

## Chapter 10 - Conclusions

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### INTRODUCTION

The FY 99 AMDMP is the ADA branch modernization plan to enable continued AMD superiority into the future. It serves as the baseline

document for other key documents and products in the research, development and acquisition process: FY00 issue requirements, FY01-05 mini-POM, the Army Modernization Plan, and the ATMP. This chapter reviews the AMD modernization strategy and provides unprioritized investment recommendations to resolve AMD capability shortfalls.

### AMD MODERNIZATION STRATEGY

The AMDMP prescribes the orderly, disciplined evolution of AMD to meet current and future threats and to maximize capabilities in this period of declining resources. The threat and conceptual battlefield operations of 2010 and beyond were analyzed, and assessments of how well funded AMD systems functioned in the future environment were developed (Figure 10-1). These assessments formed the basis for the AMD modernization strategy. While focused on materiel, this modernization strategy is tempered by training, soldier, and organizational design initiatives and needs.

Force 2010 and AMD Force 2025. The components of AMD Force XXI (SHORAD, TMD, AMD C<sup>4</sup>I, and NMD) merge into the synchronous AMD units of AMD Force 2010 and AMD Force 2025.

To reiterate, the strategy provides modernization guidance for AMD Force XXI, AMD

The strategy emphasizes the fielding of product improved systems and, where necessary, new systems that are mobile, lethal, fully digitized, and anticipate the "speed and knowledge" requirements of the AAN. Enhancements in AMD C<sup>4</sup>I capabilities and interoperability with other Army elements and between Army, joint, and multinational AMD forces are critical to the evolution of the AMD force. Commonality in C<sup>2</sup> hardware and communications data-processing capabilities will enable AMD forces at every level to use the same

#### Chapter 10 Key Points

- The AMD modernization strategy provides capability enhancements to ensure Information Dominance and Combat Overmatch of threat forces.
- The modernization investment recommendations identify the AMD systems and system improvements needed to overcome the required operational capability shortfalls.

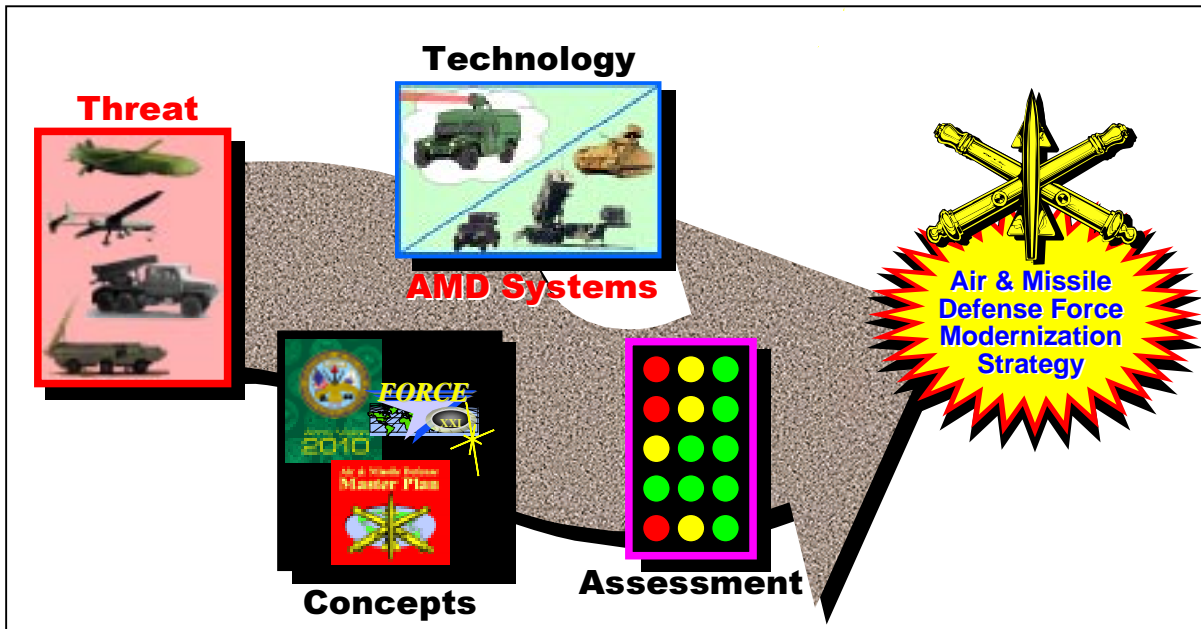


Figure 10-1. AMDMP Process

operational procedures to engage targets. The development of common sensors will promote interoperability in the joint and multinational communities to support Information Dominance.

Significant events embedded in the strategy (Figure 10-2) are the fielding of PAC-3 in FY99; the fielding of THAAD units (beginning in FY07) that provide upper tier defense; the fielding

	<u>AMD Force XXI (2005)</u>	<u>AMD Force 2010</u>	<u>AMD Force 2025</u>	
<b>S H O R T T E R M I N I S T</b>	<ul style="list-style-type: none"> <li>• Modernize Stinger, Linebacker, Avenger to extent possible</li> <li>• Examine technologies for advanced missile, kinetic energy, and/or directed energy systems</li> <li>• Demonstrate HUMRAAM concept</li> </ul>			
<b>T M D</b>	<ul style="list-style-type: none"> <li>• Continue to field PAC-3 (lower tier) and P<sup>3</sup>I</li> <li>• Continue THAAD (upper tier) development program</li> <li>• Initiate MEADS (lower tier) design/development program</li> </ul>	<div style="text-align: center;"><b>Army After Next</b></div> <ul style="list-style-type: none"> <li>• Continue to field MEADS to corps</li> <li>• Continue to field THAAD</li> <li>• Sustain PAC-3 at theater</li> <li>• Continue to maintain Stinger, Linebacker, Avenger</li> <li>• Develop an advanced weapon system(s) (advanced missile, kinetic energy, and/or directed energy systems)</li> <li>• Upgrade AMDPCS/AMDWS to add new systems' functionality</li> <li>• Field elevated sensor (e.g., JLENS)</li> <li>• Complete fielding of Sentinel P<sup>3</sup>I</li> <li>• Implement netted, distributed architecture with "plug in" weapons/sensors capability</li> <li>• Complete joint integration</li> <li>• Field NMD system</li> </ul>		
<b>A M D C 4 I</b>	<ul style="list-style-type: none"> <li>• Field AMDPCS to AAMDC/ADA bdes and AMDWS to all ADA bns and btries</li> <li>• Field deployable JLENS prototype</li> <li>• Integrate FAAD C<sup>2</sup> with FBCB<sup>2</sup>; begin Sentinel P<sup>3</sup>I fielding</li> <li>• Field SBIRS improvements to JTACS</li> <li>• Synchronize/implement Army and joint integration requirements (JDN, JPN, JCTN)</li> </ul>			
<b>N M D</b>	<ul style="list-style-type: none"> <li>• Continue development</li> </ul>			<ul style="list-style-type: none"> <li>• Maintain MEADS and THAAD</li> <li>• Continue to field an advanced weapon system(s) (advanced missile, kinetic energy, and/or directed energy systems)</li> <li>• Continue to phase out Stinger platforms; sustain remaining Stinger-based force</li> <li>• Achieve a single, integrated, joint, seamless communications and data distribution system</li> <li>• Develop a common, joint composite air picture with embedded CDI/PID</li> <li>• Develop advanced multirole/multifunction, non-weapons' dedicated sensors</li> <li>• Maintain NMD system</li> </ul>

Figure 10-2. AMD Modernization Strategy

of MEADS to the corps beginning in FY07 and the possible replacement of PATRIOT with MEADS at theater level beginning about FY15; the implementation of a netted, distributed architecture with weapons/sensor “plug in” capability by FY10; and the fielding of an advanced weapon system(s), be-

ginning about FY15, that will augment or replace existing Stinger platforms. These fieldings will sustain the Combat Overmatch and Information Dominance capabilities of the AMD forces and facilitate the protection of Army XXI and the AAN.

## **RECOMMENDATIONS**

The system improvements and new systems articulated in the modernization strategy are inadequately resourced. Without requisite funding, the AMD force cannot execute the required operational capabilities presented in Chapter 3. The resultant operational shortfalls are captured in Chapter 6. The AMD system modernization recommendations (Figure 10-3)

identify the investment actions needed to sustain capabilities and to overcome the deficiencies.

The continued, programmed development and fielding of JTAGS, Sentinel, Avenger, Bradley Linebacker, PATRIOT PAC-3, and Stinger Block I **sustain** the AMD force's detection and engagement capabilities against many aerial threat platforms. The development and fielding of the

### **Achieve Information Dominance**

- **AMDPCS - Develop and field**
- **FAAD C<sup>2</sup> - Complete procurement and P<sup>3</sup>I**
- **JTAGS - Continue improvements as programmed**
- **Sentinel - Continue as programmed**

### **Maintain Overmatch Capabilities**

- **Avenger - Continue improvements as programmed**
- **Bradley Linebacker - Continue fielding M2A2(ODS) as programmed**
- **MEADS - Begin design development and procurement of system**
- **PAC-3 - Continue as programmed**
- **Stinger Block II - Develop and field**
- **THAAD - Develop and field**

### **Focus Science and Technology for Essential and Leap-Ahead Capabilities**

- **JLENS - Develop and field**
- **NMD - Develop and field**

### **Recapitalization**

- **PAC-2 - Field GEM+ modifications**
- **Stinger Block I - Continue as programmed**



***Air and Missile  
Defense  
Force 2010***

Figure 10-3. Unprioritized Modernization Investment Recommendations

AMDPCS and FAAD C<sup>2</sup> **overcome** the *limited capability to ensure seamless, horizontal/vertical, joint/multinational C<sup>2</sup>; coordination of fires; and exchange of digitized, relevant air pictures.* MEADS procurement and fielding **overcomes** the *limited capability to ensure continuous AMD of the maneuver force from deployment through redeployment operations.* THAAD development and fielding **overcomes** the *limited capability to en-*

*gage MRBMs and achieves the two-tiered tactical missile defense of CINC-designated critical assets.* The fielding of Stinger Block II, JLENS, and PATRIOT PAC-2 GEM+ **overcomes** the *limited capability to defeat low-signature, low-altitude CMs.* NMD fielding **overcomes** the *lack of capability to engage potential missile threats against the United States.*

### **SUMMARY**

The AMDMP highlights the capabilities needed to execute Army operational concepts against a future threat shaped by projected trends in regional dangers, increased danger of asymmetric attacks, and proliferation of unmanned platforms with potential WMD payloads. Engineering

the force to counter the threat requires the capabilities articulated in the AMDMP.

The AMDMP documents the correct modernization plan to win today's and tomorrow's fights. The AMDMP makes the right recommendations to provide a focus for modernization of the AMD force in the 21st century.