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NAVAL POSTGRADUATE SCHOOL

MONTEREY, CALIFORNIA

MBA PROFESSIONAL REPORT

**A Study on Performance Based Logistics/Performance Based Service
Acquisitions and Their Applicability to Turkish Navy Service
Acquisition Activities**

**By: Atilla Bozkurt,
Aykut Caglar Guducu**

June 2005

**Advisors: Donald R. Eaton,
Jeffrey R. Cuskey and
Keebom Kang**

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**A STUDY ON PERFORMANCE BASED
LOGISTICS/PERFORMANCE BASED SERVICE ACQUISITIONS
AND THEIR APPLICABILITY TO TURKISH NAVY SERVICE
ACQUISITION ACTIVITIES**

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Submitted in partial fulfillment of the requirements for the degree of

MASTER OF BUSINESS ADMINISTRATION

from the

**NAVAL POSTGRADUATE SCHOOL
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ABSTRACT

The purpose of this MBA professional report is to investigate and analyze Performance Based Logistics (PBL)/Performance Based Service Acquisitions (PBSA) and provide implementation alternatives for Turkish Navy service acquisitions. This Professional MBA Report includes a literature review and background information about PBL and PBSA; current PBL and PBSA implementations in the U.S.A.; current Turkish acquisition rules and regulations, along with the legal constraints as to the applicability of PBSA; Turkish Navy service acquisition activities and associated problematic areas; problems with the implementation of PBL and PBSA in the U.S.A. and recommendations for alternative implementation solutions based on the findings.

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TABLE OF CONTENTS

I.	INTRODUCTION.....	1
	A. PROBLEM DESCRIPTION.....	1
	B. SCOPE.....	2
	C. RESEARCH QUESTIONS.....	2
	1. Primary Research Question.....	2
	2. Secondary Research Questions.....	2
	D. PROJECT ORGANIZATION.....	3
II.	BACKGROUND AND LITERATURE REVIEW.....	5
	A. INTRODUCTION.....	6
	1. PBL Implementation Model.....	8
	a. <i>Integration of Requirements and Support.....</i>	<i>8</i>
	b. <i>Formation of the PBL Team.....</i>	<i>9</i>
	c. <i>Baseline the System.....</i>	<i>10</i>
	d. <i>Develop Performance Outcomes.....</i>	<i>11</i>
	e. <i>Select the Product Support Integrator.....</i>	<i>11</i>
	f. <i>Development of the Workload Allocation Strategy.....</i>	<i>11</i>
	g. <i>Development of the Supply Chain Management (SCM) Strategy.....</i>	<i>12</i>
	h. <i>The Establishment of Performance Based Agreements (PBAs).....</i>	<i>13</i>
	i. <i>Conducting a PBL Business Case Analysis (BCA).....</i>	<i>14</i>
	j. <i>Award Contract(s).....</i>	<i>14</i>
	k. <i>The Employment of Financial Enablers.....</i>	<i>15</i>
	l. <i>Implementation and Assessment.....</i>	<i>16</i>
	2. PBL Metrics.....	16
	3. Performance Based Service Acquisition (PBSA).....	17
	B. HISTORICAL BACKGROUND OF PERFORMANCE BASED LOGISTICS AND SERVICE ACQUISITION IMPLEMENTATION IN THE U.S.A.....	20
	1. Performance Based Logistics.....	20
	2. Performance-Based Service Acquisition (PBSA).....	21
	C. CURRENT IMPLEMENTATIONS OF PERFORMANCE BASED LOGISTICS AND CONTRACTING IN THE U.S.A: SUCCESS STORIES.....	22
	1. F/A-18E/F.....	23
	2. Common Ground Station (CGS).....	23
	3. F-117.....	24
	4. TOW ITAS.....	25
	5. T-45.....	26
	6. Joint Surveillance Target Attack Radar System (JSTARS).....	27

7.	Shadow Tactical Unmanned Air Vehicle (UAV).....	27
8.	NAVICP: Aircraft Tires.....	28
9.	NAVICP: Auxiliary Power Unit/Total Logistics Support (APU/TLS).....	28
10.	Reduction in Total Ownership Cost (RTOC).....	29
III.	ANALYSIS AND COMPARISON OF ACQUISITION RULES AND REGULATIONS IN TURKEY AND IN THE U.S.A.....	31
A.	CURRENT RULES AND REGULATIONS OF THE TURKISH NAVY SERVICE ACQUISITIONS.....	31
1.	Acquisition Planning.....	32
a.	<i>Determination of Specifications</i>	32
b.	<i>Cost Estimation</i>	34
c.	<i>Determination of the Contracting Method to Be Conducted</i>	35
2.	Solicitation.....	38
a.	<i>Solicitation Note</i>	38
b.	<i>Tender Document</i>	39
3.	Source Selection.....	39
a.	<i>Tender Commissions</i>	39
b.	<i>Evaluation of Tenders</i>	40
c.	<i>Contract Type</i>	41
d.	<i>Procurement Proceedings File</i>	41
4.	Contract Administration.....	42
a.	<i>Inspection and Acceptance</i>	42
b.	<i>Payments</i>	42
5.	Contract Closeout and Termination.....	43
a.	<i>Contract Closeout</i>	43
b.	<i>Contract Termination</i>	43
B.	COMPARISON BETWEEN U.S. AND TURKISH ACQUISITION RULES AND REGULATIONS, IN TERMS OF PERFORMANCE BASED SERVICE ACQUISITION APPLICATIONS.....	44
1.	Utilization of the Contract Types and Fees.....	45
2.	Mandatory Role of Technical Specification Document.....	46
3.	Similarities and Differences of Contracting Methods.....	47
IV.	TURKISH NAVY SERVICE ACQUISITION ACTIVITIES AND APPLICABILITY OF PBL IN THIS AREA.....	49
A.	CURRENT SERVICE ACQUISITION ACTIVITIES IN THE TURKISH NAVY.....	50
1.	Service Acquisitions by the Current Budget Funds.....	50
a.	<i>Meal Services</i>	50
b.	<i>Personnel Transportation Services</i>	51
2.	Service Acquisitions by the Modernization Funds.....	52
B.	PROBLEMATIC AREAS OF THE TURKISH NAVY ACQUISITION PROCESSES.....	52
1.	General Problematic Areas of the Acquisition Process.....	52

a.	<i>Mandated Technical Specification Document Usage</i>	52
b.	<i>Cost Estimates</i>	53
c.	<i>Solicitation Notes Publishing Requirements</i>	54
d.	<i>Annual Budget</i>	54
e.	<i>Required Certificates and Documents</i>	54
2.	Specific Problematic Areas about the Acquired Services	55
a.	<i>Lack of Competition</i>	55
b.	<i>Performance Problems</i>	55
c.	<i>Inspection Procedures of the Meal Services</i>	56
C.	PROBLEMS WITH THE IMPLEMENTATION OF PBL AND PBSA IN THE U.S.A.	57
1.	Performance Based Logistics	57
2.	Performance Based Service Acquisitions	61
D.	POSSIBLE PBSA SOLUTIONS FOR THE PROBLEMATIC AREAS IN THE TURKISH NAVY SERVICE ACQUISITIONS	63
V.	SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS	67
A.	SUMMARY	67
B.	CONCLUSIONS	69
C.	RECOMMENDATIONS	70
	LIST OF REFERENCES	79
	INITIAL DISTRIBUTION LIST	85

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LIST OF FIGURES

Figure 1.	The PBL Strategy Spectrum	8
Figure 2.	PBL Implementation Model	9
Figure 3.	Sample PBL Team	10
Figure 4.	Performance Based Agreement.....	13

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LIST OF TABLES

Table 1. Culture Examples61

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I. INTRODUCTION

A. PROBLEM DESCRIPTION

Performance Based Logistics (PBL) is the purchase of support as an integrated, affordable, performance package, designed to optimize system readiness, while helping to meet performance goals for a weapon system through long-term support arrangements. PBLs are used for such contracts that also have clear lines of authority and responsibility.¹ They are directed at helping to improve warfighting capabilities, through improved readiness, increased agility and reduced costs.² PBLs may be applied at the system, sub-system, or major assembly level, depending on a program's unique circumstances and an appropriate business case analysis.³

In FAR part 2.101, "Performance-based contracting" is described as "structuring all aspects of an acquisition around the purpose of the work to be performed with the contract requirements set forth in clear, specific, and objective terms with measurable outcomes, as opposed to either the manner by which the work is to be performed or broad and imprecise statements of work."

Federal Acquisition Regulations also help ensure that performance-based contracting methods achieve performance quality levels, and that total payment is related to the degree that services performed, outcomes achieved, or meet standards set by the contract. Performance-based contracts specify the desired outcomes, and allow the contractors to determine how best to achieve those outcomes, rather than instructing the contractors which methods to use.

Outsourcing for service requirements is a new concept for Turkish Navy. Recently a few examples occurred in the area of base maintenance type of activities (i.e., food and transportation services). The main goal of this thesis is to establish the PBL that is structured to be a conceptual starting point for Turkish Navy service acquisition

¹ Department of Defense (not dated), *Defense Acquisition Guidebook, Chapter 5.3. Performance-Based Logistics*, <http://akss.dau.mil/dag/DoD5000.asp?view=document> (accessed Feb. 23,2005).

² D.R. Eaton, K. Doerr, and I. A. Lewis, *Performance Based Logistics: A Warfighting Focus*, California, 2004.

³ Department of Defense (not dated), *Defense Acquisition Guidebook, Chapter 5.0. Overview*, <http://akss.dau.mil/dag/DoD5000.asp?view=document> (accessed Feb. 23,2005).

activities. In order to achieve this goal, this study will explain and analyze PBL background and historical development; laws, rules, and regulations pertaining acquisitions (specifically service acquisitions) in Turkey; and problematic areas in service acquisitions in the Turkish Navy and PBL and PBSA implementations in the U.S.A. Finally, it will recommend a PBL implementation methodology for the Turkish Navy.

B. SCOPE

The scope of this Report will focus on: a literature review and background information about Performance Based Logistics (PBL); current PBL implementations in the U.S.A.; Turkish acquisition rules and regulations, along with the legal constraints as to the applicability of PBL; Turkish Navy service acquisitions and associated problematic areas; some of the problems experienced in the U.S.A in the area of PBL and PBSA; and recommendations for an implementation within the Turkish Navy.

C. RESEARCH QUESTIONS

1. Primary Research Question

This thesis raises the question, “Are there any legal constraints which would inhibit the use of Performance Based Logistics (PBL) and Performance Based Service Acquisitions (PBSA) within Turkish Navy service acquisition activities?”

2. Secondary Research Questions

- What are the current U.S. Federal rules and regulations related to PBL?
- What are current implementations of PBL in the U.S.A.?
- What are the legal issues related to the application of PBL in Turkey?
- What are problematic areas in Turkish Navy service acquisition activities?
- Can PBL be effectively used in Turkish Navy service acquisition activities?
- What needs to be done to implement PBL and PBSA in Turkish Navy service acquisition activities?

D. PROJECT ORGANIZATION

This Professional MBA Report will first analyze the concept of Performance Based Logistics (PBL). It will look at the elements of the PBL and the PBL Implementation Model provided in the Performance Based Logistics: A Program Manager's Product Support Guide.⁴ After a description of PBL metrics, it will look at Performance Based Service Acquisitions (PBSA) and their elements.

Next, it will provide background information on PBL and PBSA. The current implementations of PBL will be briefly described.

Chapter III will describe Turkish acquisition rules and regulations, as well as some of the legal constraints regarding the applicability of PBL.

Chapter IV will look at the current state of service acquisitions, while examining problematic PBL and PBSA areas in Turkish Navy and U.S. service acquisition activities, and the possible PBSA solutions for the problematic areas in the Turkish Navy service acquisitions.

Finally, this report will provide recommendations for the implementation of PBL in the Turkish Navy.

E. METHODOLOGY

The methodology used in this MBA Project consists of the following steps:

- A search of U.S. acquisition rules and regulations regarding Performance Based Logistics (PBL), and Performance Based Service Acquisitions (PBSA) policies and guidelines on the Internet.
- A review of the research available in the library, as well as Internet information resources, articles, and scholarly magazines.
- Analysis of the Turkish acquisition laws, and other guidance in Turkey, in terms of the applicability of PBL.

⁴ USD (AT&L), *Performance Based Logistics: A Program Manager's Product Support Guide*, 2004, https://acc.dau.mil/simplify/ev.php?ID=58394_201&ID2=DO_TOPIC (accessed Feb. 27, 2005).

- Interviews with Turkish Navy acquisition officials and analyses of information received from them highlighting potential problem areas of service acquisition in the Turkish Navy.
- Development of recommendations based upon data analyses and findings.

II. BACKGROUND AND LITERATURE REVIEW

In an environment characterized by rapidly changing technology and rampant threats to national security, acquisition doctrines call for more efficient and effective acquisition and procurement of all relevant information. The systems, subsystems, and components acquired should be highly reliable, inter-operable, and supportable in order to respond to threats punctually and precisely. Full and reliable equipment will give the decision-makers the necessary latitude to act without restrictions. Dominance in the global arena will be determined by the readiness, availability, and sustainability of a country's systems.

The role of United States in today's world, as declared in the 2001 Quadrennial Defense Review (QDR) Report, requires that it adopt goals "to promote peace, sustain freedom, and encourage prosperity. U.S. leadership is premised on sustaining an international system that is respectful of the rule of law. America's political, diplomatic, and economic leadership contributes directly to global peace, freedom, and prosperity. U.S. military strength is essential to achieving these goals, as it assures friends and allies of an unwavering U.S. commitment to common interests."⁵ This requires that systems, subsystems and components to be more reliable, available and ready when needed. Accordingly, logistics support systems, processes, and practices should be updated and adopted in order to meet this need.

The United States has interests, responsibilities, and commitments all over the world. Interests, which are affected by events, trends, and influences, that often occur outside of its national borders. The national interests that should be taken into consideration when developing a defense position include: ensuring U.S. security and freedom of action, honoring international commitments, and contributing to its economic well-being. It is important that the U.S. has a strong economy, a ready defense, and vigorous support.⁶

⁵ Department of Defense (DoD), *Quadrennial Defense Review Report*, 2001 www.defenselink.mil/pubs/qdr2001.pdf (accessed Feb. 27, 2005).

A. INTRODUCTION

Performance Based Logistics (PBL) is Department of Defense's (DoD) preferred product support approach.⁷ Product support is a package of logistics support functions necessary to maintain the readiness and operational capability of a system or subsystems.⁸ PBL is "the purchase of support as an integrated, affordable, performance package designed to optimize system readiness and meet performance goals for a weapon system through long-term support arrangements with clear lines of authority and responsibility."⁹ PBL may be applied at the system, subsystem, and major assembly level, depending upon a program's unique situation.

According to DoD 5000.1, program managers (PM) are required to develop and implement performance-based logistics strategies that optimize total system availability, while minimizing cost and the logistics' footprint. The same directive also states, "trade-off" decisions involving cost, useful service, and effectiveness shall consider corrosion prevention and mitigation. Sustainment strategies shall include the best use of public and private sector capabilities through government/industry partnering initiatives, in accordance with statutory requirements."¹⁰

PBL utilizes a performance-based acquisition strategy rather than the traditional transaction-based approach and this is stated in the Performance Based Logistics (PBL) Support Guidebook as "The Department of Defense (DoD) and military services are transforming from traditional methods of logistics support to Performance Based Logistics as the methodology to of product support for the 21st century." PBL strategy spectrum is shown in Figure 1. Program Managers are now responsible for Total Life-

⁶ Ibid. p. 2.

⁷ Under Secretary of Defense (Acquisition, Technology and Logistics) (USD (AT&L)), *DoD Directive 5000.1: The Defense Acquisition System*, 2003 www.dtic.mil/whs/directives/corres/pdf2/d50001p.pdf (accessed Feb. 27, 2005).

⁸ USD (AT&L), *Performance Based Logistics: A Program Manager's Product Support Guide*, 2004, https://acc.dau.mil/simplify/ev.php?ID=58394_201&ID2=DO_TOPIC (accessed Feb. 27, 2005).

⁹ Department of Defense (not dated), *Defense Acquisition Guidebook, Chapter 5.3. Performance-Based Logistics*, <http://akss.dau.mil/dag/DoD5000.asp?view=document> (accessed Feb. 23, 2005)

¹⁰ Under Secretary of Defense (Acquisition, Technology and Logistics) (USD (AT&L)), *DoD Directive 5000.1: The Defense Acquisition System, Enclosure 1.1.17*, 2003 www.dtic.mil/whs/directives/corres/pdf2/d50001p.pdf (accessed Feb. 27, 2005).

Cycle Costs. This assumes the change of expectancy of the logistics support by supply chain management from commercial instead of DoD/Military providers.¹¹

PBL's main goal is to achieve over-all optimal performance, instead of the success of individual parts or repair actions. This suggests the adoption of a business relationship that is framed in such a way as to meet the requirements of warfighters.¹² Essentially, it is the intent of the PBL to form a long-term business partnership between the government and industry early in the development of a system or a product. A long-term partnership means long-term profitability, providing business partners with an incentive to focus on using their ability to optimize profits, while also meeting the performance objectives of the government.¹³

In the implementation stage of PBL, the government benefits in several ways, such as from obtaining more direct access to commercial practices that can provide logistic support, to additional incentives it provides for the industry's performance, the potential reductions in cost, and the potential increases in system effectiveness. On the other hand, industry's benefits include: the potential of increasing a business's scope and duration for a given program, the potential for entering into new business areas, and increased freedom to apply innovative approaches in product development when providing support to the government.¹⁴ If a PBL contractor significantly improves reliability, then there will also be a reduction in cost to the contractor, reduced logistics footprint, and enhanced operational availability (A_0).

¹¹ Department of Defense – Defense Contract Management Agency (DoD – DCMA) (not dated), *Performance Based Logistics Support Guidebook, in DCMA Directive 1, Chapter 2.3, Acquisition Logistics* (Unpublished Manuscript).

¹² USD (AT&L), *Performance Based Logistics: A Program Manager's Product Support Guide*, 2004, https://acc.dau.mil/simplify/ev.php?ID=58394_201&ID2=DO_TOPIC (accessed Feb. 27, 2005)

¹³ Charles O. Coogan and C.P.L. Fellow (not dated), *Performance Based Logistics: What It Takes*, http://www.ale.com/Pages/PBL_WIT.PDF (accessed Mar. 1, 2005)

¹⁴ Ibid. p. 1.

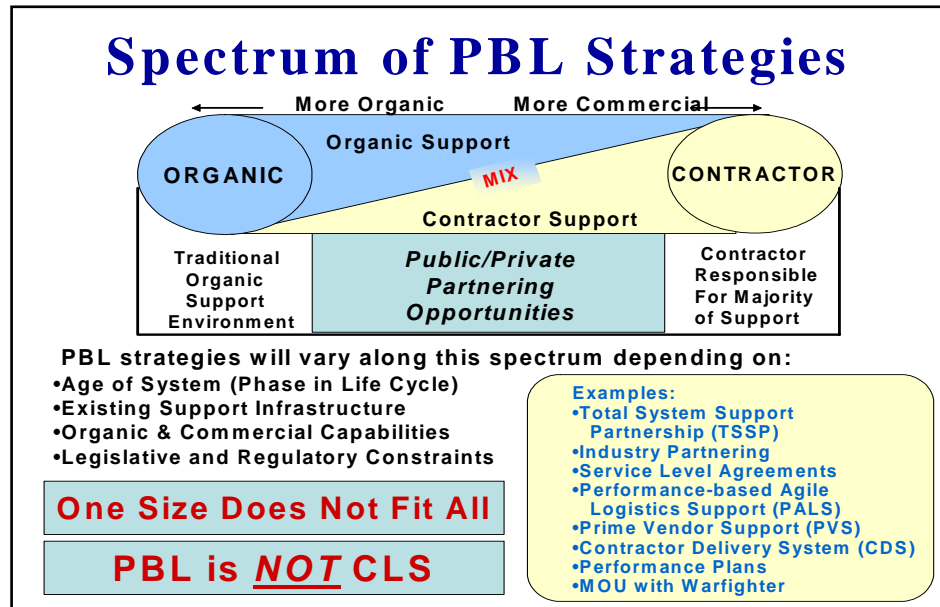


Figure 1. The PBL Strategy Spectrum¹⁵

1. PBL Implementation Model

There is a PBL implementation model defined in the “Performance Based Logistics: A Program Manager’s Product Support Guide to implement PBL”. This model, shown in Figure 2, has twelve steps for implementing PBL. These steps are considered to be flexible in an actual PBL implementation.

a. Integration of Requirements and Support

PBL implementation analyzes capabilities needs in concepts generated by the Joint Capabilities Integration and Development System (JCIDS). It accomplishes this by focusing on overall performance, then by linking supportability to this performance. The key to supportability is maximizing reliability, and then by making support systems that demonstrate this reliability.

In order to better understand warfighter needs, in terms of performance, it is important to consider such things as such as reliability improvement, availability improvement, and reduced delivery times with the end goal of improving logistics

¹⁵ USD (AT&L), *Performance Based Logistics: A Program Manager’s Product Support Guide*, 2004, https://acc.dau.mil/simplify/ev.php?ID=58394_201&ID2=DO_TOPIC (accessed Feb. 27, 2005)

support to the warfighter¹⁶. The capability needs of the warfighter will later be translated into performance and support metrics. These will be documented in Performance Based Agreements (PBAs) and serve as the primary measures of support provider performance. The warfighter supportability requirements may need to be modified in the event of changing scenarios and operational environments.

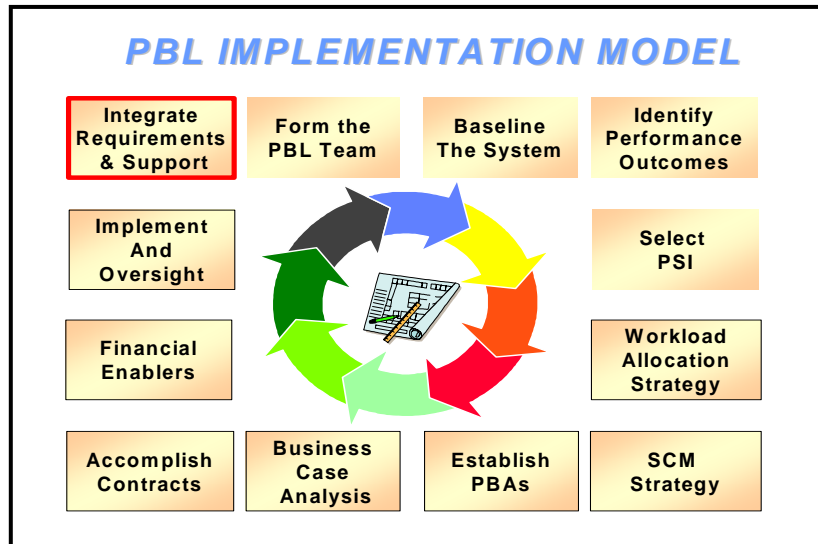


Figure 2. PBL Implementation Model¹⁷

b. Formation of the PBL Team

One of the initial and critical steps of PBL implementation is establishing a team, consisting of various stakeholders, especially the end-user, to develop the optimum support strategy. This team, led by the PM or the PM’s Product Support Manager, may include representatives and experts from public and private sectors. The Product Support Manager is the person responsible for giving oversight and management of the product support function. He also leads the development and implementation of the product support and PBL strategies to ensure the achievement of desired support

¹⁶ Department of Defense – Defense Contract Management Agency (DoD – DCMA) (not dated), *Performance Based Logistics Support Guidebook, in DCMA Directive 1, Chapter 2.3, Acquisition Logistics* (Unpublished Manuscript).

¹⁷ USD (AT&L), *Performance Based Logistics: A Program Manager’s Product Support Guide*, 2004, https://acc.dau.mil/simplify/ev.php?ID=58394_201&ID2=DO_TOPIC (accessed Feb. 27, 2005)

outcomes during sustainment. A sample PBL team is provided in Figure 3. Team members should be able to work across organizational boundaries. The team also should have achievable goals, set by the Program Manager (PM). Having these goals will enhance a team's ability to achieve system orientation and build an efficient management infrastructure.

c. Baseline the System

Defining and documenting the system baseline answers such questions as, what is the scope of the support requirements, who are the key stakeholders, what are the costs and performance objectives, and for fielded systems, what are the historic readiness rates and Operations and Support (O&S) costs relative to the upgraded or new system.

First, the PM needs to identify the difference between the existing and desired performance requirements, and then identify and document the current performance and cost baseline. The scope of baselining effort is determined by the life-cycle stage of a program. After this effort, this baseline can be used to evaluate the necessary changes to the support concept to achieve the desired level of support.

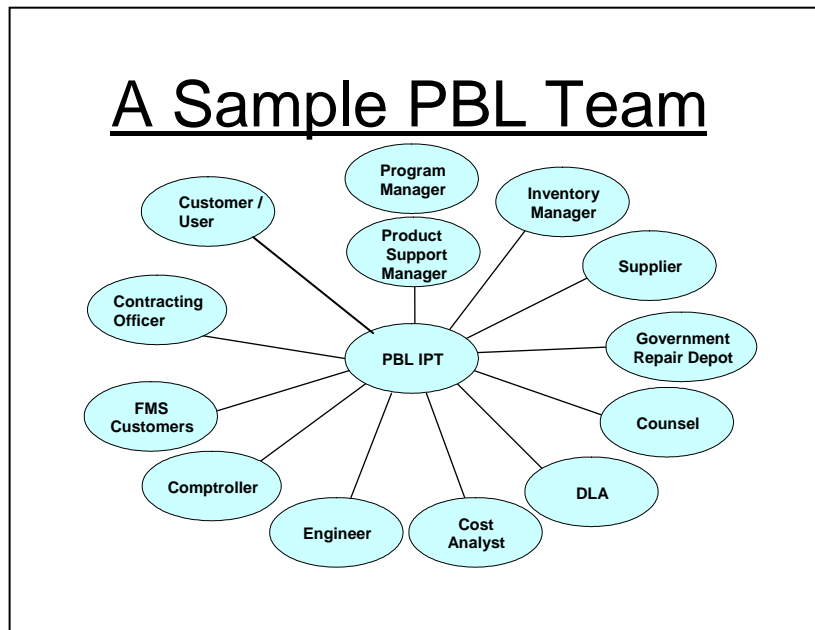


Figure 3. Sample PBL Team¹⁸

¹⁸ USD (AT&L), *Performance Based Logistics: A Program Manager's Product Support Guide*, 2004, https://acc.dau.mil/simplify/ev.php?ID=58394_201&ID2=DO_TOPIC (accessed Feb. 27, 2005)

d. Develop Performance Outcomes

Performance outcomes and metrics should be developed with a warfighter's focus in mind, characterized as an operationally available, reliable, and effective system, having minimal logistics footprint, and at a reasonable cost.

It is the performance agreement with the warfighter that states the objectives. Readiness metrics and supportability performance are balanced against costs and schedules. When developing metrics, it is preferable to link metrics to existing warfighter performance measures and reporting systems, because many existing and financial metrics can be related to top-level warfighter performance outcomes.

e. Select the Product Support Integrator

A major component of PBL is single point accountability for support. A Product Support Manager (PSM), or one or more Product Support Integrators (PSIs), is responsible for integrating all sources of support, whether public or private, to meet the identified performance outcomes. Product Support Integrators are selected by the PM, from the government or private sector, to coordinate the work and business relationships necessary to satisfy the performance based agreement.

f. Development of the Workload Allocation Strategy

When implementing PBL, "best competencies" and partnering opportunities are considered. Based on the System Baseline, developed previously, the PM and PBL team must address each discrete workload, assessing where, how, and by whom it can best be carried out, while considering statutory, regulatory, and related Military Department guidance. These support workloads, generally, will include common sub-systems, commodities, and components. While allocating and sourcing these categories, the various characteristics to be considered include:

- Title 10 USC applicability (Core, 50/50);
- Existing support processes (e.g., contract, organic);
- Existing support infrastructure (in-place, to be developed);

- Best capabilities evaluation (based on public and private sector market research);
- Opportunities for Public/Private Partnering.

These factors and tools upon which to base decisions, including a Business Case Analysis, will be considered in order to reach the best decision and, in turn, in order to develop the optimum support sourcing strategy.

g. Development of the Supply Chain Management (SCM) Strategy

Development of a supply chain management and material support strategy are critical to the success of any PBL effort. In other words, it is important to acquire the right part, at the price, and at the right time. It also brings the industry flexibility, enhanced capacity and proprietary spares support to weapon systems.

There are four categories of supply support items in DoD Material Management system:

- **Unique Repairable Items:** These are repairable parts that are unique to the system. They are usually sourced by the Prime Vendor/Original Equipment Manufacturer (OEM) of the system.
- **Common Repairable Items:** These parts are common with other systems, and may have a variety of sources.
- **Unique Consumable Items:** These are consumable items (i.e., discarded after use) that are used only on the target system, and are usually sourced by the Prime Vendor/OEM of the system.
- **Common Consumable Items:** These are consumable items used across more than a single system, and are generally managed and provided by Defense Logistics Agency (DLA).

Supply chain management includes, spare parts distribution, asset visibility and obsolescence mitigation. From a warfighter's perspective, transportation and asset visibility have a significant impact on high-level metrics, and should be emphasized in the PBL strategy.

h. The Establishment of Performance Based Agreements (PBAs)

It is stated in DoDI 5000.2 in the following way, “The PM shall work with the users to document performance and support requirements in performance agreements specifying objective outcomes, measures, resource commitments, and stakeholder responsibilities.”¹⁹ Performance Based Agreements (PBAs) should be simple and focused on reliability improvement.

The PBA is used to enter into a formal relationship for levels of support for all stakeholders (such as, the User/Warfighter, the PM, and the Support Provider). PBA establishes an understanding among all stakeholder parties in regards to the performance outcomes and commitments, and also the requirements to achieve those outcomes. The structure of PBA is provided in Figure 4.

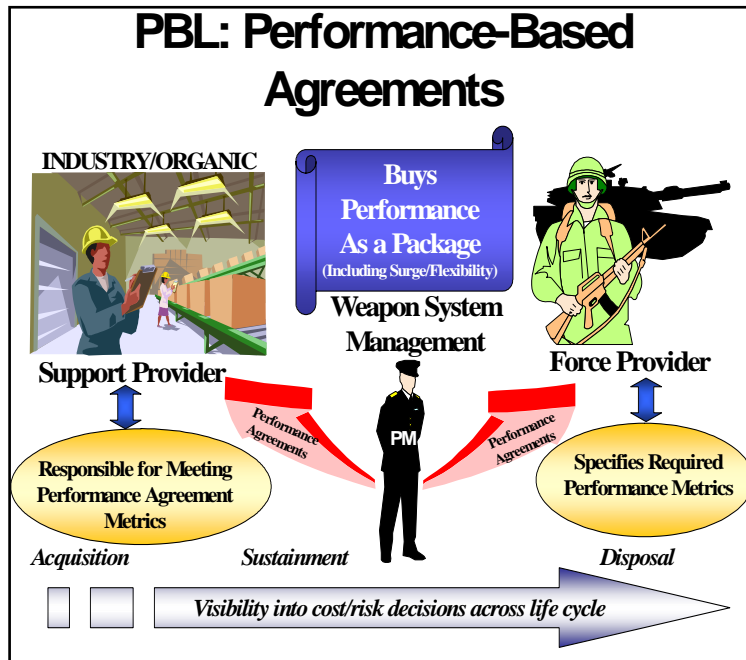


Figure 4. Performance Based Agreement²⁰

¹⁹ Under Secretary of Defense (Acquisition, Technology and Logistics) (USD (AT&L)), Department of Defense Instruction 5000.2: Operation of the Defense Acquisition System, Section 3.9.2.3, 2003 <http://www.dtic.mil/whs/directives/corres/pdf2/i50002p.pdf> (accessed Mar. 27, 2005).

²⁰ USD (AT&L), *Performance Based Logistics: A Program Manager's Product Support Guide*, 2004, https://acc.dau.mil/simplify/ev.php?ID=58394_201&ID2=DO_TOPIC (accessed Feb. 27, 2005).

Documenting a completed, approved, and funded product support agreement is a critical step in the development of a PBL. A documented, performance-based agreement, between all stakeholders, defines the system operational requirements (e.g., readiness, availability, response times, etc.). Support providers may be partnerships between public, private, or a combination thereof. Some examples of public support providers are: service maintenance depots, Service and Defense Logistics Agency (DLA) inventory control points, and DLA distribution depots.

i. Conducting a PBL Business Case Analysis (BCA)

The PBL BCA assesses alternative solutions in terms of the cost to meet the warfighters logistics performance objectives, compared, particularly, to existing support strategies. It provides a best-value analysis that considers both the cost and the quantifiable and non-quantifiable factors (i.e., performance, producibility, reliability, maintainability, and supportability enhancements) that support a decision to invest. In the BCA, alternatives are compared, in terms of total cost against total benefits, to arrive at the optimum solution.

The PBL BCA process extends beyond traditional economic, cost/benefit analyses, in its way of connecting each alternative, to how it satisfies strategic objectives of the program; for example, how it complies with product support performance measures, and the resulting impact on stakeholders.

j. Award Contract(s)

A PBL contract specifies performance requirements, describes roles and responsibilities of both sides, specifies metrics; includes incentives as appropriate, and specifies how performance will be assessed. A Statement of Objectives is preferable to a detailed Performance Work Statement in PBL contracting. Ideally, the implementation of PBL contracts will be for a Fixed Price, securing needed outcomes at a known price. However, the risky nature of Fixed Price contracts requires the use of Cost Plus contracting approaches early in the product support life. As a general rule, Fixed Price contracts should be avoided, until the price can be predicted at a certain level of confidence. As a result, PBL strategies may have a phased contracting approach, which

can be characterized by a Cost Plus cost reimbursement type contracts at the beginning, then, over time, as Cost Plus incentive contracts, and finally, as Fixed Price incentive contracts.

Long-term contracts are the preferred approach for PBL implementation. PBL encourages service providers to do their best, because it provides the foundation for increased profit. This motivation must be balanced, due to investment requirements of service provider, to achieve reliability improvements. This balance can only be achieved when the service provider is assured that the contract is of sufficient length to guarantee them an adequate return on their investment. Also, there should be adequate exit criteria in every PBL contract.

All PBL performance-based agreements should include: performance objectives, responsibilities, reliability growth targets, maintainability improvements, terms of the contract, flexibility provisions (i.e., the range of support necessary for implementation), diminishing manufacturing sources, continuous / modernization improvements; incentives for completion and penalties for breach, and plans for cost reduction/stability. Industry PBL contracting priorities include: adequate metrics, a minimal number of contract line items (CLINs), caps on liabilities, measures to mitigate risk, provisions to ensure they are long-term contracts (i.e., more than five years), incentives, return on net assets (RONA), clarity, and flexibility.

k. The Employment of Financial Enablers

Performance agreements require the implementation of a financial process strategy by the PM. This includes the estimation of annual costs based on operational requirements, as well as a review of funding streams for applicability. After the funds have been appropriated, the customer (or force provider) must ensure that the funds for the support actions defined in the PBA are made available. The process puts the PM in the dual role of providing management and giving oversight in the use of funds. However, it does not provide the PM direct 'control' over the funds for support.

l. Implementation and Assessment

Developing the performance assessment plan, monitoring performance, and revising the product support strategy and PBAs, as necessary, are all parts of the PM's oversight role. The PM also acts as the agent for the warfighter, certifying Product Support Integrator (PSI) performance and approving incentive payments.

The Services are required to compare the actual performance with the expected performance and support levels. The PM should conduct Product Support Integrator/Provider (PSI/PSP) performance reviews against the PBA on at least a quarterly basis, and use that data to prepare for the Service level assessments.

In conclusion, the PBL implementation model is not a rigid model. Thus, it can be tailored to fit the program, business and operational environments. The Product Support Manager (PSM) and Product Support Integrator(s); Performance Based Agreements; PBL Business Case Analysis; Legislative and Statutory Issues; and Financial Management Issues are considered as key elements of any PBL implementation.²¹

2. PBL Metrics

It is an essential part of PBL implementation to establish performance metrics. Performance metrics must be defined and established in a manner that can be tracked, measured, and assessed. The PM and the user work together to establish system performance needs. Then, the PM works with the product support integrator to fulfill those needs through documentation of their requirements, with the appropriate metrics in performance-based agreements. The success of a PBL implementation is highly dependent upon accurately established metrics.²² PBL metrics should support the following five top-level desired outcomes:

- (1) Operational Availability. The percent of time that a weapon system is available for a mission or ability to sustain operations tempo.

²¹ USD (AT&L), *Performance Based Logistics: A Program Manager's Product Support Guide*, 2004, https://acc.dau.mil/simplify/ev.php?ID=58394_201&ID2=DO_TOPIC (accessed Feb. 27, 2005)

²² Ibid. p. 12.

(2) Operational Reliability. The measure of a weapon system in meeting mission success objectives (percent of objectives met, by weapon system). Depending on the weapon system, a mission objective would be a sortie, tour, launch, destination reached, capability, etc.

(3) Cost Per Unit Usage. The total operating costs divided by the appropriate unit of measurement for a given weapon system. Depending on weapon system, the measurement unit could be flight hour, steaming hour, launch, mile driven, etc.

(4) Logistics Footprint. The government/contractor size or "presence" of logistics support required to deploy, sustain, and move a weapon system. Measurable elements include inventory/equipment, personnel, facilities, transportation assets, and real estate.

(5) Logistics Response Time. This is the period of time from logistics demand signal sent to satisfaction of that logistics demand.²³

Another outcome focus should be on maximizing inherent reliability, i.e., the best that can be achieved considering all circumstances. Tailoring the metrics to fit the operational role of the system is a vital element of PBL strategy. Product Support Integrators (PSIs) are responsible for using the metrics defined in the Performance Based Agreements. Although performance metrics are the evaluation criteria for a PBL provider's performance, some of the product support requirements might be more appropriately evaluated, subjectively, by both the PM team and the user, to allow for adjusting potential support contingencies.²⁴

3. Performance Based Service Acquisition (PBSA)

A big part of DoD acquisition is service acquisitions. In his memorandum to Military Services, Defense Agencies, and Defense Logistics Agency, J.S. Gansler, USD (Acquisition, Technology and Logistics (AT&L)) directed, "It is the policy of the Department of Defense (DoD) that, in order to maximize performance, innovation, and competition, often at lower cost, performance-based strategies for the acquisition of

²³ Michael W. Wynne (USD (AT&L)), *Performance Based Logistics: Purchasing Using Performance Based Criteria*, 2004, http://akss.dau.mil/dag/Guidebook/IG_c5.3.1.4.asp (accessed Mar. 4, 2005)

²⁴ USD (AT&L), *Performance Based Logistics: A Program Manager's Product Support Guide*, 2004, https://acc.dau.mil/simplify/ev.php?ID=58394_201&ID2=DO_TOPIC (accessed Feb. 27, 2005).

services are to be used wherever possible. While not all acquisitions for services can be conducted in a performance-based manner, the vast majority can. Those cases in which performance-based strategies are not employed should become the exceptions.”²⁵

In the same memorandum, a goal of at least 50 percent of all service acquisitions, measured in terms of both dollars and contracts, is directed to be performed by performance-based service acquisition approaches by 2005.

Performance Based Service Acquisition (PBSA) can be defined as; “...acquisition strategies, methods and techniques that describe and communicate measurable outcomes, rather than direct performance processes. It is structured around defining a service requirement, in terms of performance objectives, and providing contractors with the latitude to determine how to meet these objectives. Simply put, it is a method for acquiring *what is required*, and placing the responsibility for *how it is accomplished* on the contractor.”²⁶

The use of performance-based service acquisition has many potential benefits for both the industry and the governmental side. If the services are acquired by fixed-price contract arrangements, the contractor can be innovative, and find cost-effective ways to perform under contracts that have fixed funding levels. Eventually, this can help contractors to produce better outcomes at a reduced cost.²⁷ Besides the benefits listed above, if implemented properly, it can also:

- Reduce inspection requirements of governments,
- Develop the identification of requirements,
- Increase the satisfaction of the buying agency,
- Avoid delays in performance,

²⁵ J.S. Gansler, (USD Acquisition and Technology (A&T)), *Performance-Based Services Acquisition (PBSA)*, 2000, <http://akss.dau.mil/docs/197DVDOC.doc> (accessed Mar. 6, 2005).

²⁶ J.S. Gansler (Office of Deputy Under Secretary of Defense for Acquisition Reform), *Guidebook for Performance-Based Service Acquisition in the Department of Defense*, 2001, <http://www.acq.osd.mil/dpap/Docs/pbsaguide010201.doc> (accessed Mar. 6, 2005).

²⁷ United States Government Accountability Office Report (GAO-04-715), *Opportunities to Enhance the Implementation of Performance-Based Logistics*, 2004, <http://www.gao.gov/new.items/d04715.pdf> (accessed Mar. 23, 2005).

- Avoid claims by contractors.²⁸

An acquisition should include the following elements to be considered performance-based:

(1) Performance Work Statement — The Performance Work Statement describes the requirement in terms of measurable outcomes rather than by means of prescriptive methods.

(2) Measurable Performance Standards — To determine whether performance outcomes have been met, measurable performance standards define what is considered acceptable performance.

(3) Remedies — Remedies are procedures that address how to manage performance that does not meet performance standards. While not mandatory, incentives should be used, where appropriate, to encourage performance that will exceed performance standards. Remedies and incentives complement each other.

(4) Performance Assessment Plan — This plan describes how contractor performance will be measured and assessed against performance standards (Quality Assurance Plan or Quality Assurance Surveillance Plan).²⁹

The main objectives of performance-based acquisition implementation can be described as follows:

- *Maximize Performance:* The contractor can deliver the required service by following its best business practices, adjusting them accordingly. The contractors can be incentivized to use their best performance.
- *Maximize Competition and Innovation:* Since the focus in a PBSA contract is on the end product, it will drive innovation. Thus, using performance requirements will increase the opportunity to maximize competition on supplier base.
- *Encourage and Promote the Use of Commercial Services:* Most of the service requirements can be met by commercial suppliers and Part 12 of Federal

²⁸ PBSA (not dated), http://www.usacce.army.mil/center_of_excellence/PBSA%20Page.htm (accessed Mar. 23, 2005)

²⁹ J.S. Gansler (Office of Deputy Under Secretary of Defense for Acquisition Reform), *Guidebook for Performance-Based Service Acquisition in the Department of Defense*, 2001, <http://www.acq.osd.mil/dpap/Docs/pbsaguide010201.doc> (accessed Mar. 6, 2005).

Acquisition Regulation (FAR) (Acquisition of Commercial Items) provides the industrial base, with a lot of benefits, by reducing the reporting burden and government-unique contract clauses and similar requirements.

- *Shift in Risk:* Since the contractors are responsible for achieving the performance requirements placed in the statements of work, the majority of the risk related with performance is transferred from government to industry. Agencies should consider this when determining the appropriate acquisition incentives.
- *Achieve Savings:* The use of performance requirements motivates the contractor towards the innovation of business practices, resulting in cost savings for both government and industry.³⁰

B. HISTORICAL BACKGROUND OF PERFORMANCE BASED LOGISTICS AND SERVICE ACQUISITION IMPLEMENTATION IN THE U.S.A.

1. Performance Based Logistics

Many business environments around the world have recently experienced a transformation in their business practices, such as: reduced inventories; the elimination of non-value added steps; and the elimination of waste. The defense environment, although it has different objectives than do private sector environments, has adopted new procedures and policies, especially, in acquisition processes. This reform of acquisition processes, occurring primarily in the 1990s, has opened new windows of opportunities for improving the acquisition management.

The 2001 Quadrennial Defense Review (QDR) Report reveals the fact that the business sector in the U.S.A has attained substantial cost savings, and a corresponding reduction in inventories, by removing unnecessary steps and carefully managing their supply chain. The same report mandated, “DoD will implement Performance Based

³⁰ Ibid. p. 2.

Logistics to compress the supply chain and improve readiness for major weapons systems and commodities.”³¹

In his memorandum, the Under Secretary of Defense (AT&L) at that time, E.C. Aldridge, Jr., said, “The FY 2003-07 Defense Planning Guidance (FY 03 DPG) requires that each Military Department submit a plan that identifies its implementation schedule for applying PBL to all new weapon systems and all Acquisition Category I and II fielded systems. Service PBL schedules should reflect an objective to aggressively pursue program implementation end dates tailored, program-by-program, to complete at the earliest feasible date.”³²

The DoD 5000.1 Directive, signed in May 2003, mandates that the Program Managers shall develop and implement PBL strategies. In his February 4, 2004 memorandum, Paul Wolfowitz (Deputy Secretary of Defense), directed each Military Service “...to provide a plan to aggressively implement, including transfer of appropriate funding, on current and planned weapon system platforms for Fiscal Years 2006-2009.”³³

“Performance Based Logistics: A Program Manager’s Product Support Guide” November 10, 2004 provides program managers with the guidelines in the PBL implementations.

2. Performance-Based Service Acquisition (PBSA)

One of the early guides for PBSA is the “Office of Federal Procurement Policy Pamphlet Number 4,” issued as a supplement (Supplement No. 2) for the Office of Management and Budget (OMB) Circular A-76. Supplement No. 2 is a guide for Writing and Administering Performance Statements of Work for Service Contracts, issued in October 1980.³⁴

³¹ Department of Defense (DoD), *Quadrennial Defense Review Report*, 2001
www.defenselink.mil/pubs/qdr2001.pdf (accessed Feb. 27, 2005)

³² E.C. Aldridge, Jr. (USD (AT&L)), *Performance Based Logistics*, 2002,
https://acc.dau.mil/simplify/ev.php?ID=11937_201&ID2=DO_TOPIC (accessed Mar. 6, 2005).

³³ Paul Wolfowitz (Deputy Under Secretary of Defense), *Implementation of the Business Practice Implementation Board (DBB) Recommendation to the Senior Executive Council (SEC) on Continued Progress on Performance Based Logistics*, 2004,
https://acc.dau.mil/simplify/ev.php?ID=24121_201&ID2=DO_TOPIC (accessed Mar. 6, 2005).

³⁴ Office of Federal Procurement Policy (OFPP), *Pamphlet No. 4*, 1980,
http://www.wifcon.com/ofpp4_ack.htm (accessed Mar. 6, 2005).

In the OFPP's Policy Letter 91-2, dated April 1991, performance-based contracting methods are required to be used by the agencies to the maximum extent practicable when acquiring services, and acquisition and contract administration strategies, methods, and techniques that best accommodate the requirements are also required. Also, in the same letter, justification is required for the use of a contracting method, other than performance-based contracting, when acquiring services.³⁵

J.S. Gansler, USD (AT&L) at that time, issued a memorandum in April 2000 establishing the PBSA goals, namely 50 percent both in terms of dollars spent and actions accomplished for Military Departments and Defense Logistics Agency. ³⁶

In 2001, a guidebook entitled, "Performance-Based Service Acquisition," was issued by the Office of Deputy Under Secretary of Defense for Acquisition Reform in order to promote performance-based strategies for service acquisitions, to educate acquisition workforce, to encourage innovative business practices within the DoD acquisition processes, and to promote use of commercial marketplace.³⁷

Federal Acquisition Regulation (FAR), Part 37, mandates the use of performance-based contracting to the maximum extent practicable. Also, subpart 37.6 prescribes policies and procedures for use of performance-based contracting methods.³⁸

C. CURRENT IMPLEMENTATIONS OF PERFORMANCE BASED LOGISTICS AND CONTRACTING IN THE U.S.A: SUCCESS STORIES

In this section, some of the successful PBL implementations will be discussed briefly, serving as examples.

³⁵ OFPP, *Policy Letter 91-2: Service Contracting*, 1991, http://www.arnet.gov/Library/OFPP/PolicyLetters/Letters/PL91-2_4-9-91.html (accessed Mar. 6, 2005)

³⁶ J.S. Gansler, (USD (A&T)), *Performance-Based Services Acquisition (PBSA)*, 2000, <http://akss.dau.mil/docs/197DVDOC.doc> (accessed Mar. 6, 2005).

³⁷ J.S. Gansler (Office of Deputy Under Secretary of Defense for Acquisition Reform), *Guidebook for Performance-Based Service Acquisition in the Department of Defense*, 2001, <http://www.acq.osd.mil/dpap/Docs/pbsaguide010201.doc> (accessed Mar. 6, 2005).

³⁸ Federal Acquisition Regulation (FAR), *Subpart 37.6-Performance-Based Contracting*, 2005, http://farsite.hill.af.mil/reghtml/regs/far2afmcfars/fardfars/far/37.htm#P228_34977 (accessed Mar. 28, 2005).

1. F/A-18E/F

The combat-proven, F/A-18E/F Super Hornet, is the U.S. Navy's multi-mission, long-range, and all-weather strike fighter. F/A-18E, the single-seat model, and F/A-18F, the two-seat model, perform several missions such as; air superiority, day and night strike with precision-guided weapons, fighter escort, close air support, suppression of enemy air defense, maritime, forward air control and tanker. Changing missions can be quickly accomplished by merely flipping a switch.

The Super Hornet also provides warfighters with increased payload flexibility by mixing and matching air-to-air and air-to-ground ordnance, with the help of a total of 11 weapon stations. The F/A-18E/F also can carry smart weapons, including laser-guided bombs.³⁹

The F/A-18E/F Integrated Readiness Support Team (FIRST) Performance Based Logistics contract covers approximately 73% of F/A-18 E/F material support. The major Product Support Integrator is Naval Inventory Control Point (NAVICP), and the PBL Contractor is Boeing. The Defense Logistics Agency (DLA) is the primary source for common consumables. Through the FIRST contracts, Boeing provides total aircraft support, including supply chain support, reliability improvements, and obsolescence management. Additionally, Boeing has Commercial Services Agreements with all three Naval Aviation Depots (NADEPs) for depot level repairs. ⁴⁰ The U.S. Navy is responsible for configuration control, system safety, base-supply (or retail) material allowances, and organizational, intermediate and depot maintenance.⁴¹

2. Common Ground Station (CGS)

The Common Ground Station (CGS) is the U.S. Army's real-time, multiple sensor Command, Control, Communications, Computers, and Intelligence (C4ISR) capabilities

³⁹ The Boeing Company, *F/A-18E/F Super Hornet*, 2005, http://www.boeing.com/defense-space/military/fa18ef/fa18ef_4back.htm (accessed Mar. 28, 2005).

⁴⁰ USD (AT&L), *Performance Based Logistics: A Program Manager's Product Support Guide*, 2004, https://acc.dau.mil/simplify/ev.php?ID=58394_201&ID2=DO_TOPIC (accessed Feb. 27, 2005).

⁴¹ Kathy Cook (not dated), *Navy-Industry FIRST Team*, The Boeing Company, <http://www.boeing.com/ids/allsystems/go/issues/vol2/num1/story09.html> (accessed Mar. 28, 2005).

provider. It provides; real-time surveillance, reconnaissance, situation, awareness, target development, and theater missile defense capabilities.

The CGS operates in various climates, geographical situations and weather conditions, helping the commanders to make decisions with a high level of certainty. The CGS is also a mobile system, with the support of battlefield management; crisis management; the war on drugs; and contingency operations.⁴²

The CGS has the product support integration from both government and industry, and is being managed, organically, at the Tobyhanna Army Depot. There are ongoing Performance Based negotiations between the product support integrator and the support providers. To develop a fully capable weapon system with a support infrastructure that would meet the sustainment requirements and reduce life cycle costs was the goal of the CGS program.

The Product Support Integrator established a Supportability Integrated Process Team (SIPT) to overcome the challenges in product support, while focusing on the capabilities of the industry, the Defense Logistics Agency, and the Army Communications Electronics Command. All support providers provide their support to the CGS fleet worldwide, and each of them is a member of the CGS SIPT.⁴³

3. F-117

The F-117 Nighthawk is the world's first operational aircraft designed to exploit low-observable, stealth technology. The F-117 is the single-seat attack and defense suppression aircraft for the Air Force.

It is equipped with a sophisticated navigation and attack system that is integrated into a digital avionics suite. This serves to increase mission effectiveness, while reducing pilot workload, having the capability to employ various weapons.

⁴² General Dynamics C4 Systems (not dated), *Common Ground Station (CGS)*, <http://www.gdds.com/cgs/> (accessed Mar. 28, 2005).

⁴³ USD (AT&L), *Performance Based Logistics: A Program Manager's Product Support Guide*, 2004, https://acc.dau.mil/simplify/ev.php?ID=58394_201&ID2=DO_TOPIC (accessed Feb. 27, 2005).

Their unique design and construction (i.e., surface coated with different radar absorbent materials) prevents them being observed by the radars and gives them extraordinary capabilities. ⁴⁴

The F-117 prime contractor is Lockheed Martin Aeronautics Company, located in Palmdale, California (LMAC-P). LMAC-P has total system performance responsibility (TSPR) for the F-117 weapon system. Research, Development, Testing and Evaluation (RDT&E) funds are used to improve the F-117's capability, reliability, maintenance, and safety modifications. Operational Flight Program (OFP) software is continuously updated to supplement modification development efforts. The contract pricing arrangements used include Cost Plus Fixed Fee (CPFF) and Cost Plus Award Fee (CPAF) contracts. ⁴⁵

4. TOW ITAS

The TOW (i.e., "Tube-launched, Optically tracked, Wire-guided"⁴⁶) Improved Target Acquisition System (ITAS) constitutes a material change to the current target acquisition and fire control sub-system used by light infantry forces.

Using a second-generation Forward-Looking Infrared Radar (FLIR), and other digital components, ITAS increases target detection, acquisition, recognition, engagement ranges, and, most importantly, the probability of a hit.

ITAS has the capability of firing all versions of the TOW missile from both the M41 ground launcher and the M1121 High-Mobility Multipurpose Wheeled Vehicle (HMMWV) platform, while providing a growth path for future missiles. TOW ITAS provides a highly mobile weaponry, and is able to overcome adverse weather, has the capability to operate day or night (capabilities that are often needed by early entry forces to destroy advanced threat armor at greater standoff ranges).⁴⁷

⁴⁴ F-117A Nighthawk (not dated), <http://www.globalsecurity.org/military/systems/aircraft/f-117.htm> (accessed Mar. 28, 2005).

⁴⁵ USD (AT&L), *Performance Based Logistics: A Program Manager's Product Support Guide*, 2004, https://acc.dau.mil/simplify/ev.php?ID=58394_201&ID2=DO_TOPIC (accessed Feb. 27, 2005).

⁴⁶ Synergy Microsystems, *Synergy's Rhino 10 Single-board Computers Chosen for TOW "ITAS" Program*, 2003, http://www.synergymicro.com/PressRel/03_11_02.html (accessed Mar. 28, 2005)

⁴⁷ Raytheon (not dated), *The TOW ITAS Mission Is To Defeat Enemy Armored Vehicles*, http://www.raytheon.com/products/tow_itas/ (accessed Mar. 28, 2005).

In FY2000, a PBL Contractor Logistics Support Contract for TOW-ITAS was signed with Raytheon. PBL was implemented in early 2002 with free issue spares delivered to units and loaded as shop stock. Raytheon is the item manager for ITAS unique parts and provisions for field and depot.⁴⁸

5. T-45

The T-45 Goshawk aircraft is the U.S. Navy version of the British Aerospace Hawk aircraft. It is used for intermediate and advanced portions of the Navy pilot training program for jet carrier aviation and tactical strike missions.⁴⁹ It is a two-seat, single-engine aircraft, used in the rigorous naval aviation training environment, including catapult launches and arrested landings. The T-45 training aims at reducing the transition time of fleet jets, because it has 31.5 fewer flight hour requirements when compared to previous training jets, allowing pilots to focus more upon learning key tactical maneuvers.

PBL performance is based on Aircraft Ready for Training (RFT) and Sortie Completion Rate (SCR), where each normal workday, including a bonus, is calculated daily and paid once a month. The aircraft PBL contractor shall have a minimum number of aircraft RFT at 1100 hours, Monday through Friday (excluding Federal holidays), and each Surge Day. This minimum number of RFT aircraft shall be computed each day.

The T-45's F405-RR-401 engine is supported through a PBL 'power by the hour' (PBTH) contract with Rolls Royce. Performance is based on aircraft flying time and paid per flight hour.⁵⁰

⁴⁸ USD (AT&L), *Performance Based Logistics: A Program Manager's Product Support Guide*, 2004, https://acc.dau.mil/simplify/ev.php?ID=58394_201&ID2=DO_TOPIC (accessed Feb. 27, 2005).

⁴⁹ FAS Military Analysis Network, T-45 Goshawk, 1999, <http://www.fas.org/man/dod-101/sys/ac/t-45.htm> (accessed Mar. 28, 2005).

⁵⁰ USD (AT&L), *Performance Based Logistics: A Program Manager's Product Support Guide*, 2004, https://acc.dau.mil/simplify/ev.php?ID=58394_201&ID2=DO_TOPIC (accessed Feb. 27, 2005).

6. Joint Surveillance Target Attack Radar System (JSTARS)

The Joint Surveillance and Target Attack Radar System (JSTARS) is a joint development project of the US Air Force and US Army, providing an airborne, standoff range, surveillance and target acquisition radar and command and control center.⁵¹

The JSTARS airframe a modified Boeing 707-300 series aircraft, and is capable of detecting, locating, tracking, and targeting hostile surface movements, while communicating real-time information through secure data links to Air Force and Army command centers.

The prime contractor is Northrop-Grumman, which has a Total System Support Responsibility (TSSR) arrangement for the sustainment of JSTARS over a maximum contract period of 22 years. Warner-Robins ALC performs core sustaining workloads (e.g., repair of prime mission equipment and system software maintenance) and other workloads (e.g., ground support software maintenance and various back shop functions) under a work-share partnership with Northrop-Grumman. DLA is the primary provider for common consumable parts, and almost all consumable parts unique to JSTARS.⁵²

7. Shadow Tactical Unmanned Air Vehicle (UAV)

The Shadow Tactical Unmanned Air Vehicle system consists of air vehicles, modular mission payloads, ground control stations, launch and recovery equipment, and communications equipment.⁵³ The system is designed to meet the Army's Unmanned Aerial Vehicle System (UAVS) requirements for flexible, responsive, near-real-time Reconnaissance, Surveillance, and Target Acquisition (RSTA), Battle Damage Assessment (BDA), and battle management support to maneuver commanders.

The contractor is responsible for total product support for the UAVS under performance-based logistics. The contractor-managed supply and maintenance system supports the system operational requirements in accordance with the performance

⁵¹ JSTARS Joint Surveillance And Target Attack Radar System, U.S.A., 2005, <http://www.airforce-technology.com/projects/jstars/> (accessed Mar. 28, 2005)

⁵² USD (AT&L), *Performance Based Logistics: A Program Manager's Product Support Guide*, 2004, https://acc.dau.mil/simplify/ev.php?ID=58394_201&ID2=DO_TOPIC (accessed Feb. 27, 2005).

⁵³ RQ-7 Shadow 200 Tactical UAV (not dated), <http://www.globalsecurity.org/intell/systems/shadow.htm> (accessed Mar. 28, 2005)

metrics. Performance will be measured on a recurring basis, and the contractor is given incentive to exceed the defined contract performance metrics.⁵⁴

8. NAVICP: Aircraft Tires

The Naval Inventory Control Point (NAVICP) Aircraft Tires PBL contract transfers the traditional inventory management, warehousing, and transportation functions to the contractor, and is expected to save \$46 million over a fifteen-year period.⁵⁵ The contract includes 23 different types of tires. This contract guarantees a 95 percent level of tire availability, and to deliver tires anywhere in the United States within two days after receiving orders electronically.⁵⁶ The contractor is the single supply chain integrator for U.S. Navy aircraft tires, providing a full service, 24 hour a day, 365 days a year service center, with Web-based access. The contractor is also committed to provide up to twice the amount of the normal monthly demand.⁵⁷

9. NAVICP: Auxiliary Power Unit/Total Logistics Support (APU/TLS)

The APU/TLS PBL contract transfers the “inventory management, warehousing, and engineering”⁵⁸ responsibilities to the contractor for Auxiliary Power Unit (APU) types used on the F/A-18, S-3, C-2 and P-3 aircraft, including all peculiar components and accessories. This PBL contract is the first Public/Private partnership in Naval logistics. Under this arrangement, the contractor provides program management while Naval Aviation Depot Cherry Point provides the touch-labor. The contract guarantees 30 to 60 percent reliability improvement, two-day delivery for high-priority requirements, obsolescence management, product support engineering, and surge capabilities up to 120 percent of annual flight hours. The arrangement also makes provision for gain-sharing, if

⁵⁴ USD (AT&L), *Performance Based Logistics: A Program Manager's Product Support Guide*, 2004, https://acc.dau.mil/simplify/ev.php?ID=58394_201&ID2=DO_TOPIC (accessed Feb. 27, 2005).

⁵⁵ M.G. Ahern, *2004 DoD Procurement Conference (Logistics Panel)*, 2004 www.acq.osd.mil/dpap/about/Procurement2004/presentations/01_M_Ahern.pdf (accessed Mar. 28, 2005).

⁵⁶ The Naval Inventory Control Point, *Innovative Contract Saves Navy Millions*, 2001, <http://www.navicp.navy.mil/news/tirepbl.htm> (accessed Mar. 28, 2005)

⁵⁷ USD (AT&L), *Performance Based Logistics: A Program Manager's Product Support Guide*, 2004, https://acc.dau.mil/simplify/ev.php?ID=58394_201&ID2=DO_TOPIC (accessed Feb. 27, 2005).

⁵⁸ M.G. Ahern, *2004 DoD Procurement Conference (Logistics Panel)*, 2004 www.acq.osd.mil/dpap/about/Procurement2004/presentations/01_M_Ahern.pdf (accessed Mar. 28, 2005)

reliability is improved, and includes downward price adjustments, if the contractor fails to meet reliability or performance objectives. Life-cycle cost savings are expected to exceed \$50 million. The contract is structured to facilitate adding any Honeywell product, such as the C-130 APU, F/A-18 F404 Engine Main Fuel Control, and the P-3 Engine Driven Compressor. Expected performance benefits include: the reduction of G Condition at the Depot (i.e., the time waiting for parts) from 232 to 0, the reduction of backorders from 125 to 0, an increased supply of Material Availability from 65% to over 90%, reliability improvements of over 75, and filling 98% of requisitions received during Operation Enduring Freedom within contractual requirements, even if there is an increase in demand of more than 60 percent.⁵⁹

10. Reduction in Total Ownership Cost (RTOC)

The purpose of the RTOC program is to achieve readiness improvements in weapon systems by improving the reliability of the systems or the efficiency of the processes used to support them. New Technologies and management practices may provide significant opportunities to improve readiness and reduce ownership costs. In recent years, world-class suppliers have achieved cost reductions while making major improvements in customer support. Some DoD programs have achieved similar successes in adopting private sector improvements in logistics and supply chain management.⁶⁰

Since 1999, the DoD is using Pilot Program initiatives to test the RTOC concept. F-117, JSTARS, and TOW-ITAS are some examples of these pilot programs. The program has been highly successful, resulting in significant cost savings, and identifying lessons learned, which are now being institutionalized throughout the DoD. The institutionalization effort will be led by the RTOC Special Interest Programs.

Identified RTOC Best Practices and their associated programs include:

- R-TOC Management
 - Coordination of R-TOC initiatives: Common Ship, AEGIS cruisers, LPD-17, CVN-68 carriers

⁵⁹ USD (AT&L), *Performance Based Logistics: A Program Manager's Product Support Guide*, 2004, https://acc.dau.mil/simplify/ev.php?ID=58394_201&ID2=DO_TOPIC (accessed Feb. 27, 2005).

- Development of tools for R-TOC tradeoffs (JSTARS), analysis of maintenance requirements (CH-47), and recapitalization (Apache)
- Reliability and Maintainability Improvements
 - Design for reduced O&S: LPD-17, EFV, MTVR
 - Government-industry partnerships: Abrams
 - Recapitalization and system upgrade: Apache, HEMTT, CH-47, EA-6B, C-5, F-16, C/KC-135
 - Replacement of high O&S cost components and subsystems with COTS: C/KC-135, F-16, Common Ship, AEGIS cruisers
- Supply Chain Response Time
 - Direct vendor delivery: HEMTT, H-60
 - Commercial maintenance agreement: Aviation Support Equipment (ASE)
 - Industrial/virtual prime vendor: C/KC-135, F-16, and C-5
 - Reliability centered maintenance: EA-6B, ASE
 - Team Armor Partnership: Abrams Tank System
 - Electronic tech manuals: F-16, C/KC-135
- Performance Based Logistics (PBL)
 - Systems sustainment responsibility: F-117, JSTARS
 - Contractor logistics support: ITAS
 - Flexible sustainment: C-17
 - Life cycle support study: LPD-17
 - Performance based product support: Abrams, EA-6B, Guardrail⁶¹

⁶⁰ Institute for Defense Analyses (not dated), *Reduction of Total Ownership Costs*, <http://rtoc.ida.org/rtoc/rtoc.html> (accessed Mar. 28, 2005)

⁶¹ USD (AT&L), *Performance Based Logistics: A Program Manager's Product Support Guide*, 2004, https://acc.dau.mil/simplify/ev.php?ID=58394_201&ID2=DO_TOPIC (accessed Feb. 27, 2005).

III. ANALYSIS AND COMPARISON OF ACQUISITION RULES AND REGULATIONS IN TURKEY AND IN THE U.S.A

A. CURRENT RULES AND REGULATIONS OF THE TURKISH NAVY SERVICE ACQUISITIONS

Procurement is one of the six basic functions of business. It can be defined as the process of acquiring goods and services from outside the organization. The goal of the procurement process is to acquire goods and services in accordance with cost, schedule, and quality and performance objectives.

From the perspective the procurement of service activities, there have been remarkable changes as of late. Outsourcing the manufacturing and service activities has become a growing trend in the world of business. The increased complexity of products and processes is compelling more and more companies to use structured decision tools, to facilitate strategic decisions to “make or buy.”⁶²

Companies are outsourcing some of their activities simply to reduce costs, while simultaneously increasing quality. Some other advantages of outsourcing are increased efficiency, reduction of staffing levels and achieving greater flexibility. All of these advantages allow companies to focus on their main activities, while helping them to achieve more innovative solutions and methods in their core areas.⁶³

Today, outsourcing is growing more common for government organizations, too. Since the government is spending taxpayer money, there is a great deal of public interest in the expenditure of these funds. The strict controls over government budget and statutory acquisition regulations are other factors that create the difference between private sector and government practices on outsourcing.

Especially in the defense side of government operations, outsourcing has had a critical impact. The main focus of defense activities is their war-fighting capability. Outsourcing some of the service activities creates opportunities to save a remarkable

⁶² C. H. Fine and D. E. Whitney, *Is the Make-Buy Decision Process a Core Competence?*, MIT Center for Technology, Policy, and Industrial Development, 1996, http://web.mit.edu/ctpid/www/Whitney/morepapers/make_ab.html (accessed Mar. 21, 2005)

⁶³ D.N Burt, D.W. Dobler, and S.L. Starling, *World Class Supply Management*, (McGraw-Hill/Irwin, New York, 2003).

amount of money; money that can be better spent to help modernize and maintain the combat superiority of military forces.

Just like the differences between business and government procurement activities, there are also differences between government procurement applications of different countries, due to their unique procurement requirements and organizational structures.

The Performance Based Service Acquisition (PBSA) concept, developed and applied in the United States, might be beneficial for the Turkish Navy. On the other hand, however, Turkish service acquisition rules and regulations might limit, or completely prohibit, the application of Performance Based Service Acquisition within Turkey. The approach taken here will be to review the Turkish rules and regulations in accordance with the acquisition process to see if there are any legal constraints that limit the applicability of the PBSA approach within the Turkish Navy.

1. Acquisition Planning

a. Determination of Specifications

Definitions of technical and administrative specifications of the required services are essential. Administrative, pre-qualification and technical specifications are determined by the contracting entity⁶⁴ before the solicitation. However, if it is impossible for the contracting entity to determine technical specifications, due to the complexity of characteristics of the required services, and if this situation is justified by the contracting officer⁶⁵ and approved by the commanding officer of the contracting entity, then activities associated with defining and preparing the technical specifications might be outsourced.⁶⁶ Three different kinds of documents are utilized to indicate those specifications;

⁶⁴ The term “contracting entity” is used for the institutions and entities that are demanding the goods and services and performing the procurement activities.

⁶⁵ The term “contracting officer” is used for the personnel or the boards of the contracting entity that have the authority and responsibility to spend government funds.

(1). Administrative Specifications Document. The administrative specifications document specifies procurement objectives, bid/tender⁶⁷ participations requirements, evaluation criteria and contracting processes.⁶⁸ In addition to these, all the quality requirements and the quality assurance issues are also defined within that document.⁶⁹

(2). The Pre-qualification Specifications Document. The pre-qualification specifications document is utilized in the restricted method of contracting⁷⁰, and contains information about the pre-qualification application and evaluation factors. Additionally, this document addresses bidding issues.⁷¹

(3). Technical Specification Document. The technical specification document contains all the technical information, details and limitations. On the other hand, those technical criteria that are stated in the technical specification document should not limit full and open competition, and, thus, violate the opportunity equity.⁷² Required features of services specified in the technical specification documents include: sampling issues, inspection and acceptance issues, handling, packaging and labeling requirements, and warranty issues.⁷³

⁶⁶ The Turkish Public Procurement Law (No: 4734), *Article 12*, 2002
http://www.sigmaxweb.org/PDF/Laws_PUP/Turkey_PPL_Amend_April_2004.htm (accessed Mar. 21, 2005).

⁶⁷ The term “tender” is used for the price offer with all the asked documents and certificates submitted by tenderers to the contracting entity for bidding of a particular procurement.

⁶⁸ The Turkish Public Service Procurement Execution Code Appendix 2 (not dated), *Acik Ihale Usulu ile Ihale Edilen Hizmet Alimlarinda Uygulanacak Tip Idari Sartname*,
[http://www.alomaliye.com/hizmet_Ek2\(acik_tip_idari\).doc](http://www.alomaliye.com/hizmet_Ek2(acik_tip_idari).doc) (accessed Mar. 27, 2005).

⁶⁹ The Turkish Ministry of Defense Domestic Procurement Directive, 2003, 18,
<http://www.msb.gov.tr/Birimler/IcTedD/Yonerge/Yonerge.pdf> (accessed Mar. 27, 2005).

⁷⁰ The Turkish Public Service Procurement Execution Code, *Article 27*, 2003,
http://www.alomaliye.com/hizmet_uygulama_yonetmeligi.doc (accessed Mar. 26, 2005). This contracting method will be described in the following sections.

⁷¹ The Turkish Public Service Procurement Execution Code Appendix 3 (not dated), *Belli Istekliler Arasinda Ihale Usulu ile Ihale Edilen Hizmet Alimlarinda Uygulanacak Tip On Yeterlilik Sartnamesi*,
[http://www.alomaliye.com/hizmet_Ek3\(belli_tip_onyeterlik\).doc](http://www.alomaliye.com/hizmet_Ek3(belli_tip_onyeterlik).doc) (accessed Mar. 27, 2005)

⁷² The Turkish Public Service Procurement Execution Code, *Article 26*, 2003,
http://www.alomaliye.com/hizmet_uygulama_yonetmeligi.doc (accessed Mar. 27, 2005).

⁷³ The Turkish Ministry of Defense Domestic Procurement Directive, 2003, 18,
<http://www.msb.gov.tr/Birimler/IcTedD/Yonerge/Yonerge.pdf> (accessed Mar. 27, 2005).

The Turkish Ministry of Defense's, Domestic Procurement Directive, describes the use of technical specification document in detail. If approved by the commander of the contracting entity, the administrative and technical specification documents can be waived, when it is possible to purchase goods and services by NATO stock numbers, by internationally accepted part numbers or by standard numbers assigned by the Turkish Standards Institute. It is also possible to make purchases without a technical specification document for research and development (R&D) projects.⁷⁴

b. Cost Estimation

Cost estimates, and associated supporting documentation of the required services, are determined before solicitation. Then, final price offers of tenderers⁷⁵ cannot exceed the amount of the estimated cost. These calculations are made based on cost and price analysis.⁷⁶

Estimated cost is calculated by utilizing the price and price related data received from government entities that purchased the same or similar services at some earlier time, the prices provided by the chamber of commerce, or other government entities according to the specifications of the service to be purchased. When unable to estimate the cost of the service, then the consultation of an expert or an authority can be sought. If it is still difficult to make estimation, then the service providers, themselves, who can meet the requirements, are asked for their prices. Then the average of all the prices provided by those service providers is accepted as the estimated cost.⁷⁷

All the calculations and prices provided by the service providers, together with their justifications, are combined to structure the “Cost Estimation Calculation

⁷⁴ Ibid. p. 16.

⁷⁵ The term “tenderer” is used for the supplier, service provider or works contractor submitting tenders for contracts of goods, services or works.

⁷⁶ The Turkish Public Service Procurement Execution Code, *Article 6*, 2003, http://www.alomaliye.com/hizmet_uygulama_yonetmeligi.doc (accessed Mar. 27, 2005).

⁷⁷ The Turkish Public Service Procurement Execution Code, *Article 10*, 2003, http://www.alomaliye.com/hizmet_uygulama_yonetmeligi.doc (accessed Mar. 29, 2005).

Statement.” The contracting entity is responsible for preparation of this statement must keep it concealed until the contract⁷⁸ is awarded. ⁷⁹

When it is impossible to estimate the cost, because of the industrial and technological complexity of the required services, estimation can be waived, by specifying in the approval document, approved by the commanding officer of the contracting entity, the authority to issue payment orders.⁸⁰

c. Determination of the Contracting Method to Be Conducted

The contracting method to be used in each service acquisition is determined by the contracting entity. Four different types of contracting methods are mandated;

(1). Open Procedure. All the vendors and service providers that are willing to participate in the bidding can submit their tenders for procurement actions. There are no restrictions on one’s participation in the bidding. The process resembles the U.S. Lowest Price Technically Acceptable (LPTA) approach. Tenderers, first, submit their tenders with the required certificates and documents attached to it. Next, the contract shall be awarded to the lowest bidder who possesses the capability to meet the given technical and financial requirements. This is the main contracting method.⁸¹

⁷⁸ The term “contract” is used for the written agreement between the contracting entity and the contractor for the procurement of goods, services or works.

⁷⁹ The Turkish Public Procurement Law (No: 4734), *Article 9*, 2002
http://www.sigmaxweb.org/PDF/Laws_PUP/Turkey_PPL_Amend_April_2004.htm (accessed Mar. 21, 2005).

⁸⁰ The Turkish Ministry of Defense Domestic Procurement Directive, 2003, 12,
<http://www.msb.gov.tr/Birimler/IcTedD/Yonerge/Yonerge.pdf> (accessed Mar. 27, 2005)

⁸¹ The Turkish Public Procurement Law (No: 4734), *Article 19*, 2002
http://www.sigmaxweb.org/PDF/Laws_PUP/Turkey_PPL_Amend_April_2004.htm (accessed Mar. 21, 2005).

(2). Restricted Procedure. This method is used when the open procedure is not applicable due to the complexity of the requirements. The contracting entity makes a preliminary evaluation of the tenderers, evaluating such things as whether or not they have the technical and financial capability to meet the government's specific requirements. This evaluation is made based on pre-qualification criteria that are specified in the pre-qualification document. Only those who are approved after the pre-qualification phase are allowed to submit their tenders. Invited tenderers have a minimum of 40 days to prepare their tenders. If the number of the tenderers invited to submit tenders is less than five, or the number of the tenderers that submit tenders is less than three, then the procurement process is cancelled.⁸²

(3). Negotiated Procedure. This method can only be used under circumstances when;

- No tender is received under open and restricted procedures,
- Any urgency is caused by an "act of god" (like natural disasters),
- Any urgency occurs that is caused by threats to national security,
- The needed goods and services are not commercially available, requiring a research and development effort,
- Technical and financial specifications cannot be defined adequately because of the complexity of the needed goods and services.

In the cases set forth in second and third bullet, solicitation can be exempted, but the negotiations have to be conducted with at least three tenderers.

Processes existing under situations other than the ones specified in second and third bullet must start with the submission of technical proposals. Negotiations are then carried out with the tenderers who qualify, based upon specified

⁸² The Turkish Public Procurement Law (No: 4734), *Article 20*, 2002
http://www.sigmaxweb.org/PDF/Laws_PUP/Turkey_PPL_Amend_April_2004.htm (accessed Mar. 21, 2005).

criteria established by the contracting entity. The tender commission, which can be assembled to resemble a Source Selection Board in the U.S. system, negotiates with each tenderer issues of technical requirements and technical capabilities. The tenderers, having sufficient technical capacity and capability, are asked for their final price proposals, and the contract is awarded to the tenderer who offers the lowest price. If the number of the responsive tenderers is less than three, then the procurement process is cancelled.⁸³

(4). Direct Procurement

This method can be used under the circumstances when;

- There is a sole source that can meet the government requirements,
- The cost of the acquisition is under the Direct Acquisition Threshold. (This threshold is determined each and every fiscal year.)

In the cases set forth in paragraph (a), tender commissions conduct negotiations about price and technical requirements with the representatives of the sole source business entity.

In the cases set forth in paragraph (b), the procurement is made by the government officials that are empowered by the contracting officer. This application of the direct acquisition method is the only one that the tender commission exempts from competition requirements under the Turkish procurement process.⁸⁴

Some documents or certificates might be needed in order to make the financial and technical qualification in the open or negotiated procedure, or for the pre-qualification evaluation in the restricted procedure. All the needed documents, certificates, and the evaluation criteria to be utilized, are specified by the contracting entity. The evaluation criteria must be measurable, and must not limit the competition.⁸⁵

⁸³ The Turkish Public Procurement Law (No: 4734), *Article 21*, 2002
http://www.sigmaxweb.org/PDF/Laws_PUP/Turkey_PPL_Amend_April_2004.htm (accessed Mar. 21, 2005).

⁸⁴ Ibid. Article 22.

⁸⁵ The Turkish Public Service Procurement Execution Code, *Article 37*, 2003,
http://www.alomaliye.com/hizmet_uygulama_yonetmeligi.doc (accessed Mar. 27, 2005).

The elements of the pre-qualification evaluation criteria cannot be weighted, and tenderers reaching the minimum qualification values are determined as “qualified” for the purposes of bidding.⁸⁶

2. Solicitation

a. Solicitation Note

Threshold values are determined on an annual basis. The solicitation note is published in the Official Gazette for those procurements that have an estimated cost equal to, or exceeding, the threshold value.

- Solicitation notes for procurements that are to be conducted by open procedure are published, not later than forty days prior to the bidding date,
- Solicitation notes for procurements that are to be conducted by negotiated procedure are published, not later than twenty five days prior to the bidding date,
- Pre-qualification notices for procurements that are to be conducted by restricted procedure are published not later than forty days prior to the application date for pre-qualification.

For procurements that have an estimated cost below the threshold value, the publication requirements of solicitation notes vary according to the contracting method and estimated cost.⁸⁷ This information can be found in the Turkish Public Procurement Law (No: 4734), Article 13.

In addition to the publication requirements, all the solicitation notes and the results of the biddings are announced in the Turkish Navy Inventory Control Centre Internet site (<http://www.ekm.tsk.mil.tr/ihale/index.jsp>).

⁸⁶ Ibid. Article 48.

⁸⁷ The Turkish Public Procurement Law (No: 4734), *Article 13*, 2002
http://www.sigmaweb.org/PDF/Laws_PUP/Turkey_PPL_Amend_April_2004.htm (accessed Mar. 21, 2005).

The solicitation notes specify the following information: name, telephone number and address of the contracting entity; types and quantities of the required services; start and closeout dates of the contract; bidding date and place; contracting method; the documents and certificates needed for the qualification evaluation; qualification evaluation criteria; and the place to see or buy the tender document.⁸⁸ The solicitation note includes additional information, concerning the pre-qualification requirements and processes.⁸⁹

b. Tender Document

The tender document contains all the information about the required services, including qualification criteria, technical specifications, administrative specifications and pre-qualification specifications. It is prepared and exhibited in a designated place, also specified in the solicitation notes by the contracting entity. Tenderers can either see the document for free, or buy it for a price that is determined and stated in the solicitation notes.⁹⁰

3. Source Selection

a. Tender Commissions

Submitted tenders are evaluated by the tender commissions.⁹¹ Tender commissions are responsible for the source selection process. The commissions should consist of at least five members, and be in odd numbers. The senior member is assigned to act as the chairperson of the commission. At least two of the members shall be experts on the subject matter of particular contract bidding. The other members of the commission are officers selected on the basis of his/her experience in the contracted area.

⁸⁸ The term “tender document” is used for the document that includes all the instructions to the tenderers that are the subject matter of the tender.

⁸⁹ The Turkish Public Procurement Law (No: 4734), *Article 27*, 2002
http://www.sigmaxweb.org/PDF/Laws_PUP/Turkey_PPL_Amend_April_2004.htm (accessed Mar. 21, 2005).

⁹⁰ The Turkish Public Service Procurement Execution Code, *Article 68*, 2003,
http://www.alomaliye.com/hizmet_uygulama_yonetmeligi.doc (accessed Mar. 27, 2005).

The commission decisions are made according to a majority of the votes received. The members, who disagree with the commission's decision, have to write down the justification for their dissenting position in the records of commission minute, and then sign it.⁹²

b. Evaluation of Tenders

Tenders are submitted by in sealed envelopes. The tender commission opens up each tender, in order of submission date, after receiving all of them.⁹³ Required documents, certificates and price proposals are controlled in accordance with rules and regulations.⁹⁴ After opening all tenders, the tender commission starts evaluating them. The tender that is technically acceptable with the lowest price is awarded the contract. Then, the decision document is prepared by the tender commission and presented to the commanding officer of the contracting entity for approval.⁹⁵

Price is the main evaluation criteria in the source selection phase. On the other hand, Turkish Public Tender Law (No: 4734) authorizes the acquisition personnel to use the "best value" approach in evaluating the tender. When it is not appropriate to use price as the only criteria, then other elements, like operation and maintenance cost, quality, or technical value may be utilized to determine the best value.⁹⁶

Evaluation criteria other than price have to be specified by the contracting entity stated in the administrative specifications document on the weighted value basis. The weight value of each criteria element must also be stated in the administrative specifications document.⁹⁷

⁹¹ Ibid. Article 70.

⁹² The Turkish Public Procurement Law (No: 4734), *Article 6*, 2002
http://www.sigmaxweb.org/PDF/Laws_PUP/Turkey_PPL_Amend_April_2004.htm (accessed Mar. 21, 2005).

⁹³ Ibid. Article 30.

⁹⁴ Ibid. Article 36.

⁹⁵ Ibid. Article 40.

⁹⁶ The Turkish Public Service Procurement Execution Code, *Article 71*, 2003,
http://www.alomaliye.com/hizmet_uygulama_yonetmeligi.doc (accessed Mar. 27, 2005).

⁹⁷ Ibid. Article 72.

Even though the “best value” approach is appropriated, LPTA is the only authorized method for acquisitions within the Turkish Ministry of Defence.⁹⁸

The commanding officer of the contracting entity has to approve or reject the award recommendation, with justifications, within twenty days. After the approval of the commanding officer, the decision becomes absolute, and the contractor⁹⁹ is invited to sign the contract.¹⁰⁰

Award results for acquisition activities having costs that are equal to or exceed the threshold value are published in the Official Gazette, after the contractor signs the contract, at which time the contract award decision becomes irrevocable.¹⁰¹

c. Contract Type

Turkish acquisition rules and regulations authorize the contracting entities to use only firm fixed price type of contracts. The contract specifies the type; characteristics; quantity and detailed description of services; accepted price for the services; commercial title and other information about the contractor; all the information about the contracting entity; timeline of the contract; delay penalties; inspection and inspection conditions; subcontracting issues and other terms and conditions.¹⁰²

d. Procurement Proceedings File

A procurement proceedings file is organized for each and every procurement activity, and consists of approval documents from the payment authority, price estimation calculation statement, tender documents, solicitation note, contractor

⁹⁸ The Turkish Ministry of Defense Domestic Procurement Directive, 2003, 21-22, <http://www.msb.gov.tr/Birimler/IcTedD/Yonerge/Yonerge.pdf> (accessed Mar. 27, 2005).

⁹⁹ The term “contractor” is used for the tenderer, who is awarded the contract.

¹⁰⁰ The Turkish Public Service Procurement Execution Code, *Article 77*, 2003, http://www.alomaliye.com/hizmet_uygulama_yonetmeligi.doc (accessed Mar. 27, 2005).

¹⁰¹ The Turkish Public Service Procurement Execution Code, *Article 79*, 2003, http://www.alomaliye.com/hizmet_uygulama_yonetmeligi.doc (accessed Mar. 27, 2005).

¹⁰² The Turkish Public Tender Contracting Law (No: 4735), *Article 7*, 2002, <http://www.kentli.org/yasa/4735.htm> (accessed Apr. 5, 2005).

proposals, tender commission records and decision documents, as well as other documents related to the procurement process.¹⁰³

4. Contract Administration

a. Inspection and Acceptance

Inspection and acceptance of services are performed by the “Inspection Commissions,” formed within the contracting entity. Inspection commissions consist of at least three members, and senior member becomes the chairperson of the commission.¹⁰⁴

Inspection commissions are responsible for ensuring that all goods delivered and services performed comply with the tender document.¹⁰⁵ The decision process of inspection commissions is the same as the tender commissions’ decision process. Decisions are taken according to the majority of the votes, and dissenting members have to write down justifications for their dissenting positions in the records of commission minute and sign it.¹⁰⁶

b. Payments

Payments for services performed are made on a periodical basis. The inspection commission makes periodic inspections, reporting any inconsistency with the tender document to the contracting officers. Penalties for inconsistencies are pre-determined and written into the contract. According to the terms and conditions of the contract, the penalty fees are calculated, and subtracted from the periodical payments. The contracting officer calculates the adjusted payment amount and submits the order to

¹⁰³ The Turkish Public Procurement Law (No: 4734), *Article 7*, 2002
http://www.sigmaxweb.org/PDF/Laws_PUP/Turkey_PPL_Amend_April_2004.htm (accessed Mar. 21, 2005).

¹⁰⁴ The Turkish Public Tender Contracting Law (No: 4735), *Article 11*, 2002,
<http://www.kentli.org/yasa/4735.htm> (accessed Apr. 5, 2005).

¹⁰⁵ Turkish Armed Forces, *Muayene ve Kabul Komisyonlarının Kurulusu, Sorumluluklari ve Kararin Verilisi*, Procurement Control, Inspection and Acceptance Directive, 2003, 17
<http://www.msb.gov.tr/Birimler/KaliteYonD/pdf/Yonerge.pdf> (accessed Apr. 3, 2005).

¹⁰⁶ *Ibid.* p. 18.

the commanding officer of the contracting entity. After the commanding officer approves the payment order, it is submitted to the Financial Office, an organization under the Ministry of Finance. The Financial Office is responsible for ensuring that all documents conform to the rules and regulations, and making the payment from the Treasury.

5. Contract Closeout and Termination

a. Contract Closeout

Start and closeout dates of the contracts are defined in the acquisition planning phase, and specified in the solicitation notes and the contract, itself. Contractors are responsible for making sure the performance is between the stated dates and that they receive payments for their performance between the stipulated start and closeout dates. If the contractors use any government furnished material, the government official responsible for that particular material must also receive it after contract closeout. In case of any missing equipment or damage, the contractor is responsible for replacement and/or repair of lost or damaged government furnished material. The contracting officer has to make sure that all the liabilities with respect to government equipment and material are written into the contract's terms and conditions.

b. Contract Termination

Service providers are responsible for all the costs that are caused by using defective materials, projection errors, inaccurate implementations, lack of inspection and control, and any deviation from the contract's terms and conditions and specification documents.¹⁰⁷ The contract can be terminated by the contracting entity if the contractor does not perform in accordance with the terms and conditions of the contract, or fails to comply with the timeliness of the contract, even after being given a twelve day warning by the contracting entity.¹⁰⁸ Furthermore, the contract can be terminated in cases of

¹⁰⁷ The Turkish Ministry of Defense Domestic Procurement Directive, 2003, 53, <http://www.msb.gov.tr/Birimler/IcTedD/Yonerge/Yonerge.pdf> (accessed Mar. 27, 2005).

¹⁰⁸ The Turkish Public Tender Contracting Law (No: 4735), *Article 20*, 2002, <http://www.kentli.org/yasa/4735.htm> (accessed Apr. 5, 2005).

fraud, or when any attempt is made that causes harm or damage to the contracting entity.¹⁰⁹

B. COMPARISON BETWEEN U.S. AND TURKISH ACQUISITION RULES AND REGULATIONS, IN TERMS OF PERFORMANCE BASED SERVICE ACQUISITION APPLICATIONS

The purpose of Performance Based Service Acquisition is to maximize performance, competition and innovation, while getting significant cost savings and shifting the majority of the risk to industry (by specifying only what is needed instead of dictating how the job is going to be accomplished). In order to be able to apply PBSA, requirements should be defined in measurable terms in assessing outcomes. A Performance Work Statement (PWS) is used to specify those performance requirements.

Performance standards must also be set in the acquisition planning phase. These standards must be measurable, being used to evaluate whether or not the performance of the contractor is acceptable. Contracting types and payment methods are used to allocate the risk between two parties, while also giving contractors an incentive to meet performance standards.

Procedures to deal with the contractors who fail to meet these standards are also determined, and called as remedies. Another important tool of Performance Based Service Acquisition is the government's Performance Assessment Plan (PAP). The PAP describes how the contracting entity will assess the contractor's performance. It is the contractor's responsibility to monitor and ensure quality during performance. This is typically accomplished via a contractor-derived Quality Assurance Plan (QAP), or Quality Assurance and Surveillance Plan (QASP).¹¹⁰ These instruments play key roles in the application of Performance Based Service Acquisition.

Although U.S. acquisition rules and regulations are in accordance with the Performance Based Service Acquisitions, Turkish acquisition rules and regulations have some boundaries limiting the applications of PBSA.

¹⁰⁹ Ibid. Article 25.

¹¹⁰ W.G. Macfarlan, *Performance-Based Contracting*, Working Paper Series, California, 2001.

1. Utilization of the Contract Types and Fees

Firm-fixed price and cost reimbursement are the two major categories of contracting types used in U.S. acquisition activities.¹¹¹ The contracting type is selected in accordance with the risk levels to be assumed by both parties. In order to be able to reach stated performance requirements, contract type selection and the structure of the contract are very important. U.S. contracting methods give contracting officers an opportunity to use monetary incentives as a tool, in accordance with the risk of the work to be performed. This is a very helpful tool, and adds flexibility to the acquisition process. Contract type utilization is enhanced with fees. Fixed fees, incentive fees and award fees can be added to the contract types to provide incentive to employ cost control and/or desired performance objectives.¹¹²

Award fee is frequently used in Performance Based Service Acquisition applications, as they tend to be useful elements in providing incentives to service providers. In the beginning of the process, the contract is structured by specifying the maximum possible profit. This profit can be exceeded by a contractor who qualifies to get a particular share of the award fee pool. The award fee pool is established and linked to the stated performance criteria. An award fee board meets periodically to assess the contractor's performance, and determines the amount of the fee to be awarded. Award fees provide added incentives for the contractor to provide performance beyond minimum acceptable levels.

However, the only contract type that can be utilized in the Turkish government acquisition process is firm-fixed price. While contracting types can be useful tools for U.S. government acquisitions, it has no effect in Turkish government acquisitions because the only contract type used in Turkey is fixed-price type contract. However, in the U.S., there are many successful PBSA applications with a firm-fixed price contract type. Consequently, the mandate of fixed price contract usage in Turkey does not prohibit

¹¹¹ Federal Acquisition Regulation (FAR), *Part 16-Types of Contracts*, 2005, http://farsite.hill.af.mil/reghtml/regs/far2afmcfars/fardfars/far/37.htm#P228_34977 (accessed Apr. 12, 2005).

¹¹² Federal Acquisition Regulation (FAR), *Part 16-Types of Contracts*, 2005, http://farsite.hill.af.mil/reghtml/regs/far2afmcfars/fardfars/far/37.htm#P228_34977 (accessed Apr. 12, 2005).

the PBSA applications; it only reduces the flexibility and the ability to provide incentives and opportunities, thus, limiting the effective implementations of Performance Based Service Acquisitions in the Turkish Navy.

2. Mandatory Role of Technical Specification Document

Turkish acquisition rules and regulations mandate the use of technical specification documents. These documents define in detail all the technical parameters and features of the services to be procured. Technical specification documents place a legal constraint on the Performance Based Service Acquisition applications in the Turkish Navy. First of all, the obligation to use technical specification documents to determine the requirements is against the performance based acquisition rationale. By doing that, contractors are restricted on how to do the job, instead of doing what is needed to be done.

On the other hand, there is no obstacle in specifying expected performance criteria in the administrative specifications document, or in the contract, itself, since they are describable and measurable. Stating the performance criteria might increase the workload of the contractor, but it also might create an opportunity to improve the quality of the acquired services. Stated performance criteria would be a matter of inspection before acceptance of the performed services. All the penalties for inconsistencies with the tender document are determined and specified in the contract.

Inspection commissions are responsible for controlling the performed services, in terms of compatibility with the tender document and the terms and conditions of the contract, and report inconsistencies to the contracting officer. These reports affect the periodical payments to be made to the contractor. Turkish rules and regulations authorize the use of penalties solely to provide contractors with incentives, and there is no upward price adjustment application. Authorization of only the negative incentives will probably have the undesirable effect of sub-optimizing Performance Based Service Acquisition applications.

3. Similarities and Differences of Contracting Methods

On one hand, the U.S. contracting methods use sealed bidding¹¹³, competitive negotiations¹¹⁴ and simplified acquisition processes.¹¹⁵ The competitive negotiations method is selected in accordance with the complex nature of the required goods and services. On the other hand, the Turkish government uses negotiated procedures for two reasons:

- For defining the specifications adequately, especially for complex and non-commercial items, and
- For urgent needs.

The Turkish negotiated procedure applications are very limited, and, thus, rarely used in some occasions. Most government acquisitions are conducted by open or restricted procedures in Turkey. The main Turkish government acquisition objective can be defined as receiving the “Lowest Price Technically Acceptable (LPTA)”.

There are some similarities between Turkish and U.S. contracting methods. Turkish open procedures are very similar to the U.S. sealed bid method. The conditions when these methods are used in the U.S. are also similar to conditions under which Turkish procedures are used. The Turkish open procedure and the U.S. sealed bid method are both used when the requirements are clear, and there is no need to carry on discussions for purposes of clarification. Turkish restricted procedure is also very similar to the U.S. two-step sealed bidding method, while the Turkish direct procurement method is similar to the U.S. simplified acquisition process (except its usage as the contracting method for sole source acquisition actions in Turkey).

Continuous changes in business environments require acquisition reform and changes in acquisition laws and regulations. As a consequence of the continuous evolution in the business environment, the U.S.’s acquisition rules and regulations are in a constant state of flux, and there is a relentless pursuit of applicable business practices that are most effective and efficient. Performance Based Service Acquisition is one of the

¹¹³ Federal Acquisition Regulation (FAR), *Part 14-Sealed Bidding*, 2005, http://farsite.hill.af.mil/reghtml/regs/far2afmcfars/fardfars/far/37.htm#P228_34977 (accessed Apr. 12, 2005).

¹¹⁴ Ibid. Part 15-Contracting by Negotiation

significant outcomes of that transformative process. The U.S. acquisition system is structured to give flexibilities to acquisition decision-makers and participants. As noted in the U.S. Federal Acquisition Regulation (FAR) guiding principles, set out below, the U.S. acquisition system encourages prudent risk taking, innovation, and the adoption of sound business practices. Furthermore, the U.S. system has a mechanism to facilitate changes to existing regulations.

The role of each member of the Acquisition Team is to exercise personal initiative and sound business judgment in providing the best value product or service to meet the customer's needs. In exercising initiative, Government members of the Acquisition Team may assume if a specific strategy, practice, policy or procedure is in the best interests of the Government and is not addressed in the FAR, nor prohibited by law (statute or case law), Executive order or other regulation, that the strategy, practice, policy or procedure is a permissible exercise of authority.¹¹⁶

However, the Turkish acquisition system is structured to minimize individual errors, and to streamline the process, as much as possible, by simplifying the sub-processes. The inflexibility of Turkish acquisition rules may create difficulties in applying Performance Based Service Acquisitions. Although there are some legal constraints limiting the applications of the Performance Based Service Acquisitions approach in Turkey, it is not, thereby, completely impossible to implement this acquisition method. This approach has the capability and potential of providing superior service quality, while also ensuring an efficient usage of funds by the Turkish Navy.

¹¹⁵ Ibid. Part 13-Simplified Acquisition Procedures.

¹¹⁶ Federal Acquisition Regulation (FAR), *Part 1-Federal Acquisition Regulation System*, 2005, http://farsite.hill.af.mil/reghtml/regs/far2afmcfars/fardfars/far/37.htm#P228_34977 (accessed Apr. 12, 2005).

IV. TURKISH NAVY SERVICE ACQUISITION ACTIVITIES AND APPLICABILITY OF PBL IN THIS AREA

Budget constraints drive all government entities to look for new and efficient ways to fulfill their missions. In order to perform effectively, the Turkish Navy constantly pursues of useful and efficient practices. Outsourcing of some non-core service activities is one such activity the Turkish Navy is using to improve quality and reduce costs.

In the Fiscal Year 2004, the Turkish Navy spent, excluding military personnel funds, approximately three to four percent of its budget for service acquisitions.¹¹⁷ Even though, outsourcing the service activities is a new concept for the Turkish Navy, it will probably be used more extensively, both in terms of the amount of funding and the number of activities.

The Turkish Tender Law defines services as activities such as those involving: maintenance and repair, transportation, communication, insurance, research and development, accounting, market surveys and polls, consultancy, architecture and engineering, surveying and project, development application, the development of plans of any scale, promoting, broadcasting and publication, cleaning, catering, meeting, organisation, exhibition, guarding and security, professional training, photography, film, intellectual and fine arts, computer systems and software services, lease of movable and immovable properties and the rights thereof, etc.¹¹⁸

Service acquisitions in the Turkish Navy are made by two different kinds of funds: the current budget funds and the funds that are particularly appropriated for modernization.

¹¹⁷ Tevfik Ozturk (Turkish Navy Comptrollership Division Project Officer), *Project Questions*, 8 April 2005, personal e-mail interview (2 May 2005).

¹¹⁸ The Turkish Public Procurement Law (No: 4734), *Article 4*, 2002
http://www.sigmaxweb.org/PDF/Laws_PUP/Turkey_PPL_Amend_April_2004.htm (accessed Mar. 21, 2005).

A. CURRENT SERVICE ACQUISITION ACTIVITIES IN THE TURKISH NAVY

1. Service Acquisitions by the Current Budget Funds

There are two main service areas that the Turkish Navy is currently contracting out.

a. Meal Services

The acquisition planning phase of the service acquisition is performed by the contracting entities, which are also requiring the services. The procurement phase of service acquisition is conducted by the Domestic Procurement Offices, under the Ministry of Defense. Those offices are located in seven different regions of Turkey to support the organizations under the Ministry of Defense within their areas of responsibility. Currently, meal services are acquired by nine different bases within the Turkish Navy.¹¹⁹ After the source selection phase, all the contract administration activities are executed by the contracting entity and the incumbent inspection committees in that region.

The fund planning for meal service acquisitions are prepared by the Turkish Navy Comptrollership Division in compliance with the contracting entities' requests, and coordinated with the incumbent project officers of relevant branches in the Turkish Navy Headquarters.¹²⁰ Standard "Demand Notification Forms" are prepared and coordinated with the contracting entities and sent to the Ministry of Defense with the offered technical and administrative specification documents. Even though the funds are being used by the Ministry of Defense Domestic Procurement Offices, they are appropriated to the Turkish Navy, and are shown under the Turkish Navy's budget. Therefore, it is incumbent upon officers of relevant divisions and branches to keep track of how those funds are spent.¹²¹

¹¹⁹ Sencer Basat (Turkish Navy Plan Principles Directorate Project Officer), *Project Questions*, 8 April 2005, personal e-mail interview (15 April 2005).

¹²⁰ Ibid.

b. Personnel Transportation Services

The acquisition planning activities are performed by the contracting entities or supply organizations in that area. The authorization to conduct acquisition planning activities is given by the Turkish Navy Logistics Directorate.

In the acquisition planning phase, the coordinating authority (i.e., the contracting officer of the contracting entity or the contracting officer of the supply organization) sends an official memorandum to all Navy units in that region asking for the requests of their personnel regarding the route of the transportation services. The Navy units in the region send their requests about the routes of the transportation service with the needed documents, proving that there is no public transportation within those directions, and all the requirements that they want to be included in the administrative specifications document. Administrative and technical specifications are determined by the coordinating authority in accordance with the feedback received from the units in that region. Then, funds are appropriated for that specific service acquisition activity.¹²²

Specifically with regard to Turkey, the procurement and contract administration activities are performed by the incumbent tender commissions and inspection commissions that are in charge of supporting that region. Personnel transportation services are acquired by seven different base commands within the Turkish Navy.¹²³

Funds for personnel transportation service acquisitions allocated by the Turkish Navy Comptrollership Division are coordinated by the relevant Directorates. The Comptrollership Division also asks for the opinions of all the regional supply organizations in charge of supporting different regions before allocating those funds.¹²⁴

Besides meal and personnel transportation services, other service acquisition actions within the Turkish Navy include: the lease of some special vehicles (like hoisting cranes, winches, etc.), the lease of daily porters (especially for loading and

¹²¹ Ibid.

¹²² Can Aksoy, (Istanbul Supply Command Contracting Officer), *Project Questions*, 15 April 2005, personal e-mail interview (17 April 2005).

¹²³ Sencer Basat (Turkish Navy Plan Principles Directorate Project Officer), *Project Questions*, 8 April 2005, personal e-mail interview (15 April 2005).

¹²⁴ Ibid.

evacuation activities), and consultancy service acquisitions, the above represents only a minor portion of the service acquisition activities within the Turkish Navy.¹²⁵

2. Service Acquisitions by the Modernization Funds

The Ten-Year Procurement Plan¹²⁶ (TYPP) and the Strategic Objective Plan¹²⁷ (SOP) are classified documents prepared each year by pertinent personnel within the Turkish Ministry of Defense. Some service activities might be required as part of the projects defined in those documents. Services required by TYPP and SOP projects are acquired with the funds appropriated specifically for modernization activities. Modernization funds are allocated by Turkish Navy Plans and Principles Division in accordance with the projects specified in TYPP and SOP, as well as by the opinions of the project managers and other officers involved in those projects.

“Demand Notification Forms” are prepared in accordance with the TYPP and SOP documents. These are then sent to the Ministry of Defense, with the offered technical and administrative specification documents attached to them. The Ministry of Defense Domestic Procurement Division and the Ministry of Defense Foreign Procurement Division, centrally, perform the procurement activities for the required services.¹²⁸

B. PROBLEMATIC AREAS OF THE TURKISH NAVY ACQUISITION PROCESSES

1. General Problematic Areas of the Acquisition Process

a. Mandated Technical Specification Document Usage

¹²⁵ Sencer Basat (Turkish Navy Plan Principles Directorate Project Officer), *Project Questions*, 8 April 2005, personal e-mail interview (15 April 2005).

¹²⁶ This plan is called as OYTEP in Turkish.

¹²⁷ This plan is called as SHP in Turkish.

¹²⁸ Sencer Basat (Turkish Navy Plan Principles Directorate Project Officer), *Project Questions*, 8 April 2005, personal e-mail interview (15 April 2005).

Turkish acquisition rules and regulations, primarily the Turkish Public Procurement Law, mandate the use of the technical specification document in the acquisition process. On the other hand, the technical specification documents should be structured in a way that they will not limit the competition and, thus, violate the equal opportunity principle,¹²⁹ because in some cases, the language of the technical specification documents may lead the acquisition personnel to select a particular product or service. This means that the incumbent contracting personnel of the contracting entity that specifies the technical requirements must ensure that those requirements do not limit the competition and provide equal opportunities for the participants. This is one of the drawbacks of using technical specification documents. Besides that, the creation of the technical specification documents requires a great deal of effort. Personnel responsible for creating technical specifications spend significant amounts of time and effort dedicated to the process.

In addition, technical specification documents must be approved by the Ministry of Defense before the acquisition process. In some cases, the approval takes a long time, causing delays in the acquisition process.¹³⁰

b. Cost Estimates

Making a fair and reasonable price determination is very critical part for all acquisition activities. Contracting officers of the contracting entities make cost and price analyses in developing the cost estimate. In preparation of the price estimate, the contracting officer may use the cost and pricing data from other government entities, the chamber of commerce and/or prospective tenderers. When it's difficult to make the estimate, the contracting officer may consult an expert.¹³¹ Making the cost estimate is one of the most critical and difficult issues of the entire acquisition process. It requires

¹²⁹ The Turkish Public Service Procurement Execution Code, *Article 26*, 2003, http://www.alomaliye.com/hizmet_uygulama_yonetmeligi.doc (accessed Mar. 27, 2005).

¹³⁰ Erdogan Yanikoglu (Turkish Naval Headquarters Logistics Directorate Project Officer), *Project Questions*, 8 April 2005, personal e-mail interview (5 May 2005).

¹³¹ The Turkish Public Service Procurement Execution Code, *Article 10*, 2003, http://www.alomaliye.com/hizmet_uygulama_yonetmeligi.doc (accessed Mar. 27, 2005).

significant time and dedication, potentially increasing the acquisition lead-time which might result in schedule delays.¹³²

c. *Solicitation Notes Publishing Requirements*

Solicitation notes for the procurements are published between seven to forty days prior to the bidding date, in accordance with the contracting method and estimated cost.¹³³ The time period between the solicitation and the bidding date prolongs the acquisition process, thus, causing delays in meeting the end user's needs.¹³⁴

d. *Annual Budget*

The Turkish acquisition rules and regulations limit the use of funds on annual basis. All of the acquisitions have to be made within the annual budgeted funds. As a result of the annual budget, all of the requirements activities must be procured again each year. Especially for items, which are needed on a continual basis, repetition of the biddings causes a waste of time, and increases the administrative costs.¹³⁵

e. *Required Certificates and Documents*

The tenderers participating in the biddings may be required to submit some certificates and/or documents for the evaluation of their technical, financial, professional qualifications, in order to ensure that they are capable of meeting the stated requirements.

Some of those documents include, but are not limited to, bank statements, balance sheets, statements of tenderes' overall turnover ratios, documents indicating the experience and the volume of the work that the tenderers carry out, documents demonstrating the organizational structure of the tenderers, and quality certificates

¹³² Tefvik Ozturk (Turkish Navy Comptrollership Division Project Officer), *Project Questions*, 8 April 2005, personal e-mail interview (2 May 2005).

¹³³ The Turkish Public Procurement Law (No: 4734), *Article 13*, 2002
http://www.sigmaxweb.org/PDF/Laws_PUP/Turkey_PPL_Amend_April_2004.htm (accessed Mar. 21, 2005).

¹³⁴ Tefvik Ozturk (Turkish Navy Comptrollership Division Project Officer), *Project Questions*, 8 April 2005, personal e-mail interview (2 May 2005).

granted by the international quality organizations.¹³⁶ Those documents and certificates are used in the qualification or pre-qualification phases in the acquisition process. Number and content of the required documents should be determined in accordance with the complexity and the nature of the goods and services to be purchased. The certificates and documents to be required should not be more than those needed. This is one of the issues extending the overall acquisition process and limiting the competition.¹³⁷

2. Specific Problematic Areas about the Acquired Services

a. Lack of Competition

Acquisitions of transportation services are made locally by the contracting entities. The estimated costs of these services are relatively high, so the contracting entities generally ask for certificates to ensure that the tenderers have the capability and capacity to meet the requirements. The number of tenderers who qualify for bidding is very limited, especially for local contracts. This limits the competition, and increases the cost of the service.¹³⁸

b. Performance Problems

There are several problems relating to performance for the acquired services. Contractors are entitled to accomplish the work in accordance with the terms and conditions of the contract and the stated administrative and technical specifications. Inspection committees are responsible for monitoring the contractor's performance.

Especially for the transportation services of main Naval Bases, the biggest performance problems occur because of fluctuations in the number of the ships that are on-shore at any given time. Sometimes, the number of the ships on-shore is so small that

¹³⁵ Tefvik Ozturk (Turkish Navy Comptrollership Division Project Officer), *Project Questions*, 8 April 2005, personal e-mail interview (2 May 2005).

¹³⁶ The Turkish Public Procurement Law (No: 4734), *Article 10*, 2002
http://www.sigmaxweb.org/PDF/Laws_PUP/Turkey_PPL_Amend_April_2004.htm (accessed Mar. 21, 2005).

¹³⁷ Tefvik Ozturk (Turkish Navy Comptrollership Division Project Officer), *Project Questions*, 8 April 2005, personal e-mail interview (2 May 2005).

the busses are moving without passengers, while at other times, personnel can not find enough seats.¹³⁹

Another specific problem related to transportation services is the timeliness of the vehicles being used. Such problems are mostly related to schedule conflicts and breakdowns, eventually affecting the overall performance of the contractor.¹⁴⁰

Some performance problems are related to the quality and amount of meal services. Contracting entities might get too many complaints from their personnel about the taste and portions of meals offered by certain meal service providers.

c. Inspection Procedures of the Meal Services

Meal services are acquired in accordance with too many detailed technical specifications. Each ingredient of the meal needs to be inspected before acceptance in accordance with the technical specification document. Most of the ingredients of the meals require chemical and microbiological testing before being accepted. However, the test period often takes more than approximately two weeks. Thus, the ingredients are generally used in meals within that period before receiving the approval. When an ingredient is not adequate, failing to comply with the stated technical specifications, but has already been used in meals, then the inspection commission documents the situation, and the following periodical payment is adjusted downwards by the percentage stated in the contract.

Besides chemical and microbiological tests, the other physical inspection procedures such as tasting, smelling, and handling also take a significantly long time. There are many detailed technical specifications to inspect before the acceptance of the performed services.

¹³⁸ Saldıray Turkkın (Aksaz Naval Base Contracting Officer), *Project Questions*, 15 April 2005, personal e-mail interview (2 May 2005).

¹³⁹ Ibid.

¹⁴⁰ Saldıray Turkkın (Aksaz Naval Base Contracting Officer), *Project Questions*, 15 April 2005, personal e-mail interview (2 May 2005).

C. PROBLEMS WITH THE IMPLEMENTATION OF PBL AND PBSA IN THE U.S.A

1. Performance Based Logistics

The problems experienced in service acquisitions in the Turkish Navy described in the previous section will likely have an adverse effect on implementing Performance Based Logistics and Performance Based Service Acquisitions. Since, PBL and PBSA is a new concept for the Turkish Navy, it will be helpful to address some problems experienced in the U.S.A in the implementation of these concepts. In the implementation of PBL in the U.S.A, the Military Services encounter both cultural and structural barriers.

According to a study conducted by Dr. Hank DeVries, and other literature survey there were numerous instances of misunderstanding of the PBL concept, resistance to its initiatives, and difficulties in its implementation. Some of the barriers to the implementation of PBL are identified as:

- Funding restrictions/inflexibility.
- Statutory/regulatory requirements.
- Old paradigms/cultural constraints.
- Existing infrastructure/bureaucracy.
- Technical data rights issues.
- Lack of PBL awareness/training.
- Inability to incentivize organic providers.

Some of the key enablers for the implementation of PBL are identified as:

- Supply Chain Management (e.g., end-to-end customer support, enterprise integration).
- Strategic alliances/partnerships (e.g., depot partnering, joint ventures).
- Performance based contracting (e.g., incentivizing performance).
- Performance based metrics.
- Total Life Cycle Systems Management (TLCSM) perspective.

- Adoption of Commercial Off-the-Shelf (COTS)/Best Commercial Practices.
- Reduction in Total Ownership Cost (RTOC) initiative.

This study reveals that certain enablers have a strong influence on the successful implementation of PBL, as can: performance metrics, performance-based contracting, Total Life Cycle Systems Management (TLCSM), and COTS/Best Commercial Practices.¹⁴¹ Thus, for a successful PBL implementation, it is imperative to focus on these enablers.

To address performance issues and ensure that metrics are closely linked with warfighter outcomes, logisticians should work closely with program managers and other acquisition disciplines at the program office level. For example, contracting officers need to work closely with logisticians when drafting contracting strategy and building incentives into contracts. Also, financial managers and logisticians should jointly develop life-cycle cost estimates, and find new ways and innovative approaches within the funding constraints and statutory guidelines, thereby reducing total ownership cost. Furthermore, logisticians need to develop objective business case analyses to support smart decisions, ones having the right mix of support providers, thus, optimizing warfighter performance outcomes. ¹⁴²

It is another challenge to adopt business practices that are more common in commercial organizations when transitioning into PBL. The government and industry must agree on business practices that have the greatest value for both parties, in order to meet the objectives of PBL. The transition to PBL requires both changes in the infrastructure and the culture of the organizations.

Organizational culture is “a pattern of beliefs and expectations shared by organizational members.” These shared beliefs and expectations affect and shape the behavior of the members of the organization. It is a fact that, in a changing organizational

¹⁴¹ Hank J. DeVries, “Performance-Based Logistics-Barriers and Enablers to Effective Implementation”, *Defense Acquisition Review Journal*, February-March 2005, <http://www.dau.mil/pubs/arq/2005arq/DEVRIES.PDF> (accessed May, 5, 2005).

¹⁴² Hank J. DeVries, “Performance-Based Logistics-Barriers and Enablers to Effective Implementation,” *Defense Acquisition Review Journal*, February-March 2005, <http://www.dau.mil/pubs/arq/2005arq/DEVRIES.PDF> (accessed May, 5, 2005).

culture, people tend to surround themselves with others of like opinions and values, thus, strengthening their common beliefs and expectations. Some cultural comparisons are shown in Table 1. There are models for the successful management of change in the literature, and also examples of governmental successes in changing the culture of specific organizations.¹⁴³

“New” Culture	“Old” Culture
<p>The C-17 aircraft is the focus of a Boeing – Air Force partnership. They do joint off-site meetings to work specifically on their “relationship.” They have joint weekly, monthly, and block. meetings and reviews. Every employee who works on the C-17 wears a plastic badge imprinted with the partnership agreement signed by Boeing and Air Force leaders.</p>	<ul style="list-style-type: none"> • Arms length, adversarial relationship between government and contractor • All communications in writing to create an audit trail • Interact as little as possible, conduct bi-annual performance reviews • Maintain objectivity don’t get too “close” to the contractor • Contractor driven by “profit motive” vs. nation’s defense • Government close holds information
<p>NAVSEA established an e-marketplace using a one-page flowchart showing what it wanted its electronic services procurement system to look like. The five steps represented the “full operating capability” (FOC) of the desired system, with the extensions and clouds being areas for future scalability in the eventual system. The Navy simply handed the flowchart to potential vendors and asked them, “How much of this picture can you deliver and at what price?” (IBM – Seaport Study p. 18)</p>	<ul style="list-style-type: none"> • Lengthy statement of work developed by government- requiring office - with an attempt to document every possible situation, process, regulation, Military Specification, service, and government expectation for the bidders • Independent government estimates • Elaborate processing of Statement of Work (SOW) through technical data, system engineering, legal, and all organization-specific word requirements

¹⁴³ David Berkowitz and others, “Defining and Implementing Performance Based Logistics In Government”, *Defense Acquisition Review Journal*, February-March 2005, <http://www.dau.mil/pubs/arq/2005arq/BERKOWITZ.PDF> (accessed May, 5, 2005).

<p>Air Force Joint Surveillance Target Attack Radar System (JSTARS) Total System Support Responsibility (TSSR) Partnership has multiple agreements in place supporting the sustainment of JSTARS. In most cases, these agreements stand alone and are not part of the contract between Northrop Grumman Corporation (NGC) and the Air Force. The Partnering Agreement (PA) between NGC and the Warner Robbins Air Logistics Center (WR-ALC) has been incorporated into the prime TSSR contract as the guiding basis for the Air Force providing the depot-performed workload to the contractor.</p>	<ul style="list-style-type: none"> • Finger pointing between government and suppliers over delays and cost increases • Request For Proposal (RFP) describes services and scope of work in great detail • Numerous change orders as soon as work starts and RFP omissions are identified • Government defines service delivery means and process through inclusion of government regulations and directives • Contract administration role vs. partner role • Only acceptable relationship is a contractual one
<p>Sikorsky Aircraft Corporation (SAC) is working side-by-side with Corpus Christi Army Depot (CCAD) to reduce repair/overhaul turnaround time for the H-60. This joint collaboration has improved business processes, depot repair methodology, and more responsive product support, with only four contractor jobs directly attributable to the partnership.</p>	<ul style="list-style-type: none"> • “Expert” role assigned to government employees • Use of design specifications where the government tells the contractor <i>how</i> to provide the service • Quality assurance processes defined by government specialists • Government employee relies on “guidance” from headquarter

<p>The NAVICP has an F/A-18E/F Integrated Readiness Support Teaming (FIRST) prime contract with Boeing under which NADEP North Island performs depot repair services to Boeing as a <i>subcontractor</i>. Boeing provides funding, repairable units, repair parts, obsolescence management, and shipping. NADEP North Island provides touch labor, facilities, technical data, equipment, production engineering, and packaging. Fifty-seven government jobs were either created or sustained by this partnership.</p>	<ul style="list-style-type: none"> • Contractors are taking jobs away from government workers • Government is buyer of services, not seller • All payments to government are deposited in the U.S. Treasury account • Private sector cannot use government facilities and equipment to perform work
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Table 1. Culture Examples ¹⁴⁴

2. Performance Based Service Acquisitions

FAR Part 37.6 requires the fulfillment of four criteria in the implementation of performance based contracts:

- Describe the requirements in terms of results required rather than the methods of performance of the work;
- Use measurable performance standards (i.e., in terms of quality, timeliness, quantity, etc.) and quality assurance surveillance plans;
- Specify procedures for reductions of fee or for reductions to the price of a fixed-price contract when services are not performed or do not meet contract requirements; and
- Include performance incentives where appropriate.¹⁴⁵

¹⁴⁴ David Berkowitz and others, “Defining and Implementing Performance Based Logistics In Government”, *Defense Acquisition Review Journal*, February-March 2005, <http://www.dau.mil/pubs/arq/2005arq/BERKOWITZ.PDF> (accessed May, 5, 2005).

¹⁴⁵ Federal Acquisition Regulation (FAR), *Subpart 37.6-Performance-Based Contracting*, 2005, http://farsite.hill.af.mil/reghtml/regs/far2afmcfars/fardfars/far/37.htm#P228_34977 (accessed Mar. 28, 2005).

A study conducted by RAND to support ongoing Air Force efforts to implement PBSA for services purchased by the Air Force Materiel Command (AFMC) identified the following problems, which are related to FAR Subpart 37.6, at an Air Logistics Center and a Product Center.

Several people at both Centers caution that there are many services that should not be acquired using “pure” performance-based requirements. An example of this, some argue, is environmental management services such as environmental safety requirements enforced by laws. The reason is that the Air Force cannot transfer its legal responsibility to the contractor; as a result, it must have a greater degree of control over how the services are provided to ensure compliance with federal regulations. Another example is aircraft maintenance related to safety-of-flight issues. This maintenance must be performed according to a step-by-step process, governed by technical orders. Contractor field teams are provided with detailed instructions when they install modifications. Thus, some component repair contracts specify packing and shipping requirements in detail which in turn conflicts with the principle of describing requirements in terms of results.

During the interviews with the personnel at these two centers, the researchers discovered some Program Offices still try to purchase Advisory and Assistance Services (A&AS) by specifying requirements for specific numbers of people, possessing certain skills and experience. Another problem is presented by the fact that many requirements personnel have difficulties in distinguishing between “what” is needed, and specifying “how” the work should be accomplished.

Another problem, revealed during the interviews is that it is difficult to provide incentives for some services. For A&AS services, comments included, “How do you evaluate whether you received the contractor’s best advice?” and “How do you incentivize pass/fail activities?” Personnel at these Air Logistics Center and a Product Center believe that an organization should expect good performance under an A&AS contract.

One big challenge related to performance-based service contracts, pointed out by the personnel at these two centers, is defining measurable performance standards for the

services they purchase. This problem is especially applicable to A&AS, and other engineering services contracts. The people interviewed perceived that “measurable performance standards” require frequent collection of objective performance data; data that allows for an ongoing assessment of performance against known measures of success (i.e., “Measurable performance standards,” means that one can evaluate the percentage of time the contractor met the performance goal during a certain period of time.). For some systems services, like A&AS and engineering services, measurable performance standards are difficult to establish and assess.¹⁴⁶

In 1994, executive officials of 27 agencies signed an OFPP-sponsored pledge to participate in a government-wide PBSC pilot project. These agencies committed to implement PBSC and measure its effects on volunteered contracts, conform to stipulated project design criteria, and cooperate with each other to institutionalize PBSC. Four industry associations, representing over 1,000 companies, endorsed the project and signed an industry pledge to cooperate with the project, and otherwise promote the use of PBSC among their member firms.

A recent OFPP report noted some agencies not involved in the PBSC pilot experienced a degradation of service quality when they only implemented selected aspects of the PBSC methodology.¹⁴⁷ Problems occurred when the non-pilot agencies failed to define the work in complete terms, failed to develop or enforce measurable governmental quality assurance plans based on contract performance standards, and/or placed sufficient financial risk on the contractor. This report shows the necessity of fully and properly implementing PBSA versus piecemeal application of some PBSC elements.

D. POSSIBLE PBSA SOLUTIONS FOR THE PROBLEMATIC AREAS IN THE TURKISH NAVY SERVICE ACQUISITIONS

The implementation of PBL in the U.S.A is evolving and maturing over time. In the Turkish Navy, on the other hand, service acquisitions have a long way to reach a

¹⁴⁶ John Ausink and others, *Implementing Performance- Based Services Acquisition (PBSA) Perspectives from an Air Logistics Center and a Product Center*, RAND, 2002, <http://www.rand.org/publications/DB/DB388/DB388.pdf> (accessed May, 8, 2005).

similar level of maturity. There are some problems now, and there will be other problems in the future. However, it is important to realize that, even though every new initiative comes with a risk, the Turkish Navy must be to mitigate potential PBSA implementation problems.

In 2004, the Turkish Navy spent only three to four percent of its budget on service acquisitions. In the near future it is anticipated this percentage will increase as more services are outsourced. In this environment, PBSA and PBL has a lot of potential benefits for the Turkish Navy These concepts seem to mitigate some of the risks involved with the service acquisitions and weapon system support. Operation and Maintenance costs and service acquisitions consume a large part of the service budget. Adoption of PBL and PBSA may lead to cost reductions within Operation and Maintenance accounts and free-up scarce funds for the Turkish Navy other initiatives such as modernization.

In order to apply the PBSA approach, all the tasks should be defined in terms of desired outcomes. Performance criteria, performance standards and acceptable levels of quality must be clearly determined. Those criteria should be achievable and measurable. From this point of view, some of the services might not be appropriate to be purchased in a performance-based structure. Provided that both the personnel transportation and meal services are not naturally complicated services, they are good candidates for PBSA applications.

Using PBSA as the main contracting approach can provide solutions for some of the problematic areas being faced by the Turkish Navy acquisition workforce:

- Mandated performance specifications document usage causes some problems in the acquisition process. According to the current regulations, all the performance specifications documents must be approved by the Ministry of Defense, a situation that extends the duration of the whole acquisition process. One of the changes that PBSA approaches will bring to the Turkish Navy is forgoing the technical specification determination usage.

147 OFPP, *A Report on the Performance-Based Service Contracting Pilot Project*, 1998, http://www.acqnet.gov/Library/OFPP/BestPractices/pbsc/library/OFPP_report-on-the-perf.pdf (accessed May, 12, 2005).

- Using performance specifications, instead of detailed performance specifications, will streamline the acquisition process. The time and administrative costs spent to prepare the technical specification document would be saved. The contractors will be given flexibility to decide how to accomplish the job. While this flexibility will shift more planning responsibility to the contractor, it will also shift the risk of reaching the specified performance levels.

- Inspections of acquired services are generally very detailed and time consuming activities. There are many points to check before the acceptance of the performed services. All the technical and administrative specifications, and the terms and conditions of the contracts are subject to subsequent inspections. Most of the inspection committees have significant workloads. This is especially true because of the inspections of acquired services. There are many requirements to be met before the acceptance, and additionally the requirements are neither measurable nor quantifiable, meaning committees have difficulties in performing the inspections in accordance with the tender document. A PBSA approach would simplify the inspection process, provided that all the tasks are determined in terms of desired expected outcomes and are measurable. In addition, the performance criteria could be more clearly defined to facilitate timely inspection and acceptance.

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V. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

A. SUMMARY

Performance Based Logistics (PBL), while focusing on improving warfighter capability (by reducing the logistical footprint) and reducing ownership costs, offers new opportunities and challenges. Not only will a government have more direct access to commercial practices for providing logistic support, industry will have the opportunity to increase their business scope, duration, seek innovations in areas of product development and support.¹⁴⁸

A significant and essential part of PBL implementation is the use of performance metrics. Typically, the metrics used in the performance based support agreement include: operational availability (i.e., a measure of the degree to which an item is in an operable state, and can, thus, be committed at the start of a mission, even before the mission is fully known); mission capability (i.e., the material condition, indicating that it can perform at least one, and potentially all, of its designated missions); and customer wait time (i.e., the total time elapsed between issuance of a customer order and fulfillment of that order).¹⁴⁹ Also, reliability is an integral part of the performance metrics on a well-thought out program. Thus, the ways to improve reliability must be constantly sought--if reliability can be improved, logistics footprint and maintenance costs will be reduced, and operational availability (A_0) and effectiveness will be increased.

Performance Based Contracting in the acquisition of services has many potential benefits, especially, when services are acquired by means of a fixed price agreement. This contracting method can encourage contractors to be innovative, and to find cost-effective ways of delivering services for a fixed level of funding. Since the focus shifts

¹⁴⁸ Charles O. Coogan and C.P.L. Fellow (not dated), *Performance Based Logistics: What It Takes*, http://www.ale.com/Pages/PBL_WIT.PDF (accessed Mar. 1, 2005)

¹⁴⁹ United States Government Accountability Office Report (GAO-04-715), *Opportunities to Enhance the Implementation of Performance-Based Logistics*, 2004, <http://www.gao.gov/new.items/d04715.pdf> (accessed Mar. 23, 2005).

from the process to the results, these contracts can potentially produce better outcomes and reduced costs.¹⁵⁰

Acquisition rules and regulations in Turkey require the use of a technical specification document when acquiring products and services. Technical specification documents can only be waived if the products and services have NATO stock numbers. These stock numbers are by internationally accepted part numbers, or the standard numbers assigned by the Turkish Standards Institute.

There are four methods of contracting in Turkey: (1) open procedures, (2) restricted procedures, (3) negotiated procedures, and (4) direct procurement. The only contract type that can be used, in Turkey, is a firm-fixed price type contract.

Service acquisition is a new concept for the Turkish Navy. There are two major types of service acquisitions acquired by the Turkish Navy, namely meal services and personnel transportation services. Besides these services, the leasing of some special vehicles, daily porters and other consultant services form a small portion of the service acquisition activities performed by the Turkish Navy.

Since service acquisition is a new concept for the Turkish Navy, they have experienced several problems with its use. General problems pertaining to service acquisition activities include the mandated use of technical specification documents, cost estimation problems, solicitation note publishing requirements, adherence to the annual budget structure, and the requirement for certificates and documents. There are also some problems that are unique to the acquisition of services, such as the lack of competition, performance of the contractors, and inspection procedures of services.

Besides the service acquisition problems faced in the Turkish Navy, there are problems experienced in the implementation of PBL and PBSA in the U.S.A. The problems related to PBL include funding restrictions, statutory/regulatory requirements, overcoming cultural barriers, the transition difficulty from the existing infrastructure, technical data rights issues, lack of PBL awareness, incorrect use of, and an inability to properly incentivize contractors. PBSA problems in the U.S.A include: the problem of

¹⁵⁰ United States Government Accountability Office Report (GAO-04-715), *Opportunities to Enhance the Implementation of Performance-Based Logistics*, 2004, <http://www.gao.gov/new.items/d04715.pdf> (accessed Mar. 23, 2005).

distinguishing “what to do” instead of “how to do it”, providing incentives for some services, and defining measurable performance standards.

PBSA implementation might be applicable to the Turkish Navy service acquisition activities under the conditions specified in the “Recommendations” section. It is important to point out that this implementation will not be simple as it seems. Careful considerations should be given to preparation of performance standards and metrics. These are two important tenets in successful implementation of PBSA.

B. CONCLUSIONS

1. PBL and PBSA have the potential to improve service quality and reduce costs, however, there may be some challenges implementing them within the construct of Turkish laws, regulations and culture.

The outsourcing of service activities in the Turkish Navy is a fairly new concept. All new initiatives come with their own risks and problems. The important thing is to approach these risks and problems proactively, and to develop new alternatives as solutions to overcome these challenges. PBL and PBSA concepts have great potential to streamline and facilitate service acquisition activities, not only in the Turkish Navy, but also in other Turkish Military Services and government entities.

2. There are some legal constraints that might adversely affect the application of PBL and PBSA within the Turkish Navy.

Fixed-price contracts are the only contract type used by Turkish government acquisition activities. This might create problems in future service acquisition contract agreements, due to inflexibility in the structure of contractual agreements. Another constraint related to contracting activities is the lack of the concept of an award fee in Turkey. Although, the absence of cost-reimbursement type contracts or award fee may not prohibit the implementation of PBL and PBSA, they might limit contractual flexibility and incentive effectiveness.

The mandated use of the technical specification documents in the acquisition process will prohibit the implementation of PBL and PBSA. The use of a technical

specification document contravenes the current PBSA tenet of describing requirements in terms of outcomes vice using detailed and prescriptive statement of work. This regulation is potentially prohibiting the PBL and PBSA implementations in the Turkish Navy's acquisition activities.

3. There are some other potential pitfalls in the current contracting methods in Turkey that could also cause problems in future PBL and PBSA implementations.

In restricted and negotiated contract procedures, if the number of the tenderers that submit tenders is less than three, then the procurement process is cancelled. In situations where there is a sole source that is able to meet the government's requirements, the only authorized contracting method is direct procurement. However, in the case where there are two tenderers submitting tenders, an open procedure contracting method is the only appropriate method. Thus, when there is a requirement for more complex services in the future, this situation might cause problems. For example; if the situation calls for negotiation between parties and there are only two tenderers, current rules and regulations prohibit the use of negotiated procedure which might cause difficulties to reach a desired outcome.

C. RECOMMENDATIONS

1. The Turkish Navy should establish a pilot program in which the PBSA approach will be used as the acquisition method.

Establishment of a pilot program within the Turkish Navy, for a trial period, could act as a starting point in the implementation of PBSA. For most of the service acquisition activities, the contract length varies from six months to one year. Based on a risk assessment, the length of the pilot program might be determined. Since the Turkish Navy began outsourcing some of its non-core service activities, this pilot program can be a useful way of monitoring the potential problems, risks, and benefits related to the implementation of PBL/PBSA. Additionally, a PBSA pilot program may facilitate the development of additional risk mitigation tools.

a. An implementation directive should be prepared to help shape and direct PBSA initiatives for the pilot program.

The pilot program directive should describe the purpose, scope, definitions, objective, and policy of PBSA implementation.

b. The mandated technical specification document should be waived for the pilot program.

The most critical barrier to the implementation of PBL and PBSA within the Turkish Navy is the mandated use of a technical specification document in the acquisition process. To overcome this problem, the best feasible solution would be to waive this document. Instead, a performance-based specification document should be used. Because the technical specification document is a statutory requirement, this waiver may require special permission from the appropriate authority. The technical specification document requirement stems from the Turkish Public Procurement Law, thus, the waiver process likely involves the Turkish Parliament.

c. Working group should be formed to structure the PBL and PBSA initiatives, as well as to monitor and assess PBL and PBSA implementations.

The first step that needs to be taken is to form a PBL/PBSA working group within the Turkish Navy. This working group should conduct an extensive study on PBL/PBSA, as well as research its many elements. As a result of this study, they should publish as a PBL/PBSA implementation guide, and help shape future PBL/PBSA initiatives. The personnel selection to this working group might be based on a person's acquisition background and field of expertise in the area of supply and/or logistics.

Since there is no PBL or PBSA implementation practice currently being used in Turkey, it will be useful, for further reference, to address some possible guidelines for PBL. Dr. David Berkowitz, Dr. Jatinder N. D. Gupta, Dr. James T. Simpson, and Joan McWilliams have established some directions for future efforts to successfully implement PBL. Their research has produced a report entitled "Defining and Implementing Performance-Based Logistics in Government." This source can be used as

a reference document to assist Turkish acquisition officials during the development of Turkish PBL planning and implementations.¹⁵¹

d. Performance metrics for the pilot program should be carefully developed by the PBL/PBSA working group.

One of the most significant elements of PBL and PBSA is the development of the performance metrics. Metrics are one of the major determinants in the success of the pilot program, and further possible implementations. The performance metrics should be focused on maximizing the overall reliability and performance of the systems subject to PBL, while also ensuring the quality of the services subject to PBSA. PBSA contracts should incentivize the contractor to increase quality, reliability, and operational availability and reduce cycle times, maintenance and the logistics footprint.

e. Key service acquisition activities to implement PBSA should be identified.

The next step of this pilot program would be to select the most appropriate candidate base or supply command that acquires one of the two major services, namely meal services or personnel transportation. Both of these services are straightforward, in nature, and appropriate for possible PBSA implementations. Thus, one of these two service acquisition activities should be selected for the pilot program. It will also be useful to evaluate the service acquisition history of the candidate commands to establish a service baseline. Resultant performance under the pilot PBSA contract can then be compared to the historical baseline to determine PBSA objectives were achieved.

f. The relevant acquisition personnel should be adequately trained to ensure successful PBSA implementations.

The acquisition personnel of the selected command should be given training in PBL and PBSA. This training should be long enough to cover the definition, scope, purpose, basic tenets and principles of PBL and PBSA. The acquisition personnel

¹⁵¹ David Berkowitz and others, "Defining and Implementing Performance Based Logistics In Government", *Defense Acquisition Review Journal*, February-March 2005, <http://www.dau.mil/pubs/arq/2005arq/BERKOWITZ.PDF> (accessed May, 5, 2005).

should also be trained to look out for possible problematic areas of service acquisition, considering solution alternatives to these problems (which would be defined by the work group in their study report). Besides these possible service acquisition problems, the training may cover current PBSA problems faced by the implementers in other countries, especially in the U.S.A.

Ideally, pilot program group should be given specific training on to develop a PBSA strategy and contract elements for the selected pilot service acquisition. This training should be outsourced to a company that has significant experience with PBSA consulting, education, and case-based training.

g. The activities after the waiver of technical specification document for the pilot program should be planned in advance.

(1) The specifications of the service to be acquired should be determined in terms of desired performance outcomes.

Instead of showing all the steps necessary to perform the service, the new Performance Specification Document (PSD) should delineate “what is needed” to satisfy the performance requirements. While defining the performance specifications, the contractor should be provided with maximum possible flexibility about “how to perform”. The following areas are examples for the performance specifications that might be included in the PSD of personnel transportation service acquisition:

- The availability of the transportation vehicles,
- The availability of the point of contact at the contractor facility,
- The physical appearance requirements (e.g., cleanness) for the transportation vehicles,
- The frequency of transportation services,
- The timeliness of the transportation vehicles,
- The seat availability of the transportation vehicles.

Corresponding performance standards should be developed for each of the required service areas. The contractor will be held responsible for these performance standards. Performance standards will be used to measure the quality level of the output.

After these, Acceptable Quality Levels (AQL) for each performance standard should be determined. AQL is defined as the allowed variation from the performance standards in terms of the maximum allowable defect rate.

(2) The restricted method will be the most appropriate contracting method for the pilot program.

The restricted contracting method is a two-step process. In the first step, after the solicitation phase, the performance specification document as a part of the tender document is exhibited in a designated place. The prospective tenderers can either see the document for free, or buy it. The tenderers will submit a Work Statement Document (WSD) attached to their tenders, which describes the way they intend to perform the service.

The contracting entity selected for the pilot program will make the preliminary evaluation of the responses by assessing the WSDs. Only those tenderers who will be approved after the preliminary evaluation will be allowed to participate in the second step and submit their price offers.

The contract will be awarded to the lowest bidder who has the capability to meet the stated performance requirements.

(3) After the contract award, a Quality Assurance Plan (QAP) will be developed by the contracting entity in accordance with the WSD submitted by the contractor.

In a performance based service acquisition, the contractor is responsible for quality control while the contracting entity is responsible for quality assurance. The QAP should include the scope of the surveillance activities, surveillance

methods, surveillance frequencies, and the responsibilities of the government quality assurance personnel.

Inspection commissions are responsible for ensuring that the performed services comply with the tender document which includes administrative and technical specification documents. The inspection procedures are very detailed and time consuming, provided that there are many detailed technical specifications to inspect before the acceptance of the performed service. The PBSA approach will simplify the inspection process. All the tasks will be defined in terms of expected outcomes and the random sampling inspection method with specified measurable AQLs.

The surveillance methods for the pilot program will be random sampling and periodic customer surveys. The random sampling will be conducted by the inspection commissions on a weekly basis. Inspections must be performed in accordance with the performance standards and the acceptable levels of performance, which were included in the PSD. Periodic customer surveys will be conducted and analyzed by the contracting officer of the contracting entity.

Corrective actions will be requested by the contracting officer for the areas that have maximum allowable defect rates. If the number of defects found during the surveillance exceeds the maximum allowable variation from the standard, the contractor might be required to submit an explanation to the contracting officer, in writing, why the problems occurred with the performance of the service and what corrective actions it plans to take. The contracting officer will evaluate the explanation and take the appropriate action. Alternative actions are: (1) to accept the explanation and request the corrective action; (2) not to accept the explanation and adjust the periodical payment downwards by a percentage specified in the contract, or (3) to give a twelve-day warning to the contractor before a possible contract termination for default. The contracting entity has the discretionary authority to terminate the contract, if the contractor cannot perform in accordance with the terms and conditions of the contract or fails to comply with the timeliness of the contract. If the contracting entity considers terminating the contract for default, the availability of immediate alternative sources of supply should be evaluated before the decision.

In general, the PBSA approach may not eliminate all the steps included in the technical specification document or administrative specification document. However, this approach will eliminate the non-value added specifications to give latitude to the contractor to perform the service. In the traditional approach, each step is dictated to the contractor and every detail about how to perform the service is provided to the contractor. The contractor has no discretion to act in any other way than mandated in these specification documents. By expanding the contractors' performance flexibility, the contractors will have an opportunity to reduce their costs and increase their profit with a fixed-price contract. One of the potential pitfalls of the pilot program is to keep the quality level high while the contractors reduce their costs. The success of the pilot program is highly dependant on the cautious determination of performance standards and AQLs and inspection commissions' surveillance over the performed services in accordance with those standards.

In Turkish acquisition and contracting, most of the burden of acquisition planning and surveillance is placed on the government, such as; preparing detailed specification of work, surveillance of contract performance, inspection and quality assurance. If implemented, PBSA will shift some of this burden to industry. Industry partners will have to decide how best to satisfy contract requirements instead of waiting for the traditional, prescriptive and detailed specifications from the Turkish Navy contracting office. They will have to ensure their performance quality and find innovative ways to do business. After this process reaches its maturity, industry will be more conscious about the quality of their businesses and this will benefit both sides. This benefit includes not only improved services but reduced test, inspection, and quality assurance requirements because industry will have its own plans of quality assurance. Ultimately, industry will have the opportunity to increase their profit by applying these new methods and concepts.

h. PBL/PBSA working group should prepare an evaluation report, based on the findings and outcomes of the pilot program.

At the end of the pilot program period, based on the findings and evaluation of the selected service acquisition, a report should be prepared and presented to the decision-making authority. The decision of implementing PBSA might be supported by the findings and recommendations of this report.

2. An amendment to the current Turkish Public Procurement law should be considered to facilitate implementation of PBSA within Turkey and increase the efficiency and effectiveness of the Turkish acquisition system.

For maximum flexibility in contracting methods, the minimum number of tenderers in the restricted and negotiated contracting procedures should be changed. In these contracting methods, the law requires the submission of tenders by at least three prospective contractors. If the number of the tenderers that submit tenders is less than three, then the procurement process is cancelled. This situation makes the open procedure contracting method the only appropriate method, when there are only two tenderers submitting tenders. In the future, when there is a need for more complex service acquisitions, negotiation between parties might be imperative. This article of the Turkish Public Procurement Law should be considered to change and that change should be proposed via the appropriate chain of command.

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