



Transforming the Public-Private Relationship

DEPOT PANEL

- **MG MIKE LENAERS**

TACOM LCMC - Commanding General

- **Ms. JANET BEAN**

Integrated Logistics Support Center - Executive Director

- **COL SCOTT KIDD**

PEO CS&CSS Tactical Vehicles - Project Manager

- **COL DOUG EVANS**

Red River Army Depot - Depot Commander

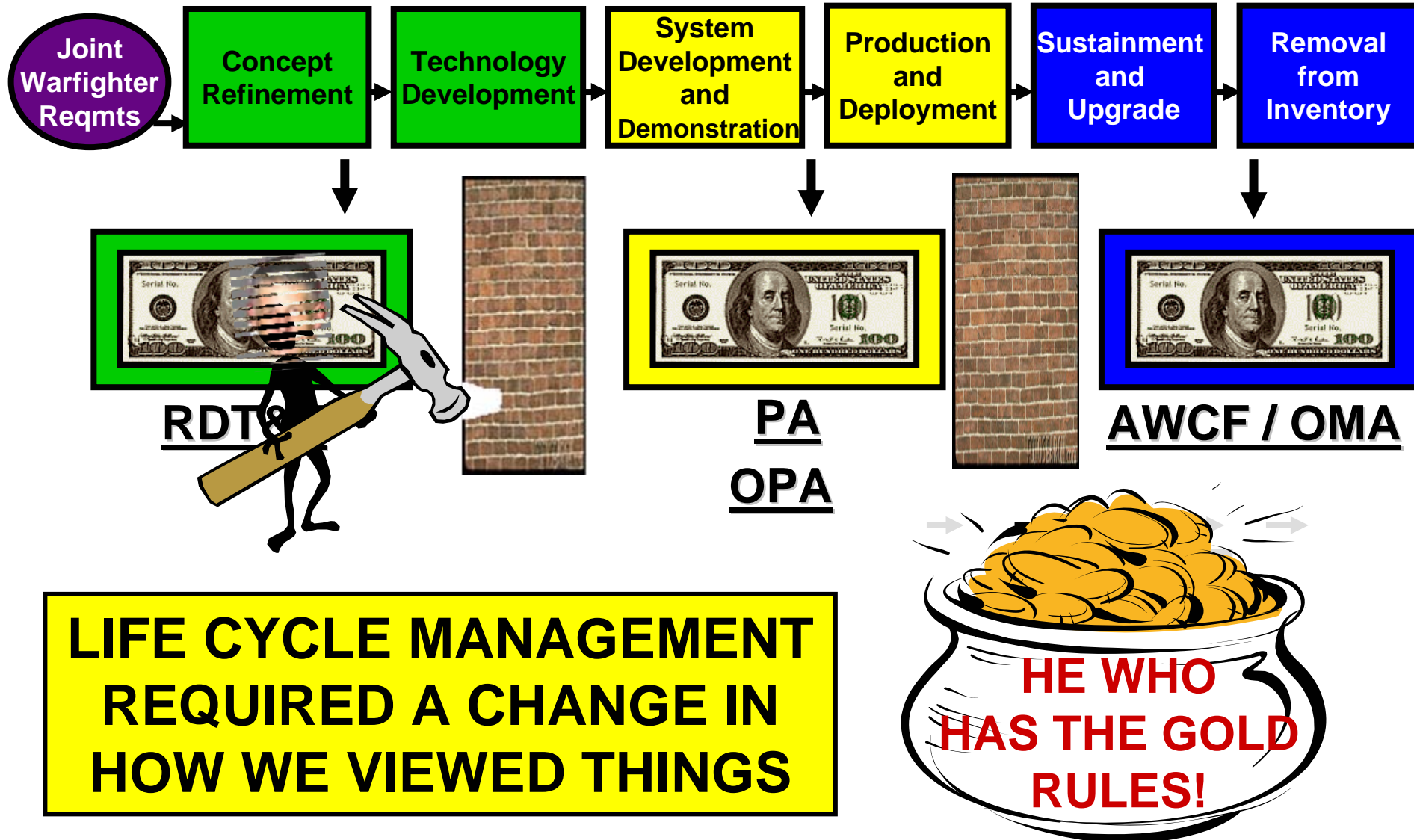
- **Dr. JOHN GRAY**

Letterkenny Army Depot - Deputy to the Commander



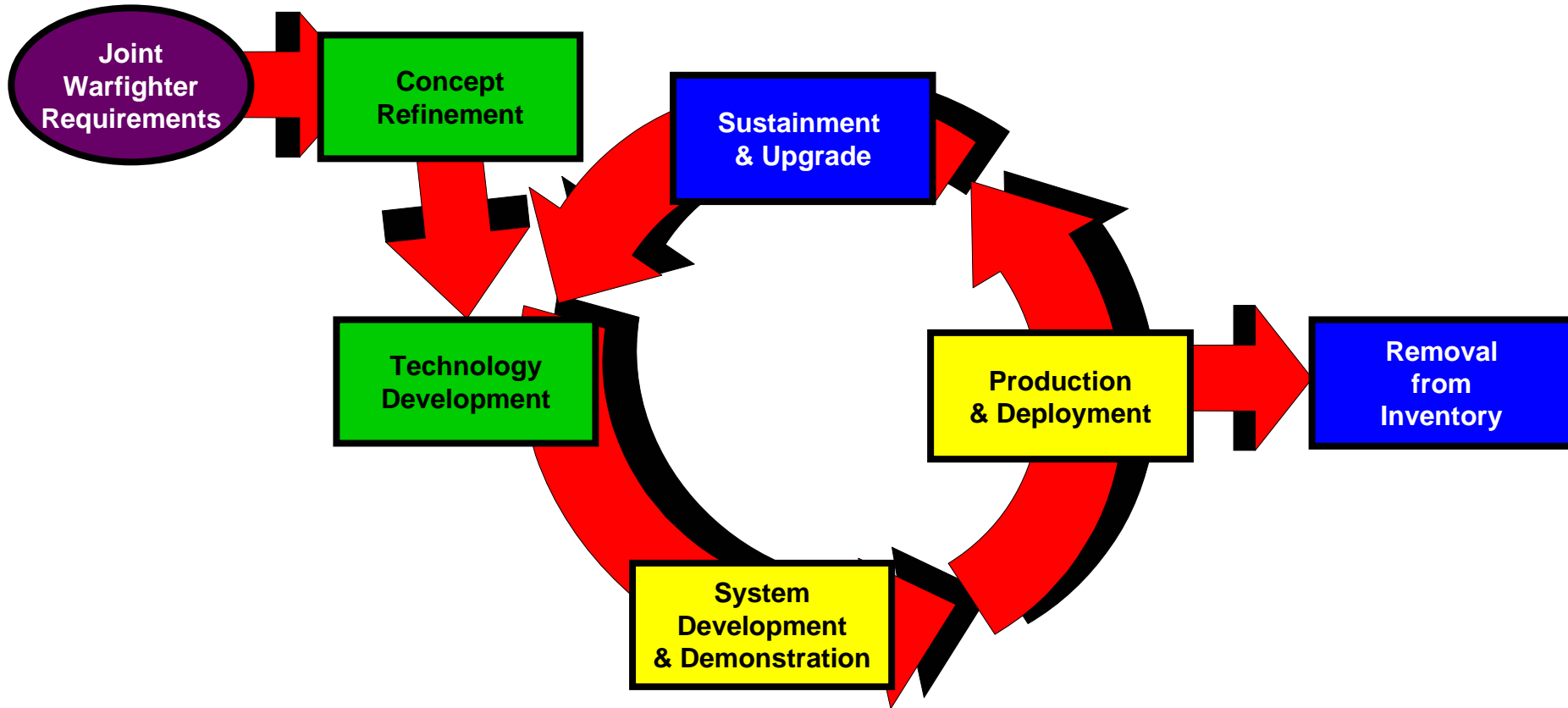
Tactical Wheeled Vehicle Conference

Transforming LCMC Relationship





LIFE CYCLE MANAGEMENT IS NOT LINEAR

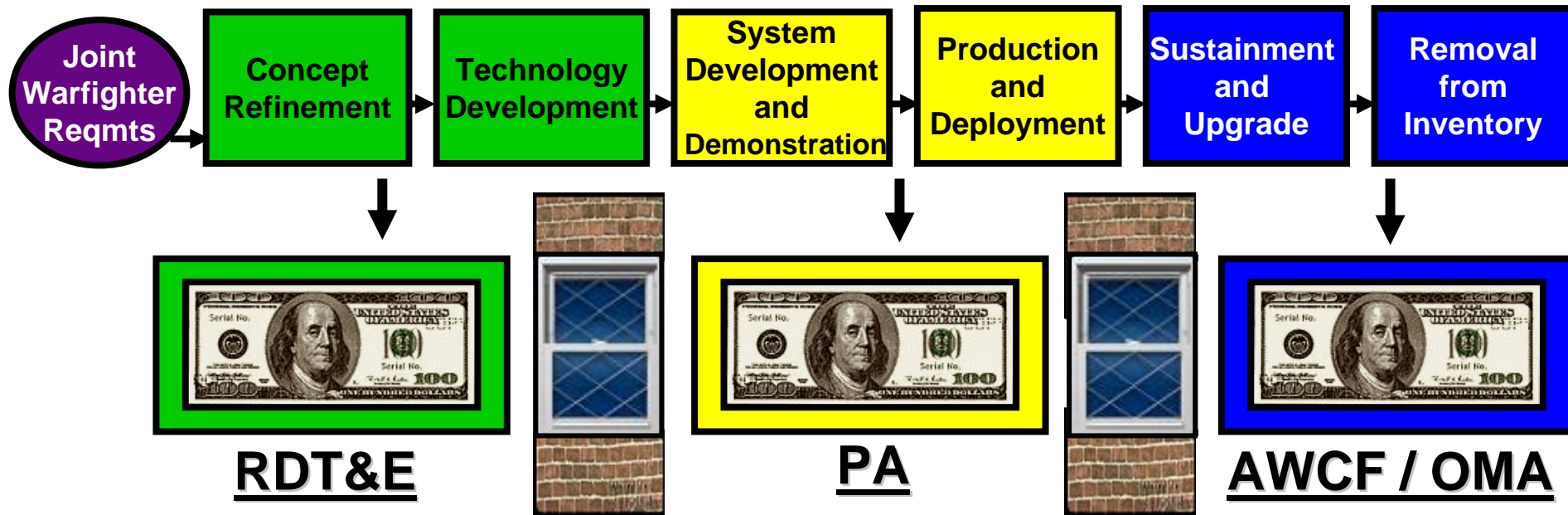


**APPLY UPGRADES TO SYSTEMS BASED ON
OPERATIONAL LESSONS AND TECHNOLOGY
IMPROVEMENTS THROUGHOUT THE LIFE CYCLE**

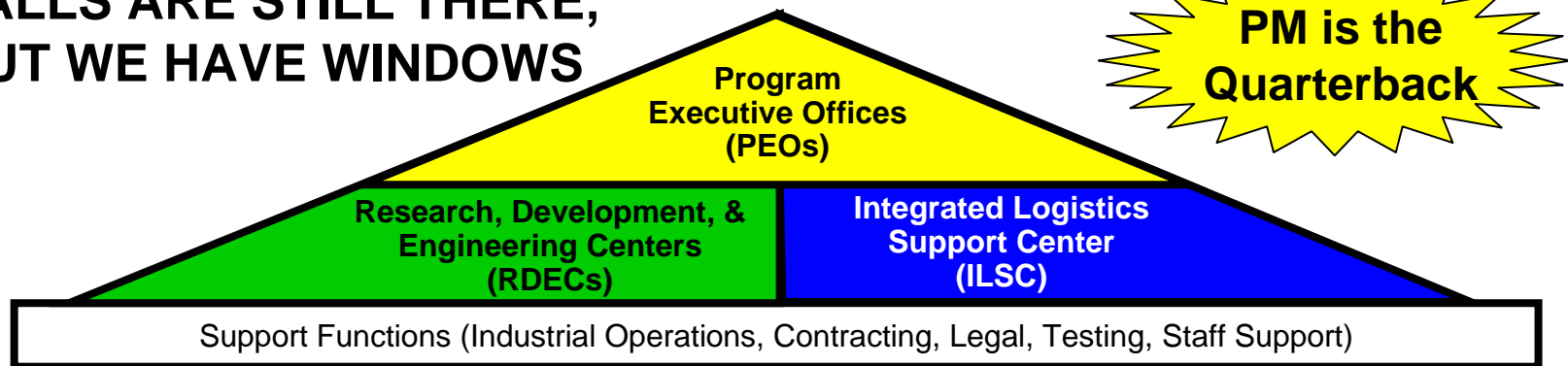


Tactical Wheeled Vehicle Conference

LIFE CYCLE MANAGEMENT INTEGRATION



**WALLS ARE STILL THERE,
BUT WE HAVE WINDOWS**





THE DEPOT – INDUSTRY RELATIONSHIP

IT'S THE LAW:

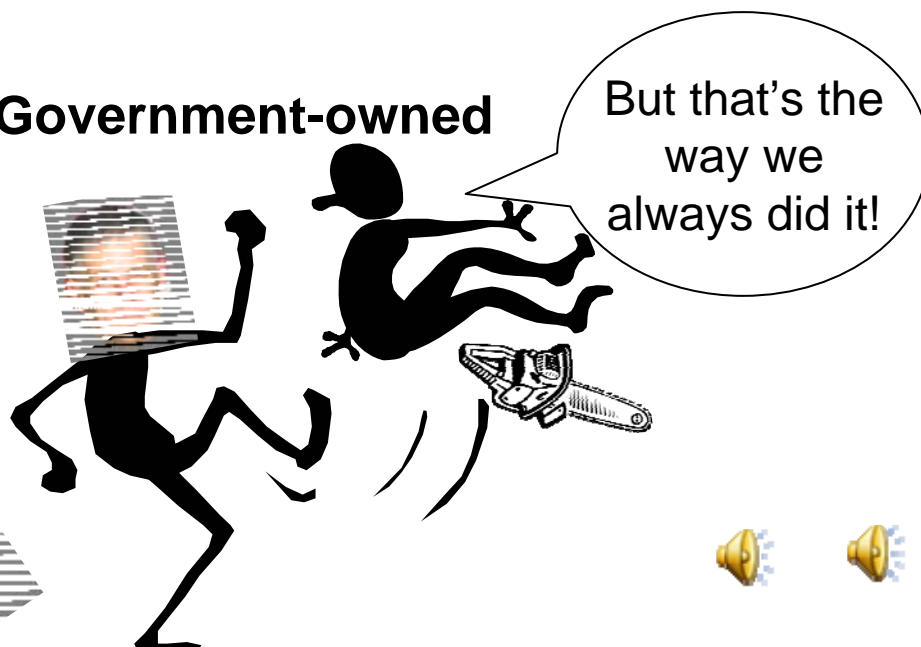
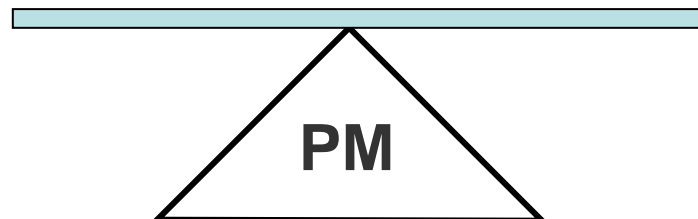
50/50 (USC 2466):

50 percent of the funds for depot-level maintenance and repair workload

DEPOT CORE (USC 2464):

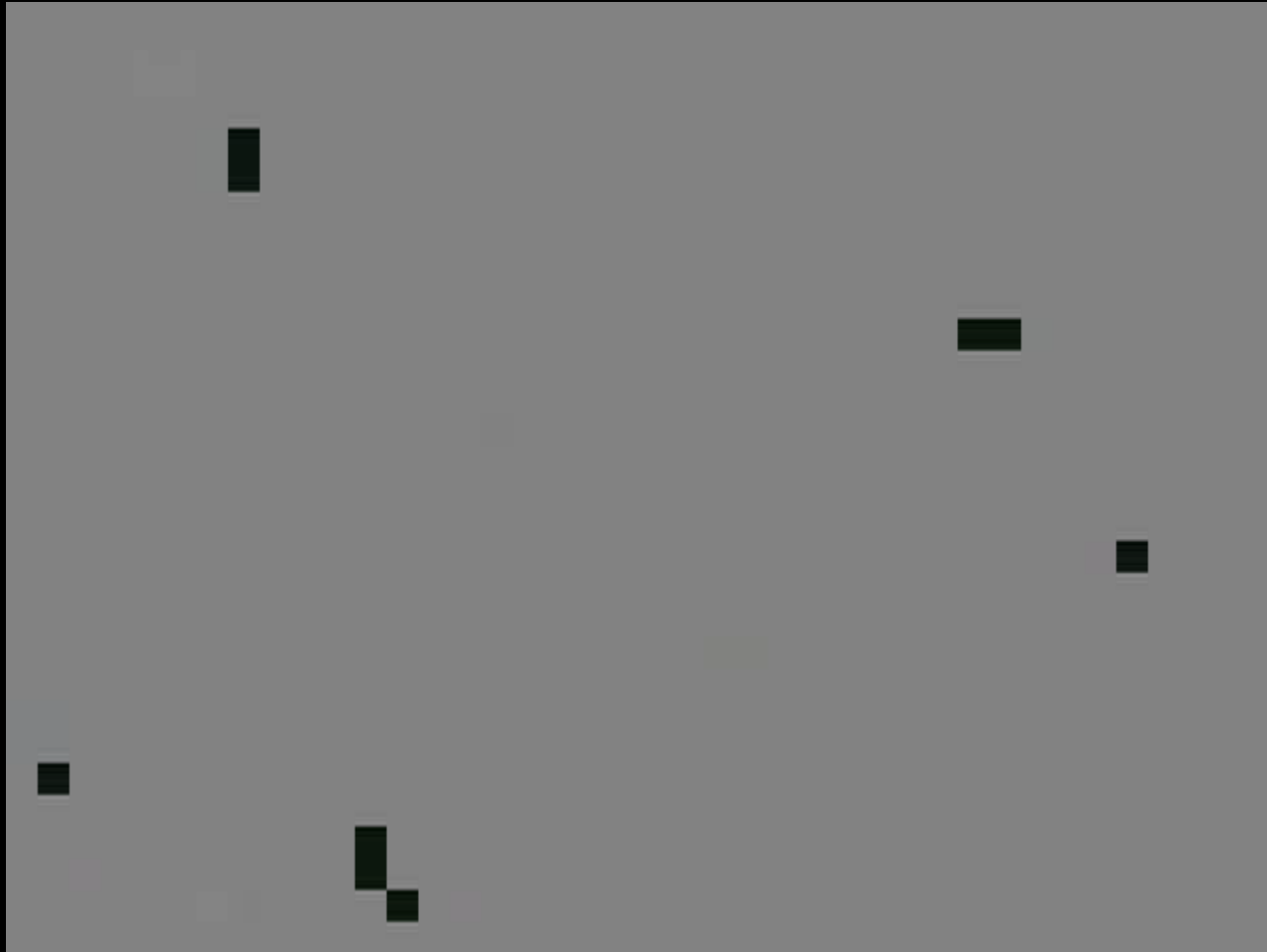
Core logistics capability that is Government-owned and Government-operated

DEPOT vs INDUSTRY



SHOULD NOT BE A DIVIDE THE BABY APPROACH

PARTNERING IS A BETTER IDEA . . . USUALLY





THE DEPOT – INDUSTRY RELATIONSHIP

PARTNERSHIP VS COMPETITION

EXPLOIT STRENGTHS

ENGINEERING AND SYSTEM INTEGRATION

CUTTING EDGE TECHNOLOGY

SUPPLY CHAIN MANAGEMENT

WORLD WIDE DEALER NETWORKS

COMMERCIAL SCALE

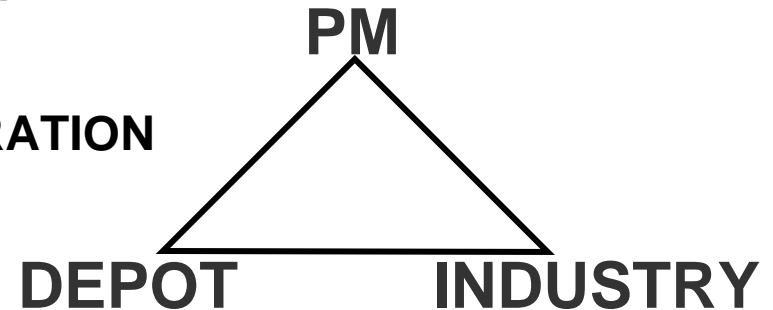
TRAINED, DEPLOYABLE WORK FORCE

SECURITY & FORCE PROTECTION

INFRASTRUCTURE

LEAN ENTERPRISE

INDUSTRIAL BEST PRACTICES



**FOCUS ON TOTAL ENTERPRISE PERFORMANCE
EXPLOIT STRENGTHS**



Transforming the Public-Private Relationship

DEPOT PANEL

- **MG MIKE LENAERS**

TACOM LCMC - Commanding General

- **Ms. JANET BEAN**

Integrated Logistics Support Center - Executive Director

- **COL SCOTT KIDD**

PEO CS&CSS Tactical Vehicles - Project Manager

- **COL DOUG EVANS**

Red River Army Depot - Depot Commander

- **Dr. JOHN GRAY**

Letterkenny Army Depot - Deputy to the Commander



Tactical Wheeled Vehicle Conference

MS. JANET BEAN

Integrated Logistics Support Center - Executive Director



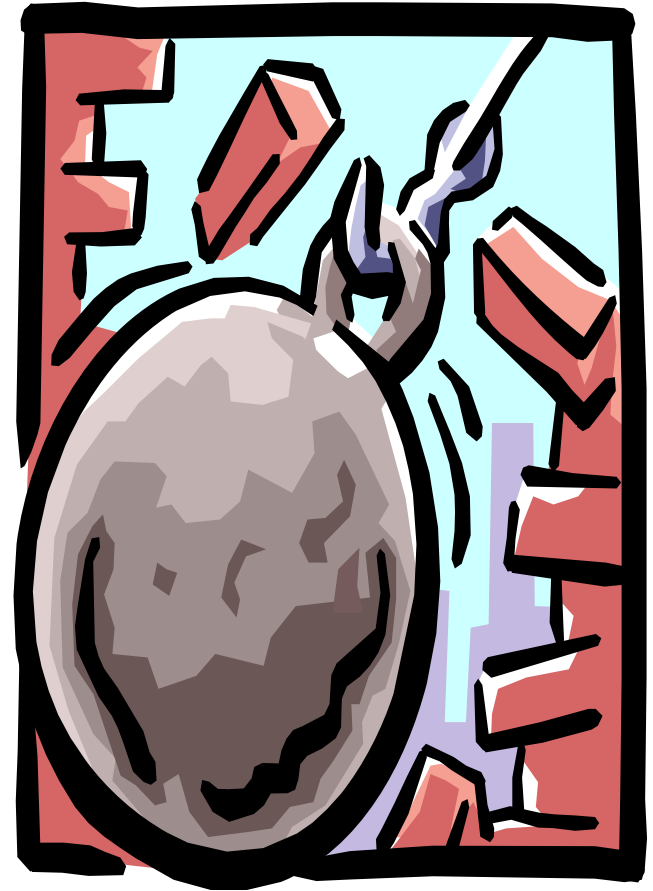
Integrating Supply Chain Solutions Across the Industrial Base



Tactical Wheeled Vehicle Conference

Agenda

- The Organic Industrial Base
 - What It Can Do
 - What It Needs From Us
- A Better Road Map
 - Breaking Down the Walls





Tactical Wheeled Vehicle Conference

Organic Industrial Base Capabilities

- **Engineering and Prototyping**

- Product design and development
- Material testing
- Manufacturing support

- **Manufacturing**

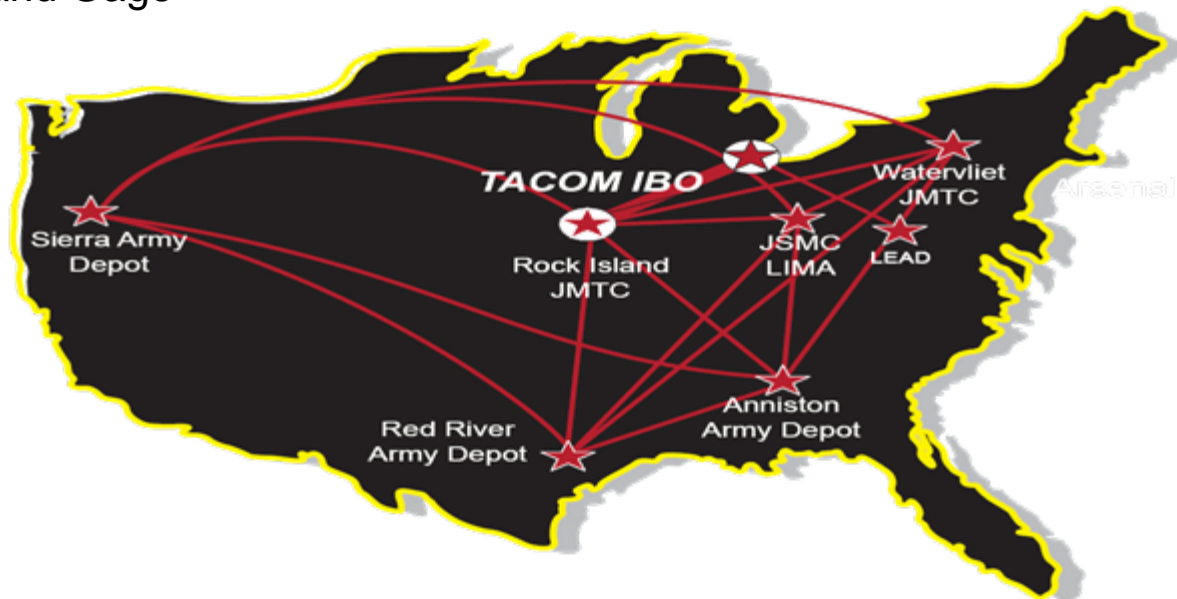
- Precision Machining
- Fabrication/Assembly
- Casting/Forging
- Heat Treatment/Plating/Finishes
- Tool, Die, and Gage

- **Maintenance and Overhaul**

- Systems/Subsystems Support
- Optics/Electronics
- Unique Processes
- Testing

- **Field Services**

- Forward Repair Facilities/Teams
- Spare/Repair Parts
- Receipt, Storage, and Issue of Equipment





Tactical Wheeled Vehicle Conference

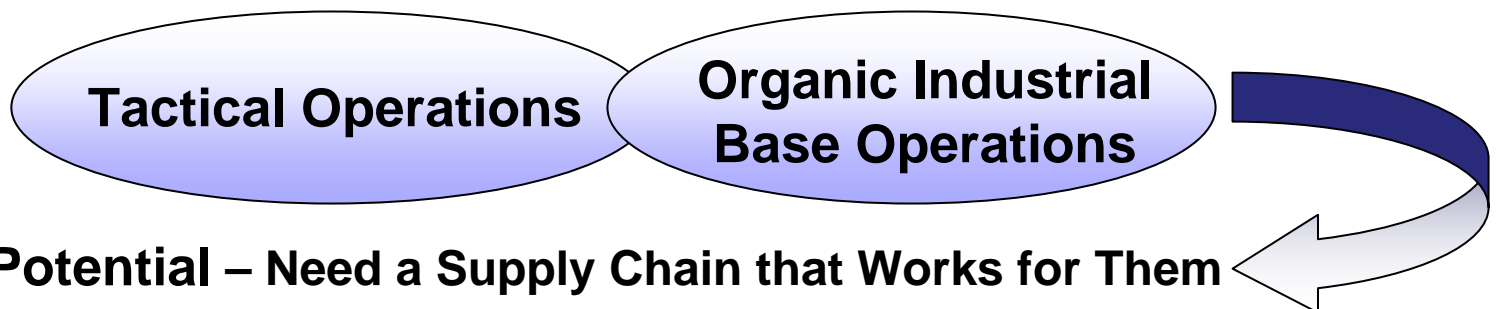
DoD Logistics Chain



TOO MANY WALLS

PLUS

TWO COMPETING SUPPLY CHAINS

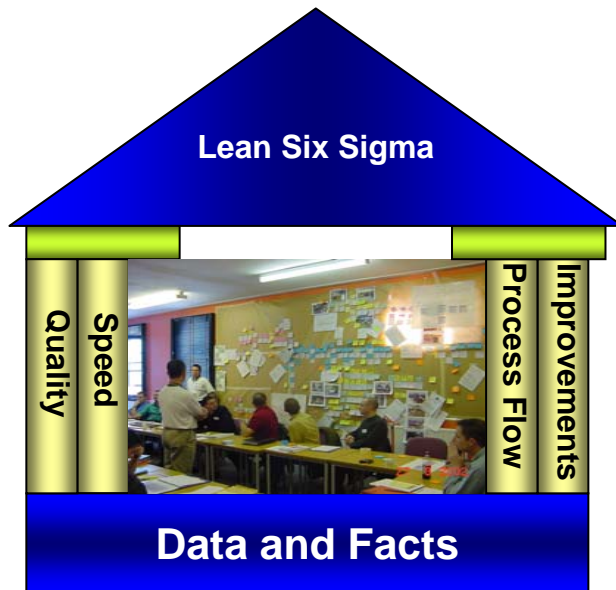


Untapped Potential – Need a Supply Chain that Works for Them



“What Constitutes a Good Supply Chain?”*

- Complete, recognizable supply chain
- Supply Chain Metrics
- No Walls; Transparency
- Efficient, collaborative Information Systems
- “Factor In” the impact of uncertainties



Preliminary Findings From our LS6 Project

- No agility in year of execution
- Too many work arounds – system is compromised
- Data not easily acted upon
- Lack of information sharing undermines performance

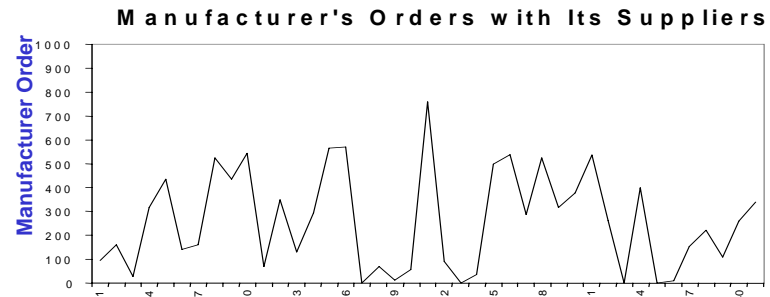
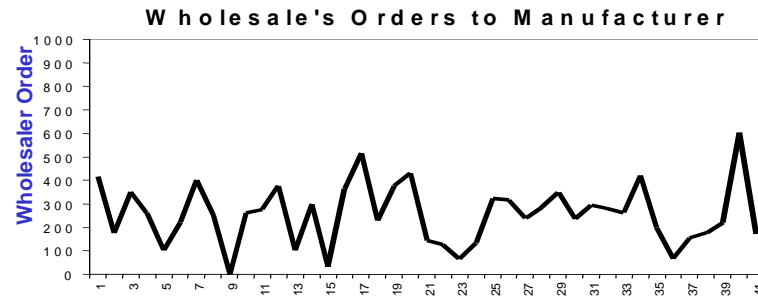
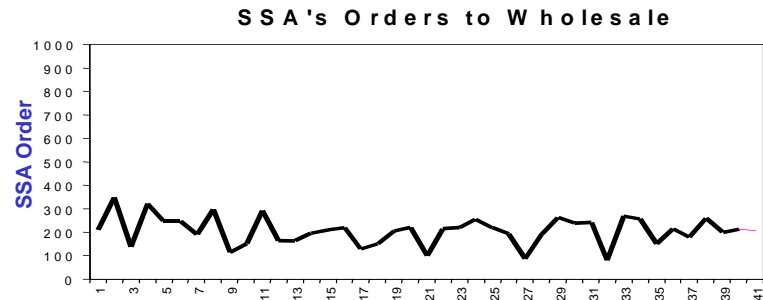
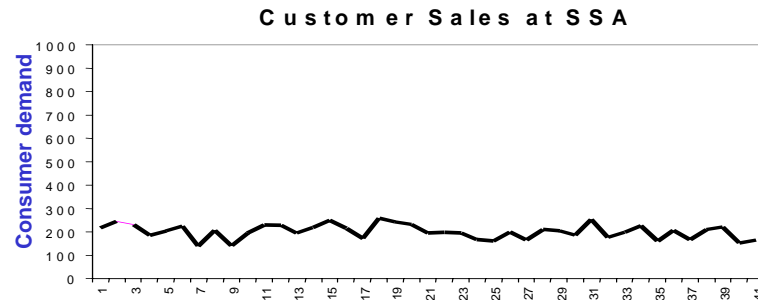
*Sloan Management Review, Massachusetts Institute of Technology, Spring 1992,
Hau L. Lee & Corey Billington, “Managing Supply Chain Inventory: Pitfalls and Opportunities”



Tactical Wheeled Vehicle Conference

Pitfalls of Missing the Mark in SC Solutions

The Bullwhip Effect



Causes of the Bullwhip Effect:

- Lack of Coordination & Collaboration Across the Enterprise
- Imbalance of JIT vs. JIC inventory stocking

Industrial Base Results: “G” Coded Vehicles, Missed Fieldings, Impact to Warfighter



Collaborative Planning and Forecasting For Replenishment



GOVERNMENT

- Demand History
- Monthly Demand Rate
- Stock on Hand

VENDOR

- Production
- Capacity
- Raw Material Orders
- External Business Factors



COLLABORATION EXAMPLES

Initiatives That Are Moving Us Forward



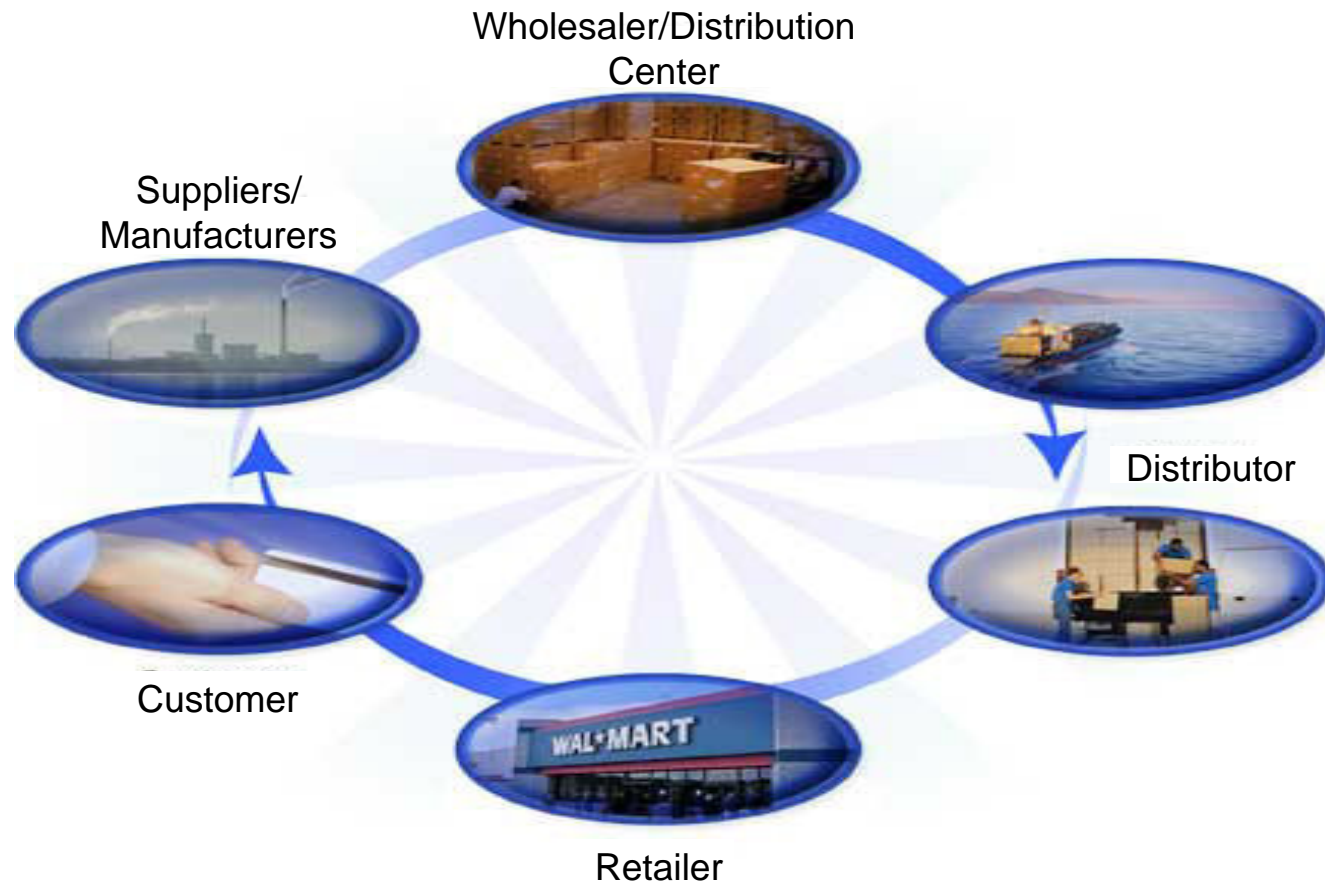
Customer Pay

ILSC + DLA + PM LTV + Depots + Industry = A Successful Collaborative Team



Tactical Wheeled Vehicle Conference

Commercial Supply Chain



We Want to End Up Here!



Tactical Wheeled Vehicle Conference

COLONEL SCOTT KIDD

Project Manager - Tactical Vehicles





Tactical Wheeled Vehicle Conference

Supported Programs

- **HMMWV Recap (OPA)**
 - Recapitalizes HMMWV A0/A1 variants to R1s (M1097R1/M1025R1)
 - **Improves Platform by**
 - Increasing payload on cargo variants
 - Provides 6.5L detuned engine, rebuilt transmission, new or rebuilt driveline components, upgraded brake and suspension components, 200AMP alternator
 - Inspect Repair Only As Needed (IROAN) select components
 - **Locations**
 - Red River Army Depot (RRAD)
 - Letterkenny Army Depot (LEAD)
 - Maine Military Authority (MMA)
 - **Production**
 - ~ 790/Month
- **HMMWV Reset (OMA)**
 - RESET, Non RECAP Variants
 - M1114, M1113 and A2 Variants
 - **Improves Platform by:**
 - Standard 10/20+ 3D (Delayed Desert Damage) including MWOs
 - **Location**
 - Red River Army Depot (RRAD)
 - **Production**
 - Average per month: 195

BL: \$561.3 M worth of business in 07



Tactical Wheeled Vehicle Conference

Supported Programs

- **ASV RESET (Pilot Program) (OMA)**
 - 5 Vehicle Pilot Program (10/20 + 3D + MWO)
- **Improves Platform by:**
 - Major Component IRON
 - Upgrades transmission to Gen 4
 - Installs Frag Kit 1
 - Incorporates ECPs upgrades
 - Turret bolts, firing switch and parking brake inhibitor
- **Location**
 - Red River Army Depot (RRAD)
- **HEMTT RESET (OMA)**
 - No configuration changes
- **Improves Platform by:**
 - Complete rebuild with overhaul of all major assemblies
 - Enhanced OR
 - Returns Platform to Zero Miles
- **Locations**
 - Red River Army Depot (RRAD)

BL: \$33.7 M worth of business in 07





Tactical Wheeled Vehicle Conference

Supported Programs

- **M939 RESET (OMA)**
- **Improves Platform by:**
 - 10/20+ 3D including MWOs
- **Location**
 - Red River Army Depot (RRAD)
 - 1086 programmed
- **FMTV RESET (OMA)**
 - RESET, Condition Code = A
- **Improves Platform by:**
 - Complete rebuild with overhaul of all major components
- **Location**
 - Red River Army Depot (RRAD)
 - 300 Vehicles programmed

- **M870/M872 Trailer RESET (OMA)**
 - RESET, No configuration changes
- **Improves made:**
 - 10/20+ 3D including MWOs
- **Location**
 - M870/M872 - Sierra Army Depot (SIAD) and Red River Army Depot (RRAD)





Tactical Wheeled Vehicle Conference

Other Depot Support

Manpower/Facilities Support:

- Five of the Army's Depots provided manpower, facilitization efforts to rapidly produce over 16,000 retrofit kits to support Theater Operations.
 - Effort complete

Manufacturing Support:

- Depot System is manufacturing Objective Gunner Protection Kits to support Up-Armored HMMWV's GPK Upgrade Program.

Partnerships:

- Ensured partnerships with commercial manufacturers provide capabilities in support of Surge Operations.

*BL: When the tide comes in, all ships rise!
(How do you position for low tide?)*





Tactical Wheeled Vehicle Conference

COLONEL DOUGLAS EVANS

Red River Army Depot - Depot Commander



ISO 9001:2000 Certified

Partnering & Lean





High Mobility Multi-purpose Wheeled Vehicle

- **Direct Army Program to RRAD for Reset & Recap**
 - **RRAD is Prime**
 - Program Management
 - Technical & Engineering Support
 - Quality
 - Manages Sub-Contracts for Engines, Transmissions, & other Outsourced Work
 - Direct Labor for Reset & Recap
 - **Customer Pay Contract to AM General**
 - **Supply Chain Management**
 - Procures & Stores Parts
 - Configures Parts to Work Station Sets
 - Delivers Parts and Work Station Sets to the Production Shop Floor
 - **Benefits to the Army**
 - Parts Are Stored Off Site – No Warehouse Space Required on RRAD
 - No Production Line Stoppage for Parts Shortages in Over 400 Days
 - Production Line Efficiency Maintained



Family of Medium Tactical Vehicles (FMTV)

- **P3 with BAE Systems Mobility and Protection Systems**
 - **BAE Systems is Prime**
 - Program Management
 - Technical & Engineering Support
 - Provides Qualified Cabs (GFM from SIAD)
 - Manages CFM Sub-Contracts for Axels, Engines, Transmissions, Cranes, & other Major Components
 - Provides Supply Chain Management Support to RRAD
 - **RRAD is Sub-Contractor**
 - Provides Facilities, Tools, & Equipment
 - Expedites Parts and Stocks Bins
 - Performs Direct Labor for Reset
 - **DCMA on Site at RRAD**
 - **Benefits to the Army**
 - Establishes Depot Capability at RRAD
 - Sustains Critical Skills & Capabilities
 - Provides Cadre of Skilled Personnel for Deployment



Family of Heavy Tactical Vehicles (FHTV)

- **P3 with Oshkosh Truck Corporation (OTC)**
 - **Performance Based Logistics (PBL) Contract**
 - HEMTT
 - HET
 - PLS
 - **OTC Is Prime**
 - Program Management
 - Technical & Engineering Support
 - Quality Oversight
 - Supply Chain Management
 - Procures and Stores Parts
 - Configures Parts to Work Station Sets
 - Delivers Parts and Work Station Sets to the Production Shop Floor
 - **RRAD Is Sub-Contractor**
 - Facilities, Tools, & Equipment
 - Direct Labor
 - **Benefits to the Army**
 - Standardized SOW Between RRAD & OTC – Transparent to War Fighter
 - OEM Warranty via OTC worldwide service centers & dealerships
 - Configuration Management



Tactical Wheeled Vehicle Conference

Mid-Range Caterpillar Engines

■ Six Sigma Charter Team Established Feb 07

- Caterpillar Corporate
- Caterpillar Holt
- RRAD
- TACOM

■ Objectives

- Establish Mid-Range Caterpillar Engine Repair Capability at RRAD
- Compliance with Established Caterpillar Certified Processes & Procedures
- Direct Labor Performed by RRAD
- Develop P3 with Caterpillar
 - Supply Chain Management to Obtain Certified Caterpillar Parts
 - Warranty Claims & Service by Caterpillar Dealerships and Service Centers (worldwide)

■ Pilot Overhaul On Going

- Data Will Drive Business Case Analysis for Future Work

■ Benefits to the Army

- Utilize Caterpillar Proven Experience from Commercial Engine Sector
- Data Collection for Determination of Maintenance Requirements
- Warranty Claims & Service by Caterpillar Dealerships and Service Centers (worldwide)



Tactical Wheeled Vehicle Conference

Armored Security Vehicle

- **P3 with Textron Marine & Land Systems**
 - **Textron is Prime**
 - Provides Access to TDP
 - Provides Technical, Quality, & Engineering Support to RRAD
 - Provides Supply Chain Management to RRAD
 - **RRAD is Sub-Contractor**
 - Provides Facilities, Tools, & Equipment
 - Performs Direct Labor for Reset
 - **Pilot Overhaul On-Going**
 - Establish Baseline SOW
 - Develop Standard Processes by Work Station
 - Develop Business Case Analysis for Future Work
 - **Benefits to the Army**
 - Establishes Depot Capability at RRAD
 - Sustains Critical Skills & Capabilities
 - Provides Cadre of Skilled Personnel for Deployment



Tactical Wheeled Vehicle Conference



FY07 P3
Revenue
>\$170M

70 Active Contracts with industry

FY08 P3
Revenue
goal \$225M



Tactical Wheeled Vehicle Conference

DR. JOHN GRAY

Letterkenny Army Depot - Deputy to the Commander



Partnering & Lean



Partnership – a relationship resembling a legal partnership and usually involving close cooperation between parties having specific legal rights and responsibilities

SHIP PARTS

Supplier Partnership

Provider Partnership



Customer Pay - Integrated Supply Chain Partnership

- **Achievable With New Business Practices**
 - Not unlike “Prime Vendor”
 - Modeled after industry practice
 - Strength of industry in Supply Chain management
- **Better Forecasting and Demand Collaboration**
- **Cost Per Vehicle is Down**
- **Strong and common supply chain between OEM and Life cycle Maintenance Activity**
- **Reduction of Inventory and Storage Costs**



Tactical Wheeled Vehicle Conference

Core Competency

Industry

- Supply chain management
- Obsolescence management
- Engineering management
- Program management

Military Depots

- Artisan technicians
- Established repair capability
- Diversity of capability
- Infrastructure
- Integral to defense maintenance systems



Tactical Wheeled Vehicle Conference

Partnerships of the Future

- Shared Information
- Integrated enterprise
- Focus on total enterprise performance
- No clear boundary





Tactical Wheeled Vehicle Conference

Where We Want To Go in the Future



Raytheon



MACRO Industries Inc.
Design & Engineering - Views From The Ground Up

**Partnerships are
the Future**

**75% of everything
depots do is on contract**

**Merging the strengths of
military industrial base with
what you do best grows
business; both ours and yours**





What are your Questions?

Transforming the Public-Private Relationship

DEPOT PANEL

- **MG MIKE LENAERS**

TACOM LCMC - Commanding General

Phone: (586) 574-5131

- **Ms. JANET BEAN**

Integrated Logistics Support Center - Executive Director

email: Janet.Bean@us.army.mil Phone: (586) 574-6090

- **COL SCOTT KIDD**

PEO CS&CSS Tactical Vehicles - Project Manager

email: Scott.R.Kidd@us.army.mil Phone: (586) 574-5569

- **COL DOUG EVANS**

Red River Army Depot - Depot Commander

email: douglas.j.evans@us.army.mil Phone: (903) 334-3111

- **Dr. JOHN GRAY**

Letterkenny Army Depot - Deputy to the Commander

email: john.gray5@us.army.mil Phone: (717) 267-8306