Evolutionary Acquisition In Action

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Agenda

- **Capability Based Acquisition**
  - Why, How, and vs. “Traditional” Acquisition
- **MDA Knowledge Points**
  - Why, What and How
- **Implementation: Acquisition Management Framework**
- **So What! Transition and Transfer**

Direction for MDA's Use Of Capability-Based Acquisition

- **January 2002 – SecDef Missile Defense Program Direction**
  - Establish a single program to develop an integrated system under a newly titled Missile Defense Agency
  - Apply a capability-based requirements process for missile defense

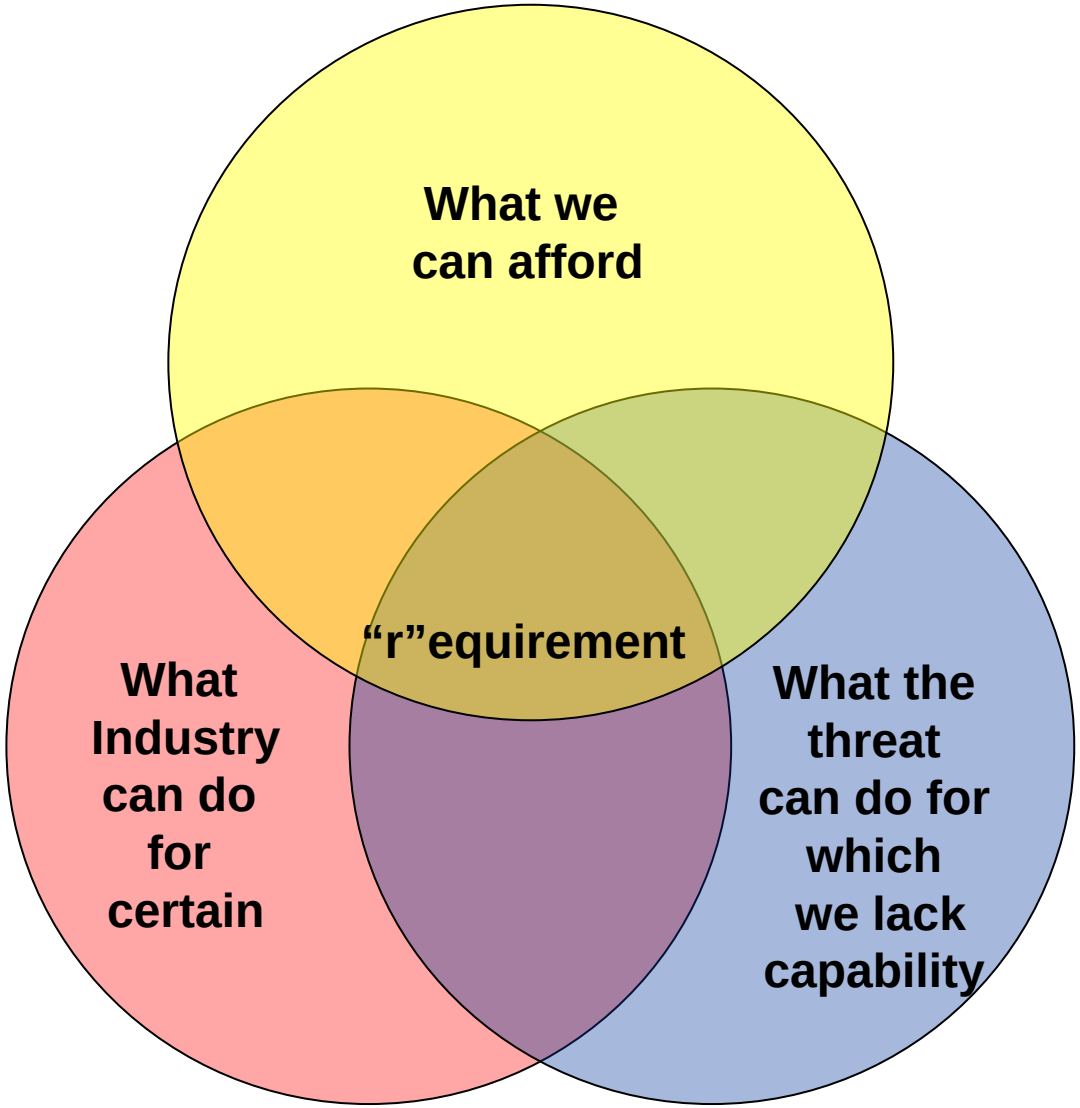
- **GMD, Aegis BMD, ABL, THAAD, SBIRS-Low / STSS, PAC-3 transferred from Services to MDA**
  - Operational Requirements Documents (ORDs) were cancelled (except PAC -3)
  - Capability-based acquisition applied

Why Capability-Based Acquisition

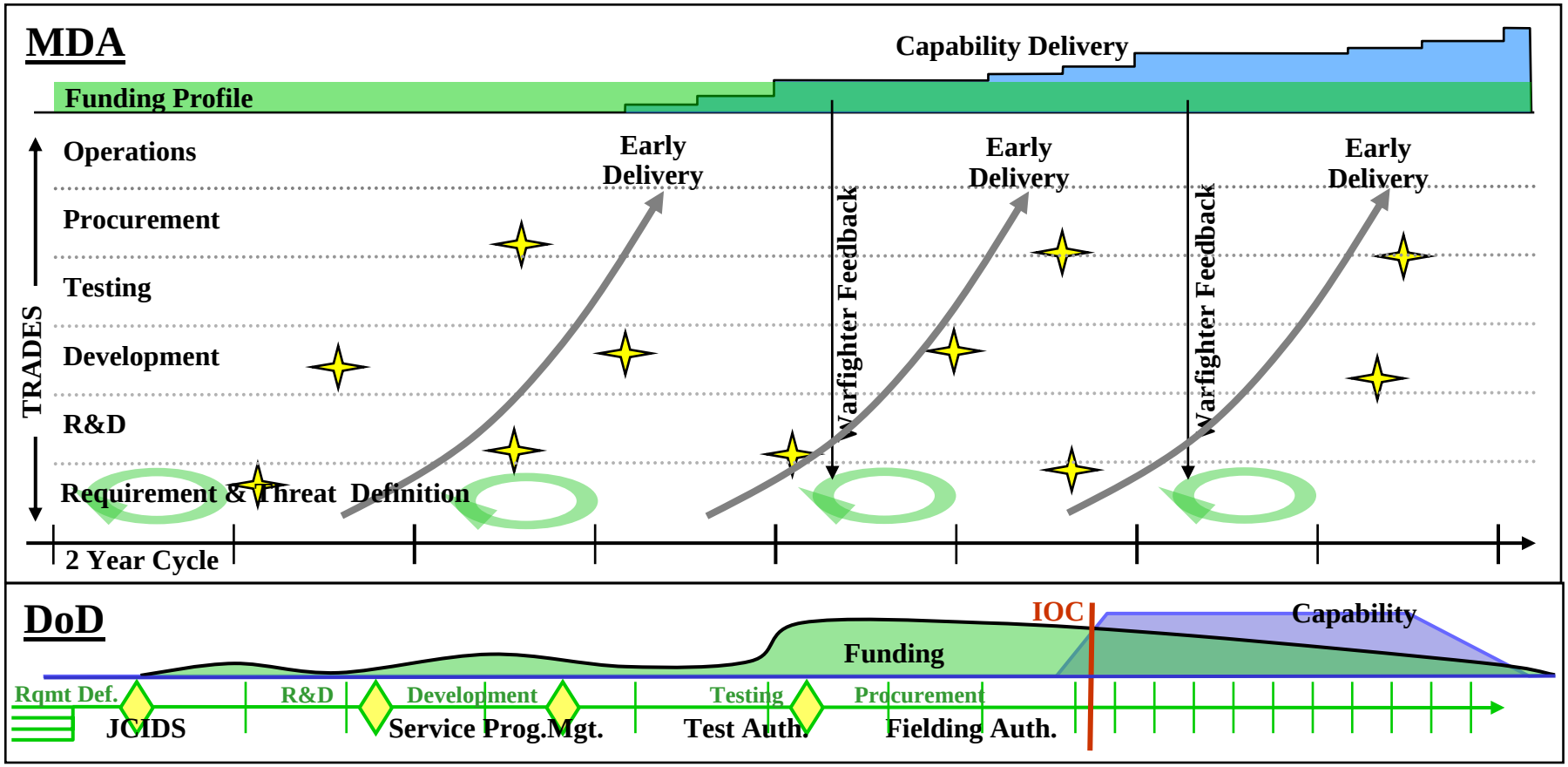
- **Cannot predict with certainty what nation(s) or non-state actors will pose threats to U.S. interests or those of our allies and friends**
- **Need a flexible strategy to exploit technological opportunities and place capability "in play" sooner**
- **Focus is on adding capabilities with demonstrated military utility, rather than meeting requirements often defined years earlier**
- **Harmonize capability "requirements" with balance "in the check book"**

Traditional Threat-Based Acquisition Does Not Effectively Address the Above

Capability-Based Acquisition



Capability Based Acquisition



Strengths

- *Fully Flexible Funding*
- *Combined Developmental & Operational Testing*
- *Integrated Capability Management*

Risks

- *Transition To Services*

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Knowledge Points - Why

- **Problems occur because development programs do not capture early-on the requisite knowledge that is needed to effectively manage risks and make decisions**
- **Programs frequently disappoint**
  - Unrealistic cost and schedule estimates
  - Ill-defined and unstable requirements
  - Immature technologies
  - Constantly changing design & manufacturing processes
  - Such lengthy development times that better investment opportunities often emerge
- **As a result, programs require more resources and time than planned**

Knowledge Points are Our Hedge Against these Risks

Knowledge Points – What They Are

- **Knowledge Point defined**
  - A preplanned event after which the decision-maker knows information for making key decisions
- **Unique to each program: Critical *risks***
  - Decision-maker decides what the knowledge points are
  - Data from knowledge points drives key decisions
    - Incremental financial commitments to a program
    - Schedule adjustments
    - Performance requirements
    - Program Continuation
    - Alternative or back-up path
  - Each added commitment to a program hinges on knowledge gained (confidence) about critical risks
  - Event-based: tests and demos based upon risks or known problems
    - Routine tests or demos are not Knowledge Points

Knowledge-Based Decisions Reflect a Fundamentally Different Way of Doing Business

Missing a KP Means the Viability of the Capability is in Jeopardy

- **Possible Outcomes of not Attaining a KP Might Include Technology remains promising, so alter approach**
  - Reallocate resources to scale back activity and concentrate on a particular aspect of the program
  - Cancel the program
  - Choose a new solution to address the requirement, i.e., cancel the program
  - Continue the program with caution
  - Changes in Personnel
  - …..
- **Attaining a KP is Absolutely Critical to "Program" Future**

Overall Results, Needs & Alternatives will Drive Outcomes

Example of MDA Knowledge Points

- **Airborne Laser**
  - Knowledge Points Achieved
    - Demonstrated the ability to laze at significant power level and duration
    - Demonstrated that laser energy could be directed from an airborne platform
  - Outcomes
    - Achievement gave us confidence to designate ABL as primary boost capability
    - Delayed substantial investment until another major KP met: shooting down a ballistic missile in FY09
    - Based on remaining risks, continued to carry Kinetic Energy Interceptors as a hedge

The Above two Knowledge Points were Critical, Never-Before Demonstrated Events

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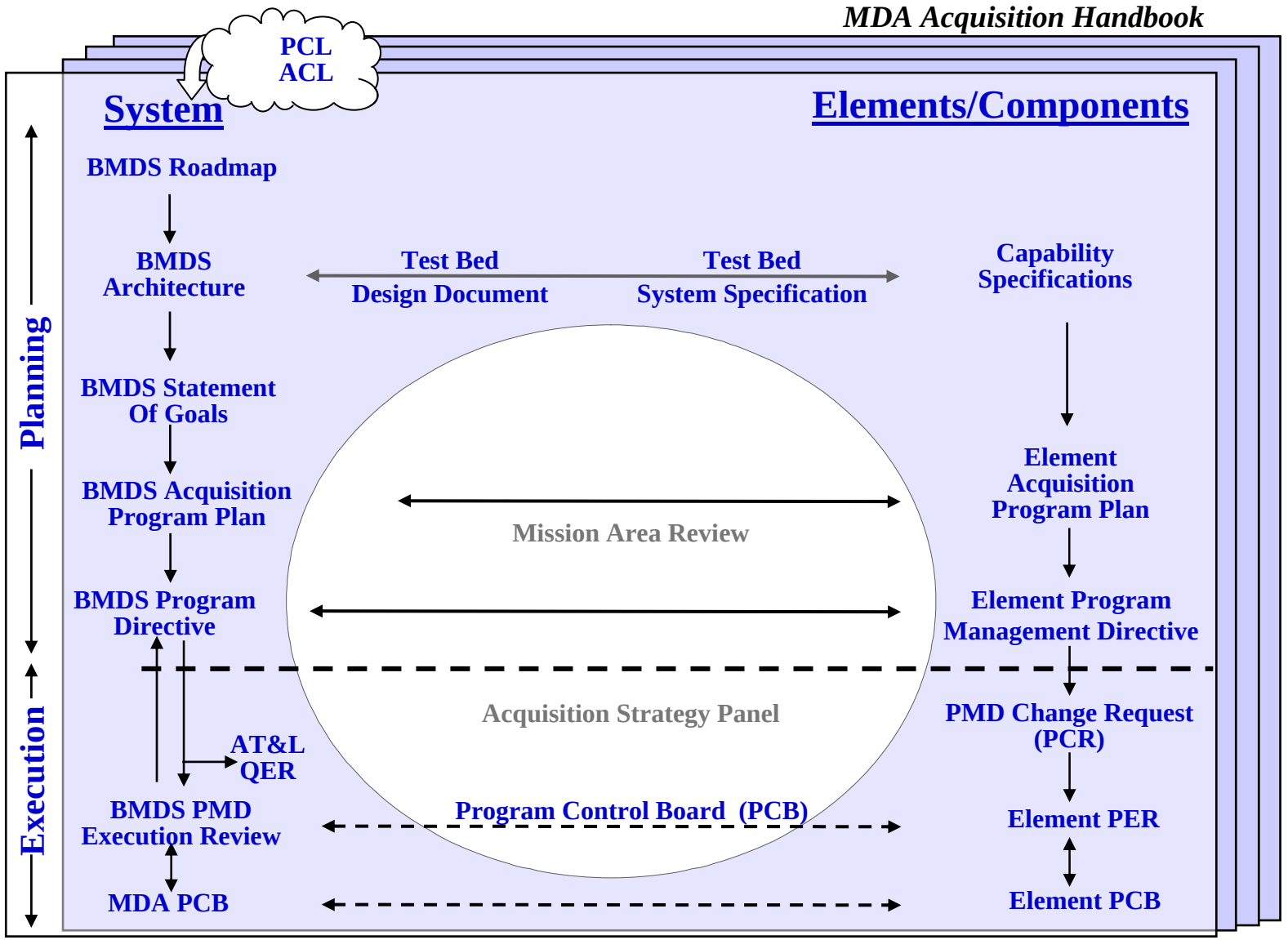
BMDS Acquisition Management - Framework



PCL – Prioritized Capabilities List

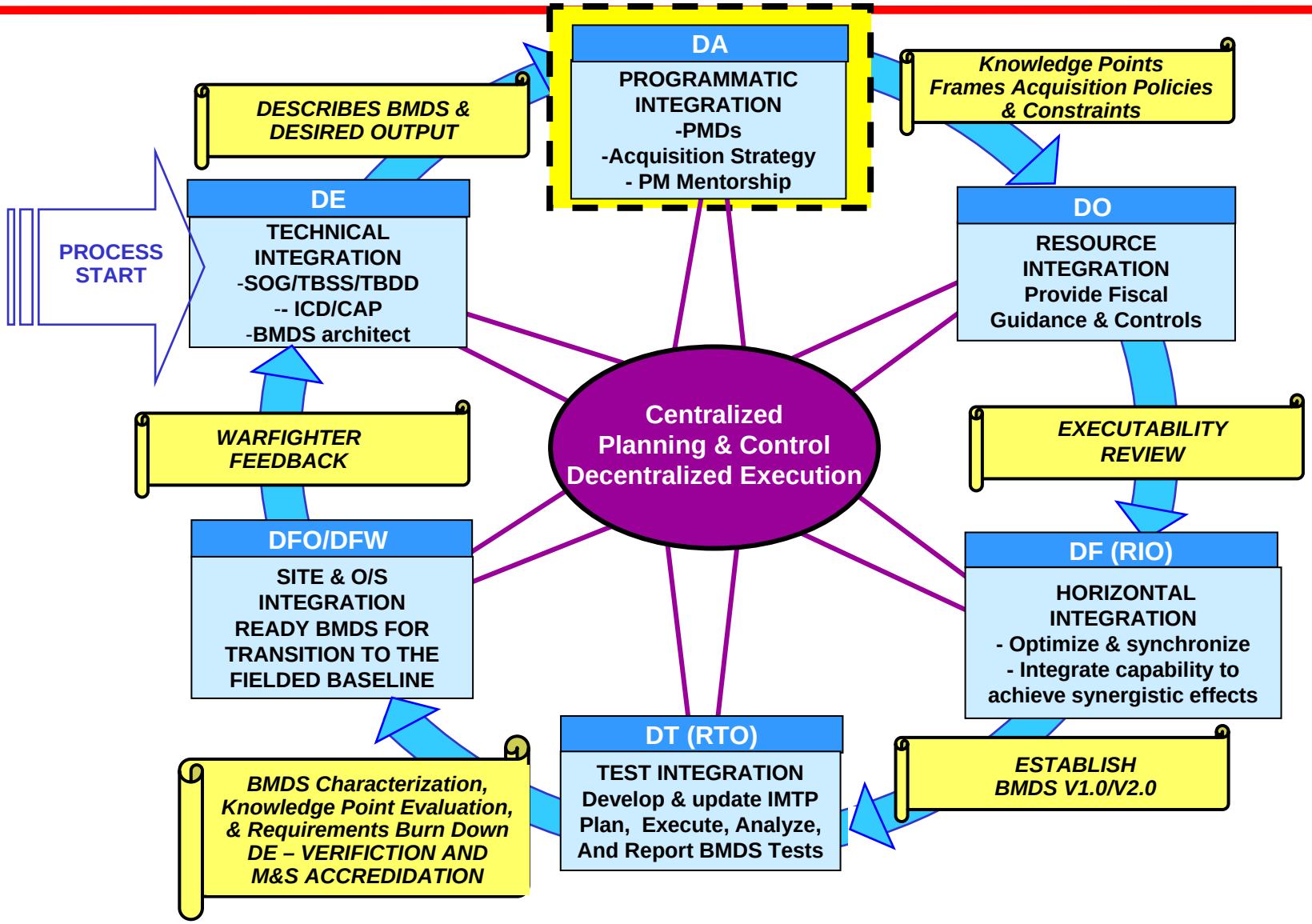
ACL – Achievable Capabilities List

QER – Quarterly Execution Review

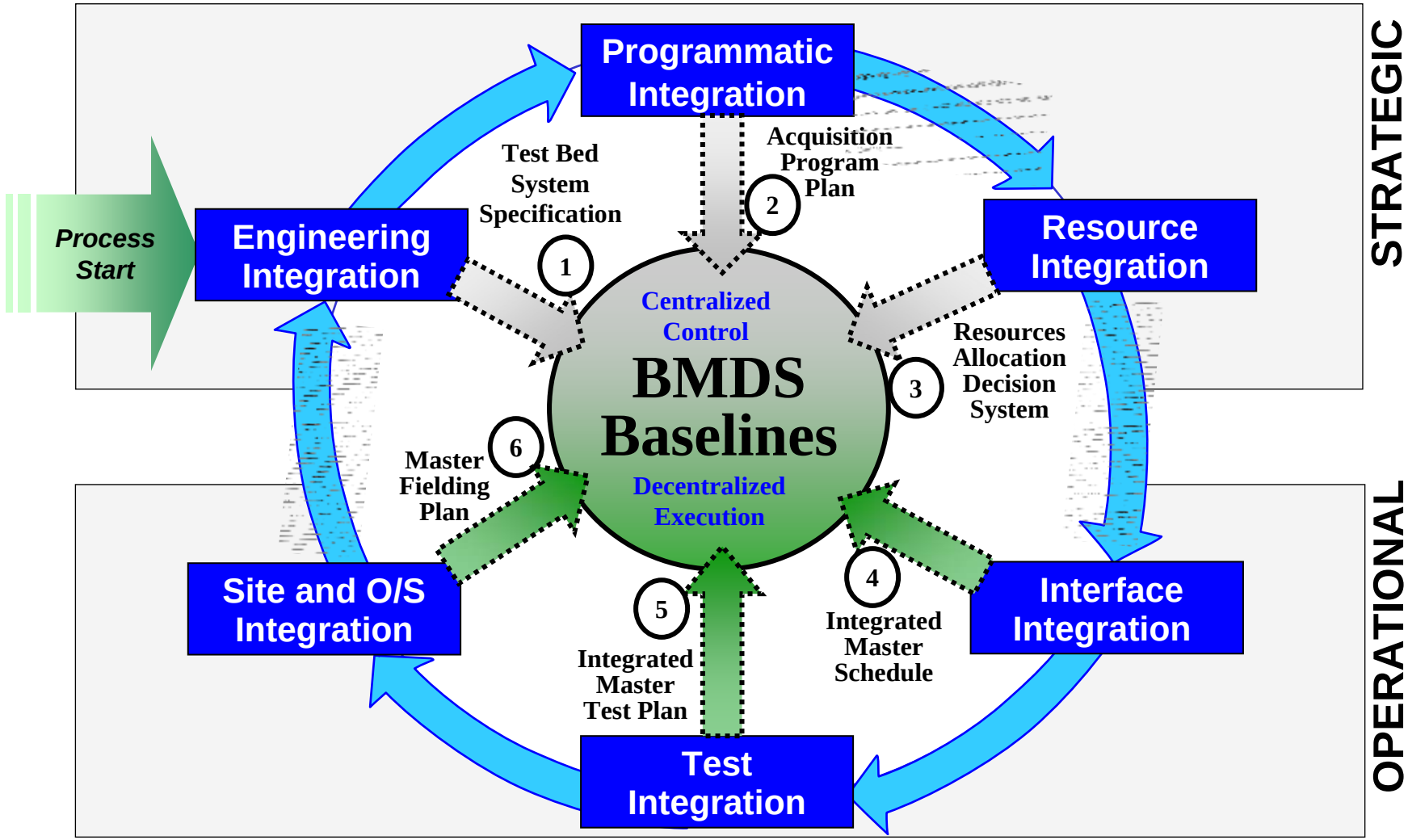
PMD – Program Management Directive

PER – PMD Execution Review

MDA Integration Process

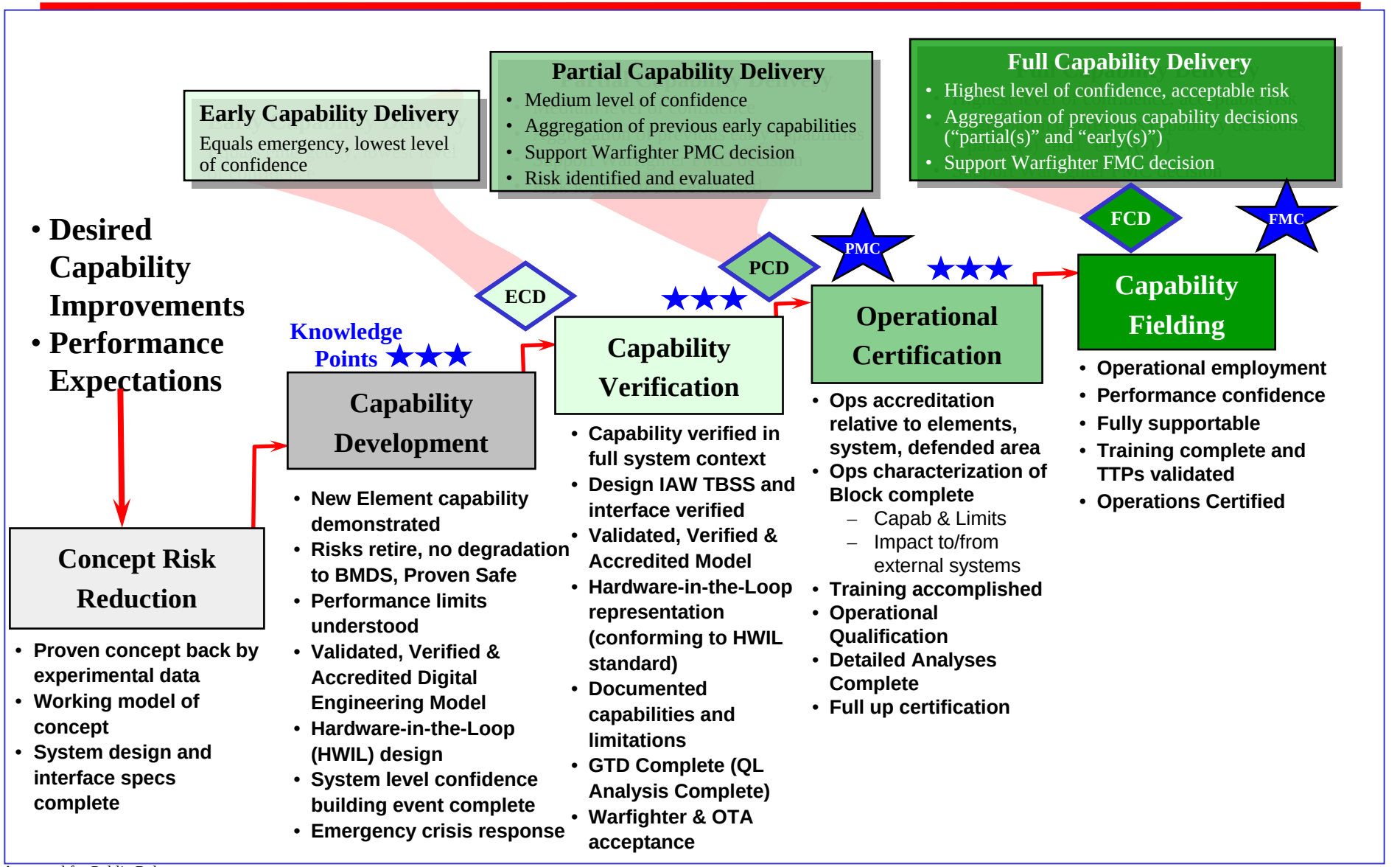


BMDS Baseline Management For Integrated BMDS



BMDS Baseline Components: (1) Technical (2) Contracts (3) Resource (4) Schedule (5) Test (6) Operational

BMDS Baseline Management
Evaluating Warfighter Delivery Capability



BMDS Baseline Management
Warfighting Capability Delivery Definitions (Current)

Block 2008+

Early Capability Delivery
Equals emergency, lowest level of confidence

Block 2006

Partial Capability Delivery
- Medium level of confidence
- Aggregation of previous early capabilities
- Support Warfighter PMC decision
- Risk identified and evaluated

Block 2004

Full Capability Delivery
- Highest level of confidence, acceptable risk
- Aggregation of previous capability decisions ("partial(s)" and "early(s)")
- Support Warfighter FMC decision

- **Desired capability improvements**
- **Performance expectations**

Knowledge Points ★★★

ECD

PCD

★★★

PMC

★★★

FCD

FMC

Concept Risk Reduction
- SM-3 Blk 1b
- MKV

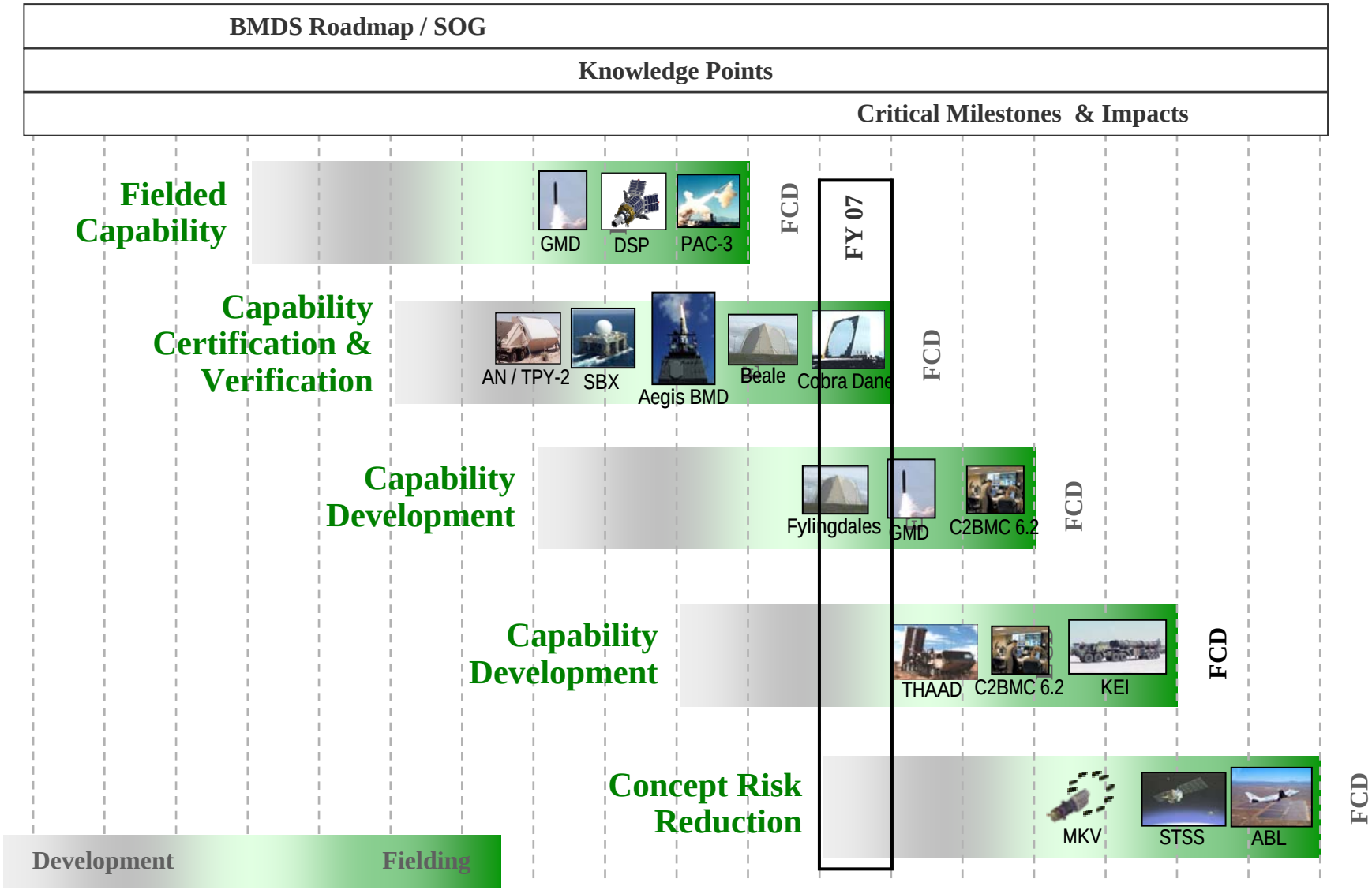
Capability Development
- Sea-Based Terminal
- KEI
- ABL
- CR-2
- THAAD
- STSS
- C2BMC 6.4
- SBX
- Fylingdales
- GFC 6a

Capability Verification
- C2BMC 6.2
- GBI

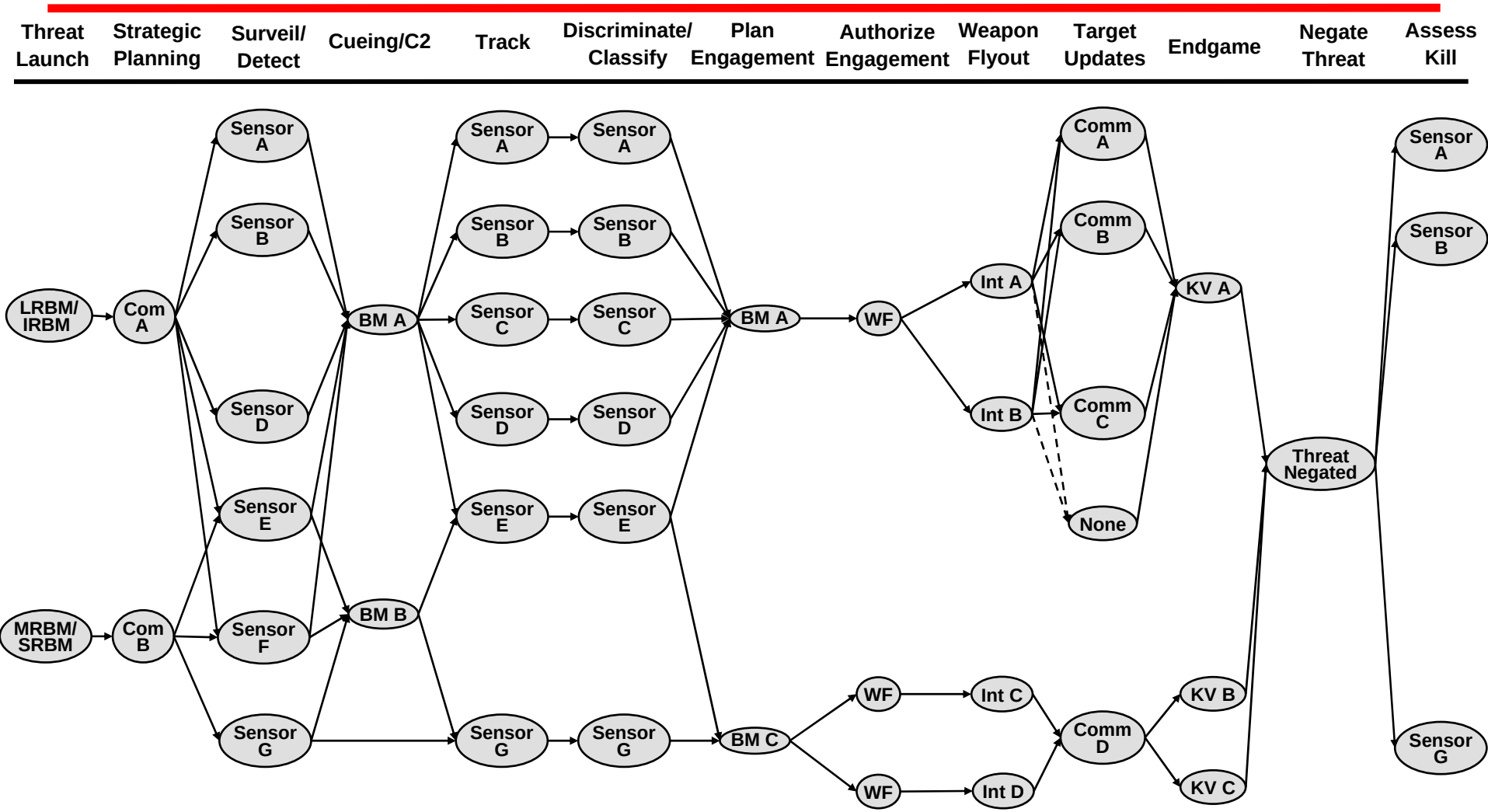
Operational Certification
- Aegis BMD 3.6
- Cobra Dane
- SM-3 Blk 1a
- AN / TPY-2 #2
- GFC 4b

Capability Fielding
- PAC-3
- DSP
- C2BMC 6.0
- SM-3 Blk 1

Developing & Delivering The BMDS

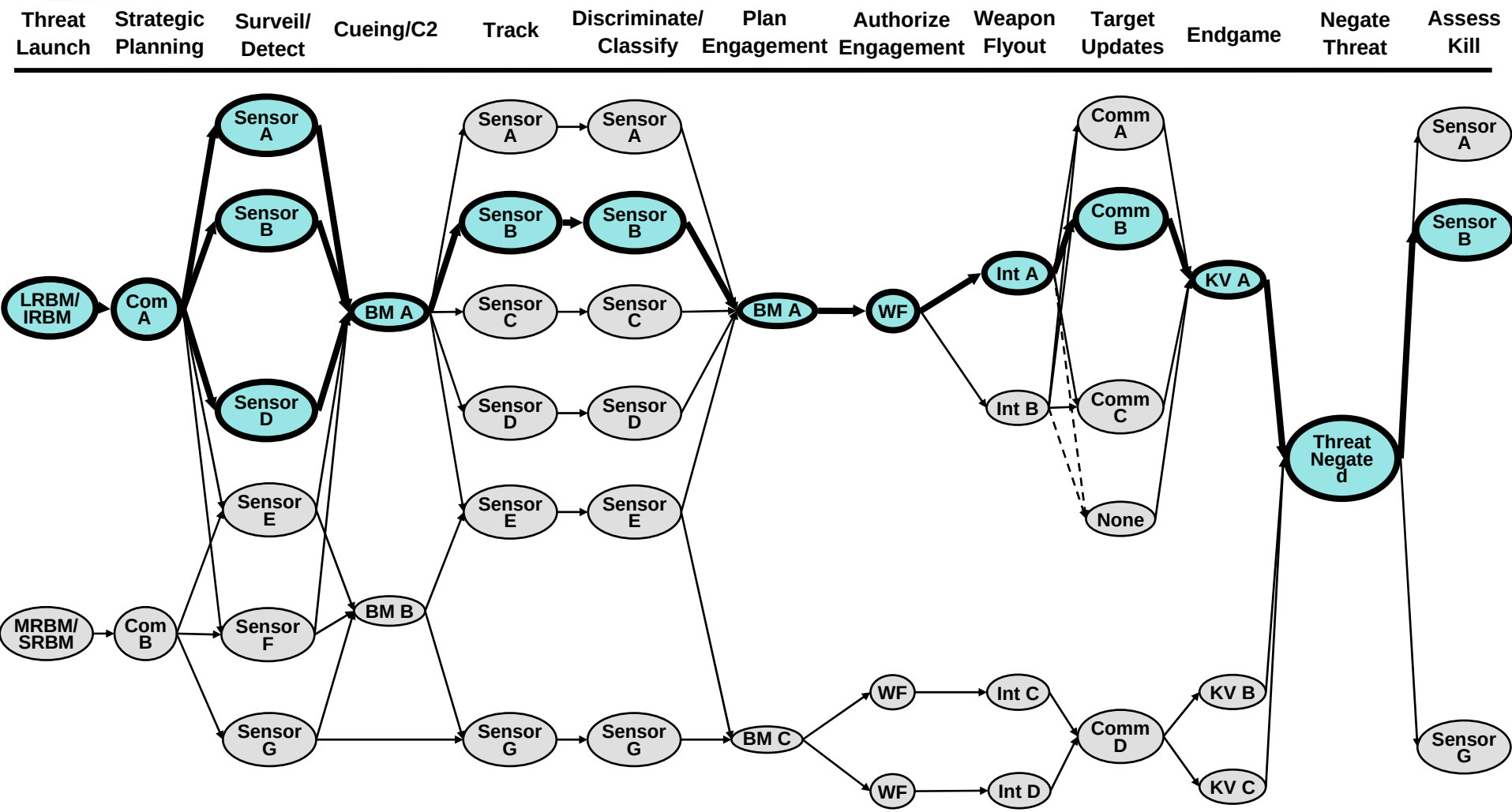


Notional BMDS "Kill Web"



Notional BMDS "Kill Web"

"Interceptor A Launch on Sensor B" ESG Highlighted



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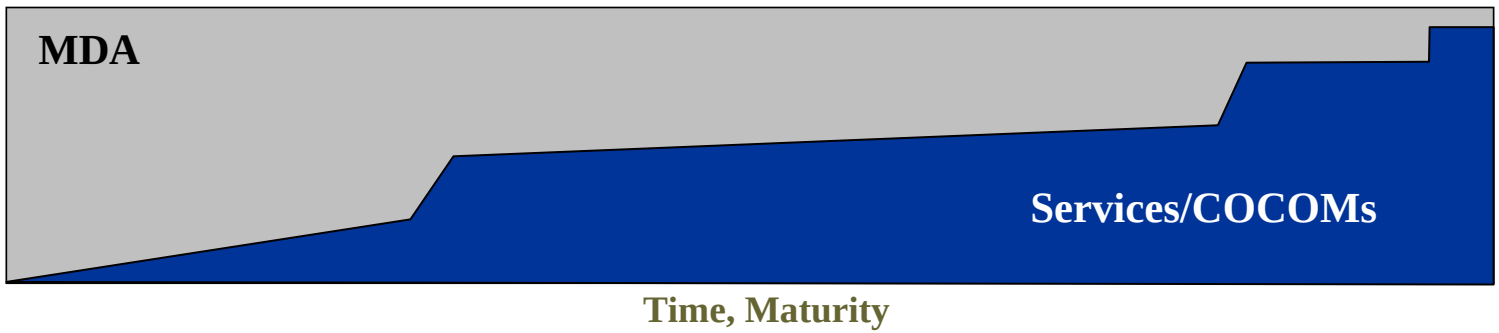
TRANSITION TO OPERATIONS

- **Early Capability**
  - Operations entry point for new, immature components/capabilities
  - Lowest level of confidence, contingency/emergency ops only
- **Partial Capability**
  - Medium level of confidence, based on tests & analyses
  - Aggregation of previous early capabilities
  - Risks identified and evaluated
  - Logistics support adequate to support operations
  - Support warfighter PMC decision
- **Full Capability**
  - Highest level of confidence, sufficient BMDS-level tests
  - Aggregation of previous capability decisions (“partial(s)” and “early(s)”)
  - Sufficient performance/logistics for sustained defensive ops
  - Support warfighter FMC decision

Transition and Transfer Spectrum Ranges

- **Transition*:** During the development phase, particularly when a component is deployed under contingency fielding, or emergency fielding conditions the Lead Military Department is responsible for providing for operation and support. Physical possession of BMD mission equipment is retained by MDA until the program office transfers
- **Transfer*:** Conveying the possession of an item or responsibility from one entity to another. Transfer includes the roles and responsibilities for procurement, operations, support, and sustainment



MDA Retains Configuration Management Responsibilities

*** From the USD (AT&L) Approved 2006 Transition and Transfer Plan**

Material Transition and Transfer Process

		Missile Defense Executive Board (MDEB)					
Element Capability (unless otherwise prescribed)	**Date of MDA Transition Planning Start**	**Lead Mil Dpt Decision (DepSecDef)**	**Status of Agreement (None, Draft, Coordinate, Complete)**	**Date of Signature**	**Proposed or Actual Transition Date (FY)**	**Transition Capability Delivery Completed**	**Transfer-Mil Dpt Element Capability Management Agreement Date (FY)(10 USC 224b)**
A. THAAD (2FU)	2006	Army 2006	Draft		2009		
B. Aegis BMD Blk 04	2006	Navy 2006	Complete	9 Mar 07	2008	FY10 (Agreed to conditions are met, e.g. Rnds delivered)	
C. UEWR	2006	Air Force 2006	Draft		2009/2011		
D. CDU Capability and PMO	2006	Air Force 2006	Draft		2008		
E. AN/TPY-2	2006	Army 2006	Draft		2010		
F. SBX	2006	Navy 2007	Draft		2014		
G. GBI/GFC	2006	Army 2006	Ltr to Army-proposed strategy for transition		2014		
H. C2BMC (No Lead SVC	2006	MDA Retains	N/A		N/A	N/A	N/A
I. STSS	2006	Air Force 2006	None		Beyond FYDP		
J. ABL	2006	Air Force 2006	None		Beyond FYDP		
K. Not Used							
L. PAC-3	2006	Army Gained 2003	Complete		N/A	N/A	N/A
M. SBIRS	2006	Air Force	Complete		N/A	N/A	N/A
N. EMR	2007		None				

= Potential future action
Date = Future action with possible date/cmt
= See notes, or Not Applicable (N/A)
= On track for capability transition and/or program transfer
= Insufficient progress
= May delay delivery, but on track (issues being worked)

Operational Transition and Transfer Planning Enablers

MDA's Development Areas

DOTMLPF Areas
(JFCC/IMD Provides)

	Planning																
	MDA Lead Development / Military Department Support										Military Department Leads O&S / MDA Supports						
Element Capability	Security	CARD	Logistics	Engineering	Testing	Contracting	EOD	FOD	Safety (QC)	POM	Doctrine	Organization	Training	Leadership	Material	Personnel	Facilities
A. THAAD (2FU)		May 06															
B. Aegis BMD Blk 04		May 06															
C. UEWR		May 06							TBD								
D. CDU		May 06							TBD								
E. AN/TPY-2		TBD		TBD					TBD								
F. SBX		May 06							TBD								
G. GBI/GS		May 06							TBD								
H. C2BMC (No Lead SVC		Nov 07							TBD								
I. STSS		May 06							TBD								
J. ABL		Nov 07							TBD								
K. Not Used																	
L. PAC-3	N/A	N/A	N/A			N/A	N/A	N/A	TBD								
M. SBIRS	N/A	N/A	N/A			N/A	N/A	N/A	TBD								
N. EMR																	

= Complete/expected completion = Working issues = Insufficient progress/Risk

Summary

- **Truly implementing Capability Based Acquisition**
- **Luxury of Focused Portfolio Management**

Proven Success!
Warfighter Capability Rapidly Delivered!

International Activity Highlights

Framework Partners

Japan: Forward-based X-Band radar siting, 21" Missile Development

UK: Fylingdales UEWR, lethality studies system-level analyses, advanced technology programs, target development

Australia: Science and technology cooperation

Denmark: Upgrade Thule Early Warning Radar, Technology Discussions

Italy: Framework MOU signed, MEADS partner, architecture analysis study

Continuing Activity

Israel: Arrow Deployed, Arrow System Improvement Program

Germany: MEADS Partner, Laser Cross-Link Technology

Netherlands: PAC-3, Trilateral Frigate Program Maritime Cooperation

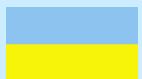
NATO: Active Layered Theater BMD – System Engineering and Integration

New Relations / Emphasis

Spain: U.S. -Spain Missile Defense Technical Group established

Poland: Missile Defense Consultations and Workshops; expressed interest in hosting missile site

Czech Republic: Missile Defense Consultations; expressed interest in hosting midcourse radar



Ukraine: Exploring possible cooperative projects

India: Missile Defense Discussions and Workshops ongoing

Russia: Theater Missile Defense Exercise Program

France: Exploring interest