

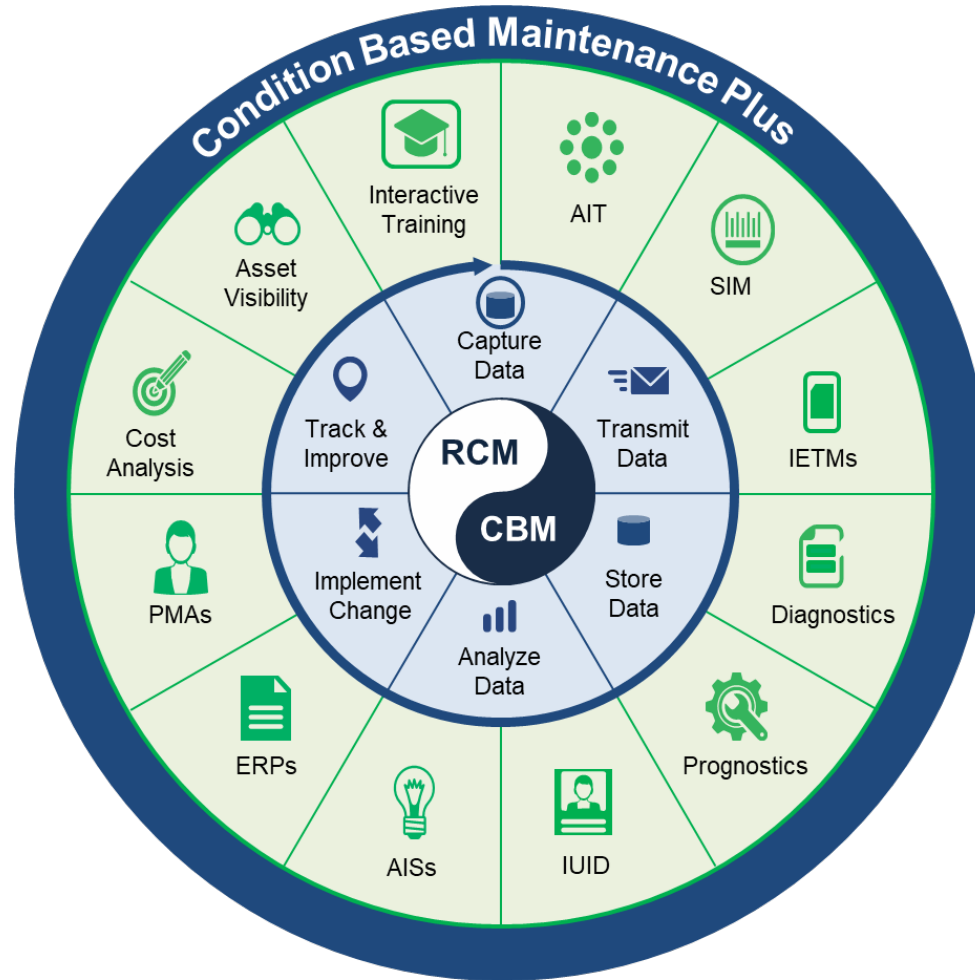


2019 CBM+ Maintainer's Summit



“From Implementation to Execution”

0800-0805	Administrative Remarks	Mr. Greg Kilchenstein, ODASD(MR)
0805-0810	Opening Remarks	Mr. Steve Morani, DASD(MR)
0810-0820	ODASD Overview	Mr. Greg Kilchenstein, ODASD(MR)
0820-0840	USA CBM+ Overview	Ms. Julia Lyons, HQDA G4
0840-0900	USN CBM+ Overview	Mr. Fogarty, NAVSEA
0900-0920	USAF CBM+ Overview	Mr. John Hedke, USAF LCMC EZ
0920-0940	USMC CBM+ Overview	LtCol Spangenberg, USMC HQ I&L
0940-1010	Caterpillar Inc	Mr. Lippert, Global Fleet Monitoring Center
1010-1040	CBM+ Propulsion Sustainment	Ms. Jonason, Chief Engineer, USAF Propulsion
1040-1055	CBM+ / IVHM Standards	Mr. Hernandez, Global Strategic Solutions
1055-1100	Wrap-up	



CBM+: From Implementation to Execution

CBM+ Maintainer's Summit

12 December 2019



Summit Outcomes



- Relay DoD Senior Leadership commitment to CBM+
- Provide Maintainers a venue to collaborate on CBM+
- Share CBM+ execution successes, strategies and plans
- Provide a venue for interchange between those implementing CBM+ enablers and those executing CBM+ based maintenance
- Illustrate vignettes of successful CBM+ implementation and execution and the resulting outcomes from DoD and Industry
- Strengthen the CBM+ community of interest through advocacy

Understanding & Advocacy Essential for CBM+ Advancement!



What is CBM+

• Predictive Maintenance

- Forecast remaining equipment life & future condition
- Need projected as probable within mission time
- Leverages AI and Machine Learning
- On and off system real time trend analysis

Through the application and integration of appropriate processes, technologies, and knowledge based capabilities.

• Condition-Based Maintenance

- Based on current condition
- Scheduled based on evidence of need
- Continuous sensor data collection
- Near-real time trend analysis

CBM+ moves us along the Maintenance Approaches Continuum

• Preventive Maintenance

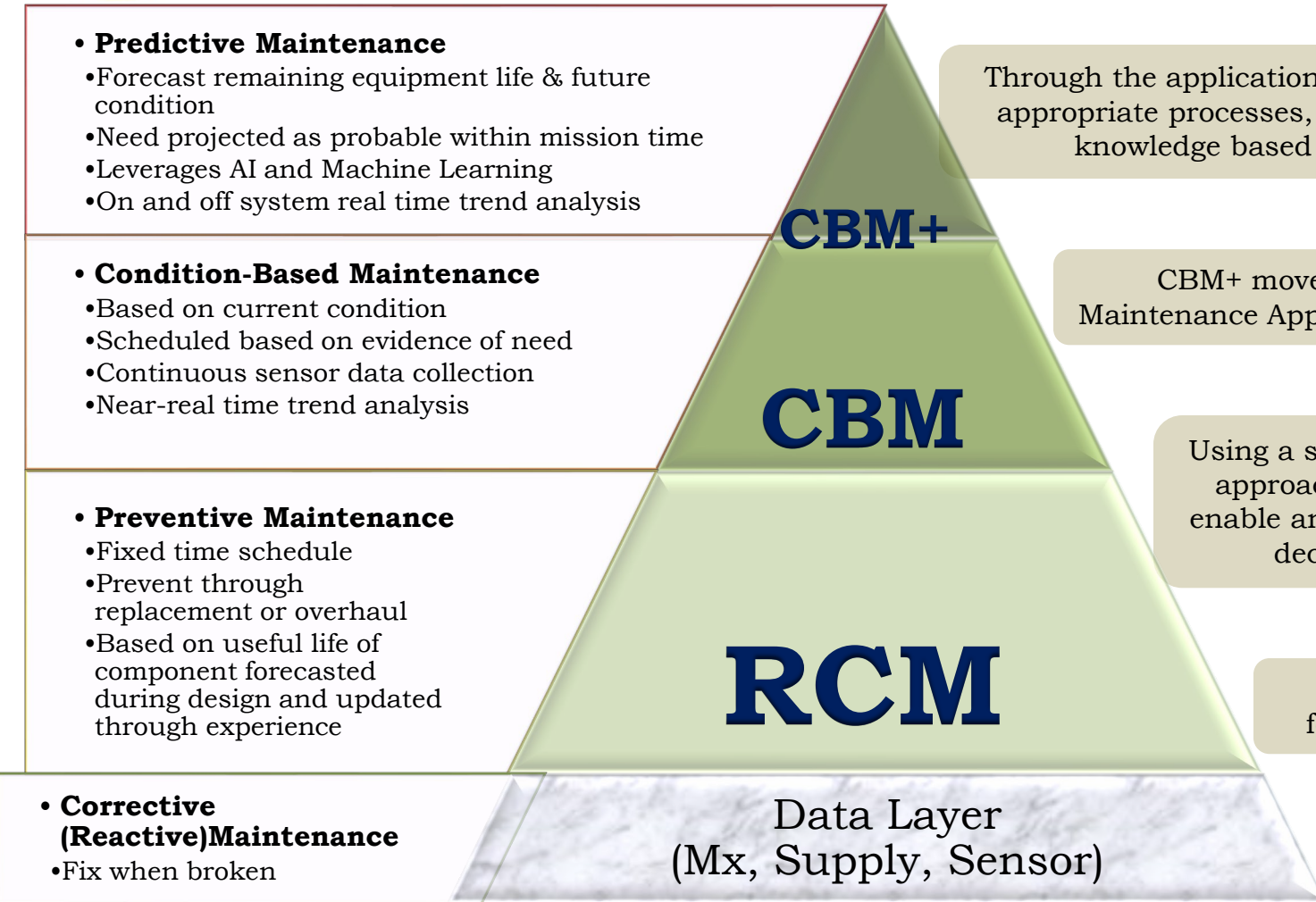
- Fixed time schedule
- Prevent through replacement or overhaul
- Based on useful life of component forecasted during design and updated through experience

Using a systems engineering approach to collect data, enable analysis and support decision making

• Corrective (Reactive) Maintenance

- Fix when broken

Built on the foundation of RCM



Data Layer
(Mx, Supply, Sensor)

Journey to CBM+ Execution



Strengthened CBM+ Policy



- Leverages results of ASD(S) directed CBM+ Study of Top 100 W/S
 - Remove ambiguity – What does CBM+ provide, Implementation Responsibilities, How to adopt and integrate CBM+ processes and technologies
 - Strengthen common best practices
- Revised Policy Focus Areas
 - Deeper leadership understanding of CBM+ mechanisms and outcomes
 - Clear, aligned Service-level policy, guidance and plans
 - Adequate resourcing for weapon system and enterprise capabilities
 - Organization constructs necessary to align required lifecycle functions
 - Strong and continuous Reliability Center Maintenance (RCM) efforts
 - Measures of CBM+ implementation performance and outcome metrics
 - SIM and IUID as foundational elements
- Formal Coordination In-Process – Issuance projected 1Q-CY2020

Accelerate Realization of CBM+ Benefits



FY20 CBM+ WG Proposed Actions



- Publish updated CBM+ Policy
 - DoDI 4151.22 fully revised and formally coordinated for reissuance
 - Review and update the DoD CBM+ Guidebook
- Identify and leverage opportunities to accelerate Predictive Maintenance (e.g. Joint Artificial Intelligence Center)
- Update training and education pathways
 - Focus and expand DAU learning modules
 - Utilize organic training resources
 - Partner with Academia
- Grow CBM+ Community of Interest
 - Expand CBM+ WG – more acquisition community participation
 - Monthly virtual forums to collaborate and share information
 - Presentations from DoD, Industry and Academia



FY20 CBM+ WG Proposed Actions



- Develop an “On-line” CBM+ Body of Knowledge
- Improve lifecycle integration of CBM+
 - Improve integration into JCIDS guidance
 - Develop RFP/Contracting language guidance
 - Influence DoDI 5000.02 rewrite
- Bolster Senior Leader awareness, understanding, and advocacy
 - 2020 Senior Leader Summit
 - Mini-Summit during 2019 DoD Mx Symposium
 - DAU training and education
 - CBM+ Strategic Communications Plan



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Questions ?