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THESIS

REQUIRED DELIVERY DATE,
AN ALTERNATIVE TO PROCUREMENT
ADMINISTRATIVE LEAD TIME?

by

Robert Jennings Vickers

December 1993

Thesis Advisor: David Lamm

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13. ABSTRACT *(maximum 200 words)*

The Navy Field Contracting System (NFCS) uses Procurement Administrative Lead Time (PALT) as the primary indicator of procurement effectiveness. However, many procurement activities are attempting to use other indicators to measure procurement effectiveness. Required Delivery Date (RDD) is one measure that has been proposed as a replacement or addition to PALT.

A survey of 62 procurement professionals in the NFCS was conducted in order to gauge the reaction to the proposed use of RDD. Respondents indicated that using RDD as an indicator of performance was a good concept, but that it was impractical due to the number of unrealistic RDDs provided by customers. It was further concluded that other concerns such as: obtaining valid receipt dates; additional buyer workload; and vendor considerations may also complicate the use of RDD as a measurement tool. This thesis recommends that activities must decide for themselves if the benefits of measuring RDD outweigh the costs of implementing a system designed to track and measure RDD.

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Required Delivery Date (RDD),
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by

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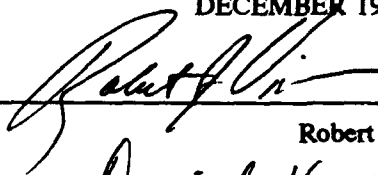of the requirements for the degree of

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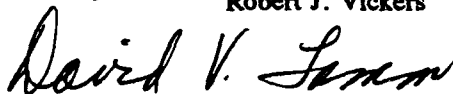
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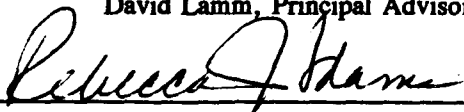DECEMBER 1993

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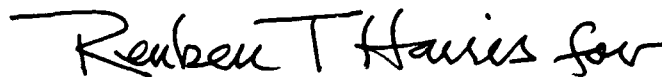
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ABSTRACT

The Navy Field Contracting System (NFCS) uses Procurement Administrative Lead Time (PALT) as the primary indicator of procurement effectiveness. However, many procurement activities are attempting to use other indicators to measure procurement effectiveness. Required Delivery Date (RDD) is one measure that has been proposed as a replacement or addition to PALT.

A survey of 62 procurement professionals in the NFCS was conducted in order to gauge the reaction to the proposed use of RDD. Respondents indicated that using RDD as an indicator or performance was a good concept, but that it was impractical due to the number of unrealistic RDDs provided by customers. It was further concluded that other concerns such as: obtaining valid receipt dates; additional buyer workload; and vendor considerations may also complicate the use of RDD as a measurement tool. This thesis recommends that activities must decide for themselves if the benefits of measuring RDD outweigh the costs of implementing a system designed to track and measure RDD.

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I. INTRODUCTION

A. GENERAL

Many procurement activities within the Navy Field
Contracting System (NFCS) are attempting to use other
indicators to measure procurement effectiveness. Required
Delivery Date (RDD) is one measure that has been proposed as
a replacement or addition to Procurement Administrative Lead
Time as a Measure of Effectiveness (MOE) for the procurement
process. This thesis will summarize data, related to RDD,
that was received from procurement professionals within the
NFCS and then analyze that data to determine if RDD should be
used as a MOE for the procurement process.

B. OBJECTIVES

The NFCS uses PALT as the primary indicator of procurement
effectiveness. PALT, however, measures only a portion of the
overall procurement process and tells us little about how well
procurement activities are doing to satisfy individual
customer requirements.

This study will focus on evaluating the use of Required
Delivery Date as an alternative to PALT, or as an additional
MOE that can be used in conjunction with PALT.

C. RESEARCH QUESTIONS

Based on the objective cited above, the following primary research question is addressed in this study: **Should Required Delivery Date (RDD) be used as a Measure of Effectiveness for the procurement process?** In support of the primary research question, the following subsidiary questions are addressed:

1. What is currently used to measure the effectiveness of the procurement process?

2. What are the advantages and disadvantages of this measurement?

3. How would RDD be used as a MOE to evaluate the procurement process?

4. What are the advantages and disadvantages of using RDD?

5. What is required to implement RDD within the Navy Field Contracting System?

D. SCOPE, LIMITATIONS, AND ASSUMPTIONS

The scope of this thesis is to address the issue of whether or not the NFCS should use RDD as a MOE for evaluating procurement effectiveness. The thesis will focus exclusively on Small Purchase procurements (less than $25,000).

This study is limited to the identification of the key factors and variables that must be considered if RDD were to be implemented as a MOE. It does not attempt to develop a standard method but cites an example of how to measure RDD, and how it might then be used to evaluate the procurement

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process. The thesis does not provide a cost-benefit or tradeoff analysis.

Throughout this study, it is assumed that the reader is familiar with the NFCS, Small Purchase procedures, and the Federal Procurement process. It is further assumed that the reader is familiar with basic Naval terminology and with basic contracting and acquisition terminology.

E. RESEARCH METHODOLOGY

The information presented in this thesis was obtained through a variety of sources. Initially, the researcher conducted an extensive literature search. This entailed obtaining a custom bibliography from the Defense Logistics Study Information Exchange (DLSIE) which turned up little in the way of related articles, studies, or theses. A DIALOGE search of Government and Industry literature pertaining to the research topic was also undertaken with little success. The following descriptors were used for the search; procurement, purchasing, contracting, administrative, leadtime, process, evaluation, measurement, Department of Defense, Armed Forces, Armed Services, Army, Navy, and Air Force. Additionally, various Total Quality Management (TQM) texts were reviewed in order to obtain a TQM perspective that could be applied toward the research question. The bulk of information for the thesis was gathered through the use of a survey questionnaire that was aimed at senior procurement professionals (both military

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and civilian), and senior buyers, all of whom are working or have worked in Small Purchase procurement within the NFCS. Lastly, research data applicable to the general thesis research topic was collected via personal and telephone interviews.

F. ORGANIZATION OF THE THESIS

This thesis consists of five chapters. Chapter I has outlined the objectives of the thesis in addition to providing comment on the scope of the thesis and research methodology used.

Chapter II provides background information relating to the procurement process and how PALT is used as an indicator of procurement effectiveness. Chapter II also discusses RDD and displays how it might be used.

Chapter III presents the results obtained from the literature search, personal and telephone interviews, and survey questionnaires.

Chapter IV is a review, discussion and analysis of the data collected. Advantages and disadvantages of both PALT and RDD will be listed.

Chapter V summarizes the results of the research and presents conclusions and recommendations. Answers to the research questions will be presented as will recommendations for further research.

II. BACKGROUND

A. NAVAL SUPPLY SYSTEMS COMMAND AND THE NAVY FIELD CONTRACTING SYSTEM

The Naval Supply Systems Command (NAVSUP) is responsible for providing procurement policies and administrative guidelines for Field Contracting activities as the Head of the Contracting Activity (HCA) for the NFCS. As such, NAVSUP sets and implements all Navy-wide small purchase policy and is responsible for ensuring Procurement Management Reviews (PMRs) are performed on all NFCS activities.[Ref 21]

The NFCS is comprised of approximately 960 procurement activities who have either large purchase authority (>$25,000), small purchase authority (<$25,000), or both. Fifteen activities make-up the NAVSUP claimancy which includes the Navy Regional Contracting Centers (NRCCs), Fleet and Industrial Supply Centers (FISCs), Ships Parts Control Center (SPCC), and the Aviation Supply Office (ASO). The remainder of procurement activities in the NFCS belong to other claimants.[Ref 21]

The Navy Field Contracting System has worldwide coverage. Shore establishments are located throughout the Continental United States, Europe, the Indian Ocean, Asia, Australia, New Zealand, and wherever the Fleet is located. During fiscal

year 1992, these activities completed over 1.8 million small purchase actions totaling more than $2.5 billion. The majority of NFCS activities have only small purchase authority ranging from $2,500 up to $25,000. There are approximately 1,600 buyers (General Service Series 1105s) within the NFCS who are responsible for procuring a myriad of goods and services: Fleet supplies and services; replenishment spares, repairables, and Designated Overhaul Point repair services for system stock; supplies and services for Navy Industrial activities; ADP equipment, software, and maintenance; and Base Operating goods and services. Purchasing offices can have as few as one buyer or as many as 60 buyers who perform their mission using manual to fully automated systems. [Ref 21]

The above statistics point out the wide diversity of activities within the NFCS. The primary indicator used to measure procurement effectiveness for all these activities is PALT. However, PALT is not the only indicator. NAVSUP, as well as many individual procurement activities, use various indicators to manage and analyze the effectiveness of the procurement function. NAVSUP views PALT as simply one indicator and states:

> Procurement Administrative Lead Time (PALT) along with workload, funding and productivity data taken collectively are the primary measures of the effectiveness of the procurement function. [Ref 22]

The next section will define PALT and provide examples of how it is used.

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B. PROCUREMENT ADMINISTRATIVE LEAD TIME (PALT)

Procurement Administrative Lead Time is defined as the number of calendar days from the date of receipt of a Purchase Request (PR), or similar initiation of a procurement action in the purchasing component of the activity, to the date on which a binding order is awarded. NAVSUP considers it essential that NFCS activities measure and manage their PALT and that PALT be publicized to customers for use in advance procurement planning. [Ref 23] NAVSUP Instruction 4200.84B states:

> To anticipate PALT for the various types and dollar values of contract actions is critically important to meeting needed delivery/performance dates and obligation targets as well as awarding an inordinate number of contract awards at the end of the fiscal year. These published PALT times should serve as a planning guide for requiring activities and as cutoff dates for submission of requirements for contract award prior to the close of the fiscal year. [Ref 23]

Navy Field Contracting activities report PALT statistics to NAVSUP who then compiles the data to be used for analysis and for reporting to higher authority. As mentioned previously, in addition to PALT, NAVSUP uses other indicators of effectiveness to assess and manage activities within their claimancy (NRCCs, FISCs, SPCC, and ASO). Additional indicators include; total receipts (PRs), total completions, backlog, productivity rate, man-hours, staffing, and Productive Unit Resources (PURs). Recently, NAVSUP has instituted Statistical Process Control (SPC) for analyzing PALT statistics using a five year average and basing it on the

activity's mix of workload. NAVSUP currently does not use RDD as a measure of effectiveness.

Individual procurement activities also rely heavily on PALT statistics to tell them how well they are performing. Increasingly, however, activities are searching for other measures that can provide a more comprehensive picture of performance, both from an efficiency and a customer service standpoint. Activities have started using many of the same indicators that NAVSUP uses plus others; average age of work-in-process, stratified PALT, number of line items completed per hour, number of modifications, customer surveys, etc. Some activities are attempting to use RDD in various forms but they are the exception. The next section will describe RDD and show how one activity proposes its use to measure the total procurement process, provide meaningful management information, and help improve customer satisfaction.

C. REQUIRED DELIVERY DATE (RDD)

Required Delivery Date is one of the mandatory entries on a requisition for supplies or services. This entry corresponds to the number of days the customer is willing to wait for his material to be received, in other words when he wants to receive his material (e.g., an RDD of 030 means the customer wants the material on or before 30 days from the requisition date). Thus, if a purchasing activity meets a customer's RDD, then one of the components to totally

satisfying the customer's needs has been met, namely
timeliness, the other two being "right price" and "right
quality".

D. FLEET AND INDUSTRIAL SUPPLY CENTER, SAN DIEGO, RDD CONCEPT

The Fleet and Industrial Supply Center in San Diego has
developed a method whereby RDD could be used as another
indicator to help manage the procurement process and provide
better customer service. This approach is shown here simply
to give the reader an appreciation of how RDD can be used to
monitor system performance and ultimately provide greater
customer satisfaction. Obviously, other methods could be
used, from measuring system performance without comparison to
a customer's RDD, to simply changing management philosophy,
"manage workflow and buy to RDD". The costs and benefits vary
with any method chosen and must be weighed against each other
in order to determine if one method should be chosen over the
others, or if the status quo should be maintained.

Figure 1 depicts FISC Naval Station's (San Diego) system
flow diagram for processing a routine Purchase Order. This
was developed by a Work Flow Analysis Process Action Team
(hence referred to as the PAT), a part of FISC's Total Quality
Management program focusing on processes. As can be seen from
the time line, PALT measures only a small portion of the
process, from the time an input clerk enters the requisition
in Automated Procurement and Accounting Data Entry (APADE),

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System Flow Diagram for Processing a Routine Purchase Order at FISC Naval Station

Figure 1
Source: Procurement PAT, FISC, San Diego 3/93

until the buyer awards and releases the contract. PALT fails to measure customer processing time (preparation and submission of the requirement in a form acceptable to the purchasing activity), technical and supervisor review time prior to assignment to a buyer, purchase order printing time, time required to sort and distribute PRs at the FISC, Postal Service handling time, supplier processing time, carrier delivery time, receipt and inspection time, and ultimately FISC delivery time to the customer.

The PAT views FISC's Open Purchase time-related indicators as incomplete and/or non-customer relevant. They see PALT as an internal measure that does not provide an indication as to how well the FISC is satisfying the customer. Their proposal is to use the customer's RDD and track the days-left-from-RDD as the requisition travels through the various processing stages. Figure 2 presents a set of parameters in a linear scale representing time that may be used to calculate Timeliness/Speed indicators. Customer Allowed Time (CAT) is based on the date the customer submits the requisition (RID) and the required delivery date (RDD). [Ref 20: p 2]

Figure 2 also illustrates two new time concepts to monitor under a new Timeliness Tracking System: Open Purchase Processing Time (OPPT) and Remaining Days From Allowed Time (RDAT). OPPT corresponds to the time it takes to process a PR from requisition in-date to release date. This time is then compared to CAT to determine FISC timeliness performance.

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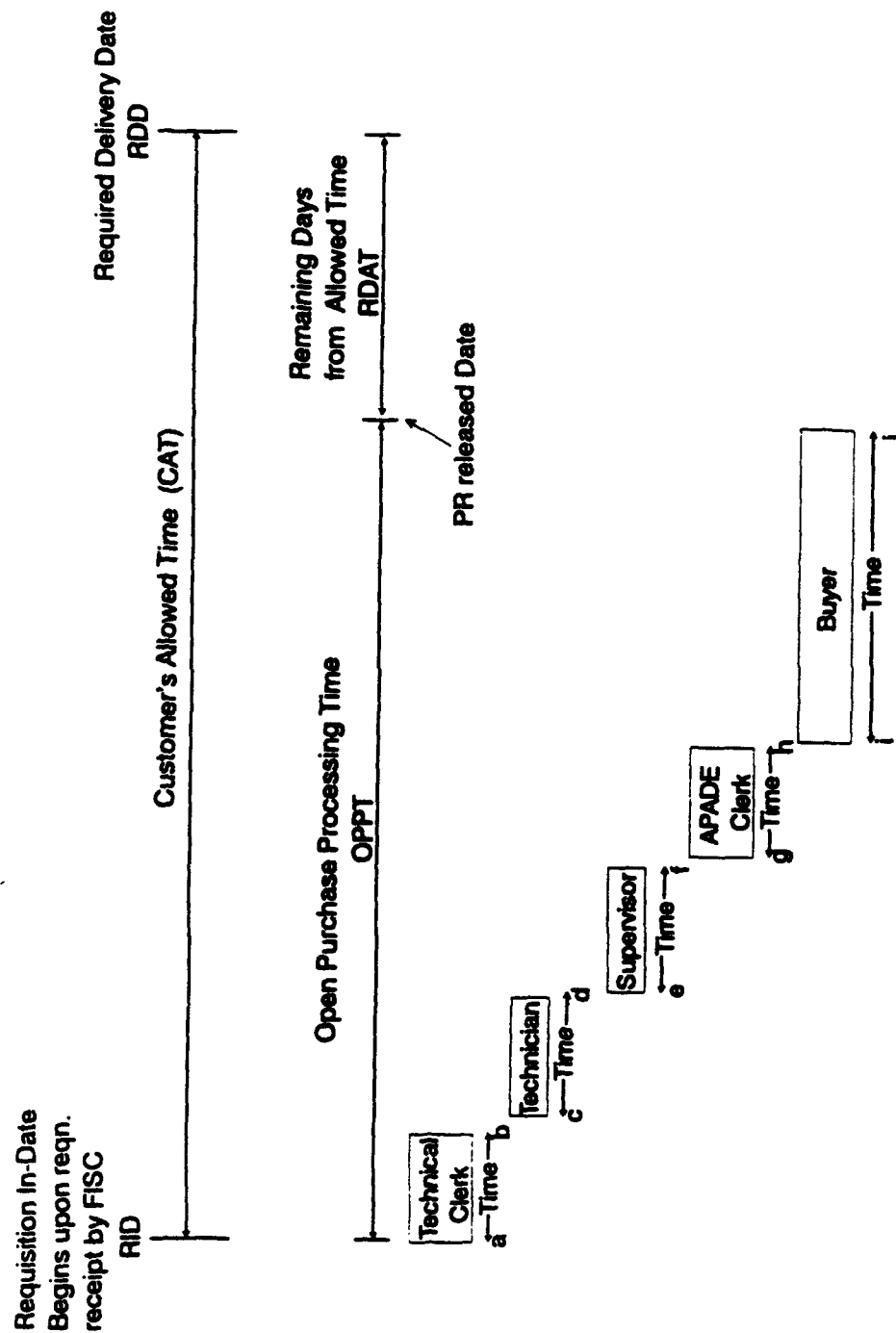
Figure 2
Source: Procurement PAT, FISC, San Diego 3/93

RDAT then represents the remaining time allowed for all other parties in the process to deliver within RDD. In order to have complete visibility of the process, all separate stages, from Technical Clerk to Buyer time would have to be measured.[Ref 20: p 4]

Figures 3 and 4 provide examples of these concepts and introduce Speed Performance indices for tracking how well FISC and the entire purchasing system are doing based on customer RDDs.

Figure 3 is an example of how FISC and the entire system performs within customer timeliness specifications:

- The top bar represents a customer allowed time of 32 days. It is measured from RID to RDD.

- The second bar represents the purchasing system turn around time (SYSTAT). This time is measured from RID to actual delivery date (ADD). As this bar shows, SYSTAT time is 28 days or 4 days earlier than RDD.

- The next bar represents FISC Open Purchase Processing Time (OPPT). It is measured from RID to purchase order release date. In the example, this time is 20 days out of the 32 days allowed by the customer. Therefore the Remaining Days From Allowed Time (RDAT) is 12 days. RDAT is a different and more compelling measure than other measures currently monitored because it is based on a customer timeliness specification.

- The last bar shows Delivery Turn Around Time. It represents the time that it takes the remaining components of the system to deliver the item to the customer. In the example this time is 8 days or 4 days earlier than RDD as illustrated by the second bar. [Ref 20: p 6]

Procurement Process Speed Performance Indicators
Based on Customer Required Delivery Date

An In-the-Black Scenario

RID

Requisition In-Date
Begins upon reqn receipt
by FISC

Required Delivery Date   RDD

Actual Delivery Date   ADD

Allowed Time by Customer = 32 Days

FISC Open Purchase Processing Time (OPPT) = 20 Days

PR Release Date

Delivery Turn
Around Time

DTAT = 8 Days →

4 Days Early

RDAT = 12 Days

Remaining Days
from Allowed Time
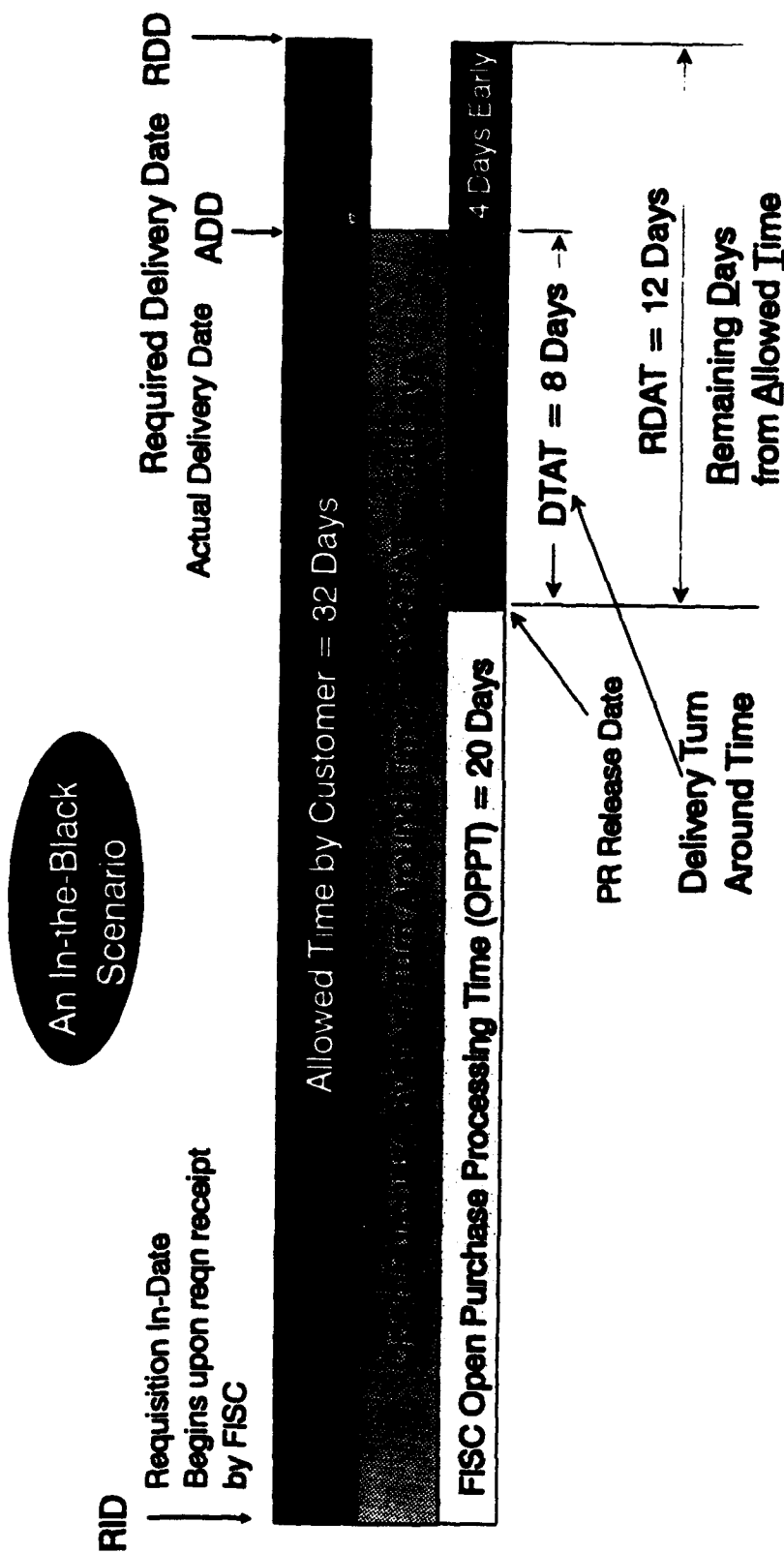
1) Remaining Days from Allowed Time (RDAT) = 12 Days

2) FISC SPI = FISC Speed Performance Index = OPPT ÷ Allowed Time = 0.62

3) Procurement System Index SPI = SYSTAT ÷ Allowed Time = 0.87

4) DTAT = Delivery Turn Around Time = 8 Days

Figure 3
Source: Procurement PAT, FISC, San Diego 3/93

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The bottom portion of Figure 3 shows three Speed Performance Indices (SPI) to monitor timeliness performance under the proposed system based on RDD:

- Point 2 shows FISC SPI, calculated by dividing "Allowed Time" by "FISC Open Purchase Turn Around Time". In order to provide greater chances for the entire system to meet the required delivery date, the index should be targeted at a to-be-determined-level (less than 1.0). For example, a FISC SPI of 0.62 meaning that 62% of the customer allowed time has been consumed by FISC and the other components of the system have 38% of the remaining allowed time to deliver within RDD. The closer the index is to 1.0 the more time FISC has taken from RDD to process the purchase request and therefore there is less chance that the RDD will be met.

- Point 4 shows the procurement system Speed Performance Index. This is calculated by dividing the System Turn Around Time (SYSTAT) by the allowed time specified by the customer. In the example, this index is 0.87, which means that the item was delivered within 87% of the allowed time. The ideal system SPI would be 1.0, implying a just-in-time delivery in which the item was delivered on the day specified by the RDD. [Ref 20: pp 6-7]

The PAT believes that additional indices should be developed to track suppliers' timeliness performance. However, RDD might not be a good indication of suppliers' performance since FISC might consume all the customer's allowed time making it impossible for suppliers to meet the RDD. [Ref 20: p 7]

Figure 4 depicts another example, except this time the actual delivery date exceeds the required delivery date by 10 days. In this example, RDAT becomes minus 2 days, meaning that FISC released the purchase request 2 days after RDD. The DTAT was 8 days which yields the same supplier's speed

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Procurement Process Speed Performance Indicators
Based on Customer Required Delivery Date

An In-the-Red Scenario

RID — Requisition In-Date
Begins upon reqn receipt by FISC

Required Delivery Date
RDD

Actual Delivery Date
ADD

Allowed Time by Customer = 32 Days

10 Days Late

FISC Open Purchase Processing Time (OPPT) = 34 Days

DTAT = -8 Days

RDAT = -2 Days

PR Release Date

Delivery Turn Around Time

Remaining Days from Allowed Time

1) Remaining Days from Allowed Time (RDAT) = -2 Days

2) FISC SPI = FISC Speed Performance Index = OPPT + Allowed Time = 1.06

3) Procurement System Index SPI = SYSTAT + Allowed Time = 1.32

4) DTAT = Delivery Turn Around Time = -8 Days
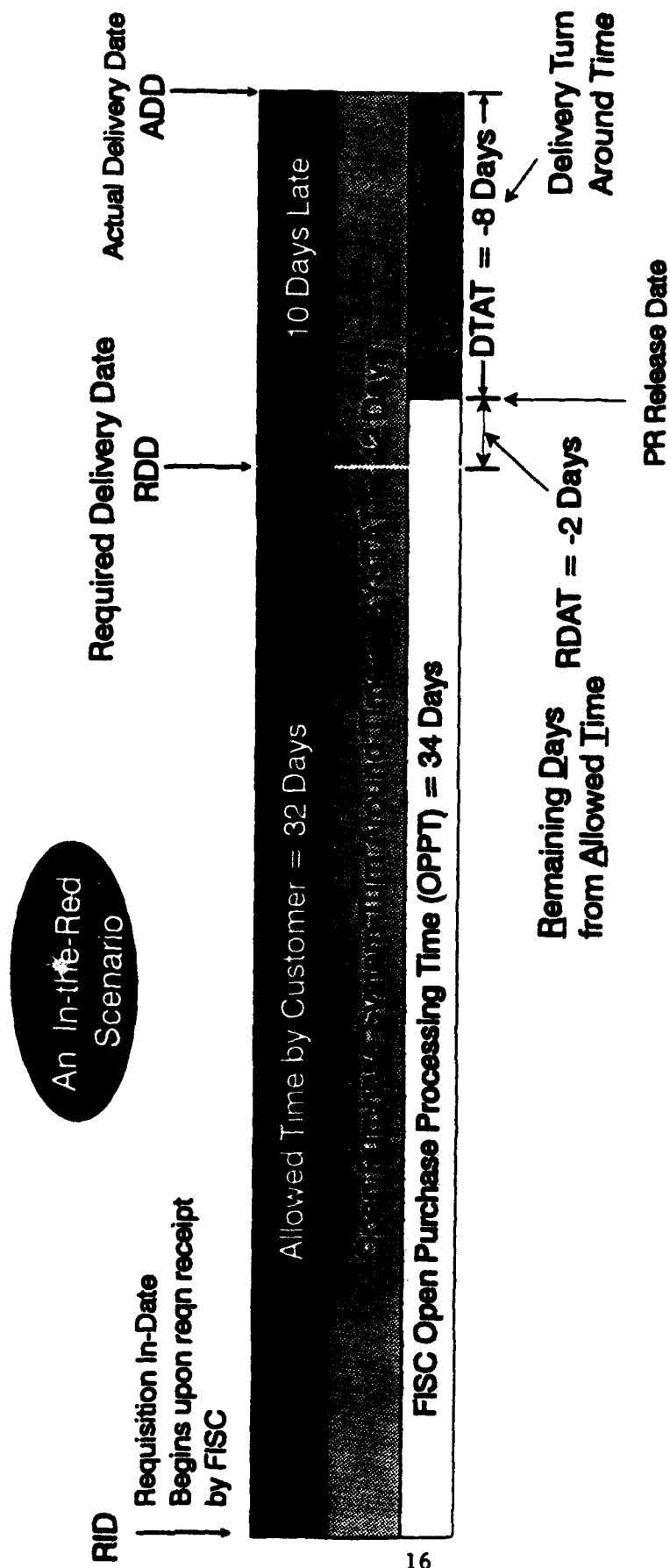
Figure 4
Source: Procurement PAT, FISC, San Diego 3/93

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performance level as in the previous example. However, from the system's perspective, this delivery/supplier's performance does not make any difference because the RDD has already passed. [Ref 20: p 7]

The SPI, greater than 1.0, shown at the bottom of the chart indicates that RDD was not met. FISC's SPI was 1.06 meaning that allowed time was exceeded by 6% and the system's SPI was 1.32 meaning the combined purchasing and delivery time exceeded RDD by 32%.

Figure 5 is an example of a FISC Purchase Request Speed Performance Indicator Report. The example shows how the data could be used to develop an overall FISC Speed Performance Indicator, in this example a value of 1.27.

Figure 5 introduces one of the problems that FISC must overcome in order to implement this system. In the example there is no procurement system Speed Performance Indicator since FISC currently has no way of inputing receipt information into APADE. Other problems pointed out by the PAT were:

1. The RID must be initiated by entering the requisition in APADE upon receipt from the customer. This poses a problem under current operations because APADE initiates PALT when the requisition is assigned to the buyer.

2. RDD itself and consequently the customer's allowed time may not be reasonable and may require the launching of a customer educational campaign to assist him/her in selecting a more realistic RDD based on the type of item, type of requisition and possibly real time constraints.

EXAMPLE

FISC Purchase Request
Speed Performance Indicator Report

				Work In-Process					Days Allowed	Open Purchase Processing Days	(RDAT) Remaining Days from RDD	FISC Speed Performance Indicator
Current Date	Buyer	PR#	PR Date	RDD	Days Allowed	Age Days in FISC	Release Date					
93016	2000BE	93006LEGT	93006	93030	24	10						
		93015LBMZ	93015	93022	7	1						
		93004LBRH	93004	93014	10	12						
		92360LDJK	92360	93010	15	6	93001		15	6		0.0
		93004LAHA	93004	93013	9	8	93012		9	8		0.0
		93004LDXL	93004	93013	9	12	93016		9	12		
				AVERAGE	74	49		OVERALL	33	26		1.27

93016	2000MA	93...
		93...

Figure 5
Source: Procurement PAT, FISC, San Diego 3/93

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3. The purchasing system itself, may be incapable of performing within the time allowed by the customer. Current process capabilities were identified during data collection based on type of buy and payment method. Part of the proposed requisition tracking system includes a constant charting of timeliness process capability in an effort to not only uncover special causes of variation but also to help reduce the turn around time and normal variation. [Ref 20: p 4]

In summary, the PAT proposes an approach that entails tracking RDD throughout the procurement process, measuring RDD against the actual receipt date, and using RDD and in-process measures to calculate speed performance indicators. This information can then be used to manage the process, start to finish. However, the PAT does recognize some problems, mentioned above, that must be corrected before implementing this approach. In addition, the researcher concludes that other problems might be encountered such as obtaining actual receipt dates, normalizing RDD statistics so as not to penalize certain vendors, creating additional buyer workload, and implementing RDD at activities that are not automated.

Required Delivery Date, used as a measurement tool, can provide procurement managers and buyers with greater information with which to manage the procurement process. However, is the cost of obtaining that information greater than the benefit derived from having that information? Chapter III presents data obtained from procurement professionals regarding their views concerning RDD, PALT, and managing the procurement process.

III. DATA PRESENTATION

A. GENERAL

The results of the two major research activities, survey questionnaire and personal interviews, are presented in this chapter. A statistical analysis of the questionnaire results is provided along with a synopsis of the interviews. Chapter IV will provide a discussion and analysis of the data presented in this chapter.

B. SURVEY QUESTIONNAIRE

1. General Comments Regarding the Survey and Target Audience.

The survey questionnaire was designed to answer the thesis research questions and provide a means by which procurement professionals could freely convey their thoughts and attitudes concerning PALT and RDD. A copy of the questionnaire is provided in Appendix A. The survey consisted of twelve scaled response questions (rate the statement from "1" to "5" with "1" being "strongly disagree" and "5" being "strongly agree"), six short answer questions, two multiple choice questions, and one scaled response question for rating impediments to implementing RDD. Respondents were requested to provide comments where applicable. Appendix B provides a complete list of those comments.

The survey was aimed at senior procurement professionals (both military and civilian), and senior buyers, who are currently working, or have worked, in Small Purchase procurement within the NFCS. In all, sixty-two individuals from a total of twenty-nine activities, out of thirty-four contacted (85% response), responded to the survey. Appendix C provides a list of activities that responded to the survey. Twenty-one military officers and enlisted personnel responded. Military respondents included; seven Commanders, eight Lieutenant Commanders, three Lieutenants, one Lieutenant Junior Grade, one Master Chief Petty Officer, and one Chief Petty Officer. Forty-one civilian General Service/Manager (GS/M) personnel responded, ranging from GS-7 to GM-15. The mean for GS/M personnel was 10.78. The contract/purchase experience of the personnel who responded to the survey was extensive. Of the 62 respondents, 50 had over four years experience, 10 had from two to four years experience, and two individuals had from one to two years experience. Slightly more than half (58%) of the respondents have been in their current billet/position for longer than two years.

2. **Description and Summary of Results.**

The summarized raw responses to the survey are provided on the following pages. Each paragraph shows the statement as it appeared on the survey and a graphical depiction of the summarized responses. The mean, standard

deviation, and Confidence Interval (CI) range are provided where appropriate. Finally, a summary of comments is provided in an attempt to categorize the respondents' remarks (listed in their entirety in Appendix B). Chapter IV presents a thorough discussion and analysis of the results presented in this chapter.

a. *Question 1. PALT, by itself, is a valid indicator of small purchase effectiveness.*
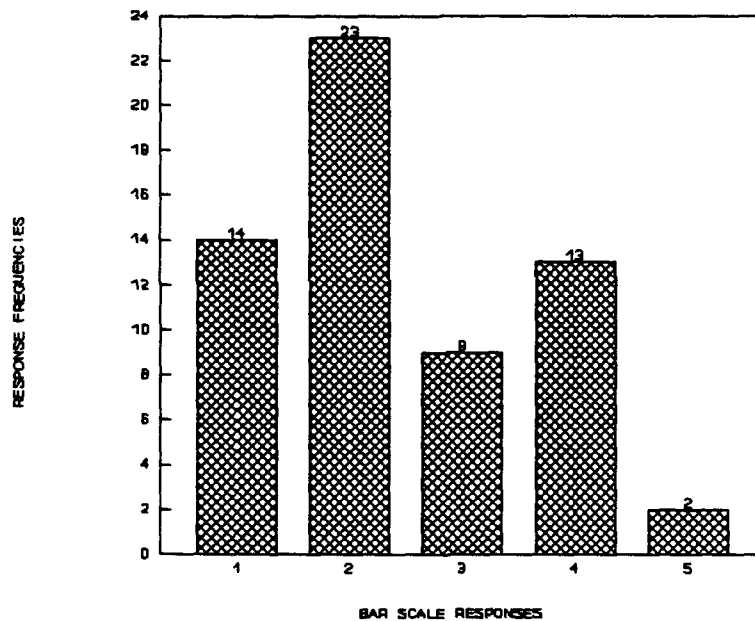
FIGURE 6: RESPONSES TO QUESTION 1
MEAN SCORE: 2.443
STANDARD DEVIATION: 1.162
CI RANGE: 2.145-2.740
N=61

The majority of respondents (61%) disagreed with the statement. Only two out of sixty-one strongly agreed with the statement. Responses would thus tend to indicate that PALT, by itself, is not a valid indicator of small purchase effectiveness. A large percentage of comments (43%) tended to emphasize this result, pointing out that PALT is only one indicator and should not be used alone. Three comments stated that PALT can be too easily manipulated and thus was not an adequate measure. Two comments tended to favor PALT as a measurement, but with certain qualifying statements. One comment focused on the customer service aspect, that purchasing needs to ensure the customer receives a quality product at a reasonable price. One other comment said that PALT only measures the productivity of the purchasing department.

b. *Question 2. In my opinion, some other MOE should be used to measure small purchase effectiveness.*

As Figure 7 points out, 47 out of 62 responses (76%) either strongly agreed or agreed with the statement. No respondents strongly disagreed with the statement. The sample thus supports the idea that some other measure should be used to measure small purchase effectiveness. Forty-seven percent of the comments supported using PALT in conjunction with one or more measures of effectiveness. Two comments said PALT was okay as is. Two comments said PALT should be used in

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conjunction with RDD. Other comments suggested using indicators such as weighted measures, percent of POs, and PALT based on priority.
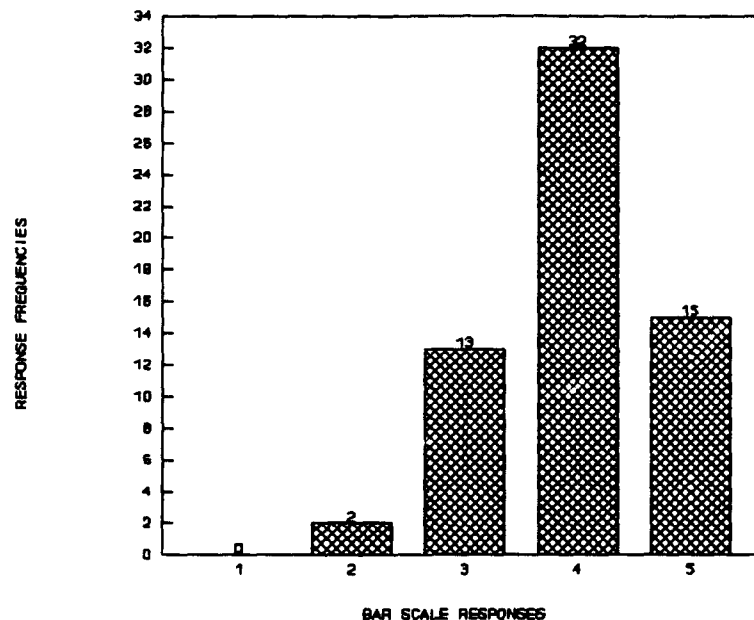
FIGURE 7:   RESPONSES TO QUESTION 2
             MEAN SCORE: 3.968
             STANDARD DEVIATION: 0.768
             CI RANGE: 3.773-4.163
             N=62

c. *Question 3.   PALT statistics serve no useful purpose for our customers.*

A slight majority (53%) disagreed with the statement. Coinciding with the mixed results shown in Figure 8, the comments were equally split between PALT being useful to customers and PALT <u>not</u> being useful to customers. Other

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comments: PALT is misunderstood by customers; PALT is not accurate as currently measured; and PALT may be useful to management and inspection teams, but not to customers.
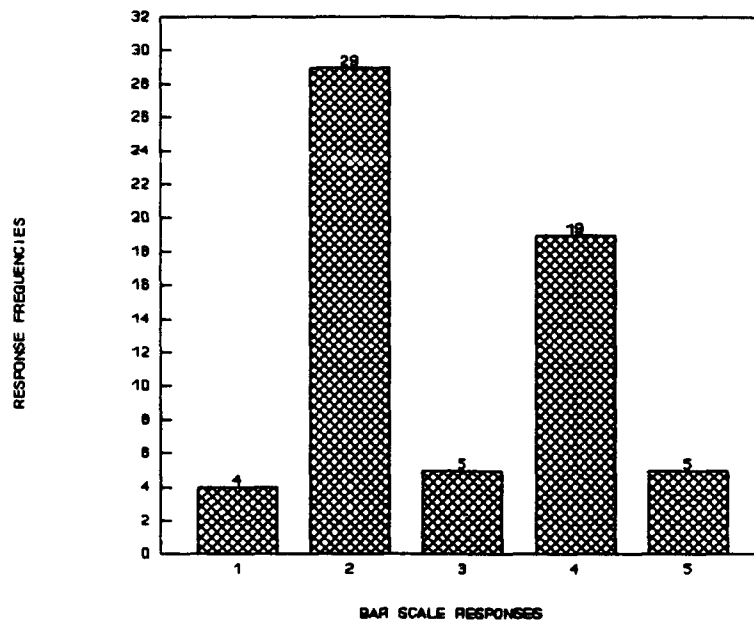
FIGURE 8: RESPONSES TO QUESTION 3
MEAN: 2.871
STANDARD DEVIATION: 1.166
CI RANGE: 2.575-3.167
N=62

d. *Question 4.* **PALT statistics can be easily manipulated.**
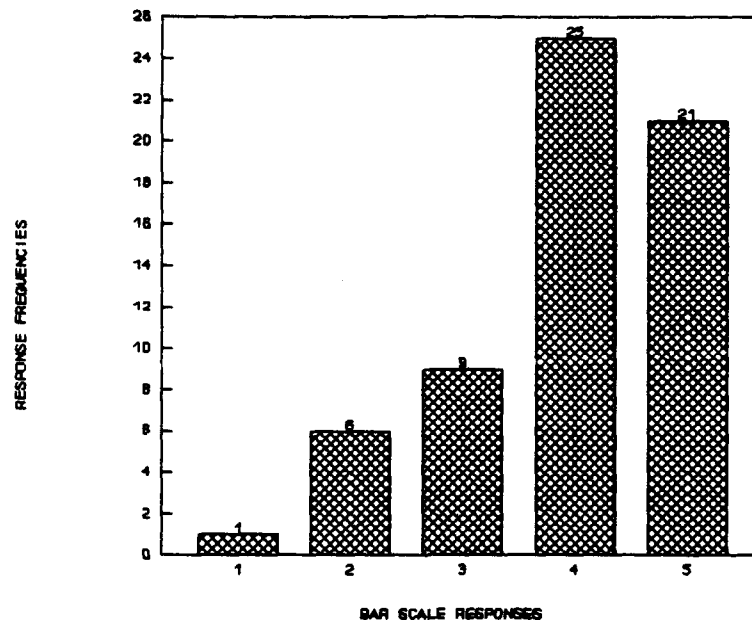
FIGURE 9:   RESPONSES TO QUESTION 4
MEAN: 3.952
STANDARD DEVIATION: 1.015
CI RANGE: 3.694-4.209
N=62

A majority of responses favored the statement as 46 out of 62 respondents either agreed or strongly agreed (74%). Only one individual strongly disagreed with the statement. The results thus favor the statement that PALT is easily manipulated and six out of nine comments stressed the point that PALT can be manipulated. However, three comments said that PALT is not easy to manipulate on automated systems. One comment stated just the opposite, that PALT can be manipulated on an automated system and even gave an example.

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e. *Question 5.* *PALT statistics tell me very little about how well I am serving my customers.*
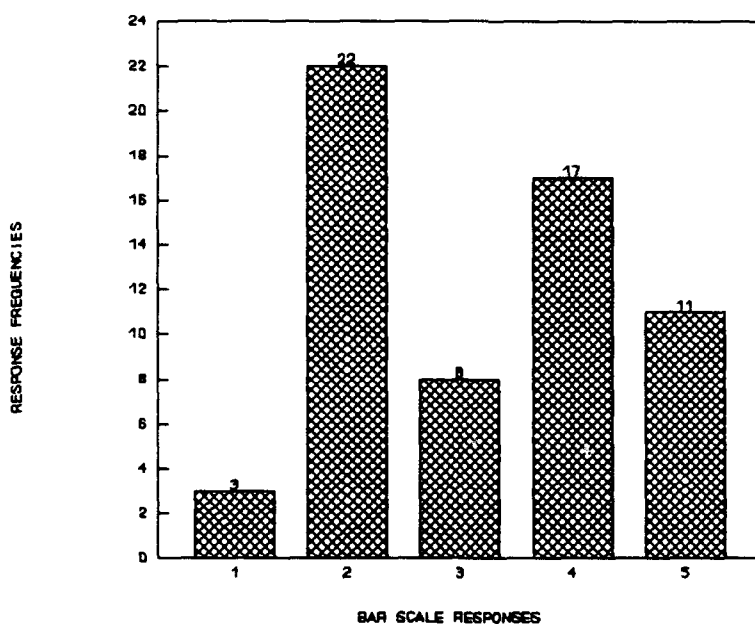
FIGURE 10: **RESPONSES TO QUESTION 5**
MEAN: 3.180
STANDARD DEVIATION: 1.245
CI RANGE: 2.861-3.499
N=61

No clear cut conclusion could be drawn from the results.   Forty-six percent favored the statement, however almost as many respondents (41%), did not agree with the statement.   Comments were mixed as the results shown in Figure 10 would predict.   About half the comments said PALT does provide some insight into the quality of customer service provided.   The other half tended to say PALT is only a partial

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indicator or that other factors need to be measured in order
to provide a complete picture.

      *f. Question 6. Procurement activities should do more
to control/influence the procurement process after
purchase order award until material receipt by the
customer.*
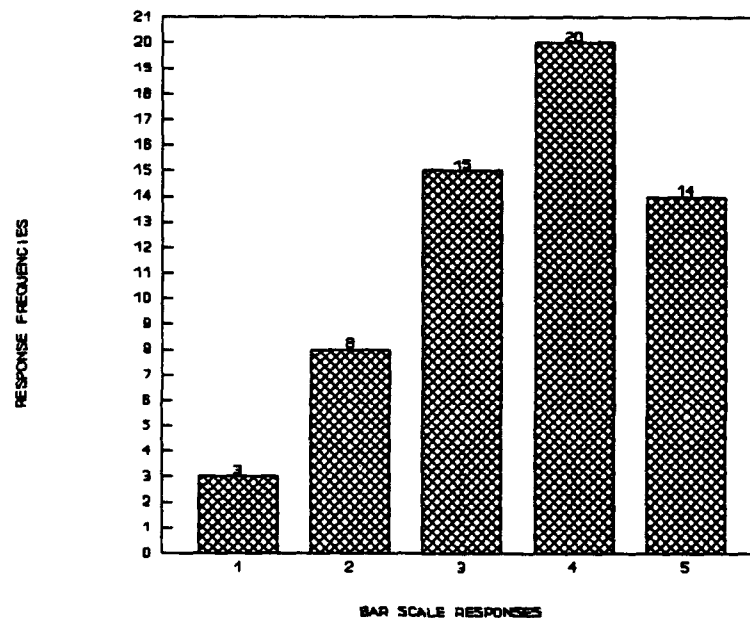
FIGURE 11: RESPONSES TO QUESTION 6
              MEAN: 3.567
              STANDARD DEVIATION: 1.140
              CI RANGE: 3.272-3.861
              N=60

Fifty-seven percent of the responses agreed with
the statement, however there was a large number of "neither
agree nor disagree" responses (15). Only three individuals

strongly disagreed with the statement. Nine remarks were inclined to agree with the statement and most of these felt their activities were doing a good job of contract administration, some mentioning they work the PO "cradle to grave". Seven responses indicated it is not feasible to control the procurement process after PO award due to a lack of dollars, people, and the time required to handle the magnitude of small purchase actions. Two particularly strong comments were received. One person who agreed with the statement said, "We need to eliminate the mind set 'it's not my job', 'I've ordered it and now I'm thru with it'". Another person thought the question was "bad", saying it assumed that follow-up and other actions were not being performed by procurement activities and further stated, "What might be more important is how often does the negotiated delivery date meet the customer RDD, and if the source (mandatory or otherwise) does not meet the negotiated delivery date, what do you do about it".

    g. *Question 7. Procurement activities should do more quality evaluation of vendors.*

       Eighty-two percent of the responses agreed with the statement. Only one individual strongly disagreed with the statement. Though most individuals felt more could be done in this area, five of the 14 comments stated that lack of resources, people and money, limit their ability to assess

vendor quality. Some additional comments include: "Small
Purchase is more concerned with distribution of business, not
quality of vendor performance"; "delivery statistics aren't
available like DLA has"; "NAVSUP should help out with some
software programs in this area".
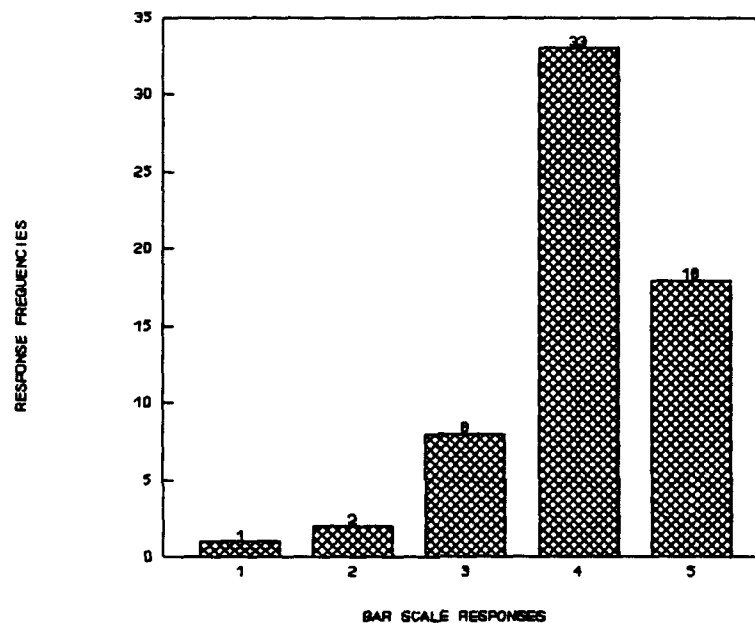
FIGURE 12:   RESPONSES TO QUESTION 7
MEAN: 4.048
STANDARD DEVIATION: 0.838
CI RANGE: 3.835-4.261
N=62

   h. Question 8.   RDD would be a more valid measure of
   small purchase effectiveness.
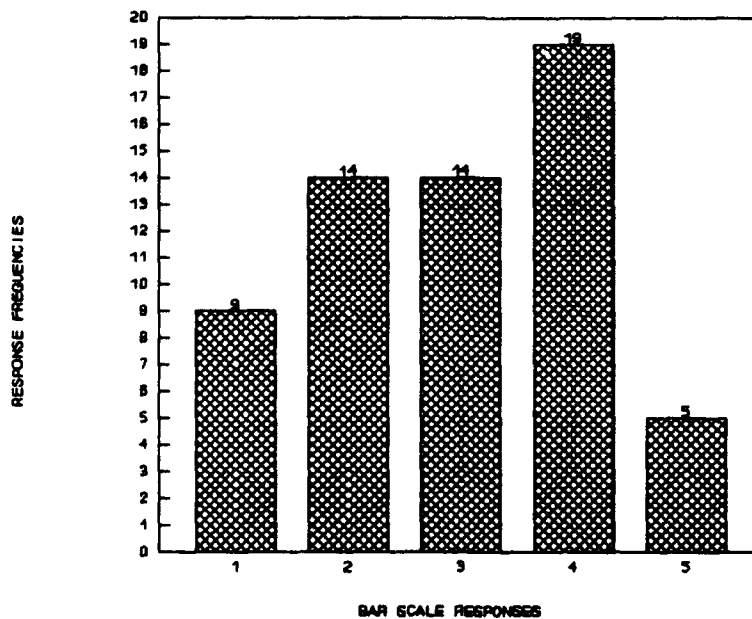
FIGURE 13: RESPONSES TO QUESTION 8
             MEAN: 2.951
             STANDARD DEVIATION: 1.217
             CI RANGE: 2.639-3.263
             N=61

As the mean indicates, there was no strong correlation of responses to measure agreement or disagreement with the statement. Thirty-nine percent favored the statement, whereas 38% disagreed with the statement. The comments, however, were almost unanimous in that 17 out of 24 respondents stated that RDDs are rarely, if ever, realistic. Three comments stated that both PALT and RDD should be used together. One particularly strong comment against RDD was: "...we often receive: 1) No RDD, 2) An RDD of 'ASAP', 3) An

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RDD that reflects more of a lack of planning than a truly urgent need".

> *i. Question 9. Procurement activities should not be held accountable to RDD since they don't have control over the entire procurement process.*
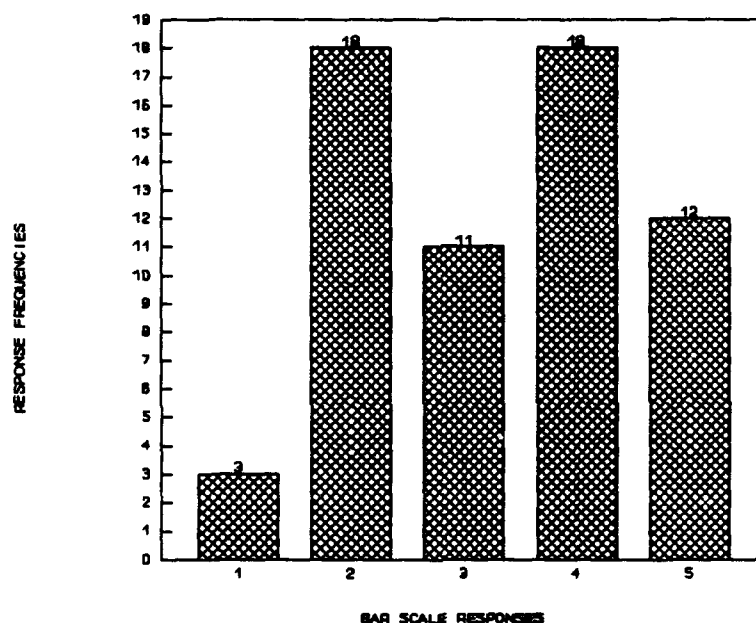
FIGURE 14: RESPONSES TO QUESTION 9
MEAN: 3.290
STANDARD DEVIATION: 1.220
CI RANGE: 2.980-3.600
N=62

Forty-eight percent of the respondents agreed with the statement. Thirty-four percent disagreed with the

statement. Eleven remarks (out of 20 received) emphasized that the procurement activity must pursue follow-ups and attend to contract administration functions. Three individuals stated that unrealistic RDDs pose a problem while five comments related to there being too many variables in the procurement process that the buying activity has no control over. One individual stated that, "At ICPs, the faster the production, the less wholesale system stock to have to buy to support longer production leadtime". One individual said the procurement process ends after award.

   j. *Question 10.* *Individual buyers have no control over the procurement process after award of the purchase order.*

   Forty-eight percent of the responses either disagreed or strongly disagreed. Thirty-seven percent agreed with the statement. Ten of nineteen comments tended to disagree with the statement by saying that buyers do have control over all or most of the process. Three of the remarks stated that the buyer tends to lose visibility of the order once award is made to a vendor. Three comments touched on the problem of scarce resources, dollars and personnel, that limits the amount of contract administration that can be accomplished. Two individuals felt that the amount of participation by the buyer depends on how the procurement activity is organized.
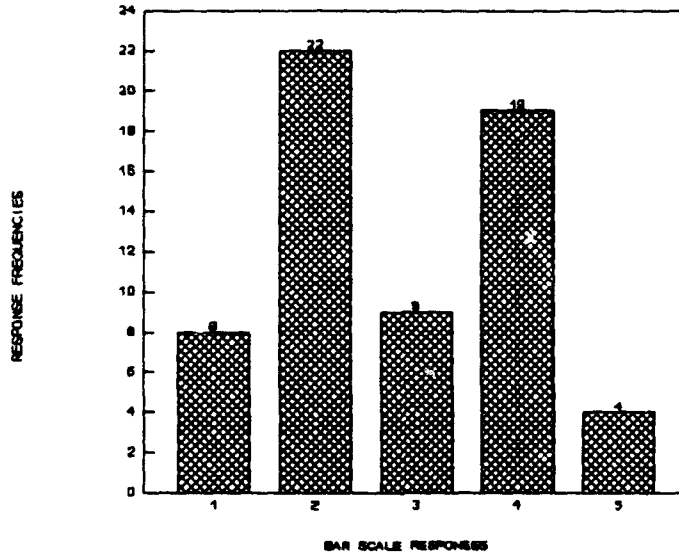
FIGURE 15: RESPONSES TO QUESTION 10
MEAN: 2.823
STANDARD DEVIATION: 1.195
CI RANGE: 2.519-3.126
N=62

k. Question 11. RDD, if implemented, would be easy to manipulate.

Twenty-one respondents rated this question "neither agree nor disagree". This may be due to a lack of familiarity of how RDD would be used by a procurement activity. Comments varied with some saying that RDD could be manipulated by the customer, and others saying that the buying activit· could manipulate the RDD to whatever they wanted. Two responses stated that RDDs could be generated from the priority and that this may lead to less gaming of the system.

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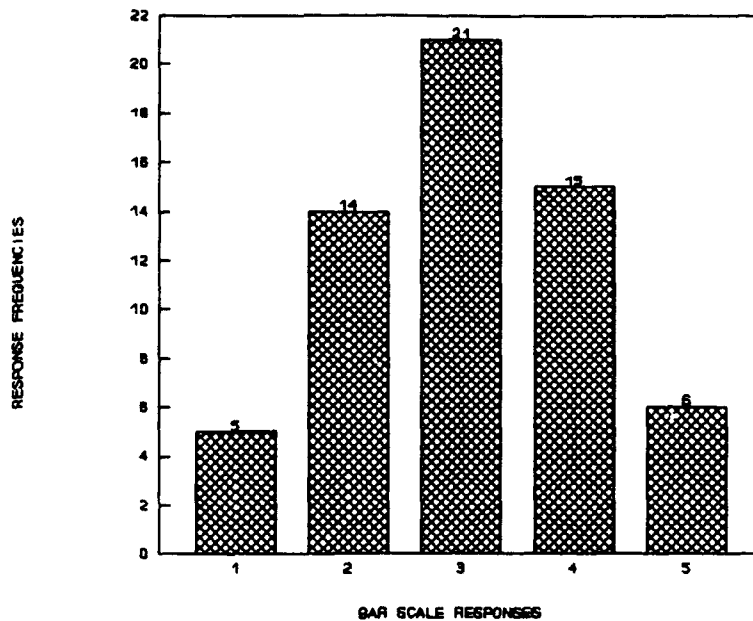
FIGURE 16: RESPONSES TO QUESTION 11
            MEAN: 3.049
            STANDARD DEVIATION: 1.102
            CI RANGE: 2.767-3.331
            N=61

1. *Question 12. RDD would be more useful than PALT since it provides a better measure of how well I am supporting my customers.*

   Thirty-eight percent of the responses disagreed with the statement. Thirty-three percent agreed with the statement, while 17 respondents rated this question "neither agree nor disagree". Four comments again touched on the problem of unrealistic RDDs as being a detractor from using RDD. Three respondents said that both PALT and RDD should be

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used together. Other comments stipulated that there are too
many unknowns, one individual went so far as to say,
"Achieving RDD is more a function of luck and/or coincidence
than buyer effectiveness". Another individual felt that PALT
and RDD were equally as bad.
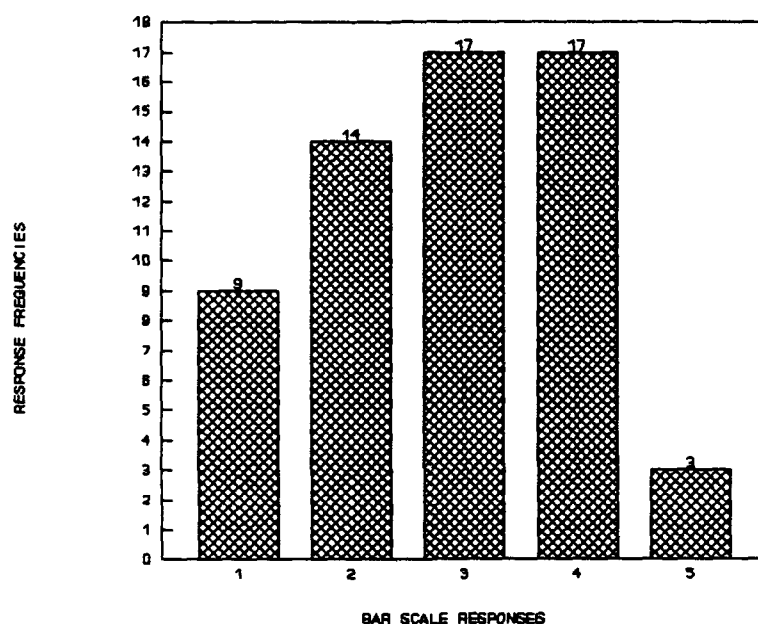
FIGURE 17:   RESPONSES TO QUESTION 12
             MEAN: 2.850
             STANDARD DEVIATION: 1.147
             CI RANGE: 2.554-3.146
             N=60

m. Question 13.   What other MOEs are you using to
   measure small purchase effectiveness?

Many of the respondents said that they use no other
measure than PALT, however there were numerous activities that

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said they supplement PALT with other measures. The reader must be cautioned that ten activities who responded to the survey had more than one respondent and thus those activities' responses may slightly skew the results. However, the researcher believes the measures listed provide a good indication of the variety of MOEs being used by activities in the field. Some of the most widely mentioned MOEs were production, average age of work-in-process (WIP), backlog, completions, number and type of modifications, customer surveys, and customer attitude/reports. For a full list of responses see Appendix B.

  n. **Question 14.** **If RDD were to be implemented, should it be used for:**

  a. **Small Purchase only**

  b. **Large Purchase only**

  c. **Both Large and Small Purchases**

Sixty-nine percent said that, if implemented, RDD should be used for both Large and Small Purchases. However, some individuals, who didn't pick any of the choices provided, wrote in that RDD shouldn't be used in any form. One person said she didn't know enough about Large Purchase to make a choice. Another individual qualified his choice of (a) by scratching out "only" and writing in "first".
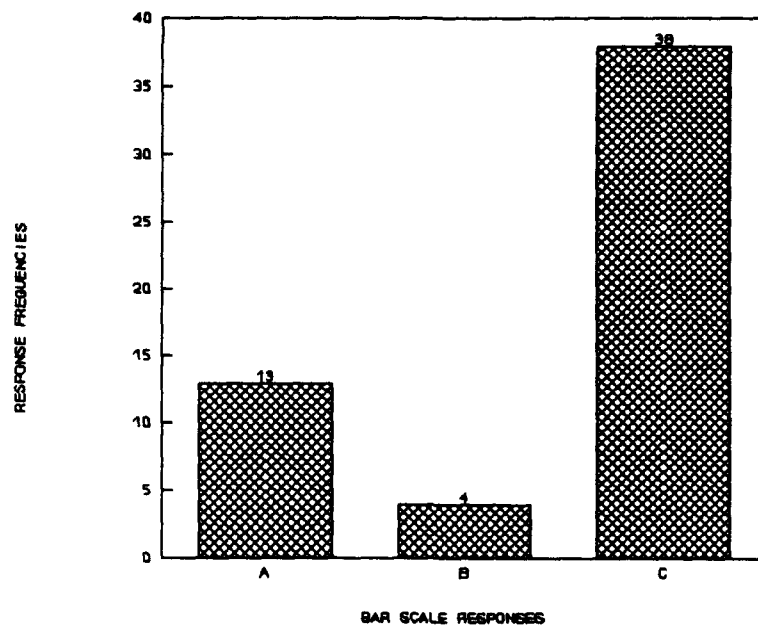
FIGURE 18: RESPONSES TO QUESTION 14
N=55

o. *Question 15. Are you currently using some form of RDD to measure small purchase effectiveness? If so, how?*

The large majority of responses were "no" to this question. However, eight respondents did say they are using RDD in one form or another. Six comments stated they were using RDD, by exception only, as in high profile or critical buys. Three individuals said they tracked award date to RDD, with one qualifying his/her response by adding that, "it's not a good measure since customers put unrealistic RDDs on requisitions".

p. Question 16. *Do you currently measure vendor quality or lead time? If so, how?*

Again, as in question 15, the majority of responses were "no" or left blank. However, six did respond by saying they either currently use or will use the Red, Yellow, Green (RYG) program. Two of these six responses were qualified by saying that RYG does not measure delivery or lead time. Six comments could be categorized in the "manage by exception" category while four respondents said they rely on their customers to provide them feedback on delinquent vendors. Two individuals said they track and compile a list of deficient vendors. Some other comments include: "Quality Deficient Reports are used"; "Blue Star program"; "collect non-conformance reports from the receiving activities".

q. Question 17. *Should some other measure of performance be used (other than PALT or RDD)? If so, explain why.*

Nine of the 32 responses said that a combination of measures should be used, with PALT and RDD being two of the indicators. Three responses said that PALT and RDD should be used together. Some kind of quality measurement was proposed by two respondents (though no mention of which measurements should be used). Other individual comments were: "PALT by Issue Priority Group"; "customer satisfaction"; "Contract Award to Delivery (in days)"; "process control charts in

conjunction with PALT"; "age of work in process; and cost effectiveness".

r. *Question 18. Impediments to implementing RDD.*

For this question, individuals were asked to rate obstacles to implementing RDD on a scale of "1" to "5", with "1" being least difficult to overcome and "5" being most difficult to overcome. They were told to circle "0" if they did not consider the item to be an obstacle to implementation. Space was provided for respondents to list additional impediments. The following choices were listed on the survey (Listed in parentheses after each item is the number of respondents who rated that item):

A. APADE/System implementation (54)

B. Receiving valid RDDs from customers (60)

C. Capturing receipt information (59)

D. Lack of control over the entire process (60)

E. Vendor concerns (57)

F. Cost to implement (57)

G. Deployed units (52)

H. Workload sharing between activities (53)

I. Political concerns (36)

Figure 19 depicts the mean score for each item. As can be seen on the graph, only two items, "A. Receiving valid RDDs from customers", and "D. Lack of control over the entire

process", had mean scores greater than three. The results thus show that these two areas are of the greatest concern to the sample audience. The next highest mean score of 2.589 was for item G, "Deployed units", whereas the lowest mean score was 2.196 for item E, "Vendor concerns". A few of the respondents expressed a lack of understanding for some of the items listed and thus did not rate those items. Some of the write-in comments include: "customers providing good specifications"; "personnel performance standards"; "vendor lead time for special items"; and "[customers] lack of knowledge of the system".

s. *Question 19. Who handles your receiving function?*

Primarily three responses were received to this question: Defense Logistics Agency (DLA); Navy personnel; and direct to customer.

t. *Question 20. Do you use an automated procurement system? If so, which system?*

Seven different automated systems were listed: APADE; Standard Automated Contracting System (SACONS); Base Contracting Automated System (BCAS); Purchasing Automated Data Processing System (PADPS); Requisition Processing System Version 2 (RPSV2); Integrated Logistics Support Management Information System (ILSMIS); and one developed "in-house". Another seven activities said they use no automated system.
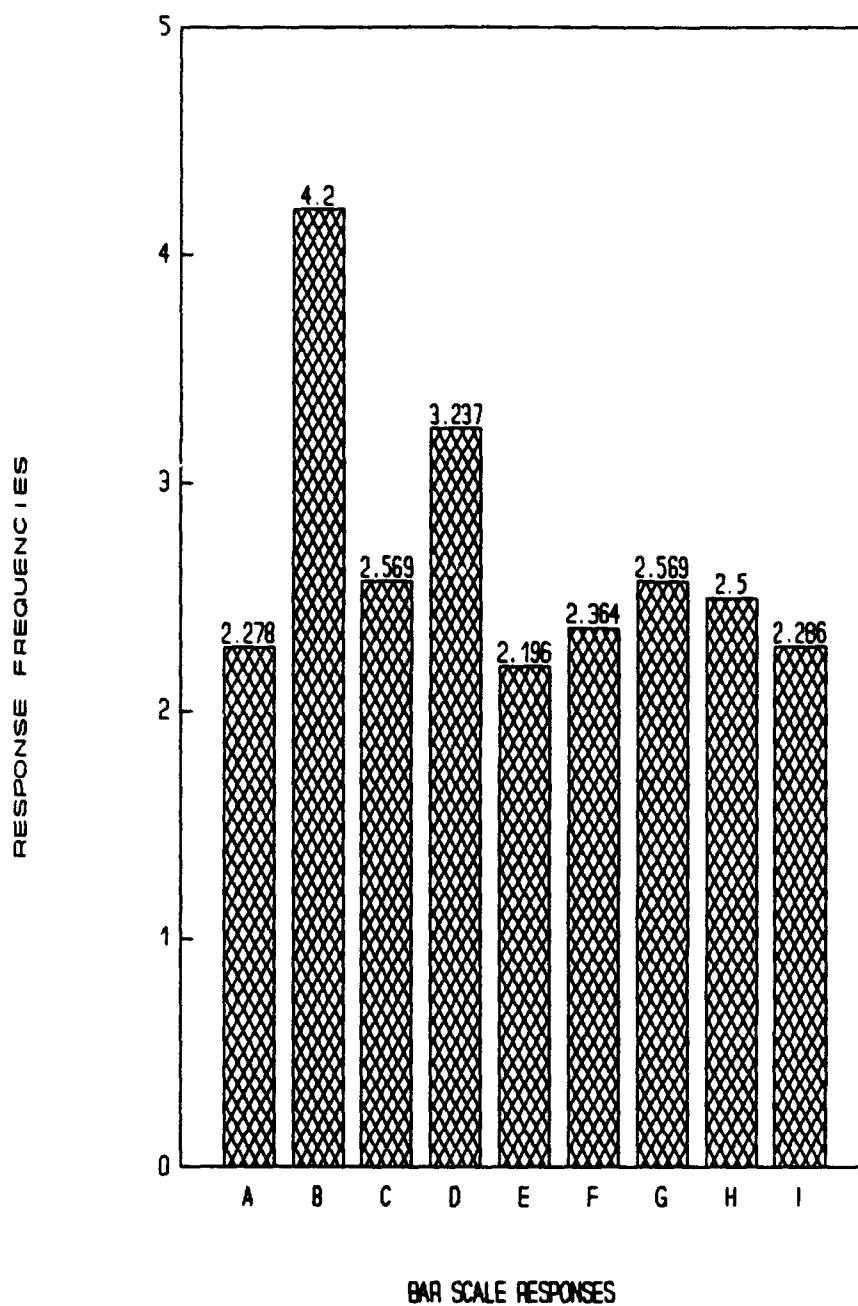
FIGURE 19: QUESTION 18: MEAN SCORE FOR EACH ITEM

u. *Question 21. RDD should:*

   a. *replace PALT as a MOE.*

   b. *be used in addition to PALT.*

   c. *not be used in any form.*
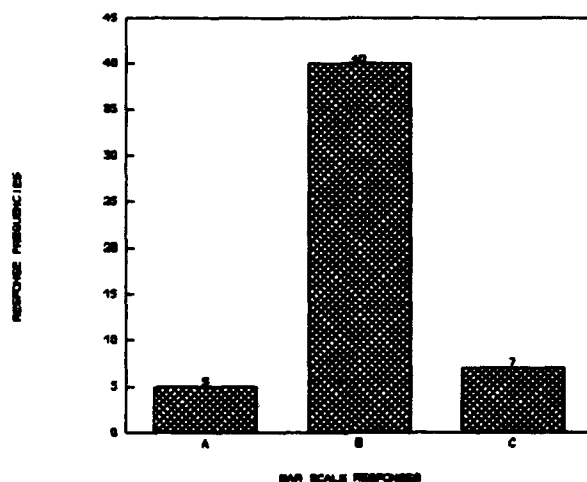
**FIGURE 20:   RESPONSES TO QUESTION 21
              N=52**

As can be seen from Figure 20, the large majority of individuals (74%) chose answer "b". Six individuals either added a choice "d", or qualified choice "b", all saying that a combination of measures should be used.

v. *Other Comments:*

Five additional comments reiterated individuals' concern about receiving valid RDDs from customers. One respondent said that effectiveness should be measured by

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quantity and quality whereas another felt that if just one measure were to be used, then it should be PALT based on priority.

C. PERSONAL AND TELEPHONE INTERVIEWS

1. General

Representatives from each of the following activities were questioned by the researcher: FISC, San Diego, CA; Naval Postgraduate School, Monterey, CA; Stewart Sandwiches Inc., Virginia Beach, VA; NRCC, Philadelphia, PA; Naval Air Warfare Center, Aircraft Division, China Lake, CA; and NRCC, San Diego, CA. All interviews were conducted over the telephone with the exception of face-to-face interviews conducted at FISC, San Diego, and at the Naval Postgraduate School, Monterey.

The purpose of the interviews was to seek information and opinions regarding the use of PALT and RDD. The conversations were basically allowed to free-flow with questions being generated by the researcher as the interview progressed. The survey shown in Appendix A was not used as a guide to lead the discussion. The results of the interviews and telephone conversations are summarized below.

a. Fleet and Industrial Supply Center, San Diego

The interviews summarized in this section took place at FISC, San Diego, on August 12 and 13, 1993.

LCDR McKee, Head of Procurement Management at the FISC, was interviewed initially since she had earlier requested the researching and writing of a thesis that would attempt to define the best measures of effectiveness to be used for the procurement process. As time passed, the thesis was refined and narrowed to focus on PALT and more specifically, RDD.

LCDR McKee identified several measures that were being used at the FISC but felt that a combination of indicators or measures would be more appropriate and provide a more comprehensive picture of buying effectiveness and efficiency. She stipulated that PALT was only one indicator. In discussing RDD, she mentioned that it is another indicator that can be used, however, she mentioned problems associated with using this measure such as data collection (getting actual material receipt dates into APADE), APADE compatibility and defaults, and unrealistic RDDs from customers. She recommended that since APADE was currently not set up to handle RDD, that an "award date to material receipt date" measurement be used instead.[Ref 7]

Ms. Joyce Cozart, Deputy Director of Procurement at the FISC, and Ms. Shelley Pierce, a Procurement Analyst at the FISC, were also interviewed during the two day visit. Their views were similar in that they both reiterated the problems of using only PALT or any single measure of effectiveness to measure efficiency or productivity. Both mentioned that PALT can be easily manipulated by buyers and may thus provide false

information to managers and customers. They both had concerns with any attempt to use RDD. They mentioned the same problem areas that LCDR McKee had listed and added that buying to RDD would cost more dollars and that customers would have to be educated about RDD, and that even education may not be enough to ensure customers will assign realistic RDDs to requisitions.[Refs 5, 8]

Captain Erno, Site Commander at FISC Naval Station, was interviewed on 13 August 1993. It was Captain Erno's opinion that FISC should take ownership of the whole procurement system and that some measure of the entire process was needed, possibly RDD. He mentioned that one of the problems with measuring to RDD was that DLA managed the receiving and warehouse function at FISC and thus procurement (Navy) officials had little control over this portion of the process. Though he mentioned an upcoming experiment at FISC Naval Station to use RDD, he cited many problems with its use. Some of his concerns were: unrealistic RDDs; Issue Group versus RDD incompatibility; APADE and UMMIPS interface problems; requisitions received with no RDD or priority assigned; and problems with overseas shipment. He mentioned that teaming arrangements with customers must be undertaken to ensure credibility exists between customers and procurement activities. In this way, customers would gradually begin to provide more realistic RDDs on their requisitions. In closing, he listed a combination of indicators that could be

used to measure effectiveness (in addition to PALT and RDD);
number line items purchased per hour, average days on desk,
average age of backlog by Issue Priority Group, overall
backlog, and number of personnel.[Ref 6]

Mr. Mike Stames, Total Quality Manager at the FISC, was
also interviewed, both in person and over the telephone. He
said that management must define the purpose or aim of the
procurement function and then find MOEs that measure how well
we meet that purpose or aim. He was very much in favor of
using RDD as a measurement. He said that there was no QA
after purchase order award and that PALT was only a key
process variable, and not the most important. He proposed
using RDD as one way to measure quality and enhance customer
satisfaction, and further added that we "can't afford not to
do it [RDD]". He discussed the move toward "reinventing
Government" and speculated that ultimately the customer will
be able to choose where he/she goes to receive procurement
services and that if we can't provide quality services we may
be shout out by the customer. He mentioned two changes in the
area of small purchase that may impact the process, the
proposed small purchase threshold increase to $100,000, and
the increase in computer technology and systems development
that enable the customer to deal directly with vendors, thus
bypassing purchasing. His help was greatly appreciated as he
furnished the PAT documentation used in Chapter II to depict
FISC's approach to using RDD.[Ref 9]

b. *Naval Postgraduate School, Monterey*

Two individuals from the school were interviewed, CDR Tryon, a Supply Corps officer who is the Curricular Officer for the Administrative Sciences Department, and Professor Wargo, who teaches Total Quality Management courses at the school.

CDR Tryon was interviewed on 28 October 1993. CDR Tryon pointed out that "cost" was going to become a big driver in the services area and that if private companies could provide better quality procurement services than Government activities, then they should be given the opportunity to provide those services. He mentioned one problem at his last command, FISC San Diego, where the receiving function was thought of as a "black hole" by customers, some place where material may sit for weeks before being delivered to the customer. His point was that PALT is meaningless to the customer since the tail-end portion of the procurement process was not part of the PALT calculation. In response to the researcher's question on unrealistic RDDs, he said that the Navy does a poor job of educating its personnel on the Supply and Logistics systems and thus customers don't understand RDD and its significance.[Ref 10]

Professor Wargo was interviewed on 1 November 1993. She was very helpful in providing information which the school's Procurement Process Action Team had gathered regarding the procurement process. These data showed that the customer

wanted material faster, with better status, and with greater accuracy (what they want) than was currently being provided. She mentioned that one of the problems with PALT was that it did not count rework. She was in favor of using RDD as a process measure. [Ref 11]

c. *Stewart Sandwiches, Inc.*

Retired Navy Supply Corps Commander George Foley was interviewed over the telephone on 28 October 1993. CDR Foley currently works for Stewart Sandwiches, but while on active duty he had extensive procurement experience during his career which included tours at a shipyard, an Inventory Control Point (SPCC), and a Naval Supply Depot (NSD Subic).

He stated that PALT was an indicator, but no more, and that RDD was most important. He commented that industrial activities must measure to RDD and that at ICPs its the only thing that matters. At an ICP he said PALT doesn't relate to inventory investment whereas RDD does relate to investment and consequently is a more valid measure, one that can also be easily measured. From experience he related that PALT for Pierside activities tends to be short, so there was possibly no need for an indicator, but that if one were to be used, RDD would be better than PALT. He also mentioned RDD might be a better measure for large than for small purchase. CDR Foley stated that vendors didn't like PALT and would prefer the Government manage to RDD, thus decreasing the turn around time

for award of orders after the Government receives the vendor's quote or proposal. When asked about vendor management, he said that vendors should manage themselves and be made to meet RDDs and trusted to deliver on time, but that procurement managers must still measure the process.[Ref 16]

d. Navy Regional Contracting Center, Philadelphia

Captain Pointer, the Commanding Officer, was interviewed over the telephone on 3 November 1993. Captain Pointer indicated to the researcher that NRCC Philadelphia does only large contracting and that most of their business is services contracting (approximately 86%). He said both PALT and RDD were not particularly useful to a NRCC since most of the services contracts are for renewals or options and that the concern is to keep from having gaps in service. He commented his activity is a "high touch" organization and they work closely with customers to ensure proper advance procurement planning is undertaken. He stipulated that RDD may be useful in the area of spares procurement, but that unreliable customer RDDs would hinder its use at a FISC or other procurement activity.[Ref 19]

e. Naval Air Warfare Center, Aircraft Division, China Lake

Commander Knight, a Navy Supply Corps Officer who is the Contracting Officer at the Center, was interviewed over the telephone on 3 November 1993. CDR Knight mentioned to the

researcher that his activity did over $500,000,000 in large purchase, most of which was for services. His activity does provide small purchase services and is using an innovative system to speed up the process. He described the Small Purchase Electronic Data Interchange (SPEDI) system, used to procure only certain approved commodities, as allowing his customers to go direct, via computer, to local vendors for ordering material. The vendor receives material requests via computer, printed on a bar code label, that can be affixed to the material and delivered to base receiving who scans the item and delivers direct to the customer. Average total process time (order to delivery) was about five days. He called this "reengineering" the procurement process. He said that by reengineering the process, small purchase could move away from the sweatshop mentality, do more vendor quality evaluations, and overall make the process more responsive to the customer.

When questioned about RDD, he said that it tends to translate into customer satisfaction. His view was that RDD was extremely important, especially at a FISC Pierside (he mentioned Submarine Base Point Loma in San Diego) where industrial type services must be received by the customer's RDD in order to meet ship or submarine schedules. CDR Knight also suggested that Procuring Contracting Officers (PCOs) tended to ignore RDD and focused more on buying than making sure the customer receives the material. He said that

contract administration is often done "by exception" and that
vendor quality measurement and leadtime analyses are rarely
accomplished.[Ref 17}

f. *Navy Regional Contracting Center, San Diego*

Mr. Archie Nesbitt, a member of the Procurement
Management Review (PMR) Team, was interviewed over the
telephone on 23 November 1993. Mr. Nesbitt stated that,
during procurement activity inspections the PMR Team attempts
to measure customer satisfaction through interviews and
surveys. PALT statistics and computations are also reviewed
but not the activity's ability to buy to RDD. He mentioned
that certain Management Information Systems can provide RDD
type statistics. "Unrealistic RDDs" was his first response to
the researcher's question regarding their use as a measure of
effectiveness. He mentioned customer education as the only
means to affecting a solution to this problem. He recalled
that Shore Intermediate Maintenance Activity (SIMA), San Diego
might have had some success with using RDDs. He said they
accomplished this through an exchange of personnel between the
technical and purchasing departments that led to improved
customer relations among the functional areas.[Ref 18]

D. SUMMARY

In this chapter the survey data were presented along with
a summary of remarks received for each question. Finally, the
summaries of the personal interviews were presented. Chapter

IV will provide a discussion and analysis of the results presented in this chapter.

IV. DISCUSSION AND ANALYSIS

A. GENERAL

This chapter will discuss and analyze the data presented in chapter III. The chapter is divided into three sections: **Required Delivery Date; Management of the entire process;** and **Procurement Administrative Lead Time.**

1. Required Delivery Date.

At first glance, the results tend to signify that RDD should be used in conjunction with PALT as indicators of small purchase effectiveness. However, it is the researcher's assessment that the underlying feeling of the respondents, based on the comments received, is that use of RDD is not practical at most activities. This was due mostly to the respondents' concern that customers often submit unrealistic RDDs.

In reviewing the responses and comments, the researcher concludes that most procurement professionals mistrust customers when it comes to submitting valid RDDs. This mistrust would have to be overcome in any attempt to use RDD. The results of the survey **do** tend to give the impression that all customers submit invalid RDDs. This is not entirely the case, however, as many customers do submit valid RDDs. A customer education campaign, mentioned by a few of the

respondents, as a way of correcting the problem of invalid RDDs, could thus be tailored to focus on the "worst" offenders. This would help the larger procurement activities who buy for the greatest number of customers.

Another idea put forth to alleviate the problem of unrealistic RDDs, was they should be "negotiated" between the customer and the procurement activity. As was mentioned above, not all RDDs are invalid and so not every one would need to be negotiated. Again, large activities purchasing for a multitude of customers and handling thousands of transactions could focus training efforts on those customers who they must continually "negotiate" with, implying that those activities' RDDs are the most unrealistic. Until a vendor and commodity lead time database could be set up, buyers would have to go on "gut" feel when analyzing customer RDDs, or only question those RDDs that are obviously invalid (e.g. already passed, As Soon As Possible, no RDD assigned). Once a vendor and commodity lead time database was set up, buyers could see where large discrepancies existed between a customer's RDD and the average or normal turn-around time for that commodity. Buyers could then work with customers and vendors to negotiate a realistic RDD.

A major drawback to negotiating RDDs is that it takes time, especially as it may prove almost impossible for buyers to contact the individual who filled-out the requisition. The researcher knows about this problem from shipboard

experiences. Scarce phone lines into most ships make it difficult for buyers to reach the point of contact listed on the requisition, if one even exists. Additionally, in the Fleet, very junior personnel, who know little about Supply operations, are tasked to fill out requisitions, and their idea of a valid RDD is whenever the Petty Officer or Chief wanted the material, minus some x number of days so that, hopefully, the material can be received on time.

Another method might be available whereby a negative incentive could be used to force customers to submit valid RDDs. The researcher theorizes that if Fee-for-Service is adopted by procurement activities, then a system could be set up whereby the customer pays more for those materials and services that he/she wants the soonest. For example, a customer may pay $100 (procurement service fee) for an item with an RDD of 005 (5 days from requisition date), but pay only $50 for the same item with an RDD of 030 (30 days from requisition date). This may be one way (negative incentive) to ensure customers provide reliable RDDs. If a price tag was attached, so to speak, on each RDD, then customers may pay more attention to assigning valid RDDs. Some disadvantages to this system would be: Accounting and Finance systems would have to be modified; buying organizations may have to "refund" money when RDDs are not met; and, if delivery times are missed, who is determined to be at fault, the customer, buyer, or vendor? In addition, customers would have to

receive supplementary funding in order to pay for their procurement services, and would have to decide at what level within their organization they would distribute these funds. Pushing the funding and responsibility down to the lowest levels may force all personnel to become more fiscally aware. No longer can everything be ordered with a RDD of ASAP, as funds will be quickly exhausted. Ideally, customers would become incentivized to submit valid RDDs and place orders in larger, more economical quantities, a habit that would also cut down on the number of requisitions to be processed. This may, however, have some negative consequences as customers may stockpile material, leading to greater inventory cost and material obsolescence. Some activities may simply decide not to change their buying habits. However, as they spent larger sums on procurement services they would have less to spend on material and support services, thereby hurting unit readiness and sustainability.

Chapter II contains FISC, San Diego, Procurement PAT's approach to monitoring and tracking RDD. The system, as designed, raises another concern about measuring RDD. Any tracking system designed for use with RDD will require additional effort on the part of the buyers. Buyers, held accountable to RDD, may play a bigger role in expediting, thereby having less time for other duties. However, expediting hassles may be lessened if Electronic Commerce (EC) and Electronic Data Interchange (EDI) Value Added Networks

(VANs) could be used to pass requisition status and queries between the vendor and the procurement activity. Electronic flags could be set for purchase orders awarded to vendors using EC/EDI. Some prearranged number of days prior to a Purchase Order's RDD, the vendor would be queried electronically on the status of the outstanding order. The vendor's computer would respond electronically, providing the latest status on the order. All such queries and responses would be done automatically by the vendor and Government computers, without the need for human intervention. Based on an electronic response from the vendor's computer that indicated a delivery date slip, the buyer or analyst may decide to further expedite the order and call the vendor to discuss workarounds. Based on the amount of expediting currently done at procurement activities, this arrangement could actually increase the number of expediting phone calls made, one of the negative aspects the system would hopefully have reduced. In either case, the buyers become more proactive, knowing ahead of time when delivery problems are looming downstream and are thus able to intervene on the behalf of the customer. Buyers may be able to arrange for partial shipment by the RDD, or change to a faster mode of delivery, one that can ensure the material is received by the customer on the RDD. If nothing else, buyers can at least notify the customer of potential delivery slippage. Thus,

tracking RDDs may increase expediting, but it may also equate to better customer service.

There are other factors that may also make RDD impractical. Many activities, including the FISCs, would have to receive actual receipt dates, and input them into their automated or manual procurement systems. For example, receipt dates are collected in the Finance and Accounting Systems and used for vendor payment and customer billing, however no interface currently exists at the FISCs that can transfer the receipt data into APADE (the researcher is not aware of the capabilities of other automated systems). Any system designed to collect receipt information that does not utilize existing Finance and Accounting systems must take into account the different avenues from which customers receive material: delivery from a central receiving activity; customer pick-up at the vendor; vendor delivery direct to the customer; mail; and express shipments. In other words, a purchasing activity cannot rely on a central receiving point to collect all receipt information because that central point may get bypassed in certain situations (e.g. customer pickup without going through central receiving).

Another problem may be the validity of the receipt dates. It is the researcher's analysis, based on experience, that obtaining valid open purchase receipt dates from ships is a problem. In the fleet today, many open purchase items have to be administratively received, as actual receipts can never be

located. More often than not, these "administrative" receipt dates are many days or months later than when the item was actually recieved. If procurement activities use these dates to develop RDD statistics, then the results will tend to make the procurement process appear less responsive than is actually the case. So, even if receipt information is available, the data used to calculate RDD statistics, may not be accurate enough to give a true picture of the timeliness of the procurement process.

Once data, needed to measure RDD, were available, computer programs, capable of performing the calculations and manipulating the data, would have to be written. After the receipt date is loaded into APADE it must be compared against the requisition-in-date to establish a total process time. Additionally, the receipt date must be compared against the award date in order to calculate vendor and delivery time. A third comparison must be made, between the actual receipt date and the customer's Required Delivery Date. Once the calculations have been completed, the data can be sorted, via computer, in any format required by buyers, procurement analysts, and procurement managers.

The above paragraph shows why smaller, less automated commands may find it extremely cumbersome to measure RDD. Simply doing the calculations, let alone the data manipulation, may take an inordinate amount of time. Any gains from having the additional information may be outweighed

by the costs of obtaining that information. Samples could be used, thus cutting down on the amount of time required to collect and manipulate the data, however, even this method will require time and effort on someone's part. For the above reason, the researcher concludes that smaller activities, with few buyers and no automated procurement system, should not measure RDD. However, assuming these activities are in close proximity to their customers, they could still make "buying to RDD" a priority. They would simply redirect their focus and alter their procurement processes such that satisfying the customer's RDD becomes a major goal. Workload could be assigned based on RDDs and tracked, much like FISC, San Diego's approach. With little or no automation, a tickler system could be developed to assist with expediting purchase orders once they have been placed. Without measuring RDD or tracking actual receipt dates, these activities would have to resort to other means of collecting data on vendor and commodity leadtime, possibly through customer questionnaires. These activities would still have to be concerned about invalid customer RDDs, but due to the smaller size of their customer base, they would be in a better position to educate customers about RDD, or simply negotiate RDDs with their customers. However, education and negotiation also take time away from normal purchasing functions, so the activity would have to weigh the advantages against the disadvantages.

Another potential reason for not measuring RDD at smaller activities is that the same type of information, gained by measuring RDD, may be obtainable through customer feedback. It may be easier just to ask the customer for information regarding his/her satisfaction with the timeliness of the buying process and whether or not they are having vendor delivery problems. Thus, at small installations, where buyers see their customers on a daily basis, there may be no need to implement RDD just to gather information that is readily available.

The researcher expected to see other impediments such as "system implementation" and "cost to implement" rated almost as highly as "unrealistic RDDs" and "lack of control over the entire process". The researcher concludes that the lower ratings were probably due to the respondents' perception that it would be harder to educate and control customers and vendors, than it would be to modify existing systems, and pay for those modifications. Modifying systems and paying for the changes would be someone else's worry, but working with unrealistic RDDs and being held accountable for managing the entire process would be daily problems that buyers and procurement managers would have to address. In addition, unrealistic RDDs and the lack of control over the entire process were the first "gut" reactions to the question of using RDD as a measurement tool, something the researcher noticed during face-to-face and telephone interviews.

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Additionally, many of the respondents probably did not take the time to fully analyze what it would take to implement RDD and pay for its implementation.

Other impediments listed in Question 18 also received low ratings, relatively speaking. Capturing receipt information, vendor concerns, deployed units, workload sharing between activities, and political concerns all received low ratings. A few individuals expressed a lack of understanding of certain impediments such as vendor and political concerns and so they might have rated these lower than if they had fully understood the researcher's intent. The issue of vendor concerns was included for two reasons: 1) if RDD were implemented, certain vendors may lose business, and 2) the level of Government expediting may grow to be intolerable. The first concern centers around how buyers would react to vendor lead time data that could be generated from RDD statistics. Obviously, vendors who exhibit long lead times and routinely fail to deliver by the RDD, compared to other vendors who can supply the same commodities within prescribed time frames, may lose business as buyers would award purchase orders to the most responsive vendors. However, the smallest businesses, with the least amount of inventories, may lose out to larger enterprises that can afford to carry larger inventories and provide faster delivery turn-around times. An example points out another potential problem of analyzing vendor lead time data. If vendor "A" receives all the rush orders, and vendor

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"B" receives all the routine orders, vendor "A" statistics will look much better than vendor "B", even though vendor "B" may have met all RDDs. The statistics would somehow have to be normalized in order to keep vendor "B" from being penalized relative to vendor "A". Another vendor concern may be that RDD would tend to "regionalize" buying. Buyers may be tempted to only award orders to vendors within that local area or region, as delivery time may well be less for those vendors compared to vendors located halfway across the country. Buyers may override considerations of achieving better quality, or "best value" from distant vendors, and simply focus on timeliness, and thereby only award to local or regional vendors.

The other vendor concern related to expediting. It is the researcher's analysis that, if RDD were to be implemented, Government expediting efforts would increase as was mentioned earlier. If buyers and procurement activities are now holding themselves accountable to RDD, they may increase their expediting efforts in order to put more pressure on vendors to deliver on time. This sounds like what they should be doing anyway, however many respondents said that, without additional personnel, it would be difficult to accomplish additional contract administration (of which expediting is a part). From the vendors' standpoint, increased expediting by Government personnel means someone at the vendor's location must spend

time, probably over the phone, to answer questions and track Government orders.

One respondent simply took more of a TQL approach to vendor management. His point was that vendors should be held accountable to delivery by RDD, without any extra effort on the Government's part to expedite delivery. In other words, let them do their job. However, the Government still measures RDD and computes vendor lead times, and uses that information when evaluating which vendors should be awarded purchase orders.

Only 36 respondents rated "political concerns" as an issue. Again, most respondents were probably unclear as to the researcher's intent. Political concerns was meant to include any bureaucratic roadblocks, within the NFCS and Defense Logistics Agency, to implementing RDD, such as coalitions and individuals with the power to defeat any such implementation plan. Compatability with existing supply/logistics systems may have been a concern of DLA, had DLA been given the chance to respond.

Another concern that received a low rating from the respondents was "workload sharing between activities". Most procurement activities within the NFCS do not share workload, so the low rating may be understandable. The researcher's intent was that, for the larger activities, such as the FISCs who do shift Small Purchase workload, measuring RDD may prove impractical, for the shifted workload, due to the distance

between the ultimate buying activity and the customer. However, this might only pose a problem for the more complex orders that may require several discussions between the buyer and the customer, which would be made more difficult, because it would have to be done via long distance telephone calls.

Another situation where RDD may not be required is at activities that use credit cards or systems such as SPEDI. At these activities, procurement lead times tend to be so short, three or four days, and thus measuring RDD may not make any sense. That does not mean that the process could not be improved, it simply implies that tracking RDD in a scenario such as this would be impratical.

Though RDD was heavily criticized concerning reliability, several respondents advocated its use. As the researcher anticipated, both Total Quality managers were very much in favor of using RDD as a total process measure. To them, RDD is one easy way of measuring the system's ability to be timely, a critical aspect in determining customer satisfaction. For this same reason, other individuals, from senior procurement managers, to junior buyers, were also in favor of using RDD. Even though there are no hard data to substantiate a correlation between RDD and customer satisfaction, the researcher concludes that it is intuitively obvious that if you can satisfy a customer's RDD, then you have met one of the criteria for obtaining true customer satisfaction, namely, timeliness. Certain activities did say

they were using or experimenting with RDD but no hard data were available to validate its success or failure. It appears from the data that only one or two activities are actually measuring RDD, and one of these is using it in Large Purchases only. Other activities, who profess to its use, are simply attempting to satisfy the customer's RDD, but are not actually tracking and measuring RDD. Again, as stated above, no hard data were available from the survey questionnaires that shed any light on exactly how these activities are utilizing RDD and what problems, if any, they are encountering with its use. As long as RDD has been around, why has it not been used as a measurement tool before now? The most likely reason is that Total Quality Leadership (TQL), along with Reinvention principles, are just now filtering down to the Procurement Process. The need to have in-process, as well as total process measures is documented in all texts related to the subject of TQL and Reinvention. Another likely reason is that systems have not been capable of measuring RDD, and no one, or no group of individuals, has championed its use as a measurement tool.

Though not a major focus of this thesis, the question of whether RDD should be used in Large Contracts generated mixed results. Question 14 addressed this issue. Sixty-nine percent of the respondents said that, if implemented, RDD should be used both for Small Purchases and Large Contracts. However, one individual interviewed over the telephone stated

that RDD would not be suitable to Large Contracts because of the high percentage of services contracting, a type of procurement where RDD is almost meaningless. The researcher does not agree. All contracts have a date when the service is required to start. This date can be viewed as the RDD for that contract and thus be measured against the actual start of services provided to a customer. The researcher does agree that some system may have to be put into place in order to adjust the actual RDD based on the vendor's performance. For example, vendors should be penalized for poor performance and not considered to have started the contract on time until performance is brought in line with contract specifications. The researcher does conclude that this may blur the distinction between timeliness and other quality measurements. Required Delivery Date, used in this manner, may thus not be solely a speed indicator, but may also be an indicator of a vendor's past performance. In contrast to the above individual's concerns about using RDD in Large Contracts, FISC, Puget Sound, is starting to use RDD in its Large Contracts department (but not in Small Purchases). Use of RDD for Large Contracts is an area for further analysis.

2. Management of the entire process.

The researcher included survey questions on vendor management and control over the entire procurement process in an attempt to establish whether or not procurement managers

and buyers felt that, after PO award, they had control over the remaining portion of the process. Relating this to RDD, the researcher wanted to know if managers and buyers would rebel against being held accountable to RDDs, especially if they felt they had little or no control after PO award.

The results were mixed. While a slight majority of individuals thought that procurement activities and buyers should take more ownership of the process after PO award, a number of these same individuals stated that a lack of resources, dollars and personnel, limited their activity from performing any additional contract administration. Contract administration in this case means expediting and measuring vendor quality and lead time. As the results indicate, little is currently being done in the field to track vendor lead time. However, many activities said they perform some expediting functions.

It is the researcher's analysis that using RDD in conjunction with PALT to establish vendor and commodity lead times may prove useful. This information could obviously be used as one factor in the award of future orders. Vendors that routinely deliver on time receive more business. Buying activities can also work to improve the responsiveness of vendors who exhibit the worst lead times. However, one caution should be emphasized when reviewing lead time statistics. Early delivery may be worse than late delivery. Procurement activities will always strive to lower PALT. The

same statement should probably not be made about RDD since in many cases early delivery of material could mean additional costs to the Government, either through inventory storage costs or loss due to theft. Required Delivery Date should be viewed similar to Just-In-Time (JIT) purchasing. Material should be delivered on the RDD, not before and not after. Required Delivery Date statistics must somehow take this into account.

Procurement managers could also use information relating to various commodity lead times to assist in the assignment of workload to buyers. Senior buyers may be adept at working long lead items, and should be assigned more of these types of orders. Junior buyers could then be assigned requisitions for commodities that generally have shorter lead times. This analysis assumes that requisitions for commodities with a history of long lead times are more complex and thus could be handled more efficiently by experienced personnel.

Not one respondent mentioned that actual delivery dates should be collected and analyzed in conjunction with PALT, especially when RDD is not measured. The researcher contends that activities who measure system performance would be able to calculate, using PALT figures, vendor and commodity lead times that could be analyzed for problem areas. Additionally, specific customer problems may be found to exist that could be alleviated through training or incentives as was touched on earlier. But if neither RDD nor actual delivery dates are

utilized, it may be very difficult to assess when problems exist. In other words, if you do not measure it, you very likely do not know when it needs to be fixed. Smaller activities, as was mentioned earlier, may be able to address this problem through daily interaction with the customer and vendors. Very small buying organizations may only deal with a few vendors and thus the buyers and vendors may have such a good working relationship that lead time measurement and analysis may not be required. But at larger activities, with numerous customers and vendors, information concerning specific problem vendors may not reach the buyers and procurement managers. Customer service questionnaires and surveys many not be enough. Though some activities do collect actual receipt date information, no data were available to determine if these activities were having any success using this information. One Air Force study written in 1979 looked at vendor and commodity lead times for a Base Small Purchase organization and depicted how RDD could be used as a MOE. [Ref 13] The researcher concluded that RDD should be used, but also worth noting was that the data showed vendor and delivery time to be approximately 65% of the total process. The Air Force researcher also determined which commodity types had the worst lead times, and therefore needed more attention from buyers. This type of information could be extremely useful to procurement managers at large activities.

3. Procurement Administrative Lead Time.

PALT, used alone, was not viewed as a valid indicator of procurement effectiveness. Respondents believe that PALT has a number of disadvantages that limit its usefulness as an indicator of small purchase effectiveness. Comments such as: "it is only one indicator of effectiveness"; "doesn't count rework"; "easily manipulated"; and "provides little meaning to customers", were numerous throughout the results. Based on experience, the researcher tends to agree with the respondents concerning the disadvantages of PALT. However, there was no mandate to do away with PALT. Respondents believed that PALT is here to stay, even with its shortcomings.

The underlying feeling was that PALT should be used in conjunction with other indicators, such as average age of work-in-process, backlog, customer service attitudes and surveys, number line items procured per hour, and RDD. These measures were the most frequently mentioned, however other measures are being used by field activities to supplement PALT. Some of these include; number of modifications, orders placed by EC/EDI, amount of rework, stratified PALT, cost per order, number of completions, and number of cancellations. Obviously, PALT does not provide all the information procurement managers feel is required to manage the process. In fact, NAVSUP uses a multitude of indicators to manage activities within its Claimancy. The wide diversity of

opinions, concerning combinations of indicators, does point out a need for further study in this area.

The researcher expected someone to address PALT as an efficiency measure, and RDD as an effectiveness measure. PALT obviously measures only a portion of the entire process whereas RDD focuses on the whole process. Used together they can provide valuable information regarding the timeliness of the process, both the buying time and vendor/delivery time, and provide some insight into how well the customer is being satisfied. They do not provide all the answers to procurement managers' questions, and that is probably why so many other indicators are currently being used at various NFCS activities.

B. SUMMARY

Required Delivery Date, used as a management tool, can provide valuable information that can be utilized by procurement managers, buyers, and analysts to enhance buying effectiveness and increase customer satisfaction. However, the above discussion and analysis points out a number of obstacles that procurement managers must overcome if RDD is to be used as a Measure of Effectiveness. Smaller, less automated activities should not measure RDD, as the benefits may be outweighed by the added effort. Larger activities may find RDD more useful, however customers must be educated or incentivized to provide realistic RDDs. Increased expediting

may occur as buyers must now manage vendors more closely. Certain vendors may lose business to larger businesses that are able to deliver goods faster, but not necessarily cheaper or of better quality. Other problems may be encountered that will limit the capability of RDD statistics to provide valid information.

V. CONCLUSIONS AND RECOMMENDATIONS

A. GENERAL

This chapter presents the conclusions that can be made based on the discussion and analysis of the research findings in the preceding chapters. It also provides recommendations in terms of actions to be taken. It further restates the thesis questions and provides answers based on the results of the research. Finally, the chapter presents several areas for further research.

B. CONCLUSIONS

There are eight conclusions based on the research findings.

1. **Required Delivery Date may provide additional management information, however there are many factors that make RDD impractical for use within the NFCS.**

   The respondents believe that the use of RDD is a good concept and would provide some valuable information, but that it would prove impractical unless customers can be educated or incentivized to submit valid RDDs. This conclusion is based partly on the overriding number of comments to this effect and the mean score of "4.2", the highest rating of all impediments to implementing RDD. Larger activities may find RDD useful, however, many factors, other than problems associated with

unrealistic customer RDDs, limit its practicality. Some of the other factors are: collecting valid receipt information; added buyer workload; vendor concerns; and political realities.

2. **Smaller, less automated procurement activities should not measure RDD.**

Measuring and tracking RDD should be automated to the maximum extent practical. Therefore, smaller activities with little or no automation should not use RDD. The added effort to manually calculate and manipulate the data would not be worthwhile. Smaller activities may be able to obtain the same type of information through daily customer interaction or through the use of surveys and questionnaires.

3. **Procurement Administrative Lead Time (PALT) is the MOP used by all NFCS activities to measure procurement effectiveness. However, many additional indicators are being used to supplement PALT.**

PALT is currently used by all NFCS activities. However, many activities are using other indicators as measures of efficiency and effectiveness. A few of the indicators currently in use are: productivity measures (number of line items per hour, etc); average age of work-in-process; backlog; priority; customer service attitudes and surveys; stratified PALT; number of modifications; orders placed by

EC/EDI; amount of rework; cost per order; number of completions; and number of cancellations.

4. **Several disadvantages of PALT were identified and only one advantage was mentioned.**

Respondents believe that PALT has a number of disadvantages that limit its usefulness as an indicator of small purchase effectiveness. This conclusion is derived from the specific findings that PALT: is only a single indicator of effectiveness/efficiency; only measures a part of the procurement process and doesn't count rework; is easily manipulated; provides little meaning to customers; is being supplemented with numerous other indicators.

The only advantage that was listed for PALT is that it is the only measure currently used by every NFCS activity.

5. **If RDD were to be used, FISC San Diego, Process Action Team's approach could be utilized as a model.**

This approach, highlighted in Chapter II, is simply one method of using RDD. This model basically tracks RDD throughout the procurement process, measures RDD against the actual receipt date, and uses RDD in combination with other indicators to calculate speed performance indicators for the procurement process.

6. **The advantages to using RDD would be that additional information could be obtained which procurement managers could use to manage the procurement process.**

In addition, better insight into customer satisfaction may be gained through the use of RDD.

Information about process times, both buying time and vendor and delivery times, could be collected. Additionally, commodity lead times could be collected and analyzed for potential problem areas.

7. **The disadvantages to using RDD are many.**

The biggest disadvantage to using RDD is that customers oftentimes submit unrealistic Required Delivery Dates and would therefore need to be trained or incentivized to submit valid RDDs. Other disadvantages include: obtaining actual receipt dates; increases in buyer workload; vendor considerations such as a loss of business for vendors distant from the buying activity, and increased Government expediting.

8. **Two critical factors, receiving valid RDDs and obtaining actual receipt dates, must be addressed before RDD can be implemented within the NFCS.**

As was concluded above, not all NFCS activities should implement RDD. However, if implemented, customers must be trained or incentivized to submit valid RDDs. Actual receipt dates must be collected and input into procurement systems to enable computers to calculate and manipulate RDD statistics. Computer programs would have to be written to accomplish the computations and data manipulation.

C. RECOMMENDATIONS

1. **Until further information is available on RDD, individual procurement activities should decide if use of RDD would prove beneficial at their activity.**

   RDD should not be used by small procurement activities without the automation tools to make collecting the data worthwhile. Larger activities may decide that the information that can be gained through the use of RDD may be beneficial, but must be aware of the many problems that must be overcome to support its measurement.

2. **The Naval Supply Systems Command should select a few procurement activities to test the feasibility of using RDD and have these activities collect data to support a go/no-go decision.**

   NAVSUP should select activities, or request activities who are already experimenting with RDD, to collect information that would be useful in determining if RDD can be used as an effectiveness measure. This would entail selecting various activities of different sizes (for example; one FISC and two activities with $10,000 authority).

3. **The Navy, as a whole, and individual procurement activities must seek ways to educate customers regarding assignment of RDDs, or incentivize them to submit valid RDDs.**

The Navy must do more to educate Officers, Enlisted personnel, and civilians in Supply and Logistics matters. Seldom are members of the Navy, outside the Supply and Logistics communities, trained in the workings of the procurement system. Though education may help, the researcher believes that incentives must be put into place before customers will fully cooperate and submit requisitions with valid Required Delivery Dates.

4. **All procurement activities should collect actual receipt date information.**

These data can be used to assist procurement managers to determine where problems might be occurring, either with certain vendors or with specific commodities. This data collection effort should be automated as much as possible, and activities without an automated system should use a sampling process.

D. **ANSWERS TO RESEARCH QUESTIONS**

1. **Primary.** *Should Required Delivery Date (RDD) be used as a Measure of Effectiveness for the procurement process?*

Individual procurement activities should decide if it makes sense to use RDD at their activity. Required Delivery Date may not be a practical measure for all NFCS activities.

2. Subsidiary.

a. What is currently used to measure the effectiveness of the procurement process?

Procurement Administrative Lead Time is the primary indicator used to measure effectiveness. A number of other measures, such as number of line items procured per hour, average age of work-in-process, backlog, customer service attitudes and surveys, number of modifications, and amount of rework, in addition to PALT, are being used at different activities but PALT is the universal measure for the NFCS.

b. What are the advantages and disadvantages of this measurement?

Few advantages were discovered during the research, however, it was noted that PALT is the only universal measure in use and it is the only valid measure in use. Additionally, it was stated that PALT does provide management with some indication of efficiency and that it should be included in any combination of indicators that would be used to measure efficiency.

Specific disadvantages were that PALT: is only a single indicator of effectiveness/efficiency; only measures a part of the procurement process and does not count rework; is easily manipulated; provides little meaning to customers.

c. How would RDD be used as a MOE to evaluate the procurement process?

Chapter II presented the FISC San Diego, Process Action Team's approach to using RDD as a means of monitoring system performance and providing greater customer satisfaction. Other methods could be used, from measuring system performance without comparison to a customer's RDD, to simply changing management philosophy, "manage workflow and buy to RDD".

d. What are the advantages and disadvantages of using RDD?

Advantages to using RDD would be that it would provide a "system" measure of effectiveness, theoretically customer satisfaction would be enhanced, and when used with in-process measures such as PALT, management would have greater insight into vendor lead times and responsiveness.

Though RDD may have numerous impediments to implementation, the most significant disadvantages to its use are the following:

- Customer RDDs are invalid and thus customers would have to be educated and/or incentivized to provide reliable RDDs.

- Few procurement systems, both automated and manual, collect actual receipt information that can then be fed back into the system to compare against the customer's RDD.

- Procurement officials lack total control over the entire process that RDD would measure.

e. What is required to implement RDD within the Navy Field Contracting System?

Customers would have to be educated and/or incentivized to provide valid RDDs. Systems, both automated and manual, would have to be redesigned to collect actual receipt information that can be fed back into the system. Procurement managers would have to embrace the new philosophy of managing and buying to RDD and reinvent internal procurement procedures consistent with the method chosen to utilize RDD.

E. AREAS FOR FURTHER RESEARCH

1. **What is the optimal combination of indicators that should be used to measure procurement effectiveness? Efficiency?**

2. **Should RDD be used as a measure of effectiveness for Large Purchases?**

3. **How can customers be incentivized to provide valid Required Delivery Dates?**

PALT/REQUIRED DELIVERY DATE (RDD) SURVEY QUESTIONNAIRE

This survey will be used to determine attitudes concerning the use of Procurement Administrative Lead Time (PALT) and Required Delivery Date as procurement Measures of Effectiveness (MOE) for <u>Small Purchase only</u>. This information will be used in a student thesis. POC at the Naval Postgraduate School is LCDR. Robert Vickers (Coml 804-373-5970 or 804-656-2536: Fax # 408-656-2138).

GENERAL INFORMATION (PLEASE CIRCLE CORRECT RESPONSE OR FILL IN THE BLANK):

_____ _____
Activity   Name

1. Your position?_____

2. Your Rank/Rate?
    a. ENS   e. CDR
    b. LTJG   f. CAPT
    c. LT   g. GS/M-_____
    d. LCDR

3. Your procurement/contracting experience?
    a. 0-1 yr
    b. 1-2 yrs
    c. 2-4 yrs
    d. more than 4 yrs

4. Number years in current billet/position?
    a. 0-1 yr
    b. 1-2 yrs
    c. 2-4 yrs
    d. more than 4 yrs.

SURVEY QUESTIONS:

Please rate the following statements (except multiple choice or fill in the blank questions) on a scale of 1 to 5 with 1 being "strongly disagree" and 5 being "strongly agree." Please circle the appropriate number on the bar below the question. Space is provided after each question for any written comments.

1. PALT, by itself, is a valid indicator of small purchase effectiveness.

1	2	3	4	5
STRONGLY DISAGREE	DISAGREE	NEITHER AGREE NOR DISAGREE	AGREE	STRONGLY AGREE

Remarks:

2. In my opinion, some other MOE should be used to measure small purchase effectiveness.

1	2	3	4	5
STRONGLY DISAGREE	DISAGREE	NEITHER AGREE NOR DISAGREE	AGREE	STRONGLY AGREE

Remarks:

3. PALT statistics serve no useful purpose for our customers.

1	2	3	4	5
STRONGLY DISAGREE	DISAGREE	NEITHER AGREE NOR DISAGREE	AGREE	STRONGLY AGREE

Remarks:

4. PALT statistics can be easily manipulated.

1	2	3	4	5
STRONGLY DISAGREE	DISAGREE	NEITHER AGREE NOR DISAGREE	AGREE	STRONGLY AGREE

Remarks:

5. PALT statistics tell me very little about how well I am serving my customers.

1	2	3	4	5
STRONGLY DISAGREE	DISAGREE	NEITHER AGREE NOR DISAGREE	AGREE	STRONGLY AGREE

Remarks:

6. Procurement activities should do more to control/influence the procurement process after purchase order award until material receipt by the customer.

```
     1              2              3              4              5
<===========================================================================>
STRONGLY        DISAGREE      NEITHER AGREE     AGREE         STRONGLY
DISAGREE                      NOR DISAGREE                    AGREE
```
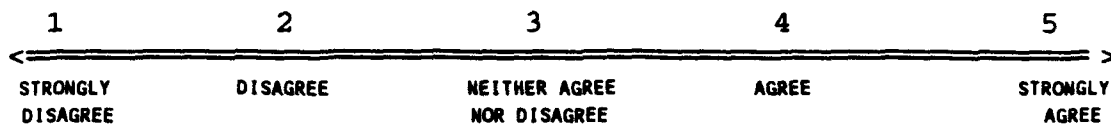
Remarks:

7. Procurement activities should do more quality evaluation of vendors.

```
     1              2              3              4              5
<===========================================================================>
STRONGLY        DISAGREE      NEITHER AGREE     AGREE         STRONGLY
DISAGREE                      NOR DISAGREE                    AGREE
```
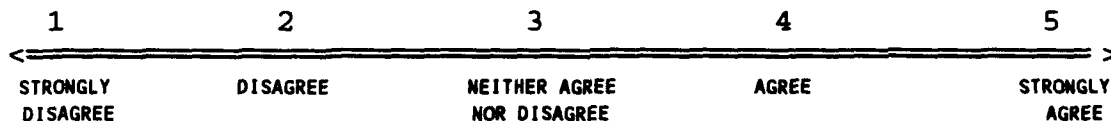
Remarks:

8. RDD would be a more valid measure of small purchase effectiveness.

```
     1              2              3              4              5
<===========================================================================>
STRONGLY        DISAGREE      NEITHER AGREE     AGREE         STRONGLY
DISAGREE                      NOR DISAGREE                    AGREE
```
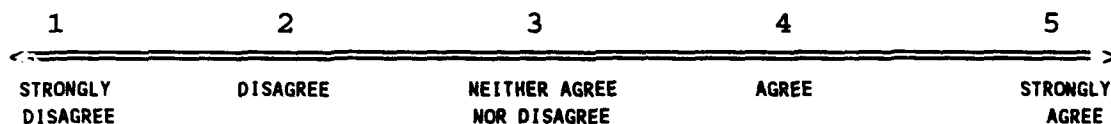
Remarks:

9. Procurement activities should not be held accountable to RDD since they don't have control over the entire procurement process.

```
     1              2              3              4              5
<===========================================================================>
STRONGLY        DISAGREE      NEITHER AGREE     AGREE         STRONGLY
DISAGREE                      NOR DISAGREE                    AGREE
```
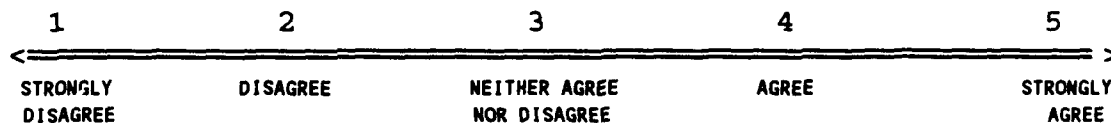
Remarks:

10. Individual buyers have no control over the procurement process after award of the purchase order.

1	2	3	4	5
STRONGLY DISAGREE	DISAGREE	NEITHER AGREE NOR DISAGREE	AGREE	STRONGLY AGREE

Remarks:

11. RDD, if implemented, would be easy to manipulate.

1	2	3	4	5
STRONGLY DISAGREE	DISAGREE	NEITHER AGREE NOR DISAGREE	AGREE	STRONGLY AGREE

Remarks:

12. RDD would be more useful than PALT since it provides a better measure of how well I am supporting my customers.

1	2	3	4	5
STRONGLY DISAGREE	DISAGREE	NEITHER AGREE NOR DISAGREE	AGREE	STRONGLY AGREE

Remarks:

13. What other MOE's are you using to measure small purchase effectiveness?

14. If RDD were to be implemented, should it be used for:

   a.   Small Purchase only
   b.   Large Purchase only
   c.   Both Large and Small Purchase

15. Are you currently using some form of RDD to measure small purchase effectiveness? If so, how?

16. Do you currently measure vendor quality or lead time? If so, how?

17. Should some other measure of performance be used (other than PALT or RDD)? If so, explain why.

18. Listed below are possible obstacles to implementing RDD. Rate on a scale of 1 to 5 the measure of difficulty, with a "1" being least difficult to overcome and a "5" being most difficult to overcome. Circle "0" if you do not consider the item to be an obstacle to implementation. Space is provided for you to list additional concerns you feel must be addressed if RDD were to be implemented.

		Rating					
A.	APADE/System implementation	0	1	2	3	4	5
B.	Receiving valid RDD's from customers	0	1	2	3	4	5
C.	Capturing receipt information	0	1	2	3	4	5
D.	Lack of control over the entire process	0	1	2	3	4	5
E.	Vendor concerns	0	1	2	3	4	5
F.	Cost to implement	0	1	2	3	4	5
G.	Deployed units	0	1	2	3	4	5
H.	Workload sharing between activities	0	1	2	3	4	5
I.	Political concerns	0	1	2	3	4	5
J.	_____	0	1	2	3	4	5
K.	_____	0	1	2	3	4	5
L.	_____	0	1	2	3	4	5

19. Who handles your receiving function?

20. Do you use an automated procurement system? If so, which system?

21. RDD should:

    a. replace PALT as a Measure of Effectiveness.
    b. be used in addition to PALT.
    c. not be used in any form.

Other Comments:

APPENDIX B

The following are comments to specific survey questions.

Question #1: PALT, by itself, is a valid indicator of small purchase effectiveness.

1. I think PALT could be a valid indicator if games were not involved in trying to make the PALT look good & reasonable PALT was set.
2. It can be if used judiciously; may not be if only measure.
3. It is of some use, but should be used only as a part of measure.
4. Too easily manipulated. Negative motivator.
5. Procurement does not have access to performance of vendors and receiving date.
6. PALT by itself cannot indicate effectiveness. Many other factors play a role in small purchasing. We have the same problems large purchase has, i.e., inadequate specs, gov't delays, contractor delays, etc..
7. PALT can be easily manipulated. PALT by itself is a false sense for measuring procurement effectiveness.
8. PALT only measures the productivity of the purchasing department.
9. No! Need to know customer receives a quality product, at a reasonable price. Vendors charge extra for expediting material not in stock. Did the customer receive the correct material when he needed it? Describing & receiving what one really wants can be a problem.
10. There are too many elements involved in the procurement of an item that affect PALT.
11. There are too many factors to be considered in addition to PALT.
12. Given similar procurements (and adequate purchase requests) along with comparable workloads, PALT, by itself, may be a valid indicator of an organization's processes & their effectiveness.
13. Would be effective if every Purchase Request was adequate/complete and ready for purchase.
14. PALT is one valid indicator.

Question #2: In my opinion, some other MOE should be used to measure small purchase effectiveness.

1. I can't agree or disagree if I don't know what other method would be used.
2. PALT, in conjunction with other measures.
3. Other measure (can't think of which - "quality" of some sort) used in conjunction w/ PALT. Not as a substitute.
4. Some other system may be better, but as of now - no such system exists. It is best tool we have now.

5. Weighted measures.
6. PALT plus RDD would accurately measure small purchase effectiveness.
7. PALT & MOE [RDD] should go side by side to show how effective the small purchases are in relation to actual receipt of material.
8. Some other MOE should be used in _addition_ to PALT.
9. If we continue to measure "PALT" we need to address issues related to "pre-award & post award" functions. When material is received, does it sit on the docks waiting for processing? Does the customer interact with "supply/purchasing" if material received is incorrect, of poor quality, etc., in lieu of just "reordering". How long did the vendor take to deliver material? Are we following-up ensuring the gov't gets material on time? Are we mailing the necessary contracts, etc, on time? What's our administrative time. Concentration needs to be applied to both pre-award and post award factors, workload and personnel problems. Problems dealing with inadequate descriptions & specs, short delivery schedules, unknown MFG's, etc. Procurement needs to involve the customer in addressing these issues.
10. A combination of indicators is perhaps most meaningful.
11. I don't think you can pick just one MOE, there should be a variety of ones evaluated to give an accurate portrayal of how well the function is executed.
12. We do not have a problem using PALT as a measuring unit.
13. Maybe a % of POs processed.
14. Use PALT as a MOE, but base PALT goals on priority and not Pierside/Non-Pierside. (Ex: Pri 01-03, 5 days; Pri 04-08, 10 days; Pri 09-15, 15 days)
15. Used in conjunction with PALT.

Question #3: PALT statistics serve no useful purpose for our customers.

1. Don't know how they are used by the customer.
2. PALT would show the customer how long we had his request but it would not indicate the reason why we had it so long. A hard buy sometimes requires extra time, or is the request sitting on a desk, the answer isn't shown in the PALT.
3. Serves as 1 _indicator_ of effectiveness, however is usually used against purchasing by the customer because it currently is the _only_ MOE. Also, it is _misunderstood_ by the customer.
4. Customers can gain some insight into the process.
5. Useful to establish average procurement lead times.
6. Need ability to predict completion.
7. A customer can monitor the progress of his procurement, once rec'd by the buyer.
8. Can provide estimates they can use for planning purposes.
9. The only PALT the customer cares about is his immediate requirement.
10. Would be of greater use if we honestly measured it (i.e., clock starts at the time of receipt by the FISC regardless of where in the FISC).

11. Whether order is placed w/in the required PALT period or not, the customer's concern is the RDD.

12. Customers do not care about statistics. They only care about when they get the requested material.

13. Our customers need to know how long it will take from requisition date to receipt date. PALT times are confusing to non-purchasing personnel.

14. But, could serve a purpose for management and inspection teams. Customers could care less about PALT.

15. Without some statistics/history, production would not be able to determine realistic delivery dates for job completions. Which contractors can do the job? Which can supply material in a timely manner?

16. The PALT can provide customers with needed information to assist in planning lead times for placing procurement requests.

17. Its not as important now as it use to be. Customer don't care how long it takes (unless it's urgent) they just want the item processed.

18. If one particular customer has a higher PALT than the rest of the customers this could be indicative of a customer based problem (Ex: poor reqn description).

Question #4: PALT statistics can be easily manipulated.

1. In an automated environment, I don't think this could be done.

2. I believe most commands have "exceptions", where PALT can be adjusted.

3. As a PCO at a field activity, this was a "fact of life".

4. PALT reports are never accurate.

5. On manual reporting, PALT is easily manipulated but not in PADPS, where the computer actually computes the PALT.

6. Activities/purchasing organizations can use different "start" times for PALT.

7. If they are computer generated, they are not usually manipulated. However, PALT does not cover submission time thru Comptroller, approval officials etc., nor does it cover time from award to delivery, so it is a incomplete statistic when looking at satisfying customer need.

8. Purchase request can be held until all the purchase info is received then can be entered in computer and awarded, or clocks can be turned back.

9. On APADE, update reqn # and change reqn # to a fake reqn #. Cancel the fake reqn #. When ready for award reinput orig reqn and award.

Question #5: PALT statistics tell me very little about how well I am serving my customers.

1. Serving in what way? Days on desk, PALT is a good indicator but quality it is not.

2. As a buyer I watched my PALT. There are times when you can have a high PALT and give good customer Service. Sometimes contractors take longer to quote or you are having

problems making sure everyone is bidding on the same specs. These would be the same even if you were using RDD to measure customer service. Just because you don't meet RDD doesn't mean your not giving good customer service. You can be doing everything possible & still have a higher PALT than you would like to have or not meet RDD.

3. They are 1 indicator, however is not necessarily accurate.

4. The average can point to problems, either w/ customer responsibilities or procurement delay.

5. It only shows how fast orders are getting out but not how effective, meeting RDD, or accuracy of getting quality materia'..

6. SIMA San Diego categorized requisitions by UMMIPS movement. Ex. Casrep is No. 1 priority. PALT tells me how effective my purchasing & delivery schedules are on my buys. NOTE: Vendor responsiveness to requests for delivery and price availability, volume of business, manning, limited sources, and contract law are factors which are beyond control of the buyers and which might extend PALT on individual purchase actions.

7. Tech & review time as well as follow-up needs to be considered also.

8. If realistic delivery dates are submitted, contractor's delivery schedules would be in line with customer's expectations. Serving the customer's needs to receive material in the amount of time really needed.

9. Customers really do not care about PALT - only care when their requirement will be available to them.

10. As stated above, it does provide info on the one area or block of time that the requisition is actually "in work" in the procurement branch.

11. PALT doesn't get the material ordered, make sure it's been shipped, or received in good condition...

12. PALT is a good indication of the level of service provided.

13. They tell a <u>partial</u> story.

Question #6:   Procurement activities should do more to control/influence the procurement process after purchase order award until material receipt by the customer.

1. I don't understand the question? The best way a customer can get good service is to provide a good Reqn with all the information required (good specs) and a good phone # & POC in case questions come up & respond quickly with info when required or money if necessary.

2. "Status up dates" probably serve no real purpose.

3. Some procurement activities which choose not to delegate the admin function would be effected. It depends on which activity, i.e., workload, personnel, etc.

4. Customer's primary concern is timely delivery of supply/services not timely contract award.

5. However that takes bodies and money.

6. Not enough post-award training to fulfill post-award processing.

7.   I feel my activity has an active role. We are basically cradle to grave.

8.   Schedule follow-ups with vendors to check on progress if items being remanufactured.

9.   An aggressive contract administration doing follow-ups.

10.   At this command, this is an "unwritten" portion of the procurement function - even extending into the payment process.

11.   We need to eliminate the mind set "it's not my job", "I've ordered it and now I'm thru with it". Customer's satisfaction is achieved when he receives what he wants, when he wants it.

12.   Particularly in small purchase, vendors are not penalized for non-performance.

13.   It's impossible to accomplish this in the arena of small purchase with 1,000's of transactions.

14.   Our procurement follow-up post award is done on an exception basis. All efforts (funding constraints) go to pre-award on the small purchase side. On large procurement, I think we do an excellent job post award.

15.   This is a bad question, it assumes that aggressive follow-up and other actions are not performed by procurement activities. I think that usually they are. What might be more important is how often does the negotiated delivery date meet the customer RDD, and if the source (mandatory or otherwise) does not meet the negotiated delivery date, what do you do about it.

16.   We do all we can from order, to follow-up material/invoice to receipt. (From cradle to grave)

17.   Agree, but not feasible for several reasons. Not enough personnel to follow-up on overdue orders, no centralized receiving point to know which orders are overdue and not enough time.

18.   However, with the volume of reqns we process it is not feasible--there should be a system Navy wide that could keep this.

19.   ACO's!

Question #7: Procurement activities should do more quality evaluation of vendors.

1.   Contract Admin has no idea of a problem unless someone contacts us. If a vendor is continually late or provides bad equipment we need to know.

2.   Red, Yellow, Green is one means as well.

3.   Depends on the need. Provisions are available for the desired level of quality assurance.

4.   Again that takes bodies and money.

5.   With additional resources (either people or information systems).

6.   Not in small purchasing. It would be to time consuming and require additional personnel.

7.   Compile list of errant vendors. Also check vendor's background with other local procurement activities.

8.   Eliminate vendors who are chronic delinquent providers.

9. Depends on activity, amount of workload.
10. Qualified vendor evaluation is not performed adequately in small purchase... Small Purchase is more concerned with distribution of business not quality of vendor performance.
11. We really don't have a Quality Vendor Program because we don't have good delivery statistics like DLA has.
12. We could use some software applications from NAVSUP in this area!
13. I have few to none, complaints about vendors.
14. Once again severely limited by personnel and budget which makes this impractical.

Question #8: RDD would be a more valid measure of small purchase effectiveness.

1. I see very few documents that reflect a realistic delivery date.
2. Often Req's are received with unrealistic RDD's. I have received over comp. buys with RDD that have already past. As I've stated before just because you miss an RDD doesn't mean that good service isn't given. Was the lead time allowed long enough for the buyer to make a good buy?
3. Considering the lack of control of what the customer sites as the RDD--It is probably just as bad of an indicator as PALT.
4. If can ensure that it is a good date & there is sufficient time to achieve it.
5. If you can verify that the RDD is a realistic date.
6. RDD is a goal, not a measure of procurement success.
7. Do not know. Need further explanation of RDD system/concept.
8. This is only meaningful when RDD is valid. Too often RDD is not true "drop dead" date.
9. Customers give unrealistic RDD's. Example: MFG must make the item and can't deliver for 6 months. End user make RDD the very next day. Their reason, we need the buyer to call it out & get the MFR. started.
10. End-users do not understand RDD to be an effective measure.
11. Where customers are satisfied purchase effectiveness is met. Customer satisfaction is the measure of purchase effectiveness.
12. PALT is a more valid measure because the faster you place an order, the faster the delivery. However, PALT/RDD should go hand in hand together. NOTE: Some requirements have to be manufactured, only MFR/OEM can provide delivery date.
13. If technical gives reasonable RDD.
14. In conjunction with measuring "PALT", RDD needs to be included in the process. Customers also need to trust Supply, submit realistic RDD. Get away from "priority" system. Many times procurement receives a document with an expired delivery date.
15. As long as there is a valid RDD.
16. I presume you mean the ability of the organization to satisfy realistic, bonafide RDD's.

17. How about measuring against IPG's the way the supply system does? What a novel idea.....
18. This makes the gigantic assumption that the RDD is accurate. In the case of NPS, we often receive: 1) No RDD, 2) An RDD of "ASAP", 3) An RDD that reflects more of a lack of planning than a truly urgent need.
19. We try to procure material based on RDD in relation to PALT.
20. RDD are sometime unrealistic.
21. Too many variables such as time it takes for vendor to provide quote, delivery times quoted in GSA schedules, UNICOR, and unrealistic RDD's provided by end user.
22. RDD is great except that does not ensure item will be rec'd by commands on that date, i.e., ships deployed, overseas command, transhipments.
23. More easily manipulated than PALT. Realism of RDD often suspect.
24. RDD's themselves invalid.

Question #9: Procurement activities should not be held accountable to RDD since they don't have control over the entire procurement process.

1. RDD's can be unrealistic. Vendors can delay shipment as well as customers that want to change specs after the award. With the FAR regulations, Vendors must be rotated therefore you can't just go to vendors you know are dependable, sometimes you have to go with a vendor you never used before.
2. Should include.
3. Activities should be held accountable for establishing an RDD & ensuring it is met.
4. Too many variables come into play w/ RDD's.
5. Numerous activities bring rqn in with bad RDD just to get priority placement of an order for an item they know has an extended mfg lead time.
6. RDD should be used to the extent that the buy was made in sufficient time for the vendor to meet the RDD. Too many other variables affect delivery.
7. Procurement process ends after award.
8. Wrong. Procurement activities should work with valid RDD's and the procurement process hand in hand.
9. It is the procurement activities responsibility to follow-up until material is received and turned in to the end user.
10. Contract Administration is a vital point of purchasing, RDD are constantly upgraded thru continuous & aggressive follow-ups.
11. I agree, however, with today's varied modes of shipping, most items should be available within 2-10 days provided they are in stock. The purchasing office should be held accountable to process the PR's in time for shipping prior to RDD.
12. Adapt to the theory of "cradle to grave". Share information. Concentration should be on delinquent contractors. Activities may not control contractor's delivery

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schedules, but they can control which contractor to solicit. More calls to vendors inquiring if deliveries will be met.

13.   Procurement activities should have a customer relationship that allows for sufficient control.

14.   In the ideal system, the procurement activity should be accountable for satisfying the customers true need.

15.   Documents have a tendency to get stuck in the Fiscal Dept. or because so many individuals are required to see the document time is lost.

16.   Can't be responsible for production or shipping methods.

17.   All efforts should be made to meet a _realistic_ RDD. Activities should be held accountable to the level of effort.

18.   We should have to take into account everything necessary to reduce production/delivery.   At ICPs the faster the production, the less wholesale system stock to have to buy to support longer production leadtime.

19.   Hold procurement activity accountable for processes they are responsible for.

20.   RDD usually inflated by customer.

Question #10:   Individual buyers have no control over the procurement process after award of the purchase order.

1.   Buyers seem to have the feeling once it's awarded its not their problem. Often a buyer with a good rapport with vendors can get something expedited w/o cost with a simple phone call. But over all as for shipment, delivery & receipt buyers don't have any control.

2.   Very little.

3.   Contract administration could.

4.   They still control certain contract admin functions, i.e., expediting.

5.   It seems large purchase would have more control.

6.   This is only true in cradle-to-grave operations when contract admin is retained by buyer.

7.   They have all the control they want, but again it takes bodies/money to control.

8.   Given the volume of worked processed (>2,500 reqn per year) it is not reasonable to expect the individual buyer to manage the post award performance of the vendor & transportation system.

9.   Buyers are not given the time to control purchase after award.

10.   Depends on the activity.

11.   Buyers are always responsible for their buys until materials are received.

12.   Dependent on the purchasing activities organization, some facilities have buyers involved in post-award issues, others (i.e. SIMA) have a separate administration section.

13.   Buyers should be involved and can be involved when a vendor is not performing.

14.   Except unpriced orders.

15.   With proper feedback, a buyer can improve the overall process by not awarding future orders to vendors that have a history of problems of performance.

16. If there are problems relating to money the buyers get involved.

17. Buyers are responsible from cradle to grave, they can expedite or cancel orders or re-route.

18. Buyers have control on things like delinquent delivery, but do not know about it until the end user lodges a complaint.

19. Lose visibility once awarded.

Question #11:   RDD, if implemented, would be easy to manipulate.

1. I think it would be easier for our customers to manipulate the RDD to either say we are doing a good job or a poor job by the amount of lead time they allow.

2. In terms of manipulating the automated system - we could put any RDD we wanted, regardless of what the customer indicates.

3. While RDD is theoretically the best measure from a TQM perspective, the issue still remains if the RDD is realistic.

4. Not familiar enough w/ RDD to express opinion.

5. The RDD is set by the requiring end user.

6. RDD can differ considerably from actual dates. An item (or service) is delivered or completed. RDD is also dependent on supplies status. Is item on the shelf or having to be manufactured.

7. To an extent, agency can change situation. Procurement agents, receipt depts need to work together. Communicate/interact on Post-award functions. It's important to train personnel it's their responsibility to make the customer happy. With shrinking personnel training is essential.

8. The customer defines RDD. If an item cannot be procured to meet the RDD, the customer is notified and a new RDD can be established, but customer is in control.

9. Any MOE based on statistics would be subject to gaming.

10. Hopefully, a reasonably tight system could be molded into place.

11. RDD are on the document based on the priority system. Pri 03 - 8 days, Pri 06 - 12 days, Pri 13 - 31 days.

12. RDD is basically based on availability from vendors.

13. If implemented the RDD generated by APADE based on priority should be the RDD used as the MOE. This would be standard for all APADE users and would not be able to be manipulated. However, comment on #4 would still apply which would alter the RDD.

Question #12:   RDD would be more useful than PALT since it provides a better measure of how well I am supporting my customers.

1. If PALT and RDD are used together and both are realistically set, and it wasn't manipulated, then, you could get a true picture of effectiveness of small purchase support to our customer.

2. They are equally as bad.

3. But.... while RDD is theoretically the best measure from a TQM perspective, the issue still remains if the RDD is realistic.

4. Achieving RDD is more a function of luck and/or coincidence than buyer effectiveness.

5. Need to know more about how it would work.

6. But only to the extent that we use RDD to measure if the buy was made in time to allow the vendor to be able to deliver by RDD.

7. If you keep your PALT down your customer is satisfied. We can tell the vendor to deliver at a certain time. Vendor says ok. We put this in the 1155 RDD great. Vendor delivers 6 months later.

8. Too many unknowns & less control.

9. Both can be useful- should be timely & meeting the RDD.

10. RDD is beyond buyers control. PALT for SIMA is normally five to six days over-all.

11. Depends on the situation.

12. Controls need to be set. Anyone can submit an urgent RDD.

13. [Again] I presume you mean the ability of the organization to satisfy realistic, bonafide RDD's.

14. Both leave something to be desired. Why not use Requisition Priority?!

15. Since it (RDD) can not be trusted at the present time, it would not provide a better measure.

16. We work with both.

17. Depends on availability.

18. Most RDD's are unrealistic or left blank. It is more important to place the order as quickly as possible with a negotiated delivery date to meet the needs of the customer.

Question #13: What other MOE's are you using to measure small purchase effectiveness?

1. Production, Ave WIP, Backlog, Completions, Canx, Cost.

2. PALT, RDD.

3. Average age of work in process, backlog-receipts-cancellations, production- output-# of awards completed/# of line items, average age in house, # of modifications, # due to release, QA reviews, PMR's, PMA's.

4. Days on desk. Customer surveys. Work in process report.

5. Customer service attitude. Customer feedback. Use of EASE.

6. PAT Teams.

7. Reports from customers.

8. Small Purchase check-off list with flow chart & check points.

9. Customer survey feedback, monthly productivity report.

10. Material quality and cost effectiveness of buys.

11. Amount of modifications issued within a certain time frame. Sole source busts. Actual number/amount of purchase actions awarded in certain time frame. By running buyers backlog weekly & constantly reminding them of buys over ten

days. Full utilization of UMMIPS, based on order & precedence.

12. I have done a couple of studies to measure order to receipt times and found them to be useful tools when department's claim it takes 3-4 months to get supplies. Our department was shocked to see it was actually taking about 3 weeks.

13. Customer remarks/responses. Priority designator. Did the customer get what was requested and required and good value for quality. Urgency of Need.

14. Complaints from customers and or customer feedback.

15. Backlog.

16. Customer satisfaction surveys.

17. Since some requests are hotter than others, we work with customers to accomplish those requests first. We set up pre-award conferences on future production deadlines. Communicating restrictions approvals, sole source requirements to get a heads-up on requirements before requisitions are submitted. Help customers achieve the best description, share data on past deliveries, workload problems, shift personnel to utilize for projects that are critical.

18. We have a requisition status sheet that comes out every Monday. It shows when order received, when placed & when due. My buyers call on any over due orders.

19. Vendor delinquency rate (% of orders over due), number of line items procured per hour, aged purchase backlog (<5/5-15/16-30/>30 days old).

20. Add technical review and distribution to the PALT calculation.

21. Customer feedback. Vendor feedback. Buyer/Team Leader feedback.

22. Subjective customer satisfaction feedback is used in addition to standard PALT computations.

23. None.

24. None to my knowledge.

25. Receiving Lead Time (from award to receipt). Backlog. Award counts for individual buyers.

26. We use only RDD and PALT.

27. None, unfortunately.

28. None.

29. PURS. (measure productivity)

30. Number, type of and reason for modifications. Established a data base on a software called Q & A. Analysis allows us to pinpoint weak areas and upgrade our quality thereby improving overall effectiveness.

31. # orders place via EDI. Measure changes to order qty/rework variables - eliminate rework which drives up PALT.

32. Work in Process (WIP), age, mix by $'s, mix by comp/SS, mix by contractor, mix by customer.

33. How many purchase orders placed electronically. Backlog (WIP).

34. Project O; measures by age category, once funds received.

Question #15: Are you currently using some form of RDD to measure small purchase effectiveness? If so, how?

1. Award date to RDD. (Can't capture actual rcpt date.)
2. Yes. Computer generated reports.
3. Yes. Charting RDD vs award date. Not a good measure since customers put unrealistic RDD's on reqns.
4. Yes. Using info that is not complete.
5. We current'y buy to RDD vs 1st-in-1st-out. We have weekly reports whir'i provide the following: # of days allowed, # of days remaining, # of days past due. We also graph the % which meet RDD.
6. In large purchases, it has been my experience that activities will only comeback to the contracting office when the contractor has failed to deliver on time. Activities will emphasize when they need to use the particular item, instead of the actual contract delivery date.
7. Customer satisfaction is the key control process till customer has matl. Much better support for giving the extra effort.
8. Tracking high profile buys.
9. RDD currently used in large to back in to procurement milestones.
10. Yes. A local report compares RDD to the PR date & gives number of days until RDD.
11. No. I keep my PALT down.
12. Yes. On a test basis only.
13. No. PALT is still used, but are informally emphasizing to buyers the importance of meeting RDD's.
14. No, not formally. On high profile acquisitions such as Casrept, Deployers, work stoppage, this issue is important. We have an aggressive follow-up program that 80% of our orders are delivered on time and some are earlier.
15. Priority and date required as listed on 2276; an in-house system only, that ensures customer satisfaction in completing work-in-progress. Usually proceeded by a heads-up phone call.
16. Are using RDD, must try to meet RDD, call customer if can't meet.
17. Not really - only on critical jobs, requirements.
18. No. Only by exception.
19. No, except an ad hoc program can be used when desired. We do not enter RDD with data entry of PR's.
20. Not on an objective basis.
21. No.
22. No, it is not reliable as received in the NPS current system.
23. We work with the RDD that is on the purchase request.
24. No.
25. No.
26. No.
27. No.
28. Standards for our buyers are for processing requirement IAW Issue Group Priority, i.e., 1-3; 4-10-APADE will not allow you to track - to hard otherwise.
29. At the ICP, requirement determination includes PALT therefore RDD usually is buffered by PALT. RDD is built into PALT.
30. No.

31. No.
32. No.

Question #16: Do you currently measure vendor quality or lead time? If so, how?

1. Red, Yellow, Green forthcoming.
2. No.
3. In the Admin Section we try to keep an eye open for problem vendors and give the buyers a heads up & to use caution if one appears to have problems. We started keeping a vendor file & gave it to Code P for their Red, Yellow, Green program they were starting.
4. Currently implementing RYG Quality Vendor program. Measures quality _only_ not delivery or lead time.
5. No.
6. We have the RYG program- however it is currently only used for specific commodities only - _not lead time_. Other than that - we have no quality vendor program.
7. Yes. Off line.
8. Manage by exception.
9. Only to the extent provided by Red/Yellow/Green program.
10. Only in instances when requirement is urgent.
11. No. We get very little feedback from customers on bad vendors.
12. No. Not at this time, although discussion has been ongoing regarding the matter.
13. Yes. End users input quality.
14. Yes. Compiling list of deficient vendors.
15. Yes, aggressive follow-ups on materials and Quality assurance for services. When an item is urgently needed (Casrept, Deploying unit, work stoppage) and the low-bidder cannot provide material/services before RDD, other than low-bidder is considered/awarded.
16. No, but, I ask if material is readily available and for immediate shipment.
17. Primarily by RDD, promised and actual.
18. Quality, talk to technical personnel, get calls from customer, monitor by contract closeout.
19. Vendor quality is determined by prior purchases, references and customer input.
20. Both. The Honeywell ILSMIS system sets up a system to collect data on vendors that don't deliver on time and vendor quality. But it's only as effective as the data put into the system. "Garbage in/ Garbage out".
21. We measure Vendor delinquency rate. Order is delinquent when order is one day past the established estimated delivery date established with the buyer.
22. No.
23. SACONS can generate that report.
24. Yes. Quality Deficiency Reports document unsatisfactory vendor performance (when properly completed by the requiring technical activity). We also utilize the Navy's Red, Yellow, Green evaluation plan on limited Federal Supply Classifications.

25. No. No measure built into APADE.
26. Only to the affect that if we receive valid complaints from customers, we will restrict orders to those vendors that are problem children.
27. We measure vendor quality - mainly by the complaints from the end user, leadtime by the complaints from the Receipt Control personnel.
28. Not really when it comes to quality unless customer complains. We run past due listing which shows overdue time but we don't track.
29. No.
30. Collecting of Non-conformance Reports from the receiving activities.
31. No.
32. Vendor responsiveness is measured, i.e., Red, Yellow, Green, still some items very hard to procure - long lead time; minimum quantity etc.
33. Depends on individual contractor.... FAT, production lot (albeit very unusual).
34. No.
35. Yes. Blue Star program.
36. Yes. PLT, Production Lead Time, Procurement lead time and Administrative lead time.

Question #17: Should some other measure of performance be used (other than PALT or RDD)? If so, explain why.

1. See 13. All are indicators.
2. I think a combination of both PALT and RDD should be used.
3. It is not fair to utilize only PALT & RDD as neither of them are accurate indicators alone, or even combined. I can't think of any fair way to monitor performance. A combination of a lot of things (as provided on previous page). The best way would probably be customer surveys on a continuing basis - probably not reasonable!
4. Quality. No rework.
5. No, the two should be used together, not one to the exclusion of the other.
6. PALT may not be entirely effective, but many requiring activities assign RDD's that are not realistic. In many cases, the RDD is past when the requirement enters the contracting activity.
7. Don't have better idea.
8. PALT by Issue Priority Group for a start!
9. RDD. Go for it!
10. Yes. Need some measure of customer satisfaction/support.
11. CATD. Contract Award to Delivery (in days).
12. Use of Process Control Charts in conjunction with PALT would be IAW TQL.
13. Age of work in process.
14. Complexity of documents. (Weighted measures)
15. PALT and RDD would be a more effective MOE with weighted measure.
16. Yes. PALT and RDD are not realistic to the "real world" many factors play into the performance, not just numbers.

17. Yes. Include cost effectiveness as part of measure of performance.
18. Sole Source Busts, finding alternative and new sources of supply that supply high quality cost effective products.
19. Both, PALT to set reasonable standards within each procurement office and RDD to measure if the customer got material/services in a timely and responsive period.
20. Response to RFQ's.
21. I believe the most effective performance measurement would take RDD's met, PALT, prices paid & quality received, etc. into "collective" consideration.
22. IPG. Priority Designators. It works well for the box kicking side of the world. We should be measured on our timeliness for meeting the customers priorities.
23. Yes, we should also measure performance by some other means but I'm not sure what we should use.
24. A combination of the performance measures available, i.e., PALT, RDD, Backlog, Work output of buyer, etc.
25. At this time I cannot think of any.
26. No opinion.
27. No.
28. Yes. PALT based on priority.
29. Very hard to do, too much work with limited resources.
30. PALT, RDD, WIP.
31. Yes, but its probably a combination of PALT, which is strictly time (as is RDD), and quality.
32. Yes. Total process lead time. Pre-Reqn time development--PALT--Production Lead Time, time to produce by KTR--Delivery.

Other comments:

1. Just because a RDD is valid to a customer doesn't mean that the RDD is valid to the buyer (i.e., If a ship needed a piece of equipment by a certain date, deployment or something, this date is valid to the customer [and so] he needs it by that date. But that date might not [give] enough time for the buyer to compete, the vendor to make or the transportation to take place. These factors can't change the fact that the customer still needs the equipment at a certain date). Sometime it just takes experience, cooperation, and just plain luck to make an RDD.

2. I would like to know more about how RDD would serve as a MOE. This is not clear to me. Is this the customers RDD at time of PR submission? If so, the customer cannot be relied on to establish an honest, accurate RDD. If its the RDD negotiated & whether or not the contractor meets it, there still could be variables precluding an accurate measure.

3. Too many times the RDD submitted is a date pulled out of the air, sad but true. Trying to use RDD as a MOE for purchasing would be unfair and unjust unless every end user was realistic and truthful with the RDD used.

4. My experience is that almost all RDD's on request I receive are not realistic. A significant factor in using RDD is whether a particular item requested is a stock/shelf item or if it is a customer made to order item. An activity like SIMA which buys OEM, sometimes sole source, parts or equipment for ships, procure many custom items that need to be manufactured. Delivery lead times can be as high as 26 to 52 weeks. These lead times do not meet the customers needs. If RDD becomes a viable factor, expediting costs would soar. If the RDD is not realistic, waste of funds would occur. Most of the time, RDD is not realistic.

5. Customers don't really use RDD's with any degree of consistency. Customers do consistently use priority designators, and everyone, including the line community, understands them. It makes more sense to use .riority Designators than RDD's!! or PALT!

6. RDD & PALT are two separate functions. One has nothing to do with the other. Availability is the factor when estimating RDD. Sometimes we (purchasing) have no control over certain items. PALT is too easy to manipulate. Some times a request can go back and forth from end user to buyer. I think effectiveness should be measured by quantity & quality.

7. If I had an opportunity to choose just one MOE it would be PALT based on priority.

APPENDIX C

LIST OF ACTIVITIES RESPONDING TO SURVEY

The following is a list of activities that responded to the survey and the number of surveys received from each activity.

Activity	Location	#Surveys
FISC	San Diego, CA	9
NAVSUP	Washington, DC	11
FISC	Pearl Harbor, HI	3
FISC	Guam	1
FISC	Charleston, SC	1
FISC	Jacksonville, FL	1
FISC	Oakland, CA	2
FISC	Yokosuka, Japan	2
FISC	Puget Sound, WA	1
FISC	Norfolk, VA	2
FISC, Detachment	Long Beach, CA	4
Naval Postgraduate School	Monterey, CA	4
Naval Satellite Operations Center	Point Mugu, CA	1
Marine Corps Air Station	El Toro, CA	1
Naval Sea Support Center, Pacific	San Diego, CA	1
Shore Intermediate Maint. Act.	San Diego, CA	1
Naval Hospital	Twentynine Palms, CA	1
Naval Reserve Intell Command	Dallas, TX	2
Naval Air Station	Dallas, TX	1
Naval Weapons Station	Seal Beach, CA	1
Naval Computer & TELCOM Station	San Diego, CA	1
Naval Hospital	Camp Pendleton, CA	1
Defense Printing Service, Det	San Diego, CA	1
Navy Public Works Center	San Diego, CA	1
Naval Surface Warfare Center	Crane, IN	1
Naval Hospital	Corpus Christi, TX	1
Naval Special Warfare Group ONE	Coronado, CA	1
Naval Air Facility	El Centro, CA	1
Navy Aviation Support Office	Philadelphia, PA	4

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