



OFFICE OF THE SECRETARY OF DEFENSE  
1000 DEFENSE PENTAGON  
WASHINGTON, DC 20301-1000

## Medium Extended Air Defense System (MEADS) Fact Sheet

**Background:** MEADS is a NATO-managed, cooperative development program that was conceived in the mid-1990's to develop a ground-based air and terminal ballistic missile defense capability that would replace existing Patriot systems in the United States and Germany and replace the Nike Hercules system in Italy. MEADS is designed to significantly reduce strategic lift requirements into theater, reduce logistics and operator workloads, and provide enhanced surveillance and intercept capabilities over existing Patriot units.

- The MEADS program has experienced a number of technical and management challenges since its inception in the mid-1990's. While the program has shown marked improvement in recent years, it has been unable to meet schedule and cost targets.
- According to program plans from the mid-1990's, MEADS was originally slated to begin production in 2007. The original Design and Development (D&D) program plan at phase inception in 2004 envisioned MEADS production beginning in 2014.
- The most recent NATO MEADS Management Agency (NAMEADSMA) program restructure proposal, discussed by the BoD in November 2010, would extend the D&D phase some 30+ months from the original 110-month program established in 2004, and would require at least \$974 million of additional U.S. investment during FY12-17 (the U.S. Cost Assessment and Program Evaluation Office estimates \$1.16 billion). Under this proposal, production would begin no earlier than 2018.
- In view of the above considerations, and in the broader context of a comprehensive DoD review of the U.S. Army's Air and Missile Defense (AMD) portfolio, the U.S. considered several potential courses of action including:
  1. Terminate immediately;
  2. Continue development within the funding limits set by the D&D Memorandum of Understanding (MoU) that entered into force in early 2005; or
  3. Complete the planned D&D phase by amending the D&D MOU to add the additional funding and time required.

**Decision:** The U.S. has decided that the best course of action is to continue the D&D phase by providing funding up to the agreed MoU cost ceiling of \$4B equivalent U.S. dollars (in 2004 dollars).

- The U.S. proposes focusing the remaining activities to implement a 'proof of concept' effort with the remaining MOU funds that will provide a meaningful capability for Germany and Italy and a possible future option for the U.S.
- This re-focused proof of concept D&D program would end by 2014, consistent with the MoU expiration date and cost ceiling.

**Rationale:** We believe implementation of a proof of concept D&D program, using the remaining D&D MOU funds contributed by the three nations, is the best option for all MEADS partners for the following reasons:

- Funding MEADS up to the existing MoU cost ceiling enables all partners to harvest technology from large investment to date:
  - The NAMEADSMA is already developing an implementation plan for a D&D proof of concept effort that will use the remaining D&D MOU funding in 2011-13 (approximately \$804 million U.S. share) to complete prototypes, demonstrate and document the capabilities of the major system elements and complete limited system integration.
  - This work would place the D&D program on stable footing should Germany and Italy wish to continue a MEADS development and production effort after the current MOU funding is expended. The same options would be available to the U.S. if its air defense plans should change.
  - Terminating the program now, just after successful completion of the MEADS Critical Design Review, would force the nations to devote significant funding to contractor termination costs instead of using this funding to bring MEADS development to a viable level of maturity.
- The U.S cannot afford to purchase MEADS and make required upgrades to Patriot concurrently over the next two decades:
  - The current NAMEADSMA program office estimate to complete the D&D program, which would extend into 2017 would, as noted above, require at least \$974 million of additional U.S. investment during FY12-17. This is on top of the approximately \$804 million already programmed for MEADS, which, in turn, is on top of the \$1.5 billion the U.S. has funded to date for D&D. The U.S. cannot afford this additional R&D funding. Moreover, we estimate an additional \$800 million would be required to complete U.S.-unique national certification, test and evaluation requirements, and integration of MEADS elements in the U.S. air and missile defense systems-of-systems if MEADS were fielded.
  - Further, due to the substantial delays in the development of MEADS, the U.S. Army would not be able to purchase MEADS to replace Patriot as early as originally planned. Consequently, the costs of completing MEADS development and procuring MEADS to eventually replace Patriot would also require a significant concurrent investment in Patriot sustainment and modernization over the next two decades. Together, these costs are unaffordable in the current DoD budget environment.

- The U.S. can achieve some of the capabilities that MEADS provides using existing assets:
  - Because AMD systems are relatively few in number and high in demand, the U.S. AMD portfolio is based on the concept of integrating and fielding a diverse set of elements to provide expanded coverage against a wide range of threats. Our primary priority in AMD is the Phased Adapted Approach (PAA) in Europe, which includes systems like THAAD, TPY-2, and AEGIS to counter the ballistic missile threat. The portfolio must also address threats in Southwest Asia and the Pacific with these ballistic missile defense systems, as well as other air defense systems such as Patriot and JLENS. The U.S. is willing to accept some risk in our air defense portfolio in the near term, not just in MEADS, but in other major acquisition programs (for example, JLENS, which has been scaled back, and SLAMRAAM, which has been cancelled) in order to increase investments in new capabilities that our soldiers can use today to counter threats in Forward Operating Bases in Afghanistan, such as capabilities to Counter Rockets, Artillery and Mortars (C-RAM). By fielding a diverse set of systems, the U.S. is able to achieve some of the capabilities using existing assets, such as 360-degree coverage and extended range air defense, that MEADS is designed to provide.
  
- The U.S. remains concerned with the overall track record of the program:
  - While the partner nations and NAMEADSMA have worked aggressively over the past few years to define a restructured program that balances cost, schedule, system performance, and risk, the U.S. remains concerned that difficulties in program management and system engineering experienced in the early stages of the program continue to subject the program to a high degree of risk through the end of development and into the integration and test program phases.
  - While the MEADS program's record of performance might ordinarily make it a candidate for cancellation, the U.S. believes that the benefits to the partner nations of continuing a proof of concept development effort using the remaining MOU funding outweigh the costs of termination.

### **Transatlantic Cooperation**

International cooperative programs are just one means of transatlantic defense industry interaction and are increasingly less statistically relevant as trade continues to open on both sides of the Atlantic and global supply chains become more robust.

- In fact, between 2006 and 2008 (the latest years for which data is available), only six percent of total U.S. procurement awards were provided to “cooperative programs” but European suppliers still made up 28 percent of contracts that were awarded through full and open competition.
- Two of the top 10 companies in U.S. defense revenue that involve Italy and Germany are EADS and Finmeccanica. One of these companies, EADS, is competing directly for the \$30-40 billion next generation Air Force tanker. Much of this growth can be attributed to the

significant participation in programs by second- and third-tier suppliers who increasingly participate largely without regard to national boundaries. This participation will likely increase further with the passage of export control reform.

- The unprecedented cooperation by both industry and government has also been successfully tested and proven in the current operational environment, and notably in Afghanistan. The ability to rapidly respond and field the systems needed for the collective protection and operation of our coalition forces is a testament to moving beyond program-specific workshares to fielding warfighter requirements.
- Fielding elements of the PAA in Europe will provide security and economic opportunities in those areas where those elements will be based and operated. As other NATO nations contribute to missile defense in support of the Lisbon agreement, there should be indigenous growth opportunities in science, technology, and engineering to meet increased demand.