



# FACT SHEET

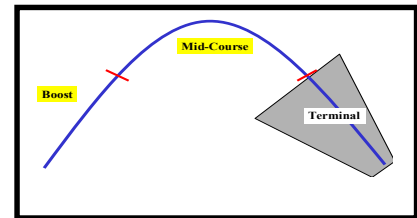


MDA FACT SHEET

## TERMINAL PHASE MISSILE DEFENSE

### INTRODUCTION

The Terminal Defense Segment (TDS) allocates resources to support development and selective upgrades of defensive capabilities that engage and negate ballistic missiles in the terminal phase of their trajectory. The primary projects under this PE are the Theater High Altitude Area Defense (THAAD) system and the Israeli Arrow Deployability Program (ADP). Related activities include the Israeli Test Bed (ITB), Arrow System Improvement Program (ASIP), and studies via the Israeli Systems Architecture and Integration (ISA&I) effort that assess the



Arrow performance relative to both existing and emerging threats. The PAC-3, MEADS, and Sea Based Terminal programs are funded within their respective Service accounts.

### DESCRIPTION

The mission of the THAAD System is to defend against short- and medium-range ballistic missiles at significant distances from the intended target and at high altitudes. THAAD will protect U.S. and allied armed forces, broadly dispersed assets, and population centers against ballistic missile attacks. This evolutionary program is structured to demonstrate capability in Block 2004, with planned improvements based on upgraded seekers, ground support equipment, and discrimination software. Current efforts are addressing component and system performance, producibility, and supportability. A robust ground-testing program will precede flight testing, currently planned for FY2004. The budget adds resources to advance acquisition of a THAAD radar and to buy more test missiles in order to capitalize on early flight test successes should our disciplined development program prove effective. The Arrow Weapon System (AWS) (developed jointly by the U.S. and Israel) provides Israel a capability to defend against short- and medium-range ballistic missiles and helps ensure U.S. freedom of action in future contingencies. Arrow also provides protection against ballistic missile attacks for U.S. forces deployed in the region. The successful Arrow intercept test on September 14, 2000 resulted in Israel declaring the system operational in October 2000. The Arrow Deployability Program (ADP) also supports Israel's acquisition of a third Arrow battery and Arrow's interoperability with U.S. TMD systems. Interoperability will be achieved via a common communication architecture utilizing the Link-16. An interoperability test was completed in January 2001 using the Theater Missile Defense System Exerciser (TMDSE) that validated that the Arrow Weapon System is interoperable and can exchange surveillance and missile track cueing data with U.S. PATRIOT and AEGIS missile defense systems. The Arrow System Improvement Program (ASIP) will include both technical cooperation to improve the performance of the AWS and a cooperative test and evaluation program to validate the improved AWS performance. We added \$20 million in our amended budget specifically for additional flight testing and development of additional production capacity for the Arrow missile.

Equally important to the integrated BMD System are the lower tier programs that are being transferred to the Military Departments. We have had significant success with the PAC-3, and interceptor missiles will be delivered to training battalions this year. PAC-3 system will provide critical operational capability to defend our forward-deployed forces, allies, and friends. The system is designed to counter enemy defense suppression tactics that may include tactical ballistic missiles, anti-radiation missiles, and aircraft employing advanced countermeasures and low radar cross-section. The PAC-3 technology has a proven record of hit-to-kill success. We are now 8-for-9 body-to-body intercepts against ballistic missile targets. PAC-3 missile technology also accomplished 4-for-4 body-to-body intercepts against cruise missiles and air breathing threats. Recent successes included multiple simultaneous engagements of both short-range ballistic missiles and cruise missiles using PAC-2 and PAC-3 Interceptors.

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## ACTIVITIES

**THAAD** THAAD is our ground-based, terminal defense product line for countering short- and medium-range ballistic missiles. THAAD is a hit-to-kill system and the only system that can operate in both the endo- and exo-atmosphere. It is the nearest-term solution to the longer-range missile threat. Its extended range relative to other terminal missile defense systems (for example, PAC-3) will allow area defense of critical military assets and population centers. THAAD also provides multiple shot opportunities and, in comparison to other terminal defense product lines, is capable of engagements farther from targeted areas.

THAAD was approved for entry into its Engineering and Manufacturing Development (EMD) phase in June 2000. THAAD's low-risk program and evolutionary acquisition strategy calls for the phased introduction of capability.

**PAC-3** PAC-3 is the country's most mature developmental product line. It provides critical operational capability to defend our forward-deployed forces and Allies against growing short-range ballistic missile threats, cruise missiles, anti-radiation missiles, and advanced aircraft. It is the only near-term active defensive capability for local and area defense for countering short-range ballistic missiles armed with weapons of mass destruction.

PAC-3 has a sterling record in flight-test successes. It is now 9-for-10 in body-to-body intercept flight test successes. Successes include multiple simultaneous engagements of both ballistic, and air breathing aircraft and cruise missile targets.

**SEA-BASED TERMINAL** The program builds upon the legacy of success found in the AEGIS and standard missile programs.

In light of the emerging missile threat, we are endeavoring to provide a capability to the fleet as early as possible. Two AEGIS cruisers, the USS Port Royal and the USS Lake Erie, are at sea now providing critical feedback to influence the tactical design improvements and modifications to be AEGIS combat system. They will conduct a variety of at-sea tests, develop core doctrine and tactics, and serve as a focal point for getting our theater missile defense capability to sea.

**MEADS** The Medium Extended Air Defense System (MEADS) is an international cooperative program essential to fulfill the requirements of the U.S. Army and the U.S. Marine Corps for an air defense system in the 21<sup>st</sup> century. It will offer a significant improvement in tactical mobility and strategic deployability over comparable missile systems and robust, 360-degree protection for maneuvering forces and other critical forward-deployed assets against short- and medium-range ballistic missiles, cruise



missiles and other air-breathing threats throughout all phases of tactical operations. MEADS will be interoperable with other airborne and ground-based sensors.

Medium Extended Air Defense System (MEADS) is a lower-tier system that will play a key role in reducing these risks in future Army and Marine Corps operations because it is the only TMD system under consideration that can provide maneuver forces with 360 degree defense protection against short-range tactical ballistic missiles, cruise missiles and unmanned aerial vehicles. It must be able to move rapidly and protect the maneuver force during offensive operations. MEADS is designed to perform these critical air and missile defense functions. Through international cooperation, multi-national burden sharing by the U.S., Germany, and Italy has reduced cost estimates for MEADS.

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