

Army TACMS-BAT Production Decision for Block II/BAT Missile

First-Time PM Shares Insights, Observations on Getting a Production Decision — A Tough, Time-Consuming, Never Easy Process

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The Army Tactical Missile System/Brilliant Anti-armor (TACMS-BAT) Project Office recently completed the long and arduous task of getting a production decision for the Block II/BAT missile at the Defense Acquisition Board (DAB) level. As a relatively new project manager, I walked into the process while it was still at the Integrating Integrated Product Team (IIPT) coordinating level. I participated in and observed the process as it worked its way through the Department of the Army and Office of the Secretary of Defense (OSD). This article attempts to assemble observations and lessons learned that may benefit other program managers (PM) as they go through the process.

Tools of the Trade

The first thing you, as a PM, need to do when facing a major milestone decision is to purchase a high-quality, carry-on suitcase. Then, get your Training and Doctrine Command System Manager (TSM) to do the same. You will both be on the road much more than you anticipate and, frankly, much more than should be necessary.

Next, ensure you are equipped with the communications tools you will need to stay in touch with the office while on the road. I was fortunate to have a truly gifted deputy and a talented workforce that stayed on top of the day-to-day opera-



BAT SUBMUNITION ATTACKING MOVING T-72 TANK.
Photos courtesy Army TACMS-BAT Project Office

tions of the office, but even so, you have to know what's going on. A laptop with a reliable dial-in tool, a beeper, and a cell phone made life easier.

IPT Process — Room for Improvement?

While the IPT process works well, it simply does not work well enough. You and

your TSM will still have to undertake numerous trips, meetings, pre-briefings, and briefings, always working as a combined PM/TSM team. In my situation, it was necessary to schedule every briefing that was required prior to implementation of the IPT process. The closer you get to your decision review, the more time you'll need to spend in the Penta-

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BLOCK II MISSILE LAUNCH
U.S. ARMY, WHITE SANDS MISSILE RANGE

gon. IPT and IIPT members who have been quiet for months come alive with issues as the review approaches. (This is to be expected and is not necessarily a criticism. Team members don't have the luxury of focusing solely on one program.) Prioritization of effort results in a flurry of activity as the light at the end of the tunnel gets brighter.

Similarly, team members and the principal players and decision makers they represent have their own thoughts on how the process should work. In reality, some team members are empowered to say, "No" but not necessarily empowered to say, "Yes." That makes it essential to not only work with the team mem-

bers, but also to pre-brief their bosses before the big decision points. Figure 1 lists the offices that were scheduled for pre-briefings prior to the Army Systems Acquisition Review Council (ASARC) or Overarching IPT (OIPT). Only one office declined the pre-brief, and that office later nonconcurrented with a major issue.

Following the IIPT, the program proceeded to the OIPT level and then to the Defense Acquisition Board Readiness Meeting (DRM). While we were eventually successful, my opinion is that the IPT process broke down after the OIPT. The decisions made at the OIPT and, indeed, at the DRM were challenged as the

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Acquisition Decision Memorandum was being staffed. I found that some concurrences have a limited life span and that some issues never die.

Smaller Sometimes is Better

We found it beneficial to have a small team (six members) within the project office (Figure 2). We initially had a much larger team, but found it unwieldy and unproductive. The team leader (in this case the product manager) was empowered with tasking authority throughout the project. I emphasize that getting the production decision was the No. 1 priority for the project. Selecting the right people and giving them the support they need is key to success.

For our project, support included setting aside a dedicated workspace, known as the War Room, where they could meet to collectively review issues and progress. While each team member maintained a desk in their respective division/branch,

FIGURE 1. Scheduled Block II/BAT Prebriefs

A R M Y	
DCSOPS*	Deputy Chief of Staff for Operations & Plans
DCSLOG	Deputy Chief of Staff for Logistics
DISC4	Director of Information Systems for Command, Control, Communications & Computers
DUSA(OR)	Deputy Under Secretary of the Army (Operations Research)
PA&E	Program Analysis & Evaluation
OPTEC	Operational Test & Evaluation Command
CEAC	Cost and Economic Analysis Center
SARDA	Secretary of the Army for Research, Development & Acquisition
MILDEP	Military Deputy
O S D	
DDP	Director of Defense Procurement
OSD(A&T) API	Office of the Under Secretary of Defense (Acquisition & Technology), Acquisition Program Integration
OSD(A&T) S&TS*	Office of the Under Secretary of Defense (Acquisition & Technology), Strategic & Tactical Systems
DOT&E	Director of Operational Test & Evaluation
DTSE&E	Director, Test, Systems Engineering & Evaluation
DUSD(IA&I)	Deputy Under Secretary of Defense (Industrial Affairs & Installations)
OSD(PA&E)	Office of the Secretary of Defense (Program Analysis & Evaluation)
OSD(Comptroller)	Office of the Under Secretary of Defense (Comptroller)
C3I	Command, Control, Communications & Intelligence
J-8	Joint Staff Director for Force Structure, Resources & Assessment
OSD(A&T)	Office of the Under Secretary of Defense (Acquisition & Technology)

*Two pre-briefings scheduled.

each one also had a desk in the War Room.

IIPT — Silence Never Means Consent

The IIPT began meeting one year prior to the planned ASARC date. Membership included, but was not limited to, Army and OSD action officers representing the principals listed in Figure 1. We met about once a month and generally tried to key the meetings so that review of major test activities could be reported. The closer we came to the de-

cision reviews, the better the attendance. This sometimes contributed to late breaking issues. I found it beneficial to ask each member to discuss their agency’s outlook and position prior to concluding each IIPT. The most important thing to remember is that, “Silence never means consent” (Figure 3).

Another observation is that some IIPT members are reluctant to stay focused on their particular area of oversight (or at least what I thought their area should be.) This is understandable when an

issue is broad-based and affects multiple aspects of the program, but is difficult to deal with when the boundaries are clear-cut.

A Need for Two Sub-IPTs

We found it beneficial to establish two sub-IPTs: one for cost and one for test. Originally we had additional IPTs, but they were disbanded when found to be duplicative of work being performed in either the IIPT, the test IPT, or the cost IPT. Additionally, the test IPT established several sub-IPTs for specific technical test issues.

Cost IPT

The cost IPT’s mission was to get an Army Cost Position (ACP) established and assist the Cost Analysis Improvement Group (CAIG) in their review and analysis of the ACP. This process was much more involved than I expected and was the topic of numerous discussions. The cost IPT was very successful with the ACP, and the program was able to undergo a “paper Cost Review Board” because of their diligence. Even so, getting the CAIG assessment of the ACP was the very last thing completed before the OIPT, and it threatened to delay the process. Although we started a full year in advance and worked closely with analysts at all levels, this seemed to be a never-ending, open issue. In fact, new issues were raised on the day of the DRM. As you will see elsewhere, the IPT process can only do so much.

Test IPT

Since the test program is so vital to getting a decision, a few points are worth noting. The Block II/BAT missile had a highly successful flight test program leading up to the decision reviews. Even so, we found that casual observers, including some IIPT members, had difficulty differentiating between test results and test objectives. For example, just because a test did not result in 100-percent target hits does not mean it did not meet its objectives. Test objectives must be emphasized to head off unrealistic expectations.

The Block II/BAT system was faced with a mismatch of the evaluation methodology and the system schedule. The eval-

FIGURE 2. In-House Team

- Low Rate Initial Production (LRIP) established as top priority for the entire project
 - Announced at project-wide meeting
 - Emphasized in staff calls and with appropriate E-mails
- Established LRIP team with small core of people (approximately 6)
 - Team leader empowered with tasking authority
 - Met weekly with all project personnel with LRIP tasks
- Product manager met with core team daily.

PEOPLE ARE KEY TO SUCCESSFUL ASARC

uation methodology for submunition reliability was established along with the initial Test and Evaluation Master Plan (TEMP) and relied on a test-fix-test approach. Schedule changes caused by the Program Objective Memorandum and Congressional cuts caused us to purchase all of our test hardware before testing, thus negating the opportunity to make fixes between tests. We noted the various problems, devised fixes for them, and will introduce the fixes into the next hardware build.

An alternative evaluation methodology that takes delayed fixes into account was available and applied to our system. Although we still were evaluated based on the original approach, having an alternative to better explain the real situation was essential in getting a production decision. The lesson learned here is to ensure the evaluation methodology is realistic for your situation. Our test IPT worked well in presenting the available data in a reasonable way.

One other observation concerning testing is that you will be evaluated and held responsible for things out of your control. Expect it, and find a way to mitigate the risk to your program. In our case, the command and control (C2) system, the launcher, the missile, and the BAT submunitions all met expectations. Army TACMS-BAT relies on other systems, managed by other project offices, to locate the target and feed the required information into the C2 system. While completely out of the control of the Army TACMS-BAT Project Office, the Block II/BAT system was rated “yellow” for effectiveness because of the targeting aspect of performance.

A Home Away From Home

You’ll need a conference room or place where you can retire at the end of the day to assess progress and get ready for the next pre-briefing or meeting. You’ll also need graphics support, classified storage, secure E-mail, and phones. What worked for us was to use the Crystal City, Va., office of one of our support contractors. Located close to the Metro, it was next to an approved Army Lodging Success Program hotel.

Documentation — The Good, the Bad, and the Ugly

DoD 5000 lists the various documents required for a decision review. While all are important, some are more important than others. By far, the TEMP is the most critical. It drives your budget and schedule and provides the means of assessing performance. As noted in Figure 3, a standing test IPT was required to stay on top of the test program. At the IPT level, early agreement on the TEMP emerged. Even so, it took several months and multiple changes for the TEMP to gain approval at Operational Test and

Evaluation Command (OPTEC). The lesson here is that, once again, the IPT process works well, but not well enough.

The TEMP may have been the most important document, but the ACP was certainly the most troublesome. Development of the ACP went relatively smoothly because of the superb work done by the cost IPT. After the “paper Cost Review Board,” getting the CAIG’s validation and assessment of the ACP was difficult, despite having worked the issue for a year.

The System Assessment is prepared and briefed by OPTEC. Much more comprehensive than I anticipated, it includes assessments of many things besides testing and performance. Review of the system assessment in advance of the ASARC (and the ASARC pre-briefs) is key. While not your document, an opportunity still exists to influence the verbiage of OPTEC’s assessment. Another observation is that the assessment tended to focus on the Milestone III (full-rate) criteria rather than the low-rate criteria. In our case, we have different performance requirements for low rate and full rate. It proved extremely beneficial in that OPTEC not only joined us for selective pre-briefings, but also briefed their assessment to the IIPT.

Finally, remember that the assessment is based on effectiveness, suitability, and survivability, not necessarily tied to acquisition milestones. Don’t expect a clear statement such as, “Ready to enter Low-Rate Initial Production [LRIP].”

FIGURE 3. IPTs

- IIPT began meeting one year prior to ASARC and DAB
 - Included action officers from DA and OSD
 - Held approximately monthly
 - Event-driven, generally by flight tests
 - Action officer attendance not 100% until late
 - Contributed to late breaking issues
- Limited IPTs to those needed: test and cost
 - Test IPT was and should be a continuous standing IPT
- Do not depend entirely on IPT process. Worked test and other issues offline directly with Department of the Army and OSD community continuously throughout the process.

SILENCE IN THE IIPTs OR EVEN IPTs NEVER MEANS CONSENT

FIGURE 4. Marketing

- Carry photos/videos at all times
- Develop video with contractor
 - Document test program
 - Describe how system works
 - Emphasize LRIP readiness
 - Local production allows more influence
- Publish enough articles in the press.

DON'T JUST PRESENT YOUR PROGRAM — SELL IT!

Modeling and Simulation (M&S) played a major role in our test activities. While not a specific document called out in the DoD 5000 series, models developed as part of your program require formal accreditation by the Commanding General, OPTEC. Because the Block II/BAT missile has requirements to operate in weather and countermeasure environments that are difficult or impossible to replicate in actual flight tests, we developed the STRIKE model. Before the results of the model (in conjunction with actual test data) could be accepted as genuine measures of performance, the model had to be accredited. Although development of the model was highly successful, our emphasis on the System Assessment caused us to lose visibility on the accreditation process. Although we eventually completed the accreditation, we should have started the process earlier in our program.

Our TSM effectively staffed the Operational Requirements Document (ORD) and also took the lead in the Joint Requirements Oversight Committee. The ORD outlines the Critical Performance Criteria, which, in our case, made up the

bulk of the exit criteria. Exit criteria are one of three categories of items by which you will be judged. The others are the directives from your previous Acquisition Decision Memorandum and the listing of critical issues for a milestone review from DoD 5000.

The Modified Integrated Program Summary (MIPS) is intended to be the primary Army decision document to support milestones. In reality, it was not used as a decision tool, and was provided to the Army Acquisition Executive only after the decision was already made. We plead guilty to not submitting it on time, but found it didn't fit into the decision cycle created by the IPT environment.

Sell Your Program, Don't Just Present It

You have to approach a decision process as if you are selling a product. You cannot afford to simply present your program; you have to sell it (Figure 4). You will find that some of the principal players and decision makers have little or no idea about your system; for them, you will have to start with the basics. I carried photos at all times and created a

video to specifically support readiness for LRIP. The video was a great lead-in to whatever pre-briefing or briefing I was giving and set the stage for presenting not only what the Block II/BAT system is, but also what it is designed to do. It addressed the requirement, the capabilities, the test program, and the production facilities. In all, it was a mini-briefing in its own right. Never underestimate the power of a photo or video!

Something that we did not do very well was take advantage of the opportunities to highlight successful test events and accomplishments through positive press releases. Although we had occasional articles in the Redstone Rocket, our local command information paper, in hindsight we needed items that would have visibility within the Pentagon.

No One Said it Would Be Easy

I can not say that the decision review process is enjoyable or even that it works as outlined within the IPT process. It is, however, rewarding to know that a great weapon system is one step closer to being in the hands of our warfighters. Acquisition reform, so highly evident in PM/contractor relations, is not as obvious within the Pentagon. The IPT process makes it easier to draw out positions and issues, yet lacks what it takes to bring issues to closure. Only by empowering team members to speak for their organizations and by ensuring that what is being said truly represents positions of all the principal players and decision makers can the process improve.

Having said that, only with the hard work of the IIPT members were we able to resolve most issues and meet with the principal players and decision makers to work through the others. Figure 5 recaps the program strategies discussed in this article. Taken together, they empowered us to achieve our common goal — to provide a superior weapon system for the warfighter in the field, well into the 21st century.

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FIGURE 5. Parting Thoughts

- ASARC/DAB coming up? *Pack your bags!*
- The IPT process works *but* doesn't work well enough
- Plan on briefing everyone — *just like before*
- The number of people empowered to say "no" increases as you get closer to your decision date
- People *won't stay in their lanes*
- Achieving test objectives *isn't good enough*
- Force IIPT members to *say something!*
- *Focus* on exit criteria, ADM guidance, and DoD 5000 critical issues.