



# Sustained Materiel Readiness

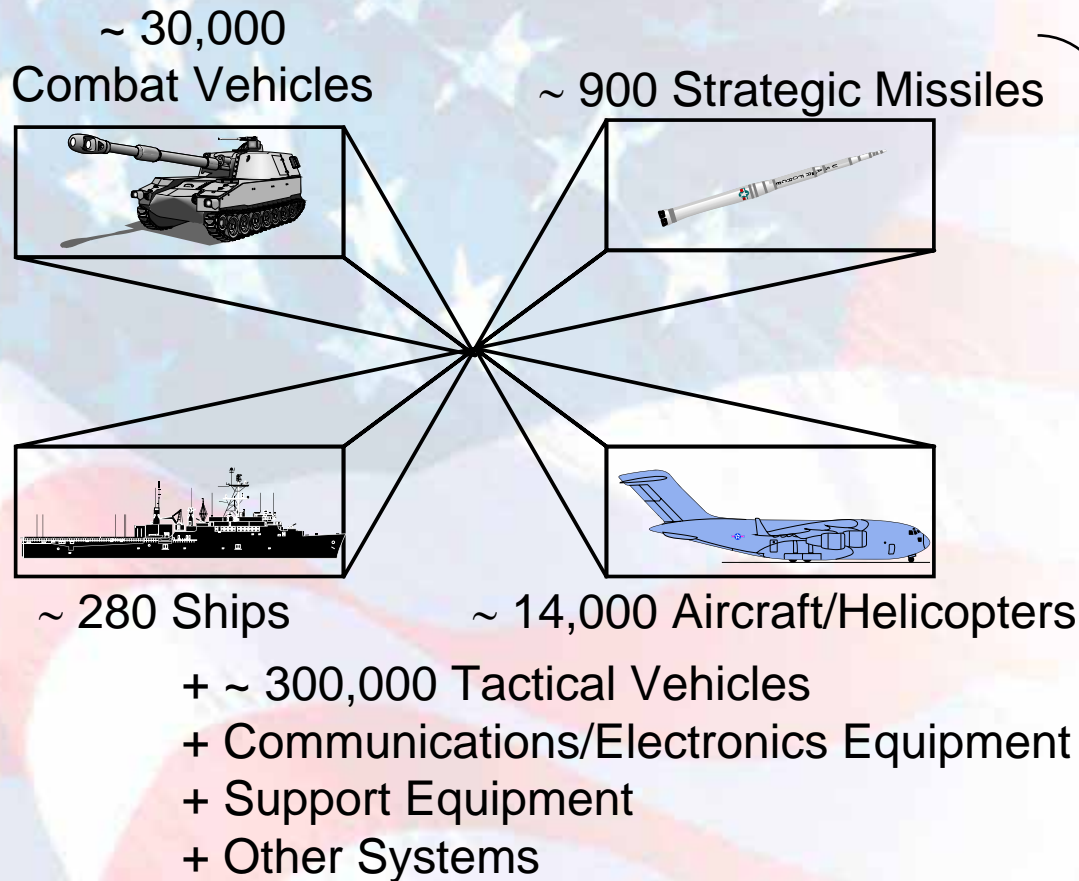
**THE WARFIGHTER NEEDS.....  
AVAILABLE, TECHNICALLY SUPERIOR WEAPON SYSTEMS THAT  
ENABLE –**

***SUCCESSFUL COMPLETION OF THE MISSION  
RETURN HOME SAFELY***

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# Systems Supported



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

*Maintained by:*

- 678,000 DoD personnel
- Private sector companies

*Maintenance cost:*

~ \$63 billion per year



# Sustained Materiel Readiness



## ISSUE:

- **Concentrate on achieving/sustaining SPG/CPG readiness**
  - **Balance Safety, Reliability, Maintenance and supply distribution activities to achieve materiel readiness at best cost.**
  - **Optimize “TIME-ON-WING” and “TURN AROUND TIME”**
- **Promote End-to-End (E2E) Materiel Readiness Value Chain Perspective across DoD**
- **Sustain Optimize Materiel Condition Reliability**
- **Sustain Optimize support cost, cycle time**



# Sustained Materiel Readiness



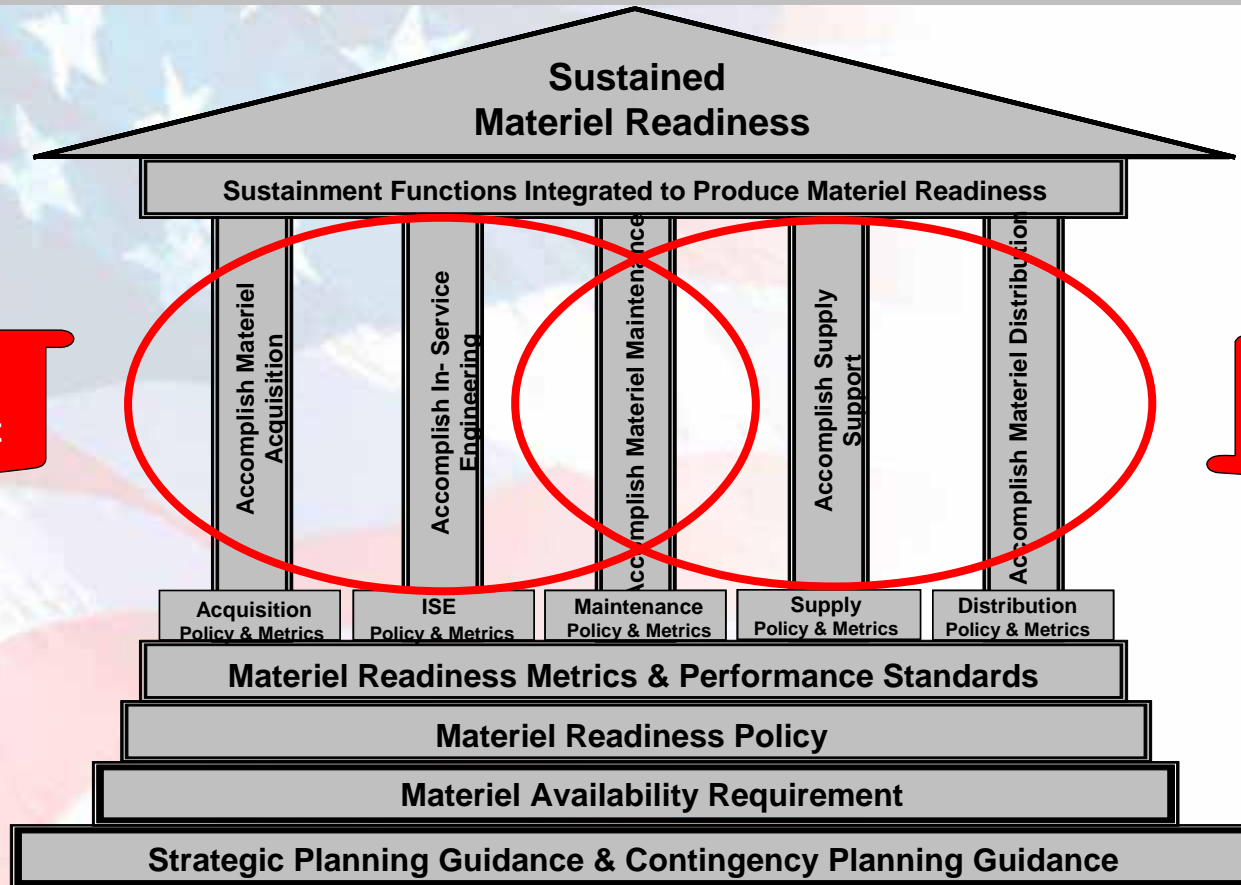
## WAY AHEAD:

- **Translate SPG/CPG capabilities to Weapon System/Materiel Requirements**
- **Develop cause and effect predictive models**
- **Foster and promote continuous process improvements**
  - **Capability (Co)**
    - **Technical superiority technology insertion**
  - **Dependability (Do)**
    - **Safety/Reliability/Condition Based Maintenance +**
  - **Availability (Ao)**
    - **Cycle process discipline**
      - **Lean, Six Sigma, Theory of Constraint, Etc.**
  - **Institute Integrated Budgets (engineering, logistics, industrial)**



# Focus

There are leverage points within weapon system value streams that drive overall materiel readiness

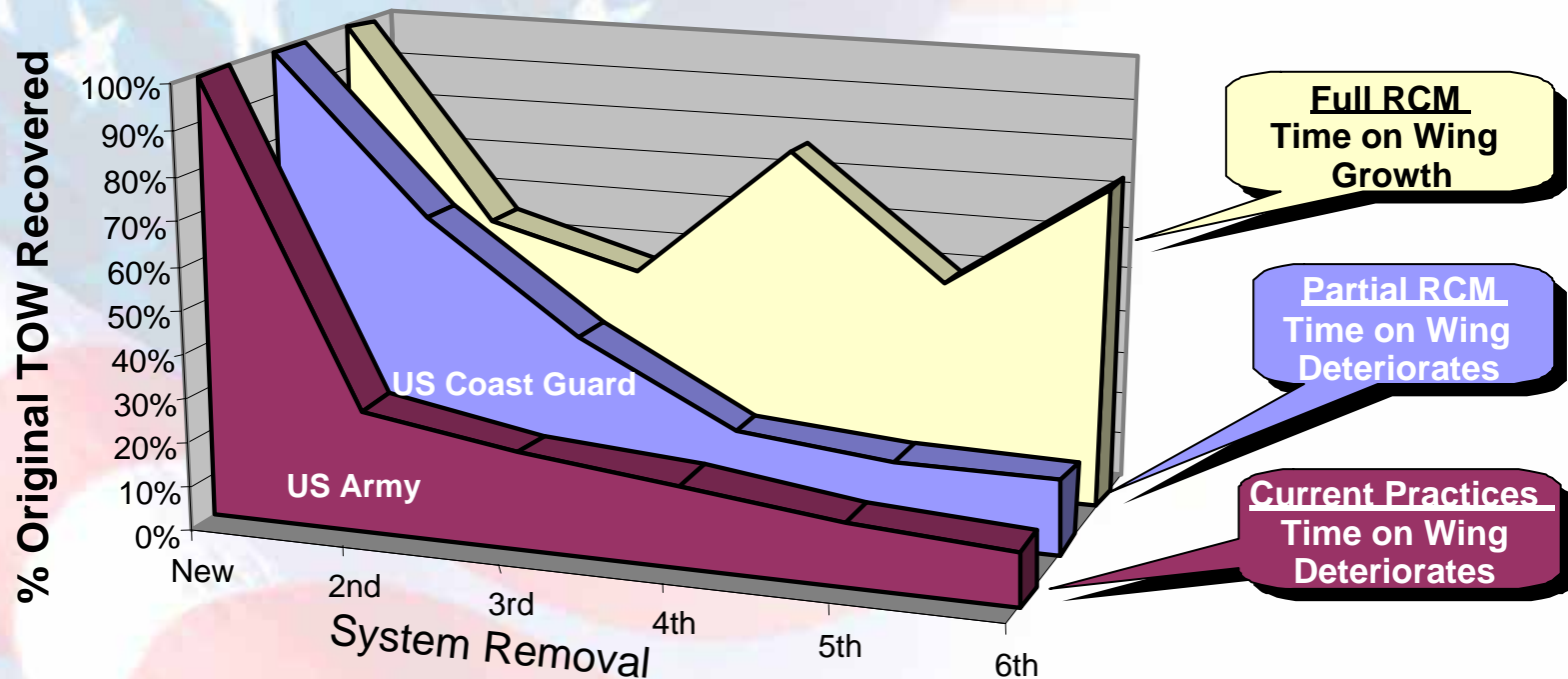


Leverage point: the points at which attention and/or application of resources would result in tangible improvements/benefits to the entire end-to-end materiel readiness value stream.



# System Life Recovered After Repair

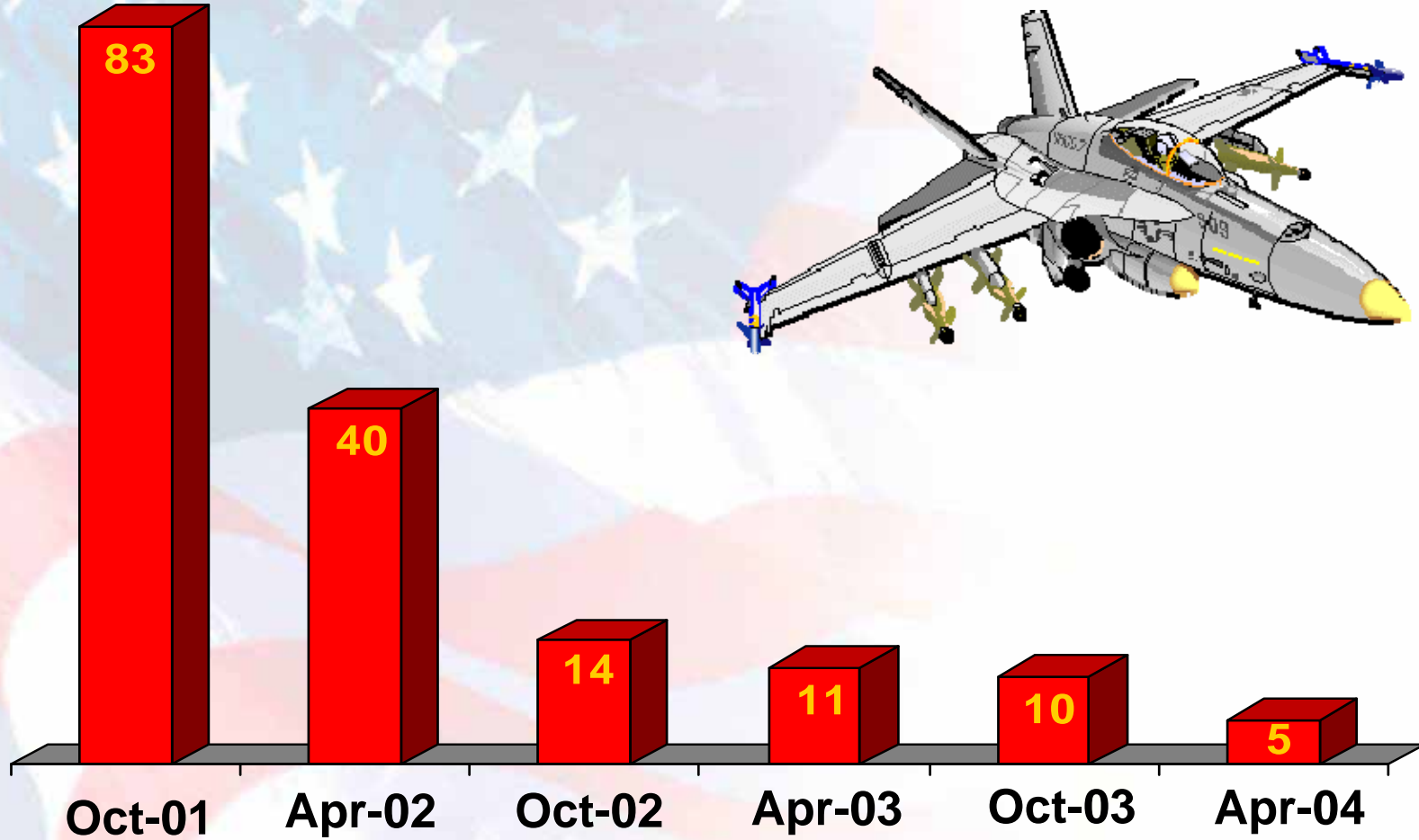
## Reliability Centered Maintenance vs. Current On-Condition Practices



RCM =  
Reliability  
Centered  
Maintenance

3X+ improvement in Time on Wing (TOW) with Comprehensive Reliability Centered Maintenance vs. Current On-Condition Practices

# Focus on Continuous Improvement (Maintenance Cycle Time)



AIMD Lemoore Power Plants Shop Engine Repair Cycle Time

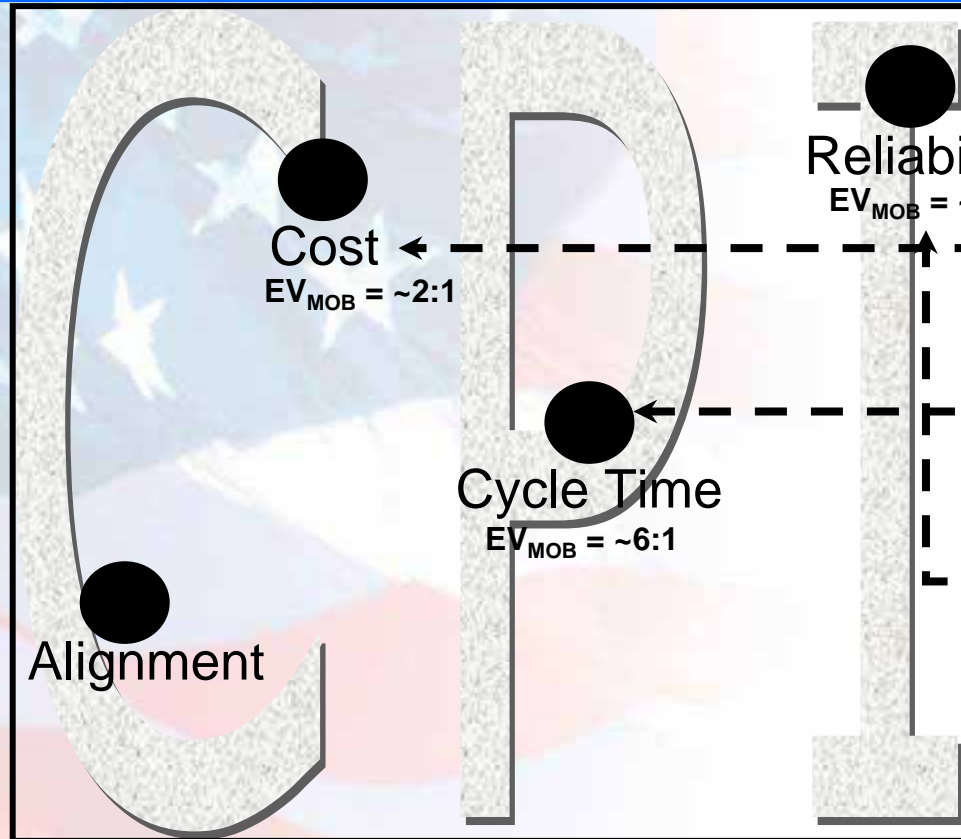


# Applying CPI in each area in an integrated manner achieves maximum benefits



**Difficulty of Implementation**

Results horizon;  
Investment timing  
(Budget vs. POM)



Cost  
 $EV_{MOB} = \sim 2:1$

Cycle Time  
 $EV_{MOB} = \sim 6:1$

Reliability  
 $EV_{MOB} = \sim 5:1$

Attaining target  
 $EV_{MOB}$  helps  
achieve best  
value readiness

Current Status  
(As-Is)

Required Readiness at  
Best Value

**Benefit**

CPI "Islands of  
Excellence"

Fully Integrated  
CPI

**CPI Progress**

$EV_{MOB}$  = Expected value for magnitude of benefit





# SUMMARY



## OSD and DoD Components

- Identify Strategic Materiel Readiness Requirements
- Employ useful Materiel Readiness Standards/Measurement Tools/Processes
- Resource to achieve/sustain Materiel Readiness most efficiently/effectively

## Five Pillars for Sustaining Materiel Readiness

- Policy (E2E)
- Measuring materiel readiness
- Optimizing materiel reliability
- Optimizing materiel turnaround time/cycle time
- Balancing resources

UID/SIM  
enables  
this!

