

Analyzing Ammunition Acquisition Strategies – Breakout Versus Systems Contracting

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The acquisition of ammunition in today's environment presents a complex decision-making process to select the appropriate acquisition strategy. The Defense Acquisition University defines acquisition strategy as "a business and technical management approach designed to achieve program objectives and provide the framework for planning, directing and managing a program through research, development, test, production and fielding." In the ammunition production phase, a key decision is whether to pursue a systems or component breakout procurement strategy. A key challenge for the project manager is how to make these decisions in a systematic and consistent manner.

A soldier on patrol peers around a corner of a building in Kirkuk, Iraq, April 11, 2004. (U.S. Army photo by SGT April Johnson.)

Systems procurement strategy is when a contract for an end item is awarded to a prime contractor who accepts responsibility for procuring all components and subassemblies, and then integrating them and ensuring the end

item functions as required. In *component breakout strategy*, the government goes directly to industry and procures the necessary components and processes and provides them as government furnished material or equipment to a final-process contractor for assembly and test.

The difference in the two strategies is much like building a home and deciding whether to employ a general contractor to attend to construction details or accept responsibility oneself for contracting and coordinating all the skills

and services necessary to complete the house. In this case, it means assigning the risk of integration and assembly to a single “systems” contractor, or accepting the risk of integrating and assembling the deliveries and processes from multiple “breakout” contractors and vendors.

Risk often equates to cost. Systems contractors will usually cost more because they must cover the potential cost of late component deliveries and flawed integration processes. Of course, the government can choose the less expensive summary cost of



CPL Bryan J. Webber fires an MK19 40mm Automatic Grenade Launcher during a crew/serve live-fire exercise. This training is to maintain proficiency in force protection. (U.S. Navy photo by Photographer's Mate First Class Edward G. Martens, Fleet Combat Command Group, Pacific, Philippines.)

multiple contractors and accept the potential integration “risk” associated with faulty material, late deliveries and the resulting monetary claims for default when other component or process contractors are inconvenienced.

The dilemma in choosing between systems or breakout procurement strategies is an old one. Both have pros and cons and either may have merit over the other in different situations. Obviously, there are many factors to be considered in the decision process. The technology and

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complexity associated with each end item must be viewed in light of the capabilities and critical skills available in the traditional munitions industrial base. Typical questions one might ask are: were there similar items procured in the past; what was the strategy; and was it successful? *The Competition in Contracting Act*, small business policies and numerous sections of the *Federal Acquisition Regulation* and various statutes require consideration of component breakout. The decision may also be influenced by whether there are like end items being procured and the possibility of savings

across these end items by grouping component procurements.

Cost and potential cost savings of breakout must be weighed against potential risk. Is the risk so great it would be less expensive to pay a systems contractor to accept the risk?

Choosing a systems or component strategy is certainly a decision that must be in accordance with regulation and statute. At the same time, the decision must include an objective evaluation of all factors and an evaluation independent of opinion, culture and the notion that “we’ve always done it this way.” The decision methodology

should be a structured, single process that can be applied to the different end items and products across the acquisition manager’s portfolio, yet be flexible enough to allow consideration of each item or product’s unique attributes.

The following two examples demonstrate the complex issues involved in choosing appropriate acquisition strategies and how the government must adapt to new methods of procurement, while ensuring that readiness is maintained and Soldiers are being provided with the highest quality equipment.

40mm Grenades

The 40mm grenades for the M203 and MK19 weapons have historically been procured through component breakout acquisitions to small businesses with the government performing the system integration role. These 40mm cartridges were procured on a component basis to reduce contract cost and to satisfy small business set-aside goals. Contracting directly with subcontractors eliminates prime contractor overhead costs. However, it was concluded that the cost-reduction benefit was more perceived than real. The overhead costs represent functions that must be performed on a program — if not by the prime contractor, then by the government. In breakout strategy, the government must go through the entire contracting process for each component — from preparing procurement packages and developing requests for proposals, to performing source-selection evaluations and conducting negotiations annually.



SPC Isaiah Oliver mans an MK19 Grenade Launcher mounted on a Humvee in central Iraq. (U.S. Army photo by SFC David K. Dismukes, Coalition Forces Land Component Command Public Affairs.)

While actual contract costs may decrease with a component breakout approach, there is an increase in technical and schedule risk that leads to an overall increase in program costs. More importantly, if the difficulties in a breakout strategy materialize, fielding of critical ammunition may be impacted. This time-consuming process — coupled with reduced government personnel, increased workload and ongoing military actions and associated training — led to a rescission of FY03 funding for 40mm grenades.

Beginning in FY05, 40mm cartridge procurement for the M781, M583, M433, M430A1, M918 and M385A1 will be handled as a system by two or three small business teams. This allows

the benefits of small business set-asides to be maintained without the burden associated with component breakout. The items will be combined into one family acquisition in a long-term contract (base year with four 1-year options). The basis for award will be a best-value evaluation, and the system contract will yield many benefits for both the government and industry.

Bombs

Bombs are the largest family within Project Manager Joint Services (PM JS) and include both tactical and training configuration. Bombs represent the greatest challenge in crafting long-term acquisition strategies. The current acquisition environment for general purpose and penetrator bombs is

characterized by breakout procurement, single bomb body producers with significant government facility and equipment investment and other components produced by several small businesses.

To address the need for dynamic changes in bomb acquisition, PM JS is realigning its integrated product team structure to focus on the family system approach. The decision was based on criteria including the interrelation of bomb components, protecting the existing industrial base, competition, insertion of new technology and timely delivery.

A Structured Methodology Alternative

The PM for Combat Ammunition Systems (PM CAS) recognized the

need for, and difficulty in defining, a structured methodology to equitably resolve the question of systems versus breakout. Late in 2003, the PM began working with Altarum Institute, a non-profit research and innovation institution, to develop and implement a structured approach to analyzing acquisition strategies for artillery and mortar ammunition. The goal was an accepted, definitive process to determine strategies for specific ammunition items or commodities that would achieve program executive office/PM business objectives, could be implemented within regulatory and statutory boundaries of a complex acquisition environment and would strike optimal balances between risk and reward.

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Development of this structured approach has resulted in an acquisition template in Microsoft® Excel that guides the acquisition analyst through a particular item's impact on business objectives related to cost, schedule, performance and risk and ammunition acquisition environment constraints such as legal statutes, industrial base impacts and cultural issues. The functional result is a suggested optimal acquisition strategy with a detailed list of actions necessary to implement the suggested strategy.

Initial acquisition template applications have suggested that both systems and breakout strategies may be preferred depending on the particular item or commodity. In some cases, template application has suggested that a system strategy has

advantages over the item's current component breakout approach. However, with such a reversal of strategy, it becomes difficult to satisfy the competing priorities in the areas of contract bundling, direction of work to government-owned government-operated plants and equitably breaking out work for small businesses.

The overall objective in developing this decision-making template is to create a framework that PMs can easily use to identify and implement appropriate acquisition strategies for their respective programs or projects. Similarly, the decision template and framework can be used to evaluate current acquisition strategies, their degree of optimization and, if necessary, determine the actions necessary to transition these programs to a more efficient and effective acquisition strategy. Whether determining a new strategy or evaluating an existing one, the next decision development template step is to use the output to define the detailed implementation plan for achieving the recommended acquisition strategies.



Marines establish an overwatch position with their MK19 Grenade Launcher during a field training exercise. (National War College photo.)



A special operations soldier mans a MK19 Grenade Launcher as he and his team conduct a mounted patrol through the town of An Najaf, Iraq, during *Operation Iraqi Freedom*. (U.S. Army photo by SSG Kyle Davis.)

PM CAS, along with Altarum, is in the process of “dry-running” the acquisition decision template and expects to complete the effort in late FY04. The PM expects to begin using this template to evaluate and assess the systems versus component breakout strategies for all of his FY05 programs, commodities and end items.

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