



Phased Contracting Process Improves Requirements and Life Cycle Cost Estimate Fidelity

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Uncontrolled cost growth. Nunn-McCurdy breach. Program manager relieved of position. Not the words any program manager predicts hearing at a milestone review but always in the back of every PM's mind as he/she assumes the helm of an ACAT program—because cost growth has always been a problem in DoD acquisitions.

In 2011, the Government Accountability Office (GAO) in its biennial list of federal programs deemed at high risk for “waste, fraud, abuse, mismanagement, or in need of reform,” again listed the DoD weapons acquisition system, as it has since 1990. For 96 major defense programs, the report estimated total acquisition cost growth in fiscal year 2008 at \$303 billion (in 2011 dollars), accompanied by an average delay of 22 months in delivering initial capabilities. Given these statistics, a flexible, tailorable, and pragmatic contracting process is not only needed but has been called for by Congress all the way down to program leads.

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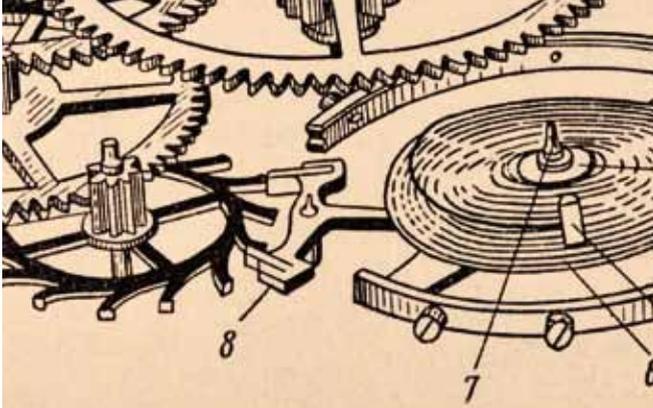
The major culprit in cost/schedule growth is estimating full program costs before you know exactly what you are going to design, purchase, build, and test. Funding limitations, technical challenges, and accurate representation of requirements are all complexities that change the equation—factors only known once you begin development. Add to that the acquisition Cold War mentality of mistrust between the government and industry sides of the partnership. To combat these factors, Boeing has implemented a phased joint approach in contracting methodologies called the joint business process (JBP) across its Airborne Warning System programs. The joint business team uses an incremental proposal development process to develop technical understanding and improved costing proposals, saving costs across the total program life cycle. In short, better proposals lead to better program execution.

The secret is the simplicity and basis in common sense. Every writer knows the first draft requires reviews and edits to find its potential. Traditionally, contracting officers request a single draft proposal on a best guess of requirements. JBP simply opens the process to mutually reviewed drafts for products on both sides. That means sharing previously sensitive data, such as budget allo-

cation from the customer, and being open to feedback, such as a critical analysis of requirements and alternatives by the contractor. Steadfast conservatives will protest, "You can't share the government's cost bogey with the contractor."

A review of the facts shows no reason not to be open. Critics warn if you give contractors a number, every proposal will match it. True—but in everyone's favor. Very few RFPs ask for less than the program can afford. The old practice of asking for the world and then hacking at the pricing to afford it is wasteful and inefficient, and it generates animosity on all sides. By providing a bogey upfront, the government/industry partnership have the opportunity to make real-time cost trades during proposal development to balance key requirements with very real cost limitations.

In addition, government will need to accept that industry is not best served by gouge-pricing every proposal. While it is true that industry is built on a profit incentive, industry employees are also Americans who have a patriotic commitment to those serving in uniform. If legally required certified pricing data is not sufficient to quell resistance, one must understand that the typical



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curate set of requirements and technical challenges/risks on which to base pricing.

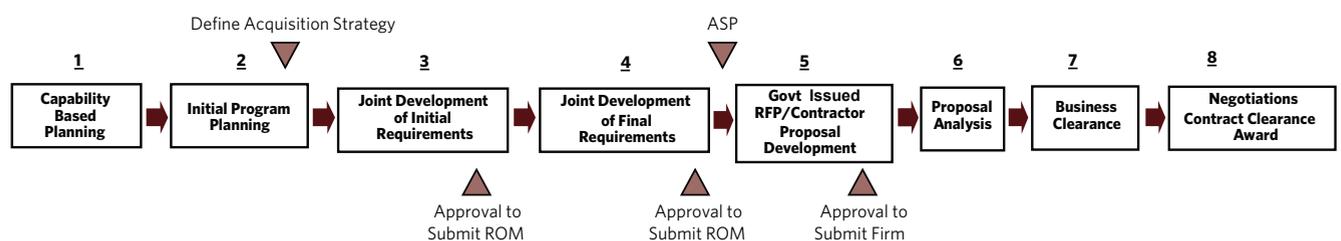
On the surface, JBP appears to increase the contracting schedule timeline, but given most traditional contract awards are quickly followed by clean-up and scope adjustment mods plus the fact JBP actually allows work to begin much sooner, the overall schedule is reduced and more effective. Requirement and proposal development are incrementally performed in eight tailored, separately funded phases relying heavily on partnering between the program office and the contractor to complete. Each phase allows greater clarity into the program's challenges, limitations, and capabilities before committing to the next. Conversely, these decision points provide convenient off-ramps if the effort needs to be aborted or suspended due to resource constraints or warfighter requirements change before a total commitment of funds to the effort. If a technology isn't progressing sufficiently to meet a major need or the current budget cycle is not favoring the project, it can be cleanly shelved or restructured for a future restart. By testing the waters, decision makers can begin the next phase with eyes wide open to the risks and objectives while not committing taxpayer money to a great unknown. Industry is incentivized to perform during these phases to compete for the follow-on work and potentially invest in industry-funded research and development if the business case supports it.

industry manager has no profit incentive in his pay but rather evaluated by his or her ability to meet technical goals on time and on cost. Shareholder value likewise is not enhanced by a short term spike in price, but by consistent customer satisfaction in a quality product that drives repeat business. Reversing the conversation, the requirements first generated by the program office are by no means perfect. They represent a summary-level best guess of a translation from warfighter's combat needs to a technical solution.

Try explaining your technical requirements in building a new house to an architect while being completely accurate and explicit on the first attempt. This is not the way it works. Instead, the architect takes a day and develops a draft sketch of the new home for the customer to review. They then discuss price point options and make refinements. They continue the process until both sides understand and agree to the final design, price, and schedule. If government admits that RFPs are a first draft and lets the true experts in industry coauthor the deeper technical capability specifications in varying detail, the conversation will likely produce a better understood, more ac-

Phases 1 and 2 begin like any other new effort, as a need is identified. The JBP engages within the existing RFP structure by enhancing the data products beginning in phase 3. Phases 3 and 4, led by the program manager, are conducted by integrating alpha contracting with full, open, honest, and active dialogue. Trust is key during the process, as the parties conduct objective versus threshold requirement cost trades, contemplate contracting strategies, and establish budget benchmarks. It is in these phases that decisions are made as to whether the program should be firm fixed price (FFP) or cost plus, so risk and pricing strategies can evolve. While sufficient proposal preparation funding is provided for each phase, the major difference is additional funding for preliminary technical development. By doing initial technical development functions, the team gains greater insight into future risks and focus areas while spending minimal funds that would have been used anyway in a full-fledged award. In return, both sides develop a preview without full and total commitment. The best analogy is an auto mechanic giving an initial estimate before

Figure 1. Joint Business Process



work starts but providing a better estimate once some labor is spent exploring the problem. If the educated estimate is too high, you recover the vehicle with minimal out-of-pocket cost. But expecting a firm estimate without the benefit of looking under the hood, which overcharges either the customer or the shop, is foolhardy and, in the world of defense acquisition, is a major cost/schedule driver.

Phases 3 and 4 culminate in submissions of rough orders of magnitude (ROM) including suitable statements of work (SOWs). Each ROM adds more fidelity and confidence, focusing primarily on hours and material costs, as a foundation for decision making to enter the next phase. They also provide a convenient deliverable to manage contractually, but in reality the true deliverable is the framework for the contracting strategy and detailed technical definition. In the traditional approach both sides have to fully commit placing all their chips down before either side knows what surprises lurk. In contrast JBP provides a look under the tent and a strategy session ending where both sides have a handshake on how the program would move forward built firmly on the chassis of the previous phase.

Phase 5 transitions to a traditional contracting process using the refined SOW in the RFP. The contracting officer takes formal control of the process issuing the RFP and accepting the formal proposal to end phase 5. Technical evaluation and requests for information are conducted in phase 6 but should be more of a formality, since the technical merits were developed jointly. Legal counsel reviews the case in phase 7, permitting the PCO to negotiate with the contractor in phase 8, and due diligence is exercised to provide legally required fiduciary responsibility. The timeline is extremely expedited, since the intended work has been widely documented, alpha negotiation has resolved most major disconnects, and a firm proposal is quickly generated in phases 3-5. By this point, labor hours have informally been agreed upon, so all that is left is to negotiate rates, factors, and fees progressing to phase 8.

The inability to acquire joint defense capabilities at contracted costs and within scheduled timeframes is a continuing DoD problem. The standard “over the fence” contracting method of requesting sealed bids consisting of industry’s best guess of the warfighters’ needs has demonstrated for decades that the process does not work. Given that DoD is entrusted with more taxpayer dollars than any other federal agency, it is incumbent upon program managers to identify and implement contracting strategies that produce improved acquisition outcomes. At the same time, program managers in government and industry owe it to the warfighter to deliver effective war winning solutions as promised. The JBP offers a structured teaming approach to better requirements definition, estimating, and planning—serving the taxpayer through reduced rework while preserving manpower and funding. In the age of significant budget shortfalls and lean initiatives, such a promising and tested solution must not be overlooked. 

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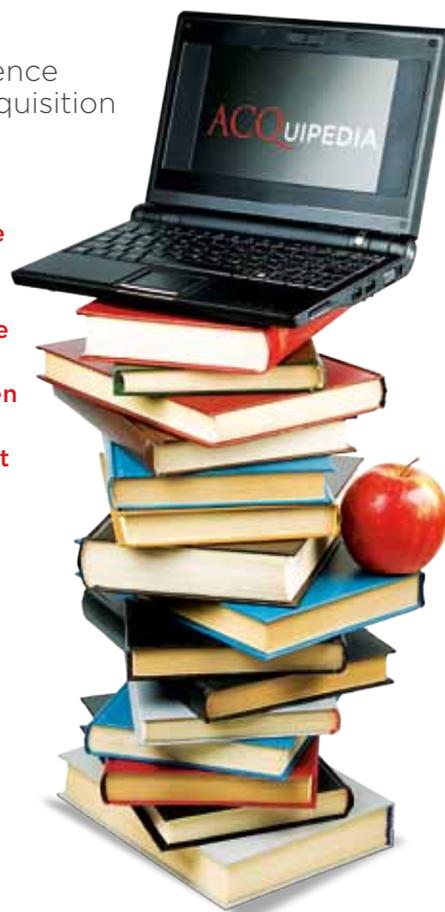
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