



MISSILE DEFENSE AGENCY

BALLISTIC MISSILE DEFENSE SYSTEM (BMDS)

PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT (PEIS)

Scoping Meeting



MDA BMDS PEIS

Scoping Meeting

- ❑ **Welcome and introductions**
- ❑ **Purpose of tonight's meeting by the Missile Defense Agency (MDA)**
 - **Provide overview of MDA's Ballistic Missile Defense System (BMDS) activities**
 - **Discuss environmental review process under the National Environmental Policy Act (NEPA)**
 - **Provide a public forum to gather comments on scope of Programmatic Environmental Impact Statement (PEIS)**
 - **Maintain an open and collaborative process**



Tonight's Agenda

- Agenda overview and “ground rules”**
- BMDS Overview**
- NEPA Process**
- BMDS PEIS**
- Public Involvement**
- Scoping**



“Ground Rules”

- Tonight’s meeting is for the public to speak and MDA to listen**
- MDA will discuss**
 - ✓ **What is the BMDS?**
 - ✓ **What is the NEPA process?**
 - ✓ **What is the PEIS?**
 - ✓ **How can the public get involved?**
 - ✓ **What is scoping?**
- MDA will adjourn for 30 minutes to answer questions near the posters**
- MDA will reconvene meeting to hear oral comment**
 - ✓ **Sign up at the registration table to speak**
 - ✓ **Speakers will be limited to 5 minutes**
 - ✓ **Court reporter will record statements**



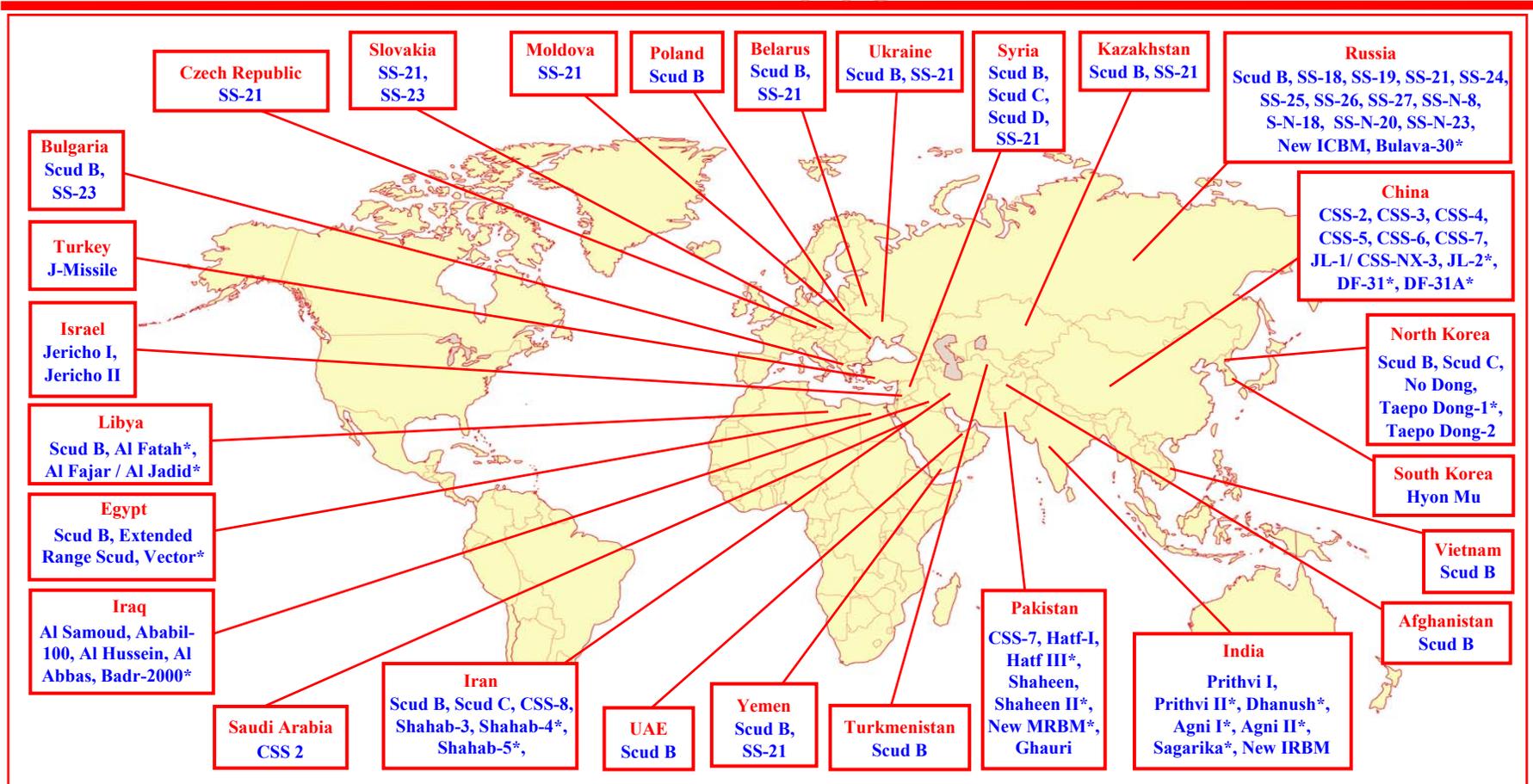
Overview of BMDS

- ❑ **Describe the BMDS**
 - **Why do we need it?**
 - **What is it?**
- ❑ **BMDS Presentation outline**
 - **The ballistic missile threat**
 - **Our national defense policy regarding the threat**
 - **What is a ballistic missile?**
 - **The BMDS**
 - **The BMDS Test Bed**
 - **Progress to-date**
 - **Initial Defensive Capability Fielding**



World Ballistic Missile Capability

- 2003 -



* Missiles Not Yet Deployed

❑ In 1972, only 8 countries had ballistic missiles

❑ Today, the threat is pervasive, proliferating, and the pace of proliferation is accelerating



Ballistic Missile Defense and U.S. National Security Policy

Ballistic Missile Defense is integral to the U.S.'s current national security policy goals regarding ballistic missile threats and weapons of mass destruction.

Key Policy Goals

Assure allies and friends that we can and will fulfill our security commitments

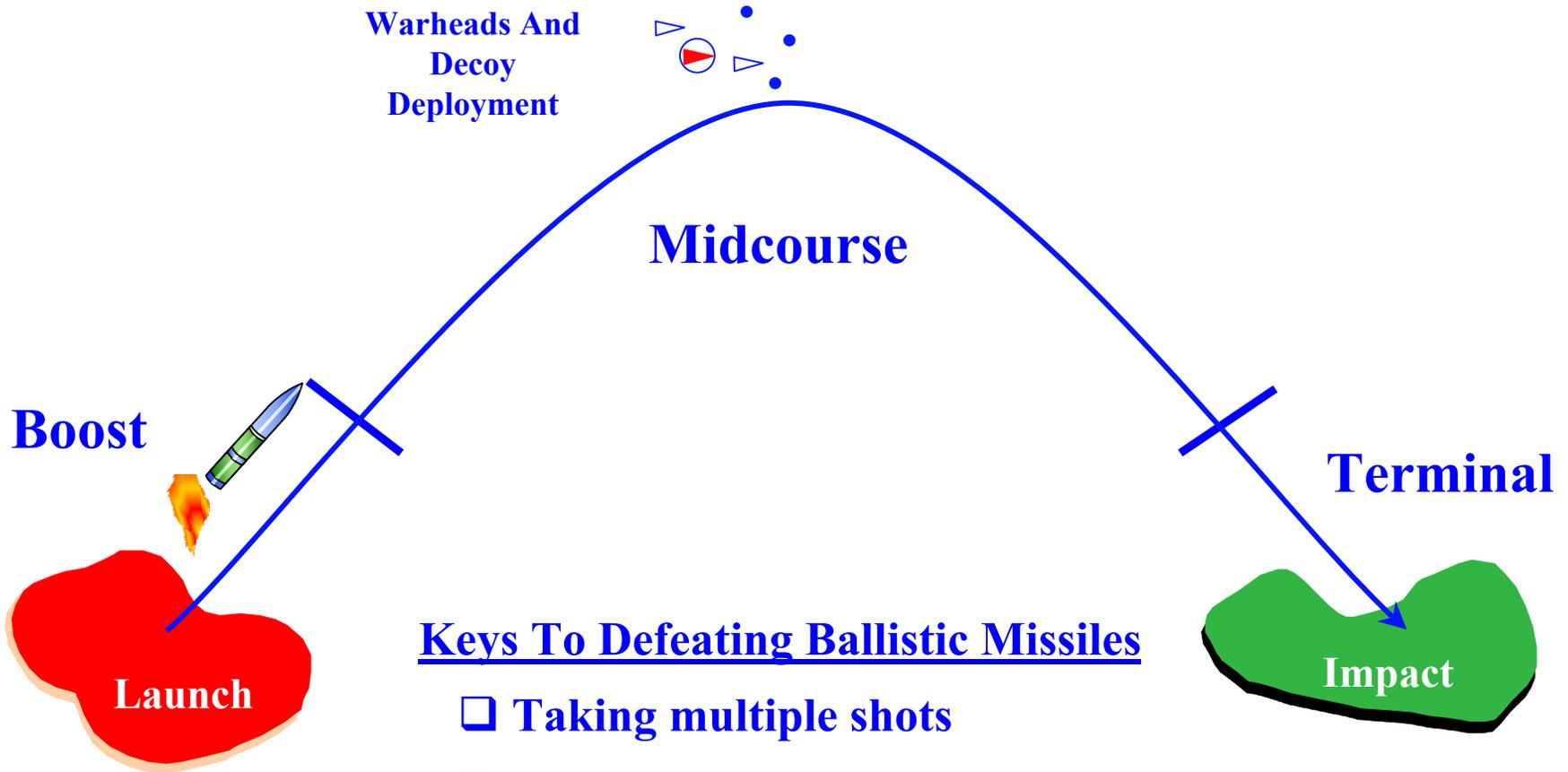
Dissuade adversaries from undertaking programs or operations that could threaten our interests

Deter aggression and coercion by maintaining capacity to swiftly defeat or impose severe penalties on an adversary

Decisively defeat any adversary if deterrence fails



What is a Ballistic Missile?



Keys To Defeating Ballistic Missiles

- Taking multiple shots
- Earlier the better
- Flexibility – geography counts

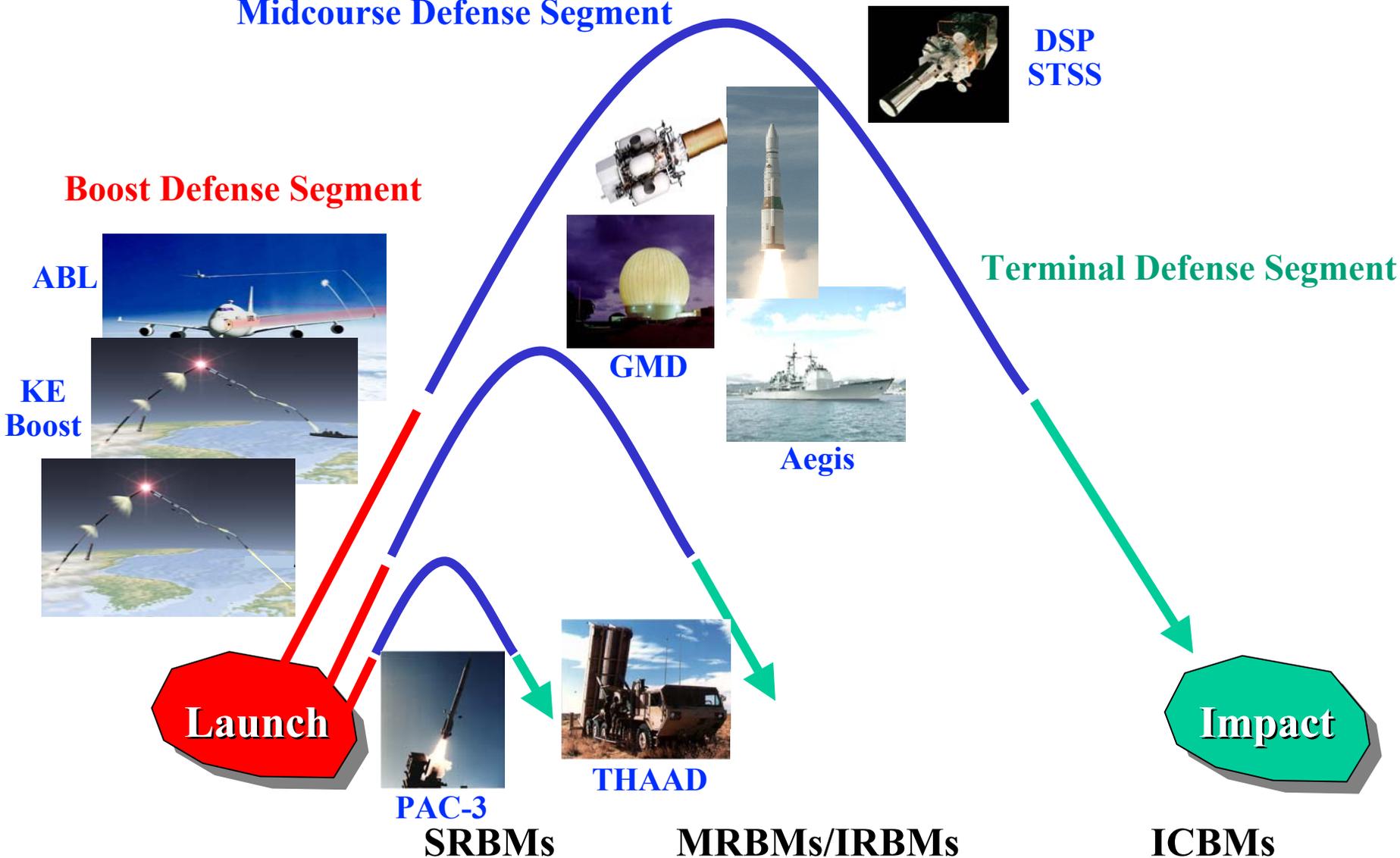


Layered BMDS

Midcourse Defense Segment

Boost Defense Segment

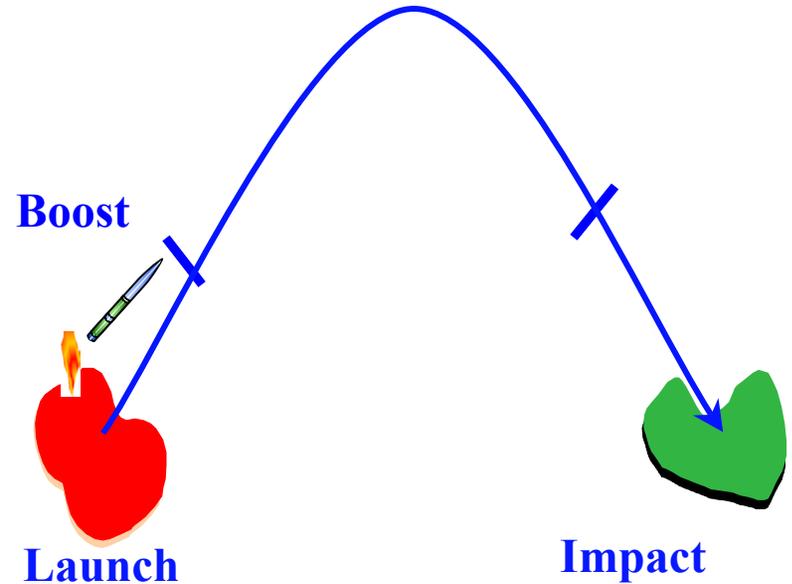
Terminal Defense Segment



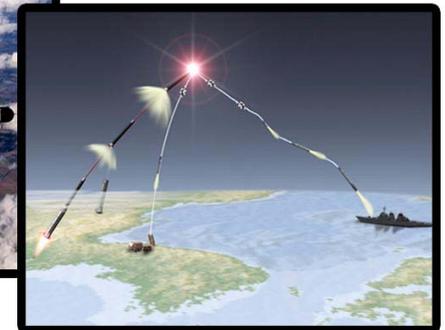


Boost Defense Segment

- ❑ Ballistic missiles are most vulnerable during boost – relatively easy to find and are moving slowly
- ❑ BMDS needs to be alerted and positioned near the enemy launch site to engage in boost phase
- ❑ Requires quick reaction times, high confidence decision making, and multiple engagement capabilities
- ❑ Key elements
 - Airborne Laser (ABL)
 - BMDS Interceptor



Airborne Laser



Terrestrial Test Bed
Kinetic Energy Intercept



Airborne Laser



- ❑ Acquires, tracks, and negates short- and medium-range ballistic missiles in boost phase – investigating longer-range capabilities
- ❑ 747 aircraft with a high-energy chemical laser weapon system - laser pierces the missile's propulsion system, terminating lift-off
- ❑ Initial system shoot-down capability demonstration planned for December 2004



BMDS Interceptor

- ❑ “Hit-to-kill*” interceptor against intermediate and long-range ballistic missiles
- ❑ Will rely on existing space sensors for launch and flight guidance
- ❑ Early data collection and technology demonstrations are ongoing for ground and space-based platforms
- ❑ Initial capability and fielding several years away



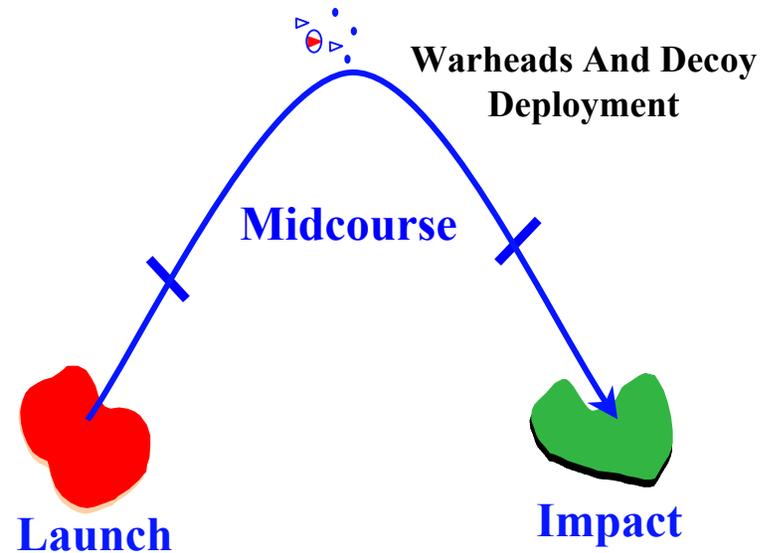
Ground-, Sea-, and Potentially
Space-based BMDS
Interceptors

*Hit-to-kill = no explosives or nuclear materials

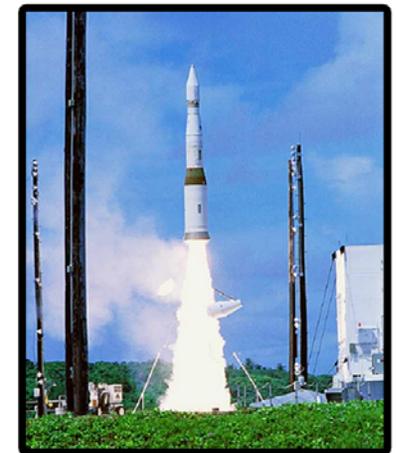


Midcourse Defense Segment

- ❑ Ballistic missiles “coast” for several minutes during midcourse, and may deploy warheads and decoys
- ❑ BMDS uses multiple sensors determine “real” threat, and directs defensive weapons to intercept threat objects, e.g., warheads, in space
- ❑ Key elements
 - Aegis Ballistic Missile Defense
 - Ground-based Midcourse Defense



Launch from an Aegis Cruiser



Ground-Based Interceptor Launch



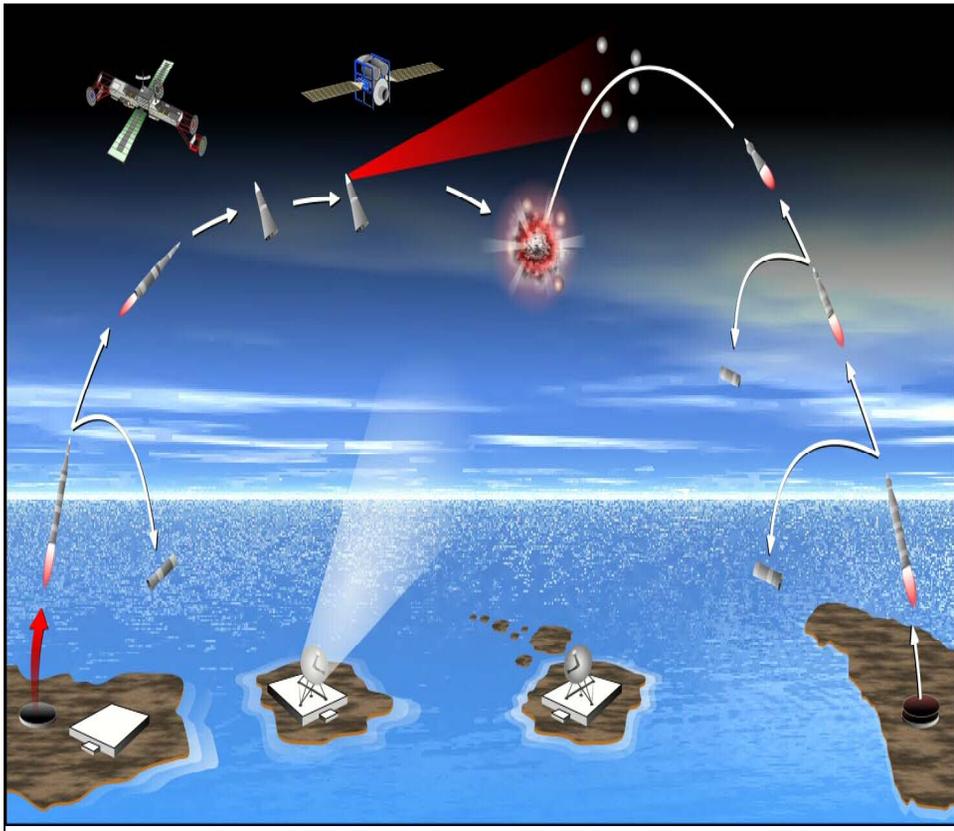
Aegis Ballistic Missile Defense

- ❑ Acquires, tracks, and negates short- and medium-range ballistic missiles
- ❑ Navy Aegis cruisers with radars to direct an advanced Standard Missile interceptor
- ❑ Can potentially provide multiple shots at enemy target
- ❑ System testing ongoing, initial fielding planned for next year





Ground-based Midcourse Defense

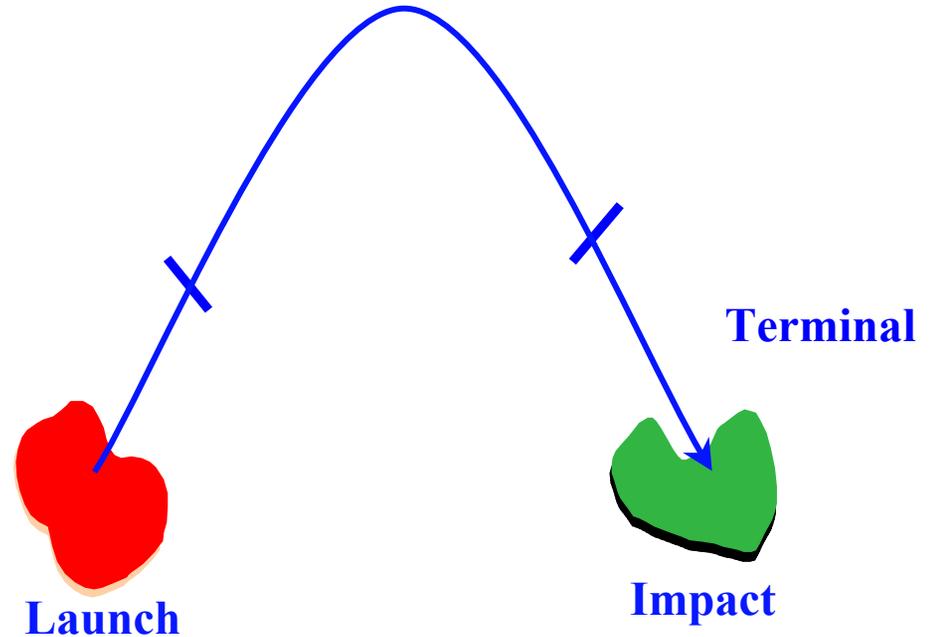


- ❑ Acquires, tracks, and negates long-range ballistic missiles
- ❑ Comprises widely dispersed sensors, launchers, and control sites
- ❑ Program Manager for BMDS Test Bed construction and initial operations
- ❑ System testing ongoing, initial fielding planned for next year



Terminal Defense Segment

- ❑ Ballistic missile is seconds away from its intended target as it re-enters the atmosphere
- ❑ BMDS “last line of defense” - defensive systems must be positioned near area to be protected (e.g., city, airfield)
- ❑ Key elements
 - PATRIOT Advanced Capability – 3 (PAC-3)
 - THAAD
 - Israeli Arrow System
 - Multi-national MEADS



Theater High Altitude Area Defense (left) and PATRIOT Advanced Capability-3 (above)



PATRIOT Advanced Capability - 3

- ❑ Protects forward-deployed forces and assets against short- and medium-range ballistic missiles, enemy aircraft, and cruise missiles
- ❑ Can be transported aboard military aircraft
- ❑ Significant improvements since 1991 Gulf War to radar, missile, and control systems
- ❑ Currently in production and fielding – participated in Operation Iraqi Freedom





Theater High Altitude Area Defense



- ❑ Protects forward-deployed forces, assets, and population centers against short- and medium-range missiles
 - Radar provides capability against longer range threats
- ❑ Can be transported aboard military aircraft
- ❑ Interoperable with ground- and sea-based systems (PAC-3 and Aegis BMD)
- ❑ Flight testing planned to resume in late 2004, with initial fielding to follow a few years later





Arrow Weapon System

- ❑ Protects Israeli forces and population against short- and medium-range ballistic missiles
- ❑ Designed to be interoperable with U.S. ground- and sea-based systems
- ❑ U.S. participating in technology and engineering development
- ❑ Initial Arrow systems being produced and fielded – system improvements ongoing





Medium Extended Air Defense System

- ❑ Protects forward-deployed forces and assets against short-range ballistic missiles, aircraft, and cruise missiles
- ❑ Follow-on to the PAC-3
- ❑ Highly mobile – designed to move with the troops
- ❑ Cooperative effort between U.S., Germany, and Italy
- ❑ Initial engineering design and demonstration ongoing, fielding planned at end of decade





BMDS Sensors

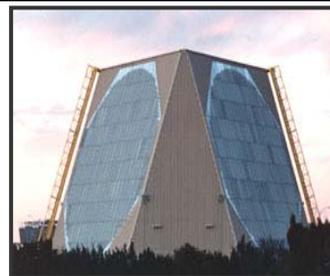
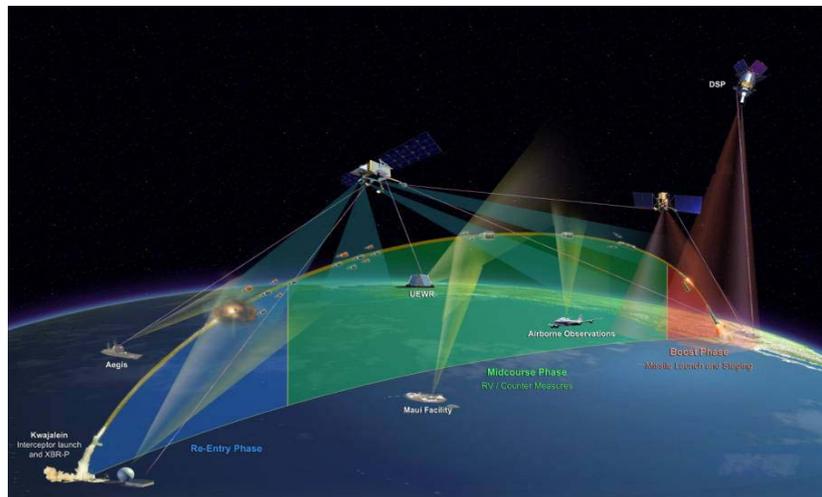
□ Additional BMDS-wide “eyes and ears”

- Detect enemy missile launches
- Track missile flights, activity
- Discern real threats from decoys
- Direct defensive interceptors
- Observe, report intercepts

□ Multiple sensor types (radars, telescopes) to provide robustness against enemy countermeasures

□ Key elements

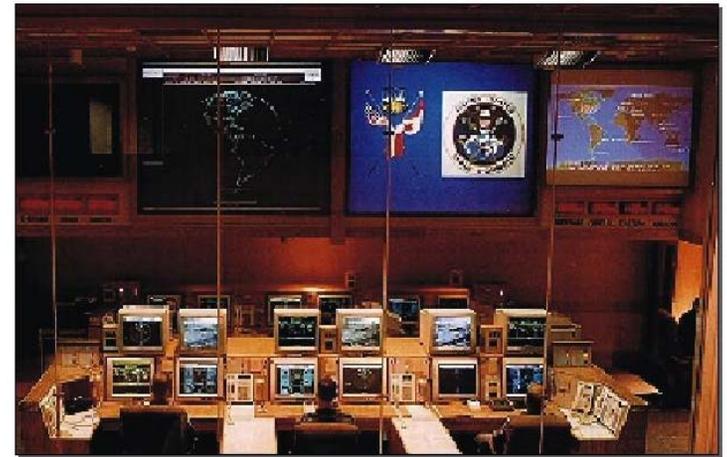
- BMDS radar (forward deployed)
- Space Tracking and Surveillance System (STSS)
- Sea-based X-band radar (SBX)





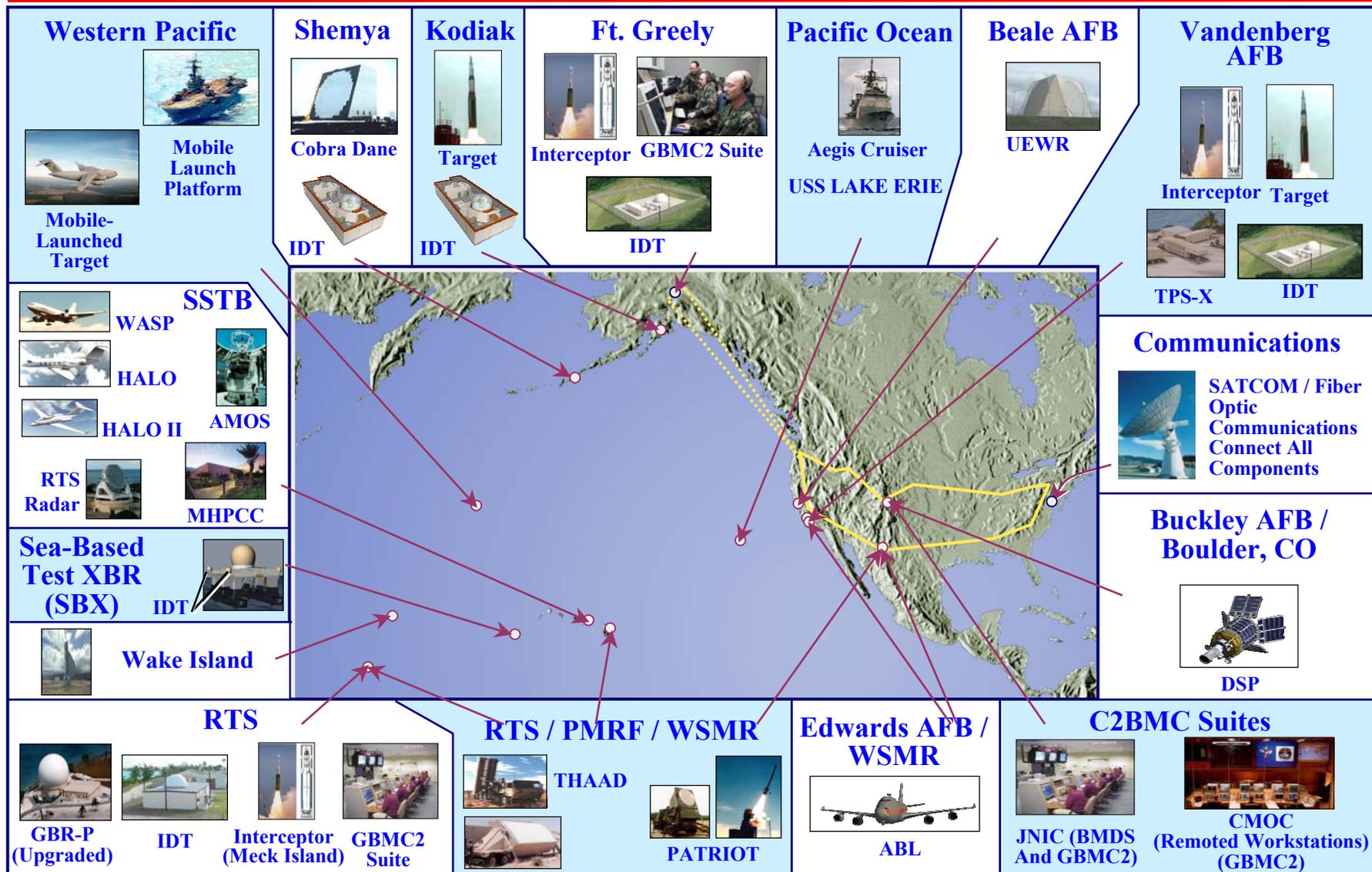
Command and Control, Battle Management and Communications

- ❑ Provides the rules, tools, displays, and connectivity enabling the BMDS to destroy ballistic missiles
- ❑ Integrates and coordinates both BMDS equipment and operators - provides link to the “warfighter”
- ❑ Key elements
 - Command and Control (C2)
 - Battle Management (BM)
 - Communications





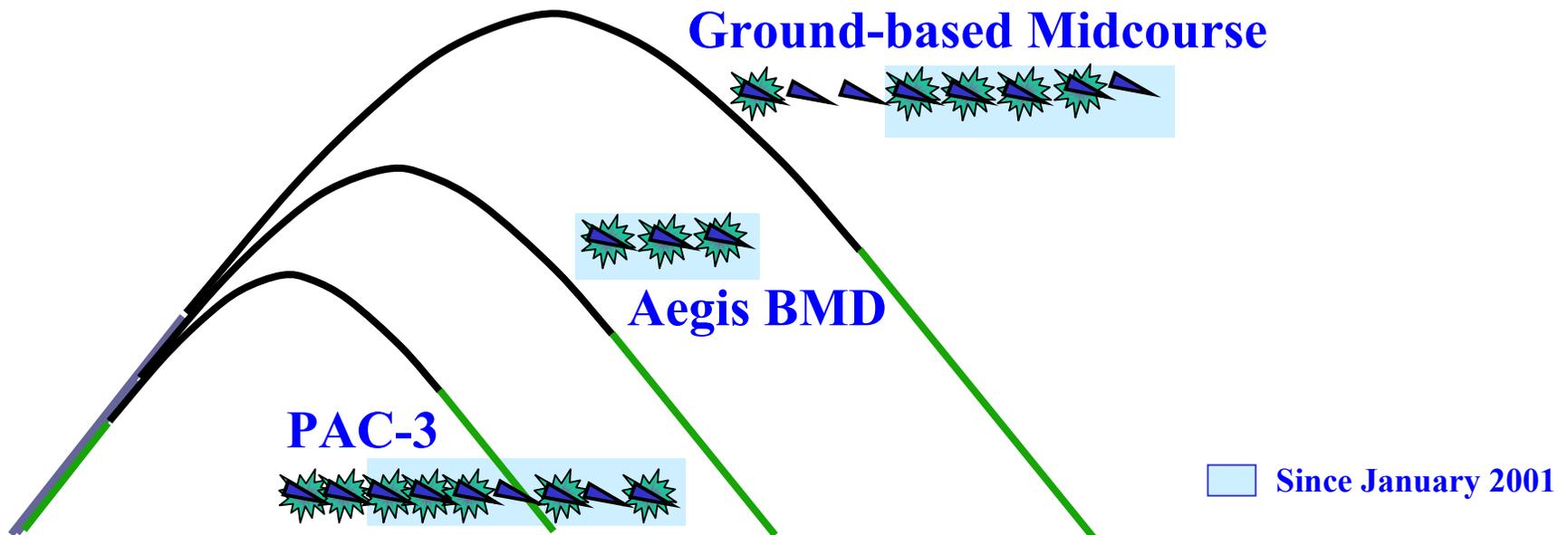
BMDS TEST BED





BMDS Testing – Progress to Date

- ❑ Successful flight tests demonstrating “hit-to-kill*” interceptors, as well as our integrated systems approach



- ❑ Over past 2 years, conducted 55 flight tests and 60 ground tests
- ❑ Over next 2 years, planning 68 flight tests and 58 ground tests

***Hit-to-kill = no explosives or nuclear materials**



Progress Supports Initial Fielding

“ I have directed the Secretary of Defense to proceed with fielding an initial set of missile defense capabilities. We plan to begin operating these initial capabilities in 2004 and 2005, and they will include ground-based interceptors, sea-based interceptors, additional PATRIOT (PAC-3) units, and sensors based on land, at sea, and in space.”

- President Bush, December 17, 2002



Summary

- Ballistic missiles pose significant threat to U.S. interests at home and abroad**
- Our national strategy to address this growing threat relies on both diplomatic and military tools**
- The layered BMDS is the military's "tool box" designed to protect the U.S. homeland, deployed forces, friends and allies from ballistic missiles of all ranges**
- BMDS testing has been successful, with more comprehensive and realistic tests planned over the next few years**
- BMDS Test Bed is central to our ability to deliver highly effective missile defenses**
- The President has directed the deployment of an initial defensive capability, based on the Test Bed, by the end of next year**

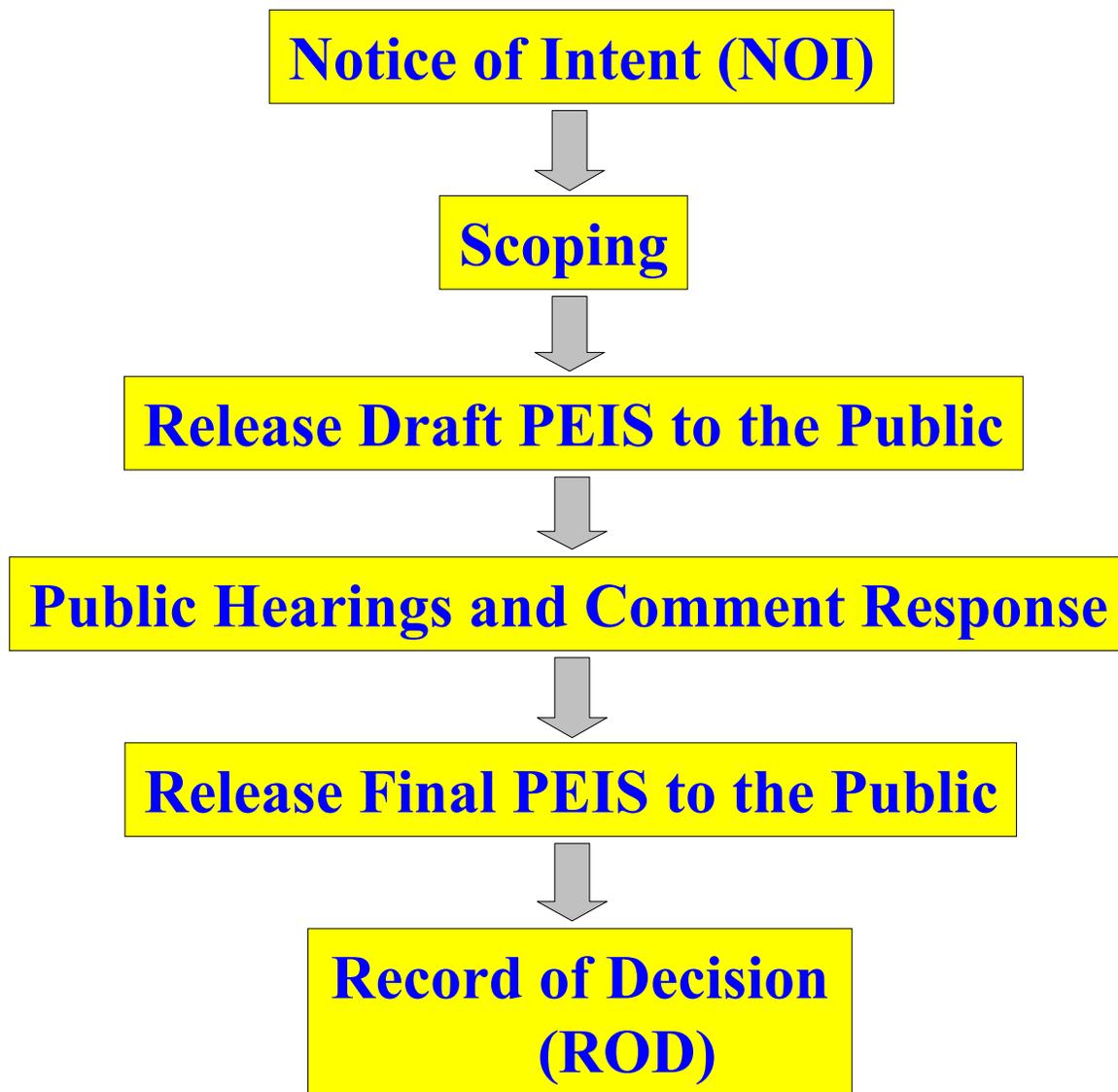


National Environmental Policy Act

- ❑ **NEPA establishes broad national framework for protecting the environment**
- ❑ **Objective of environmental review process is to help public officials**
 - **Make informed decisions based on understanding environmental consequences**
 - **Take actions that protect, restore, and enhance the environment**
- ❑ **MDA's role in the NEPA process**
 - **Lead Federal agency for developing the BMDS PEIS**
 - **May invite other Federal agencies with specific regulatory oversight or technical expertise to be cooperating agencies**



NEPA Process





The BMDS PEIS

- ❑ **What is a Programmatic Environmental Impact Statement (PEIS)?**
- ❑ **BMDS PEIS Approach**
 - **Purpose of and Need for Proposed Action**
 - **Description of the Proposed Action**
 - **Alternatives to the Proposed Action**



What is a PEIS?

- ❑ **Analyzes actions that**
 - **Are broad in scope**
 - **Occur in phases**
 - **May be widely dispersed geographically**

- ❑ **Creates a comprehensive, global analytical framework**
 - **Supports subsequent analysis of specific actions at specific locations within the overall system, i.e., tiering**
 - **Conserves resources in terms of schedule and cost**



Purpose and Need

Purpose of the Proposed Action

- To incrementally develop and deploy a BMDS, the performance of which can be improved over time, that layers defenses to intercept ballistic missiles of all ranges in all phases of flight

Need for the Proposed Action

- To protect the United States, its deployed forces, friends, and allies from ballistic missile threats



Proposed Action

The proposed action is to develop, test, and deploy, and to plan for related decommissioning activities, for an integrated BMDS using existing infrastructure and capabilities, when feasible, as well as emerging and new technologies, to meet current and evolving threats in support of MDA's mission.



Proposed Alternatives

Alternative 1 – Land-, Sea-, and Air-based BMDS

Develop, test, deploy and plan to decommission land-, sea- and air-based platforms for missile interceptors and directed energy missile defense system components, and related architecture and assets

Alternative 2 – Land-, Sea-, Air- and Space-based BMDS

Develop, test, deploy and plan to decommission land-, sea-, air- and space-based platforms for missile interceptors and directed energy missile defense system components, and related architecture and assets

No Action Alternative

To not test, develop, deploy or plan to decommission an integrated BMDS but to continue status quo development of discrete systems as stand-alone defensive capabilities



Resource Categories

□ MDA will consider the environmental impacts of the proposed action and alternatives, including no action, on the following resource categories

- **Air quality**
- **Airspace**
- **Biological resources**
- **Cultural and historic resources**
- **Environmental justice**
- **Geology and soils**
- **Hazardous wastes and materials**
- **Land use**
- **Noise**
- **Socioeconomics**
- **Transportation**
- **Utilities**
- **Visual resources**
- **Water resources**



Public Involvement

- ❑ **MDA invites YOU to submit comments and questions throughout the entire BMDS PEIS development process**
- ❑ **Comments received during scoping will help MDA**
 - **Identify significant impacts**
 - **Eliminate insignificant issues**
 - **Identify public concerns**
 - **Ensure examination of full range of alternatives**
- ❑ **Comments received during public review of Draft PEIS will help MDA**
 - **Address impacts**
 - **Identify need for mitigation measures**



Scoping

- Comments may be submitted at any time during scoping**
- Scoping comments to MDA no later than June 12, 2003**
- MDA will categorize and analyze scoping comments received to determine**
 - **Issues of priority**
 - **Level of detail to be included**
 - **Sources of information**
 - **Issues to be addressed and evaluated**
- MDA will consider all comments provided regarding the scope of issues to be analyzed in the Draft PEIS**



Submitting Scoping Comments

Oral comments

- Speak tonight during the scoping meeting
- Call the toll-free telephone number

Written comments

- Submit written comments that you brought to the meeting
- Use the written comment sheets at registration table to write down comments and submit them this evening
- Fax, mail or e-mail your comments
- Use the electronic comment form provided on the MDA BMDS PEIS web site



Contact Information

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Web site

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To Obtain Additional Information

- ❑ Visit the MDA BMDS PEIS public involvement web site for additional information at <http://www.acq.osd.mil/bmdo/peis/html/home.html>
- ❑ To view a copy of the future Draft PEIS
 - Fill out a request sheet tonight to receive a hardcopy of the Executive Summary
 - Send an e-mail to bmds.peis@mda.osd.mil to request a hardcopy of the Executive Summary
 - Visit your local library to review a hardcopy of the entire Draft PEIS
 - Download a pdf version of the entire Draft PEIS from the web site



Thank You for Participating

**MDA ENCOURAGES YOU TO SUBMIT
COMMENTS AND QUESTIONS AT ANY TIME
DURING DEVELOPMENT OF THE BMDS PEIS**