Army TACMS-BAT Project Office

Utilizing Limited Resources to Achieve Maximum Success

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Occasionally, the U.S. Army produces a bona fide Cinderella Story, and the Army Tactical Missile System — Brilliant Anti-Armor Submunition (Army TACMS-BAT) Project Office has created a real winner at Redstone Arsenal, Ala.

In conjunction with Lockheed-Martin Vought Systems Corporation and Northrop Grumman Corporation, the Army TACMS-BAT Project Team, by implementing several of the basic principles and tenets of Acquisition Reform, is empowering team members, accelerating missile production and delivery, and exceeding all program expectations.

The foundation of the project office's success is its personnel. Staffed with both core and matrix acquisition professionals, the project office's matrix support personnel (engineers, logisticians, and technical support) come from the U.S. Army Aviation and Missile Command (AMCOM) at Redstone Arsenal.

Army Col. R. Kelley Griswold leads this successful team as the Project Manager, and Donald C. Barker is the Deputy Project Manager. Both Griswold and Barker attribute the project's stellar success to the cooperation, dedication, and teamwork of the people they work with every day.

The Two Become One

On April 12, 1994, the Army formally joined two offices, Army TACMS and BAT, to create the Army TACMS-BAT Project Office. Headed by a core staff of program and financial management personnel who manage two Acquisition Category I (ACAT I) programs totaling in excess of $7 billion, the newly formed project office became the Army TACMS-BAT Project Office.

Systems managed by the ATACMS-BAT Project Office are the Army TACMS Block I, Block IA, Block II, BAT and P3I BAT programs, along with an Army TACMS Foreign Military Sales (FMS) variant. Future systems such as the Army TACMS Block IIA and Block III Earth Penetrator, along with a Navy version are also under the direction of the Army TACMS-BAT Project Office.

Lockheed Martin Vought Systems Corporation (Vought Systems), headquartered in Dallas, Texas, is the prime contractor for the Army TACMS systems; and Northrop Grumman Corporation, headquartered in Rolling Meadows, Ill., is the prime contractor for BAT and P3I BAT.

Army TACMS Block I

The Army TACMS Block I is a surface-to-surface, inertially guided, semi-ballistic missile fired from the M270, Multiple Launch Rocket System (MLRS) launcher family. It comes packaged one missile per launch pod/container, with a payload of approximately 950 M-74 anti-personnel, anti-materiel bomblets that produce 750,000 fragments from a single missile payload.

The missile can fly approximately 165 km. This means that key enemy command posts, air defense sites, staging areas, or logistical sites will be easy targets for this deadly munition. The Block I missile can engage targets throughout the corps area of influence.

From the first low rate initial production delivery in September 1990 until the final delivery in July of 1997, Vought Systems delivered each of the 1,647 Block I production missiles on or ahead of schedule. In fact, the production schedule was significantly accelerated to produce 105 missiles to support Operation Desert Storm, where it was devastatingly effective in silencing or destroying every target it engaged.

Army TACMS Block IA

The Army TACMS Block IA is an extended range variant of the Army TACMS Block I missile. The Block IA effort entails integrating an onboard global positioning system (GPS) into an inertial navigation system and reducing the payload to approximately 300 M-74 bomblets to achieve the required accuracy (a factor of 3 better than Block I) and extended range of approximately 300 km.

Today, Vought Systems continues to deliver the Army TACMS Block IA missiles far ahead of the scheduled delivery dates, and the program achieved "first unit equipped" to the Eighth U.S. Army ahead of schedule.

What About Maintenance?

The Army TACMS maintenance facilities, both within and outside the continental

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United States, are fully capable of servicing both Block I and Block IA variants. In addition, missile reliability in both missiles has exceeded requirements by an additional 14 percent and seven percent respectively. Just recently, the Army successfully launched an Army TACMS Block I missile taken from stockpile, from a High Mobility Artillery Rocket Systems Launcher.

Army TACMS Block II

The next evolution of the missile, the Army TACMS Block II variation, began as an innovative solicitation package where Acquisition Reform, specifically Military Standards and Specifications Reform, was fully realized.

The solicitation featured a brief yet concise statement of work and weapon system performance expectations without military specifications and standards. The instructions to the contractors required that they focus their proposals on specific areas: program management, integrated product and process development, software development, system safety, and test and integrated support in terms of the processes, controls, and metrics they would use.

In a November 1994 memorandum to Gilbert F. Decker, Assistant Secretary of the Army (Research, Development, and Acquisition), Dr. Kenneth J. Oscar (Principal Deputy for Acquisition) stated, "This is a landmark solicitation for the missile community. We intend to use it as an example of a masterful application of the Army's Acquisition Streamlining and Military Specifications/Standards Reform initiatives."

BAT Submunition

The Army TACMS Block II missile carries 13 BAT submunitions to kill moving armored targets out to a range of approximately 140 km. A later evolution of the BAT, the P3I BAT, will kill moving or stationary, hard or soft targets to the same range.

The BAT submunition delivered by the Army TACMS missile is an unpowered, aerodynamically stable submunition that uses two types of sensors: acoustic for acquisition and infrared for terminal attack. The BAT has an extremely large target acquisition footprint. After dispense, the submunition autonomously seeks and destroys moving armored combat vehicles.

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> – Dr. Kenneth J. Oscar
> Principal DeputyAssistant Secretary of the Army (Research, Development & Acquisition)

MULTIPLE LAUNCH ROCKET SYSTEM (MLRS) FIRING AN ARMY TACMS GUIDED MISSILE.
Photo courtesy Lockheed Martin

Northrop Grumman successfully completed a grueling contractor development flight test series with BAT. The formal qualification tests for the BAT Central Electronics Unit Operational Program and the Initial Production Readiness Reviews were also successful. Integrating the BAT into the Army TACMS Block II missile, the Army TACMS-BAT team achieved such great success in their engineering development testing and two of their pre-production tests (PPT) that the remaining PPT was foregone.

During the Block II PPT flights, 100 percent of all dispensed BATs achieved target hits, and the system achieved its required reliability, enabling Block II and BAT to begin production qualification testing (PQT). To date, three of five PQT flights are scheduled for November and December 1998.

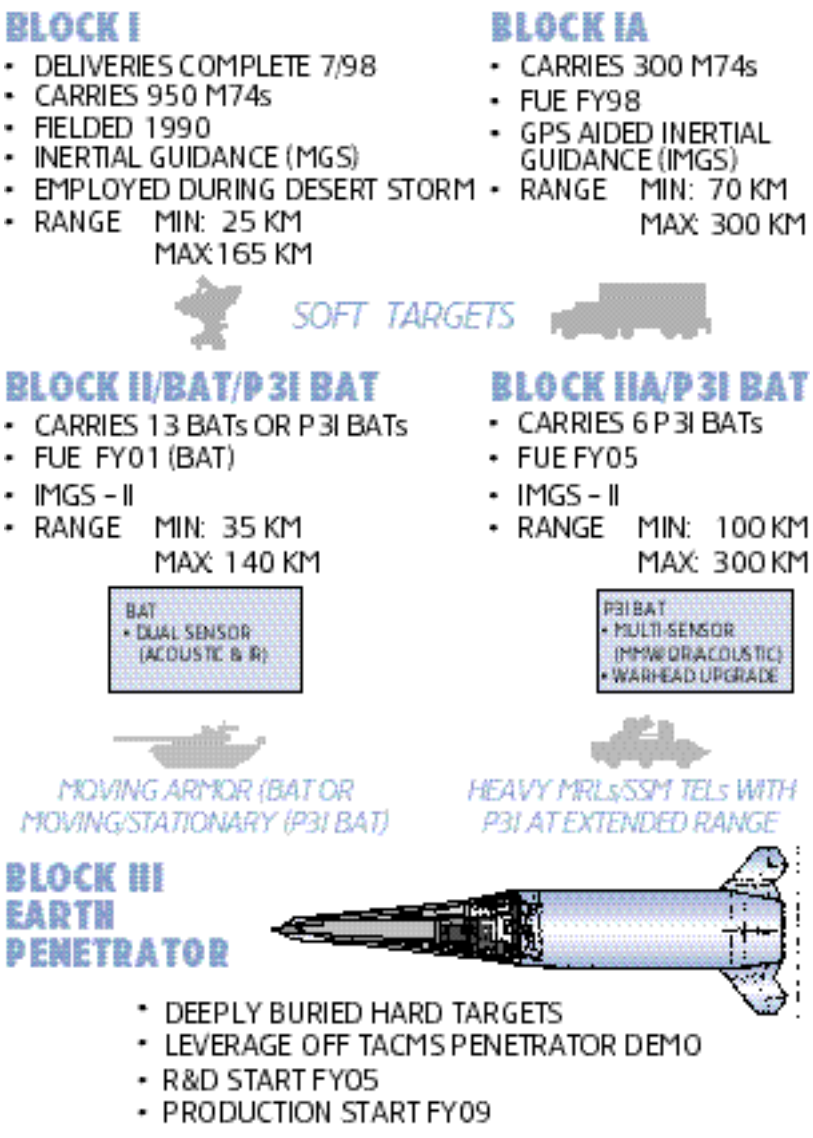
The project office also successfully dispensed two BAT simulants from an MLRS rocket, proving that BAT is a viable option for the Army's MLRS smart tactical rocket (MSTAR) program.

P3I Improvement to BAT

P3I BAT is an improvement to the BAT submunition that retains the basic physical characteristics of BAT while offering an enhanced acquisition capability and an improved warhead. Each P3I BAT is a self-guided submunition that uses imaging infrared, millimeter-wave, and acoustic sensors to autonomously locate and individually attack and destroy both moving and stationary targets. The enhanced dual mode seeker will also ensure the P3I BAT is more robust in adverse weather and against countermeasures.

The P3I BAT Program also has been off to a fast start with the extremely successful captive flight test No. 2 in the heart of winter in Grayling, Mich. The integration and demonstration of P3I

Army TACMS-BAT Deep Fires Missile



BAT hardware-in-the-loop, infrared-only capability was completed six weeks ahead of schedule.

Budgeting shortfalls have slowed the progress of the P3I BAT program to incorporate pre-planned improvement over a longer period of time and more incrementally. The Army TACMS-BAT team will place a greater emphasis on economical and performance capabilities as milestone decisions are determined.

Army TACMS Block IIA

The Army TACMS Block IIA missile is an extended range variant of the Block II system. The Block IIA program modifies the payload section of the Block II missile to carry and dispense six P3I BAT submunitions out to a range of approximately 300 km.

Add Navy to the Mix

The Army TACMS-BAT Project Office has been working with the Navy to integrate the current Block IA missile configuration, with minimal modifications, to be suitable for both submarine and surface combatant applications. The project office, in conjunction with the Navy, conducted a successful launch from an MK 41 Vertical Launch System cell in November 1996.

Earth Penetrator Demonstration

To further strengthen the cooperative efforts between the Army TACMS-BAT Project Office and the Navy, the project office is currently working on a demonstration program with the Navy's Strategic Systems Program Office to demonstrate a prototype earth penetrator.

Army TACMS Block III

The Army TACMS-BAT Block III earth penetrator program will build from the knowledge gained in the earth penetrator demonstration. Block III will develop an Army TACMS missile variant optimized or the Army user's requirement for an M270 launched earth penetrating weapon. The missile will deliver a conventional earth penetrator that will attack and destroy hard and deeply buried targets to a range in excess of 450 km. Block III will also be adaptable for Naval submarine and surface combatant applications.

All three programs will meet the challenge of the changing warfare roles and the evolving force/weapons structures within the DoD as well as support a joint vision requirement.

People — The Primary Equation

Clearly, the significant record of success compiled by the Army TACMS-BAT Project Office would be impossible without the skills and dedication of its people. Empowerment to do the right thing, for the customer and for the organization, is the business norm. Management fosters an environment such that each employee is provided the opportunity to excel. This is evident in the individual successes of project office personnel.

Two of the last three project managers were honored by the Secretary of the Army as the project manager of the year for excellence and project office of the year.

Four employees (including one civilian) were competitively board selected for other project manager positions, and three employees were selected for participation in the Army Acquisition Corps Competitive Development Group.

Awards bestowed upon individual members of the Army TACMS-BAT Project

Office include the Outstanding Employee with a Disability Achievement in Value Engineering; The Exceptional Civilian Service Award (highest possible award given); The Meritorious Civilian Service Award; Logistician of the Year; and numerous other awards and citations.

In addition, members of the Army TACMS-BAT Project Office staff were selected to attend the Massachusetts Institute of Technology Sloan School of Management, Management Technology Program; Vanderbilt Executive MBA program; Texas Senior Service College Fellowship Program; and the Advanced Program Management Course at the Defense Systems Management College.

The project office itself has also received four Army Materiel Command (AMC) Value Engineering Achievement awards and Army Missile Command awards for achievement in value engineering every year since 1991. Total project office value engineering savings are in excess of $90 million.

The Vought Systems Army TACMS Block II Team was recently selected to receive the Lockheed Martin Corporation 1998 NOVA award. Every year, Lockheed Martin Corporation recognizes only 50 individuals and/or teams from their approximately 170,000 employees for their contribution in technical excellence, leadership, exceptional service, and teamwork.

In every instance, Army TACMS-BAT team members met the challenges and changes in an era of acquisition streamlining and shrinking defense dollars. Numerous congressional staffers and Department of the Army staff members noted the project office's success in innovative program planning, despite externally imposed budgeting challenges.

Perhaps the most revealing indicator of the project office's success is its reputation for cooperative teamwork in a highly professional environment. Personnel within and outside the AMCOM community are seeking to join the project office team, while other organizations welcome former Army TACMS-BAT personnel to their staffs. As a familiar adage reminds us, "It's not the job, it's the people."

Our Mission is Success

The Army TACMS-BAT Project Office is an excellent example of success in project management. Production deliveries that are ahead of schedule, reduced developmental phase flight testing, reliability requirements that are exceeded, and combat-proven capabilities – all are the results of empowerment, teamwork, and implementation of Acquisition Reform business practices and processes.

Army TACMS-BAT personnel, however, are merely the underlying factor for the project's success. Joint Service programs, Foreign Military Sales customers, the prime contractors, the subcontractors, and other support personnel are all part of the many successes achieved by the Army TACMS-BAT Project Office.

Through leadership, innovation, teamwork and ownership, management uses its limited resources to achieve maximum program success. But teamwork, undeniably, stands out as the critical catalyst for program success – government and industry working as a team to achieve the milestones necessary for successful design, development, production and sustainment of multi missile systems.

Ultimately, individual successes give way to total team success. And in the final analysis, isn't that the way it should be?

College Welcomes French Acquisition Professionals

Navy Rear Adm. "Lenn" Vincent, DSMC Commandant, hosted two French acquisition professionals at the DSMC main campus, Fort Belvoir, Va., Oct 26-27: Ingenier General De L'Armement Jacques Pechamat, Deputy Commandant, French Acquisition Corps, Delegation Generale pour L'Armement (DGA); and Dr. Gertrud Humily, Executive Director, International Education, DGA.

Both were visiting DSMC to prepare for the International Defense Educational Arrangement (IDEA) '99 Seminar to be held at DSMC in July 1999. As part of their visit, they also reviewed the ongoing research project on Comparative Acquisition and exchanged educational ideas for the acquisition workforce. Pictured from left: Pechamat; Humily; Vincent.