are the primary factors to be considered in the decision for whether small purchase workload should be transferred. On the other hand, the type of commodity or service was found to be the greatest determining factor for selecting which purchase actions to transfer. The selection of potential purchase documents for transfer should be based on a logical thought process for evaluating which activities could perform the procurement action in the shortest period of time. This thought process should incorporate evaluation

criteria for comparing each activity's adeptness for procuring the various types of requirements.

Question #3. What primary reasons make these the key factors which should be considered in the decision-making process? This question is a continuation of the previous question and was also discussed in Chapters III through VI. The DAWU and CDB are valid key indicators of procurement trends and should be the impetus for initiating an analysis of each Navy Field Contracting System activity for a possible transfer of workload. Once the decision has been made to make the shift, there are several other factors to be considered in selecting which small purchase requests should be selected for the transfer.

The factors for selecting potential small purchase documents for transfer are discussed in Chapter VI and are segregated into three general categories of documents: (1) those which should be transferred, (2) those which should not be transferred, and, (3) those which could possibly be transferred. The selection of the first two categories is based on whether it is more efficient for the document to be transferred or retained. Small purchase requests which should be retained are those which Activity-A is the more proficient at procuring. This proficiency could be due to previous experience in purchasing a particular item and/or Activity-A has an established BOA or BPA for that item. Finally, complex procurements should be retained if they

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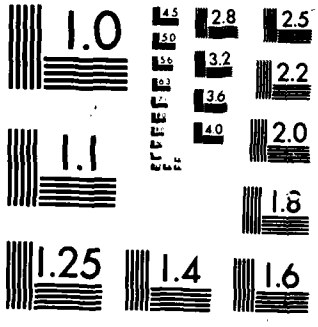

will require considerable communications between the purchase agent, customer or supplier.

Low Uniform Material Movement and Issue Priority System (UMMIPS) priority and commercial, "off-the-shelf" items make up the majority of requirements which should be transferred. Also, any items which Activity-B might specialize in buying should be shifted. The last category of documents are those which could possibly be transferred. This category is primarily composed of any of the above documents, which if transferred, would result in increased efficiency of system assets and improved customer response time.

Question #4. How is the small purchase workload functionally organized and distributed among the buyers (by commodity, customer, workload, weapons system, etc.)? Most Navy Field Contracting System activities have been functionally organized by commodity or workload. Chapter II discussed the various types of major field contracting activities and their organizational structure. The organizational structure is believed to have no direct impact on the shifting of contract workload.

Question #5. How is small purchase workload presently being measured? Each procurement action under $25,000, no matter how difficult to administer, is credited as a single work unit for the small purchase workload. As previously discussed in Chapter II, Crew Days of Backlog (CDB) is the ratio of the purchase request backlog for the reporting

period divided by the Daily Average Work Units (DAWU). The CDB represents the number of work units pending at each field contracting activity and is measured and monitored each month by the Naval Supply Systems Command. These statistics are reported in the monthly Uniform Management Report and are used for comparison of backlogs.

Question #6. How is productivity measured? This question was also discussed in Chapter II. The productivity rate for each field contracting activity is measured each month and is calculated as the Daily Average Work Units (DAWU) in the Uniform Management Report. The DAWU is the ratio of total work units accomplished for the period divided by the total number of work days in the reporting period.

E. AREAS OF FURTHER STUDY

A study should be done to refine the present definition of small purchase work units. The need to apply a universally acceptable measurement of small purchase work units is evident from the findings of this study. Although the present measurement is adequate as an indicator of adverse trends in productivity rates and backlogs, it is considered too crude for purposes of comparison of field contracting activities. Furthermore, a better definition of a work unit will hopefully provide a solution to ensure contract workload is properly and equally distributed. Unless there is a valid means for measuring the workload, the selection of the

number of documents and the type of documents can only be an educated "guess" at best.

With the emphasis on productivity as the foundation for the NAVSUP budget formulation process, the same work units are instrumental in the survivability of each field contracting activity. The value of a better measurement system is that it will provide a more reasonable evaluation of an activity's productivity and can ensure each activity is adequately compensated for actual work performed.

APPENDIX

INTERVIEWS

1. Anderson, M.
   Navy Regional Contracting Center
   Washington, D.C.
   19 August 1985

2. Anholt, J.
   Aviation Supply Office
   Philadelphia, Pennsylvania
   21 August 1985

3. Barker, B.
   Navy Regional Contracting Center
   Washington, D.C.
   19 August 1985

4. Carpenter, L.H., CDR, SC, USN
   D. Taylor Naval Ship R&D Center
   Carder Rock, MD
   20 August 1985

5. Cartwright, D.
   Ships Parts Control Center
   Mechanicsburg, Pennsylvania
   22 August 1985

6. Cohen, J.M., CDR, SC, USN
   Naval Supply Systems Command
   Washington, D.C.
   19 August 1985

7. Desmaret, B.
   Navy Regional Contracting Center
   Philadelphia, Pennsylvania
   29 October 1985

8. Fisher, B.
   D. Taylor Naval Ship R&D Center
   Carder Rock, Maryland
   20 August 1985

9. Grant, C.W., CDR, SC, USN
   Aviation Supply Office
   Philadelphia, Pennsylvania
   21 August 1985

10. Gross, R.A., CAPT, SC, USN
Naval Regional Contracting Center
Philadelphia, Pennsylvania
21 August 1985

11. Harris, R.E., CDR, SC, USN
Aviation Supply Office
Philadelphia, Pennsylvania
21 August 1985

12. Hart, E.N., LCDR, SC, USN
Navy Regional Contracting Center
Philadelphia, Pennsylvania
21 August 1985

13. Hennigan, K.
Naval Supply Systems Command
Washington, D.C.
20 August 1985

14. Hirsh, J.
Naval Supply Systems Command
Washington, D.C.
19 August 1985

15. Howdyshell, R.J., CDR, SC, USN
Naval Regional Contracting Center
Philadelphia, Pennsylvania
21 August 1985

16. Jarman, C.A., CAPT, SC, USN
Naval Supply Systems Command (SUP-02)
Washington, D.C.
24 October 1985

17. Kline, B.
Ships Parts Control Center
Mechanicsburg, Pennsylvania
7 November 1985

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Navy Regional Contracting Center
Washington, D.C.
19 August 1985

19. Mastandrea, G.A., CAPT, SC, USN
Ships Parts Control Center (Code 200)
Mechanicsburg, Pennsylvania
22 August 1985

20. Matsushima, R.F., CDR, SC, USN
Supervisor of Shipbuilding, Repair and Conversion
Seattle, Washington
21 November 1985

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Naval Supply Center
Charleston, South Carolina
12 November 1985

22. Meltz, B.
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Naval Supply Center
Puget Sound, Washington
15 November 1985

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Naval Supply Center
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Navy Regional Contracting Center
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33. Stempel, J.
Aviation Supply Office
Philadelphia, Pennsylvania
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Naval Regional Contracting Center
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Naval Supply Center
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Naval Supply Center
Oakland, California
24 July 1985

39. Walker, P.
Naval Supply Center
Oakland, California
24 July 1985

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Naval Supply Center
Oakland, California
24 July 1985

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China Lake, California
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9. LCDR Douglas W. Brown, SC, USN 1
SUP-042B
Naval Supply Systems Command
Department of the Navy
Washington, D.C. 20376

10. Mr. John Olio 1
Logistics Management Institute
6400 Goldsboro Road
Bethesda, Maryland 20817-5886

11. CDR Leaven Carpenter, SC, USN 1
David Taylor Naval Ship R&D Center
Bethesda, Maryland 20084-5000

12. LCDR G. M. Gannaway, SC, USN 3
6362 North Shore Court
West Bloomfield, Michigan 48033

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