



***Condition  
Based  
Maintenance  
Plus  
(CBM<sup>+</sup>)***

***Major Dave Clark, USMC***

October 2008

## *What is CBM+? How is it different from CBM??*

**CBM** – conducted “because the need for corrective or consequence-avoiding action is based on an assessment of the condition of the item.”

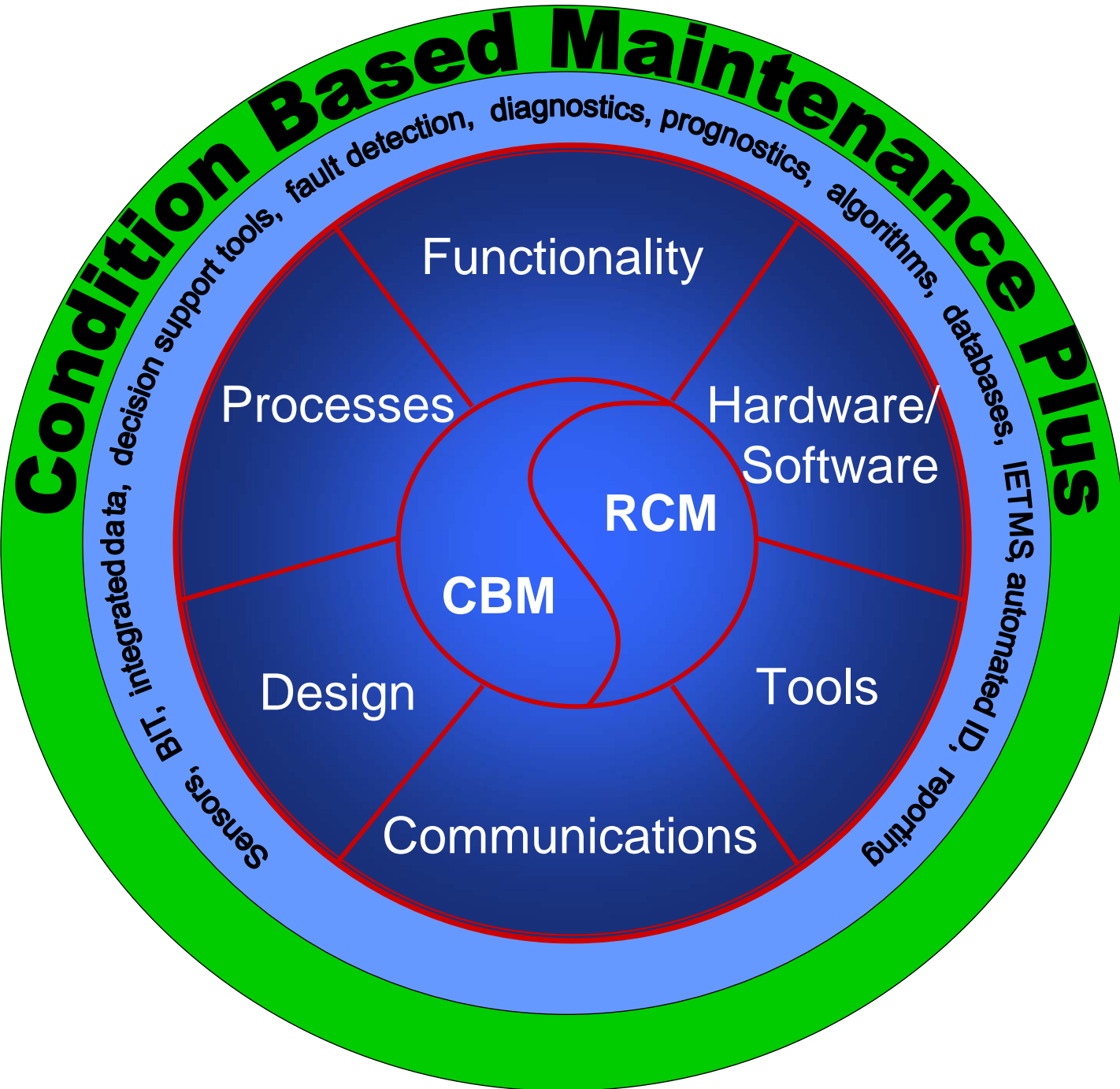
- “Also known as predictive maintenance.”
- “On-condition tasks”

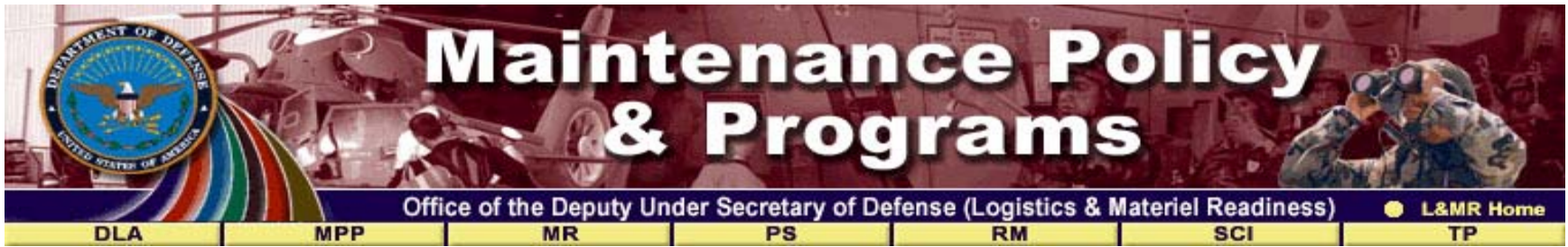
- John Moubrey, RCMII 2<sup>nd</sup> Ed, pg 145

# *What is CBM+? How is it different from CBM??*

## **CBM+**

- application and integration of appropriate processes, technologies, and knowledge based capabilities to improve the reliability and maintenance effectiveness...
- maintenance performed on evidence of need provided by reliability centered maintenance (RCM) analysis...
- systems engineering approach to collect data, enable analysis, and support the decision-making processes...





## **Condition Based Maintenance Plus Action Group** **(CBM+ AG)**

Chair: Mr. Greg Kilchenstein, L&MR, MPP

Representatives from each Service and DLA

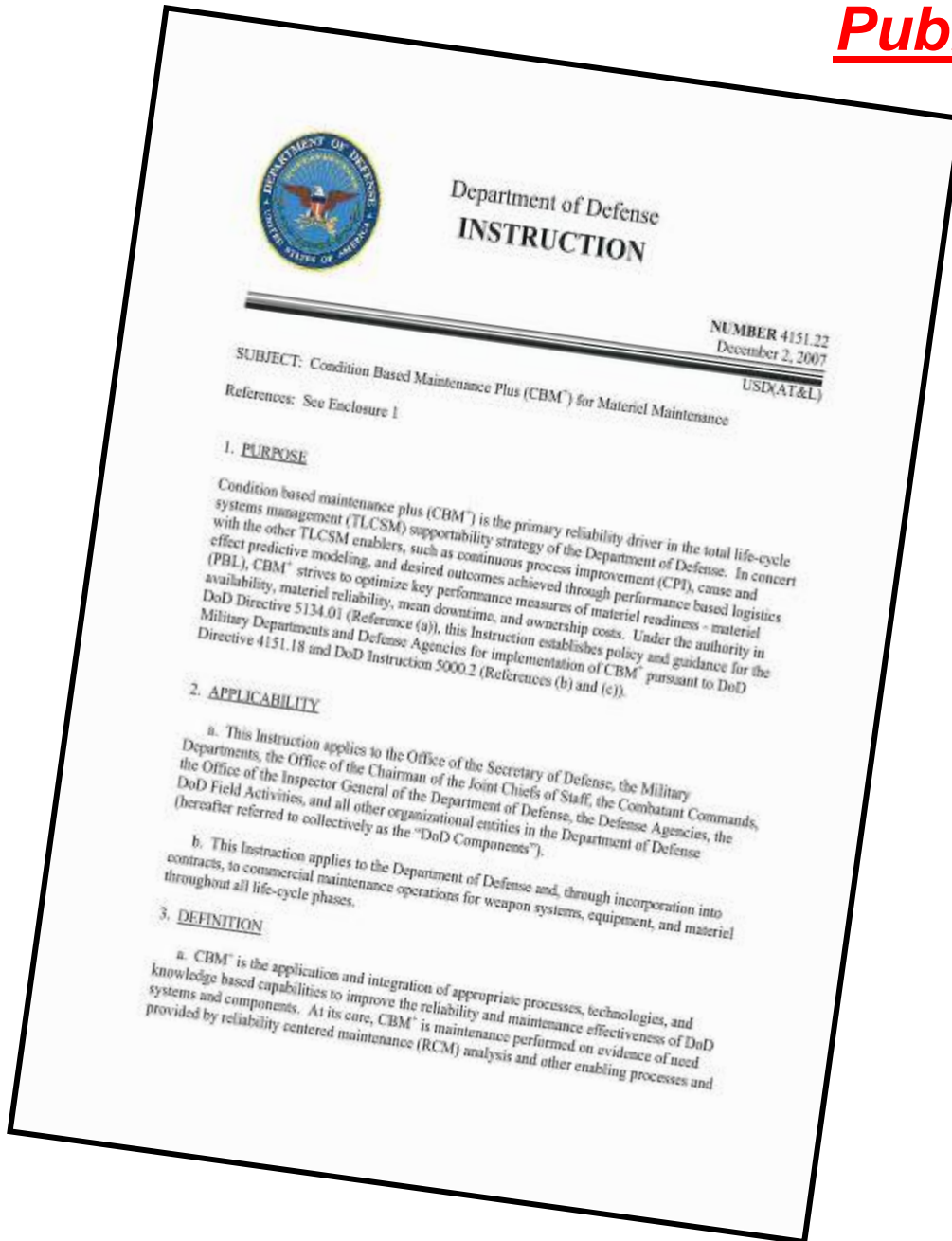


**Mission: Promote, advocate, and monitor the implementation of CBM+ throughout DoD's maintenance and logistics processes.**

- Provide strategic review and advice
- Coordinate approaches and seek best practices
- Monitor and track CBM+ cost/impact on readiness
- Provide guidance for improving maintenance & training
- Ensure CBM+ is considered throughout the lifecycle

***Cross-Service Forum***

# Publication of DoDI 4151.22



- ✓ Applied to both new design and current fielded systems
- ✓ Achieved with enabling technologies, tools, and processes from public and private sources
- ✓ Incorporated in organic capabilities and commercial contracts
- ✓ Funded from RTD&E through implementation to achieve outcomes
- ✓ Measured with key performance indicators – materiel availability and reliability, mean down time, and ownership costs

## **Publication of Guidebook**



### **Condition Based Maintenance Plus DoD Guidebook**

May 2008

- **3 year coordinated effort**
  - **User Friendly**
  - **Not Service specific**
- 
- **What is CBM+?**
  - **Where did it come from?**
  - **How do I initiate CBM+ Strategy?**
  - **What are essential elements?**
  - **What are CBM+ relationships to:**
    - ✓ **RCM ?**
    - ✓ **PBL**
    - ✓ **TLCSM ?**
    - ✓ **FL ?**
    - ✓ **S&RL ?**



# Various AG Initiatives:

Policy WIPT

RCM WIPT

JOAP WIPT

AIA/AG Partnership

NDIA/AG Partnership



**RCM Course CLL 030**

\*\*Not available for credit yet

**CBM+ Course CLL 029**

\*\*On DAU Test Site



## Partnerships

### AIA

- **Survey conducted early 2008**
  - Both industry and DoD
- **Can we develop a BCA Template for CBM+ Implementation??**

### NDIA







- **Recommend an SE approach to implementation**
  - Tom Dabney from JSF Program
    - Brief to AG and JALC
    - Outcome: NDIA will partner with AG to develop a “Joint Alliance”
    - Build Technology Roadmaps with Services using the SE Approach

# CBM+ Action Group Web Site

## Links to:

- MPP Home
- CBM+ Home
- DoDI 4151.22
- Briefings, Presentations, & Current Reading
- Guidebook
- Related Links

### Service Specific CBM+ Information

-  Air Force
-  Army
-  Marine Corps
-  Navy
-  OSD
-  DLA

- DoDI 4151.22
- Guidebook
- AG Charter
- Briefings/Presentations
- WIPTS
- Service Initiatives

<http://www.acq.osd.mil/log/mpp/cbm+.html>

*Today's Panel Members:*

**Dr. Bob Lusardi**

**- PM LAV**

**Mr. Tom Carroll**

**- NetJets**