



ACQUISITION RESEARCH PROGRAM SPONSORED REPORT SERIES

**An Analysis of Contracting Activity Purchase Request
Acceptance Lead Time for USMC using Unit Acquisitions under
the Simplified Acquisitions Threshold**

December 2019

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Prepared for the Naval Postgraduate School, Monterey, CA 93943.



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ACQUISITION RESEARCH PROGRAM
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ABSTRACT

This project analyzes the purchase request acceptance lead time (PRALT) for United States Marine Corps (USMC) acquisitions under the simplified acquisition threshold from unit requirement generation to acceptance by a contracting entity. We evaluate the lead time required prior to the start of the procurement acquisition lead time (PALT) measurements to determine how the length of PRALT affects units' ability to receive valid contract requirements. With this project, we reviewed various contracting procedures and conducted a literature review of current contracting practices and the procurement environment. We use quantitative data from approved program systems of record to review the amount of time required from the contract package proposal to acceptance into the contract PALT process. This review allows us to analyze variations in PRALT and identify factors delaying acceptance of a contracting package. From this analysis, we develop policy recommendations to further decrease total acquisition lead time.



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We would like to thank our spouses for their support and sacrifice throughout our careers. Without them, we would not be where we are today.



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LIST OF ACRONYMS AND ABBREVIATIONS

| | |
|---------|---|
| APSR | Accountable Property System of Record |
| ASAP | As Soon as Possible |
| BICmd | Blount Island Command |
| CICA | Competition in Contracting Act |
| COR | Contracting Officer Representative |
| COTS | Commercial Off the Shelf |
| CPI | Continuous Process Improvement |
| CPRG | <i>Contract Pricing Reference Guide</i> |
| DCCH | <i>Defense Contingency Contracting Handbook</i> |
| DoD | Department of Defense |
| DoN | Department of the Navy |
| FAR | Federal Acquisition Regulation |
| FASA | Federal Acquisition Streamlining Act |
| FY | Fiscal Year |
| GCSS-MC | Global Combat Supply System – Marine Corps |
| LSS | Lean Six Sigma |
| MCB | Marine Corps Base |
| MilSpec | Military Specifications |
| NIGP | National Institute of Governmental Purchasing |
| PALT | Procurement Acquisition Lead Time |
| PoP | Period of Performance |
| PR | Purchase Request |
| PRALT | Purchase Request Acceptance Lead Time |
| RCO | Regional Contracting Office |
| RCO-SW | Regional Contracting Office Southwest |
| RDD | Required Delivery Date |
| SAT | Simplified Acquisition Threshold |
| SDN | Standard Document Number |
| SoW | Statement of Work |
| SupO | Supply Officer |
| TALT | Total Acquisition Lead Time |



USMC
USN

United States Marine Corps
United States Navy



I. INTRODUCTION

The goal of this project is to improve the effectiveness and efficiency of goods and services procurement through contract action by analyzing the period of time between a need becoming apparent to the warfighter and a contracting activity accepting a purchase request (PR) from the unit to procure that need. This chapter provides background necessary to understand the research and describes our motivation to conduct the research. This chapter also describes the specific questions we hope to answer during the project, the scope and limitations of the project, and how the study is organized.

A. BACKGROUND

Ellen Lord, undersecretary of defense for acquisition and sustainment, and other Department of Defense (DoD) officials have emphasized the importance of fielding equipment to the warfighter with expediency (Berteau, 2018, para. 11). The process to procure with public funds is highly regulated by Congress, as lawmakers attempt to achieve socioeconomic benefit for the public. These regulations are primarily enumerated in the Federal Acquisition Regulation (FAR) and legislation such as the Competition in Contracting Act (CICA): this is the realm of contracting personnel and contracting activities who study, understand, and implement these regulations. Personnel submitting PRs to contracting activities, however, are not trained in these regulations and can experience delays in the delivery of a PR resulting from administrative mistakes. Effectiveness and efficiency can be increased by reducing administrative mistakes made prior to PR acceptance by a contracting activity.

B. PURPOSE

The purpose of this study is to evaluate the process to procure United States Marine Corps (USMC) using unit level (battalion/squadron/battery) requirements under the simplified acquisition threshold (SAT) and to identify weaknesses that extend the time prior to the contracting activity accepting the PR, hereafter referred to as PR acceptance lead time (PRALT).



PRALT refers to the period of time between a using unit realizing it needs a good or service and a contracting activity accepting the PR for that requirement as complete and actionable. This period of time before the contracting activity takes possession of a PR represents a critical component of the acquisition timeline that can vary and can sometimes be measured in months. By defining and naming this period, it can now be studied for potential improvement areas.

Utilizing raw data from the Marine Corps Accountable Property System of Record (APSR) PR Builder, the goal is to identify trends affecting the procurement process for relevant purchases in the PRALT stage and make recommendations to increase effectiveness and efficiency.

C. RESEARCH QUESTIONS

The following are research questions designed to lead the exploration of PRALT in order to identify events in the PRALT period that could extend total acquisition lead time (TALT). The questions are designed to explore the parts of PRALT we thought would reveal opportunities for improvement and to isolate different variables to determine how vulnerable the PRALT timeline is.

1. Primary Question

- What time variation exists between using unit need establishment and PR acceptance by the supporting contracting activity for contracts under the SAT?

2. Secondary Questions

- What are the causes of acceptance delay by a contracting entity?
- How does the use of Required Delivery Date (RDD) or Period of Performance (PoP) fields affect PRALT?
- How does the time of year a request is submitted affect PRALT?
- What process may shorten this timeline?

D. SCOPE AND LIMITATIONS

The scope of this thesis includes analyzing a sampling of USMC using units' PRs submitted to a contracting activity for acquisitions of goods and services under the SAT.



This study identifies factors related to increased or decreased timelines associated with a procurement request by reviewing the reasons for delay, the types of requests that affect acquisition timelines, the date of request submission in relation to time of fiscal year (FY), and the procurement's dollar amount. The analysis of these areas demonstrates how each variable affects PRALT. PR Builder, the USMC's purchase APSR, provides data and milestones for purchases beneath the SAT. Due to the large volume of data from purchases that meet our criteria, the PR Builder engineering team was only able to provide us with a sampling of 8,929 transactions. From this raw data, we filtered out transactions that, due to modifications or iterations, present multiple transactions under the same document number. Upon isolating individual document numbers, we were left with 661 documents to study that meet our research criteria. A description of this filtering process is described in Chapter IV. Relevant statistical relationships from these 661-document samples are analyzed.

A limitation to the study was the use of Excel for the analysis of the raw data. While Excel presents a powerful tool in which to look at data, it lacks some abilities of more sophisticated data processing software. Tools that are more powerful would allow deeper research into relationships in the data set, but these tools were not available to us during our research time frame. Though other tools may provide more detailed analysis of the results in future studies, we feel Excel provided us with ample ability to study the data and provided a premier look into PRALT.

E. ORGANIZATION OF THE STUDY

This project is organized into five chapters. Chapter II provides a background into the using unit's requirements in generating appropriate documentation to support a PR under the SAT. Chapter III includes a literature review of articles to provide context for the federal regulations and procedures that affect public acquisitions as well as proposed solutions to streamline public procurement processes. Chapter IV systematically analyzes the data gathered from PR Builder and then discusses the methodology used to interpret the data. Chapter V concludes the body of research and provides recommendations to decrease the timeline associated with PRALT.



This chapter has introduced the topic of this project, PRALT, and described the direction and intent of the study. The next chapter discusses the background of PRALT and other topics pertinent to PR and contract actions.



II. BACKGROUND

This chapter aims to provide the reader with the requisite knowledge to understand the procurement process at the using unit level. It provides a background of the regulations, key terms, and the environment for using unit procurement, and it touches on the knowledge base of both using unit procurement managers and contracting professionals.

A. BACKGROUND

In order to discuss individual components of the PRALT period and develop recommendations on how to improve the procurement process, we must provide context by discussing regulations surrounding government acquisitions. This chapter covers statutory requirements for government acquisitions and their effects on timelines.

Acquisition is the process used by the U.S. government to procure contract supplies and services required for government agents to achieve their mission goals. According to the F.A.R. Part 2.101,

Acquisition means the acquiring by contract with appropriated funds of supplies or services (including construction) by and for the use of the Federal Government through purchase or lease, whether the supplies or services are already in existence or must be created, developed, demonstrated, and evaluated. Acquisition begins at the point when agency needs are established and includes the description of requirements to satisfy agency needs, solicitation and selection of sources, award of contracts, contract financing, contract performance, contract administration, and those technical and management functions directly related to the process of fulfilling agency needs by contract. (Definitions of Words and Terms, 2019)

This research is focused on PRALT. PRALT encompasses the period of time beginning when agency need is established and ending when a contracting activity accepts the PR for the same agency need. Agency need establishment could refer to the informal identification of a need, such as a request made for goods or services during a staff meeting, but is represented in this research by the creation of a PR in PR Builder. Subsequent PRALT metrics assume requirements are entered into PR Builder in a timely manner. Once the need is identified, there are many details that must be addressed before the contracting activity will accept the PR as actionable—all contributing to the PRALT timeline.



Examples include creating a Statement of Work (SoW) for a service or a salient characteristics description for products, obtaining necessary waivers, and assigning funding to the requirement. Necessary actions for a contracting activity to accept the PR vary between requirements, with complex and high price requirements needing more preparation and potentially having longer PRALT times. Once the prerequisites are complete and the contracting activity accepts the PR as actionable, the PRALT timeline stops. PR acceptance by the contracting activity is represented by the contracting manager's approved stamp in PR Builder. However, contracting activities will often stamp a PR approved with details unresolved, such as a pending waiver, in order to support the using unit. The contracting activity will then work its contracting duties concurrently as the requesting unit completes unresolved PRALT details. Because there can be a delay for a requirement to be entered into PR Builder and contracting activities can accept incomplete PRs to support the using unit, PRALT timelines in this research represent best-case scenarios. Requirements that take weeks to be generated in PR Builder and then are accepted early by the contracting activity will have a longer PRALT time than can be measured by this data.

PRALT is the first portion of the total time used to award a contract after a using unit establishes a requirement, referred to as Total Acquisition Lead Time (TALT) (Kair, 1996). TALT consists of Procurement Acquisition Lead Time (PALT), a metric tracked by most contracting activities beginning when a using unit's PR is accepted, plus PRALT. A diagram of the TALT process is provided in Figure 1. PALT is the primary metric used by contracting activities to measure their own effectiveness and efficiency. However, the quality of the solicitation and expedience of requirement fulfillment depends heavily on the work completed during PRALT, which is subject to the same regulations as PALT but not currently tracked or recorded by any contracting activities reviewed during this research. Furthermore, the personnel completing tasks during the PRALT period typically are not trained in acquisitions or contracting regulations. The subsequent scenario thrusts untrained personnel into critical tasks during PRALT, with the potential to significantly increase TALT.



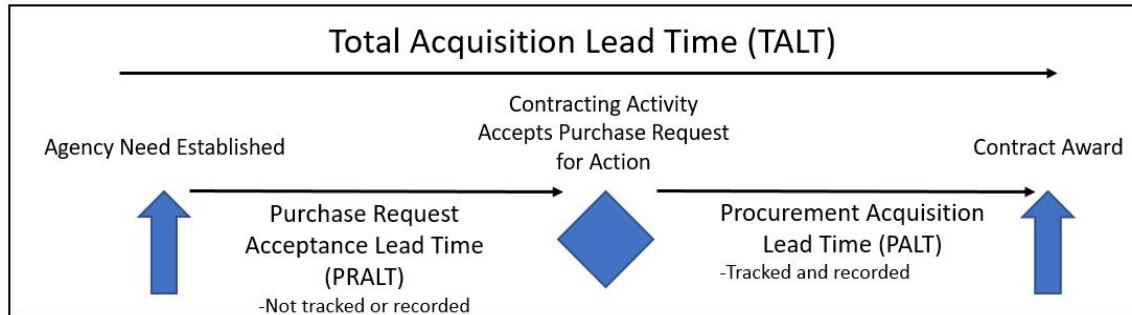


Figure 1. TALT Breakdown and Measurements

Using units face significant barriers to creating a PR that a contracting activity will accept. PR acceptance is the point at which PRALT ends and the contracting activity begins its PALT. For example, describing essential physical characteristics of a specialized item or the required performance in a SoW, as required in FAR Part 11 can be beyond the technical capabilities of the end user or using unit (Describing Agency Needs, 2019). Additionally, Congress has created a web of acquisition regulations that complicate the development of an actionable PR. As using units prepare their PR for submission to the contracting activity, there is limited support available to offer guidance. The *Contract Pricing Reference Guide (CPRG)*, Volume 1, instructions to contracting officers are as follows:

Normally, you will not be ultimately responsible for describing Government needs. That will normally be the responsibility of technical experts and the requiring activity. However, as a member of the Acquisition Team, you are responsible for sharing your acquisition knowledge in an attempt to meet the needs of the Government. (DoD, 2012, para. 2.1.2)

Contracting professionals are educated in these regulations and spend their careers mastering their application, but they usually do not get involved in an acquisition until the PR is complete. According to the *Defense Contingency Contracting Handbook (DCCH)*, “The customer is responsible for requirements generation, from definition through approval; however, contingency contracting officers should expect to advise and assist in the development of requirements (for example, by drafting outcome-based requirements)” (DoD, 2017, p. 50). Consequently, there is no deliberately assigned support resource available for using units preparing a procurement request; using units are dependent on the

goodwill of contracting activities for support during procurement request preparation. The Government Accountability Office (GAO) recognized the Federal Emergency Management Agency’s (FEMA) lack of control of the pre-solicitation phase of contracting as a major issue in its emergency preparations. The GAO referred to the process as acquisition planning but included the pre-solicitation phase and the need to provide timeline guidance to this phase as necessary (Mak, 2018, p. 27). This pre-solicitation phase directly aligns with the PRALT concept our paper reviews. A depiction of FEMA’s acquisition planning process is depicted in Figure 2. We feel this demonstrates the relevance of the PRALT concept as we see a resemblance to our own TALT concept depicted in Figure 1. The GAO recommended the following action to FEMA: “FEMA’s Administrator should update and implement existing guidance for program office and contracting officer personnel to identify acquisition planning time frames and considerations across the entire acquisition process,” (Mak, 2018, p. 42). Even though the importance of PRALT has been recognized as a critical part to the acquisition process, it remains an unmeasured and overlooked piece of acquisitions.

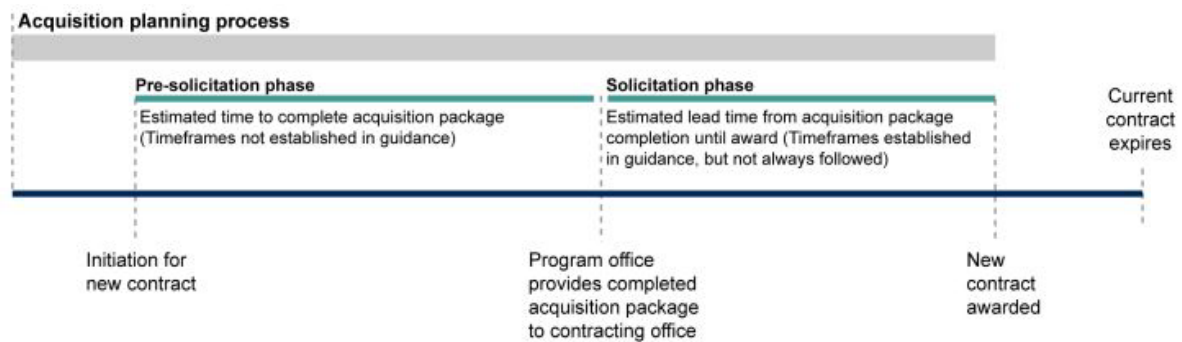


Figure 2. Notional Depiction of Acquisition Planning Timeline Depicted in FEMA’s Five-Year Master Acquisition Planning Schedule. Source: Mak (2018).

Finally, there is currently no metric to track, record, or evaluate performance and timeliness before the contracting activity accepts the PR. PALT begins when the contracting activity determines that a using unit’s PR is complete; it ignores the steps prior to acceptance, which include the description of the requirement, the commitment of funding, and the waivers and routing necessary for the contracting activity to accept the



PR. PALT is focused on the internal performance of the contracting activity and subsequently ignorant of the total time required for the end user to receive the good or service required by mission goals.

The purpose of Marine Corps contracting activities is to support using units, many times with significant consequences tied to the delivery and performance of contracted supplies and services. Dense contracting regulations dictate the path of need establishment. In the process of conforming to contracting regulations, contracting activities can lose sight of their legitimate purpose to deliver a capability to the end user. The resulting process is not customer-focused and may result in poor effectiveness and efficiency. The intent of this research is to explore PRALT in order to create a larger view of using unit acquisitions and promote a customer-focused acquisition process.

B. SUMMARY

This chapter provided an overview on some of the statutory requirements affecting government acquisitions. It pointed out that the PRALT time period is not tracked, the personnel preparing PRs in the PRALT period are not trained, and there is little to no support structure for using units during PRALT. The following chapter provides a literature review of professional studies into public procurement.



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III. LITERATURE REVIEW

There are existing studies of the acquisition timeline surrounding the PRALT period. This chapter explores projects examining PALT, TALT, and other acquisition-related topics that affect PRALT and good/service procurement through contract action.

A. INTRODUCTION

Reviews and analysis into public procurement are frequent. Professional groups and peer-reviewed journals produce an overwhelming amount of literature that focus on the field. Although much effort is concentrated into the history, statutes, procedures, and processes of the field in order to improve government procurement practices, most of that research focuses on PALT. The PALT process is not the subject of this paper.

This literature review examines the articles relating to the customer-focused PRALT timeline and variations of this timeline. We found very little information pertaining to this specific subject matter. Due to the void in the body of knowledge, this research provides value by starting to fill this gap. With the lack of applicable work in mind, this literature review is focused on providing an overview of what makes up the public procurement environment for USMC using units. Previous research provides insight into the ever-changing regulations, the political forces that shape actions, the way that individuals who comprise the field view their roles, dilemmas these professionals face, and a review of measurement methods utilized in the field.

The following sections provide an in-depth review of the relevant literature. They were chosen to provide insight into all areas of public procurement and demonstrate how the procurement environment may affect PRALT variations.

B. PEGNATO (2003)

Pegnato (2003) discussed fluctuations of the federal procurement system from times of extreme regulation to periods of relaxed controls. His work has been referenced in several articles covered in this literature review. While his work did not directly address the processes and timeline leading up to acceptance of a using unit procurement request by a supporting contracting agency, Pegnato's research helped develop an overarching view



of the government procurement environment. We feel that greater statutory restrictions placed on the procurement professional resulted in reluctance to accept less-refined PRs, which then resulted in increased timelines to fulfill requirements. The opposite may also prove true, with decreased timelines during periods of relaxed procurement regulations. Pegnato explored whether any procurement reform can be permanent or if the system will perpetually be in a state of ever-increasing and decreasing regulations.

Pegnato (2003) described how the nation's procurement regulations relax during times of national emergencies and are later amended upon the conclusion of a crisis. Two such examples cited were the removal of advertised contracts and competitive bidding during both World War I and World War II, only to have these regulations implemented again upon armistice. Pegnato pointed out that looser regulations eventually lead to scandals resulting in additional regulation. New regulations made politicians popular with voters, but these regulations cost more to implement and enforce than the cost of the relatively few scandals that caused their creation (Pegnato, 2003). Pegnato recognized an ultimate desire by the government to streamline procurement, which resulted in the passing of the Federal Acquisition Streamlining Act (FASA) of 1994 and the Clinger–Cohen Act of 1996. These acts allowed greater use of government credit cards, brought about the use of electronic contract processes, and promoted the purchase of commercial-off-the-shelf (COTS) products. These acts decreased the amount of time required for agencies to receive goods and services. The exact costs or savings from decentralizing purchases is unknown, but the speed at which authorized items can be purchased on government credit cards has been extremely valuable (Pegnato, 2003). Another major breakthrough of these laws resulted from the relaxing of regulations pertaining to COTS. Allowing government agencies to purchase COTS greatly reduced the need to generate detailed military specifications (MilSpec) in order to produce custom military-specific items. COTS purchases significantly reduced the amount of time required to fulfill a procurement.

A negative impact from the mid-1990s reforms was the increased use of performance-based contracts. Performance-based contracts set performance goals to measure contract completion without prescribing a method for how to reach those goals. This granted the contractor greater flexibility to utilize efficient industry standards. While Pegnato (2003) recognized the positive impact of increased competition, which in turn



decreases government costs and improves customer satisfaction, he also noted the lack of understanding on how to draft such performance-based contracts has resulted in a 16% increase in procurement lead time. The study Pegnato cited from 1998 is dated, but if procurement professionals at the time proved unable to properly utilize these types of work statements, those agencies drafting the initial objectives also suffered from a lack of knowledge on how to communicate their needs. The age of the study referenced by Pegnato becomes less concerning when related to the average USMC using unit, which is the focus of this paper. Marine battalions and regiments have an extremely high turnover rate, with the average Marine rotating out of a unit in less than three years. This constant turnover results in significant knowledge loss from one individual to the next. Any experience gained during a Marine's time at a unit will often need to be relearned by his or her successor. With this continuous knowledge loss, it is reasonable to conclude the Marine unit's ability to effectively draft performance work statements has seen little improvement since the publishing of this study in 1998.

PALT has been the measurement of choice to evaluate reform in acquisition. While decentralized purchasing reduced PALT on the contracting side it did not cover how this affected the potential burden placed on the requesting using unit. Pegnato also discussed the reduction of the DoD's acquisition workforce by 25% in 2001 and how this increased workload by 12% (Pegnato, 2003). He did not, however, discuss how this reduction in workforce and accompanying increase in per-worker workload affected the acceptance rate of contracting packages.

Pegnato (2003) concluded that government reforms have helped, but ultimately the changes will not be permanent. While procurement scandals were few, they received a great deal of attention and inevitably lead to greater restrictions, increased PALT, and overburdened workers. The risk-averse culture of the government is not easily changed. While this article did not directly discuss the timeline associated with generating a requirement and acceptance by a contracting activity, we acknowledge the government's desire to reduce the time for end users to receive items.



C. McCOMAS, OLIVER, AND HARRINGTON (2007)

A study conducted by McComas, Oliver, and Harrington (2007) analyzed the use of Lean Six Sigma (LSS) principles to review activities at the USMC Regional Contracting Office Southwest (RCO-SW). The USMC referred to the LSS principles as its Continuous Process Improvement (CPI) program. While its work focused on process improvement at the RCO-SW, the CPI team recognized the PRALT time frame as a significant area for improvement. Because of this, McComas et al. represents the only study we found that directly attempted to track the PRALT time frame in any fashion like our own analysis.

McComas et al. (2007) examined the process flow and determined to include all contracting actions from customer planning to post-contract award in their analysis (p. 54). Their process flow chart is shown in Figure 3.

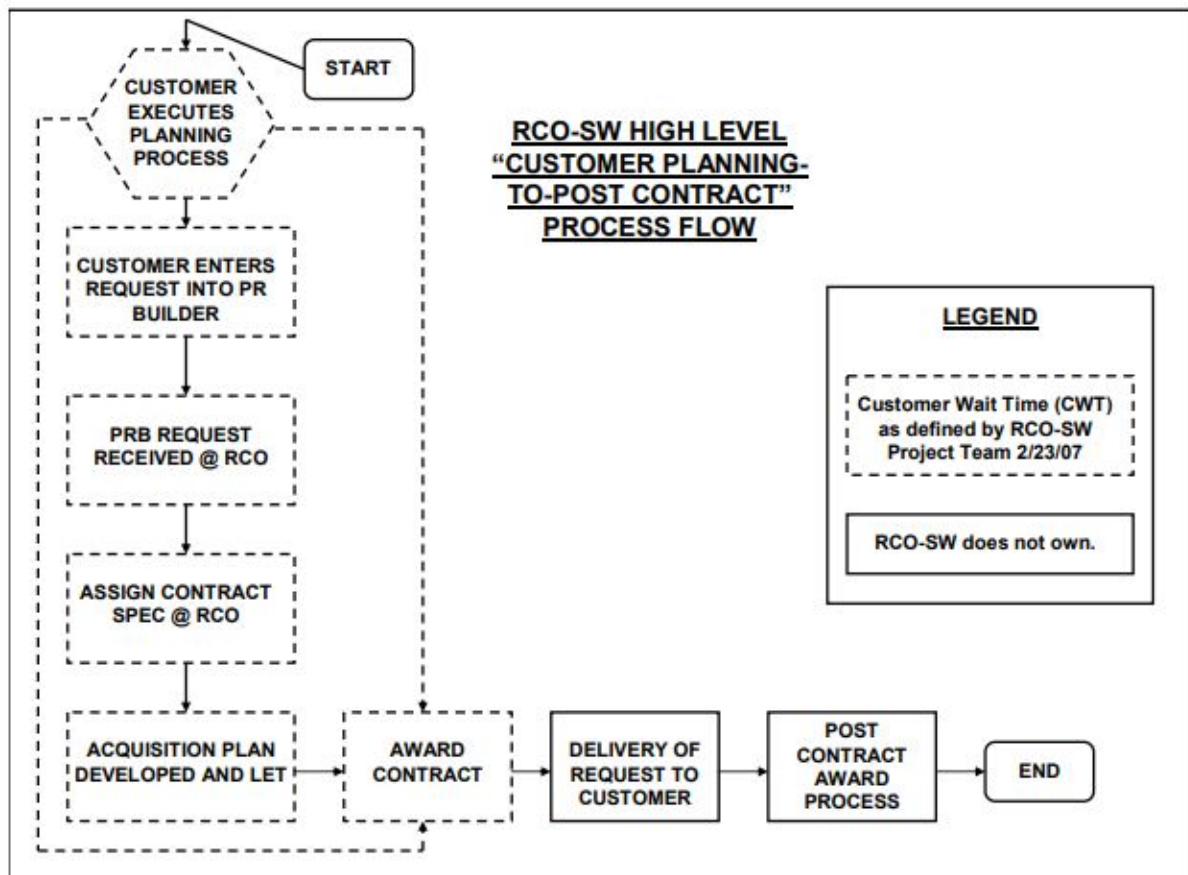


Figure 3. RCO-SW Process Flow. Source: McComas et al. (2007).

McComas et al. (2007) also classified the components of PALT as follows:

1. Customer execution of the planning process
2. Customer enters request into PR Builder
3. PR Builder request received at RCO
4. Assign contract specialist at RCO
5. Acquisition plan developed and executed
6. Award contract (p. 54)

While McComas et al. (2007) admitted the traditional PALT measurement does not include customer planning, they nevertheless recognized this as a valuable portion of the process flow and worthy of review. Steps 1–3 of this process represented the direct focus of this research, and thus the authors' work represented valuable insight on this topic. This study, however, takes a more traditional definition of PALT and only recognized the starting point of this measurement as the point at which the contracting office accepted the procurement package from the customer for action. While the CPI program looked at the total process for brevity, we focus this literature review on the initial three steps.

McComas et al. (2007) were not part of the CPI team that conducted the study, but they followed the study and interacted with the team on a monthly basis to track the progress. The CPI team analyzed the process and determined areas on which to focus its study that it believed would add the most value to the process and shorten cycle time. The CPI team did this through two primary methods: first, utilizing the team's knowledge of the subject area to analyze process delays, and second, through region-wide surveys to canvas Marine units representing the RCO-SW's customer base.

The CPI team uncovered several factors that frustrated customers and lengthened the process without adding value. The major areas of concern were a lack of knowledge by the customer about mandatory procurement regulations, proper use of the automated PR Builder system, improper data entry, and an inability to properly communicate needs on a SOW or PWS. These shortcomings often resulted in the request being returned to the originator for further rework (McComas et al., 2007).

This perceived lack of process knowledge and use of the mandatory automated tools was confirmed by the CPI team through the surveys. The authors' survey results were as follows:



1. Of the units surveyed (I MEF, Base, 1st Mar Div, 3rd MAW, MCAS, Tenant, Other), 74% responded.
2. 65% stated that the product or service they receive meets their requirements.
3. 35% stated it was “easy” to submit a purchase request to RCO-SW.
4. 23% stated they had a complete understanding of the role of RCO-SW in the procurement process.
5. 68% stated using PR Builder was the most challenging step in the procurement process.
6. 32% stated they engage RCO-SW in their process at initial planning. (McComas et al., 2007, p. 59)

The numbers revealed that some units believed they can effectively navigate the procurement process. However, most units did not possess a complete understanding of the process or a knowledge of the electronic tools used to move requests through the procurement process. Of all contracts studied by the CPI team, a customer can anticipate a request to be returned on average at least 1.08 times. The CPI team’s study results can be seen in Table 1.

Table 1. Quality and Cycle Time. Source: McComas et al. (2007).

| Dollar range | Average Value | Average Days in System | Average # of Returns |
|------------------------------|----------------------|-------------------------------|-----------------------------|
| \$0 – 9,999 | \$5,518 | 15.42 | 1.0 |
| \$10,000 – 25,000 | \$16,911 | 6.82 | .65 |
| \$25,001 – 50,000 | \$31,824 | 6.50 | .50 |
| \$50,001 – 100,000 | \$65,831 | 11.83 | 1.83 |
| \$100,001 – 300,000 | \$172,602 | 7.33 | .67 |
| \$300,001 - \$520,000 | \$379,396 | 21.60 | 1.80 |

The method used to collect these measurements and the sample size utilized cannot be analyzed because the original data from the work cited is not available. This information, however, provides a body of work to compare data from this thesis. Since the publication of McComas et al.’s (2007) work, PR Builder in 2015 became a USMC APSR, which mandated all purchases outside the Global Combat Supply System–Marine Corps



(GCSS-MC) be recorded in it for tracking and auditability (USMC, 2015). With all units now utilizing PR Builder on a regular basis for purchases, it will be intriguing to see whether some variation in the process timeline is revealed due to greater familiarization with the program.

D. ROMAN (2015)

Roman (2015) identified a gap in the current body of knowledge focused on how government procurement specialists actually behave and see their roles in the government sector. His work was published in the *Journal of Public Procurement* in 2015, and provided insight into how procurement specialists perceived their role in the public arena. Roman analyzed the common antecedent of public procurement specialists as “enforcers of procurement ordinances” and considered whether they impose government procedures with an apolitical agenda as if procurement robots or whether they step outside of this stereotype and play an active role in shaping decisions (Roman, 2015, p. 39). Roman’s work provided valuable insight into the individuals who make up the public procurement profession.

Roman (2015) attempted to answer two primary questions: What administrative roles do these procurement specialists assume, and what are the implications of their behavior patterns? The author reviewed current literature surrounding administrative roles and utilized a model based on the work of Selden, Brewer, and Brudney (1999) to develop the roles described in Table 2, which were utilized in Table 3 (Roman, 2015, p. 42).



Table 2. Roles of Public Procurement Professionals. Source: Roman (2015).

| Administrative Roles | |
|--|---|
| Role | Role description |
| Stewards of the Public Interest | They search for opportunities to participate in the formulation of "good" public policy. A "good" public policy is one that incorporates the needs of all citizens. They are committed to social and political goals, and policy efficiency is not a priority. They see themselves as serving the public and furthering the public interest, independent of perspectives of management or elected public officials. |
| Adapted Realists | They seek to balance equity and fairness. They are committed to both effective management and equity considerations. They reject the general value of neutrality, but they also recognize that they must work within the constraints imposed by the system in order to survive in a bureaucracy. |
| Businesslike Utilitarians | They value efficiency as an organizational and individual goal. When faced with a decision, they will opt for the most efficient solution. They do not make exaggerated claims and reject any politicization of their role. They do not seek to further the interest of those less privileged or minority citizens. They are ambivalent about their relationship with elected public officials. |
| Resigned Custodians | They see themselves as neutral agents, who know their boundaries. They work within the rules and the expectations of supervisors and elected public officials. They feel no inclination to play a mediator role between elected and nonelected officials. |
| Practical Idealists | They see themselves as highly responsible and professional. They work efficiently and accurately while also advocating policy positions and legislation in the public interest. They do not see themselves as agents of elected officials. They reject neutrality, but also the politicization of the public service. |

Roman (2015) used a survey developed by Selden et al. (1999) and then updated statements to make them more applicable to the current procurement environment. The survey was then reviewed by several experienced procurement specialists before being administered to a random sample of 2,000 members of the National Institute of Governmental Purchasing (NIGP) organization evaluated the responses on a seven-point Likert scale, ranging from "strongly disagree" to "strongly agree" (p. 46).



Table 3. Public Procurement Professionals' Self-Perceived Roles.
Source: Roman (2015).

| Role | Frequency | Percent |
|----------------------------|------------------|----------------|
| Practical Idealist | 150 | 30.40% |
| Adapted Realist | 143 | 29.00% |
| Steward of Public Interest | 97 | 19.70% |
| Resigned Custodian | 68 | 13.80% |
| Businesslike Utilitarian | 35 | 7.10% |
| Total | 493 | 100% |

The results of Roman's survey were unexpected. The previous notion of the resigned, neutral, efficient, and rule-following procurement specialist was not supported by the survey. A majority of the respondents were identified as "Practical Idealists" or "Adapted Realists" (Roman, 2015, p. 50). While these professionals understood their need to operate within a defined system of rules and procedures, the study uncovered that they were much more likely to execute decision-making and become involved in policy formulation than was previously believed. Roman's study did confirm that procurement specialists viewed themselves as professionals, which supported previous studies conducted by various authors.

As thorough as Roman's study was, he noted several research limitations:

1. All those surveyed were NIGP members. While this is a diverse group, pulling from only one source may introduce certain unintended biases compared to the total population.
2. Self-administered surveys inherently lead individuals to represent their "ideal selves" rather than their "real selves," potentially skewing results.
3. This was the initial use of the survey question set. (p. 53)

While the study did not analyze the effects between the individual procurement specialist and acceptance rate of procurement packages, it provided valuable insight into how these professionals identified their roles in the procurement system. Their self-described commitment to professional conduct, while not fully apolitical, does lend itself to a stable environment in which procurement transactions can be conducted. This stable environment created by the procurement specialist created a consistent framework for the



evaluation of PRALT procurement packages and reduced variability in the acceptance timeline by contracting offices.

E. SCHAPPER, VEIGA MALTA, AND GILBERT (2006)

Schapper, Veiga Malta, and Gilbert (2006) further developed the picture of the government procurement environment by discussing an inability to separate the process from politics. The use of government funds and taxpayer dollars attracted additional public attention and required transparency in the funding's use. They declared that those who often make the rules directing procurement professionals lacked a full understanding of the skills required to perform procurement duties. They were, however, very aware of the political ramifications associated with procurement reform. Again, such as in Pegnato (2003), inefficiency is accepted in the entire procurement system in order to prevent a small number of procurement failings (Schapper et al., 2006).

Political pressure further prevented improvements in PRALT. When the procedure's foundation remained in flux, this reduced the ability of non-procurement professionals to effectively navigate the process and lengthens the timeline. Public procurement remained subject to fluctuating political and public ideals, making it difficult for inexperienced personnel to effectively learn. Effective procurement action require knowledge of the field, yet many mandated procedures changed due to political factors (Schapper et al., 2006).

Schapper et al. (2006) described three common approaches to oversee government procurement: regulations, management, and centralization (p. 6). These approaches may be applied individually or combined in a hybrid fashion. Regulations described a set of procedures and rules to follow. These rules were derived to reduce procedural risk during times when high discretion was required and to help maintain confidence in the system. The United States falls into this regulatory category. The need to prevent misspending of funds was paramount because failure in oversight relating to tax dollars created drastic political fallout. The highly regulated process, though, created inefficiency, resulting in poor performance when attempting to fulfill the agency goals (Schapper et al., 2006).



Schapper et al. (2006) described how managerial factors have led governments away from the purely regulatory process. The managerial approach attempted to push away from strict compliance in order to create a deeper understanding of the market and achieve results through higher risk and higher value engagements. While the United States primarily deals in a regulated framework, decentralization has bled into the process, as demonstrated in the reforms enacted in the 1990s that increased the use of purchase cards for small-scale purchases. Decentralized procurement authority reduced the level of internal controls governing performance. This practice is consistent and works with low-cost, high-volume purchases such as office items. These types of purchases created relatively little risk and required fewer regulations and less managerial oversight, but many high-dollar, low-volume purchases created great risk and require significant expertise (Schapper et al., 2006).

Political influence cannot be disconnected from the government procurement process. The scale of government spending makes political interference unavoidable. In business areas, the government's purchasing power has the potential to destroy or create economic booms; for example, in certain regions, public procurement represents 50% of the information technology market (Schapper et al., 2006). This makes elected government officials very aware of how procurement regulations will potentially affect the economy in their districts. With the power of economics as a motivator, this creates little desire to remove political influence from the procurement process.

Schapper et al. (2006) explored how technology can help strengthen "transparency of process, efficiency, and policy coherence" (p. 18). Using electronic means that streamline communications between agencies and procurement professionals can speed up the process, increase transparency, and reduce risk, which is what politicians desire. Fraud can automatically be looked for and detected in most, if not all, purchase transactions without the use of manual audits. For high-dollar, high-visibility buys, electronic methods produced up-to-date disclosure throughout the acquisition process. With the adoption of these new technologies, additional stability and streamlining could be introduced into the procurement process. This stability benefited the agencies by allowing them to develop knowledge in the process and learn how to navigate a consistent PRALT environment, which will reduce lead time. However, even with this technological adoption and



stabilization, political forces will still be in play, inevitably changing political goals and procurement practices.

F. VICKERS (1993)

Vickers (1993) created a survey to canvas various buying commands in the U.S. Navy (USN), targeting senior level individuals with experience in procurement (p. 20). The author's work was geared toward determining the value of PALT in measuring a contracting activity's effectiveness or whether other methods of measuring procurement would provide better information. He wanted to analyze whether procurement professionals saw PALT as a meaningful measurement for managers and the customers they supported. Vickers's survey also reviewed the ability to manipulate PALT, how feasible survey participants felt the use of RDD would be, and what potential drawbacks would come from potentially using RDD.

Vickers (1993) defined PALT as "the number of calendar days from the date of receipt of a PR, or similar initiation of a procurement action in the purchasing component of an activity, to the date on which a binding order is awarded" (p. 7). Vickers points out that PALT only measures the portion of acquisition time from the data being entered into the procurement system to the award of the contract. This ignores the planning and preparation of the contracting package prior to submittal to the contracting office.

Vickers's survey received responses from 62 individuals from across various USN buying commands to gather a sampling of respondents. He utilized a survey of 12 scaled questions, each with a corresponding number range from 1 to 5. In this range, 1 represented "strongly disagree," and 5 represented "strongly agree." In addition to these scaled responses, he also utilized six short-answer questions, two multiple choice questions, and a scaled response question (p. 20). This literature review is concentrated on only the 12 scaled questions.



From these responses, an interesting pattern emerged pertaining to PALT, mainly outlining its limited effectiveness in capturing the process. The responses are listed as follows with their corresponding evaluations:

- PALT, by itself, is a valid indicator of small purchase effectiveness.
 - 61% disagree. PALT is only one component of procurement process and can be easily manipulated.
- In my opinion, some other measure of effectiveness should be used to measure small purchase effectiveness.
 - 76% agree.
- PALT statistics serve no useful purpose for our customers.
 - 53% disagree. PALT is useful to management, but not to customers.
- PALT statistics can be easily manipulated.
 - 74% agree. However, it was noted PALT was harder to manipulate on automated systems (Vickers, 1993, pp. 23–26).

Vickers’s work looked into the use of RDD as a measurement, which allowed the customer to declare the delivery date of the requirement. While several of the respondents stated this may prove helpful, many respondents mentioned that this field is misunderstood and often improperly filled in by the requesting organization. Often, the RDD responses from a requesting unit were “No RDD, an RDD of ‘ASAP,’ or an RDD that reflects more of a lack of planning than a truly urgent need” (Vickers, 1993, pp. 31–32).

Vickers’ work provided a more complete picture of how the individuals using PALT viewed the measurement, including its flaws and drawbacks. He concluded 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; is being supplemented with numerous other indicators” (p. 77). While PALT helped analyze a buying activity, it did not capture an effective measure for the customer’s process prior to the contracting office’s acceptance. While RDD appeared to be an inaccurate measurement due to misuse and a lack of education of the field by requesting units, Vickers’ review of the subject moved the literature into a more customer-focused framework and revealed the problems faced in controlling the PRALT process.



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G. MCCUE, PRIER, AND SWANSON (2015)

McCue, Prier, and Swanson (2015) provided a familiar argument of the competing values surrounding public procurement. Their work delved into the conflicting standards of political forces trying to make government procurement resemble the private sector. A drive for efficiency and cost savings while at the same time promoting socioeconomic goals depleted any realized efficiencies and cost savings. McCue et al. focused on five dilemmas that plague the public procurement specialist. Regulations are often ineffective because contracting effectiveness and efficiency measures conflicted with the socioeconomic goals of congress. By exploring the findings of this work and reviewing the conflicting objectives imposed on procurement specialists, our research provides greater understanding of the conflicts between the procurement professional and the using units that lack the adequate support structure to develop an actionable PR.

McCue et al. (2015) utilized a twofold approach to review the dilemmas they identified. First, they conducted a comprehensive literature review covering areas of concern from previous scholarly articles. Second, they utilized an interviewing method known as the Delphi technique. The use of the Delphi technique reduced bias by vetting the authors' dilemmas through industry experts and has them comment on whether issues are prevalent in the field or if they are only theoretical issues. The researchers only used industry experts who had over 20 years of experience, were key award winners from within the NIGP, held prominent leadership positions in the NIGP, and had achieved national recognition as forward-thinking procurement professionals. With willing individuals who fulfilled these demanding requirements, the researchers felt they had the ability to systematically analyze the following dilemmas:

1. "The Accountability/Responsibility Dilemma: Develop Flexible Procurement Systems While Maintaining Accountability and Control" (p. 182)
2. "The Fraud/Red Tape Dilemma: Limit the Opportunity for Fraud/Mismanagement While Reducing Operational Constraints" (p. 186)
3. "The Principle/Agent Dilemma: Identifying "Best Value" in the Presence of Competing Goals and Command Agency" (p. 188)
4. "Short-Term Benefits/Long-Term Cost Dilemma: Short-Term Economic Efficiency vs. Long-Term Monitoring Costs" (p. 191)



5. “The Cost of Empowerment Dilemma: Responsiveness to “End User” Through Decentralization While Increasing Training and Evaluation Costs” (p. 194)

While individual review and study of each of the dilemmas is valuable, for the purposes of this MBA project, the literature review is focused only on the individual aspects of each dilemma that pertain to increasing the PRALT timeline. In Dilemma 1, McCue et al. (2015) recognized the difference between the public and private sector, the latter of which the government desires to replicate to the greatest extent possible. In their research, they discussed how the public sector’s solution to scarcity is to centralize the process to prevent duplication and thus prevent perceived wasted effort by multiple agencies. This centralization required the “end user,” or in our case the Marine unit, to use a centralized procurement office to fulfill its needs, and a lack of understanding between these two organizations inevitably lead to the procurement agency being seen as a “roadblock” to the end user. The solution to this roadblock perception is a decentralized procurement process with end users able to fulfill requirements themselves. The expert panel in this body of work agreed with the need for decentralization but recognized the need to balance risk due to the greater accountability requirements imposed on government procurement.

Dilemma 4, again the discussion of decentralizing procurement authority comes up. The experts’ answers are very similar to the balancing risk discussion from Dilemma 1. While granting greater procurement authority satisfied the end users’ desire to avoid the roadblock, this procurement process appeased the short-term agency desires, but inevitable misuses and violations of the process ultimately cost more over the long term compared to the short-term gains (McCue et al., 2015). This argument stands in contrast to Pegnato (2003), who discussed how the small number of violations costs the government relatively small amounts in relationship to the overall volume of procurement transactions. The resulting overreaction to isolated incidents of fraud created inefficiency in the overall process to prevent these events from occurring. While Pegnato’s (2003) argument may be true at the macro level, the Delphi experts in McCue et al., (2015) literature concluded that at the micro level, the cost of a violation to individual agencies was higher (McCue et al., 2015).



The final dilemma addressed the training requirements, specifically the costs to implement decentralized procurement authority. McCue et al. (2015) recognized that the expense would be substantial to train individuals at the agency level in preventing misuse or improper spending on a magnitude large enough to support the desires of the end user. The authors recognized that while administrative costs may decrease, the total procurement costs would increase to support the education and training structure required. This proved especially true for the focus group of this MBA project because the turnover of personnel at the using unit level of a battalion or regiment is relatively quick, with a full set of new personnel coming in approximately every three years. As Marines progress past the using unit level to higher-level commands, they are less likely to utilize their procurement skills, which cost so much and took so long to develop.

Often, increased training and education requirements become a standard answer to problems within the USMC. McCue et al. (2015) present a view that demands careful study of the trade-off created through this solution. While we feel education is an important piece of shortening the PRALT timeline, careful and deliberate planning as to the level and extent of this education must be considered to gain the greatest outcomes.

H. SUMMARY

The literature reviewed in this chapter provides a framework to understand the public procurement sector and how the environment may affect PRALT timelines. Chapter IV reviews the data gathered and the methodology used to obtain and analyze that data. While the works provided in this literature review provide a sampling of the overall body of knowledge, this in no way captures the total breadth or depth of research conducted on public procurement.



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IV. METHODOLOGY AND DATA ANALYSIS

This chapter investigates the process used to filter the raw data provided from the PR Builder office and provides an analysis of results. First, we describe the process used to screen data and organize the information. Our research focused only on transactions that were started and completed within FY2016–2018. Figure 4 depicts the flow of data during the cleaning process. Subsequent sections of this chapter review and explain the process used to organize the data and methods that allowed us to obtain our results. We then explore the results by describing our findings in the data analysis section and express what we believe the data reveals to us based on our experience in the field.

A. METHODOLOGY

The extensive amount of data provided by the PR Builder program office required several steps of manipulation in order to extract the various data points for evaluation. The process we used to clean this data and the subsequent PRALT development are discussed in the following sub-sections.

1. Data Cleaning

The PR Builder program office provided a vast amount of information in the form of two spreadsheets that covered a period roughly from FY2016–2018. The raw data provided contained 8,929 standard documents numbers (SDN) for reference. The only tool used to compute this raw data to a workable form was Microsoft Excel. As our analysis sought to observe contracting actions below the simplified acquisition threshold (SAT) of \$250,000, we first must exclude any contract items above these amounts. Our study adhered to purchases below the SAT, as we felt procurements in this range represent the most common types of purchases for standard Marine units, make actions more comparable, and limit variation. A limitation to our data was the inability to perfectly match dollar amounts to individual SDNs. Many SDNs contained multiple items for purchase under the same document number and contained multiple modifications or iterations. This presented a challenge to effectively calculate the total dollar amount for each SDN and capture only the most updated modification without including dollar amounts from



previous iterations. To account for this discrepancy, we removed any item that exceeded the SAT. While this may allow for some total SDN amounts, to be above the SAT when we account for all items, we feel these SDNs are few and do not hinder our analysis.

Additionally, the raw data included only unit price and quantity. From these fields, we were able to compute the total dollar amount per line item. This total dollar amount allowed us to remove any individual item with a cost above the SAT. The data also contained multiple items for which the requirement was no longer needed, and a de-obligation of funds was required. To do this, a negative dollar amount was recorded in PR Builder to allow for the removal of funds from the SDN. With the creation of the total price per item column described previously, we were able to remove any SDN items with a price greater than \$250,000 and less than \$0.01. This removed 3,163 transactions from our data, bringing our total SDN count down to 5,766.

This data removal allowed us to substantially reduce our unusable information, but this action did not alleviate the duplicate SDNs contained in the spreadsheets. To complete this, we utilized Excel to remove any duplicate SDNs. From the 5,766 SDNs listed at the beginning of this data cleaning phase, the removal of duplicate SDNs removed an additional 4,925 SDNs, leaving our report with 841 unique SDNs. To maintain consistency with creation date, a critical part of measuring PRALT, we utilized the initial modification of all documents. The raw data recorded this as Mod 0. While many documents contained multiple modifications and iterations, all documents contained a Mod 0. This initial modification represented the first time the SDN was entered into the PR Builder system. This provided the baseline to measure all creation dates.

We only wanted to observe those documents that contained a PR Builder creation date within FY2016–2018. The government fiscal year cycle begins on October 1 and ends September 30 the following year. To observe this, FY2016 began October 1, 2015, and ended September 30, 2016. For the purposes of our research, we were only concerned with SDNs that were created on or after October 1, 2015, and on or before September 30, 2018. Applying this rule allowed us to remove 10 SDNs created prior to October 1, 2015, bringing our unique SDNs down to 831.



The final significant data cleaning effort resulted from removing any SDNs that were not accepted by a supporting contracting entity or were accepted after FY2018. Again, the use of multiple modifications and iterations presented a problem. To compensate for this, we isolated the SDN with an approval date by the contracting office. While not all modifications received an approval from the contracting office for subsequent modifications, all approved documents contained an approval for the base modification. It was from this base modification approval that we measured the approval date for each SDN. This further reduced the SDN count to 661 individual SDNs with no individual line items above \$250,000 or below \$0.01, and all SDNs were created and completed within the time frame of FY2016–2018.

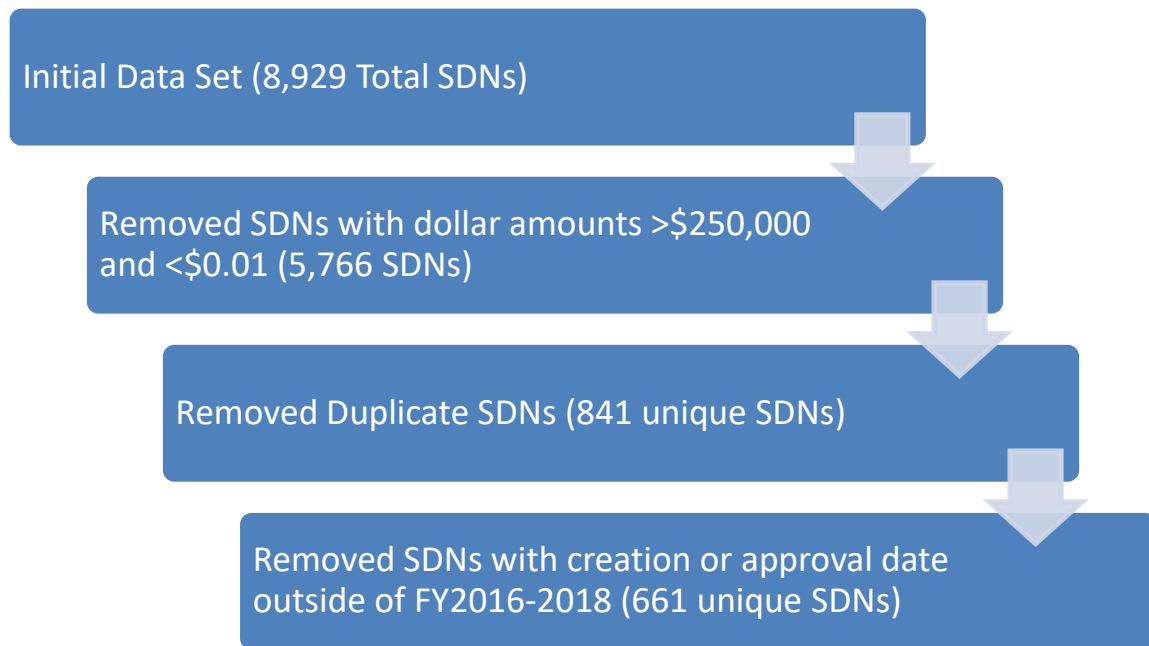


Figure 4. Data Cleaning Process Flow

2. PRALT Development

The underlying PRALT allowed us to analyze the time required from a unit's submission of a PR into the PR Builder electronic suite to approval of the request by an appropriate contracting entity. For a standardized verbiage, we classify the initial user at the unit level who enters the data into the PR Builder system as the Supply Officer (SupO).



Ideally, the process flows from need recognition by the unit to SupO input into the PR Builder system to approval by the contracting entity, which would be captured and tracked for PRALT. However, the capturing of need recognition to input into PR Builder is unfeasible as there is no process that captures the specific time a unit recognizes a need and no standardized method to record this. The moment one SupO recognizes a need will not necessarily be the same as another SupO's recognition.

With this limitation in mind, we reduced PRALT down to the time stamp created when the SupO entered the PR into the PR Builder APSR. This time stamp is captured under the "date created" field. To further standardize this data capture, we utilized only the modification (0) date created field. The modification field captures all modifications to a contract. While not all contracts undergo modifications, each SDN was initially entered under a modification of (0), which represents the first time and earliest date this SDN was entered into the PR Builder system. A similar process was utilized to capture the contracting office's approval date. For this data, as stated previously, we utilized the base modification date to compensate for the fact not all subsequent modifications receive approval from the contracting office.

With a standard method of measuring the earliest creation date and approval date for each unique SDN, we were able to calculate PRALT. The PR Builder system provided date stamps with both a date and time for creation and approval of documents. Excel was able to take these date-and-time stamps and convert the days to decimal points, providing extremely accurate measurements to produce PRALT measurements. The date created in PR Builder was subtracted from the date approved by a contracting office, which revealed a measure of PRALT for further analysis.

B. ANALYTICAL MEASURES

From the data cleaning and development of PRALT, we were able to further analyze multiple elements of PRALT and conduct an initial exploration into a new analytical field. Our cleaned data allowed us to analyze PRALT, review it for variations, and theorize potential causes for some of those variations.



1. PRALT

The PRALT measurement described previously provided the basis for all of our analysis and a starting point to review variations in the process. We utilized the data set to determine the SDNs created and approved per month and the average PRALT for all SDNs per month based on creation date. We broke down the data for each month across all three FYs and presented the data in heat maps to observe how creation and approval of documents relate to monthly PRALT averages.

2. Average PRALT Frequency

From our PRALT measurement, we captured the minimum PRALT, maximum PRALT, range of minimum and maximum PRALT, and median PRALT. We grouped each individual SDN's PRALT into seven bins consisting of 0–7 days, 8–14 days, 15–21 days, 22–30 days, 31–60 days, 61–90 days, and 90+ days, respectively. We then analyzed the frequency of PRALT within these bins to look for trends.

3. Appropriate Use of RDD

Through the analysis of the RDD data discussed previously, we were able to review the appropriate use of the RDD requirement for a PR. For the purposes of our study, we determined an RDD of less than 30 days from the initial creation of a PR to be an unreasonable use of RDD. FAR Part 13.003 requires a contracting officer to provide a solicitation period that will “afford suppliers with a reasonable opportunity to respond” under simplified acquisition procedures (Policy, 2019). FAR Part 5.203 establishes various timelines to respond to a solicitation depending on the requirement. These timelines range from 10 to over 45 days depending on the contract action (Publicizing and Response Time, 2019). These requirements do not include any of the administrative work the contracting office must complete pursuant to the award of the contract. Due to this, we feel that less than 30 days from the creation of the SDN in PR Builder to the RDD is an insufficient and unreasonable amount of time for a unit to expect a contracting entity to complete an award. We classified this as an inappropriate use of RDD.



4. Approval Percentage for RDD and PoP

During our study, we separately reviewed the acceptance rate of SDNs that utilized RDDs and PoP. We wanted to determine if one provided an advantage over the other in terms of acceptance by the contracting office. To determine this, we reviewed the total number of SDNs initiated during FY2016–2018 regardless of acceptance date and then compared the numbers with those SDNs that were approved by the contracting support office during FY2016–2018 to determine the percentage of acceptance. While this method may not account for some contracts started very late in FY2018, our data shows 79% of the studied SDNs were acted upon in less than 30 days. This timeline negates concern that PR created very late in FY2018 would not be approved before the start of FY2019. Additionally, PRs initiated in a FY utilize funds from that FY, as funding expires at the end of the FY. This further limits the concern of contracts starting late in FY2018 and not being processed until subsequent FYs. Units generally do not risk losing funds and are restricted from starting projects that cross current year FY funds into subsequent FYs. The most likely result of a PR initiated late in the study period that had little chance of approval during the study period was either that the request was removed and reinitiated in a subsequent FY or the request was never approved.

5. PRALT RDD

This analysis reviewed all SDNs that utilized an RDD on their PR. We isolated these SDNs and broke them down similarly to the overall PRALT measurements of amount created per month, amount approved per month, and average PRALT per month based on the creation date. We laid out data points for each of the three FYs and developed a heat map to chart and compare activity. The RDD requirement was used much less frequently than the PoP in our data set, resulting in the creation of no SDNs during several months.

6. PRALT PoP

We repeated the process described for PRALT and PRALT RDD for SDNs utilizing PoP. We then additionally presented this data in heat-map format. We found the use of PoP was more prevalent in our data set, providing a larger sample size to review.



7. Average PRALT and Activity Level per Procuring Activity

We were able to utilize the PRALT measurements to look at the variation between procuring activities. In our study, all SDNs in our data set were from Marine Corps procuring activities. All unit data was redacted from the raw data set. We were provided with SupOs names in the raw data set for SDNs, but no further individual attributable information was provided, nor was it necessary or recorded for the conduct of our research. We did not include these names in our paper, as they serve no purpose for our study but to analyze the frequency range of SDN amounts for each unidentified procuring activity. We utilized this information to formulate frequency diagrams of the PRALT range per procuring activity and the levels of activity per procuring activity. The level of activity was calculated by the amount of SDNs associated with a SupO, which we associated to one unique procuring activity.

8. Average PRALT and Activity Level per Contracting Support Entity

In a similar fashion to the PRALT and activity previously mentioned, we were able to analyze the average PRALT based on the contracting support activity. We also reviewed the activity level of each RCO in our study by reviewing the amount of SDNs that were approved by each office. There was a very large disparity in activity level between the contracting offices captured in our data set. Of the 12 contracting support entities, the level of activity ranged from one SDN processed between FY2016–2018 to 194 SDNs processed during the same time period. To account for this, we only reviewed those offices that processed over 100 SDNs during our three-year study period. Four contracting offices met this requirement and accounted for 594 of the 661 SDNs, or 89.86% of the SDNs reviewed.

9. Correlation between Average PRALT/Creation Date/Approval Date and Time

We tested the correlation between time and average PRALT number of contracts created per month and number of approvals per month. We wanted to review how the time of year affected each of these factors and determine whether a relationship existed between time and each condition. Again, for the number of contracts created per month, we utilized the month in which the initial SDN was created prior to any modifications. The approval



date was the base modification date when the SDN was approved by the contracting support entity.

C. FINDINGS

Our primary research question is: What time variation exists between using unit need establishment and PR acceptance by the supporting contracting activity for contracts under the SAT?

1. PRALT Statistic Distribution

Table 4 shows aggregate statistical data for PRALT in days, representing all SDNs within the research criteria. The average PRALT, 22.59 days, would be added to the PALT tracked by the contracting activity to determine TALT, the total time from requirement realization to award of a contract.

Table 4. PRALT Statistics

| | |
|---------|--------|
| MIN | 0.02 |
| MAX | 288.40 |
| Range | 288.37 |
| Average | 22.59 |
| Median | 11.43 |

The average PRALT for all unique SDNs that were initiated and approved was 22.59 days with a median of 11.43 days. Because the median is significantly lower than the average, the distribution of PRALT times is skewed towards the maximum PRALT. This suggests that complex PRs on the high end of the distribution require significant rework in order to be accepted by the contracting activity. After-action reports on PRs that cause this skewed distribution would help identify the type of PR, whether good or service, and nuances that contributed to the extended PRALT. The PRALT minimum of 0.02 shows that PRs can be accepted by a contracting activity in less than one day. The PRALT range, 288.37 days, demonstrates that large variation exists and suggests the possibility for comprehensive improvement to streamline processes and decrease variability.



2. Non-Compliant/Unusable Required Delivery Date (RDD)

Analysis of the data set shows 65 out of 98 line items using the RDD field had an RDD less than 30 days from the creation date. This represents 66.33% of all documents for goods acquisition. Contracting activities generally require 30 days to award a contract, so when a PR contains an RDD less than 30 days from the creation date, the RDD field is not usable by the contracting activity.

Table 5. RDD Use

| PRs which utilize RDD | RDD <30 Days | Percentage improper RDD |
|------------------------------|------------------------|--------------------------------|
| 98 | 65 | .66 |

Several reasons could contribute to an RDD less than 30 days from the creation date. The first is a requirement with an urgent need. Urgent need requirements are not uncommon, but justifying a truly urgent requirement is a meticulous process, and urgent needs requirements would not encompass 66.33% of requirements using the RDD field. Second, end users may be overemphasizing the priority of their needs to achieve faster delivery. This habit can perpetuate a cycle of inflated requirement priorities that degrades the integrity of the procurement system.

Last, and the reason believed to be the most common, is that end users and ground supply personnel do not understand the statutory requirements for publicizing and competition set forth in the FAR. Without understanding the minimum publicizing and competition requirements for a contract, the end user and ground supply personnel will have unrealistic expectations for product delivery. For example, contracting actions between \$15,000 and \$25,000 “must be posted not later than the date the solicitation is issued, and must remain posted for at least 10 days or until after quotations have been opened, whichever is later” (Methods of Disseminating Information, 2019). Additionally, “the contracting officer must establish a solicitation response time that will afford potential offerors a reasonable opportunity to respond to each proposed contract action” (Publicizing and Response Time, 2019). Failure to meet FAR requirements puts the contract at risk of protest. To be compliant with the FAR, a contracting officer must build an immediate lead



time of at least 20–30 days into the contract action once he or she receives an actionable PR just to accommodate the publicizing and response time requirements outlined in the FAR.

In the event of a legitimate urgent need PR, the RDD could appropriately be less than 30 days from the PR creation date. The data was not screened for legitimate urgent needs requests, but any that exist would be outliers that do not significantly change the results of the analysis.

Lack of end user and ground supply personnel education on FAR requirements is a recurring topic through this research. An initial step to making the RDD column a usable field is to instruct the personnel creating the PR on the minimum time frames associated with their acquisition. Adding instructional material about contracting and the FAR in USMC Ground Supply School would educate the personnel transacting in the PRALT period and reduce RDD usage errors. General knowledge about contracting requirements would also promote a healthier using unit planning process for contracting actions.

3. Comparison of Approval Percentage between Documents Utilizing RDD and PoP

Of the 225 unique SDNs that utilized RDD, only 98 were eventually approved by the RCO. This results in a 43.56% approval rate for RDD. Of the unique SDNs that utilized PoP (606), 563 were eventually approved by the RCO, resulting in a 92.90% approval rating. This resulted in a combined approval rating of 79.54% for all unique SDNs. These results are shown in Table 6.

Table 6. RDD versus PoP Approval Percentages

| | Total SDNs (Initiated and Approved) | SDN Initiated | Approval Percentage |
|-----------|-------------------------------------|---------------|---------------------|
| SDN w/RDD | 98 | 225 | 0.44 |
| SDN w/PoP | 563 | 606 | 0.93 |
| Total | 661 | 831 | 0.80 |

Firm causes for the disparity in approval percentage between RDD and PoP documents are difficult to identify, but one reason could be the availability of alternate sources for the goods requested in RDD documents. There are mandatory sources for



certain goods, so if a PR was submitted for a good with a mandatory source of supply, another purchasing vehicle could be used. In this case, the contracting activity would reject the request as inappropriate for contracting action.

PoP services PRs, on the other hand, typically do not have mandatory sources and require competition to get the best offer. Because of the unique nature of service contracts, with varying schedules and levels of service, the supply system is unable to predict and pre-purchase inventory. Required services that the Marine Corps cannot provide organically would need to be contracted, resulting in a higher approval rate for service PR.

Improving the RDD approval rate would not necessarily translate to better contracting performance; it could simply mean inappropriate PRs would decrease. Even so, correctly sourced requirements would result in faster delivery to the end user and a lower workload for contracting activities, as they would not have to evaluate and return inappropriate PRs. One way to reduce inappropriate PRs being submitted to contracting activities is to publish a submission guide, or Standard Operating Procedure (SOP), for PR submissions along with customer service contacts to evaluate unique cases.

There is a great deal of uncertainty on roles and responsibilities surrounding the submission of a PR. Contracting activities, which possess the knowledge and experience to vet unit requirements, do not frequently engage in the acquisition process before the PR is submitted. This situation, where the end user, using unit, and ground supply personnel are attempting to source a requirement, is one where all parties would benefit from proactive participation by the contracting activity or an element dedicated to supporting the PRALT period. A dedicated contract specialist or contracting officer representative (COR) to advise using units and ground supply personnel on procurement paths/methods could be a valuable solution to this issue and increase RDD document approval rate.



4. PRALT for Documents Utilizing PoP Averages Seven Days Longer than Documents Utilizing RDD

RDD documents took an average of 17 days to approve once the document was created, while PoP documents took an average of 24 days. Documents utilizing the PoP data field are requests for services, while documents utilizing RDD data field are requests for goods. Table 7 shows the average PRALT length in days for RDD and PoP documents.

Table 7. RDD versus PoP PRALT

| | Avg # Days to Approval |
|---------------|-------------------------------|
| Avg PRALT RDD | 16.76 |
| Avg PRALT PoP | 23.60 |

Table 8 shows how many PRs using the RDD data field are created each month during FYs 2016, 2017, and 2018.

Table 8. PRs Created per Month Utilizing RDD

| | FY2016 | FY2017 | FY2018 | Total |
|-----------|--------|--------|--------|-------|
| October | 0 | 1 | 2 | 3 |
| November | 1 | 1 | 1 | 3 |
| December | 1 | 1 | 2 | 4 |
| January | 3 | 0 | 0 | 3 |
| February | 1 | 3 | 5 | 9 |
| March | 5 | 5 | 2 | 12 |
| April | 3 | 3 | 1 | 7 |
| May | 7 | 2 | 5 | 14 |
| June | 0 | 8 | 2 | 10 |
| July | 8 | 9 | 3 | 20 |
| August | 2 | 2 | 3 | 7 |
| September | 3 | 2 | 1 | 6 |
| Total | 34 | 37 | 27 | 98 |



Table 9 shows how many PRs using the PoP data field are created each month during FYs 2016, 2017, and 2018. Comparing the total RDD PRs in Table 8 to the total PoP PRs in Table 9 for each year, more than four times the number of PoP PRs are created than RDD PRs. This indicates that contracting for services is an important Marine Corps function.

Table 9. PRs Created per Month Utilizing PoP

| | FY2016 | FY2017 | FY2018 | Total |
|-----------|--------|--------|--------|-------|
| October | 8 | 7 | 6 | 21 |
| November | 17 | 13 | 13 | 43 |
| December | 8 | 16 | 15 | 39 |
| January | 5 | 10 | 7 | 22 |
| February | 18 | 17 | 18 | 53 |
| March | 20 | 15 | 33 | 68 |
| April | 13 | 6 | 21 | 40 |
| May | 18 | 29 | 32 | 79 |
| June | 8 | 24 | 30 | 62 |
| July | 23 | 16 | 30 | 69 |
| August | 7 | 24 | 23 | 54 |
| September | 3 | 8 | 2 | 13 |
| Total | 148 | 185 | 230 | 563 |

RDD and PoP represent goods and services PRs, respectively. A primary difference between good and service type PRs is complexity, with service PRs typically being more complex. A PR for a good will describe the salient characteristics of the good to be purchased, while a PR for a service will include a form of Statement of Work (SoW) detailing the service requirements across the duration of the contract. The extended time covered by service contracts and the varying nature of their performance requirements make negotiation with vendors more complicated, as common understanding is required to reach an agreement. If the PR is not constructed properly, the contracting activity will require several rounds of communication to make sure that the service PR requirement is fully understood and fulfill able by the vendor.



Building a SoW is complicated and represents a difficult task during PRALT. It requires the expertise of the end user in need of the service to generate the requirement, technical writing experience to effectively document the requirement in the SoW, and contracting experience to ensure the requirement is constructed in a manner that encourages competition. Technical writing and contracting experience are rarely available to the end user and ground supply personnel during SoW and PR creation, contributing to unnecessary delays with service contract submission. Developing a way to offer technical writing and contracting advice to using units, end users, and ground supply personnel will decrease the PRALT time for service contracts.

5. As PRs Created per Month Increase, the Number of Approvals per Month also Increase and PRALT Decreases

The created columns in the following heat-map Tables 10–12 show the number of PRs in the data sample that were created each month. The approved column shows how many PRs were approved by the contracting activity and accepted for action each month. The Average PRALT column shows the average PRALT days for each month.

The data trend suggests that the acquisition cycle will shift to accommodate periods of increased requirements. The increased number of PRs approved and the decreased PRALT indicates additional support was available to the end user and ground supply personnel during the PRALT period. Overall lack of support to the end user and ground supply personnel during the PRALT period has been identified in other areas of this research, but during times of high operational tempo, additional resources must be available to manage and expedite the larger volume of requirements as well as urgent and critical requirements.



Table 10. FY2016 PRs Created and Approved and PRALT

| FY16 | Created | Approved | Avg. PRALT |
|-----------|---------|----------|------------|
| October | 8 | 4 | 28.99 |
| November | 18 | 8 | 18.29 |
| December | 9 | 16 | 20.40 |
| January | 8 | 12 | 11.41 |
| February | 19 | 9 | 14.35 |
| March | 25 | 24 | 19.71 |
| April | 16 | 20 | 9.14 |
| May | 25 | 23 | 22.23 |
| June | 8 | 12 | 7.55 |
| July | 31 | 18 | 12.60 |
| August | 9 | 24 | 45.78 |
| September | 6 | 9 | 1.82 |

Table 10, representing FY2016, shows that as more PRs are created per month, more PRs are also approved and PRALT decreases. The months of March, April, and May, in particular, show an increased number of PR created as indicated by the yellow and orange colors assigned. March and May have the second highest single month totals with 25 PRs created, with July being the only month with more. Notice that not only are the number of PRs created in March, April, and May the highest consecutive three-month total of the year, but the number of PRs approved for March, April, and May are also the highest consecutive three-month totals of the year. The density of PRs approved in March, April, and May, represented by the orange and red colors assigned, is more than the previous five months combined. Also, average PRALT for April is the third lowest PRALT for the year, demonstrating that PRs can be processed in an expedient manner when necessary.



Table 11. FY2017 PRs Created and Approved and PRALT

| FY17 | Created | Approved | Avg. PRALT |
|-----------|---------|----------|------------|
| October | 8 | 3 | 54.11 |
| November | 14 | 11 | 20.42 |
| December | 17 | 11 | 35.04 |
| January | 10 | 14 | 13.32 |
| February | 20 | 22 | 27.15 |
| March | 20 | 13 | 34.12 |
| April | 9 | 8 | 40.12 |
| May | 31 | 23 | 37.67 |
| June | 32 | 34 | 28.89 |
| July | 25 | 26 | 18.03 |
| August | 26 | 35 | 20.86 |
| September | 10 | 17 | 6.56 |

Table 11 shows the same trends as Table 10, with a high density of PRs created and approved in May, June, July, and August of FY2017. Although October is the longest average PRALT month for FY2017, it also has the least number of new PRs. July shows the second lowest average PRALT for FY2017, only after November, despite July being in the middle of the highest volume period of PRs created for the year. Again, PRs appear to be processed faster to accommodate the increased volume.



Table 12. FY2018 PRs Created and Approved and PRALT

| FY18 | Created | Approved | Avg. PRALT |
|-----------|---------|----------|------------|
| October | 8 | 9 | 26.10 |
| November | 14 | 4 | 34.47 |
| December | 17 | 20 | 30.56 |
| January | 7 | 8 | 32.08 |
| February | 23 | 25 | 10.31 |
| March | 35 | 16 | 60.23 |
| April | 22 | 22 | 21.57 |
| May | 37 | 30 | 10.15 |
| June | 32 | 45 | 13.98 |
| July | 33 | 44 | 9.72 |
| August | 26 | 38 | 6.36 |
| September | 3 | 4 | 0.68 |

Table 12 continues to demonstrate that as more PRs are created by using units, more are approved by contracting activities and with reduced PRALT in FY2018. May, June, July, and August represent the greatest density of PRs created, shown by the red and orange colors assigned to the months in the created column. The number of PRs approved in May, June, July, and August also shows a great increase from previous months, and average PRALT decreases significantly from previous months. Average PRALT for October, November, December, and January in FY2018, the lowest volume of PRs created during the year, is 30.8 days. Conversely, the average PRALT for May, June, July, and August, the highest volume of PRs created during the year, is 10.05. In the face of increased PR volume, the average PRALT time was significantly reduced to process pending requests.

6. Continuing Resolutions Delay the Creation of PRs

Continuing resolutions (CRs) were in place for 83, 216, and 173 days in FYs 2016, 2017, and 2018, respectively, as seen in Figure 5. CRs are enacted when regular annual appropriations are not available and “provide temporary funding to continue certain programs and activities until action on regular appropriations acts is completed” (Heniff, Lynch, McClanahan, Murray, & Saturno, 2019, p. Summary). CRs create an uncertain



purchasing environment where using units tend to retain their requirements until annual appropriations are available. This behavior can be attributed to the funding rate of the CR, restrictions on new activities under the CR, and general risk adverse behavior to spending stemming from ignorance of CR protocols. CRs have six components, two of which could cause delays in requirement submission: the funding rate and the purpose for funds and restriction on new activities clause.

a. *Funding Rate*

The funding rate establishes funding limits during a CR. “CRs often fund activities under a formula-type approach that provides budget authority at a restricted level but not a specified amount. This method of providing budget authority is commonly referred to as the ‘funding rate’” (Heniff et al., 2019, p. 5). Because the funding rate is not a firm number, but rather a percentage or ratio based on length of the CR, Marine Corps organizations are hesitant to spend money to avoid the possibility of exceeding their limit. This results in PR submissions being delayed until regular annual appropriations are passed.

b. *Purpose for Funds and Restriction on New Activities*

To control spending, CRs will also limit the use of CR funds to programs that existed the previous year.

CRs that provide a funding rate for activities often stipulate that funds may be used for the purposes and in the manner provided in specified appropriations acts for the previous fiscal year. CRs may also provide that the funds provided may be used only for activities funded in the previous fiscal year. In practice, this is often characterized as a prohibition on “new starts”. (Heniff et al., 2019, p. 6).

This rule possesses a measure of subjectivity, much like the formulaic funding rate, that results in risk-adverse behavior from Marine Corps organizations. Between the funding rate limiting available funds and new programs being unauthorized, Marine Corps organizations will delay requirement submission/PR creation until regular annual appropriations are available to avoid breaking any rules.



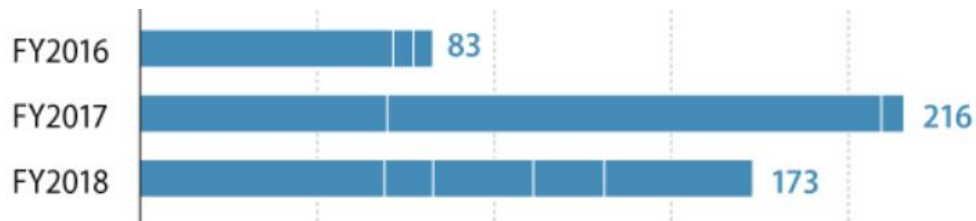


Figure 5. Days CR in Place FY2016–2018. Source: Adapted from Heniff et al. (2019).

Fiscal years begin October 1 of the prior calendar year—FY2016 began October 1, 2015, for example. The duration of the CR, or series of CRs, can be counted from the beginning of the fiscal year to determine the expiration date and beginning of regular annual appropriations. FY2016 CRs lasted 83 days from October 1, 2015, to December 22, 2015. FY2017 CRs lasted 216 days from October 1, 2016, to May 5, 2017. FY2018 CRs lasted 173 days from October 1, 2017, to March 23, 2018. The total CR duration and date of CR expiration affect the number of SDNs created, SDNs approved, and PRALT length per month. Table 13 shows the number of SDNs created in PR Builder each month for FY2016–2018.

Table 13. PRs Created by Month

| | FY2016 | FY2017 | FY2018 | Total |
|-----------|--------|--------|--------|-------|
| October | 8 | 8 | 8 | 24 |
| November | 18 | 14 | 14 | 46 |
| December | 9 | 17 | 17 | 43 |
| January | 8 | 10 | 7 | 25 |
| February | 19 | 20 | 23 | 62 |
| March | 25 | 20 | 35 | 80 |
| April | 16 | 9 | 22 | 47 |
| May | 25 | 31 | 37 | 93 |
| June | 8 | 32 | 32 | 72 |
| July | 31 | 25 | 33 | 89 |
| August | 9 | 26 | 26 | 61 |
| September | 6 | 10 | 3 | 19 |
| Total | 182 | 222 | 257 | 661 |



FY2017 CRs expired May 5, 2017, the longest of the three years examined. There is a noticeable increase in SDNs created in PR Builder in May of FY2017 compared to previous months, suggesting requirements were not submitted by Marine Corps units until regular annual appropriations were approved. Table 14 shows a significant increase in SDNs approved in May.

Table 14. PRs Approved by Month

| | FY2016 | FY2017 | FY2018 | Total |
|-----------|--------|--------|--------|-------|
| October | 4 | 3 | 9 | 16 |
| November | 8 | 11 | 4 | 23 |
| December | 16 | 11 | 20 | 47 |
| January | 12 | 14 | 8 | 34 |
| February | 9 | 22 | 25 | 56 |
| March | 24 | 13 | 16 | 53 |
| April | 20 | 8 | 22 | 50 |
| May | 23 | 23 | 30 | 76 |
| June | 12 | 34 | 45 | 91 |
| July | 18 | 26 | 44 | 88 |
| August | 24 | 35 | 38 | 97 |
| September | 9 | 17 | 4 | 30 |
| Total | 179 | 217 | 265 | 661 |

Focusing again on FY2017, Contracting activities, in support of increased tempo and delayed requirements, increased their support efforts by approving more PRs than any previous month in FY2017.



Table 15. Average PRALT by Creation Month

| | FY2016 | FY2017 | FY2018 | Month Avg |
|-----------|--------|--------|--------|-----------|
| October | 28.99 | 54.11 | 26.10 | 36.40 |
| November | 18.29 | 20.42 | 34.47 | 24.39 |
| December | 20.40 | 35.04 | 30.56 | 28.67 |
| January | 11.41 | 13.32 | 32.08 | 18.93 |
| February | 14.35 | 27.15 | 10.31 | 17.27 |
| March | 19.71 | 34.12 | 60.23 | 38.02 |
| April | 9.14 | 40.12 | 21.57 | 23.61 |
| May | 22.23 | 37.67 | 10.15 | 23.35 |
| June | 7.55 | 28.89 | 13.98 | 16.81 |
| July | 12.60 | 18.03 | 9.72 | 13.45 |
| August | 45.78 | 20.86 | 6.36 | 24.33 |
| September | 1.82 | 6.56 | 0.68 | 3.02 |
| YR Avg | 17.69 | 28.03 | 21.35 | |

Table 15 shows that PRALT time decreases as the number of SDNs for each month increases. Several explanations for the reduction in PRALT are feasible: units have more time to work their requirements package before PR creation and/or contracting activities are more involved in the PRALT period during CRs because their own tempo is reduced. Whatever the cause, it is again apparent that the acquisition process can adjust to accommodate periods of increased and decreased activity.

7. PRALT Range Visuals

Histograms of PRALT frequency for aggregate PRALT, RDD PRALT, and PoP PRALT show similar distribution. The frequency of each timeline is similar between PR types, and although PoP PRs are typically more complicated than RDD PRs, units are able to successfully submit these requirements in a form acceptable to the contracting activity. The preparation of a PoP PR may require significantly more work than an RDD PR, but effort within the PRALT days is not available for this research. The large range of PRALT times for the PRs studied suggests that there is opportunity for significant improvement.

Table 16 shows that 234 PRs had a PRALT of 0–7 days. Subsequent PRALT times are listed after, with 30 PRs having PRALT over 90 days. More than half of the PRs studied were approved within 14 days.



Table 16. RDD and PoP Aggregate PRALT Frequency

| Days | Frequency |
|-------|-----------|
| 0-7 | 234 |
| 8-14 | 142 |
| 15-21 | 92 |
| 22-30 | 55 |
| 31-60 | 72 |
| 60-90 | 36 |
| 90+ | 30 |

Figure 6 is another depiction of PR PRALT distribution, with the long tail explaining why average PRALT is 22.59 days despite more than half of PRs being approved within 14 days.

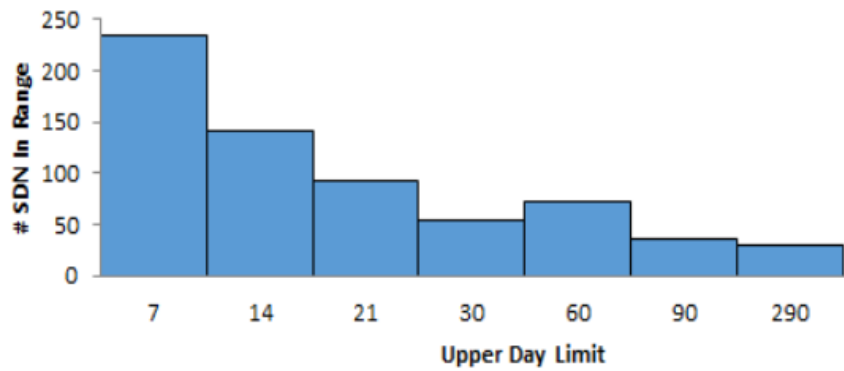


Figure 6. RDD and PoP Aggregate Histogram

Table 17 shows that RDD PRs are generally done more quickly than the aggregate PR frequency in Table 16. While more than half of aggregate PRs, including both RDD and PoP PRs, are approved within 14 days, 65% of RDD PRs are approved within 14 days. This suggests faster approval time for RDD documents, likely stemming from the simplicity of the PRs compared to PoP PRs.

Table 17. RDD PRALT Frequency

| Days | Frequency |
|-------|-----------|
| 0-7 | 44 |
| 8-14 | 20 |
| 15-21 | 13 |
| 22-30 | 6 |
| 31-60 | 8 |
| 60-90 | 4 |
| 90+ | 3 |

Figure 7 has a much shorter tail than Figure 6, showing a reduction on the variation in PRALT time for RDD PRs.

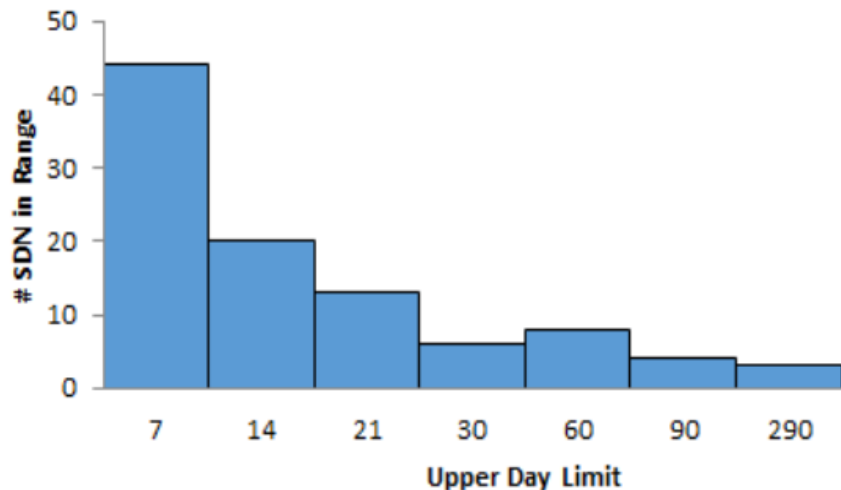


Figure 7. RDD PRALT Histogram



The data in Table 18 and the long tail in Figure 8 shows why, despite more than half of PRs being approved within 14 days, the average PRALT is 22.59 days.

Table 18. PoP PRALT Frequency

| Days | Frequency |
|-------|-----------|
| 0-7 | 190 |
| 8-14 | 122 |
| 15-21 | 79 |
| 22-30 | 49 |
| 31-60 | 64 |
| 60-90 | 32 |
| 90+ | 27 |

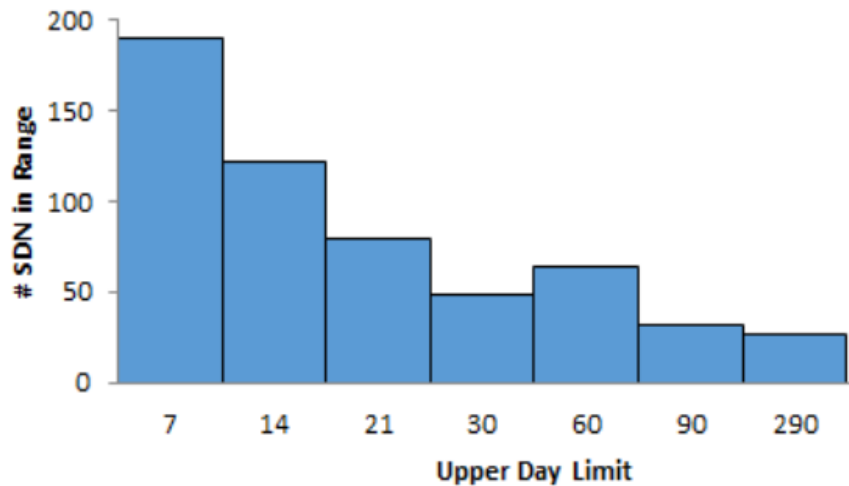


Figure 8. RDD PRALT Histogram

8. Supply Officer PR Management Range

Marine Corps SupOs are typically the final step in PR routing before the contracting activity takes possession and acceptance of the PR, this acceptance marks the end of PRALT. When they approve a PR, money is committed in the financial accounting system for the contracting activity to negotiate with vendors. Of the 28 SupOs in the data set, PRALT and number of contracts varied widely. The variation suggests that SupO

responsibilities vary from billet to billet, with some having a larger volume of purchases requiring contracting actions than others.

Table 19 shows the range of PRs as 105, with a minimum of 1 and a maximum of 106. The level of proficiency in processing PRs will depend on the repetitions the SupO has, with SupOs who process PRs more often typically having greater proficiency. The data sample encompasses 36 months of data, closely aligning with the 36-month tour lengths for Marines. SupOs then process on average 23.61 PRs during their tour with a unit.

Table 19. PR Totals

| | |
|---------|--------|
| Min | 1.00 |
| Max | 106.00 |
| Range | 105.00 |
| Average | 23.61 |
| Median | 17.00 |

Table 20 shows the PRALT frequency for the SupOs in the data set. More than half of SupOs average 20 days or less PRALT for PRs they own, with 78.57% averaging 30 days PRALT or less.

Table 20. Supply Officer PRALT Frequency

| Days Avg PRALT | Number SupOs |
|----------------|--------------|
| 0-10 | 11 |
| 11-20 | 4 |
| 21-30 | 7 |
| 31-40 | 2 |
| 41-50 | 1 |
| 51-60 | 2 |
| 60+ | 1 |



Figure 9 shows again that a majority of SupOs have their PRs approved within 30 days of creation, although a few outliers struggle to have their PRs approved.

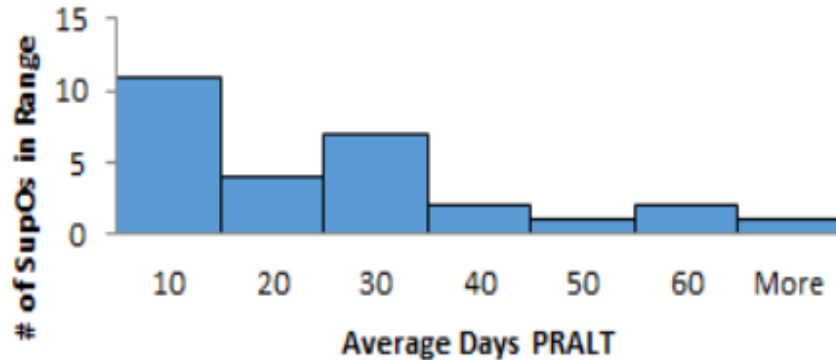


Figure 9. Days of Average PRALT

Table 21 illustrates the range of PR activity each SupO has. The most common amount of activity was 10 or less PRs over the course of 36 months, with more than half of SupOs completing 20 or less PRs. While the average number of PRs is 23.61 per SupO, this number is supported by several SupOs who completed 60 or more PRs during their 36 months. There are a few SupOs who processed a large volume of PRs, and these SupOs can be expected to be proficient at the process.

Table 21. PRs Completed by Supply Officer (Frequency)

| Number PRs SupO has completed | Number SupOs |
|-------------------------------|--------------|
| 0-10 | 11 |
| 11-20 | 5 |
| 21-30 | 5 |
| 31-40 | 3 |
| 41-50 | 1 |
| 51-60 | 0 |
| 61-70 | 1 |
| 71-80 | 1 |
| 81-90 | 0 |
| 91-100 | 0 |
| 100+ | 1 |



Figure 10 shows that 10 or fewer PRs is the most common PR frequency a SupO will experience during a three-year assignment. However, it is not uncommon for a SupO to manage as many as 40 PRs, with the SupOs managing higher volumes of PRs certainly possessing additional proficiency in PR processing/PRALT management.

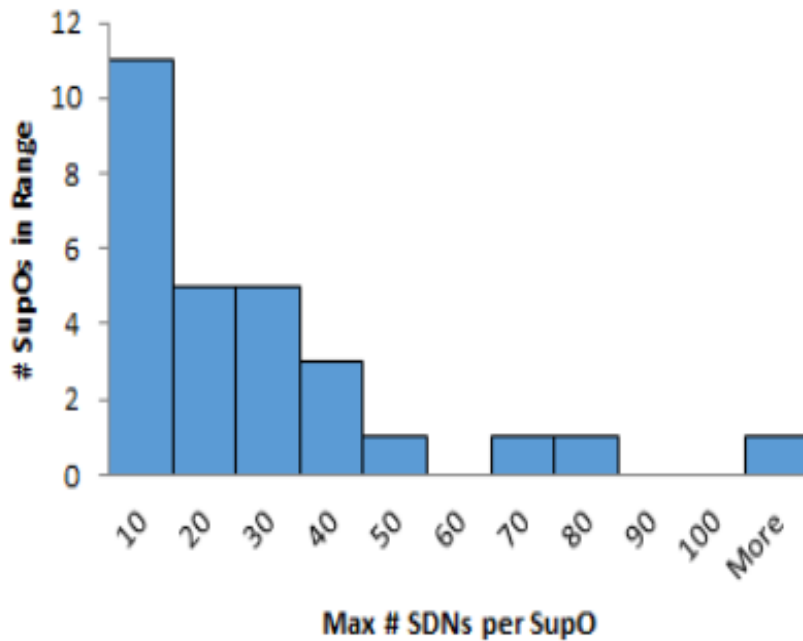


Figure 10. PRs Completed by Supply Officer (Histogram)

9. Regional Contracting Office PRALT

We conducted a statistical comparison of four Regional Contracting Offices (RCOs). Only RCOs that processed over 100 SDNs over the three FYs were included in data. The data covers 594 of 661 SDNs in our criteria, or 89.86% of SDNs that meet our criteria. Despite PRALT being primarily the responsibility of the end user and using unit, the support offered by the contracting office can greatly influence the effectiveness of the PR submission. Outside of the RCO, there is no dedicated support structure for the end user, using unit, or SupO managing a PR.

RCO Marine Corps Base (MCB) Butler has the longest average PRALT, with 30.42 days per PR. RCO MCB Butler is a unique office that supports OCONUS requirements,



often from foreign vendors. Blount Island Command (BICmd) Jacksonville Contracts has the shortest average PRALT, with 9.39 days per PR.

Table 22 shows a wide range of statistics for the contracting offices in the data set. RCO Quantico shows both the fastest and slowest PRALT times. The PRALT minimum shows that all offices can achieve same-day acceptance of a PR, but also that a PR could take more than 100 days to accept.

Table 22. Contracting Office Data

| Contracting Office | PR Count | PRALT Min | PRALT Average | PRALT Max |
|------------------------------|----------|-----------|---------------|-----------|
| BICmd Jacksonville Contracts | 154.00 | 0.04 | 9.39 | 118.84 |
| Contracting-MCI East Office | 121.00 | 0.91 | 26.26 | 167.93 |
| RCO MCB Butler | 194.00 | 0.27 | 30.42 | 214.30 |
| RCO Quantico | 125.00 | 0.02 | 22.86 | 288.40 |

Figure 11 shows the average days of PRALT for each PR by contracting office. Of note, BICmd has the lowest PRALT at 9.39 days per PR; this is likely a result of its repetitive contract process in support of maritime prepositioned forces ships. BICmd’s limited range of requirements allows it to specialize and possess great efficiency with the PRs.

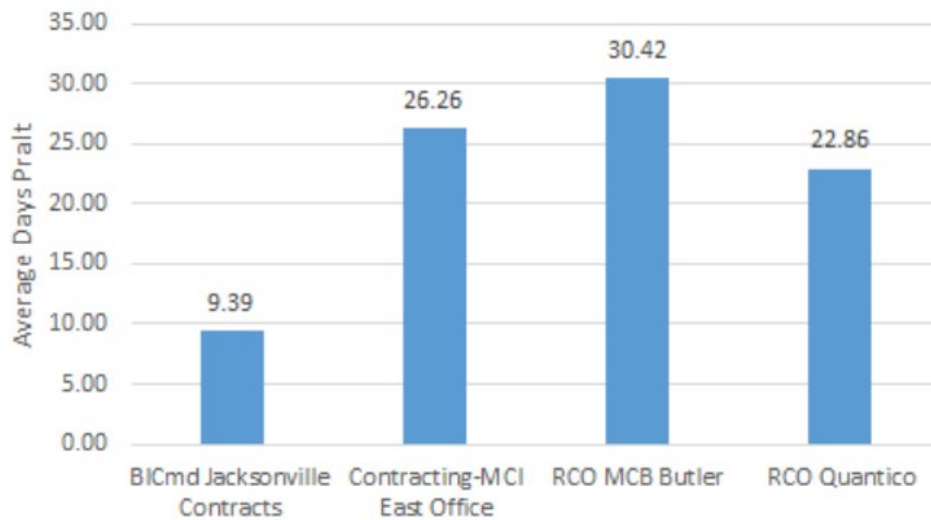


Figure 11. Average Days of PRALT per RCO Office



Alternately, MCB Butler shows the highest PRALT at 30.42 days. While the requirements processed through MCB Butler would not be much different than Marine Corps Installations East or Quantico, MCB Butler supports bases in Okinawa and other pacific locations. The international contracting environment undoubtedly adds PRALT days to the contracting process and ultimately extends the overall timeline.

10. Correlation

There is a correlation between SDN creation/approval and average PRALT. It appears that there is a strong correlation between approval dates and time of year for all SDNs regardless of the use of RDD or PoP. Figure 12 demonstrates this relationship visually while Table 23 provides a numerical reference. As the year progresses, the PR creations increase steadily. Average PRALT has a weak correlation between time created and average days to approval. The creation of SDN ranges from weak (-0.061) to strong (0.346) between all SDNs.

Table 23. Correlation of SDN Data Compared to Time

| | FY2016 | FY2017 | FY2018 |
|--|--------|--------|--------|
| Correlation between SDN Created by Month and time | 0.090 | 0.467 | 0.345 |
| Correlation between SDN Approved by month | 0.460 | 0.718 | 0.534 |
| Correlation between Avg PRALT based on month initiated | -0.123 | -0.502 | -0.617 |
| Correlation between SDN Created by month (RDD) | 0.442 | 0.492 | 0.188 |
| Correlation between SDN Approved by month (RDD) | 0.712 | 0.645 | 0.307 |
| Correlation between Avg PRALT based on month initiated (RDD) | 0.065 | 0.014 | -0.596 |
| Correlation between SDN Created by Month and time (PoP) | -0.061 | 0.358 | 0.346 |
| Correlation between SDN Approved by month (PoP) | 0.288 | 0.650 | 0.539 |
| Correlation between Avg PRALT based on month initiated (PoP) | -0.026 | -0.494 | -0.566 |



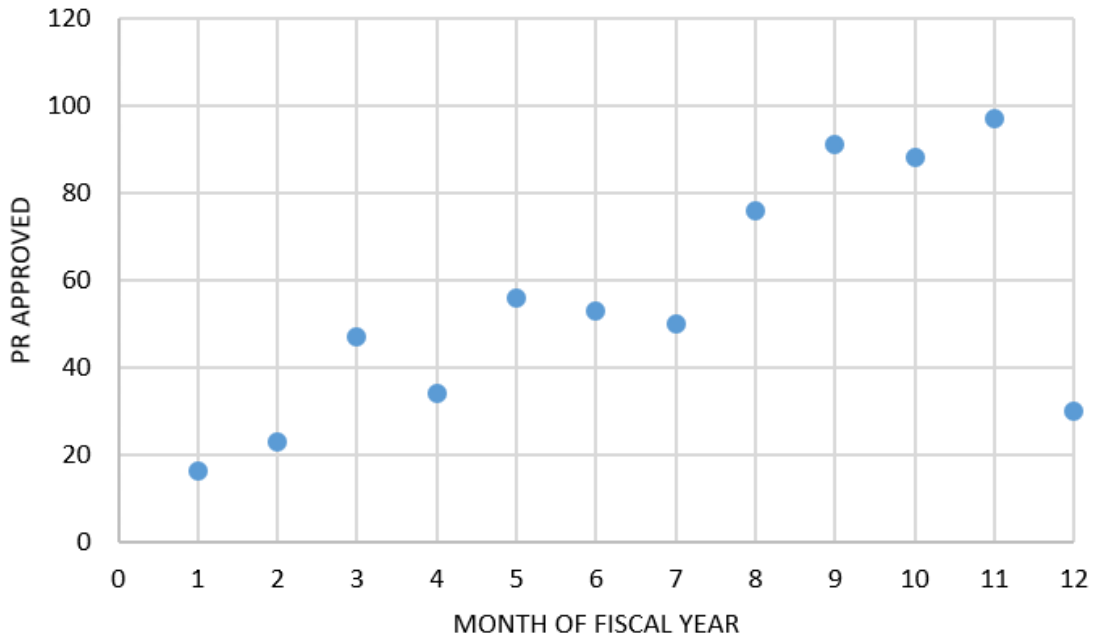


Figure 12. Scatterplot of Aggregate SDNs Approved by Month and Time (FY2016–2018)

D. SUMMARY

In this chapter, we discussed the methodology and findings of our analysis. We began by describing the process utilized to clean the data, taking us from raw unfiltered information to the removal of SDNs outside of our study window and the identification of unique SDNs. We then used these unique SDNs for our subsequent findings. The report then covered how the PRALT measurement was calculated. We then briefly described the analytical measurements the previous two processes allowed us to review. Finally, this chapter concludes with a display of the findings uncovered during the study. Chapter V reviews the primary and secondary questions this research intended to answer and provides recommendations to shorten PRALT.



V. CONCLUSIONS AND RECOMMENDATIONS

We proposed to track the time required from need generation by the end user to the beginning of contracting action. This beginning was deemed to take place at the time the supporting contracting office deemed a PR as workable and approved it in the PR Builder APSR. We analyzed variances that affect timelines. This thesis contributes to the body of knowledge by providing one of the few studies on this timeline and develops a usable measurement to review the process through the development of the PRALT measurement. This chapter looks to relate the findings to our primary and secondary questions and provides recommendations on potential ways to shorten PRALT.

A. ANSWERING RESEARCH QUESTIONS

- (1) What time variation exists between using unit need establishment and purchase request acceptance by the supporting contracting activity for contracts under the SAT?

The paper worked to answer this primary question. We determined several factors that play into the variations in PRALT. The most basic was the use of RDD or PoP. Our data set shows that PoP has a shorter time from generation to approval compared to RDD. Additionally, we observed many PRs that used RDD were never approved within the time frame of our study and therefore were not captured for PRALT measurement. Some potential reasons for this are captured in our third research question. We observed variations in PRALT based on the time of year. We also observed that the federal budget approval process appears to affect PRALT. Our findings revealed more than a passing resemblance between a lengthening of PRALT during times of CRs and uncertain federal budgets.

We felt our data would show a lengthening of PRALT during times of increased PRs. We believed as units increased requests, we would see a lengthening of PRALT as the RCO offices would become overwhelmed and reject less refined requests. The data revealed the opposite of this phenomenon, as PRALT decreased as the number of requests increased. We did not have the resources or ability to explore this further in our research,



but a review of RCO processes and acceptance criteria would greatly add to the body of knowledge.

Our data revealed a wide range of SupO experience with contracting actions. Nearly a third of SupOs represented had fewer than 10 PRs submitted for contracting action. One SupO had submitted over 100 PRs to the contracting shop, while others had submitted only one. This demonstrated a variation of skills utilized between the SupO billets at different units. We feel it is only natural as experience level increases, PRALT will decrease, but a more thorough study with a larger sample size would produce more conclusive results to test this theory.

Our data showed a large variation of PRALT based on contracting support office. While each of the reviewed offices had processed over 100 PRs during the time frame, PRALT averages varied widely, as Table 22 demonstrates. The average PRALT time ranged from 9.39 days on the low end to 30.42 days on the higher end. The reason for this variance is unclear from our data, but it may have to do with the routine nature of PRs processed by some contract support agencies compared to others.

While the exact reason for variations between all PRs is uncertain based on the data set, we did see substantial variations in PRALT. Further study is needed to expand the body of knowledge surrounding PRALT and further make recommendations on how to reduce this measurement.

(2) What reasons delay acceptance by a contracting entity?

Our research intended to deeply dive into this topic and review the underlying reasons for PRALT. Unfortunately, we quickly learned we were only able to scratch the surface of this complex question. One finding we did show was delays were shortened during months with greater amounts of PR submissions. Months with fewer submissions represent longer PRALT. While the exact reason for this is uncertain, we feel CRs play into this process, and a general feeling of uncertainty of funding levels that creates hesitation around accepting new PRs factor into these delays.

Many factors affect PRALT to include each of the reasons for PRALT variation described previously. A limitation to our data was that inconsistent disapproval comments



and the use of Excel for data mining made further exploration of this topic difficult at best. We were forced to accept this limitation and believe further study into this secondary question would provide a deeper understanding on how to reduce PRALT. Further research utilizing direct surveys of contracting office employees and SupOs, as well as more powerful data software, would potentially yield additional qualitative results and reveal further details of PR delays.

(3) How does the use of Required Delivery Date (RDD) or Period of Performance (PoP) fields affect PRALT?

Our findings observed a difference between RDD and PoP. The use of RDD drastically reduced the chances of a PR's acceptance by the contracting support agency. From our study, we observed that only 44% of PRs that utilized RDD were ever accepted by the contracting office. PRs that utilized a PoP were accepted by the contracting office 93% of the time. We feel much of the time the RDD field was utilized to request goods compared to the PoP's use in services. This thought was based on the fact at the SAT level of purchase, single item purchases were most common for goods. These represent one-time procurements for single items, while services will most likely be utilized over a period, and thus the use of PoP. While this rule will not hold true for all PRs, it gives a useful reference when evaluating the use of RDD and PoP. The procurement of goods is subject to more mandatory sources of supply or required vendors (Priorities for Use of Mandatory Sources, 2019). A lack of knowledge in the necessary use of a required vendor would result in a PR submission being subsequently disapproved by the contracting office. Services are not restrained to mandatory vendors to the same extent as goods (Priorities for Use of Mandatory Sources, 2019). A lack of knowledge on how to prepare a SoW would also affect this. It may be more difficult to draft requirements for goods without favoring a specific brand or particular item. Services are generally more generic and less susceptible to brand preference in the requirement generation.

While PRs with RDDs suffered from much lower acceptance rates, those that were accepted had a much shorter average PRALT compared to accepted contracts that utilized PoP. As Table 7 demonstrates, accepted PRs with an RDD had an average PRALT of 16.76 days compared to PRs with PoPs' average of 23.60 days. We found this intriguing based



on the results of acceptance rates presented in Table 6. We believe the shorter PRALT for RDD also has to do with the PR request for goods. As previously discussed, many of these PRs with RDDs were potentially rejected in favor of mandatory sources of supply (Priorities for Use of Mandatory Sources, 2019). Additionally, when drafting required functions, it becomes difficult not to draft such verbiage without a specific make or model of item in mind. Drafting requirements with such verbiage where one make or model was favored over another would render the PR unacceptable by a contracting office. Those PRs that avoid restrictive verbiage and properly articulate requirements without specifying a make or model appear to be more readily accepted by the contracting office. This appears to be an area where skill and knowledge of the PR generation process becomes useful.

Those PRs that utilize PoP for services or request a date range for delivery suffer much less from the rejection process of the contracting office. Why this is remains uncertain. We feel the description of a service proves less challenging to describe without favoring one vendor over another. Few services are so unique in performance that only one company will do. While the success rate for PoP PRs proved much higher, the length of time required before acceptance was longer than those with an RDD. This demonstrates that services may receive greater scrutiny by the contracting office prior to acceptance and solicitation.

(4) How does the time of year a request is submitted affect PRALT?

Our study found the time of year a request was submitted affected PRALT very little. Our data demonstrated CR and the number of PRs created during a particular time period affected PRALT to a greater extent than the time of year itself. As seen in Table 23, the correlation between the month a PR was initiated and average PRALT was inverse. This weak relationship supports our conclusion that time of year has little effect on PRALT.

The heat maps of creation dates for each FY, however, do resemble the CR graph presented in Figure 5. This suggests submitting a PR for approval during a CR hindered the potential acceptance of the PR. Once a budget was approved by lawmakers and the CR was lifted, a greater number of PRs was submitted, as shown in Table 13. Interestingly, Table 15 shows this influx of PRs coincides with a reduction of PRALT. The reason for this may relate to heavier workloads by the contracting office, affording them less ability



to scrutinize PRs for defects. This demonstrates that regardless of the time of year a unit submits its PR, if it submits outside of a CR and during a period of increased PR submissions, it will likely reduce its PRALT.

- (5) What process may shorten this timeline?

Shortening PRALT is discussed in the following Recommendations section.

B. RECOMMENDATIONS

- (1) Recommendation One: Introduce commercial procurement ethics and basics of competition to enlisted administration students in Ground Supply School, and also add a contracting for services class for enlisted administration students and officer students.

Recurring throughout this research are procedural issues that extend PRALT. The procedural issues root in human performance, namely an incorrect decision by various personnel during the PR submission process. Finding 2 provides an example: 66.32% of PRs utilizing the RDD field do not allow enough time for statutory advertisement and competition requirements. Anecdotally, this mistake will only be made once by the clerk creating the PR because the contracting activity will correct the mistake and offer guidance for future submissions. However, job rotation and personnel turnover may lead to the mistaking being repeated and causing the 66.32% rate of improper RDD use.

The clerks managing the PR creation and submission process are USMC military occupational specialty (MOS) 3043, supply administration. The entry level school for these Marines at Ground Supply School, Camp Johnson, does not include any instruction on acquisition regulations, commercial procurement, or contracting for services (J. Chuprevich, personal communication, September 20, 2019). The natural consequence of a training gap is performance errors, and the improper use of RDD is an example. Introducing the basics of the FAR, particularly ethics and competition requirements, could equip supply administration Marines to avoid improperly using the RDD field in PR Builder and subsequently reduce PRALT.

Finding 4 demonstrates that PRALT for PoP PRs is 6.84 days longer than PRALT for RDD PRs, on average. While not necessarily inappropriate, as service contracting is more complicated than goods contracts, units would benefit from additional efficiency. In



addition to introducing basics of the FAR, supply administration Marines would benefit from exposure to services contracting during Ground Supply School. Basic procedures, such as validating end user requirements and constructing a SoW, would equip supply clerks to navigate the PR submission process. Also, with service contracting considered more complicated than contracting for goods, supply Marines would also gain increased processing abilities for RDD PRs.

In our opinion, adding commercial procurement ethics, basics of competition and contracting for services education to the Ground Supply School curriculum is supportable under Individual Training Standards 3043-REQS-1001 and 3002-REQM-1001 in accordance with NAVMC 3500.64C (Department of the Navy [DoN], 2017).

- (2) Recommendation Two: Annually publish a regional available/mandatory sources of supply guide, including existing Indefinite Delivery Indefinite Quantity (IDIQ) and Blanket Purchase Agreement (BPA) contracts.

Finding 3 could also be addressed with streamlined procedures, but not from Ground Supply School. Finding 3 showed that PoP PRs were approved 48.64% more often than RDD PRs. The possible source of this disparity, that the contents of RDD PRs are not appropriate for procurement through contracting, could be alleviated by streamlined sourcing procedures published regionally. A thorough consolidation of available/mandatory sources and existing IDIQ and BPA contracts, updated annually, would reduce invalid PRs for goods submitted to contracting activities and increase the approval percentage of PRs. This tool, or guide, could have significant impacts on the performance process of SupOs as they transition from unit to unit.

- (3) Recommendation Three: Major Subordinate Commands (MSC) promulgate more specific CR details and guidance to reduce unnecessary and inefficient risk-adverse behavior.

Findings 5 and 6 both related to CR. Continuing resolutions are intended by Congress to provide funding to continue operations. While this is achieved, the stopgap funding is accompanied by the propensity to avoid expenditures unless necessary or explicitly allowed. Consequently, units will delay their requirement submissions until annual appropriations are passed to avoid the chance of violating the terms of the continuing resolution. While Finding 5 shows that the acquisition process can flex to



support an increased volume of requirements, a more consistent flow of contracting actions will promote healthy work processes and increase effectiveness and efficiency. Wider education on what a continuing resolution is and how to behave during a continuing resolution from the MSC level would save using units and contracting activities from executing a high majority of their contracting requirements in the compacted time frame when annual appropriations are available.

- (4) Recommendation Four: Add PRALT period support personnel to contracting offices to liaise with and guide using units in PR creation and submission.

Finding 8 shows that ground SupOs experience a wide range of PR and contracting responsibilities during their assignments, with some managing one PR and some more than 100 PRs. SupOs subsequently possess different levels of proficiency with PRs and contracting responsibilities. Roles and responsibilities in this time frame are not clearly defined, and the instinct of most Marines is to maintain bureaucratic boundaries to prevent themselves from being assigned tasks outside of their purview. Also, the participants in the PRALT period lack the training to successfully function in the generation and submission of actionable PRs.

During this research, it became clear that there is a gap in the acquisition process between requirement realization and PR acceptance by the contracting activity, the PRALT period. It is our recommendation that each contracting activity be equipped with CORs or other support personnel dedicated to supporting the PRALT period. An individual liaison capable of providing procedural guidance, requirement preparation resources, and technical writing advice would benefit both the using unit and the contracting activity and reduce PRALT time to the benefit of the mission.

C. SUMMARY

This chapter began by briefly reviewing the objectives of this analysis and how the study aided the body of knowledge. The primary and secondary questions the study intended to answer were reviewed. These questions were linked into the findings of Chapter IV, which provided clarity and insight into material covered. The reduction of



PRALT was then discussed using the five recommendations provided at the end of this chapter.

Many parties participate in procuring goods and services on behalf of a using unit through contracting action. The pertinent issue explored by this project is the period of time before the contracting activity accepts the PR (PRALT) where there is a vacuum of expertise and a lack of defined roles and responsibilities. With the increasing focus on contracting expedience and efficiency, the PRALT period offers an excellent opportunity to increase the effectiveness and efficiency of the contracting process. With a few pieces of education offered to ground supply personnel and a lean support element dedicated to guiding PR package creation, the Marine Corps can generate a significant return-on-investment by reducing lead-time for good and service delivery and increase the quality of the goods and services contracted to support using unit requirements.

D. FURTHER RESEARCH OPPORTUNITIES

As stated in the introduction, the goal of this project is to improve the effectiveness and efficiency of goods and services procurement through contract action by identifying weaknesses that extend the time prior to the contracting activity accepting the PR. To isolate and illustrate pertinent behaviors in the PR creation stage, the term PRALT is utilized throughout the project. While several opportunities for improvement were identified, there are additional opportunities for improvement in the PRALT stage that would be revealed with further research.

We identified the variation in time between different requirements by tracking their lifespan through PR Builder, but frequency and causes for re-routing PRs were not explored. Identifying specific problem areas in the PR creation process will offer additional insights into how to craft training and education to support using units.

Input from personnel transacting within PR Builder was not considered in this project. Conducting a survey or interviews to assess procedural issues will also deliver important details about the PR creation process in the USMC.



Finally, the data utilized in this project was digested using Microsoft Excel. More advanced software will offer future researchers the opportunity to compare new combinations of variables and explore additional causes for PR creation delays.



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