

# **The Limits of Competition in Defense Acquisition**

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## **Limits of Competition for Depot Maintenance Contracting**

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### **Abstract**

Competitive contracting remains a key acquisition and procurement objective for the Department of Defense, although its application can be substantially constrained for particular applications such as depot maintenance. When it can be applied, public-private competition has been shown to promise cost reductions of as much as 30 percent for depot maintenance, while also promoting innovation through the competitive process. Even though depot maintenance represents a sizable portion of the sustainment budget (more than \$30 billion per year), it has particular limitations that reduce the applicability of competitive contracting as well as the actual savings from the competitive process. Key examples of factors that limit competition include the general lack of requisite technical data; the extended timeframes and costs associated with establishing or moving a depot maintenance capability; and the relatively equal results of public-private competitions conducted in the 1990s. As a consequence of these factors, a significant amount of depot maintenance contracts are being awarded on a single-source basis.

This paper was derived from the authors' research and experience with maintenance policy formulation. It addresses the limitations of competitive contracting for depot maintenance by describing the current contract environment and the key limitations that affect the ability to employ competitive sourcing. It provides a survey of alternative approaches that can yield significant reductions in cost for depot maintenance activities. Examples include the application of Lean and Six Sigma tools for continuous process improvement; public-private partnerships that substantially improve supply chain support for depot maintenance and enable operational efficiencies; and the application of integrated product support elements such as reverse engineering to improve repair capabilities and inject increased reliability into repaired materiel. As a further consideration, the paper addresses how depot maintenance is subject to public laws that drive the proportion of funding that may be spent on contracts and also influence the application of public-private competitions under OMB Circular A-76. The paper will conclude with an assessment of additional approaches to contain costs and generate operating efficiencies that are currently under consideration, including alternative approaches to strategic sourcing, the substitution of "merit-based selection procedures" contemplated in public law, and a comparison of results from several of these alternative approaches.

### **Two-line Summary**

Depot maintenance has particular limitations that reduce the applicability of competitive contracting. Multiple alternative approaches to cost reduction are in the work.

## *Introduction*

In the broad range of law and policy mandating the use of competitive sourcing for the government's procurement of goods and services, few functional areas have as many exceptions to the general rules as depot maintenance. This paper examines the depot maintenance arena in terms of its size, functional characteristics and importance to DoD; its multiple laws, policies and circumstances affecting the ability to competitively source depot maintenance workloads; and alternatives to achieve comparable results in lieu of competitive sourcing.

This paper is not intended to be a full exposition of the various legal and policy authorities that affect contracting for depot maintenance. But it is important to note that long-standing Federal Government policy is to rely on the private sector for provision of commercial services through competition (OMB-2003-1). That basic policy marks the departure point for specialized treatment of the depot maintenance function. To address that special treatment we begin with some background information about the overall depot maintenance enterprise.

## *Depot Maintenance Defined*

Depot maintenance involves the most extensive repair capabilities within DoD. Its functions and processes can be described with terms such as repair, rebuild, overhaul, and remanufacture; its scope includes software as well as modifications. It is a huge enterprise with more than 80,000 federal employees (DMDC-2011) and a comparable number of contract employees. It has a massive infrastructure with a multi-billion dollar replacement value (JDMAG-2007) located at 17 major government-owned, government-operated (organic) depot activities, each with 400 or more employees, and more than 1,700 active commercial sites (DMCS-2011). It has an annual operating cost in excess of \$34 billion (AT&L-2012) split between contract and organic sources.

Depot maintenance is vitally important to sustain weapon system and materiel availability. For the great bulk of its production it is the primary source of supply for repaired parts, and is cost-effective with depot repair typically costing a fraction of a new item. Multi-commodity organic depots are also inherently capable of agile response to emergent requirements through reallocation of repair resources and use of overtime and built-in expansion capabilities. The capability to be responsive is one of the many distinctives that set depot maintenance apart from other sustainment activities.

## *Depot Maintenance Distinctives*

Depot maintenance is distinctive in terms of the products and services it provides; and in the technical complexity it supports. Depot maintenance is the ultimate source of repair for most repairable items, with total repair capability including numerous processes and technologies that only exist at the depot level. Depot maintenance activities are inherently capable of manufacturing urgently needed products and services.

Organic depot maintenance activities operate in an infrastructure that is uniquely organized and focused to support repair processes. Depot maintenance activities possess unique combinations of operating licenses and hazard permits to enable an uncommon degree of process integration for better efficiencies and to support the concept of multi-commodity repair operations. Organic depots are also military organizations with military officers leading a predominantly civilian workforce.

Contract depot maintenance activities are also distinctive because they represent similar distinctive repair capabilities, albeit typically with a lower degree of process and product integration. They are frequently able to employ manufacturing production lines that have available capacity to support repairs, making use of what would otherwise be an underutilized manufacturing base.

Both organic and contract depot maintenance activities may be connected to additional product support elements to provide integrated product support functions as a part of the repair process.

Several peculiarities set this organic and contract depot maintenance community apart from commercial counterparts. To begin, they are part of a defense industrial base that is quite different from a normal free market:

...the U.S. defense industry is a highly regulated sector of the U.S. economy in which the government is both the sole customer—even if it speaks with many discordant voices—and the regulator. Fundamental decisions about what weapons to develop, the relative priority to be given to cost, schedule and performance, and the funding to be allocated annually to various weapons programs are the result of complex, often politicalized, interactions between the military services and their war-fighting communities, the Joint Chiefs of Staff, the Office of the Secretary of Defense, the White House, and Congress. It is, therefore, a serious misunderstanding of the realities of weapons acquisition in the United States to think that the U.S. defense industry operates like a normal free market. A classic free market involves many small buyers and many small suppliers, and competition among buyers and suppliers drives prices toward stable, economically efficient equilibrium levels. None of these features resemble the way in which the U.S. defense industrial base functions. Consequently, incremental regulatory and statutory adjustments to defense acquisition based on the presumption that the defense industry operates like a normal free market are not only unlikely to improve efficiency, but have often made things worse. (Watts and Harrison- 2011-x)

To some extent, both organic and contract depot maintenance capabilities employ purpose-built infrastructure rather than warm production lines or multi-commodity repair processes. Examples include composite repair facilities, a lift fan test facility and systems integration laboratories for software. Such facilities are built to support specific weapon system or materiel requirements, tend to be expensive to build and operate, and complicate decisions regarding public or private sector selection for depot maintenance provision.

Depot maintenance is also distinctive in terms of the range of Public Law that addresses various aspects of competitive sourcing. For example:

- 10U.S.C. Chapter 146 addresses “Contracting for Performance of Civilian Commercial or Industrial Type Functions,” including multiple sections that specifically address depot maintenance. Within that chapter:
- 10U.S.C.§2460 defines depot maintenance.

- 10U.S.C.§2461 requires a public-private competition before conversion of any (formerly) organic function to contractor performance.
- 10U.S.C.§2461a requires the development and implementation of a system for monitoring cost savings resulting from public-private competitions.
- 10U.S.C.§2462 requires reports on completed public-private competitions.
- 10U.S.C.§2463 establishes guidelines and procedures for use of civilian employees to perform DoD functions.
- 10U.S.C.§2464 Defines core depot-level maintenance and repair capabilities for which government-owned, government-operated capability must be established and sustained.
- 10U.S.C.§2466 Limits the amount of annual funds that may be spent on depot maintenance contracting to “not more than” 50 percent of the total.
- 10U.S.C.§2469 requires the use of “merit-based selection procedures” when considering a change from organic to contract performance of depot-level activities with a value of \$3 million or more.
- 10U.S.C.§2470 authorizes organic depot-level activities to compete for any depot-level maintenance and repair workload for any Federal agency when competitive procedures are employed for source selection.
- 10U.S.C.§2475 requires an annual report to Congress for each “Strategic Sourcing Plan of Action” addressing consolidation, restructuring, or reengineering of organizations, functions or activities, including a particular notification when a decision to execute the plan involves a manpower reduction involving 50 or more DoD personnel.

A more comprehensive listing of applicable Public Law relating to depot maintenance may be found in *Public-Private Partnering for Sustainment — A DoD Guidebook*, located at <https://acc.dau.mil/ppp-guidebook>.

### *Organization (Depots, Contracting Activities, Industry)*

Depot maintenance is organized to support the sustainment mission in each of the military services. Its requiring and contracting activities are spread across the full range of program management organizations, inventory control points, and contingency contracting activities. Its industry activities include original equipment manufacturers, second and third tier suppliers, and international partners.

In recent years, the military services have begun to re-designate some of the organic depot maintenance activities with mission-related titles such as Fleet Readiness Centers for naval aviation and Air Force wings for Air Logistics Complexes. The effort is designed to align the organizations with mission-related sustainment operations.

## *Evolution of Depot Maintenance*

The current depot infrastructure reflects a heritage that extends back to the War of 1812 for organic shipyards and Army facilities. The depots were largely framed during WWII and were obliged to accommodate an increasing amount of commercial sourcing beginning in the 1970s. Today's depots may have a substantial number of contract personnel working on-site. One, An-niston Army Depot, claims fully 75 percent of its on-site workload is based on public-private partnerships.

Contract depot maintenance has increased in terms of the relative proportion of depot maintenance it provides, especially during the past 25 years. Today, 46 percent of depot maintenance expenditures are for workload performed by contractors; at the end of the Cold War, that number was 34 percent (AT&L-2012 and AT&L-1998). The shift in the relative proportion of contract support reflected a general preference for commercial sources (Warren-1996-9), as well as a basic assumption that competitive forces could be brought to bear in choosing sources for depot maintenance requirements. Both viewpoints were tested for depot maintenance.

As we have already discussed, a central premise of capitalism is that competition among providers of goods or services results in better value and decreased prices. While enthusiasm to apply competitive pressure to federal operations has waxed and waned over the past twenty-five years, the end of the Cold War coincided with significant concern in pursuing competitive sourcing to reduce the costs needed to support the military's infrastructure. This led DoD to aggressively pursue public-private competitions for depot maintenance during the early 1990s. Public-private competition began in 1985 when the DoD Appropriation Act of that year authorized the Navy to test the feasibility of competition between public and private shipyards. These competitions increased slowly through the 1993 time frame, when DoD projected a total of more than \$1.7 billion in savings by fiscal year 1997.

The overall effect of these competitions was an increase in the amount of depot maintenance performed by the private sector. However, the competition process proved to be particularly cumbersome and led to arguments about the reliability of the cost data used to determine the outcome of the competitions; as a result, this modus operandi for cost reduction is currently seldom used within the military. (GAO-1996-6)

In the same time frame, DoD also experimented with privatization in place initiatives where the entire workload (or major segments or bundles of workload) of particular depots was subjected to public-private competition, in conjunction with Base Closure and Realignment (BRAC) rounds that subsequently closed the organic depots. Again, the results were mixed and generally unsatisfactory for a variety of reasons. (Warren-1996-3)

Overall, the DoD experiment with competitive sourcing had several salient features that contributed to its demise:

- All of the candidate workloads were drawn from organic depots.
- Organic depots won about half of the public-private competitions, reflecting in part an organic wage structure that is determined on a locality basis to be generally equivalent to prevailing industry rates.

- Organic depots operate under the Defense Working Capital Fund, where their sales price structure must be adjusted to reflect actual costs of operations. There is no ready means to account for bid-versus-actual prices or to enforce bids lower than the cost of operations.
- A true grasp of the cost savings or benefits from public-versus-private competition remains hard to pin down.

As one example, in 1997, the San Antonio Air Logistics Center at Kelly Air Force Base conducted a public-private competition for the C-5 aircraft depot maintenance workload. This work had been performed by the San Antonio Air Logistics Center, which was undergoing closure activities as a result of the 1995 Base Realignment and Closure (BRAC-95) decision. The GAO provided a post-award review to determine whether the Air Force's procedures provided equal opportunity to both public and private offerors, whether the Air Force had complied with the Federal Acquisition Regulation (FAR), and whether the award resulted in the lowest total cost to the government.<sup>1</sup> The GAO concluded that the Air Force had achieved positive results in all three areas. There were, however, several issues noted. First, some private-sector sources thought that there was an innate imbalance in the competition because the government would have to pay for any cost overruns if a public offeror won—whereas a private offeror would have to absorb such a loss. Second, the public-sector activity was seen as unfairly advantaged because it was allowed to show \$153 million cost avoidance by using the C-5 workload to help defray overhead costs it would have to pay as a result of related activities. In sum, GAO found that this cost advantage was the key determining feature in the competition. (GAO-1998-5)

By 1994, the Army, Navy, and industry took the position that the competitions were causing more hassle than they were worth and the Defense Science Board recommended they be discontinued (DSB-1994-5). However, because of Congressional interest, public-private competition is still the primary legal means by which work performed in the public sector can be moved to the private sector.

In the ensuing years, additional factors have affected the competitive landscape. In particular, contracting activities have essentially stopped buying technical data to support depot maintenance workloads. While the federal government has a legal right to the technical data, there are substantial costs to prepare the data that can be avoided. As a consequence, more than 80% of the value of depot maintenance contracting is single-source (Callendar-2001-1-4). That is, only one source (typically the prime OEM) responds to solicitations. Notable exceptions include commercial-derivative items such as airframes and “standardized” items such as radios and tires. With respect to unique Defense materiel, the only practical alternative source, other than the original prime equipment manufacturer, is the organic depot maintenance establishment. Since the military services have essentially stopped using competition to make public-versus-private sector selections, the process has shifted to the use of legal authorities and policy procedures.

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<sup>1</sup> David R. Warren, *Public-Private Competitions: Processes Used for C-5 Aircraft Award Appear Reasonable* (Washington, D.C.: GAO, 1998).

## *Allocating Depot Maintenance Workloads Between Public and Private Sectors*

The mechanisms for allocating depot maintenance workloads between the public and private sectors are carefully defined in a “core methodology” mandated by Public Law (10 U.S.C. 2464) and detailed in DoD Instruction 4151.20. Essentially, with defined exceptions, the organic depots must possess the capability to support at least some part of the work related to any combat-capable weapon system operated by DoD. That organic capability, in turn, must be supported with sufficient workload to maintain the capability’s repair competency, plus sufficient additional workload to support economical operation of the capability.

What remains of the total workload may be contracted, subject to a proviso that the organic portion of the total work must comprise at least half of the total annual expense (10 U.S.C. 2466). The contract portion has been slowly growing in proportion to the total over the past 40 years, reflecting industry interest in assuming more of the workload and congressional relaxation of limitations on the relative size of the contracted portion.

The depot maintenance community of organic and contract sources currently remains massive in size and expense; a key employer in multiple states and regions; and a competitive arena where source of repair decisions can have substantial implications for local communities. It is no wonder that there is a Depot Caucus in Congress with as many as 100 members representing both houses and parties. There are also multiple sections of Public Law designed to maintain a balance of sorts between public and private sectors performing depot maintenance.

### *Key Trends*

Depot maintenance workload tends to follow changes in operational system density, operating tempo, and operating environment. Its support for Operation Iraqi Freedom and Operation Enduring Freedom peaked in FY 2007 and has remained at a relatively constant level as the Military Services work off backlogs of work requirements stemming from deteriorated equipment condition from extended overseas operations. Current support levels are expected to experience a gradual decline, reflecting major reductions in Defense spending and retirement of portions of operating fleets. Pending decisions regarding retrograde of materiel from Afghanistan remain a major workload driver.

Another key trend for repair of advanced technologies is the burgeoning cost associated with building special-purpose repair capabilities to support unique or sensitive work requirements. There is growing interest in building single capabilities that can support the total life cycle of production and sustainment, perhaps located at either an organic or contract location.

### *Key Limitations*

Several key limitations characterize the potential for future competitive contracting application to DoD depot maintenance:

- a. First and foremost, depot maintenance is not a product or service that is widely available from multiple sources. Quite the contrary, the capability typically exists with a single commercial provider (the OEM), possibly a single government provider (an organic depot maintenance activity) and a single buyer or requiring activity. While it may still be possible to hold public-private competitions between the two providers, the potential for

competition is effectively limited to a one-time event as soon as the losing provider exits the market.

- b. Lack of requisite technical data is the limitation that is most often cited in Justification & Approval (J&A) documents authorizing single-source contracting. While the Congress has enacted legislation providing the Federal Government with rights to technical data for the goods and services it purchases, those rights are limited by the existence of patents, copyrights and proprietary data rights. The right also comes with a price — preparation of technical data is not free. Technical data may be unaffordable even when it is theoretically available.
- c. Depot maintenance cost accounting systems do not adequately track bid-versus-actual costs, nor do they allow organic depots to run at a financial loss for more than one reporting period.
- d. A decision to prepare for competition for existing workloads therefore involves extended timeframes (e.g., longer administrative lead times to obtain funding and prepare technical data; longer procurement lead times to solicit alternate sources and address likely award protests if anyone other than the OEM is adjudged to be the winner) and costs (to produce the technical data and manage the competition). Many requiring activities have also reduced their manpower by converting to a system of single-source blanket purchase agreements with OEMs under which repair orders may easily be processed.
- e. Contract administrative functions have also reduced their oversight manpower over the years, leading to a difficulty in discerning provision quality for competitively sourced depot maintenance products and services.
- f. The core requirement can result in the development of organic capabilities that would not otherwise be established on a purely economic basis. The 50/50 rule can result in decisions to terminate maintenance contracts and bring existing work into organic facilities when a Military Service nears its spending limitation.
- g. Since the end of the Cold War, the American defense industrial base has gradually consolidated through a series of mergers and acquisitions. The remaining elements of the industrial base are still highly capable, but more consolidated under a much smaller system of prime OEMs, and joined by licensing and strategic partnership arrangements that tend to restrict the number of companies that will respond to competitive solicitations for depot maintenance contracts.

Taken together, these limitations explain the high proportion of single-source depot maintenance contracting. They also explain why requiring (contracting) activities have streamlined their buying organizations to reflect the realities of contracting in a single-source environment. Further, they explain why buying activities would face daunting costs and workforce development hurdles to overcome technical data limitations, “smart buyer” requirements for competitive sourcing, and contract administration requirements to oversee competitive sourcing of highly technical depot maintenance requirements.

### *Need to Protect Organic Capability*

Given the limitations on competitive sourcing for depot maintenance, there are several reasons why organic depot maintenance capability makes sense, and why it should be protected or preserved to some extent for the future.

- Organic depot maintenance capability is the only plausible alternative to single-source commercial support for the full materiel life cycle. While it is true that the American defense industry does not operate in an open market, it is also true that monopolistic behavior is well-defined and predictable in classical microeconomic literature. The ultimate effect of a sole-source reliance on OEMs for life cycle support without plausible alternatives is a totally predictable increase in cost over time.
- Organic depots are deliberately designed to possess capabilities for rapid response for either manufacturing and repair requirements. This capability is reflected in capacity that is predominantly designed to operate in a single-shift five-day week mode. While commercial industry would also be happy to operate in that mode, and does to some extent, the economic cost of maintaining similar surge capacity at each contract location would be prohibitive. The organic depots have long histories of examples where they were able to apply this capability to rapidly respond to emergent needs much faster than contract lead times for the same requirement.
- Organic depots are designed to be capable of supporting multiple commodities from multiple product lines and manufacturers. Within that capability, the depots can rapidly shift between workloads to meet higher priority requirements.
- The built-in diversity of organic depot maintenance capabilities gives them a unique capacity to quickly handle “last source” requirements when a commercial source ceases operation for any reason.
- Organic depots are primarily focused on maintenance requirements rather than manufacturing, in contrast to their commercial counterparts. For this reason they richly deserve their designation as “centers of industrial and technical excellence” defined in 10 U.S.C. 2474. They are the ultimate repositories of maintenance expertise.

### *Need to Preserve Commercial Industry Capabilities*

The public-private debate that has been ongoing for the past 40-odd years began with a recognition that commercial defense manufacturing workloads tend to be lower volume and longer-term than they were in the early days of the Cold War. As a consequence, production lines tend to have available capacity to support repair workloads on the same line. From that backdrop, industry makes several important points:

- It is always more economical to operate production or repair lines at their designed capacity. When there is more than one line in operation, there is usually a potential economy to be gained from workload consolidation. This is an important element of any business case evaluating workload alternatives.

- In the absence of sustained production workloads, industry production lines can be sustained for a longer period of time through substitution of repair workloads on the same line. This argument, which amounts to the opposite of the first argument, argues for non-economic retention of manufacturing capability on a less-than-economic basis. The prime current example is the proposal to keep the Lima Tank Plant open with minimal workload until the Army can resume funding for manufacturing workloads at the plant.
- The OEM is equipped with the full set of product support elements, which are necessary to support both manufacturing and repair workloads. There is a clear functional benefit to integrating repair work with its related product support elements. Once again, this is not necessarily an economic argument, since industry tends to emphasize the performance benefits of such arrangements; but the approach does provide a plausible means of improved product support as well as preservation of the commercial capabilities for a longer period of time.
- It is the long-standing policy of the federal government that government entities should not compete with commercial industry for the provision of products and services. Therefore, runs this line of thinking, depot maintenance should be summarily outsourced, because that would be good for American business. This argument is typically made in the context of advocacy for outsourcing that includes a presumption that there are multiple competitive sources for any workload. As we have already explored, the assumption is outmoded at best. The “good for business” argument *per se* no longer serves as a valid limitation on depot maintenance sourcing.

## An Ongoing Quest for New Solutions

The public-private debate for depot maintenance provision is continuing in multiple forums (Thompson-2012-11). At the same time, a focused effort is underway to find new and better approaches to sustainment provision, and to do so with collaborative government and industry collaboration.

The venue for the initiative stemmed from the Weapon System Acquisition Reform effort and its implementation arm entitled the Product Support Assessment Team (Carter-2009-11).

### *Addressing Limitations*

Both commercial and government sources have grown accustomed to a rough balance, or equivalence, in the public-private sectors for depot maintenance workloads. At the same time, both sectors are learning to use legislative and policy authorities that already exist, to form public-private partnerships between organic depot maintenance activities and commercial counterparts. Among other things, partnerships are a means to address existing limitations in workload to a certain extent, and bring some amount of additional product support elements into a workload mix that can be mutually beneficial. The DoD guidebook on public-private partnering for sustainment contains more background information and rationale, see <https://acc.dau.mil/ppp-guidebook>

Public depots cite partnerships as enhancing their ability to obtain relevant technical data, improved supply support, and technical expertise that would otherwise not be available through any other practical venue.

Commercial sources enjoy the potential for increased visibility of impending workload, avenues for employment of additional product support elements, opportunities to improve supply support for their manufactured products, and collaborative work sharing for additional workloads such as foreign military sales supported directly by the OEM.

The potential for combined workloads that are larger and more efficient, ready access to product support elements, the possibility for synergies between public and private partners, access to better technical data and engagement of highly trained maintenance artisans all militate toward improved efficiencies and better product through partnering agreements. It is no wonder that both public and private sectors are avid advocates for improvements in the ground rules and applications in the days ahead.

Partnerships involve varying degrees of collaboration, depending on the personalities of the managers and the cultures of the two parties. Some partnerships have already successfully demonstrated collaborative production management and exchange-in-kind work flows; some have foreseen a single work force that transitions from OEM to depot as workload transitions from manufacture to sustainment.

Taken together, the kinds of benefits just cited can lead to tangible cost savings, or at least a more efficient output for a given level of resource input.

A number of additional features are now under consideration for partnering. Examples include:

- Earlier partnering, including the possibility of an organic depot providing interim support to an OEM during development test;
- Easier business case justifications for early partnering arrangements; and
- Authorization for the inclusion of additional product support elements, including both public and private sector resources.

These topics are slated to be explored at a joint government/industry partnering meeting to be held in Layton, Utah the week of August 20. An update on results should be available in time for the Limitations conference in September. The three main topical areas of the meeting are designed to address contracting, legislation and policy, and metrics.

### *Fixing Competition*

Competition still has its place when it is possible to have multiple parties bidding on a given workload. Those instances occur when there are suitable conditions such as standardized products or systems, a close relationship to commercial equivalent systems, or items for which the government owns the technical data (including items the government has reverse-engineered).

Given the relative size of barriers to competitive sourcing, it is unlikely that the resources will be available to purchase all the missing pieces to form a truly competitive environment, at least in the near term.

Contract language is being addressed in one important aspect. Work is underway to develop new language for the sustainment sections of acquisition solicitations (Sections L and M) that will announce the government's intent to enter into early partnering arrangements as a part of contract award.

### *Legislative and Policy Initiatives*

Congress amended several related sections of Title 10 of the U.S. Code as a part of the fiscal year 2012 National Defense Authorization Act. Further potential amendments are under active discussion, with the possibility that a legislative proposal might be forwarded for either fiscal year 2013 or 2014. The bulk of these potential initiatives address "playing field" issues that set the terms of engagement of depot maintenance partnering.

Concurrently, work is ongoing to revise DoD Instruction 4151.21, *Public-Private Partnerships for Depot-Level Maintenance*, to address the matter of business cases and other issues that can be resolved with policy issuances.

### *Metrics*

A limited amount of information is necessary to be able to gauge progress in the applications of public-private partnering, especially with respect to quantity, size, benefits, savings and cost avoidance. The third topic of the partnering meeting will explore the potential design of a new metrics set for use by partnering practitioners.

### *Developing Further Alternatives*

The public and private sectors are figuratively learning to walk together as they pursue additional partnering opportunities and improved product support in the face of ongoing budget reductions. Collaborative skills are as important in this endeavor as technical concepts. Ultimately, the two sectors need a set of authorities that will allow them to exchange funds for goods and services produced for the other party. On its face, this objective would seem to require:

- Legislation authorizing the exchange of funds for the use of the other sector's product support elements
- Building of collaborative skill sets
- Policy regarding easier and quicker business case development for early partnering
- A range of additional ideas and initiatives that need to be matured and enabled in the coming months

At this point, partnering is associated with a relatively small percentage of total depot maintenance workload from both sectors (Buckley-2012-17). To rapidly grow that proportion in terms

of size and value, the sectors need to find any number of additional initiatives that will enable sustained growth in the partnering arena.

### *Development Process for Further Alternatives*

It is likely, as government/industry dialog continues, that a range of initiatives will be identified that will require multiple working groups to develop and nurture. Like any strategic initiative between two parties, the ventures have a probability of success that will be enhanced with enablers such as legislation, policy and management support. It remains to be seen how this plays out.

- Development of additional partnering initiatives is a first alternative to restoration of a classical competitive posture for depot maintenance. With ongoing dialog, there should be additional alternatives in due course.
- There is always the possibility of standing up a third source (other than depot and OEM) for the purpose of competition, although the prospect for sustained competition is limited by the small number of actors and the very real possibility that a losing source will exit the “market.” There is also the matter of investment in reverse engineering or purchase of technical data to support such a competition, as well as the development of a “smart buyer” capability to engineer the competition.
- At this point, it is not clear that any mechanism would force competition for existing postured workloads, other than the public-private competitions that were generated in the early 1990s (discussed earlier). Such an approach simply leads to a net loss of work for organic sources and rough equivalence in the cost to produce. It is not particularly practical.
- The cost behavior for workloads previously subjected to competition is worth discussing, because the initial savings from a “most efficient organization” is on the order of 30 percent for depot maintenance workloads. Unfortunately, that savings is dissipated with changes to work scope, pay raises and other forms of cost increases that are an inexorable part of maintenance management. Within a few years, and absent a suitable enforcement mechanism, the savings dissipate. Since there is typically only one surviving source (the incumbent) there is little opportunity to use competition to drive the savings, which amount to a one-time event.

### *Better Strategic Planning*

The depot maintenance community needs an improved system for strategic planning to correctly posture the sectors and capabilities (Avdellas-2011-6-3). Strategic planning could foresee long-term maintenance trends and posture work assignments for life-of-type sustainment. Collaboration could assign emergent work to sources with existing capabilities that could be brought to bear rather than starting with a bare shop floor. Workload realignments and consolidations are a painful and difficult process but can generate measurable savings when applied in base closure and realignment activities. Broad assessments across services and sources could lead to decisions to establish specialized repair and manufacturing capabilities, such as currently exist for micro-circuit manufacture and reverse engineering.

### *Mechanisms to Force Cost Reduction*

Given an imperative to reduce maintenance budgets, the normal approach is to select the lowest-priority work for elimination, leaving an unfunded requirement and the potential for early retirement of a supported system. It would seem to be preferable to engage maintenance activities in continuous process improvement and system-wide cost reduction, although that approach has its own hazards and pitfalls. Despite the pitfalls, continuous process improvement remains the preferred alternative, at least to outside analysis.

One of the related issues that limit management's ability to control costs is a lack of suitable cost controls. The Defense Working Capital Fund, which is the financial management mechanism for most organic depots, is designed to track expenditures but is not a management accounting system.

### *Overall*

Any move to initiate classical competitive sourcing for depot maintenance has high and costly barriers that effectively prevent the application of competitive forces.

Competition is an obsolete concept for work that is unique, developed by government investment and supported by single public and private sector sources.

There are useful alternatives to competition, centered on public-private partnering, that can increase efficiency and mission effectiveness. Partnering can begin earlier in the acquisition cycle and should have increased prospects for larger, more valuable applications as a result.

Successful cost control depends on early planning and collaboration.

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