

DoD Open Systems Architecture Contract Guidebook for Program Managers

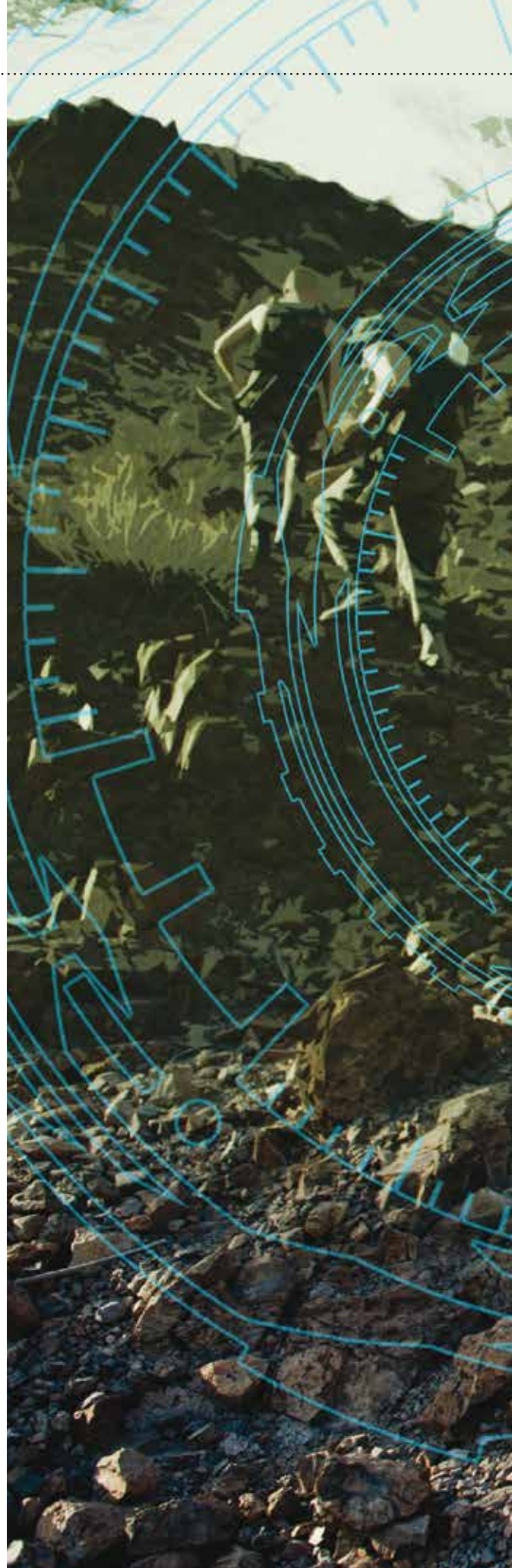
A Tool for Effective Competition

Nickolas Guertin ■ Thomas Hurt

The Department of Defense (DoD) has reached a critical juncture, when, despite shrinking defense budgets, the demand for superior warfighting capability has never been greater. New methods must be used to get more affordable acquisition results while developing systems that can change quickly to meet new warfighter capability demands. This is the driving message behind Better Buying Power (BBP) 2.0 and the reason Open Systems Architecture (OSA) is featured so prominently in the pillar for Promoting Effective Competition.

Using best practices from across the Services is a powerful and effective way for the DoD to restore affordability and productivity by better utilizing its “buying power.” An inextricable part of making the government a better monopsonistic buyer—in a market in which it is the only buyer of certain products and services—is


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Open Systems Architecture
Contract Guidebook
for Program Managers

A photograph of two soldiers in a field, one standing and one crouching, with the text overlay.

The combination of open architecture and an open business model permits the acquisition of Open Systems Architectures that yield modular, interoperable systems.

creating and maintaining a competitive environment that motivates the defense industry to deliver cost-effective solutions. To create such an environment, the government needs to make a concerted effort to “promote effective competition” in the marketplace for defense goods and services, as prescribed in BBP 2.0.

According to BBP 2.0, two of the tenets for promoting effective competition are:

- Emphasize competition strategies and create and maintain competitive environments.
- Enforce open system architectures and effectively manage data rights.

The DoD *Open Systems Architecture Contract Guidebook for Program Managers* (hereafter referred to as the *Guidebook*) addresses both of the points above by providing Program Managers (PMs) with the basic elements to capture the benefits of an open business model in order to create a competitive environment. An open business model incorporates OSA principles, alongside the smart utilization of data rights (DR), for effective competition across the entire DoD enterprise. The *Guidebook* provides specific request for proposal (RFP) language and programmatic examples to help the acquisition workforce better articulate its specific needs through contracts to get the best deal.

Version 1.1 of the *Guidebook* was released in June, with both an interactive website (<https://acc.dau.mil/osaguidebook>) and print versions. Members from across the Services collaborated to create this document, with the DoD Open Systems Architecture-Data Rights Team leading the coordination efforts. This *Guidebook* is authorized for release by the USD(AT&L)-chartered team led by the Deputy Assistant Secretary of the Navy, Research Development, Test and Evaluation (DASN [RDT&E]) and the Deputy Assistant Secretary of Defense for Systems Engineering (DASD [SE]), in collaboration with Defense Procurement and Acquisition Policy (DPAP). The *Guidebook* is designed to be used by all PMs to incorporate OSA principles into the acquisition of any system(s) or service.

What is an Open Business Model? What Does it Have to do With BBP?

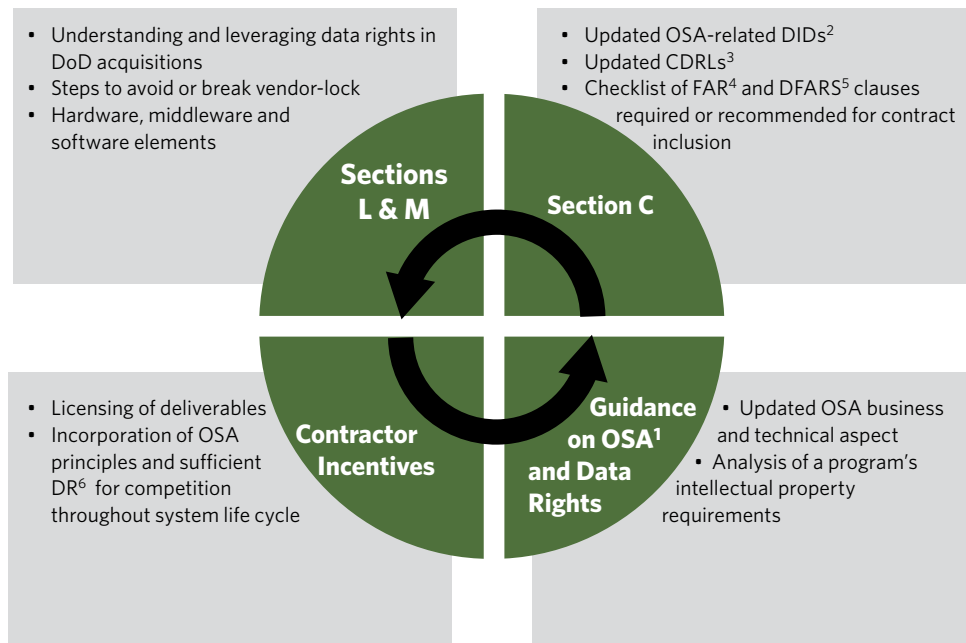
A key enabler for open architecture is the adoption of an open business model, which requires doing business transparently to leverage the collaborative innovation of numerous participants across the enterprise—permitting shared risk, maximizing asset reuse and reducing total ownership costs. The combination of open architecture and an open business model permits the acquisition of OSAs that yield modular, interoperable systems allowing components to be added, modified, replaced, removed and/or supported by different vendors throughout the life cycle in order to drive opportunities for enhanced competition and innovation.

The DoD’s BBP website defines an open architecture as a technical architecture that adopts open standards supporting a modular, loosely coupled and highly cohesive system structure that includes publishing of key interfaces within the system and full design disclosure regardless of the DR early in a program development that should reduce program risks. Full design disclosure refers to the government’s desire for early and frequent disclosure throughout the design and integration build processes, as a means of managing the government’s risk. In this way, the government can monitor the progress of development in advance of milestone reviews. This, of course, is not a replacement for requiring deliverables as part of the contract. Open architecture coupled with improved acquisition of data rights strengthens the government’s buying power, facilitating the procurement of the appropriate level of rights necessary for transparency, obtaining limited rights or restricted rights when Government Purpose Rights are not necessary for life-cycle sustainment or other purposes like reprourement, organic support, product improvement, etc.

Perhaps the most expedient way to determine if a system employs open architecture is to see if the program can answer affirmatively the following question:

Can one or more qualified third parties add, modify, replace, remove, or provide support for a component of a system, based on open standards and published interfaces for the component of that system?

Figure 1. Contents of the Department of Defense (DoD) Open System Architecture Contract Guidebook for Program Managers



Note: The language contained in this *Guidebook* should be tailored to reflect the program's phase and the goals of the intended procurement action, and should gain local approval to use *Guidebook* elements. This *Guidebook* is intended to implement and supplement, rather than replace, authoritative source materials such as the FAR, the DFARS, and other applicable DoD policy and guidance.

1. Open Systems Architecture
2. Data Item Descriptions
3. Contract Data Requirements Lists
4. Federal Acquisition Regulation
5. Defense Federal Acquisition Regulation Supplement
6. Data Rights (Government's license rights)

The guidance set forth in this *Guidebook* is applicable to both large and small business contracts and can be used in support of BBP 2.0's mandate to increase small business roles and opportunities.

Contents of the *Guidebook*

The *Guidebook* provides candidate language for the sections of an RFP that need to be created by the associated program office. It also contains information on how to establish OSA practices in both new and existing programs and how to ensure those practices are adhered to throughout the program life cycle. This *Guidebook* is divided into five chapters containing suggested language for RFP Sections C, H, L, M, and Contractor Incentives. It also has 11 appendices covering a range of related topics to help the acquisition community understand how to invoke OSA and establish open business models for their systems.

Execution of an effective OSA and Intellectual Property Strategy including strategic asset reuse must be considered from both a Pre-Award and Post-Award perspective. But first, each PM must have complete knowledge of the data delivered and then data delivered in other programs. In accordance with BBP

2.0, decisions about data and the accompanying data rights and open systems elements must be made earlier in the planning phase to ensure the government spends the least to effectively get the best with taxpayers' dollars. In addition, solicitations should be written to incentivize potential contractors to offer an open system approach up front before award when the government's leverage and bargaining power are the greatest.

What Makes this *Guidebook* Different?

This *Guidebook* provides information not covered in other guidance documents in areas such as contract incentives. The incentive structures described in this *Guidebook* have the added benefit of reinforcing the importance of the government's emphasis on collaborative business relationships, technical leadership, planning, and execution. This *Guidebook* provides the structure for incentivizing OSA technical tenets, business practices, and cooperative behavior with other

vendors as well as the more usual quality, timeliness, technical progress, technical ingenuity, and cost-effective management requirements. This document provides guidance on the use of Cost Plus Incentive Fee, Cost Plus Award Fee, and Cost Plus Award Term, in accordance with instruction provided by Under Secretary Kendall in his article titled "Use of Fixed-Price Incentive Firm (FPFI) Contracts in Development and Production," in *Defense AT&L* magazine, March–April 2013.

The *Guidebook* also offers language for Section H of the RFP that can be incorporated into contracts as appropriate. The *Guidebook* recommends that programs consider developing a "Section H Special Provision" that, at a minimum, incorporates the contractor's proposal relating to an Open System Management Plan into the resultant contracts and requires government concurrence prior to any change in that plan. As with all sections of the *Guidebook*, all recommendations are offered with the understanding that individual Program Executive Offices (PEOs) and programs must have the flexibility to adapt its principles and guidance to meet their needs, in addition to gaining local approval to use *Guidebook* elements. This *Guidebook* is intended to implement and supplement, rather than replace, authoritative source

materials such as the FAR, the DFARS, and other applicable DoD policy and guidance. Users must continue to consult and comply with the most recent versions of the FAR and DFARS, and other governing DoD policy and guidance, in addition to this *Guidebook*, when developing acquisition materials.

This *Guidebook* is a living document, which is expected to be updated biennially to incorporate community inputs and address topics that emerge from the DoD enterprise's experience from implementing OSA. Therefore, the authors are very interested in comments, suggestions, and feedback, including any "real world" experiences one may have in using OSA principles in programs.

What's Next

The *Contract Guidebook* is one of numerous tools available or in development to help the government more effectively promote competition to drive down costs and spur innovation. Continuous learning modules, such as the Defense Acquisition University's CLE 012 on open architecture and CLE 068 on data rights, are available to the acquisition workforce to learn more. To further educate the acquisition workforce on the topics of OSA and DR, the DoD OSA-DR team is

Figure 2. Summary of Updates in Version 1.1 of the Guidebook

Participation by all Services, including OSD ¹ , Office of the General Counsel, an DAU ² ; and SMEs ³ from different disciplines of the Defense Agencies		
Better guidance on data rights, IP ⁴ strategy, and business modeling		Evaluation of Special Clauses for inclusion in DFARS ⁵
Open Source Software Guidance	Revised Contract Incentives section	Subsumation of OSJTF ⁶ and MOSA ⁷ concepts

1. Office of the Secretary of Defense
2. Defense Acquisition University
3. Subject Matter Experts
4. Intellectual Property
5. Defense Federal Acquisition Regulation Supplement
6. Opens Systems Joint Task Force
7. Modular Open Systems Architecture
8.

developing an *IP Strategy Guide* as well as an update to the *Procedures for Acquisition and Management of Technical Data* (DoD 5010.12-M).

The *Guidebook* is one of many initiatives associated with the implementation of BBP 2.0 to deliver the latest innovations to the warfighter at a more affordable cost to the taxpayer. These initiatives change the way the DoD does business, with the end goal of increasing value for both the warfighter and the taxpayer through more effective and sustainable acquisition strategies. &

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For more information on the contents of the *Guidebook*, please visit <https://acc.dau.mil/osaguidebook>

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