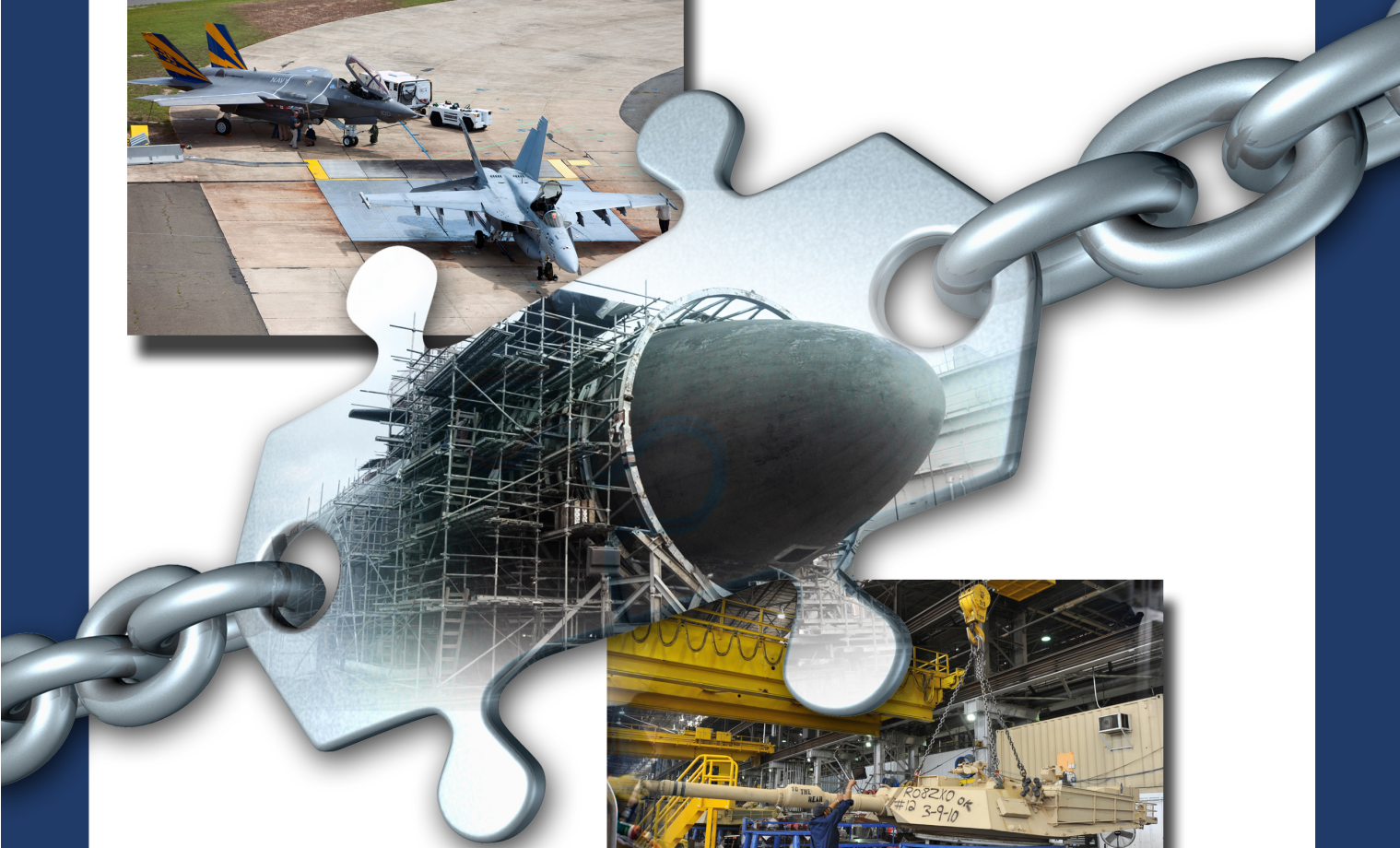




# Public-Private Partnering for Product Support GUIDEBOOK



## Foreword

This guidebook for product support partnering was prepared by the Office of the Assistant Secretary of Defense (Logistics & Materiel Readiness). It is one of several guides and references available via the Defense Acquisition University's Acquisition Community Connection (ACC) web site. Throughout this guide, embedded links will lead to related materials in the other documents. They include:

- Defense Acquisition Guide, Chapter Five
- Diminishing Manufacturing Sources and Material Shortages Guidebook
- DoD Product Support Analysis, MIL-HDBK-502A
- DoD Product Support Manager Guidebook
- DoD Reliability, Availability, Maintainability-Cost (RAM-C) Report Manual
- Integrated Product Support Element Guidebook
- Joint Capabilities Integration and Development System Manual
- Logistics Assessment Guidebook
- Operation and Support Cost Management Guidebook (awaiting publication)
- Performance Based Logistics Guidebook
- Product Support Business Case Analysis guidebook
- Public-Private Partnering for Product support (this guidebook)
- Product Support Manager Guidebook

The complete web site is at <https://acc.dau.mil/productsupport>.

This partnering guidebook is the second iteration of a document that will be updated over time with additional information, groundbreaking case studies and changes to law and policy. Inputs about its content are welcome; see the last section and back cover for information about ways to participate and how to provide feedback.

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# Public-Private Partnering for Product Support

## Introduction

By law and policy, the Department of Defense (DoD) maintains a “ready and controlled” source of technical competencies and resources necessary to ensure effective and timely response to mobilization, national defense contingency situations, and other emergency requirements.<sup>1</sup> One of the keys to maintaining those competencies is embodied in the Department’s major organic (that is, government-owned and operated) product support activities, augmented with commercial contract support. Organic and contract capabilities must work together to provide effective and efficient sustainment for the operating forces. A fully integrated defense product support industrial base, one that leverages the competencies, infrastructure, and resources of both the public and private-sector, is essential to our national security. To facilitate this collaborative effort, a series of legal authorities specifically authorize depot maintenance activities and other product support activities to enter into public-private partnering arrangements, also referred to as partnering. Public-private partnering is an essential tool to sustain modern weapon systems through their life cycle. It serves as a bridge, melding the public and private-sectors in support of increasingly complex advanced technologies, and the combined technical competence is essential to produce an assured mission response.

The department’s involvement in overseas contingency operations has tested partnerships in what is now the longest set of such operations ever prosecuted by the United States. Our armed forces have performed well despite a range of operating environments that have taxed the limits of personnel and materiel. Our unmatched product support capabilities have been instrumental in achieving this level of performance, and partnerships have played an important role in the endeavor.

This coming decade holds the prospect of constrained defense budgets and associated product support workloads, a marked transition away from extended contingency operations and transition to a new generation of technologically advanced systems and equipment. Partnerships have a critical role to play in the transition. For that reason, this guide is designed to refresh the knowledge base on partnering processes and procedures, encourage further innovation in structure and applications, and provide case studies on successful applications.

The guide also contains links to additional information, establishes an annual discussion forum for practitioners, and invites feedback for further improvement. Please use these resources and help keep public-private partnering on a continuous upward trajectory for innovation and application.

## Overview

This guide addresses public-private partnering (defined in the next section) as a useful tool for all aspects of integrated product support. The majority of existing partnerships, reflecting the focus of current partnering statutes and policy, center on the depot maintenance function. But that focus does not preclude application to other product support elements<sup>2</sup> within, or in addition to, those partnerships, and work is underway to provide additional authorities to encompass a broader range of product support functions and processes.

Despite many years of successful application, partnering still holds substantial potential for broader use across all product support processes comprising integrated product support. Accordingly, this guide contains procedural strategies and assessment tools useful to parties who are gaining an initial familiarity with partnering applications, together with more experienced partnering practitioners.

The guide is intended for use by program and product managers (PMs), product support managers (PSMs), product support integrators (PSIs), industry, and organic product support providers (PSPs), in-

<sup>1</sup> 10 U.S.C. 2464(a)(1).

<sup>2</sup> Product Support Elements: product support management, supply support, packaging, handling, storage & transportation (PHS&T), maintenance planning & management, design interface, sustaining engineering, technical data, computer resources, facilities & infrastructure, manpower & personnel, support equipment and training & training support

cluding depot maintenance participants in the partnering process. The guide is intended to provide best practices that facilitate public-private partnerships, and to frame the application of partnering in the remaining integrated product support elements encompassing the full scope of defense system product support activities. It builds on a body of information that has been collected by the Office of the Deputy Assistant Secretary of Defense for Maintenance Policy and Programs (OSD Maintenance). It reflects defense policy on depot maintenance partnering (DoD Instruction [DoDI] 4151.21), as well as the legal authorities that authorize public-private partnerships; and provides updated data about innovative approaches, successful implementations, and information resources.

DoD Directive (DoDD) 5000.01 requires product support strategies to include the best use of public and private sector capabilities through government/industry partnering initiatives, in accordance with statutory requirements.

This guide is organized into six sections. The first two sections address the what, when, why and how of partnering; the third section explains why and how to conduct a business case analysis for prospective public-private partnerships; the fourth section discusses metrics; the fifth section presents a set of case studies that illustrate successful partnerships in a broad range of applications; and the final section describes additional information resources and invites feedback for continuing improvement.

## **Section 1. About Partnering**

The DoD has the inherent responsibility to conduct its business in an effective and efficient manner. Accordingly, program managers are encouraged to enter into PPPs that facilitate achievement of these desired product support outcomes, and to employ outcome oriented metrics in the governance of product support PPPs. When PPPs are employed, the parties to the partnership will ensure that the terms and conditions contained within all binding documentation (i.e. contracts, partnership agreements, and implementation agreements) are consistent and mutually supportive.

### **1.1 PARTNERING DEFINED**

Public-Private Partnerships (PPPs) are broadly defined in the DoD as, “voluntary, non-contractual collaborations between DoD and non-federal entities (NFEs) through which both parties leverage the expertise, resources and incentives of the other to achieve mutually agreed goals.”<sup>3</sup> In the arena of integrated product support, a public-private partnership is defined as a cooperative arrangement between an organic product support provider and one or more private-sector entities to perform defense-related work, utilize DoD facilities and equipment, or both. Other government organizations, such as program offices, inventory control points, and sustainment commands, may be parties to such agreements.<sup>4</sup>

There is a key distinction between partnerships and defense contracts. All partnerships are implemented within the framework and business arrangements established by a contract between the DoD and a private-sector entity (e.g., an original equipment manufacturer [OEM], small business, or other third-party logistics provider [3PL]). Defense contracts specify the work tasks, articles, services, and outcomes to be provided by the private-sector entity. They are generally one-sided in their directive requirements—from the government to the contractor. Partnerships enable a more collaborative relationship in which parties from both public and private-sectors are able to leverage and maximize the use of their resources in ways that were not specified in their underlying contracts. Resources may include goods, services, infrastructure, products, personnel, or processes employed to more efficiently and effectively accomplish product support. Examples range from allowing contractors to utilize depot maintenance facilities, to workshare agreements in which joint organic-contractor teams join forces on a common workload, to contractor purchase of government-provided products and services. The parties may be separately funded by defense contracts or work orders. Depending on the type of cooperative arrangement, the partnership may entail payment between the partners for goods and services produced, when authorized by law.

By policy, products and services produced by organic product support activities for partnerships will be defense-related.

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<sup>3</sup> DEPSECDEF/VCJCS Memo, *Public-Private Partnerships Supporting the DoD Mission*, April 25, 2013.

<sup>4</sup> DoDI 4151.21, *Public-Private Partnerships for Depot-Level Maintenance*, April 25, 2007. Even though the definition cited from this instruction is in a depot maintenance context, it applies to the broader range of integrated product support activities and elements.

Defense partnerships that involve the sale of goods or services are a product of collaboration between elements of the defense industrial base. In that sense, they are designed to facilitate the function of depot maintenance and other product support elements as they sustain the operating forces.

### 1.1.1 Basic Types of Public-Private Partnerships

There are three basic types of public-private partnerships in use within the defense product support community. The bulk of the current authorities for partnerships are focused on depot maintenance. The three basic types and their related legal authorities are as follows:

- *Workshare* — A partnership in which a government buying activity, in collaboration with a contractor and an organic product support activity (predominantly depot maintenance activities to date), determines the best mix of work, capitalizing on each partner's capabilities. The workload is then shared between the contractor and the organic activity. The contractor is funded through a contract, and the organic activity is funded through a project or work order (in the case of depot maintenance). The partnering agreement between the contractor and organic activity focuses on the roles and responsibilities of each partner. The partners work jointly to accomplish the overall requirement. Funding is not exchanged between the partners under a workshare agreement; therefore, workshares do not require specific legal authority.
- *Direct Sale (sales of articles and services)* — An arrangement, currently authorized primarily for depot maintenance activities designated as centers of industrial and technical excellence (CITEs), arsenals and ammunition plants, and other working capital-funded industrial facilities under specified circumstances, whereby military and commercial entities enter into a business relationship for the sale of depot maintenance articles or services to an outside (non-government) entity, usually a contractor.
  - A direct sale agreement begins with a government contract that funds a commercial activity. In turn, after development of a partnership agreement with an appropriate implementing agreement, the contractor pays an organic depot maintenance activity (or other industrially funded activity as authorized) for goods and services provided to the contractor. Depending on the legal authority applied, the funds may be paid to the U.S. Treasury or directly to the depot's working capital fund. The contractor may also supply materiel to the depots in support of the partnership. The purchase of articles or services by the commercial entity establishes a quasi-subcontract relationship for the depot, which ensures (as authorized by law) the depot can be held accountable for willful misconduct, gross negligence, or the failure of the government to comply with cost, schedule, or performance requirements in the contract agreement.
  - Primary legal authorities for direct sales agreements are 10 United States Code (U.S.C.) 2474 and 2208(j), both of which authorize the payment from non-government entities to working capital funds for articles and services produced by the working capital funded activity.<sup>5</sup>
  - Additional authority for "sale of articles and services" is in 10 U.S.C. 2563, 4543, 4544, and 7300, and in 22 U.S.C. 2770 for specified circumstances.
- *Lease* — An arrangement that allows a private-sector entity to have access to, and beneficial use of, facilities or equipment that is real or personal government property. Facilities and equipment may be made available for lease, so long as the arrangement does not preclude the government activity from performing its mission. The goal is to make government-owned facilities more efficient through better utilization.
  - Lease payments may be made as monetary payments from the contractor to the government activity, or as full-value "in-kind" consideration (e.g., provision of property maintenance, protection, alternation, repair, improvement, restoration;

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<sup>5</sup> Section 2474 contains additional authorities that are beneficial to the partnering process. This guide does not attempt to repeat the content or explain the procedures for the multiple legal authorities that apply to public-private partnering; consult the statutes for specific details.



- construction of new facilities; provision of facilities; and provision or payment of utility services).
- o 10 U.S.C. 2474, 2667 and 4544 are the primary authorities for the lease of non-excess real property. Section 4544 does not require a CITE designation.

**1.1.2 Other Partnering Activities and Authorities**

Additional partnering activities and authorities apply to other DoD activities beyond depot maintenance. Many of these are designed to facilitate test and development activities or cooperative research and development agreements (CRADAs). In addition, many partnering activities support the greater DoD Mission across a broad spectrum of areas such as logistics, cyber, humanitarian assistance and disaster relief, theater sustainability, and wounded warrior support. Consult with DoD Components and other government organizations to explore specific applications.<sup>6</sup>

**1.1.3 Statutes, Regulations, and Guidance**

Numerous defense-related statutes and regulations affect public-private partnerships, with the majority focused on depot maintenance. In general, these issuances do not prohibit the addition of other product support elements to partnering agreements. Some key examples are described briefly in Table 1-1, which includes policy directives and related guidance. The table also includes references that, although not directly related to partnering, shape the partnering process. The descriptive language for each reference is meant to be for illustration only; consult the actual language in each reference for definitive guidance.

**Table 1-1: Statutes, Regulations, and Guidance**

<b>Authority</b>	<b>General description</b>
10 U.S.C. 2208	Permits the Secretary of Defense to establish DoD working capital funds. Permits, under specified circumstances, the sale of articles and services inside and outside DoD.
10 U.S.C. 2320	Addresses government rights to technical data.
10 U.S.C. 2460	Defines depot maintenance and repair.
10 U.S.C. 2462	Addresses contracting requirements for certain supplies and services when cost is lower.
10 U.S.C. 2464	Establishes the requirement for core logistics capabilities.
10 U.S.C. 2466	Limits the proportion of funding that may be used for contract depot maintenance.
10 U.S.C. 2469	Provides an exception from the requirement for competition for public-private partnerships that involve work performed at a CITE (see 10 U.S.C. 2474).
10 U.S.C. 2474	Requires the military departments to designate depot-level maintenance activities as CITEs, authorizes and encourages public-private partnerships, permits performance of work related to depot-level maintenance core competencies, permits use of facilities and equipment, and permits sales proceeds from public-private partnerships to be credited to depot accounts.
10 U.S.C. 2501	Sets national security objectives concerning national technology and industrial base.
10 U.S.C. 2539b	Authorizes the sale of services for testing of materials, equipment, models, computer software, and other items.
10 U.S.C. 2563	Authorizes the sale of articles or services outside DoD (excluding those authorized under 10 U.S.C. 4543) under specified conditions.
10 U.S.C. 2667	Allows leasing of non-excess facilities and equipment.

<sup>6</sup> DEPSECDEF/VCJCS Memo, *Public-Private Partnerships Supporting the DoD Mission*, April 25, 2013.

<b>Authority</b>	<b>General description</b>
10 U.S.C. 4543	Authorizes Army industrial facilities that manufacture cannons, gun mounts, and other items to sell articles or services outside DoD under specified conditions.
10 U.S.C. 4544	Authorizes, within specified limitations, Army working capital–funded industrial facilities to enter into contracts or other cooperative arrangements with non-Army entities to carry out a variety of activities under specified conditions.
10 U.S.C. 4551	Defines terms relating to the Armament Retooling and Manufacturing Support initiative.
10 U.S.C. 7300	Authorizes naval shipyards to sell articles or services to private shipyards for fulfillment of contracts for nuclear ships.
10 U.S.C. 7303	Authorizes Naval Surface Warfare Center, Carderock, to conduct investigations into shapes and forms of U.S. vessels and aircraft and to conduct experiments at the Model Basin for private entities.
15 U.S.C. 3710a	Permits the use of cooperative research and development agreements.
22 U.S.C. 2754	Allows sales or lease of defense articles or services to friendly countries under specified conditions.
22 U.S.C. 2770	Allows sales of articles and services to U.S. companies for incorporation into end items to be sold to a friendly foreign country or international organization under specific conditions.
1995 National Defense Authorization Act, Section 337 (P.L. 103-337)	Directs the Secretary of Defense to encourage commercial firms to enter into partnerships with depot-level activities for specified purposes.
FAR 45.1	Permits the provision of government-furnished material, facilities, and equipment to contractors.
FAR 45.3	Provides for contractor use and rental of government property.
FAR 51.100	Authorizes commercial contractors to use government (i.e., DLA) supply sources
DoDI 4151.21, Public-Private Partnering for Depot Level Maintenance	Implements policy, assigns responsibilities, and prescribes procedures for DoD depot-level maintenance.
DoD 7000.14-R, DoD Financial Management Regulation	Volume 2B, Chapter 9, Section 01, paragraph 090105 contains provisions for partnerships.
DoDI 7041.3, Economic Analysis for Decision Making	Outlines economic analysis requirements.
OMB Circular A-94	Provides general guidance for conducting benefit-cost and cost-effectiveness analyses, and specific guidance on the discount rates to be used when evaluating federal programs whose benefits and costs are distributed over time.

<b>Authority</b>	<b>General description</b>
<i>Defense Acquisition Guidebook, Section 5.1.5.2</i>	Includes partnering as a consideration to be addressed when determining the best mix of public and private sector capabilities to meet user requirements, sustainment opportunities, and statutory requirements.
<i>Diminishing Manufacturing Sources and Material Shortages (DMSMS) Guidebook</i>	A guidebook of best practices and tools for implementing a DMSMS management program. Compilation of the best proactive practices from across DoD for managing the risk of obsolescence. Also identifies assorted measurement tools that may be useful in analyzing and tracking the effectiveness of DMSMS programs.
Logistics Assessment Guidebook	Supports the USD(AT&L) initiative on “Better Buying Power” by addressing the themes of affordability, controlling cost growth, and innovation in industry. Provides a structure for conducting logistics assessments and helps components establish baseline assessment criteria.
Operation and Support (O&S) Cost Management Guidebook	Provides an overview of O&S cost management; transparency to program management offices on how O&S Cost estimates are captured throughout the lifecycle management process and used by decision makers; standardizes O&S cost metrics usage, nomenclature, and life cycle product support management processes across the Department; establishes metrics which will inform decision makers throughout the life cycle on O&S costs.
Post-Initial Operational Capability Review Guidebook	Complements Part VI of the Logistics Assessment Guidebook.
Product Support Business Case Analysis Guidebook	Supports the USD(AT&L) initiative on “Better Buying Power” by laying out a uniform methodology for accurate, consistent, and effective support of value-based decision making, while better aligning the acquisition and lifecycle support processes.
Product Support Manager Guidebook	Reference guide addresses key requirements for managing product support across the entire life cycle of weapon systems.
DEPSECDEF/VCJCS Memo, Public-Private Partnerships Supporting the DoD Mission, April 25, 2013.	Encourages the use of public-private partnerships in the DoD as a valuable method of enhancing the DoD’s capacity by leveraging the expertise and resources of non-Federal entities (NFEs).

**1.1.4 Potential Scope of Partnerships for Program Management**

Innovative partnerships frequently involve multiple product support elements, such as linking a manufacturer’s supply chain to a depot repair operation. This is consistent with defense policy. Although not specifically cited in current statutes, there is no language restricting the implementation of partnerships in functions beyond depot maintenance. Workshare (or similar) agreements in which there is no payment of funds by the contractor to the government for the sale of articles or services can be implemented for any product support element. For example, partnerships for supply support involving workshare agreements that use a combination of organic and commercial elements can be established under existing partnering authority.

PMs can apply partnerships as a way to comply with legal requirements, such as core capability requirements (10 U.S.C. 2464) while also achieving synergies from the combination of private sector and organic resources. The potential scope of partnering has few constraints and is open to creative arrangements developed by the prospective partners.

### 1.1.5 Product Support and Public-Private Partnerships

Product support is defined as a “... package of support functions required to field and maintain the readiness and operational capability of major weapon systems, subsystems, and components...”<sup>7</sup> Partnering is integral to the weapon system product support strategy that PMs document as part of the Life Cycle Sustainment Plan (LCSP). The “package of support functions” includes materiel management, distribution, technical data management, maintenance, training, cataloging, configuration management, engineering support, repair parts management, failure reporting and analysis, and reliability growth tracking.

Additional product support elements may be included in partnerships that are primarily associated with depot maintenance, to the extent those elements can be incorporated into the depot maintenance operation. They can also be provided as a part of workshare agreements. For example, maintenance planning might be associated with the depot maintenance production operation. Other examples reflect workshare or reciprocal resourcing agreements for collaboration on sustainment engineering, management of OEM-provided spares, and other elements that are funded separately but combined collaboratively in depot maintenance partnering agreements. The bulk of current partnering authorities enables rather than restricts partnering options.

Defense acquisition policy requires PMs to develop and implement performance-based logistics (PBL) strategies that include the best use of public and private-sector capabilities through government-industry partnering initiatives. The legal authorities outlined in Table 1-1 provide a fairly broad range of support for these initiatives.

### 1.1.6 Performance-Based Logistics and Public-Private Partnerships

DoD policy refers to PBL as a business arrangement that provides financial incentives to industry to deliver needed reliability and availability to DoD customers at reduced total cost by encouraging and rewarding innovative cost reduction initiatives.<sup>8</sup> Furthermore, the DoD recognizes the effectiveness of PBL when properly established and executed, and advocates for the expanded use of PBL product support solutions.<sup>9</sup> PBL offers the best strategic approach for delivering required life-cycle readiness, reliability, and ownership costs.

According to the DoD’s Product Support Business Model,<sup>10</sup> sources of support may be organic, commercial, or a combination of organic and commercial, with clearly defined roles for the PSI and the PSPs. Regardless of the PBL structure, the primary focus is on optimizing customer support, weapon system availability, and reduced ownership costs.

To carry out new operational and transformation strategies, warfighters require weapon systems that are available and reliable. Acquisition policy places full accountability for readiness on the PM. The PM, in turn, may obtain system and subsystem product support from organic providers, commercial providers, and partnerships between organic and commercial providers. As part of DoD’s core capability requirements, PMs are required to develop and implement product support strategies, including PBL arrangements that optimize total system availability while minimizing cost and logistics footprint.

Partnerships can help achieve performance-based outcomes by enabling a wide range of performance improvements, as illustrated below.

- Enhanced supply chain management
- Piece-part availability
- Workload management
- Sustainment Engineering
- Enhanced system design and processes
  - Technology insertion
  - Continuous modernization
  - Value engineering change proposals

<sup>7</sup> The *Defense Acquisition University Glossary* at <https://dap.dau.mil/glossary> defines these terms.

<sup>8</sup> *BBP 2.0: Continuing the Pursuit for Greater Efficiency and Productivity in Defense Spending*, November 13, 2012.

<sup>9</sup> *BBP 3.0: Achieving Dominant Capabilities through Technical Excellence and Innovation*, April 9, 2015.

<sup>10</sup> The *Defense Acquisition University Glossary* at <https://dap.dau.mil/glossary> defines these terms.

- Continuous process improvement
- Component reliability
- Best commercial practices
- Condition Based Maintenance - Plus
- Mitigation for obsolescence and diminishing manufacturing sources
- Industry involvement in
  - Organic workforce professional development
  - Support and test equipment
  - Facility/technology upgrades

### 1.1.7 Core Capability Requirements

As mentioned earlier, the law (10 U.S.C. 2464) requires that DoD maintain a “core” capability. That capability must be government-owned and -operated, and employ government personnel and government-owned and -operated equipment and facilities. The capability includes the ability to maintain and repair the weapon systems and other military equipment necessary for the military services to fulfill DoD’s strategic and contingency plans. Moreover, sufficient workload must be assigned to the government-owned and -operated facilities to ensure cost efficiency and technical competence in peacetime, while preserving necessary surge and reconstruction capabilities required for contingency operations.<sup>11</sup>

For depot maintenance, partnerships can help satisfy core logistics capability requirements by establishing relationships between commercial providers and DoD’s organic depots, with the commercial partner providing workload to the organic depot partner to help sustain core capabilities while utilizing contractor sustainment support. The range of skills and capabilities that can be brought to bear by any of the parties presents a broad set of possibilities, including the potential for an integrated public-private workforce. Another statute, 10 U.S.C. 2474, encourages private-sector use of excess capacity in CITEs by excluding the amount expended for contract performance at the CITE from the 50/50 limitation in 10 U.S.C. 2466. DoDI 4151.20 addresses the depot maintenance core capability determination process; a new instruction to address the depot source of repair assignment process is currently in development.

## Section 2. Value, Timing, Risk, and Keys

### 2.1 VALUE PROPOSITION FOR PUBLIC-PRIVATE PARTNERSHIPS

Partnerships should generate a beneficial effect on DoD product support and warfighter operational readiness. Beneficial effects can range from improved utilization of DoD facilities and infrastructure to improved system or subsystem repair processes that leverage public and private competencies. Congress, through the inclusion of enabling language in 10 U.S.C. 2474, specifically indicated the primary objective of partnerships is to “...reengineer industrial processes and adopt best-business practices at...Centers of Industrial and Technical Excellence in connection with their core competency requirements, so as to serve as recognized leaders in their core competencies throughout the Department of Defense and in the national technology and industrial base.” The tangible outcome from this process is the improvement in operating efficiency and effectiveness of DoD depots to facilitate operational readiness and materiel availability.

#### 2.1.1 Private-Sector Benefits from Successful Partnerships

Commercial activities stand to gain significant benefits from partnerships. Examples include the following:

- avoidance of capital investment through utilization of existing organic facilities and infrastructure
- access to a motivated, skilled, and fully trained organic workforce with applicable expertise, comparable labor rates, and long-term workforce stability

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<sup>11</sup> Policy guidance concerning the core determination process and related topics such as the depot source of repair process are addressed in the family of directives under DoD Directive 4151.18; consult Table 1-1 above for additional information.

- ability to leverage process permits and related environmental and hazardous materials licensing already in place at organic facilities
- access to laboratories, centers, ranges, and test facilities for the testing of materials, equipment, systems, software, and related specialized capabilities
- potential reduction in operating costs through the use of shared facilities, equipment, information, and related resources
- establishment of more collaborative working relationships between the public and private-sectors
- potential to expand the activity's business base.

### 2.1.2 Public-Sector Benefits from Successful Partnerships

Partnerships also provide benefits to organic activities. They:

- contribute to the ability to sustain core capabilities;
- improve facility and equipment utilization, decreasing overhead costs per unit;
- introduce commercial innovation, technology, and management practices into organic product support processes;
- provide value-added commercial support such as provision of spares to prevent or mitigate awaiting parts conditions, technical support to assist in determining allowable variances in materiel condition or waivers from inspection criteria, and adjustments to parts re-use criteria;
- facilitate access to commercial technical data, technologies, and repair processes not otherwise available;
- foster collaboration between organic and commercial activities to develop improved processes and the possibility of additional partnerships; and
- apply commercial product support resources to the partnership workload that may not otherwise be available organically.

PMs can benefit by reducing investments in what could otherwise be duplicative capabilities, and optimizing solutions for weapon system logistics support. Partnerships enable the accomplishment of core requirements under performance-based arrangements.

The particular benefits depend on the specific circumstances. The strongest partnerships actively seek synergies that are unique to each working relationship.

Taken as a whole, partnerships can provide synergies that neither partner could generate separately. Examples include access to skilled artisans and engineering expertise, improved supply chain response, and collaborative production management. Successful partnerships also can generate additional partnering opportunities.

### 2.1.3 Common Outcomes of Successful Partnerships

Some of the outcomes of successful public-private partnerships accrue to all of the parties in the partnership.

- Partnerships can improve overall product support.
- When partners are able to take advantage of their combined strengths and competencies, the benefits can include overall project cost reduction through joint efficiency improvements and a stronger ability to challenge cost elements that do not add value to the required capability.
- Traditional approaches can be assessed in a partnership and new ways of working together explored, driving innovation and flexibility while reducing costs and improving overall performance. Effects can include substantial reductions in the time to initiate projects, lower overall cost of doing business, and shorter sustainment response cycles.
- Greater transparency and openness of business objectives increase confidence between the parties involved in partnerships, allowing them to plan and manage more effectively.

- Increased trust over time allows the partners to consider new innovations, such as the possibility of integrated workforces and management structures.<sup>12</sup>

### 2.1.4 Summary Value Proposition for Partnerships

Partnerships should make sense from a business perspective. The business case or value proposition for partnerships should express value from the standpoint of all the partners to be considered worth the effort.

When partnerships are formed early in the life cycle, there may be less quantitative data available to justify their formation. Alternative approaches to satisfying the requirement for a business case analysis mandated in DoDI 4151.21 currently can include use of over-arching product support cost benefit analyses. Those additional approaches are presented in Section 3, with an objective of facilitating the approval process for new partnerships.

The value proposition for a partnership should be reviewed at intervals to assure the partnership remains worthwhile for all partners.

## 2.2 WHEN TO PARTNER

The decision to partner can be a complex one and is unlikely to be made based on a single advantage or disadvantage. If the answer to any of the following questions is yes, then partnering should be considered as part of a system's product support strategy:

- Are the requirements susceptible to change because they are constantly evolving?
- Is the approach incremental?
- Does the maintenance concept involve the PSI/OEM?
- Is technology insertion in the repair process or the product likely?
- Is there potential for efficiencies in the delivery of the equipment or service?
- Will the solution need to be developed throughout the project?
- Are there strong mutual dependencies in which joint management would be beneficial?
- Are project risks particularly difficult to predict or quantify? Is the best approach for the parties to work together on risk identification, assessment, and management?
- Is there a sole source of supply or is competition relatively weak?
- Are there key restructuring or rationalization issues to be addressed?
- Does the PM need to develop a product support concept that satisfies both core and performance-based requirements?

### 2.2.1 Assessing Partnerships—Conclusion

Partnering requires careful assessments of costs, benefits, and risks; clear and comprehensive agreements between the prospective partners; and proactive work to develop the relationship, including all of the related work forces. Effective partnering needs early, thorough planning; recognition of evolving acquisition strategies; and joint government-industry management plans.

Careful assessments and planning are important to support the formation of partnerships. Documentation should possess sufficient detail to make the appropriate point or business case; preliminary estimates may be the only available data early in a partnership's life.

## 2.3 THE LIFE CYCLE OF PARTNERING ARRANGEMENTS

There are at least two ways to view a partnership's life cycle. The first is to view partnerships as collaborative relationships that frame the partnering agreements. The second is to view partnering as an integral part of acquisition and product support and the opportunities that may exist throughout that life cycle.

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<sup>12</sup> Proposed partnering agreements are subject to legal and policy review to assure that they meet applicable requirements.

### 2.3.1 The Life Cycle of Collaborative Agreements

An eight-stage framework has been defined in a British standard to reflect the overall life cycle of collaborative relationships.<sup>13</sup> The intent of the standard is to assist organizations to assess and develop their own particular approach to collaborative business relationships. The following eight stages are an adaptation from that standard and are provided for information.

- *Stage 1, Awareness* – The overall strategic corporate policy and processes that lead to incorporating a collaborative endeavor when it can add value.
- *Stage 2, Knowledge* – Development of knowledge about a specific business opportunity to support the development of a business case and benefits analysis.
- *Stage 3, Internal Assessment* – A structured assessment of an organization's capability and maturity to successfully engage in a collaborative initiative.
- *Stage 4, Partner Selection* – Undertake a structured approach to the identification, evaluation and selection of appropriate partners.
- *Stage 5, Working Together* – Ensure that the partners establish the appropriate operational structure, governance, roles and responsibilities to effectively achieve desired business objectives.
- *Stage 6, Value Creation* – Establish procedures that seek to build value out of the joint relationship.
- *Stage 7, Staying Together* – Ensure effective measurement and monitoring of the relationship to maintain its optimum performance.
- *Stage 8, Exit Strategy* – Develop and maintain an effective exit strategy for disengagement where and when appropriate.

The eight stages reflect a fundamental framework for forming, managing, and successfully completing partnership arrangements.

### 2.3.2 Partnering in the Acquisition and Product support Life cycle

DoD policy requires that product support strategies shall include the best use of public and private sector capabilities through Government/industry partnering initiatives, in accordance with statutory requirements. An effective support strategy considers best competencies and partnering opportunities. Building on the previously developed system baseline, the Program Manager (PM), Product Support Manager (PSM) and the Product Support Management IPT must consider each discrete workload and assess where, how, and by whom it can best be accomplished, while considering statutory (i.e., Title 10 of the United States Code (10 U.S.C.)), regulatory, and pertinent DoD/Military Service guidance such as Depot Source of Repair (DSOR) determinations and Depot Maintenance Interservice Support Agreements (DMISA). In general, support workloads should include system-unique subsystems, commodities, or components; and common subsystems, commodities, and components. Within these categories, there should be various characteristics to be considered as the workload allocation and sourcing decisions are accomplished, to include:

- Title 10 U.S.C. applicability (Core, 50/50);
- Existing support process and sources (e.g., contract, organic);
- Existing support infrastructure (in-place, to be developed);
- Best capabilities evaluation (public, private sector market research);
- Opportunities for Public/Private Partnering (PPP);
- Similar factors.

The development of an effective support strategy should consider all of these factors in arriving at best value decisions, using decisions tools, including BCAs, to develop the optimum support

<sup>13</sup> British Standards Institution (BSI) publication BS 11000-1:2010, *Collaborative Business Relationships*, Part 1 "A Framework Specification," October 2010.



sourcing decisions. For example, consideration of PPP should be included when preparing the Product Support BCA for performance-based logistics support; when DSOR decisions are made; at Milestones B and C. Legacy systems should include PPP at appropriate points in the life cycle, e.g., initiation or renewal of PBL contracts, new technology insertion, changes in DSOR, or reviews required by law or regulation.

Suggestions for life-cycle partnering opportunities are listed in Table 2-1, aligned with major acquisition and product support events and milestones. Even though the ideas are couched in terms of depot maintenance partnering, they are applicable to any product support element for which partnering is a viable option.

**Table 2-1: Life -Cycle Possibilities for Partnering**

<b>Timing</b>	<b>Suggestion for Partnering-Related Activity</b>
Pre-Milestone A	
Materiel solution analysis	Start partnering dialog early with PM
	Provide initial introduction of provisional depot to PM
	Explore capabilities, opportunities, and avenues to provide depot maintenance assistance
Sustainability objectives	Assist in establishing sustainability objectives
	Evaluate product support capabilities that can be applied
Materiel solution	Assist in developing materiel solutions
	Assist in design of functional requirements for support, maintenance concepts, and technologies
Pre-Milestone B	
Technology development	Assist in defining functional requirements for supportability
Pre-Milestone C	
Engineering and manufacturing development	Assist in PBL planning including depot maintenance planning; set joint objectives, aims, vision, and identify business drivers
	Assist in product support strategy development and planning
	Assist in source selection planning
	Offer partnerships to competitors in source selections
	Complete the core capability requirements analysis and depot source of repair assignment process.
Formal partnership formulation	Conduct joint risk and opportunity management including a careful identification of potential risks and development of effective management processes
	Develop a value proposition to justify the partnership as applicable.
	Conduct legal and policy review
	Provide initial partnering for developmental support
	Define transparent information exchanges between the partners, including an identification of information required,

Formal partnership formulation (cont.)	sources, and timing.
	Establish management and governance processes to define responsibilities, authorities, management planning, and steps toward relationship management
	Devise issue management processes to quickly resolve issues at the lowest level using joint methodologies
	Create effective communications links to all stakeholders including updates to the partnering agreements, as required
	Jointly define management information systems and processes, including interchange methodologies
	Include incentives, rewards and protection, including indemnification to the extent they are required
	Agree on an exit strategy, including procedures for ending the agreement
	Report partnership formation and status, as applicable.
	Demonstrate partnership possibilities
Low Rate Initial Production (LRIP)	Implement partnership operations
	Demonstrate product support capabilities
Production and deployment	Scale partnership capabilities to meet sustainment requirements
Operations and support	Perform partnership activities
	Establish and train field teams
	Develop training requirements, including partnerships using commercial sources
	Conduct quality and materiel deficiency reporting analyses
	Link item unique identification (IUID) enablers to maintenance histories and shop findings
	Develop “tailored repair versus overhaul” strategy
	Jointly define diminishing or obsolescent source replacement strategy
End of life	Monitor variable workloads
	Plan storage
	Plan reclamation
	Plan recycling
	Plan disposition

## 2.4 PARTNERSHIP RELATIONSHIP MANAGEMENT

Effective relationship management is an important part of many successful business enterprises and is a key factor in making partnering agreements work. The relationship between DoD and industry must remain rooted in continuously improving performance and delivering better value.

Establishing and sustaining the right subculture and associated behaviors from all partners is a critical part of the overall project’s success. In particular, both of the partnering workforces may initially have concerns about the ultimate objectives and implications of a partnering arrangement. There must be sufficient trust and confidence to proceed in both the workforce and management of all partners. Careful preparation to manage relationships at a number of levels is essential. All parties must understand the strategy for relationship building and be educated and trained on the subject. Effective partnering relationships rely heavily on having the requisite change management skills, competencies, and training.

Table 2-2 examines various partnership relationship issues in some detail. In essence, Table 2-2 characterizes a spectrum of possible states for relationships—measured in terms of specific issues and described in terms of an overall characterization—ranging from “failing” to “collaborative.” The matrix may prove useful when assessing the current maturity of a partnership relationship and identifying areas for potential improvement.

**Table 2-2: Partnership Relationship Management Matrix<sup>14</sup>**

	<b>Failing</b>	<b>Reactive</b>	<b>Performing</b>	<b>Cooperative</b>	<b>Collaborative</b>
Communication planning	No or few meetings. No communications structure with defined points of contact.	One way (transactional) communication. No agreed points of contact. Meetings focus on problems and issues.	Regular meetings and communication structure with clear and consistent points of contact; contact maps documented.	Frequent communication. Points of contact are known and mapped. Meetings focus on short-term actions and long-term planning.	Joint strategic governance focused on communication, relationship, and performance planning. Stakeholder maps define roles and responsibilities.
Information exchange	Secrecy prevails; no sharing of information. Reliant on formal, written communications.	Information provided on request, although often ambiguous and inconclusive.	Information is limited to contractual obligations, where clarification may still be required.	High-quality information (clear, accurate, and timely) is provided in advance of requirements.	High-quality information is available in a shared and open environment.
Problem solving	Blame culture prevails; no acknowledgment of problems.	“Firefighting” culture, focus is on resolution, rather than prevention.	Problems identified early, and recovery plans communicated in advance.	Proactive solutions to emergent and potential problems.	Joint activity to preempt and mitigate any problems.

<sup>14</sup> Derived from British Standard BS 11000-1:2010, *Collaborative Business Relationships — Part 1: A Framework Specification*, A BSI Standards Publication, October 2010. A version of the matrix was published by the United Kingdom, Ministry of Defence, Defense Commercial Directorate, in *A Partnering Handbook for Acquisition Teams*, undated.

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	<b>Failing</b>	<b>Reactive</b>	<b>Performing</b>	<b>Cooperative</b>	<b>Collaborative</b>
Responsive-ness	No or poor response to inquiries and requests.	Responses to inquiries are reactive and often lack definition.	Responses to inquiries are timely and compliant.	Responds to predicted requirements.	Responses provide suggestions for improvement.
Behavior	Little or no behavior standards.	Recognize different behavior standards.	Behavior demonstrates appreciation of professional and ethical standards.	Behavioral standards agreed upon, managed, and maintained.	Joint behavioral charter deployed.
Strategic alignment	No awareness of each other's business strategies.	Limited awareness of the other party's strategies. No activity to capture benefits or develop opportunities.	Shared awareness of each other's strategies and understanding of the impact on own strategic planning processes.	Some joint, project-specific, strategic planning between parties.	Full visibility, understanding, and alignment of strategies. Impacts are known and jointly managed.
Life cycle capability management	Life cycle not considered.	Recognition of TLCM; activities limited to specific project requirements.	Solutions reflect the participation of both parties. Investment to meet development milestones.	TLCM concept jointly integrated at the project level.	TLCM is jointly embedded within business processes.
Solution developments	Little or no participation in developing solutions.	Little, or late, participation in developing solutions. Requirements modified to fit current products and processes.	Solutions reflect the participation of both parties. Investment to meet development milestones.	Parties engaged at an early stage of solution definition. Investment to improve performance.	Full collaborative participation (multibusiness and cross-functional teams). Investment focused on joint objectives.
Value	Focus solely on cost and price; value is not defined.	Concept of value is recognized and defined.	Value is considered in decision making.	Value added is jointly accomplished. Targets are established.	Sophisticated measurements of value are employed. Targets achieved or exceeded.

## 2.5 RISK ASSESSMENT AND MITIGATION

Relationship management (see Table 2-2 above) is only one consideration that goes into a decision to partner between a public-sector and a private-sector entity. Other factors can be addressed in the arena of risk assessment, and to the extent it is possible, risk mitigation. Some of the assessment factors are established by law or policy; some require careful consideration and negotiation. For the purposes of this discussion, assessment factors have been organized in terms of the three major types of actors that are involved in partnering agreements.

### 2.5.1 Organic Partnering Activities

Title 10 requirements for organic industrial activities are designed to provide a risk mitigation capability for unforeseen calamities and production requirements that cannot be supported within normal capabilities or by industry for any reason. Mission briefings for most organic activities include accounts of their response to any number of such emergent requirements. By design and statute, the activities maintain built-in capacity to respond to those events.

Organic industrial activities are not self-sufficient in terms of their ability to support emergent work requirements. They depend on the full range of integrated product support elements provided by combinations of external public and private organizations for successful task accomplishment. An assessment of these elements is part of a “supportability” determination the organic depots undertake before inducting new work.

Notwithstanding their outstanding performance history, industry has expressed concern about their ability to hold organic industrial activities accountable, especially when the prospective commercial partner is being contractually required to provide performance guarantees for its work.

Title 10 U.S.C. 2563(c)(3) and 4544(c)(4) partially address these concerns by authorizing designated organic industrial activities to be held accountable for misconduct or gross negligence as well as for cost, schedule, and quality of work requirements. Commercial firms have continued to express concern about the actual procedures that may be used to address any of these accountability factors.

In practice, the organic activities can address some of these concerns with a variety of approaches that can be included in partnering and implementation agreements. Examples include

- use of *tailored* pricing, when feasible, as a means to limit price fluctuations during the performance period caused by external factors;<sup>15</sup>
- establishment of quality assurance procedures to address material defects and premature failure;
- definition of management structures and interchange procedures to address day-to-day production management issues as they arise;
- establishment of dispute resolution procedures when issues require senior management resolution;
- confidence-building steps involving open communication, relationship management, and a performance history that delivers what is required on time, on cost, and with specified quality; and
- careful definition of circumstances where a partnership might be placed “on hold” or even terminated via defined “off-ramps” in the unlikely event an issue cannot be resolved.

Related topics to include liability considerations, indemnification, and violation-of-laws as well as examples of both contractual and agreement language are discussed in the Section 2.5.5.

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<sup>15</sup> Tailored pricing is authorized under specified circumstances in DoD Regulation DoD 7000.14-R, Department of Defense Financial Management Regulations (FMRS), Volume IIb, Chapter, 9, Section 090105, “Public-Private Partnerships at Depot Maintenance Activities,” paragraph C.2., June 2010.

Partnerships create complementary business relationships between two distinct entities, with the relationships marked by mutual cooperation, responsibility, and accountability. Trust between the partners is an essential ingredient for success, and that trust grows over time.

Industry feedback about existing partnerships indicates the question of organic risk is being addressed in ways that are satisfactory to the industry partners.

### **2.5.2 Commercial Partnering Activities**

When commercial partners perform their work for a government requiring activity, their work is defined by a government contract, and their performance is overseen by government activities such as the Defense Contract Management Agency. Established contract clauses hold the contractor accountable for required performance. The partnership documents associated with the government contract further define behaviors and expectations agreed upon by all partners in order to facilitate relationship management.

Over 80 percent of depot maintenance contracting is single-source to the OEM. The combination of oversight clauses and the potential for manufacturer provision of new parts and products makes the commercial side of most partnerships a very low-risk venture for the organic depots.

Commercial partners face similar risks for natural disasters as the organic depots. One reason commercial firms locate their production capabilities at multiple dispersed locations is to mitigate the risk of a disruption at any single site.

At least in part, organic depot maintenance activities can serve as an alternate production facility when commercial sites experience infrequent production disruptions.

### **2.5.3 Requiring Activities**

There is always a potential that a requiring activity may experience a reduction in available funding or an adjustment in force structure that would lead to a reduced workload. Open and continuous communication between the partners and with the PM is key to assessing and addressing the consequence of these external factors and their impacts on production.

### **2.5.4 Other Industrial Activities**

A range of additional organic industrial activities is engaging in partnering activities. A partial list includes arsenals, ammunition plants, warfare centers, and test and measurement facilities. Depending on the specific legislation authorizing them to sell goods and services, these activities may possess varying degrees of risk mitigation authority.

### **2.5.5 Liability Considerations**

Both the organic and commercial partners in any arrangement consider liability a key topic in a PPP. There are many examples throughout the DoD on how liability considerations have been documented in both partnering arrangements and contracts that implement PPPs. Efforts to standardize liability language have been attempted throughout the services, but liability language has been found to be highly dependent on the specific workload related to the partnership and the policies and practices of the organic organizations implementing PPPs.

#### **2.5.5.1 Limitation of Liability Concerns**

As stated above, both the organic and commercial partners in any arrangement consider liability a key topic in a PPP. In determining the liability issues in a partnered workload, there are a few major tenants that cannot be ignored:

- In a public-private partnership, federal law requires the private firm to indemnify or “hold harmless” the Government from any loss or damages the private firm may incur as a result of partnering with a government-owned depot (10 USC 2474 and 10 USC 2563)
- The Anti-Deficiency Act, 31 USC 1341 holds that an agency shall not incur an open-ended contingent liability

- Government signatory to the PPP Agreements may not have the authority to wave contractual or tort claims on behalf of the agency or the U.S.

Commercial partners must have liability addressed in their partnerships and contracts that implement PPPs as method of risk management. In other words:

- It is important to our industry partners to allocate or reduce risk in their contracts and/or partnership agreements
- This adds a greater degree of certainty in their contracts that may result in a lower contract price and maintain appropriate risk allocation between parties

Below is a list of considerations with regard to liability based on “best practices” from Service and industry experts with extensive PPP experience. The list of considerations are divided into items that must be considered and are recommended to be considered in the prime contract and PPP agreements, respectively.

These “best practice” considerations are not standardized language to be used in contracts or PPP agreements but rather state the consideration and how it applies in PPPs. These considerations may be implemented in a contract or PPP agreement in a variety of ways depending upon the nature of the agreement.

### **2.5.5.2 Liability Considerations for Public-Private Partnerships**

#### Contract Considerations (Mandatory)

- “Equitable Adjustment” - this is discussed in chapter six of the *Defense Procurement and Acquisition Policy*. The concept of equitable adjustment states that, if there is a modification of the contract in some way, upon request by the private firm, the government will consider an adjustment to the terms (pricing, schedule, etc.) of the contract to compensate for the change. This is applicable to PPP because one of the conditions under which an equitable adjustment is allowed pertains to unabsorbed or extended overhead costs suffered by the private firm due to government delays or work stoppages. It may also apply if the government rates increase significantly due to ground rules & assumption (GR&A) costs, etc.
- “Legal Liability Indemnification” - the private firm supplier of goods and services usually carries professional liability insurance. This insurance provides protection from claims of harm caused to a party by the negligence of the insured in the performance of professional services. The private firm can request indemnification from the government for claims by a third party that exceed the private firm’s professional liability insurance coverage. Provisions for this type of indemnification are covered under Title 50, USC 1431-1435, and are discussed in section 52.250 of the FAR. Inclusion of this type of clause in the Government contract lowers the private entity’s perceived risk in the partnership.
- “Legal Remedy” - legal remedies include bringing the matter to the Armed Services Board of Contract Appeals, submitting the issue to an alternative dispute resolution procedure as authorized by the Administrative Dispute Resolution Act of 1996, (Pub. L. 104-320) or other legal remedies consistent with the requirements of Title 10 USC 2553.
- “Best Effort” - each party agrees to put its best efforts forward to settle all controversies through direct negotiations between principals acting for each party. The parties list this commitment in writing as part of the contract.

#### Contract Considerations (Optional)

- “Termination of the Contract by the Government” -the government may terminate the contract with the private firm for either cause or convenience. Usually the government pays the private firm for work performed up to the notice of termination and reasonable charges, if it terminates the contract for convenience. If the government terminates the contract for cause, it typically is not liable for any costs except for finished goods and services, less any penalties. Termination for cause is a lose-lose situation and is only used as a last resort.
- “Liquidated Damages” - government contracts can provide for payment of a certain fixed amount in the event of the breach of the contract. The government uses liquidated damages clauses to account for probable damages in case of late delivery or untimely performance by the private firm. Therefore, the liquidated damages amount must be a reasonable forecast of just compensation for the harm caused by late delivery or untimely performance of the particular contract. It can be a tool for minimizing risk for both parties because it sets a fixed and agreed upon amount due to non-performance of an aspect of the contract.

#### Partnership Agreement Considerations (Mandatory)

- “Dispute Resolution” – considerations should lead to either a & b and/or c depending upon the partnership:
  - “Minor Dollar Value Disputes” - if a dispute remains unresolved after direct negotiations and the value is less than a certain threshold (specify threshold amount in U.S. dollars, typically \$10,000), the parties agree to have the dispute resolved by the commanding officer of the public entity. The parties agree, in writing, that this decision is “final and conclusive, and shall not be appealable or otherwise subject to challenge.”
  - “Major Dollar Value Disputes” - if a dispute remains unresolved after direct negotiations and the value is greater than a certain threshold (specify threshold amount in U.S. dollars, typically \$10,000), the parties agree to an administrative procedure that would be exhausted before further legal action could be undertaken. The procedure would involve a hearing by the commanding officer of the public entity, and a decision by the commanding officer with a time limit for appeal by the private firm. If the private firm decides to appeal, it must provide a written appeal to the next higher commanding officer at headquarters. This individual would conduct a hearing and make a decision. If the private firm decides to reject the decision of this officer, it has a time limit to then pursue any legal remedy available to it by law.
  - “Alternate Dispute Resolution” - the parties may each select an objective third party to represent them in a process directed and facilitated by an administrative law judge of a board of contract appeals. The resolution of the dispute is by mutual agreement of the parties.
- “Termination of the Partnership by the Private Firm” - the private firm may terminate the PPP with advance written notice to the public entity. Usually, the private firm remains responsible for costs incurred by the public entity up to the date of receipt of the termination notice, as well as any costs to tear down any facility, or return any facility to its condition prior to the PPP start.
- “Best Effort” - each party agrees to put its best efforts forward to settle all controversies through direct negotiations between principals acting for each party. The parties list this commitment in writing as part of the contract.
- “Warranty” - an agreement between a buyer and a seller of goods or services, detailing the conditions under which the seller will make repairs or fix problems without cost to the buyer. Warranties are addressed in most PPPs and can have a large impact on the perceived risk for both the private firm and public entity.



### 2.5.5.3 Implementing PPP Liability Considerations in Contracts: H-Clauses vs. I-Clauses

- Section H, Special Contract Requirements - includes any special contract requirements not included in Section I. In other words, H-Clauses are “special contract requirements” unique to each contract and must be negotiated in each contract.
- Section I, Contract Clauses – standard I-Clauses are included in the Federal Acquisition Regulation (FAR) and DFAR and include any clauses required by law or any additional clauses normally expected to be in any contract.. The established I-Clauses provide a tool for the contracting officer to consistently address required topics common to all contracts. I-Clauses can be used verbatim or they can provide suggested language to be used based upon the contract.

Over time DoD partnering practitioners have drafted H-Clauses focused on PPP implementation and provided them to both government program office contacts and industry partners so they could be added to contracts that in part implement PPPs. The use of H-Clauses are often necessary to define what in the associated FAR contract is and what is not applicable to the partnership agreement, since the partnership agreement in itself is not a contract. Historically these PPP H-Clauses have helped facilitate partnerships since they are intended to spread the risk between the government and industry. There have been efforts to codify PPP H-Clauses used over time by transitioning them into PPP I-Clauses with the aim at standardizing accepted PPP implementation language across the DoD and incorporating clauses that facilitate PPP into the Defense Federal Acquisition Regulation (DFAR).

The following H-Clauses have been used in contracts implementing PPP and are provided as “best practices:”

- “Flow-down Requirement” - No clause or provision contained in the Federal Acquisition Regulation (FAR) or the Department of Defense or any other agency supplement thereto, or any Presidential Executive Order otherwise applying to the conduct of acquisition from non-Federal providers, which is specifically included in this prime contract, shall apply to any PPP agreements issued or other contractual vehicle that is placed by the Contractor with a Government agency providing a supply or service under this prime contract, except as may be expressly included by mutual consent in the agreement between them.
- “FAR Non-Applicability” - Pursuant to FAR 1.104, FAR Applicability, PPP agreements fall outside the applicability of the FAR and agency supplements thereto, because the FAR applies to contracts where the Government party functions as a buyer. No clause or provision contained in the FAR or the DoD/Other Agency Supplement thereto, or any Presidential Executive Order (EO) otherwise applying to the conduct of acquisition from Non-Federal contractors, which is specifically included in this prime contract, shall apply to any PPP agreement issued or to any other contractual vehicle placed by the Contractor with a Government agency providing a supply/service under this prime contract, except as may be expressly included by mutual consent. Inclusion of any FAR or agency supplement clause or requirement shall be a subject of negotiation between the buyer (Contractor) and the seller (Government Partner).
  - “TINA Non-Applicability” - the Truth in Negotiations Act, 10 USC Section 2306a, as amended, (hereinafter referred to as TINA) and its implementing regulations/clauses, do not apply to any Government Partner performing under this contract. Accordingly, the Government agrees:
    - the portion of the contractor’s contract price that consists of costs relating to work performed by a government partner need not be supported by the submission of certified cost or pricing data;
    - requirements for submission of “subcontractor cost or pricing data,” and performance of a cost analysis on said data by the contractor are inapplicable to cost or pricing data submitted by a government partner under PPP agreements and,
    - the absence of such certified data shall not form the basis, directly or indirectly, for a claim by the government of defective pricing against the contractor.

- “Non-Applicability of Advanced Payments” - the contracting officer will not consider the cash advances required by the terms of the Partnering Agreement/Implementation Agreement to be “advanced payments” under FAR Part 32.4.
- pricing guidance for sales of goods/services by the government partner provided to the contractor under a PPP agreement is set forth in the DoD 7000.14-R, Financial Management Regulation (DFMR), Vol 2B, Chapter 9, paragraph 090105, Public- Private Partnerships at Defense Working Capital Fund Depot Maintenance Activities.
- when appropriate to the scope of, and risks associated with, the subject contract, the government partner may elect to accept incremental “advanced payments” pursuant to DFMR 7000.14-R, Vol 2B, 090105, Subparagraph E.
  - (FAR Part 32.4 will continue to apply with respect to any advanced payments by the Government (as the buyer) for the exclusive benefit of the contractor under this contract).
- “Release of Responsibility” - notwithstanding any clause or provision in this contract, including but not limited to the “Excusable Delays” and “Termination/Default” clauses, the Government agrees not to hold the contractor responsible, directly or indirectly, for the delay, non-performance, or other non-compliance of any work required under this contract to the extent such delay, non-performance, or non-compliance is attributable to the action or inaction of an Government partner performing a PPP related to the contractor’s performance obligations under this contract.
- “Equitable Adjustment” - such delay, non-performance, or other non-compliance attributable to the Government Partner in performing such PPP, shall be considered to be an excusable delay for the contractor or non-compliance for which an equitable adjustment in the performance period and/or cost/price of this contract shall be provided by the Government to the contractor if so requested by the contractor, and where the contractor can demonstrate such Government Partner fault (quantum and entitlement) as required by the disputes clause in this contract. Further, the Government shall not use such delay, non-performance, or non-compliance, in whole or in part, as the basis for termination for default, withholding of progress payments or the assessment of liquidated damages by the Government under this contract. Any disagreement with the contracting officer’s final decision regarding an equitable adjustment is subject to the Disputes Clause.
- “Other Contract Impacts” - such delay, non-performance, or non-compliance attributable to the Government Partner shall not be used, in whole or in part, by the Government as a basis for,
  - an adverse rating of the contractor under the Contractor Performance Assessment Review System (CPARS) for its performance under this contract;
  - an adverse rating of the contractor under an award fee type contract if applicable;
  - debarment or suspension of the contractor from business with the Government or proposing the contractor for debarment or suspension;
  - withdrawing Government approval of the Contractor’s Purchasing System; and
  - application of any special risk transfer provision where a performance failure adversely impacts contract compliance, i.e., total system program/integration responsibility (TSP/IR), liquidated damages, warranty, if applicable.
- “Continued “Good Faith/Duty to Mitigate” - this provision does not excuse the contractor from its requirement to continuously exercise good faith to effectively manage the Government Partner and, if necessary, to perform the affected services itself or find a commercial sub-contractor to perform the services. Such efforts include reasonable corrective actions to mitigate the effects of the Government Partner’s non-compliance on prime contract schedule and/or prices. Likewise, this provision does not excuse the Government Partner from continuously exercising its best and good faith efforts to perform its obligations under its PPP.
- “Risk of Damage/Loss” - the Government assumes the risk of, and shall be responsible for, any loss or destruction of, or damage to any Government Furnished Property (GFP) or contractor-acquired property delivered to the Government Partner under a PPP including but not limited to, any amounts the contractor might otherwise be responsible for un-

der Defense Federal Acquisition Regulation Supplement (DFARS) clauses 252.228-7001, Ground Flight Risk, and 252.228-7002, Aircraft Flight Risk, or other Government Property clause 52.245-1, Government Property (Deviation), 52.245-2, Government Property Installation Operation and Services, 52.245-9, Use and Charges, and 5352.245-9000, Government Furnished Property of this contract. In the event the contractor provides the Government Partners with Government property, or contractor-acquired property accountable to this contract and such property is required for continued performance of this contract and is either lost, damaged or destroyed by the Government Partner, the contractor shall be entitled to an equitable adjustment under the terms and conditions of this contract to the extent the contractor actually suffers a loss attributable to the Government Partner.

Liability considerations and implementing language for both contracts and partnership agreements are a necessary risk mitigator for both the Government and industry and often prove to be an attribute of a successful PPPs.

### 2.5.6 Indemnification and Violation of Laws (VOL) Clauses

An “indemnification clause” in the context of DoD PPPs documents to what extent the government and industry partners entering into a PPP are obligated to compensate each other for losses or damages occurring during the execution of the workload defined in the partnership.

DoD and Industry depot maintenance practitioners have developed and applied a PPP indemnification clause for DoD organic depots (designated Centers of Industrial and Technical Excellence or CITEs) that enter into PPPs in accordance with the language in the applicable statute (Title 10 U.S.C. § 2474). The below indemnification clause is presented as a “best practice:”

- Per 10 U.S.C. § 2474(e)(2)(B), \_\_\_\_\_ (private-sector partner) agrees to hold harmless and indemnify the United States –
  - From any claim for damages or injury to any person or property arising out of the use of the Government's equipment or facilities, except in the case of Government employee's willful misconduct or gross negligence or in the case of a claim by a purchaser of articles or services that were provided under this (IA, Direct Sales Agreement) that damages or injury arose from the failure of the Government to comply with quality, schedule, or cost performance requirements in the contract to provide the articles or services; (10 USC 2563(c)(3)); and
  - Any liability or claim for damages or injury to any person or property arising out of a decision by the Secretary concerned or the Secretary of Defense to suspend or terminate that use of equipment or facilities during a war or national emergency.

For DoD and industry partnerships in which the 10 U.S.C. § 2474 statute does not apply (i.e. PPPs at non-CITEs), the indemnification clause developed shall be in accordance with the applicable statute.

Related to the partnership indemnification clause is the “violation of laws” clause, which depending on the specific PPP workload may be required due to the desires, policies and standard practices of the government and commercial partners. The below VOL clause clearly states that each partner subject to a government and industry PPP is responsible to comply with all laws during the execution of the workload during the execution of the PPP, is responsible for its own violations, and that the commercial partner indemnifies the government partner for any liability due to any commercial partner's violation of law. This (VOL) clause is presented as a “best practice.”

- Both Parties recognize their responsibility to comply with all applicable local, state and Federal laws or rules and regulations, and Executive Orders (EO), applicable to each Party. Each Party will be responsible for its own violations of local, state and Federal laws, rules and regulations and EOs. However, Private-Sector Partner agrees it will indemnify the Government Partner against any and all liability arising out of, or in the performance of, this Agreement as a result of Private-Sector Partner's violation of any such

local, state and Federal laws, rules and regulations, or EOs, including but not limited to, environmental, occupational safety, and labor laws.

## 2.6 KEYS TO SUCCESSFUL PARTNERSHIPS

A GAO report listed 14 characteristics that partnerships need to achieve success.<sup>16</sup> Table 2-3 presents these characteristics as presented in that report.

**Table 2-2: Characteristics That Partnerships Need to Achieve Success**

Success characteristic	Reason for/benefit of partnership
Long-term relationship and commitment	A long-term relationship and commitment (1) permit both contractors and depots to better plan future workload requirements and create a better business case for the contractor to make investments to improve depot repair capability, and (2) allow the contractor to help manage parts obsolescence.
Shared partnership vision and objectives	Having partners share the same partnership vision and objectives ensures the partners will not be working at cross-purposes.
The right metrics and incentives	The right metrics and incentives are needed to effectively measure that progress is being made and ensure the partners are motivated to achieve partnership goals and objectives.
Early acquisition community involvement	Developing the partnership with acquisition community involvement during the early phases of a weapon system's acquisition helps to ensure any additional depot maintenance capability development that is needed is fully planned and funded.
Complementary skills and abilities	Each partner should bring complementary skills and abilities to the partnership because if each partner's capabilities are the same, the relationship may result in a competitive and potentially adversarial relationship, not the cooperative synergistic relationship hoped for in a partnership.
Senior-level advocacy and support	DoD and contractor senior management support for a partnership is necessary to ensure the effort receives the focus and resources needed to achieve success.
Sound business case analysis	A comprehensive business case analysis, including expected outcomes, should be conducted as part of the decision process for entering a partnership to ensure a sound result benefiting both the depot and the private-sector partners.
Mutual trust and shared risk	The partnership should be firmly grounded in mutual trust, open communications, and balanced risk among partners.
Flexibility to change partnership scope	To ensure the ability to adapt to changing circumstances or factors, the partnerships should have the flexibility to change the partnership scope.
Balanced workload	Workload should be balanced among the partners to ensure meaningful involvement for each partner and ensure one partner does not receive only low-skilled work or no work at all.
Independent review and oversight	Independent review and oversight provides an objective assessment of whether each partnership is achieving the expected benefits and that each partner performs as expected. Such a review also provides a basis for correcting or redirecting partnership efforts if expectations are not being met.

<sup>16</sup> Government Accountability Office (previously General Accounting Office), *Depot Maintenance: Public-Private Partnerships Have Increased, but Long-Term Growth and Results are Uncertain*, report GAO-03-423, April 2003, p. 14.

Success characteristic	Reason for/benefit of partnership
Enforce partnership decisions and requirements	To ensure successful partnering efforts, the partners' senior management must provide a mechanism for enforcing compliance with partnership decisions and requirements.
Full coordination with all stakeholders	Public-private partnership efforts should include steps to get feedback from all stakeholders on planned efforts and adjust the partnering strategies to reflect legitimate concerns of these stakeholders.
Clearly documented objectives in partnering agreement	Once clear mutual partnering objectives are determined, they should be documented into a formal partnering agreement. The documentation can provide for dispute mediation and resolution, and help delineate each partner's liability.

Source: GAO report GAO-03-423, April 2003, p. 14.

## Section 3. Business Case Analysis for Public-Private Partnerships

### 3.1 INTRODUCTION

The purpose of this section is to provide guidance on why and how to execute a Public-Private Partnership (PPP) Business Case Analysis (BCA). It includes roles and responsibilities, a recommended analytical process to follow, and an assessment matrix that can be used to scale the BCA appropriately. Note that PPP analysis may vary in size and scope, depending on the amount of detail necessary to enable the program manager to determine if a PPP is feasible and beneficial to the government. The PPP analysis may take many forms, ranging from the top-level product support analyses of a program's product support strategy, to a simple cost-benefit analysis that is limited in scope and tailored to the particular PPP under consideration.<sup>17</sup> Regardless of the type of analysis or tool chosen, a PPP BCA can be used to assess PPP cost drivers, value propositions, and related product support issues applicable throughout the acquisition and sustainment life cycles. The intent is two-fold:

- to maximize opportunities to reduce weapon system acquisition and support costs and
- to increase the efficiency and effectiveness of the defense industrial base.

The defense industrial base includes both organic and commercial entities.

### 3.2 WHY CONDUCT A PPP BCA?

As described in the *DoD Product Support Business Case Analysis Guidebook*: a BCA is “a structured methodology and document that aids decision making by identifying and comparing alternatives by examining the mission and business impacts (both financial and non-financial), risks, and sensitivities. BCAs may be somewhat different from other decision support analyses through their emphasis of the enterprise wide perspective of stakeholders and decision makers and assessment of the holistic effects impacted by the decision.”

To ensure a sound result benefiting both the public and the private sectors, a PPP BCA should be conducted prior to entering into a partnership. As stated earlier in Section 2, a PPP BCA should express value from the standpoint of all of the partners for the prospective partnership to be considered worthwhile. For example:

- From the DoD perspective, partnerships should generate a beneficial effect on materiel sustainment and warfighter operational readiness. Other benefits can range from improved utilization of DoD facilities and infrastructure to improved system or subsystem repair processes that leverage public and private competencies.
- From the commercial perspective, partnerships should provide a return to stakeholders. For example, benefits to a commercial partner include access to a skilled and fully trained DoD workforce with applicable expertise, comparable labor rates, and long-term stability;

<sup>17</sup> DoDI 4151.21, *Public-Private Partnerships for Depot-Level Maintenance*, April 25, 2007.

and reductions in operating costs through the use of shared facilities, equipment, information, and related resources.

### 3.3 ROLES AND RESPONSIBILITIES

As a type of product support BCA, the PPP BCA generally follows the guidance contained in the *DoD Product Support Business Case Analysis Guidebook*. However, in the interests of clarity, the roles and responsibilities for a PPP BCA are modified somewhat as shown in Table 3-1.

**Table 3-1: Roles and Responsibilities**

Roles	Responsibilities
Warfighter	Impacts on the Warfighter are the primary considerations of the BCA. As the user of the weapon system, the Warfighter is typically the ultimate beneficiary of the product support strategy. The Warfighter provides the performance requirements for the weapon system which are ultimately taken into account for the support strategy. The Warfighter also provides feedback on the system and support strategy.
Program Manager (PM)	The owner of the Product Support BCA is the program office. The PM is the primary executor of the actions and recommendations derived out of the BCA. For Milestone Decision Programs, the PM estimates the cost of conducting and obtains resources necessary for accomplishing the PPP BCA.
Product Support Manager (PSM)	The PSM is the program office employee responsible to evaluate and consider the PPP BCA of major defense acquisition programs. Within the program office, the PSM has the responsibility to plan, develop, implement, and execute the sustainment strategy or life-cycle sustainment plan (LCSP), informed by the PPP BCA.
Center for Industrial and Technical Excellence (CITE) Commander	The owner of the PPP BCA is most often the CITE. All depot activities that may impact one or more of the integrated product support elements have a key stake in the outcome of the PPP BCA. For product support strategies, the CITE estimates the cost of conducting and obtains resources necessary for accomplishing the PPP BCA.
Governance Body (as required)	Approval authorities provide directional guidance and concurrence throughout the BCA process on such matters as the problem statement, assumptions, constraints, data sources, risk mitigation strategies, etc. The governance body has the responsibility to ensure that the product support strategy integrates an enterprise wide perspective. Normally, the governance board is determined by the impacts of the decisions being made, as well as, the PM's chain of command.
BCA Team Leader	The BCA team leader is the primary focal point for the consolidation of inputs, assessment of alternatives, and preparation of the final BCA document.
Business Analyst	The business analyst has the analytical training and skills to conduct the majority of the PPP BCA analysis. This includes the financial/cost analysis section, the analytical methodology for the PPP BCA, and the conclusions and recommendations. The analyst conducts the funding analysis and budget plan with regards to the recommended PPP BCA approach
Logistician	The logistician is responsible for ensuring the product support strategy, requirements, and performance measures are addressed in the PPP BCA. Additionally, this person is responsible for completing the mission impact section, including assisting with the nonfinancial analysis of the PPP BCA.

<b>Roles</b>	<b>Responsibilities</b>
Systems Engineer	This person validates that the alternatives under consideration are technologically plausible and comprehensive in nature to support the PPP BCA's purpose.
Product Support Integrator/Provider	The PSI or PSP provides subject matter expertise and consultation with regards to the attributes of the product support strategies and alternatives that are being explored in the PPP BCA. The PSI is an entity performing as a formally bound agent (e.g., contract, Memorandum of Agreement, Memorandum of Understanding) charged with integrating all sources of support, public and private, defined within the scope of product support arrangements to achieve the documented outcomes.
Data Manager	The data manager is responsible for maintaining and keeping historical records of past PPP BCAs. These records include research, performance outcomes, cost estimates and methodology, sources of data, etc. as recommended in the GAO report GAO-10-717 on O&S costs. Historical records maintenance is critical to future analysis, variance analysis, and future iterations of the PPP BCA.
Legal and Contracting	The legal and contracting officers and managers review the PPP BCA as an advisor concerning compliance with laws and regulations.
Subject Matter Experts	SMEs are recognized experts in the specialized knowledge applicable to the analysis and preparation of the PPP BCA components (e.g., cost estimation, system requirements, risk analysis, etc.) This includes other relevant stakeholders that provide inputs to and impacts on the PPP BCA analysis.

**3.4 RECOMMENDED PROCESS**

It is recommended that key stakeholders lead, organize, and conduct the PPP BCA per these process steps:

- Articulate desired outcomes (see Section 2.1, Value Proposition for Public-Private Partnerships)
- Determine that a PPP may have sufficient merit to warrant formal exploration
- Appoint a BCA team leader
- Write BCA project plan and gather appropriate team members
- Conduct BCA kickoff to draft problem statement and design governance body and process (as required)
- Approve desired outcomes, problem statement, and BCA project plan
- Limit scope; set ground rules and assumptions; select analysis methods, tools, and rationale; define evaluation criteria
- Brainstorm PPP alternatives
- Collect authoritative data sources
- Analyze mission and business impacts
- Perform risk and sensitivity analyses
- Compare alternatives and summarize results
- Draft conclusions, recommendations, and implementation plan
- Draft executive summary
- Distribute BCA for staffing
- Make adjudicated edits
- Finalize BCA
- Obtain approval to enter into PPP
- Implement PPP

- Document lessons learned, best practices, and resource estimates

### 3.5 ASSESSMENT MATRIX

The *DoD Product Support Business Case Analysis Guidebook* provides the principle reference for developing and writing the BCA decision support package with respect to the proposed PPP. When applied as an enabler to identify key alternatives for a best value assessment of a proposed PPP product support strategy, the Assessment Matrix described below can help the PPP BCA team quickly narrow down the assessment criteria and focus on the most important inputs, outputs, and outcomes for the proposed PPP.

#### 3.5.1 Overview

The Assessment Matrix provides a list of assessment criteria for consideration by the PPP BCA team when evaluating the merits of a proposed PPP proposal. The matrix is not intended to be an all-inclusive list of potential PPP selection criteria, but rather to serve as a starting point for ideas that might be considered if applicable to the proposed PPP. The team can and should adopt selection criteria from this matrix as appropriate and other factors as needed to develop a comprehensive and well supported BCA.

#### 3.5.2 Instructions

The Assessment Matrix includes eight categories of key factors including technical, contracting, organizational, delivery, benefits analysis, cost analysis, integrated logistics support analysis (internal to depot), and legal analysis, and a ninth category for "other" coordination requirements as may apply.

Each of the elements related to a particular factor includes a brief description to help explain the intended activity or outcome desired or that should be understood as part of either a tangible or intangible impact on the PPP proposal.

The Assessment Matrix provides a notional expectation for each factor and associated descriptions in terms of whether or not the specific element can be assessed monetarily ("dollarized") or as a "value added" criterion.

Table 3-2: Assessment Matrix

Factor	Description	Dollarized	Value Added
Technical	Do both parties have a clearly defined specification?	no	yes
	Does the work involve a transfer of process knowledge?	no	yes
	Are there any International Traffic in Arms Regulations (ITAR) considerations? If yes, who bears the responsibility for compliance, licenses, etc.?	yes	yes
	Improved system availability	yes	yes
	Improved component reliability through product improvement and reliability programs	yes	yes
	Reduced field removals (due to increased reliability)	yes	yes
	Improved depot repair cycle time due to collaborative improvement actions (e.g. Lean Events, repair process improvement)	yes	yes
	Reduction in depot awaiting parts (AWP) conditions due to improved spares availability, improvements in bill of materials (BOM) accuracy through industry supply chain management (SCM)	yes	yes



Reduction in RTOK (retest OK) conditions at depot due to collaborative field support representative (FSR) support screening at field level	yes	yes
Avoidance of depot repairs through collaborative FSR field level support to accomplish repairs forward	yes	yes
Dual source of repair operating under same/similar process	maybe	yes
Increased surge capacity	maybe	yes
Increased backorder burn down	maybe	yes
No contracts required to move workloads (temporary moves)	maybe	yes
Data availability (cannot be procured from contractor)	yes	yes
Equipment for modification/upgrade of test stands, fixturing, and tooling	yes	yes
Creation of a standard work process between contractor and depot	no	yes
Elimination of reverse engineering costs (significant cost savings for depot)	yes	yes
End item output consistency between contractor and depot ensured	no	yes
Data provided for applicable technical order/technical manual (TO or TM) updates (as required)	yes	yes
Reduction in depot rework rate while increasing first pass yield	no	yes
Access to all partnered workload level 3 engineering drawings (savings if paid access today)	yes	yes
Configuration control standardization between contractor, depot and cognizant engineering	maybe	maybe
Process improvement	maybe	maybe
Contractor provided on-site technical support	no	yes
Direct access to contractor engineering support	no	yes
Open access to contractor processes, data, and facilities	no	yes
Joint Contractor/Depot process improvement efforts	no	yes
Reliability Centered Maintenance Analysis (RCMA) data	no	yes
Inventory control provided at no additional cost	no	yes
Increased depot maintenance throughput	no	yes
Kitting to increase efficiency of technicians	no	yes

Contracting	Does the partner understand depot pricing and billing?	no	yes
	Are unique features of the partnership clearly spelled out in the contract?	no	yes
	Reduction or elimination of procurement lead time (piece parts, workload movements, etc.)	no	yes
	Reduction or elimination of administrative lead time (part of savings from reduced turnaround-time)	no	yes
	Off-load contract elimination	maybe	yes
	Discrepancy reporting reduction	no	yes
	Engineering support elimination (quantify if there is a current support contract)	maybe	yes
	One-time procurement elimination	no	yes
Organizational	Open three-way communication (program office, depot, contractor)	no	yes
Delivery	Can the depot meet necessary turnaround times (TAT) on the work required?	yes	yes
	Can depot complete the work requirements?	no	yes
	Reduced end item TAT	yes	yes
	Improved supply chain management	maybe	maybe
	Reduced total ownership cost (RTOC)	yes	yes
	Reduced supply/logistical footprint	yes	yes
	Mission Capability Awaiting Parts (MICAP) and back-order reduction	yes	yes
	Improved parts forecasting	yes	yes
	Reduced end item spares	yes	yes
	Reduced risk of lost/misplaced assets	no	yes
	Condemnation validation	no	yes
	Reduced impact of surge (ability to work ahead of forecast)	no	yes
	Will the work maintain a core capability?	no	yes
	Does the work assist in gaining full overhaul capability?	no	yes
	Will this work impede other work/mission requirements?	no	yes
	Will there be opportunities to improve/"lean" current processes?	no	yes
	Any impact upon other business/workload opportunities?	yes	yes
	Any opportunities to "grow" this program?	yes	yes

	Will this partnership improve the ability to meet or exceed the established performance metrics?	no	yes
	Improved program execution	no	yes
	Improved parts supportability to depot	no	yes
	Enhanced forecasting through collaborative efforts (contractor, program office, depot)	no	yes
Cost Analysis	What are the before and after costs associated with the partnerships?	yes	yes
	Will this program affect "rates" in a positive manner?	yes	yes
	Is there any additional training required that will improve workforce skills/knowledge?	yes	yes
	Will a Facility Use Agreement be required? If yes, do adequate "excess" facilities exist to support the requirement?	no	yes
	Are capital improvements required? If yes, who funds?	yes	yes
	What are the working capital fund impacts of labor and material costs that will result from implementation of the partnerships?	yes	yes
Integrated Logistic Support Analysis (internal to depot)	Impact of entering work in progress (WIP) data into the depot systems?	no	yes
	Time needed to load any new bill of materials (BOM) data?	no	yes
	Time needed to load program hours and establish part control numbers (PCN)?	no	yes
Legal Analysis	Is there statutory authority to conduct the project?	no	yes
	Is any transfer of proprietary information properly safeguarded?	no	yes
	Has or will this project gain all necessary command approvals prior to execution?	no	yes
	Has any organizational conflict of interest been properly mitigated?	no	yes
Other Coordination Requirements	Any issues that require coordination with Federal Bargaining Units?	no	yes
	Any issues that require coordination with DLA?	no	yes
	Any required or appropriate congressional notifications?	no	yes

Assessing the value from both the government and commercial perspective of entering into a partnership is a key step to forming and executing a sound partnering agreement. The above provides some insight into why a BCA for PPP should be conducted, the roles and responsibilities that typical individuals and organizations have while conducting a PPP BCA, a generic process to build a PPP BCA around, and proposed factors for consideration while conducting a PPP BCA. As mention earlier, the PPP BCA is a

subset of the Product Support BCA and its execution increases the likelihood of building an effective and efficient product support strategy.

## Section 4. Metrics

### 4.1 INTRODUCTION

This section of the guidebook presents a method to determine whether Public-Private Partnerships are achieving their expected benefits through defined metrics related to partnering objectives. It is not intended to be a 'one-size fits all' metric solution that applies to every partnership, but rather a standard methodology to effectively demonstrate the benefits and value of PPP to the government. This section intends to provide a metrics framework which each PPP activity could build upon to fit their needs.

### 4.2 METRICS DEFINED

By policy, the Department of Defense (DoD) has a requirement per DoDI 4151.21, 25 April 2007, *Public-Private Partnerships for Depot-Level Maintenance* to be able to, "monitor and review the performance of depot-level maintenance public-private partnerships throughout the Department of Defense." In doing so, there must be a set of established metrics for each partnership to determine if and how well the stakeholders are achieving the desired benefits that were envisioned prior to entering into the partnership.

The following objectives should be viewed as a starting baseline upon which CITEs, private industry and higher headquarters can build upon. These include:

- Sustains the Defense Industrial Base Strategy
- Reduces the Cost of DoD Parts and Services
- Reduces DoD Cost of Ownership
- Maintains Core/Critical Skills
- Enhances Readiness and Improves Efficiency and Effectiveness of CITE
- Improves Support to the Warfighter
- Maximizes Utilization of CITE Resources (People, Equipment and Facilities)
- Develops new Processes Best Practices
- Promotes New Technologies and Modernization
- Leverages Private Sector Capital Investment Recapitalization
- Fosters Cooperation between DoD and Private Industry

Every partnership should meet one or more of the partnering objectives, and should employ one or more of the applicable measures and metrics to gauge partnering performance. As depicted in the following tables, a number of relevant metrics are provided for consideration that could be tracked because they tie to the overall objective(s). These metrics are cross referenced against relevant objectives to identify which metrics best support each respective objective. In addition they are categorized into standard metrics for either the "depot" or "common" communities. Based on the review of DoD and industry partnering experts, these categorizations are further based upon whether the metrics are of interest to the depot community or more of a common set of parties including the industry partner and program office. Tables 4-1, 4-2 and 4-3 depict the results of this effort.

**Table 4-1: Depot Metrics**

Aligned Depot Metric Only	Objective 1. Sustain the Defense Industrial Base	Obj 2. Reduce Cost of DoD Parts and Services	Obj 3. Reduce DoD Cost of Ownership	Obj 4. Maintain Core/Critical Skills	Obj 5. Enhance Readiness and Improve Efficiency and Effectiveness of CITE	Obj 6. Improve Support to the Warfighter	Obj 7. Maximize Utilization of CITE Resources, (People, Equip & Facilities)	Obj 8. Develops new Processes Best Practices	Obj 9. Promotes New Technologies and Modernization	Obj 10. Leverage Private Sector Capital Investment Recaptalization	Obj 11. Foster Cooperation between DoD and Private Industry
	Direct Labor Hours (by skill sets) (%)	D			4	D		D			
Direct Labor Hours Gained	2			1	6		6				D
Planned vs. Actual hours	D				4		D				D
Turnaround Time		8	D		3	2		D	D		
Reduced Cycle Time		4	D		2	3		5	2		
Facilities PPP Utilization		5	4				4				4
Average Mean Time to Repair		2	D		D	D		4	D		
Reduced Hours					D		D		3		D
50/50 Workload Split	D			5			5				
Partnering Revenue	1	3	2		D						
Rates		1	5								
Unplanned Carryover							D				
Equipment Utilization		9			D		1	3			D
Increased above Core Workload	5			3	D		3				
Increased Core Capacity	D			2	D		2				
Reduced Maintenance Backlog			1		7	6		6			D
Measure Work Stoppage						D	D				D
First Pass Yield					D	D		D			
Cost/Price per Square Foot									5		
Investment Cost			3							1	5
On-time Delivery					1	1					
Awaiting Parts (AWP)						4		D			
Reduced Overtime					D	D	D				
Work In Process (WIP)					5	7		D			
Reduced Induction Wait Time					8	5					
Best Business Practices		7	6					1			1
Technology Infusion	4	6	7		9	D		2	1		2
Sustaining Engineering Technical Support	D				D						3
# Jobs Created	3				D		D	D	4		D

Green boxes denote those metrics important to the Depot and ranked from 1 – 5 (or higher), with 1 being the most important/relevant metric to the depot SME.

**“D” indicates additional metrics important to the Depot.**

Table 4-1 is the “Depot Metrics Summary.” This table first identifies metrics relevant to the service CITE community across one or more of the eleven objectives. Table 4-1 ranks the metrics, with 1 being of highest importance. Metrics which are of importance to the CITE community, but are not in rank order, are marked with a “D.”

**Table 4-2: Common Metrics**

Common Metrics Cross Walk	OBJECTIVES										
	1. Sustains the Defense Industrial Base Strategy	2. Reduce Cost of DOD Parts and Services	3. Reduce DOD Cost of Ownership	4. Maintain Core/Critical Skills	5. Enhance Readiness and Improve Efficiency and Effectiveness of CITE	6. Improved Support to the Warfighter	7. Maximum Utilization of CITE Resources, (People, Equipment and Facilities)	8. Develops new Processes Best Practices	9. Promotes New Technologies and Modernization	10. Leverage Private Sector Capital Investment Recaptalization	11. Foster Cooperation between DOD and Private Industry
Tech Data Cost Savings		x	x								
Tumaround Time		1	x		1	x		x	x		
Reduced Cycle Time		2			2	x		x	x		
Material Response Time						x					
Reduction Overhead Costs		3	x				x	x			
Reduced Carrying Costs/ Inventory Investment			1								
Reliability			3			x		x	x		x
Maintainability			x			x		x	x		x
Availability			x			x		x			x
Mean Time Between Failures MTBF			x			x		x	x		x
Time on wing			4			x		x	x		x
Engineering Response Time of the OEM					x	x					x
Average Mean Time to Repair		4	x		3	x		x	x		
Reduced Hours					x		x		x		x
50/50 Workload Split	1			2			x				
Increased Core Capacity	2			1	x		x				
NSN MICAP Reduction					x	x		x			
Percent achieved IOC+4				3		x	x				
Reduced Maintenance Backlog			x		x	x		x			
Issue Effectiveness		x			x	x					
Stockage Effectiveness		x			x	x					
On-time Delivery					x	x					
Awaiting Parts (AWP)					x	x					
PPP # Access to Process Permits		x	x				x				
Best Business Practices	3	x	x					x			x
Technology Infusion		x	x	4					x	x	
Forecast Accuracy		x			x	x					
Ao Availability						x					
Avoid Investment in Duplication of capabilities	4	x	2				x				x

Green boxes denote those common metrics important to all stakeholders and ranked from 1 – 5 (or higher), with 1 being the most important/relevant metric to the SME.

“X” indicates additional Common metrics important to all stakeholders.

Table 4-2 is the “Common Metrics summary.” This table is also identified and ranked in order of the metrics that may be most relevant to the CITE community (service, industry and program office) across one

or more of the eleven objectives. Similar to Table 4-1, Table 4-2 also ranks the metrics in a manner that may be most relevant to this community.

**Table 4-3: Combined Alignment**



Public-Private Partnering for Product Support

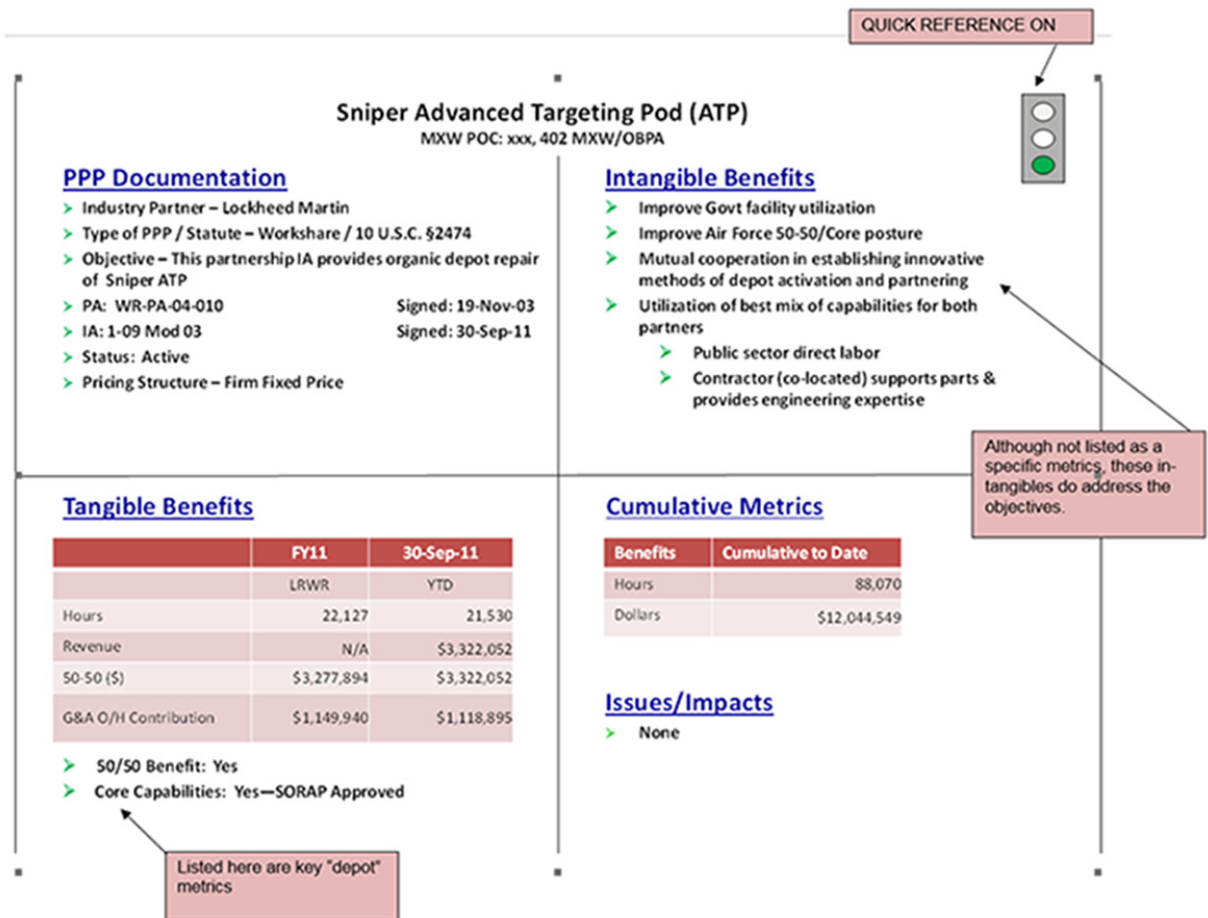
Aligned Metrics Cross walk		OBJECTIVES																			
		1. Sustains the Defense Industrial Base Strategy	2. Reduce Cost of DOD Parts and Services	3. Reduce DOD Cost of Ownership	4. Maintain Core/Critical Skills	5. Enhance Readiness and Improve Efficiency and Effectiveness of CITE	6. Improved Support to the Warfighter	7. Maximize Utilization of CITE Resources, Facilities	8. Develops new Processes Best Practices	9. Promotes New Technologies and Modernization	10. Leverage Private Sector Capital Investment Recaptalization	11. Foster Cooperation between DOD and Private Industry									
METRICS	Metric applies to Depot	Metric applies to Common	Depot Alignment	Common Alignment	Depot Alignment	Common Alignment	Depot Alignment	Common Alignment	Depot Alignment	Common Alignment	Depot Alignment	Common Alignment	Depot Alignment	Common Alignment	Depot Alignment	Common Alignment					
Direct Labor Hours (by skill set)(%)	Y	N	D				4		D				D								
Direct Labor Hours Gained	Y	N	2				1		6			6				D					
Planned vs. Actual hours	Y	N	D						4			D				D					
Tech Data Cost Savings	N	Y			C																
Turnaround Time	Y	Y		8	1	D	C		3	1	2	C		D	C						
Reduced Cycle Time	Y	Y		4	2	D			2	2	3	C		5	C	2	C				
Material Response Time	N	Y										C									
Facilities PPP Utilization	Y	N		5		4						4				4					
Reduction Overhead Costs	Y	Y			3		C					C		C							
Reduced Carrying Costs/ Inventory Investment	N	Y					1														
Reliability	N	Y					3						C		C		C				
Maintainability	N	Y					C					C		C		C	C				
Availability	N	Y					C					C		C		C	C				
Mean Time Between Failures MTBF	N	Y					C					C		C		C	C				
Time on Wing	N	Y					4						C		C		C				
Engineering Response Time of the OEM	N	Y							C								C				
Average Mean Time to Repair	Y	Y		2	4	D	C		D	3	D	C		4	C	D	C				
Material Fill Rates (part availability as needed)	Y	N											D	C		3	C				
Reduced Hours	Y	Y							D	C		D	C				D	C			
50/50 Workload Split	Y	Y	D	1				5	2			5	C								
Partnering Revenue Rates	Y	N	1		3		2		D												
Unplanned Carryover	Y	N											D								
Equipment Utilization	Y	N			9				D			1		3				D			
Increased above Core Workload	Y	N	5					3		D		3									
Increased Core Capacity	Y	Y	D	2				2	1	D	C	2	C								
NSN MICAP Reduction	N	Y								C		C		C							
Percent achieved IOCM	N	Y						3					C								
Reduced Maintenance Backlog	Y	Y					1	C		7	C	6	C		6	C		D			
Measure Work Stoppage	Y	N								D		D		D				D			
First Pass Yield	Y	N							D		D			D							
Issue Effectiveness	N	Y					C			C		C									
Stockage Effectiveness	N	Y					C			C		C									
Cost Price per Square Foot	Y	N												5							
Investment Cost	Y	N					3									1		5			
On-time Delivery	Y	Y							1	C	1	C									
Awaiting Parts (AWP)	Y	N								C	4	C		D							
Reduced Overtime	Y	N							D		D		D								
Work In Process (WIP)	Y	N							5		7			D							
Reduced Induction Wait Time	Y	N							8		5										
PPP # Access to Process Permits	N	Y											C								
Best Business Practices	Y	Y		3	7	C	6	C					1	C				C			
Technology Infusion	Y	Y	4		6	C	7	C	4	9			D		2		1	C	C	2	
Sustaining Engineering Technical Support	Y	N	D							D										3	
# Jobs Created	Y	N	3							D		D		D		4				D	
Forecast Accuracy	N	Y					C			C		C									
AO Availability	N	Y										C									
Avoid Investment in Duplication of capabilities	N	Y		4		C		2					C								C
Total PPP Cost Avoidance	N	N																			
Measure expand the number of Core Systems	N	N																			
# Proliferation of Partnerships	N	N																			
Cross-Service or Commercial Partnership # of sources	N	N																			

Table 4-3 is the “combined alignment summary.” This is a combination of all of the metrics which may be relevant to the CITE community and private industry. As can be seen by this Table, some metrics can serve more than one objective. There are also four additional metrics included in this Table that are considered “higher headquarter metrics” and were not deemed either depot or common.

It is important to clarify that all of the rankings were development by expert government and industry PPP practitioners, but each partnership should be measured on a case-by-case basis - not all metrics fit each PPP. It is imperative that the stakeholders come to an agreement on what benefits they are attempting to achieve and how they plan to measure their progress towards success prior to selecting the appropriate metrics.

### 4.3 METRICS REPORTING

After establishing the objectives and metrics that are important to the partnership, a “quad” chart may be used by the CITE to consistently report the status and benefits of the respective PPP. The following sample quad chart provides a standard format for reporting metrics. All of the metrics are not necessarily listed on the quad, but they are contained within the eleven policy objectives and can be tracked and reported based on each CITE’s internal processes. The metric requirements should be scalable (based on the size and breadth of the partnership) and flexible (sized to each CITE). If the partnership is a part of an overarching PBL strategy, the metrics need to support and align with the top level metrics to ensure the achievement of Warfighter requirements.



Establishing a basic set of objectives and related metrics is necessary in the overall monitoring and reviewing process to track the performance of Public-Private Partnerships. Utilizing the metrics and objectives provided in this chapter can lead to a standard methodology to effectively demonstrate the benefits and value of Public-Private Partnerships to the government. Consistent use of common metrics would allow the DoD to identify partnering best practices and lessons learned. The metrics tables in this chapter provide insight into determining the appropriate objective(s)-related metrics for use in measuring partnering effectiveness and efficiency on a case-by-case basis.

## Section 5. Case Studies

Case studies provide useful illustrations of some of the particular features incorporated into partnering agreements. This section presents seven such case studies, including partnerships from in-service weapon systems, a weapon system in development, an arsenal, DLA, and multi-element product support.

### 5.1 SNIPER POD

#### WARNER ROBINS AIR LOGISTICS CENTER/LOCKHEED MARTIN

The Sniper Advanced Targeting Pod was competitively awarded on 15 September 2000. The program office solicited early involvement of organic depot personnel and developed the solicitation to include acquisition of all requirements needed for depot activation. The request for proposal's requirements included a total systems support responsibility requirement for the successful offeror, along with provisions for public-private partnerships, where the contractor could utilize the organic depot to perform the core depot-level maintenance, either in a workshare or a direct sales approach.

Sniper Pod incorporates a high-resolution, mid-wave third generation Forward Looking Infrared, dual-mode laser, laser spot tracker, and laser marker; it vastly improves target detection and identification.

The advanced image processing algorithms, combined with the rock-steady stabilization techniques, deliver three times the



performance of other systems. Sniper's superior performance includes exceptional stability, long-range identification of tactical targets, and outstanding image processing during supersonic flight. As a precision targeting system in a single, lightweight, affordable pod, Sniper is designed for current and future fighter aircraft.

## The Partnership

The winning contractor, Lockheed Martin, chose a workshare method of utilizing the organic depot and quoted firm pricing for all elements of depot activation (e.g., data, support equipment, parts provisioning, and training). After the contract was signed in September 2000, depot activation began immediately and was completed during the next 3 years. Lockheed and the depot completed the workshare partnership agreement in November 2003, and the depot began performing organic maintenance in September 2004. These dates fully complied with the requirements of Title 10 U.S.C. 2464 to complete depot activation within 4 years of initial operating capability.

## Partnership Success

The organic workload increased from approximately 4,300 direct labor hours in 2004 to an estimated 18,000 hours in 2009.

Funding is direct from the program office to the depot for 34 repairable items and the arrangement satisfies both the core and the 50/50 requirements. The depot guarantees both turnaround times and workmanship.

The program office obtained a core designation and source-of-repair approvals before initiating the request for proposal (RFP) for the program. It also involved product support personnel from both the system manager and the organic depot early in the acquisition process to help plan an executable product support strategy. The purchase order within the RFP included the requirements for depot activation and partnerships that leveraged the program production competition to drive down costs of depot activation so that the competitors selected the most cost-effective partnership strategy: a workshare approach. All stakeholders planned for organic depot maintenance and were able to leverage competitive acquisition to acquire depot activation resources, such as equipment and data rights.

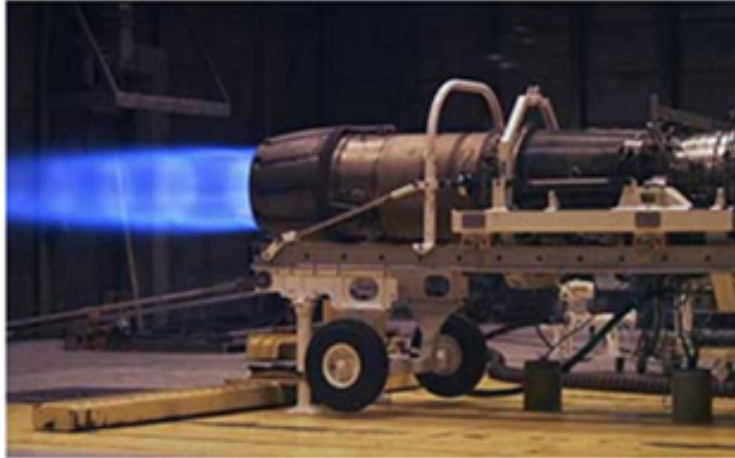
## 5.2 F404 ENGINE

### Fleet Readiness Center-Southeast/General Electric Aircraft Engines

The General Electric Aircraft Engines (GEAE) F404 is part of a family of afterburning turbofan engines in the 10,500–19,000 lbf (85 kN) class (static thrust). The engine has been used in a variety of Navy, Marine Corps, Air Force, and international aircraft since the early 1980s, and was integrated with the F/A-18 Hornet in the late 1980s. It was designed with a higher priority on reliability than performance. Cost was the main goal in the design of the engine.

### THE PARTNERSHIP

The F404 engine partnership features a public-sector depot labor provision within a PBL arrangement. The partners in the fleet exchange component availability-based project are Fleet Readiness Center Southeast (FRCSE); General Electric Aircraft Engines (GEAE); and Naval Inventory Control Point, Philadelphia. The work occurs within a government-industry teaming arrangement under the authority of 10 U.S.C. 2474. The estimated multiple-year value of the prime contract exceeds \$500 million. The scope of the partnership covers 33 critical gas path aviation repairable components associated with the F404-GE-400/402 engines that power the F/A-18 Hornet. The aim of the PBL program is to provide—and improve—the availability and reliability of the engine's components.



## **FRCSE, Jacksonville, Florida**

FRCSE provides all program management supervision, labor, facilities, and equipment for the F404 depot overhaul and repair of components for which the depot is the designated repair point. This support includes management activities from both the depot's production program management office and the business office. These offices ensure timely and economical execution of the responsibilities under a commercial services agreement that is supported by a task description document.

Activities from both the depot's production program management office and the business office. These offices ensure timely and economical execution of the responsibilities under a commercial services agreement that is supported by a task description document.

## **GEAE**

GEAE manages the F404-GE-400/402 component PBL program with assistance from FRCSE. GEAE manages wholesale stock, transportation, and delivery of assets between a central distribution facility and the depot. It also supports efforts to continuously improve industrial operations efficiency at the depot. Additional efforts associated with this program include Lean and Six Sigma training of personnel and a fully engaged team that works closely with the depot's air speed initiatives.

## **Partnership Success**

An existing business plan for F404 engine management was utilized for best practices and modified based on experience and lessons learned. A proprietary information agreement was established to allow free exchange of information within the partnership, and Lean and Six Sigma processes were used to train personnel. Both FRCSE and GEAE are fully engaged team members that work closely together. Commercial services agreements that were supported by the task description documents ensure timely and economical execution of assigned responsibilities.

## **PBL Actions**

GEAE worked with FRCSE to improve existing processing by incorporating GE parts matching procedures to increase component life. FRCSE also utilized GE's rotor blade mapping software to reduce vibration-related field rejects and maintenance-induced component damage. Back-orders were reduced when GE made a \$30 million investment in piece parts. GE ended the organic practice of reusing consumable hardware due to parts constraints; 100 percent replacement reduced the possibility of component failures to low-cost consumables beyond their life limits.

## **5.3 M1 ABRAMS**

### **Anniston Army Depot/General Dynamics Land Systems/Honeywell**

The M1A1 modernization program increased armor protection; improved suspension and added a nuclear, biological, and chemical protection system that increased survivability in a contaminated environment. The M1A1D modification was an M1A1 with integrated appliqué computer and far-target-designation capability. The M1A2 modernization program includes a commander's independent thermal viewer, an improved commander's weapon station, position navigation equipment, a distributed data and power architecture, an embedded diagnostic system, and improved fire control systems. The M1A2 System Enhancement Program (SEP) adds second-generation thermal sensors and a thermal management system. It also up-grades current processors and memory to enable the M1A2 to use the Army's common command and control software, enabling the rapid transfer of digital situational data and overlays.

## **THE PARTNERSHIPS**

The Army uses multiple partnerships in support of the M1 Abrams.

M1A2 upgrade: In this workshare program, General Dynamics Land Systems (GDLS) has a contract with the PM, while Anniston Army Depot (ANAD) has been assigned a significant amount of the maintenance work.





ANAD disassembles the basic M1A2 vehicle and provides hulls and engines refurbished under the Partnership for Reduced Operations and Support Cost, Engine (PROSE) to GDLS. GDLS converts the vehicle to the M1A2 SEP using its vendor base. The M1A2 upgrade revenue through FY2004 was \$227 million to ANAD, with approximately 107 ANAD jobs attributed to the partnership.

*Gunner's primary sight (GPS):* This partnership involves facility usage. ANAD furnishes the facility through an intraservice support agreement (ISSA) with the PM. GDLS manufactures the GPS for the M1A2 SEP in an ANAD-furnished facility. The manufacturing facility will convert to a maintenance facility over time, with the workforce evolving from primarily GDLS employees to ANAD employees.

*Abrams Integrated Management for 21st Century (AIM XXI):* This partnership involves a rebuild process that functions as a workshare program to support sustainment of the M1A1. First-year production of 45 tanks was completed in June 2000, and production continued at a rate of 125 tanks per year. ANAD disassembles the vehicles and overhauls their structure and components, while GDLS provides material to ANAD's overhaul process, and assembles and tests the vehicles. This partnership has generated \$567 million in revenue for ANAD (though FY2010) and supports 214 jobs at the depot. The AIM XXI partnership leverages the organic capability to overhaul components with GDLS's expertise in vehicle assembly.

*Recuperator:* This partnership arrangement is a direct sales and facility use in which ANAD furnishes the facility through a contract with Honeywell. The recuperator is a heat exchanger for the Abrams tank that warms inlet air for the engine. Honeywell manufactures plates for recuperators to support the AGT1500 engine production at ANAD. The depot also provides distribution and base operating and support services. On-site production eliminates the need for a parts manager at ANAD, and removes the requirement for the Defense Logistics Agency to stock and issue recuperators. This arrangement also minimizes the need for raw material and finished goods inventory.

*PROSE:* This partnership, now known as the Total Integrated Engine Revitalization program, is an engine upgrade program. ANAD provides a maintenance facility through an ISSA with the PM, while Honeywell provides parts and engineering services to support the AGT1500 engine production at ANAD. The partnership uses Lean and Six Sigma tools to develop a performance-oriented agreement with Honeywell that includes such objectives as improvement in materiel support to the ANAD overhaul line. This improvement could eliminate schedule deviations caused by the unavailability of parts.

*M1A2 SEP Retrofit:* This partnership is a workshare program. Under this partnership, ANAD disassembles the vehicle and overhauls structures and components. GDLS provides new components and overhaul of SEP-unique items. GDLS also provides material to ANAD's overhaul process and assembles and tests the vehicles.

## Partnership Programs

ANAD employs six different partnership programs to support depot work on the M1 Abrams. The partnerships include examples of workshare agreements, facility usage and direct sales agreements, MOAs, and ISSAs. In addition, the U.S. Army Tank-automotive and Armaments Life-Cycle Management Command (TACOM LCMC) worked directly with the PMs from both General Dynamics and Honeywell to manage and finance each partnership program.

## Partnership Benefits

A notable amount of responsive product support is evident in the form of more reliable tanks for the soldiers that are less costly to operate. Similarly, improved business processes have been introduced that leverage the best options from the public and private partners. Facility utilization has improved and operating and support costs have been reduced as a result of these partnerships.

## 5.4 F-35 LIGHTNING II FIGHTER

### USAF/USN/USMC/LOCKHEED MARTIN/PRATT & WHITNEY

Understanding the evolution of future DoD weapon system acquisitions can help us navigate the landscape of future sustainment requirements and opportunities. Conglomerate supplier partnerships, joint system usage, and application of break-through technologies all impact the realm of potential sustainment solutions and should be considered as forward looking benchmarks in our pursuit of best value. One of the acquisitions to watch is the F-35 Joint Strike Fighter.

The Joint Strike Fighter (JSF) Program has initiated a partnering approach that supports both Military Department core capability decisions (under 10 U.S.C. 2464) and the integration of the JSF Program Office (JSFPO)/private partner sustainment activities through public-private partnering under a performance-based logistics concept. The key instrument in implementation of this approach is a partnering agreement (PA) that is universal in its enterprise scope, and comprehensive in its functional detail.

In 1994, the Under Secretary of Defense (Acquisition, Technology and Logistics) formally established the Joint Advanced Strike Technology (JAST) Program, providing a comprehensive, advanced technology effort to prepare

the way for the next generation of strike weapon systems. From its inception, the program philosophy has been “to do business differently” and to demonstrate leadership from acquisition to sustainment.





The JAST Program has grown into the JSF Program, and is DoD's focal point for defining affordable next generation strike aircraft weapon systems for the Navy, Air Force, Marine Corps, and eight cooperative

international partners. The focus of the program is affordability—reducing the development cost, production cost, and cost of ownership of the JSF family of aircraft—while providing state-of-the-art lethality, survivability, and supportability. The JSF will fulfill stated service needs as follows:

- U. S. Navy first day of war, survivable strike fighter aircraft to complement F/A-18E/F
- U.S. Air Force multirole aircraft (primary-air-to-ground) to replace the F-16 and A-10 and complement the F/A-22
- U.S. Marine Corps short takeoff–vertical landing (STOVL) aircraft to replace the AV-8B and F/A-18 as their only strike fighter
- Other potential foreign military sales (FMS) customers from allied countries include current operators of F-16, F/A-18, and AV-8B.

A collaborative team with participants from the JSFPO, its product support integrator (PSI) (Lockheed Martin) and its propulsion system contractor (PSC) (Pratt & Whitney), and several subcontracted suppliers and customer representatives from the U.S. Air Force and U.S. Navy have set the conditions of partnerships. Their approach, based on the U.S. Air Force documentation model, was to first develop a PA to normalize the terms and conditions for the numerous partnerships between the U.S. government depots and the dozens of suppliers who would deliver maintenance services through public-private partnerships. Key objectives outlined within this PA were developed to benefit both suppliers and customers:

- Integrate the parties' strengths to provide best-value solutions.
- Establish a framework for long term association.
- Establish appropriate risk-reward relationships; and clear lines of accountability, responsibility and authority.

Having established an overarching PA, the team designed an implementation agreement (IA) template. The IA standardized elements necessary to comply with the PBL requirement while facilitating flexibility to pursue best value in ways that may be unique to the subsystem, supplier, or individual depot. Given the PA and IA templates, the PSI/PSC supplier and the depot will then be afforded the flexibility to populate the IA template with a broad range of variable elements based on their negotiated agreement, provided they comply with the terms and conditions that flow down from the PBL through the PA. As this model proves out through execution in the coming years, it will be viewed as a potential DoD standard for future partnerships to simplify the process, normalize the conventions, and expedite speed to market as added benefits.

In prospect, there are 48 system/subsystem depot source of repair (DSOR) assignments at six organic military service depots (MSDs), each with one MSD and one original equipment manufacturer, plus the PSI and PSC. The total number of partnerships to be negotiated between these actors is under development as a set of individual implementation agreements under the partnering agreement.

Prior to the start of system design and development (SDD) in the fall of 2001, the program facilitated the services' development of fully validated, affordable operational requirements, and it lowered risk by investing in and demonstrating key leveraging technologies and operational concepts.

The JSFPO will develop, deploy and sustain a three-variant family of highly common and affordable strike fighter aircraft to meet the operational needs of each of its customers. The JSF is designed to be a fifth generation, single-seat, single-engine stealth multirole fighter that can perform close air support, tactical bombing, and defense missions.

## **A Standard for Partnering**

The team responsible for developing the PA for the JSF hoped to develop an end-product that would serve as a template for developing future weapon system partnering agreements.

## **The Partnership**

The partnership has many goals, including translating warfighter requirements, JSF program requirements, acquisition strategy, and DoD objectives into expectations and behaviors for each partner. In addi-

tion, partners wanted to integrate contractor and organic strengths to provide best-value solutions; establish a framework for implementation agreements; and create a structure to support long-term association of the PA parties, identify risk-reward relationships, and distinguish clear lines of accountability, responsibility, and authority.

The JSF PA cites the following requirements:

- Support basic tenets by defining roles, responsibilities, expectations, and behaviors as identified and agreed upon.
- Identify top-level metrics to assess performance against partnership requirements.
- Facilitate contract development, implementation, and execution.
- Establish framework for implementation agreements.
- Include PSI (Lockheed Martin) and PSC (Pratt & Whitney).
- Be consistent with established JSF sustainment management strategy (SMS).
- Commit to cooperation and mutual support.
- Endure beyond the period of performance of the contract; develop a new standard in partnering.
- Exclude workload-unique expectations (which are to be included in IAs).

The basic partnership between Lockheed, Pratt & Whitney, and the MSDs is in place. Additional partnering activities and IAs are in development.

## **5.5 ROCK ISLAND ARSENAL/BAE SYSTEMS**

### **Rock Island Arsenal Composite Armor Center**

Rock Island Arsenal (RIA) entered a partnership with BAE in August 2009 to establish an organic composite armor production capability. The partnership utilizes BAE's strength in the development and production of composite panels with the skilled workforce and capital equipment at RIA. The project is an Arsenal Support Program Initiative (ASPI). It is located in some of the excess warehouse space at RIA. Renovations to the space provided the environment needed to prepare and consolidate the panels in a very effective and desirable work space.



## The Partnership

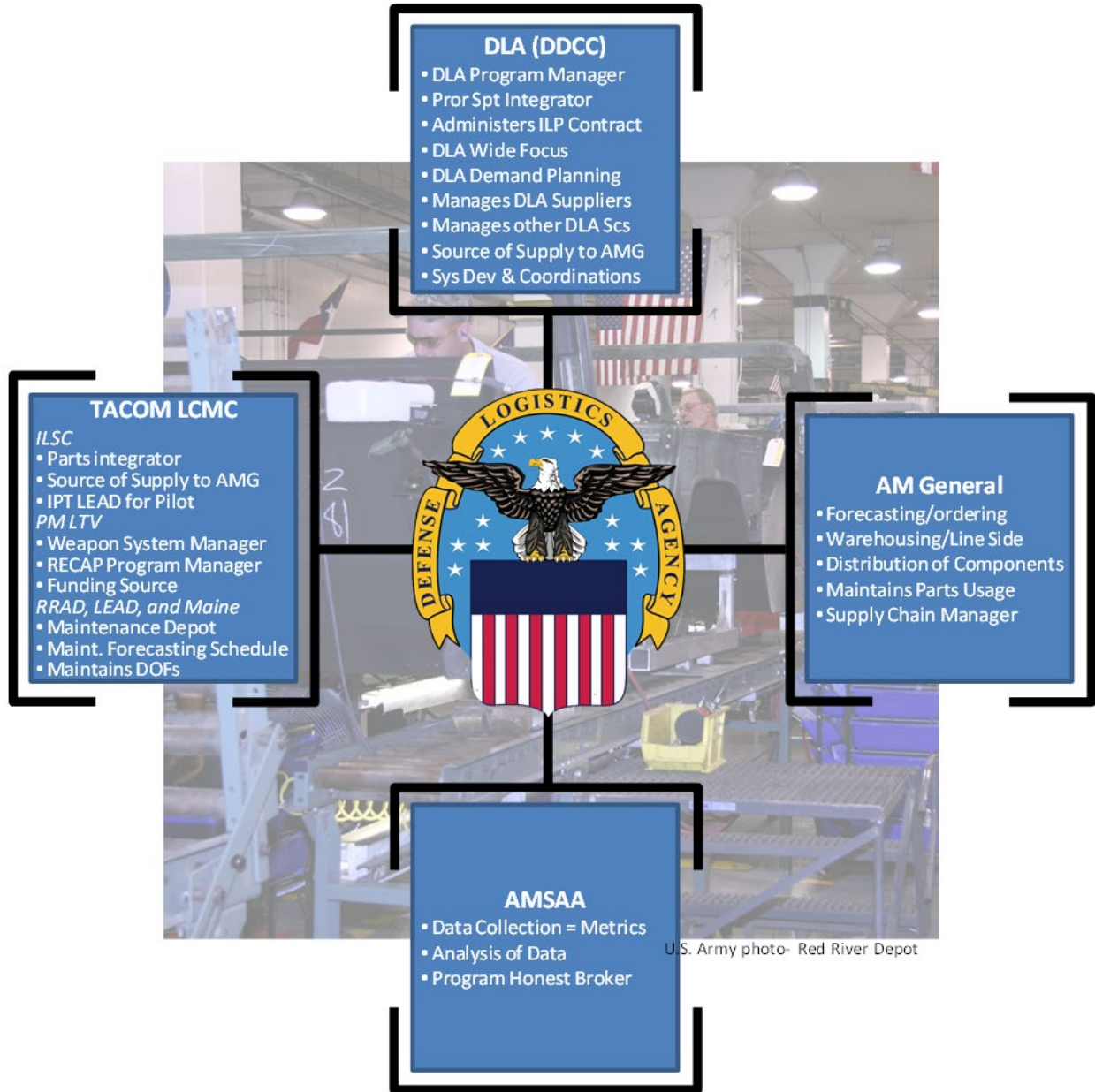
BAE has brought spall liners for the Suburban Hard Car and mine-resistant, ambush-protected (MRAP) spares. RIA has attached test panels from the U.S. Army Tank and Automotive Research, Development and Engineering Center (TARDEC) and spall liners from RIA ongoing programs for various customers. Synergies are developing with the RIA sewing department utilizing some of the panel preparation equipment for many pliable material programs. This approach allows RIA to more efficiently precut material for sewing, therefore streamlining their processes.

## Partnership Benefits

The RIA partnership with BAE Systems is bringing new work with expanded capability, retaining skills in the fabrication and pliable material disciplines, and providing a valuable service to customers and the warfighter. RIA is actively working to make the capability known to potential customers, including the U.S. Army Tank-Automotive and Armaments Life Cycle Management Command (TACOM LCMC), other Army Materiel Command organizations, and Joint Services decision makers with composite armor requirements.

## 5.6 INTEGRATED LOGISTICS PARTNERSHIP—HIGH MOBILITY MULTI-PURPOSE WHEELED VEHICLE™

**Defense Logistics Agency/U.S. Army Tank-Automotive and Armaments Life Cycle Management Command/Army Materiel Systems Analysis Activity/AM General**



## Background

The High Mobility Multi-Purpose Wheeled Vehicle (HMMWV) is a multipurpose light tactical vehicle employed by all of the military services in areas of the modern battlefield. It is supported using the current logistics and maintenance structure established for Army wheeled vehicles. The HMMWV is produced in several configurations to support weapon systems; command and control systems; field ambulances; and ammunition, troop, and general cargo transport.

Recapitalization (RECAP) is an Army program that receives HMMWVs from the field units, disassembles, and replaces targeted parts and components, remanufactures others, and rebuilds the vehicle to an updated configuration. At that point the vehicle is at zero miles, zero hours, and is a “like new” condition platform ready to issue for tactical formations. These rebuilt HMMWVs are critical to our warfighter’s execution of the contingency operations, and were used extensively in Operation Enduring Freedom and Operation Iraqi Freedom.



## Situation

On January 15, 2004, at the Joint Logistics Board, the Under Secretary Defense for Acquisition, Technology and Logistics (USD [AT&L]) asked “What is doable, pilotable, and practical [in regards to] optimizing the supply chain by having DoD pay for material when delivered to the end user [by moving] the point of inspection and point of sale to point of use.” The Executive Deputy to the Army Material Command (AMC) Commanding General offered “to develop the concept and conduct a pilot at an AMC depot.” This would make supply chain management at the production line a vendor responsibility and allow for minimal handling by government personnel. It would also facilitate inventory reductions in a controlled, defined, and measurable manner.

Due to significant support problems experienced in 2004 and 2005 on the HMMWV line, AMC selected the HMMWV RECAP Program. In 2004 and 2005, the Army had ordered or stockpiled \$109.9 million in U.S. Army TACOM and Defense Logistics Agency (DLA) parts to support the HMMWV RECAP maintenance lines at Red River Army De-pot (RRA) and Letterkenny Army Depot (LEAD). The stockpiling effort was to support RECAP for 4,500 HMMWVs. Despite this effort, nearly every HMMWV came off the production line unfinished, missing as many as 15 or more parts.



This photograph represents approximately \$35M of the 1,378 unfinished vehicles from late 2005.

The unfinished vehicles had to be stored until parts could be added later. This resulted in additional labor hours to bring the vehicles back into the maintenance facility, install the missing parts, and at times replace additional parts due to degradation during storage (seals, hoses, etc.). In late 2005 nearly 1,400 unfinished HMMWVs were in storage at one time. The Army had \$70 million in *unfinished* vehicles that could not be returned to Army units for operational missions.

## The Solution

The OSD (AT&L) requirement, the AMC selection decisions process, and the pervasive 2005 support problems on the HMMWV lines culminated in the establishment of a DLA/TACOM Integrated Logistics Partnership (ILP) Team. The team’s mission is to make dramatic improvements to support the HMMWV RECAP lines under the new OSD(AT&L) principles and to prevent the situation of unfinished vehicles from occurring again.

The Army orders consumable parts from DLA. DLA is responsible for sourcing and providing nearly every consumable item used by our military forces worldwide, and procuring new Service-managed depot-level repairables. TACOM contracts for repairable items. AM General is the manufacturer of HMMWVs and has

produced over 200,000 vehicles for the Army, Air Force, Navy and international governments since it received its original U.S. government contract in 1983.

The OSD(AT&L) requirement is to focus on optimizing supply chain performance through implementation of best business practices and innovative supply chain solutions focused on improving support to production processes:

1. Customers pay for goods and material only once it is delivered to the end user.
2. The point of inspection and sale is moved to the point of use (production line).

Defense Supply Center Columbus (DSCC) awarded a performance-based technical, logistics, and repair parts support contract to AM General on 1 November 2005. On 17 January 2006, the contract was implemented at Letterkenny Army Depot (LEAD) and Red River Army Depot (RRAD) and later expanded to a third industrial location at Maine Military Authority (MMA). ILP is an example of a true public-private partnership across the Army, DLA, and AM General.

The ILP performance-based logistics contract integrates supply support; maintenance planning; packaging, handling, storage, and transportation (PHS&T); and integrated logistics elements to improve overall material availability, mission success, and reduce the total ownership cost through support to the HMMWV RECAP program.

Under the ILP, the vendor manages, owns, stores, and delivers inventory to the customer point of use (depot shop floor) as needed. The billing and payment process is postponed until the time of use by the customer.

### Roles and Responsibilities:

- Defense Supply Center Columbus (DSCC) serves as the DLA program manager for the ILP, executes the contract award, administers the contract, functions as the parts integrator, and serves as a product support provider to AM General, RRAD, LEAD, and MMA. DSCC is DLA's supply chain owner for land and maritime items.
- TACOM serves as the weapon system program manager, the centralized e-business manager, the funding source, the IPT lead, and a PSP to AM General.
- AM General is responsible for the identification of quality issues, requirements forecasting, supply chain inventory management, distribution of individual components to the maintenance lines, construction of kits for workstations, unpacking and prepositioning of parts, disposal of all packaging, just-in-time delivery of components whenever possible, and the ordering of components from the DoD supply system.
- The industrial (RRAD, LEAD, and MMA) depots rebuild the HMMWVs into the zero mile "like new" M1097R1 HMMWV configuration.

### Performance-Based Agreement

The PBA established between TACOM and DLA delineates the roles, responsibilities, performance expectations, and accountabilities of each stakeholder.

The performance metrics are tracked by RRAD, LEAD, TACOM, DLA, and the Army Material Support Analysis Activity (AMSAA). The PBL HMMWV Program metrics are as follows:

- *Cost per vehicle* — total cost to produce a RECAP HMMWV depot maintenance program and HMMWV RECAP program
- *Data* — total dollar value and the total materiel value for both the depot maintenance program and the HMMWV RECAP program
- *Stock out rates* — number of provider parts not available at the designated delivery points when needed divided by the number of provider parts consumed during the evaluation period
- *Quality defects* — number of stock-outs on the line caused by non-conforming provider parts.

## Partnership Success

The ILP business processes enhance both the forecasting and supply support efforts. It eliminates costly support issues that involve expensive emergency purchases by the depots, DLA, or the Army and the costly process of emergency fabrication by the depots to support the production lines. It also eliminates the disruptions to the production line that lead to the generation of incomplete HMMWVs, which results in expensive shutdowns along the line. Since inception of the ILP, the stock-out rate at the depots has decreased dramatically. LEAD has not experienced a stock-out in 320 production days, RRAD in 280 production days, and MMA in 241 days. As a result of the ILP initiative, materiel availability is holding at 99.99 percent, and over 23.8 million spare parts were provided to rebuild over 30,000 HMMWVs at an inventory cost savings of over \$86 million which is a 76 percent reduction in the pre-ILP Army Inventory. According to the RECAP PM, inventory investment decreased by 95 percent. Most significant is the reduction in the RECAP cost per vehicle (\$4,520 for RRAD and \$3,414 for LEAD) and the protection of the nation's small business interest. The partnership caused a reduction in required parts inventories to \$22.9 million by concentrating on a refined bill of materials (BOM) for more than 1,200 required items.<sup>18</sup>

The ILP program is now the staple for HMMWV program industrial support, and its concept and practices can be exported to additional Army weapon systems and throughout DoD and other industrial programs for additional savings and improved performance, while still taking advantage of America's small business capabilities and partners.

## Section 6. Partnering Resources

### 6.1 GENERAL INFORMATION ABOUT PARTNERSHIPS

There is an extensive amount of reference material about public-private partnerships available online.

### 6.2 DEFENSE ACQUISITION UNIVERSITY ACQUISITION COMMUNITY CONNECTION

Site of the eight sustainment guides mentioned at the beginning of this guide, and their cross-linkages: <https://acc.dau.mil/guidebooks>.

### 6.3 OSD MAINTENANCE WEB SITE

For materials specific to depot maintenance partnering, consult the OSD Maintenance Web site at <http://www.acq.osd.mil/log/mpp/partnering.html>. That site also provides access to the following:

- Links to technical reports and brochures about partnering
- A "Partnership Practitioners' Toolbox" that contains examples of good ideas from successful partnering applications
- Links to the partnering sites of the military services
- Links to partnering database reports, many of which are updated periodically
- Links to downloadable copies of standardized formats for partnering agreements and implementation agreements.

### 6.4 STANDARDIZED PARTNERING DOCUMENTS

A Joint Service working group has developed standardized formats for partnering agreements and implementation agreements. The formats are available in the Partnership Practitioners' Toolbox (see above) in either the HTML version that will appear on screen or as links to downloadable Word documents. They are also embedded attachments to this guide, see below.

### 6.5 UNIFORM COMMERCIAL CODE

Cornell University's free version of the Uniform Commercial Code can be found at <http://www.law.cornell.edu/ucc/ucc.table.html>. It contains useful formats for business operations.

<sup>18</sup> Statistics in this paragraph are current as of February 2012. Contact TACOM for updated information.



## Appendix Abbreviations

ACC	Acquisition Community Connection
AIM XXI	Abrams Integrated Management for 21st Century
AMC	Army Material Command
AMSAA	Army Material Support Analysis Activity
ANAD	Anniston Army Depot
ASPI	Arsenal Support Program Initiative
AT&L	Acquisition, Technology & Logistics
BOM	bill of materials
BSI	British Standards Institution
CITE	Centers of Industrial and Technical Excellence
CRADA	Cooperative Research and Development Agreement
DCMA	Defense Contract Management Agency
DLA	Defense Logistics Agency
DMSMS	Diminishing Manufacturing Sources and Material Shortages
DoD	Department of Defense
DSCC	Defense Supply Center Columbus
DSOR	depot source of repair
FAR	Federal Acquisition Regulation
FMS	Foreign Military Sales
FRCSE	Fleet Readiness Center Southeast
FY	fiscal year
GAO	Government Accountability Office
GDLS	General Dynamics Land Systems
GEAE	General Electric Aircraft Engines
GPS	Gunner's primary sight
HMMWV	High Mobility Multi-Purpose Wheeled Vehicle
IA	Implementation Agreement
ILP	Integrated Logistics Partnership
ILS	Integrated Logistics Support
IPT	integrated process team
ISSA	intraservice support agreement
IUID	Item Unique Identification
JAST	Joint Advanced Strike Technology
JSF	Joint Strike Fighter
JSFPO	JSF Program Office

LCMC	life cycle management command
LEAD	Letterkenny Army Depot
LRIP	low rate initial production
MMA	Maine Military Authority
MOA	memorandum of agreement
MRAP	mine-resistant, ambush-protected
O&S	Operation and Support
OEF	Operation Enduring Freedom
OEM	original equipment manufacturer
OIF	Operation Iraqi Freedom
OMB	Office of Management and Budget
OSD	Office of the Secretary of Defense
PA	Partnering Agreement
PBA	performance-based agreement
PBL	performance-based logistics or performance-based life cycle product support
PHS&T	Packaging, Handling, Storage, and Transportation
PMs	program or product managers
PPPs	public-private partnerships
PROSE	Partnership for Reduced Operations and Support Cost, Engine
PSI	product support integrator
PSM	product support manager
PSP	product support provider
RECAP	Recapitalization
RFP	request for proposal
RIA	Rock Island Arsenal
RRAD	Red River Army Depot
SDD	System Design and Development
SEP	System Enhancement Program
STOVL	short takeoff–vertical landing
TACOM	Tank-automotive & Armaments Command
TACOM LCMC	Tank-automotive and Armaments Life Cycle Management Command
TARDEC	Tank and Automotive Research, Development and Engineering Center
TLCM	Total Life Cycle Management
US	United States
USAF	United States Air Force
USD	Under Secretary of Defense

USD AT&L	Under Secretary Defense for Acquisition, Technology and Logistics
USMC	United States Marine Corp
USN	United States Navy

### **Further Information Contact**

Suggestions for improving this handbook and DoD's partnering program are welcome. We also welcome questions about the program and problem descriptions. If you want to communicate with the OSD Maintenance staff, please send an e-mail to **partnering@osd.mil**, or address correspondence to

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