

# Tactical Wheeled Vehicle Conference

*Supporting the Warfighter*

04 February 2008

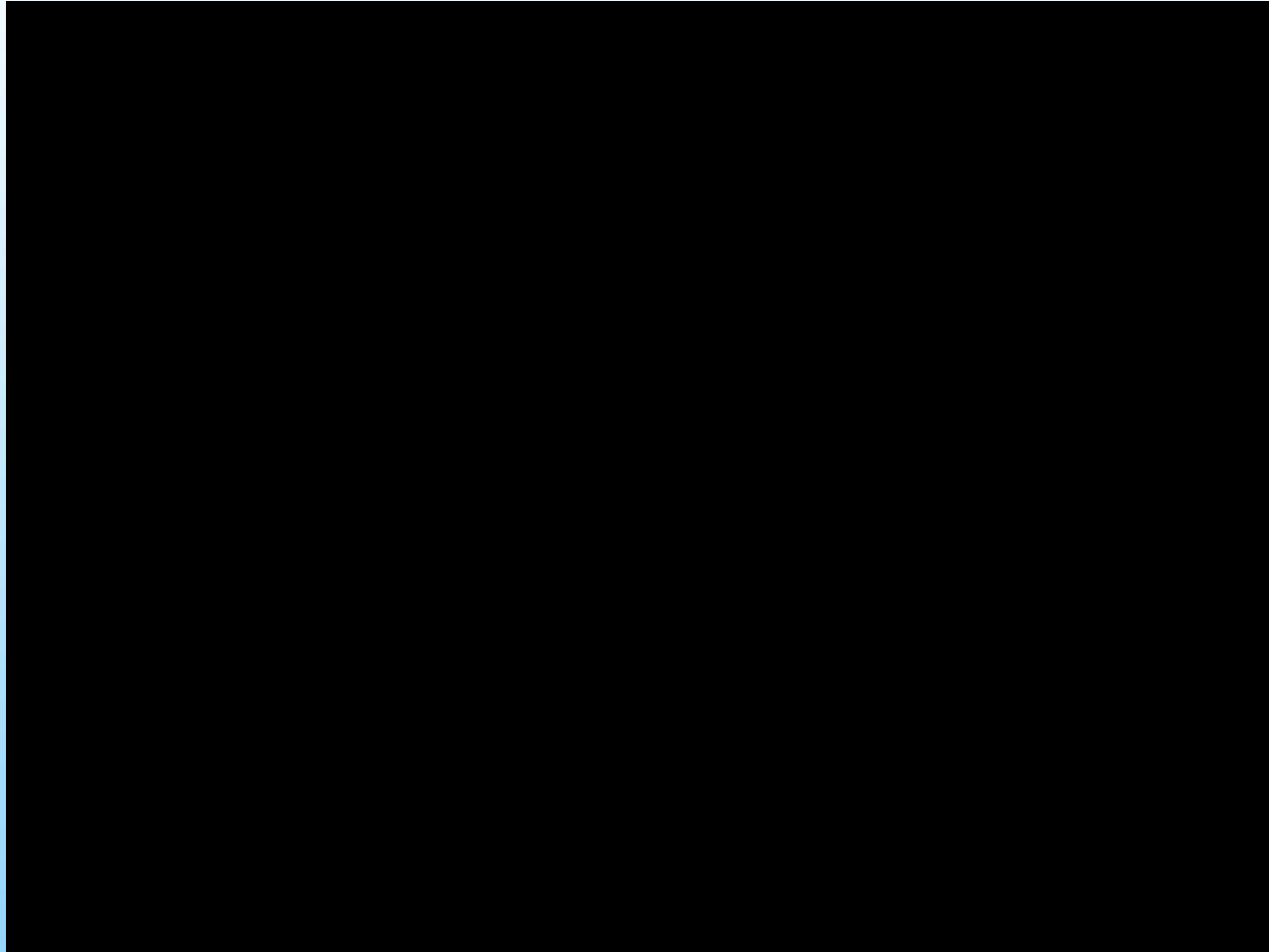
GEN Benjamin S. Griffin



*“Need to be faster, more agile, less bureaucratic... Need to fight this every day”*

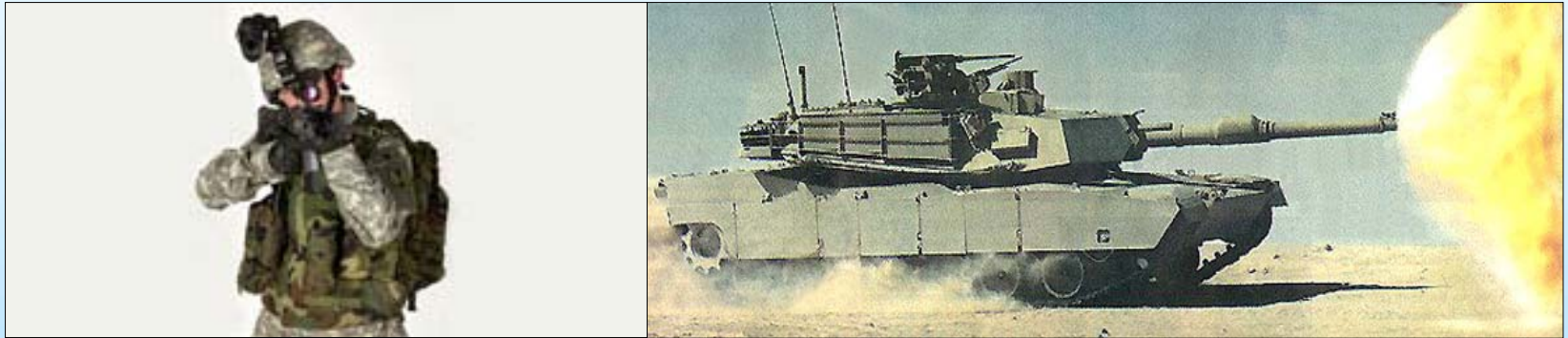


# AMC Strong Video



# Mission

Provide superior technology, acquisition support and logistics to ensure dominant land force capability for Soldiers, the United States and our Allies.



*“If a **Soldier** shoots it, drives it, flies it, wears it, or eats it, Army Materiel Command provides it.”*



“Need to be faster, more agile, less bureaucratic... Need to fight this every day”

# AMC Commanders and Deputies

**Tank-automotive & Armaments Command LCMC**

MG Mike Lenaers	Mr. Jack Dugan
	
Civilian 13,089   Military 94	

**Joint Munitions & Lethality LCMC**

BG William Phillips	BG James Rogers
	
Civilian 5,351   Military 17	

**Joint Munitions Command**

BG James Rogers	Mr. Jyuji Hewitt
	

**Army Sustainment Command**

MG Robert Radin	Mr. Scott Welker
	
Civilian 1,183   Military 696	


**Aviation and Missile LCMC**

MG James Myles	Mr. Ronald Chronister
	
Civilian 8,623   Military 107	

**Military Surface Deployment & Distribution Command**

MG Kathleen Gainey	Ms. Patricia Young
	
Civilian 1,726   Military 169	

**Chemical Materials Agency LCMC\***

Mr. Conrad Whyne	VACANT
	
Civilian 1,483   Military 16	

**Army Contracting Command**

Mr. Parsons

N/A

**Communications-Electronics LCMC**

MG Dennis Via	Mr. Ed Thomas
	
Civilian 7,192   Military 85	

**Research, Development & Engineering Command**

MG Fred D. Robinson Jr.	Mr. David J. Shaffer
	
Civilian 11,815   Military 244	

**US Army Security Assistance Command**

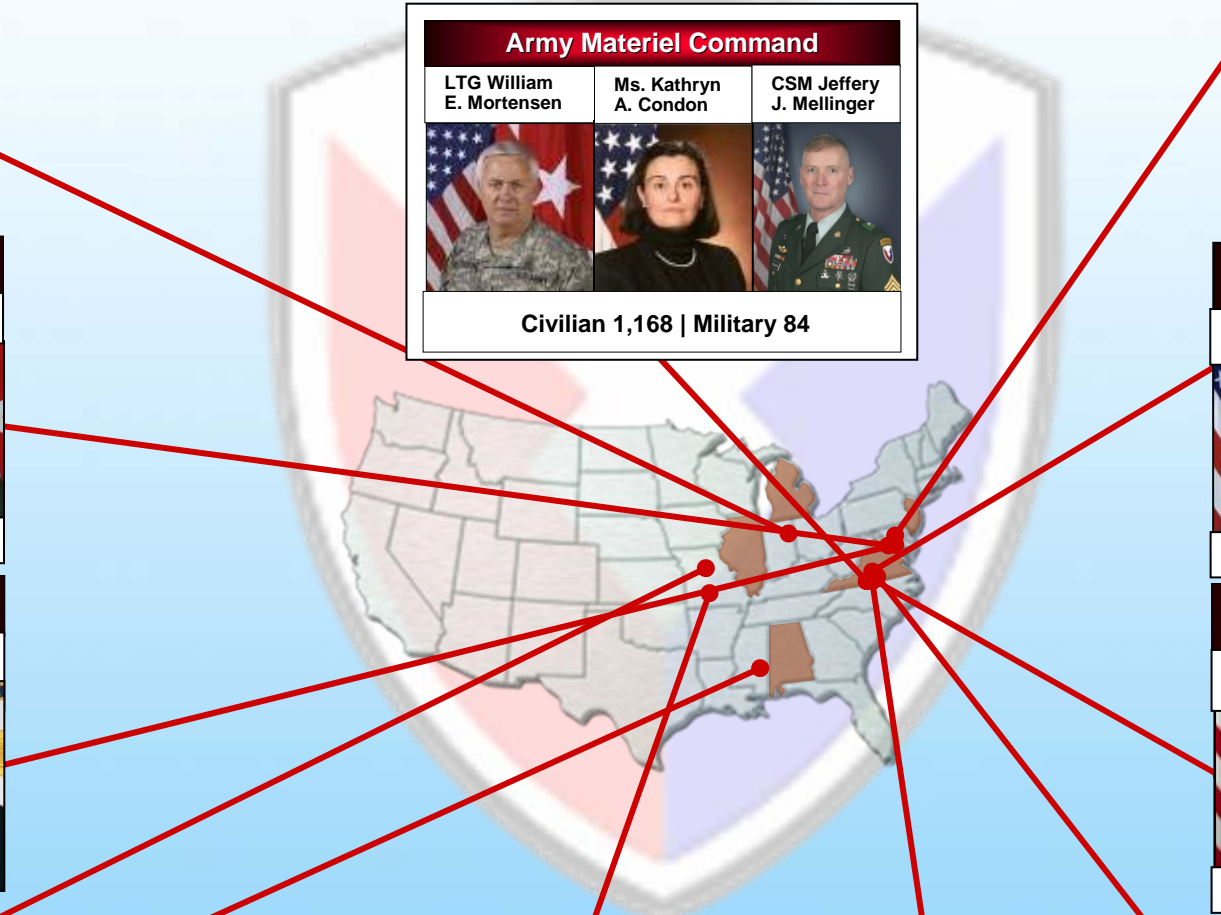
BG Michael J. Terry	Mr. Rick Alpaugh
	
Civilian 560   Military 49	

**Assembled Chemical Weapons Alternatives Program**

Mr. Kevin Flamm	Mr. William Pehlivanian
	

**Army Materiel Command**

LTG William E. Mortensen	Ms. Kathryn A. Condon	CSM Jeffery J. Mellinger
		
Civilian 1,168   Military 84		



\* Proposed

*“Providing Support to the Joint Warfighter”*

# Avenues of Change

Transforming Army Materiel Command from an organization that is  
 “Production-based, commodity-focused, and platform-centric” to one that is

*“Service-based, capabilities-focused, and unit-centric” for Persistent Conflict*

## ORGANIZATIONAL CHANGE

- Life-Cycle Management Commands
- Army Field Support Brigades and Brigade Logistic Support Teams
- 2 Star Contracting Command
- Surface Deployment and Distribution
- Base Realignment and Closure (BRAC)
- Army Watercraft
- Central Issue Facilities
- Installation Maintenance and Ammunition
- Security Assistance

End State

“Cradle-to-Grave Capabilities Support”

## CULTURE OF INNOVATION

- Safety
- Lean Six Sigma
- Reset Parts Management
- Outreach to Industry
- Partnerships
- Performance Based Logistics
- Rapid Review Teams
- Research & Development/Technology to the Warfighter
- Informing the Requirements Process
- Army Greatest Inventions
- Human Capital Strategy

End State

“Efficient Production Processes”

## COMPLEX SERVICES

- Support to ARFORGEN
- MRAP Fielding/Sustainment
- Soldier as a System
- Ammunition Enterprise
- Forward Repair Activities
- Unit-focused RESET
- Small Arms Repair
- Left-Behind & Theater Provided Equipment
- TRADOC Fleet Management
- LOGCAP IV Transition
- Industrial Capabilities Modernization
- Low Density Training Equipment
- Chemical Storage & Demil

End State

“Customer Focused Solutions”

## KNOWLEDGE MANAGEMENT

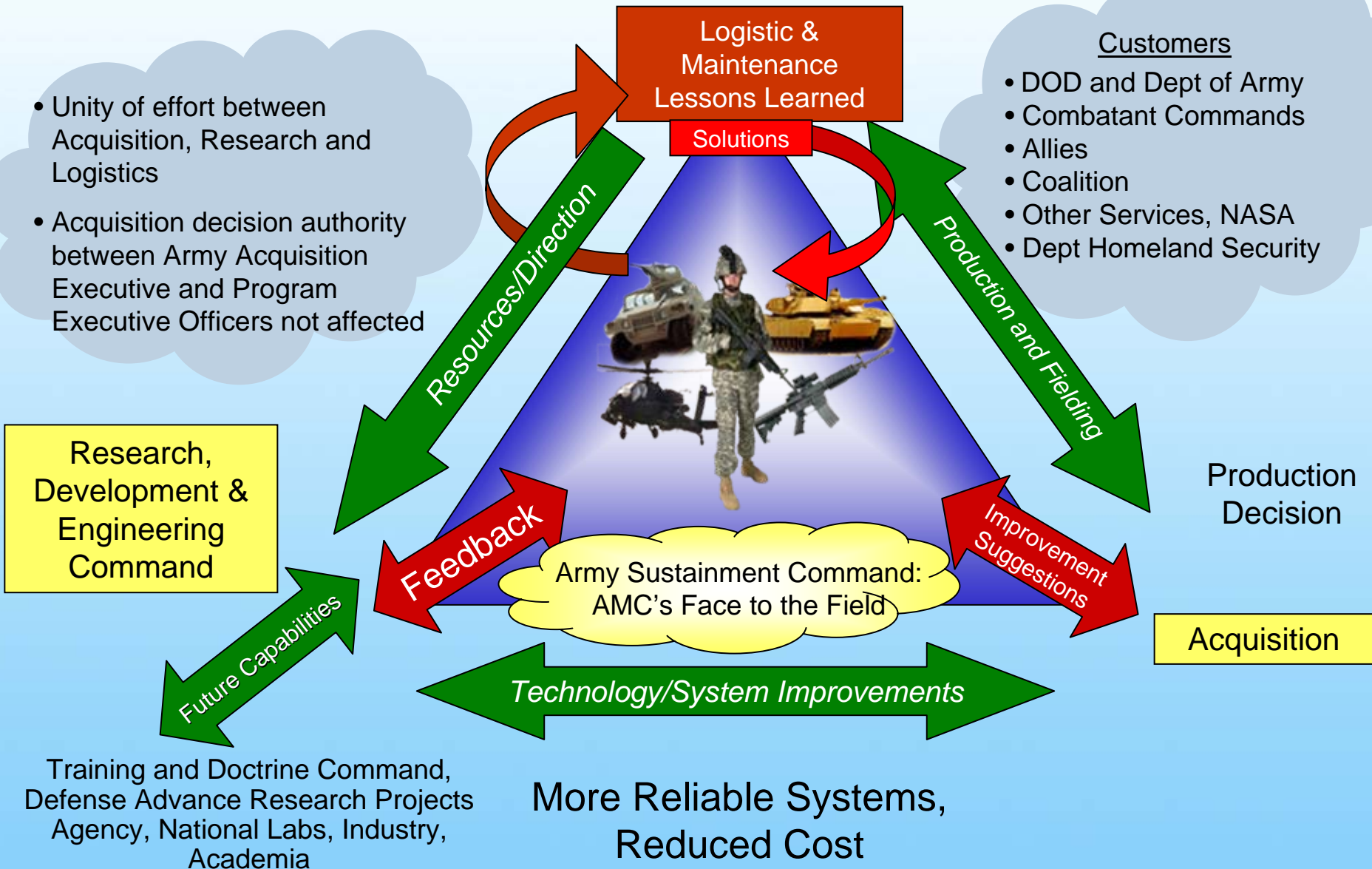
- Condition Based Maintenance
- Central Technical Support Facility (CTSF)
- Global Help Desk
- Depot IT Modernization
- AMC Enterprise Portal
- Sample Data Collection
- Factory-to-Foxhole Visibility
- Operations Center
- Single Army Logistics Enterprise
- Lessons Learned
- Quantitative Metrics and Analysis

End State

“Data Driven Decisions”

# Life Cycle Management Commands... Soldier Focused

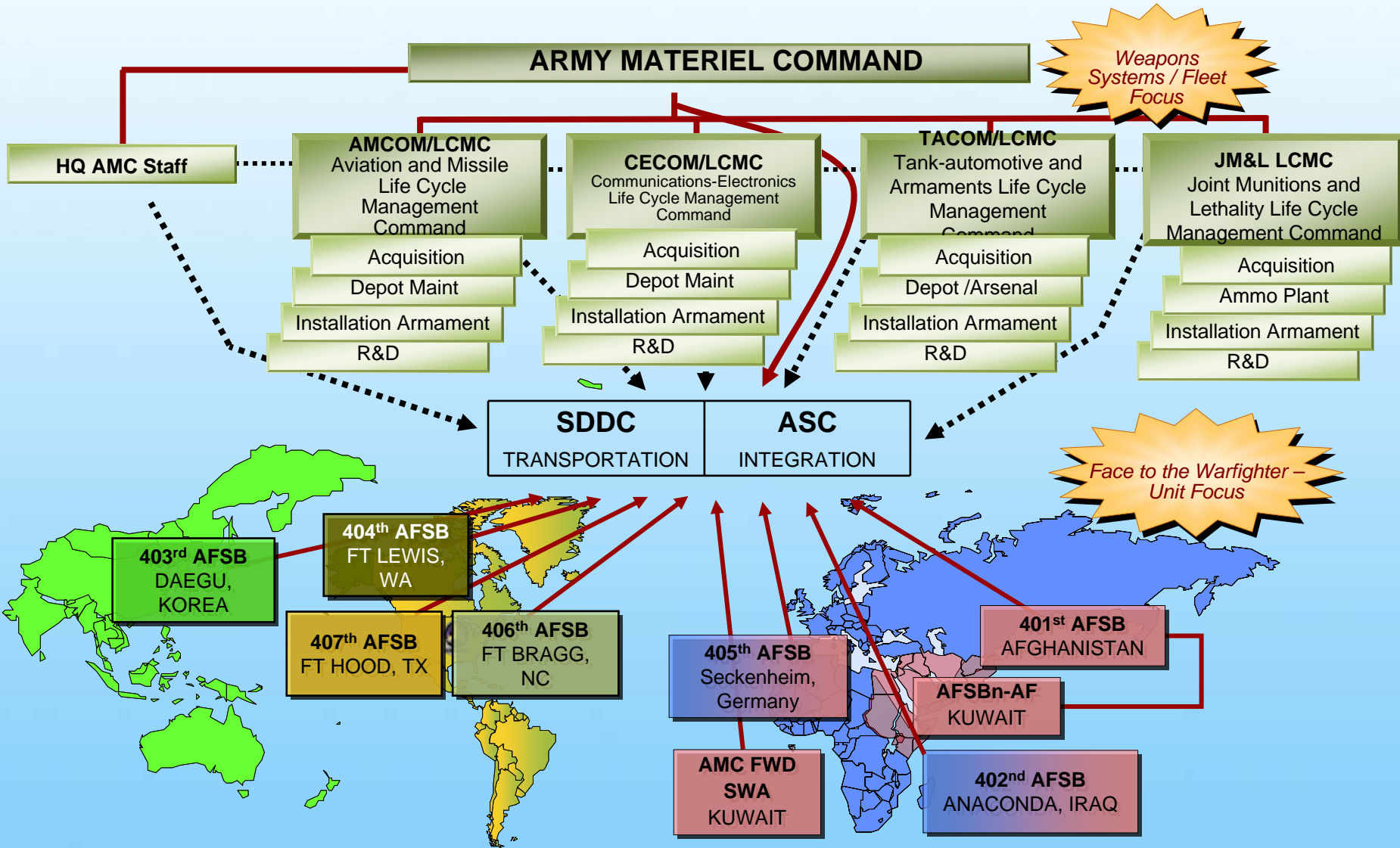
Depots, Arsenals, Ammunition Plants  
TACOM, AMCOM, CECOM, CMA, JM&L





# Life-Cycle Management Commands & Army Sustainment Command

Integrating the Unit & Weapon System View to Deliver Warfighting Capability



# Setting the Force

## What We've Done . . . What We're Doing

### ARMY PLAN

The Army will undertake a disciplined, orderly reconstitution to restore combat power.



**39,000+ Small Arms  
FY07**

154,563 Small Arms

**550+ Aircraft  
FY07**

2,440\* Aircraft Scheduled  
2,004\* Completed

**9,000+ Missile  
FY07**

10,468 Missile Systems  
29,709 Missile Rounds Reset  
13.3K Short Tons Ammunition Processed for Reissue in South West Asia  
9 Patriot Battalions  
68 MLRS

**1,700+ Tracks  
FY07**

2,754 Tracks  
28502 Wheels

**15,000+ Wheels  
FY07**

**7,400+  
Generators FY07**

15,058 Generators  
18,673 Commo/Electric  
73,888 COMSEC

**FY07**

(\* Includes Reset & Recap)





# Army Vehicles

## Current Fleet

(Approximate Values)

### Ground Vehicles

HMMWV (Armored, Non-Armored)	135,699
FMTV Trucks (2.5 and 5 Ton series)	83,650
Heavy Expanded Mobility Tactical Truck	13,383
Palletized Load System	4,456
Heavy Equipment Transporter	2,012
Line Haul Tractor	7,859
<b>TOTAL</b>	<b>247,059 Prime Movers</b>

### Aircraft

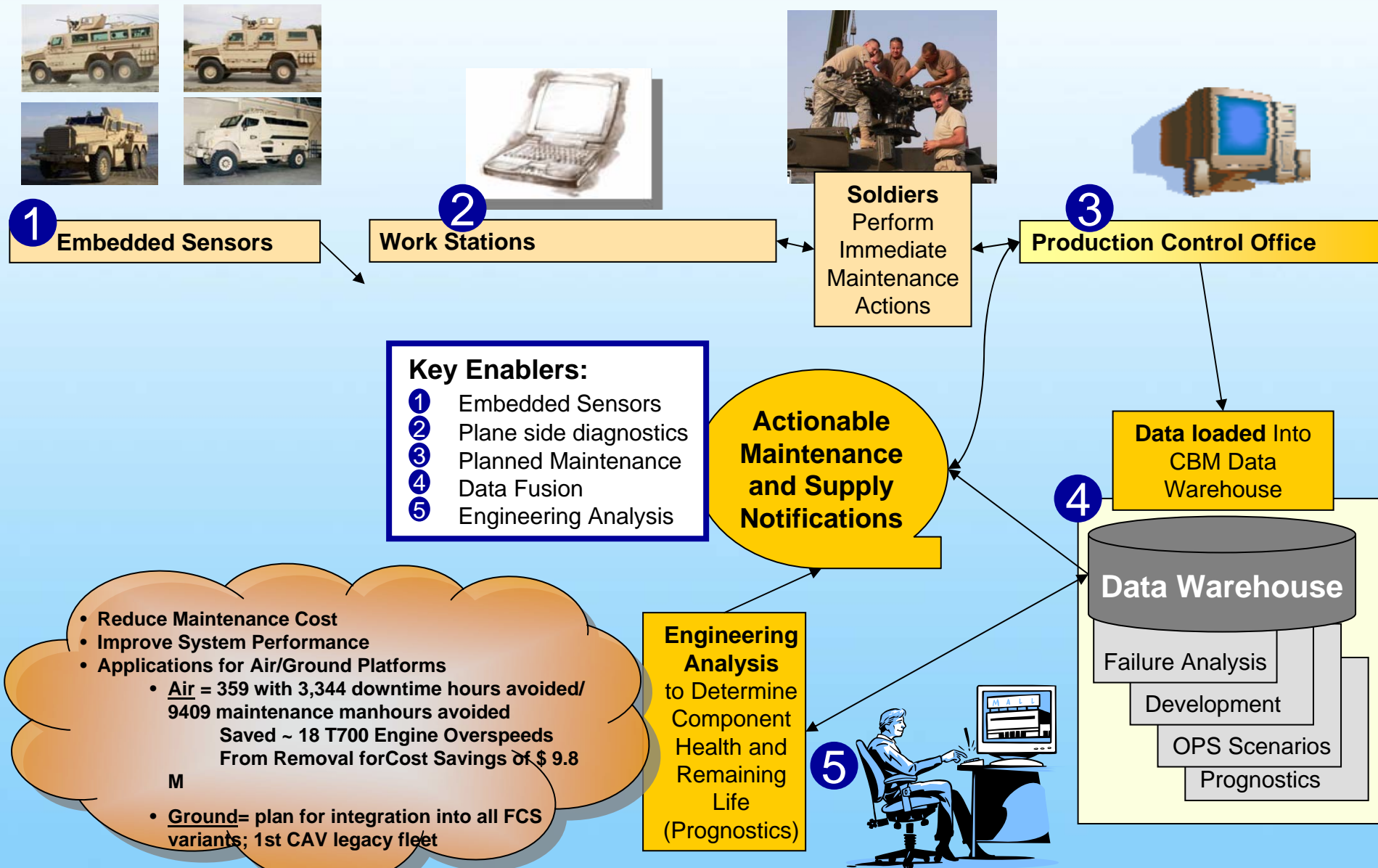
Apaches	751
Blackhawks	1,684
Chinooks	420
Kiowa	350
UAS	2315
<b>TOTAL</b>	<b>5,520 Aircraft</b>

# MRAP Highlights



- Partnership is essential to Success
  - Maintain several variants simultaneously
  - Supply Chain Management
- Streamlined delivery of Capabilities is key
  - Continue use of “off the self technology”
  - No more long acquisition cycles  
(128 days for the MRAP)
  - Need to make this the standard
- What we need to Continue
  - Responsiveness to the Warfighter
  - Predictive technology applications
  - Sustainment across multiple generations of equipment

# HOW DOES CBM WORK ?



# PARTNERING SUCCESS: Tactical Wheeled Vehicles

## Ongoing

- Red River Army Depot
  - BAE: 9 partnerships valuing \$5.7M
  - Textron from Marine & Land Systems: 2 partnerships valued at \$290K
- Letterkenny Army Depot
  - BAE
    - RG33 Series Mine Protected Vehicles Valuing \$1.1M
    - New Medium Mine Protected Vehicle value to be realized

## Evolving

- Oshkosh Truck Company
  - Family of Heavy Tactical Vehicles



The HEMTT provides transport capabilities for re-supply of combat vehicles and weapons systems.

- BAE
  - Family of Medium Tactical Vehicles



EDH# | vwhp v#J 66#7 {7,#FDW#L

- TMLS
  - Armor Security Vehicle



M1117 Armored Security Vehicle

# 2007 Shingo Prize Results

## GOLD



**Rock Island Arsenal –**  
Joint Manufacturing &  
Technology Center

Forward Repair System (FRS)



**Tobyhanna Army Depot**  
AN/TPQ-36 Firefinder Antenna



**Red River Army Depot**  
HMMWV Recap

## SILVER



**Letterkenny Army Depot**  
HMMWV Recap



**Rock Island Arsenal –**  
Joint Manufacturing & Technology  
Center Shop Equipment Contact  
Maintenance (SECM)



**Anniston Army Depot**  
FAASV



**Red River Army Depot**  
Bradley Power-train



**Red River Army Depot**  
HEMTT



### ISO Certifications

- ISO 9001:2000  
Quality Management  
System
- ISO 14001:2000  
Environmental  
Management System
- AS 9100B Aviation  
Maintenance System

## BRONZE



**Aviation Center Logistics Command**  
AMCOM – Fort Rucker  
TH-67 Creek C20J Engines



**Letterkenny Army Depot**  
Power Generators



**Corpus Christi Army Depot**  
H-60 Pavehawk



**Anniston Army Depot**  
M1 Abrams Turbine Engines



# Thoughts I want to Leave You With

- AMC's mission is to provide direct support to the Warfighter
  - Synergy gained through LCMCs
  - *Face to the Field* with ASC and AFSBs
  - Real-time/coordinated transportation through SDDC
  - Continuous supply and re-supply through Depots and Arsenals utilizing refined/Lean methodologies
- Partnering with Private Sector is a **Win-Win**
  - Teaming: Inside / Outside Depots
  - Reliant on our relationship with industry
- Future presents us with both challenges and opportunities
  - Resources
  - Technology
  - Efficiency



Continues to transform  
through technology  
developments  
& innovative applications



FOCUSED ON THE  
WARFIGHTER

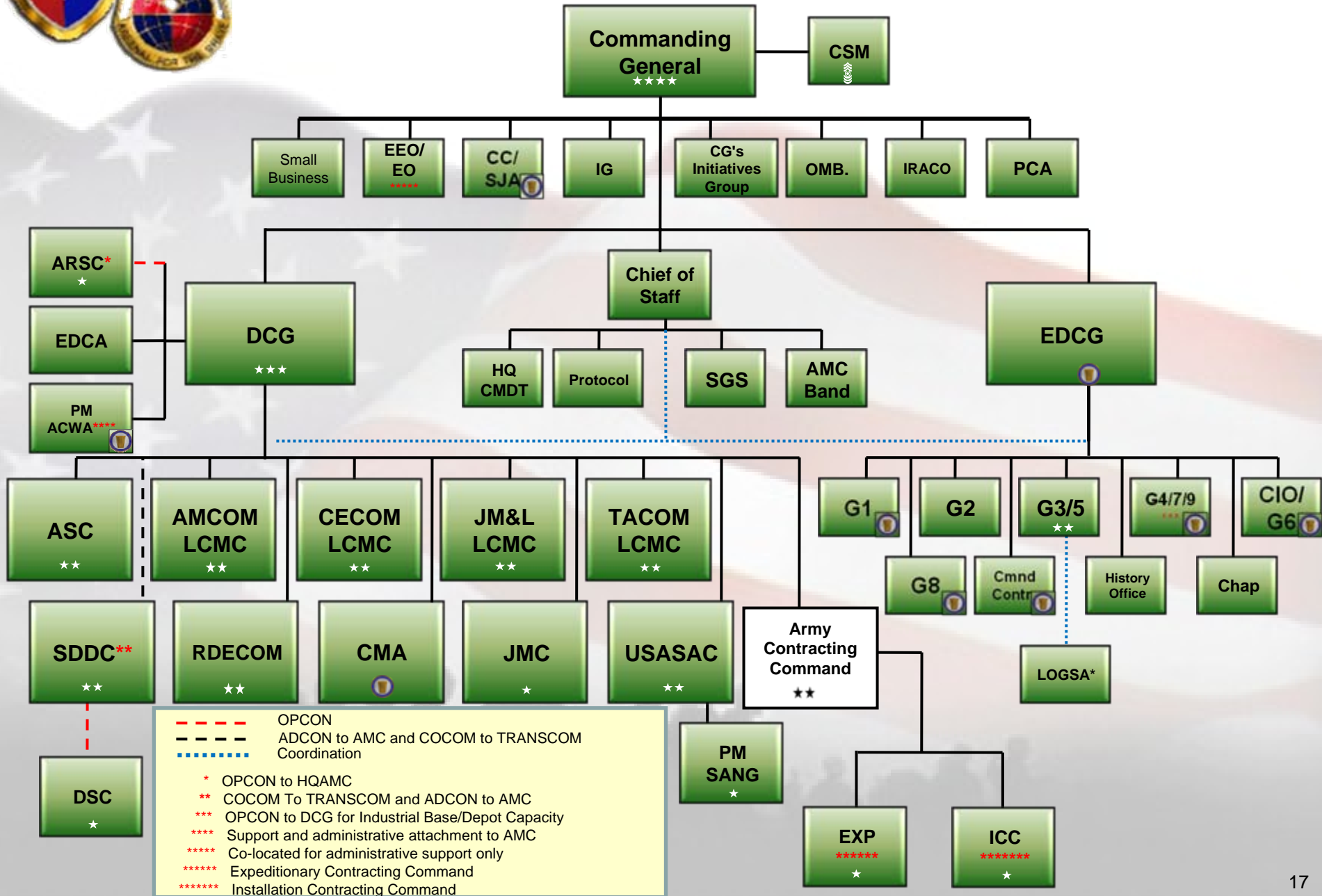


**BACK UP SLIDES**





# Army Materiel Command



- - - - - OPCON  
 - - - - - ADCON to AMC and COCOM to TRANSCOM  
 ..... Coordination

\* OPCON to HQAMC  
 \*\* COCOM To TRANSCOM and ADCON to AMC  
 \*\*\* OPCON to DCG for Industrial Base/Depot Capacity  
 \*\*\*\* Support and administrative attachment to AMC  
 \*\*\*\*\* Co-located for administrative support only  
 \* \* \* \* \* Expeditionary Contracting Command  
 \* \* \* \* \* Installation Contracting Command

# Army Field Support Brigades (AFSB) and Contracting Support Brigades (CSB) Commanders





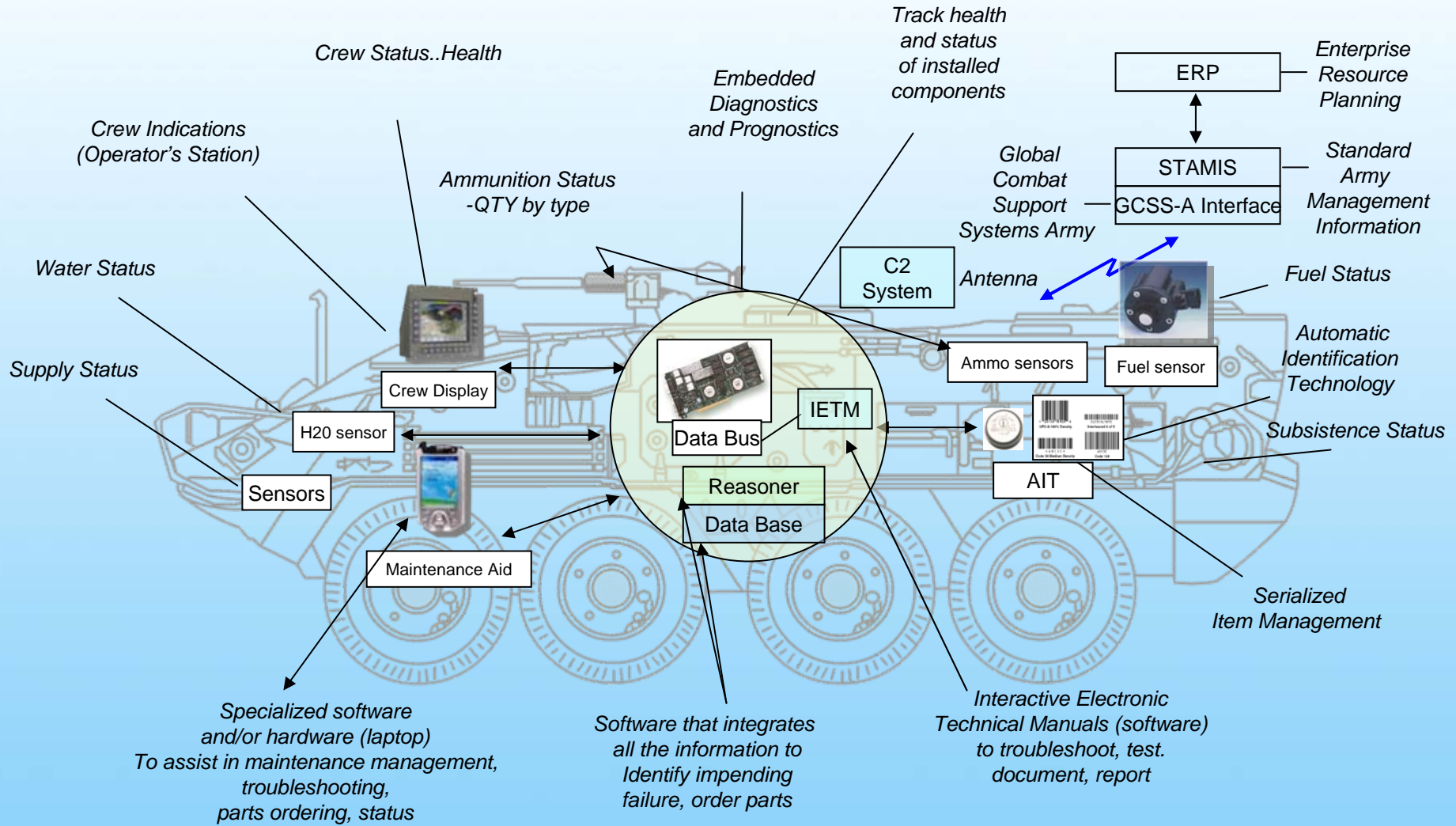
# Condition Based Maintenance (CBM) for Ground Vehicles

- CBM is a proactive equipment maintenance capability that utilizes system health indications to predict functional failure beforehand and take action.
- Implementation will:
  - Provide prognostics and diagnostics
  - Improve fleet management
  - Provide users, maintainers, and commanders with near real time data of vehicle operation and usage severity
- Initially will field limited number of CBM boxes on tactical wheeled vehicles
- CBM will link data with actual maintenance actions (i.e., part replacements)
- Need to leverage industry efforts:
  - Industry telematics initiatives (onStar, ePulse, Aware)



# Condition Based Maintenance (CBM) for Ground Vehicles

## KNOWLEDGE MANAGEMENT



# 2007 Shingo Prize Results Highlights

## GOLD

**Rock Island Arsenal –**  
Joint Manufacturing &  
Technology Center

Forward Repair  
System (FRS)

**Tobyhanna Army Depot**  
AN/TPQ-36 Firefinder  
Antenna

**Red River Army Depot**  
HMMWV Recap

## SILVER

**Letterkenny Army Depot**  
HMMWV Recap

**Red River Army Depot**  
Bradley Power-train

**Red River Army Depot**  
HEMTT

**Anniston Army Depot**  
FAASV

**Rock Island Arsenal –**  
Joint Manufacturing & Technology Center  
Shop Equipment Contact Maintenance  
(SECM)



### ISO Certifications

- ISO 9001:2000  
Quality  
Management  
System
- ISO 14001:2000  
Environmental  
Management  
System
- AS 9100B  
Aviation  
Maintenance  
System

## BRONZE

**Aviation Center Logistics  
Command**  
AMCOM – Fort Rucker  
TH-67 Creek C20J Engines

**Letterkenny Army Depot**  
Power Generators

**Corpus Christi Army Depot**  
H-60 Pavehawk

**Anniston Army Depot**  
M1 Abrams Turbine Engines

# Shingo Award Notes



- **Owner:** G-4/7/9 **Validated by:** **XO:** Hilton Mills, 703-806-9225  
**SME:** Steve Miller, 703-806-9247

- **2007 - 12 Shingo Prizes awarded to AMC (in 2007, only 4 others awarded outside the Army in DoD)**

- Rock Island Arsenal – Jt. Manufacturing & Technology Center  
- **Forward Repair System (FRS)**

- ✓ Reduced Flow Time from 265 to 62 days
- ✓ Reduced Work In Process from 32 to 13 units
- ✓ Cost savings/avoidance of \$4.8M

Tobyhanna Army Depot

- **AN/TPQ-36 Firefinder Antenna**

- ✓ Reduced Repair Cycle Time from 514 days to 429 days
- ✓ Reduced Work In Process from 16 per month to 11 per month
- ✓ Increased production from 1 to 15 systems

Red River Army Depot

- **HMMWV Recap**

- ✓ Increased production from 3 vehicles per month in 2004 to 32 vehicles per day since February 2006
- ✓ Produced 65 additional vehicles at no additional cost in FY06
- ✓ Cost avoidance of \$3.89M

Letterkenny Army Depot

- **HMMWV Recap**

- ✓ Increased throughput to 17 vehicles per day
- ✓ Reduced direct labor hours from 274 to 150
- ✓ Produced 27 additional vehicles at no additional cost a \$5.2M customer benefit

- Red River Army Depot

- - **Bradley Power-train**

- ✓ Reduced man-hours from 56.5 to 32.5 per unit
- ✓ Increased output from 2 units to 6 units per day
- ✓ Reduced lead time from 7 days to 3 days per unit

- Rock Island Arsenal – Jt. Manufacturing & Technology Center

- - **Shop Equipment Contact Maintenance (SECM)**

- ✓ Reduced flow time from 82 to 41 days
- ✓ Reduced work in process from 40 to 15 units
- ✓ Cost Savings/Avoidance of \$4.9M

- Red River Army Depot
- - **Heavy Expanded Mobility Tactical Truck (HEMTT)**

- ✓ Productivity improved from 1530 hrs/vehicle to 1011 hrs/vehicle
- ✓ Increased output from 2 vehicles/wk to 2 vehicles per day
- ✓ Decreased lead time from 120 days to 30 days

Anniston Army Depot

- **Field Artillery Ammunition Support Vehicle (FAASV)**

- ✓ Increased total units produced from 52 to 88
- ✓ Decreased overtime hours per unit from 99.4 hrs to 59.52 hrs
- ✓ Decreased direct labor hours per unit from 341 hrs to 294 hrs

Aviation Center Logistics Command AMCOM – Ft. Rucker

- **TH-67 Creek C20J Engines**

- ✓ Reduced cycle lead time from 294 to 213 hrs.
- ✓ Reduced shop backlog from 30 engines to 0
- ✓ Reduced engine faults from 105 to 72

Letterkenny Army Depot

- **Power Generators**

- ✓ Increased output from 118/mo to 500/mo
- ✓ Labor Savings since April 2006 is 83,349 man hours and \$2.9M

Corpus Christi Army Depot

- **H-60 Pavehawk**

- ✓ Reduced Turn Around Time from 180 to 109 days
- ✓ Reduced average direct labor hrs by 3,324/aircraft
- ✓ Reduced the per unit loss from \$490K to \$133K

Anniston Army Depot

- **M1 Abrams Turbine Engines**

- ✓ Reduced assembly time from 364 to 232 min.
- ✓ Consistent 100% on-time delivery
- ✓ Cost savings of \$18.4M

- **INTERNATIONAL ORGANIZATION FOR STANDARDIZATION**

- **ISO-CERTIFIED AMC INDUSTRIAL FACILITIES As of 20 Sep 07**

- **ISO 9001: Quality Management Systems – Requirements**

- Corpus Christi Army Depot
- Lone Star Army Ammunition Plant
- Letterkenny Army Depot
- McAlester Army Ammunition Plant
- Sierra Army Depot
- Milan Army Ammunition Plant
- Tobyhanna Army Depot
- Radford Army Ammunition Plant
- Toole Army Depot
- Riverbank Army Ammunition Plant
- Red River Army Depot
- Scranton Army Ammunition Plant
- Anniston Army Depot
- Rock Island Arsenal – Joint Manufacturing
- Crane Army Ammunition Activity & Technology Center
- Hawthorne Army Ammunition Plant
- Watervliet Arsenal
- Holston Army Ammunition Plant
- Pine Bluff Arsenal
- Iowa Army Ammunition Plant
- Kansas Army Ammunition Plant
- Letterkenny Munitions Center
- Lake City Army Ammunition Plant

- **AS 9100: International Aerospace Quality Systems Standards**

- Corpus Christi Army Depot

- **ISO 14001: Environmental Management Systems – Requirements with Guidance for Use**

- Letterkenny Army Depot
- Tobyhanna Army Depot
- Iowa Army Ammunition Plant
- Milan Army Ammunition Plant
- Riverbank Army Ammunition Plant
- Scranton Army Ammunition Plant
- Radford Army Ammunition Plant