Session B6
Life Cycle Costs: A PM's Challenge

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"Sustained Materiel Readiness"

Mr. Walt Cooper
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"O&S Cost Trends and Issues"

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"F/A-18 & EA-18G Life Cycle Cost Strategy"

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"F-35 Lightning II"

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OSD, Deputy Director, Program Development and Implementation
"Item Unique Identification (IUID)"

Sustained Materiel Readiness

THE WARFIGHTER NEEDS……
AVAILABLE, TECHNICALLY SUPERIOR WEAPON SYSTEMS THAT ENABLE –
SUCCESSFUL COMPLETION OF THE MISSION
RETURN HOME SAFELY

PEO SYSCOM

Life Cycle Cost Panel

Ft. Belvoir, VA

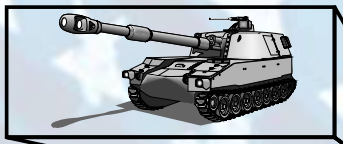
Wednesday, November 8, 2006

Mr. David Pauling

ADUSD (MR&MP)

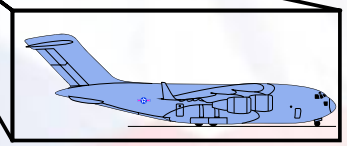
Systems Supported

~ 30,000
Combat Vehicles



~ 900 Strategic Missiles

~ 280 Ships



~ 14,000 Aircraft/Helicopters

+ ~ 300,000 Tactical Vehicles
+ Communications/Electronics Equipment
+ Support Equipment
+ Other Systems

National Defense PP&E is valued at ~ $700 Billion

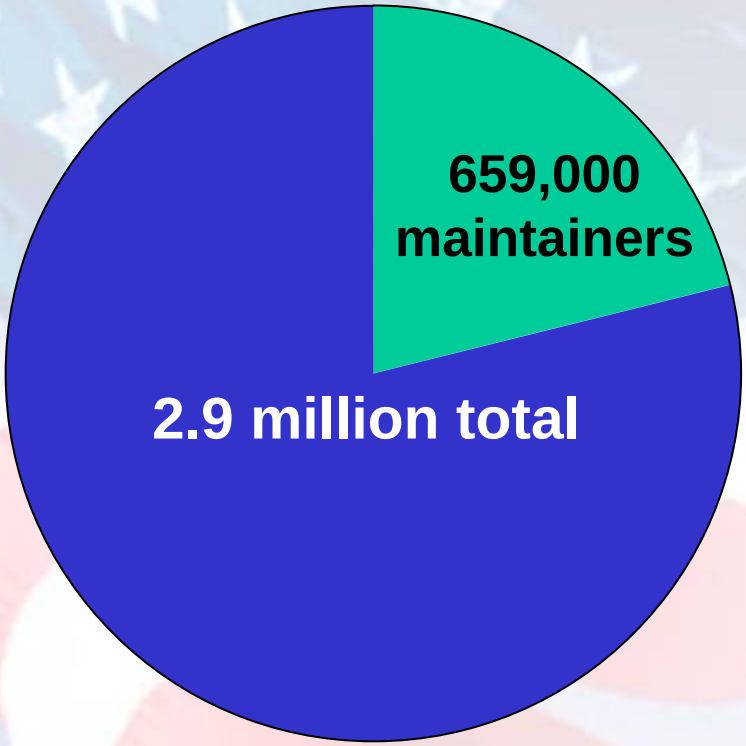
Maintained by:
- *659,000 DoD personnel*
- *Private sector companies*

Maintenance cost:
~ $81 billion per year

Source: LMI analysis of DoD data

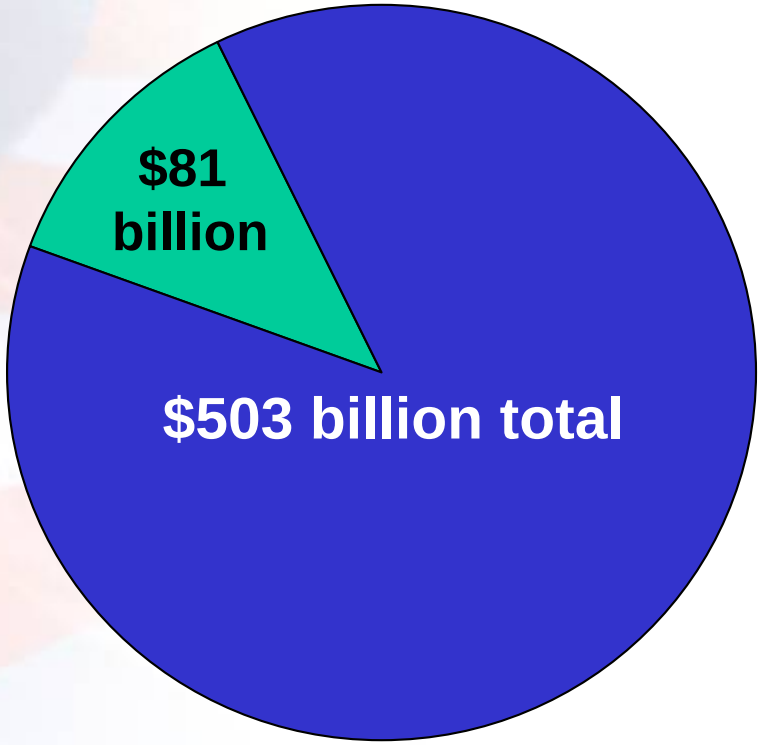
Scope of DoD Maintenance

DoD Personnel



23% maintainers

DoD Budget

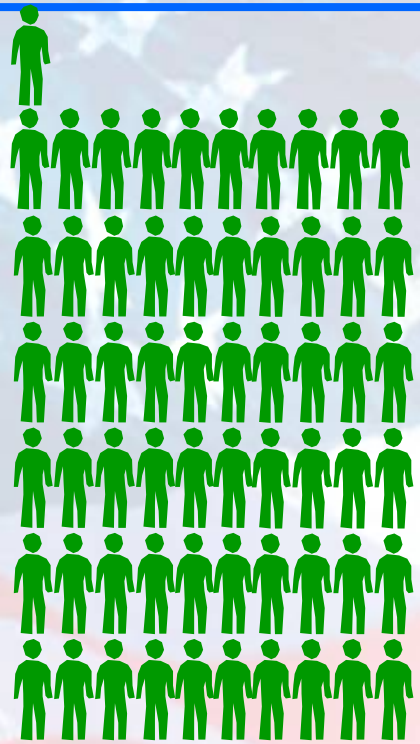


16% spent on maintenance

Sources: FY2007–FY2011 President's Budget and
LMI analysis of Defense Manpower Data Center FY2005 data

Personnel Strength

of Field- and Depot-Level Maintenance



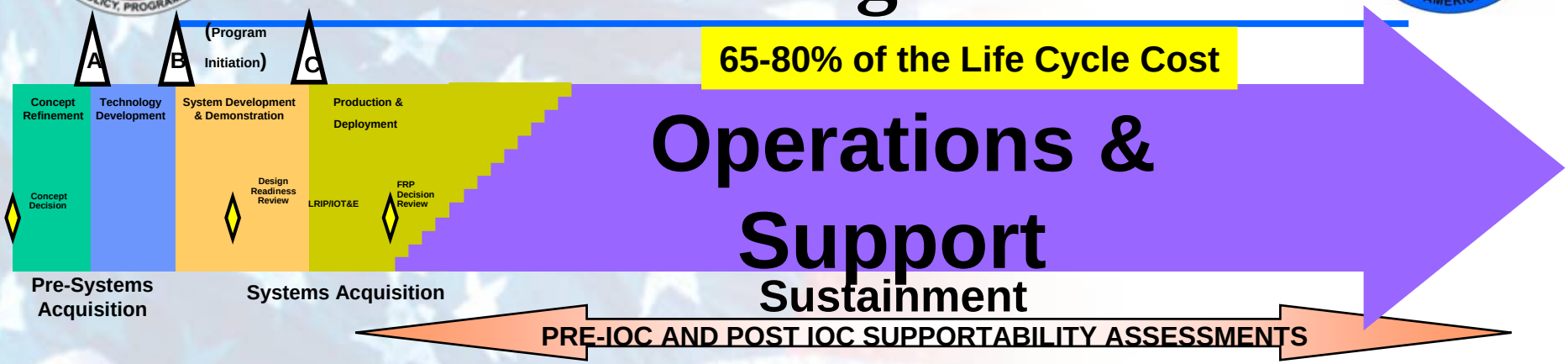
~614,000 field-level maintainers

~73,000 depot-level personnel

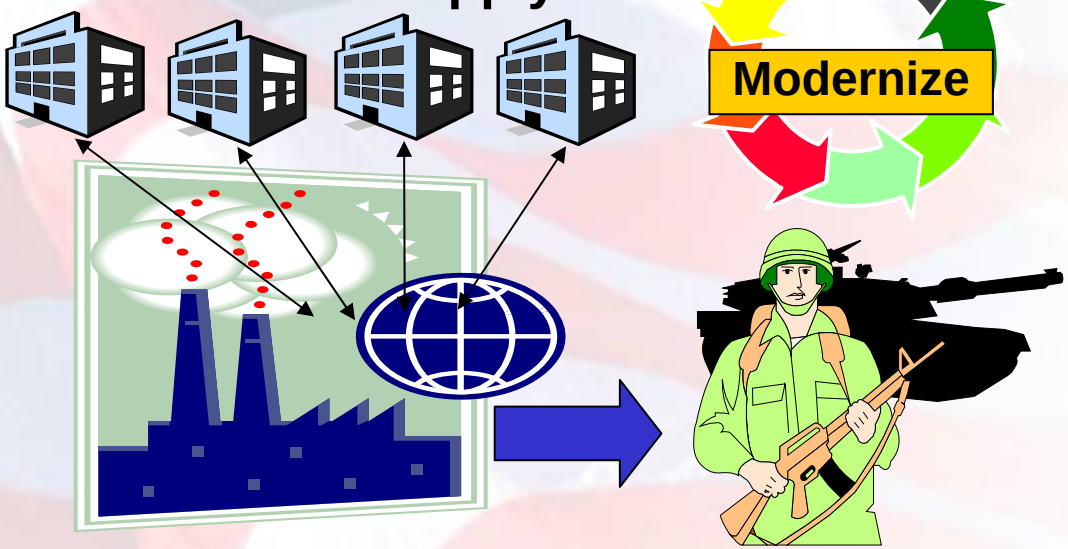
(including ~28,000 non-maintainers)

Source: LMI analysis of Defense Manpower Data Center and Joint Depot Maintenance Activity Group data for FY2005

Materiel Readiness Life Cycle Framework from the Warfighter View



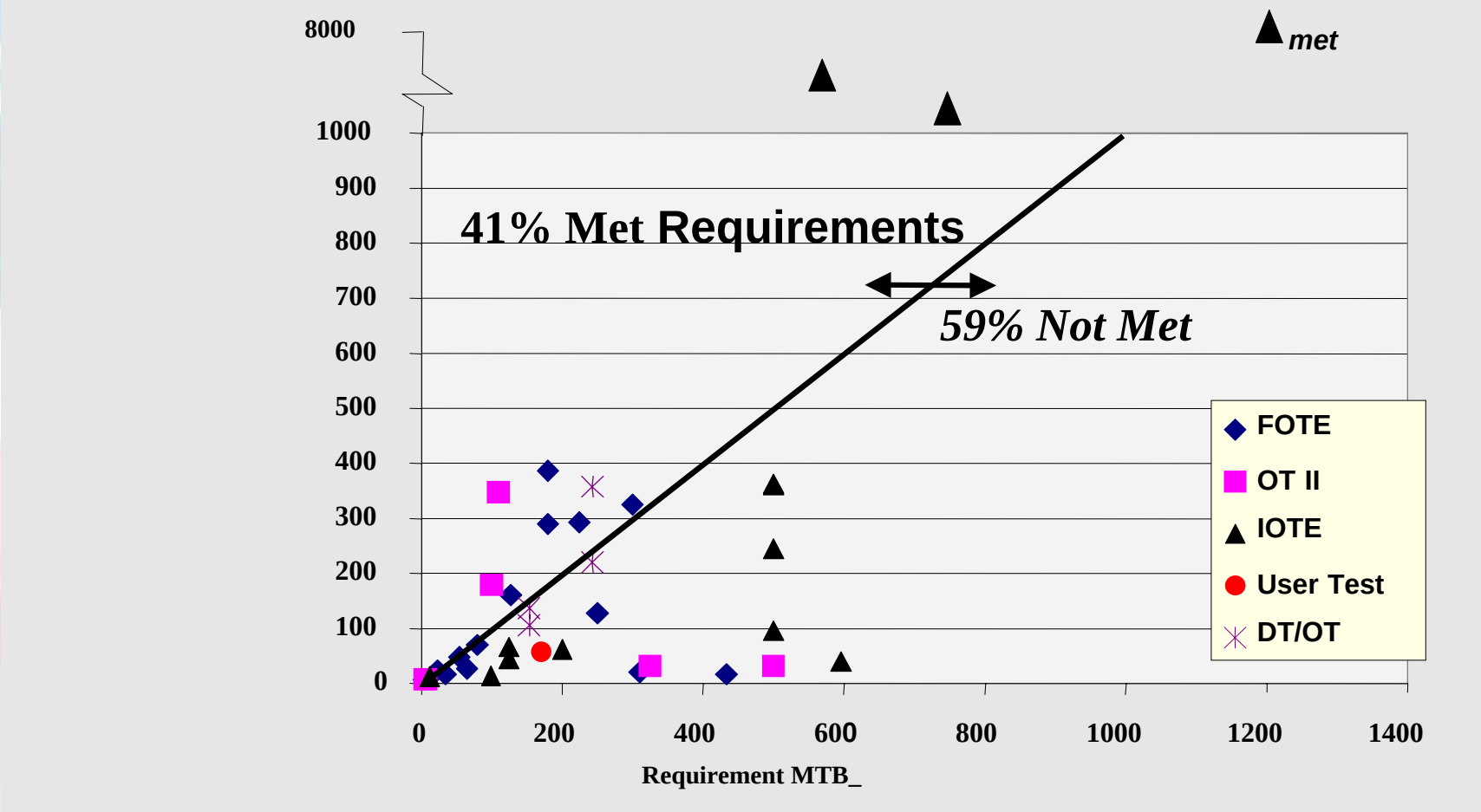
Sources of Supply



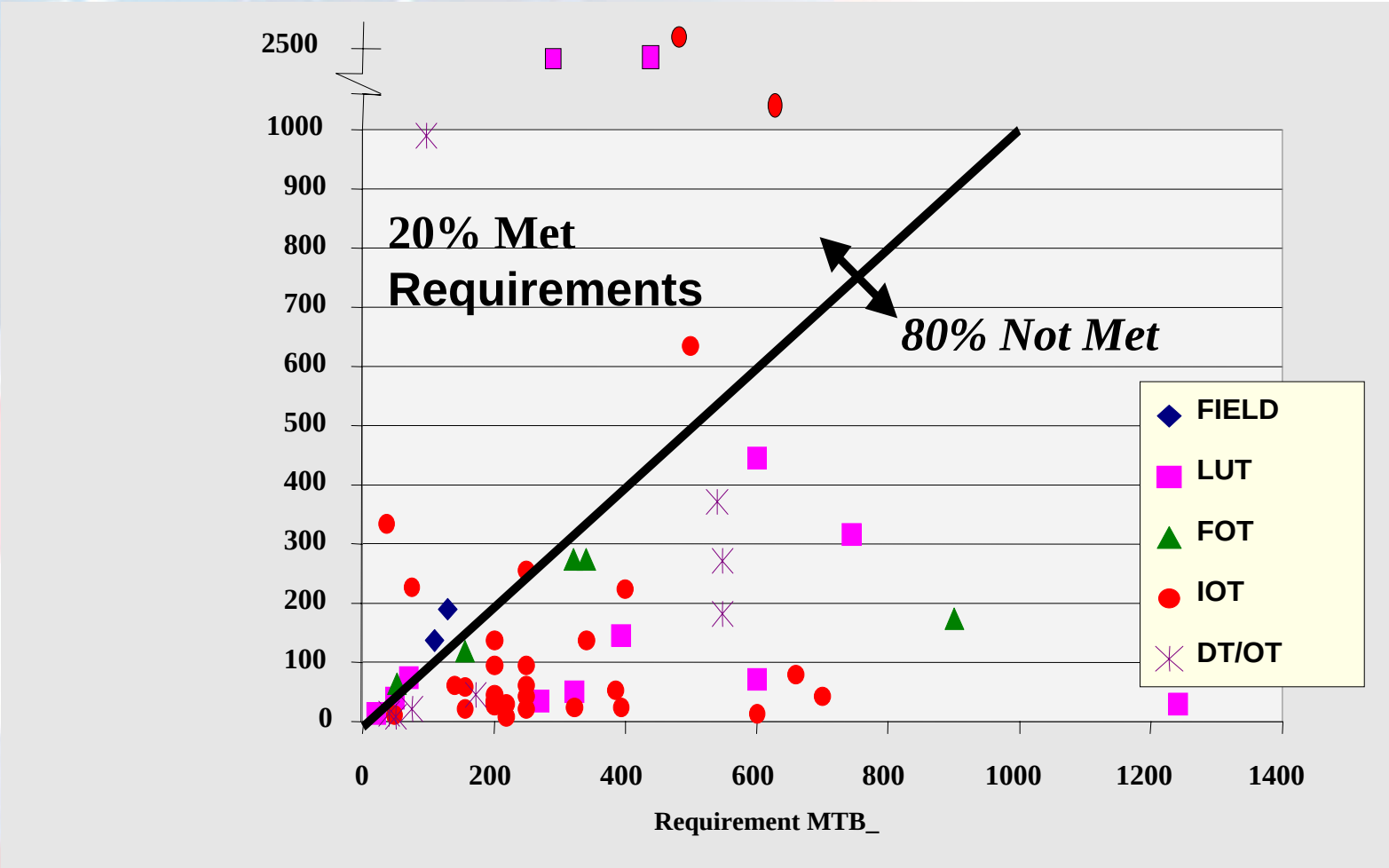
Sustaining the System

- *Ready Available Safe Assets*
  - *24/7 Availability*
- Reliability & Maintainability
- Affordable Weapon Systems
- Obsolescence/Tech Refresh
- Reduced Footprint
- Logistics Chain Reliability
- Logistics Chain Effectiveness
- Logistics Chain Cycle Time
- Retrograde Management
- Production Flexibility

Reliability Trends 1985-1990



Reliability Trends 1996-2000



Performance Driven Outcomes (PDO)

Moving to an Enterprise-wide, Life Cycle Alignment of Resources and Outputs to Achieve Top-Down Performance Driven Outcomes

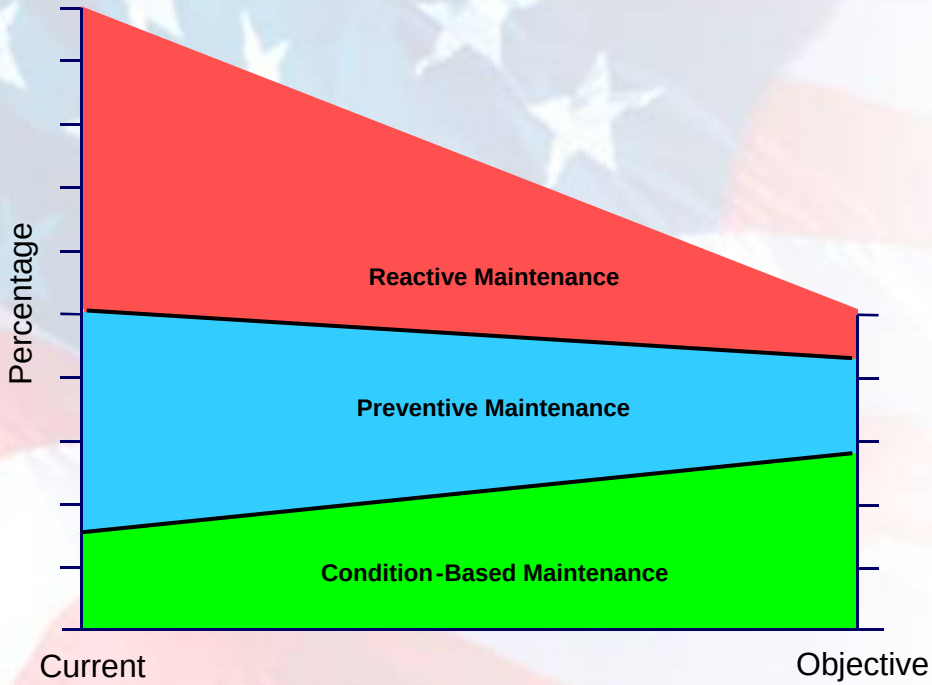
"…not drive lots of activity, but drive outcomes."

Mr. Kenneth Krieg, USD(AT&L)

October 4, 2006

When is DoD's Maintenance Accomplished?

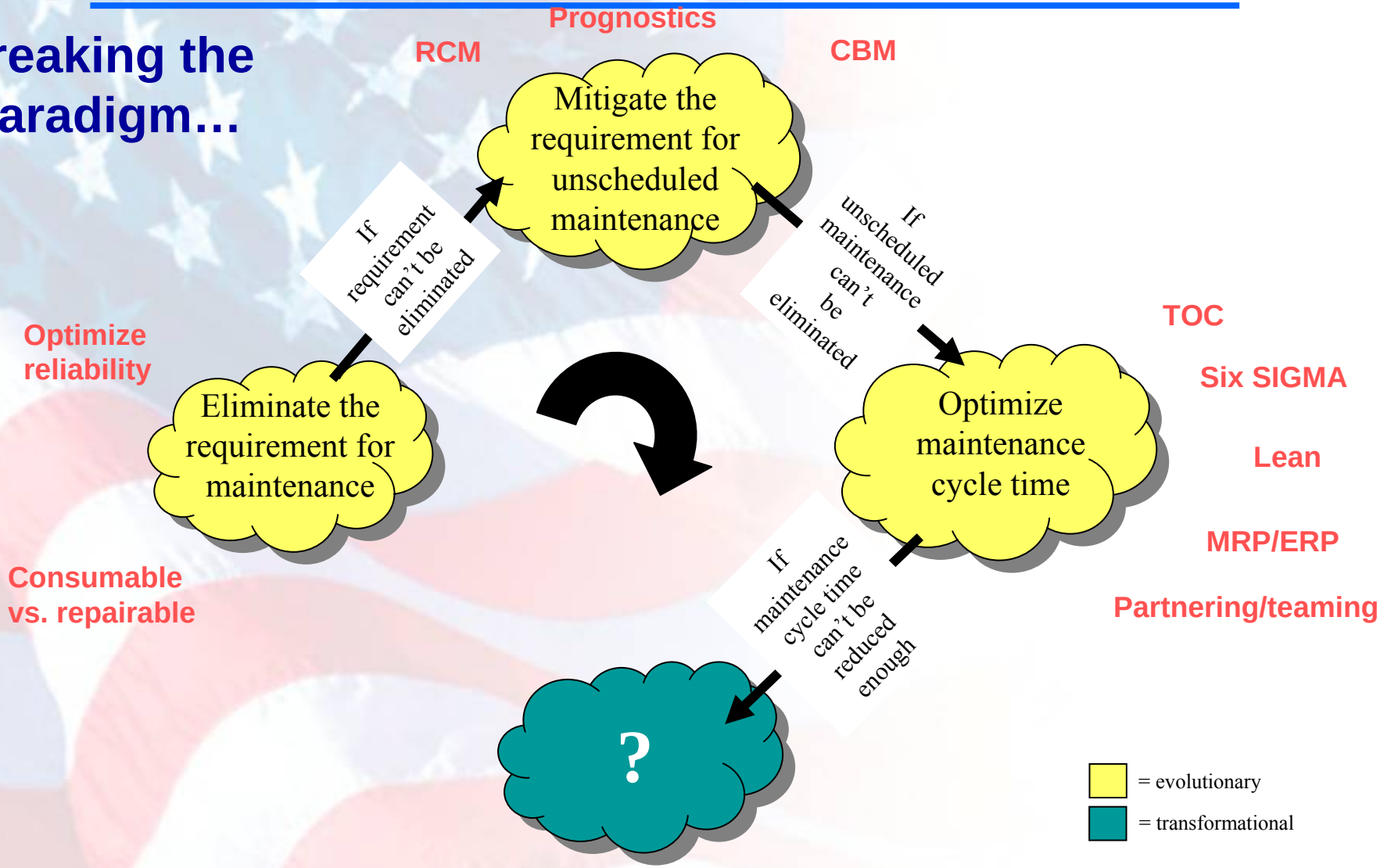
- A well-designed PM Program can reduce total maintenance required



- When should PM be scheduled?

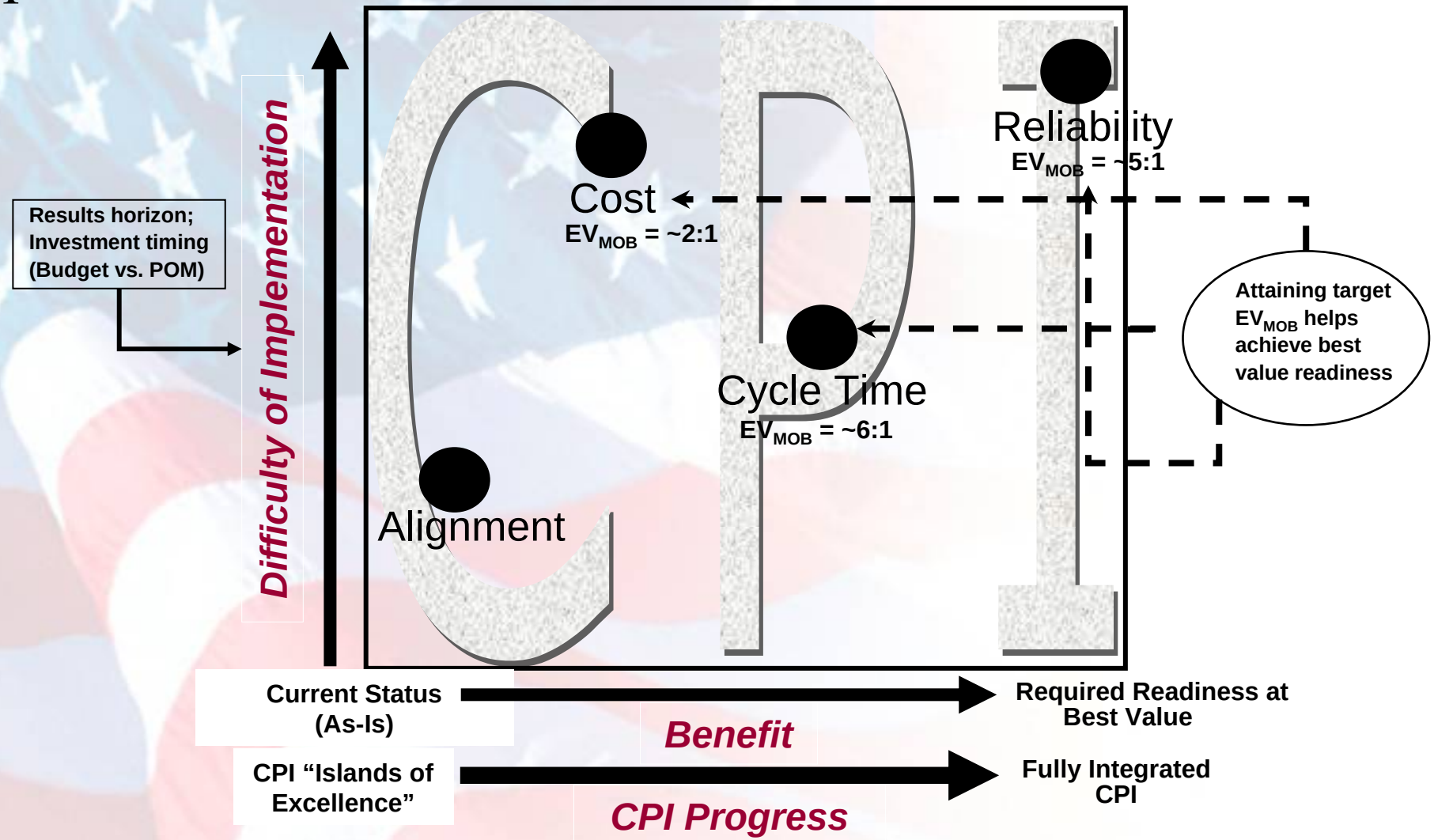
21st Century Sustainment Challenge

Breaking the Paradigm…



Applying Continuous Process Improvement (CPI)

in each area in an integrated manner achieves best performance driven outcomes



EV$_{MOB}$ = Expected value for magnitude of benefit

Approved Sustainment KPP and Mandatory KSAs

Single KPP:

- Materiel Availability

Mandatory KSAs:

- Materiel Reliability
- Ownership Cost

To achieve mission success, Combatant Commander needs:

- Correct number of operational end items capable of performing the mission when needed
- Confidence that systems will perform the mission and return home safely without failure

Ownership Cost provides balance; solutions cannot result in availability and reliability "at any cost."

Why a Sustainment KPP & KSAs?

"GAO recommends DOD (1) revise its guidance for setting requirements to <u>include</u> total <u>ownership</u> cost goals and <u>readiness rates</u> for any major weapons system as performance parameters equal to any others; (2) revise acquisition regulations to <u>require</u> a firm estimate of component and <u>subsystem</u> reliability by the systems integration phase and an estimate of <u>system reliability</u> at the <u>production decision</u>; and (3) structure contracts to ensure <u>proper trade-offs</u> between <u>reliability</u> and <u>performance</u>."

(GAO-03-057; February 2003; Best Practices: Setting Requirements Differently Could Reduce Weapon Systems' Total Ownership Costs)

Proposed DAES-S Metrics

Part A – Narrative

- Overall Program Health
- Any Operational Impacts
- Implementing Program Strategy
- Addresses TLCSM and PBL

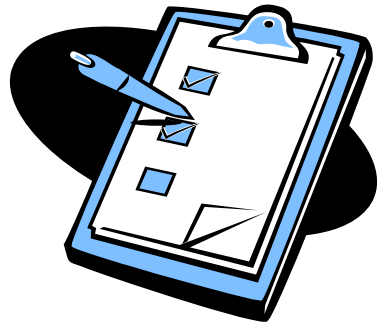
7 Indicators
Outcome based
Report issues by exception
Relevant to warfighter

Part B – Outcome Based Assessment Focused on Goals and Variance from Goals

	Goal	Forecast/ Actual	Rating
Materiel Availability	___	___	___
Materiel Reliability	___	___	___
Mean Down Time	___	___	___
Program Funding Status	___	___	___
Cost per Unit of Usage	___	___	___
Reduction in TOC	___	___	___
Safety	___	___	___

- Goals determined by Services for legacy systems
- Established as KPPs for new systems

Next Steps



- <u>Goal:</u> *Move from Transaction-Based Activities to Enterprise-Wide, Life Cycle Performance Driven Outcomes*
  - Build on PBL and CPI Lessons Learned
  - Standardize Life Cycle Metrics
  - Facilitate Cross-Functional Integration
  - Implement in Both Public and Private Sector

Performance-Based Strategies Work!
It's Time to Expand Their Application