



2005 TACOM APBI

“Partnering to Reset, Recapitalize, and Restructure the Force ”

Dearborn, MI

26-28 October 2005

Agenda

Thursday, 27 October 2005

TACOM Address, by MG William M. Lenaers, USA, Commanding General, TACOM

Keynote Speaker, by LTG Joseph L. Yakovac, Jr., USA, Military Deputy, Assistant Secretary of the Army (Acquisition, Logistics & Technology

Acquisition Address, by Mr. Daniel G. Mehney, Director for Acquisition, TACOM

Ground Systems Industrial Enterprise (GSIE) Business Opportunities, by Mr. Frederick Smith, Deputy for Ground Systems Industrial Enterprise

Tank Automotive Research, Development & Engineering Center (TARDEC), by Dr. Richard E. McClelland, Director, TARDEC

Breakout Sessions:

- USA TACOM LCMC - Path forward for heavy-duty Diesel Engines & Engine Emissions, Dr. Peter Schihl & Pam Khabra, TARDEC
- Defense Priorities & Allocation System (DPAS), by Liam McMenamin, Department of Commerce & Joseph Tappel, AMC (DPAS) and International Trafficking and Arms Regulations (ITAR), by Chuck Schwingler, State Department (ITAR)
- Public-Private Partnerships (P3), Rick Riney, AMC Industrial Base Capabilities
- Collaborative Planning and Forecasting for Replenishment (CPFR), Pat Dempsey-Klott, Integrated Logistics Support Center

Friday, 28 October 2005

Program Executive Office, Ground Combat Systems, Significant Acquisition Program Opportunities, by Mr. Kevin Fahey, Program Executive Officer, Ground Combat Systems

Program Executive Office, Combat Support & Combat Service Support, Significant Acquisition Program Opportunities, by BG John Bartley, Jr., USA, Combat Support & Combat Service Support

Integrated Logistics Support Center (ILSO), Significant Acquisition Program Opportunities, by Mr. Darryl Blackburn, Acting Director, ILSO

Program Manager, Unit of Action Business Opportunities, by Mr. John F. Kelley, Director, Supply Management & Procurement, Future Combat Systems, Boeing Company

2005 TACOM APBI



Partnering to Reset, Recapitalize, and Restructure the Force

**October 26 – 28, 2005
Hyatt Regency Dearborn, MI**

Revised Agenda and List of Attendees.

2005 TACOM APBI

"Partnering to Reset, Recapitalize, and Restructure the Force."

Welcome to the 2005 TACOM APBI. This year's APBI will provide broad based business planning information to industry relating to future tank-automotive and armament plans, programs and acquisition opportunities. TACOM, the Program Executive Officers (PEOs), and other appropriate tank-automotive and armament organizations will present market opportunities and plans to include research and development efforts, procurement of major end items, secondary items, maintenance, and other system support business. This event will also describe Acquisition Streamlining initiatives and other topics of special interest.

Wednesday, October 26, 2005

5:00 p.m. – 7:00 p.m.	Check-in & "Ice Breaker" Reception Hubbard Foyer
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Thursday, October 27, 2005

7:00 a.m. – 8:30 a.m.	Check In & Continental Breakfast Hubbard Foyer
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General Session: Hubbard Ballroom

8:30 a.m. – 8:35 a.m.	Welcome and Opening Remarks APBI Co-chairperson
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8:35 a.m. – 9:15 a.m.	TACOM Address MG William M. Lenaers, USA Commanding General, TACOM
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9:15 a.m. - 9:20 a.m.	<i>Intro to Keynote Speaker</i> MG William M. Lenaers, USA Commanding General, TACOM
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9:20 a.m. – 10:00 a.m.	<i>Keynote Speaker</i> LTG Joseph L. Yakovac, Jr., USA Military Deputy, Assistant Secretary of the Army (Acquisition, Logistics, & Technology)
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10:00 a.m. – 10:30 a.m.	Coffee Break
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10:30 a.m. – 11:00 a.m.	<i>Acquisition Address</i> Mr. Daniel G. Mehney Director for Acquisition, TACOM
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11:00 a.m. – 11:30 a.m.	<i>Ground Systems Industrial Enterprise (GSIE) Business Opportunities</i> Mr. Frederick Smith Deputy for Ground Systems Industrial Enterprise (GSIE)
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Revised Agenda

"Partnering to Reset, Recapitalize, and Restructure the Force."

2005 TACOM APBI

Thursday, October 27, 2005 (continued)

11:30 a.m. - 12:00 noon

Tank Automotive Research, Development & Engineering Center (TARDEC) Tech Base

Dr. Richard E. McClelland

Director, TARDEC

12:00 noon - 1:30 p.m.

Lunch

Regency A-K

The balance of the afternoon sessions will be devoted to breakout sessions.

Break-out Sessions

	<i>USA TACOM LCMC Path Forward for Heavy-Duty Diesel Engines & Engine Emissions</i>	<i>Defense Priorities & Allocation System (DPAS) and International Trafficking and Arms Regulations (ITAR)</i>	<i>Public-Private Partnerships (P3)</i>	<i>Collaborative Planning and Forecasting for Replenishment (CPFR)</i>
<i>Session 1 1:30 p.m. - 2:30 p.m.</i>	<i>TARDEC Dr. Peter Schihl & Pam Khabra</i>	<i>Department of Com- merce, Liam McMenamin & Joseph Tappel AMC (DPAS) & State Department, Chuck Schwinger (ITAR)</i>	<i>AMC Industrial Base Capabilities, Rick Riney</i>	<i>Integrated Logistics Support Center (ILSC), Pat Dempsey-Klott</i>
<i>2:30 p.m. - 3:00 p.m.</i>	<i>Coffee Break</i>	<i>Coffee Break</i>	<i>Coffee Break</i>	<i>Coffee Break</i>
<i>Session 2 3:00 p.m. - 4:00 p.m.</i>	<i>TARDEC Dr. Peter Schihl & Pam Khabra</i>	<i>Department of Com- merce, Liam McMenamin & Joseph Tappel AMC (DPAS) & State Department, Chuck Schwinger (ITAR)</i>	<i>AMC Industrial Base Capabilities, Rick Riney</i>	<i>Integrated Logistics Support Center (ILSC), Pat Dempsey-Klott</i>
<i>4:00 p.m. - 4:30 p.m.</i>	<i>Coffee Break</i>	<i>Coffee Break</i>	<i>Coffee Break</i>	<i>Coffee Break</i>
<i>Session 3 4:30 p.m. - 5:30 p.m.</i>	<i>TARDEC Dr. Peter Schihl & Pam Khabra</i>	<i>Department of Com- merce, Liam McMenamin & Joseph Tappel AMC (DPAS) & State Department, Chuck Schwinger (ITAR)</i>	<i>AMC Industrial Base Capabilities, Rick Riney</i>	<i>Integrated Logistics Support Center (ILSC), Pat Dempsey-Klott</i>

"Partnering to Reset, Recapitalize, and Restructure the Force."

Revised Agenda (continued)

2005 TACOM APBI

Revised Agenda (continued)

Thursday, October 27, 2005 (continued)

There will be three one-hour sessions. The same four topics will be presented each session. The times for these sessions are denoted below. Breakout topics are listed below. ***A floor plan designating specific rooms for each session is available on the back of the next page.***

1:30 p.m. – 2:30 p.m. *Breakout Session One*

2:30 p.m. – 3:00 p.m. Coffee Break

3:00 p.m. – 4:00 p.m. *Breakout Session Two*

4:00 p.m. – 4:30 p.m. Coffee Break

4:30 p.m. – 5:30 p.m. *Breakout Session Three*

Break-out Session Descriptions

U.S. Army TACOM LCMC Path Forward for Heavy Duty Diesel Engines and Engine Emissions - This session addresses the impact of current and future heavy-duty emission standards on the Army tactical ground vehicle fleet along with future potential solution pathways.

Defense Priorities & Allocation System (DPAS) and International Trafficking and Army Regulations (ITAR) - This workshop addresses the following two areas:

DPAS - This part addresses the purpose of the DPAS program as it pertains to both the production and delivery of urgently needed military hardware and the viable tools for obtaining Special Priorities Assistance. Also, it will provide insight on how to obtain preferential scheduling over either higher rated orders or equally rated orders already scheduled in the manufacturing scheme.

ITAR - This part provides an explanation of the Registration process and the legal and regulatory process governing the export /import of unclassified production, articles, technology, using the Canadian Exemption (22CFR 126.5) combined with the recordkeeping requirements.

Public-Private Partnerships (P3) - This session will explain what the Public-Private Partnership initiative is, its purpose, and DoD's plans to increase participation.

Collaborative Planning and Forecasting For Replenishment (CPFR) - CPFR is an industry standard for exchanging information amongst supply chain partners. This session will focus more on collaboration between Government and supplier relating to joint requirements planning and forecasting in order to shorten lead times and maximize production capacity, resulting in improved responsiveness to the Soldier.

5:30 p.m. – 7:00 p.m. *Networking Reception*
Hubbard Foyer

“Partnering to Reset, Recapitalize, and Restructure the Force.”

2005 TACOM APBI

Revised Agenda (continued)

Friday, October 28, 2005

7:00 a.m. – 8:30 a.m.

Check In & Continental Breakfast
Hubbard Foyer

General Session: Hubbard Ballroom

8:30 a.m. – 8:35 a.m.

Opening Remarks
APBI Co-chairperson

8:35 a.m. - 9:05 a.m.

Program Executive Office, Ground Combat Systems
Significant Acquisition Program Opportunities
Mr. Kevin Fahey
Program Executive Officer, Ground Combat Systems

9:05 a.m. – 9:35 a.m.

Program Executive Office,
Combat Support & Combat Service Support
Significant Acquisition Program Opportunities
BG John Jr., Bartley, USA
Combat Support & Combat Service Support

9:35 a.m. – 10:05 a.m.

Coffee Break

10:05 a.m. – 10:35 a.m.

Integrated Logistics Support Center (ILSC)
Significant Acquisition Program Opportunities
Mr. Darryl Blackburn
Acting Director,
Integrated Logistics Support Center (ILSC)

10:35 a.m. – 11:05 a.m.

Program Manager, Unit of Action Business Opportunities
Mr. John F. Kelley
Director, Supply Management & Procurement
Future Combat Systems
The Boeing Company

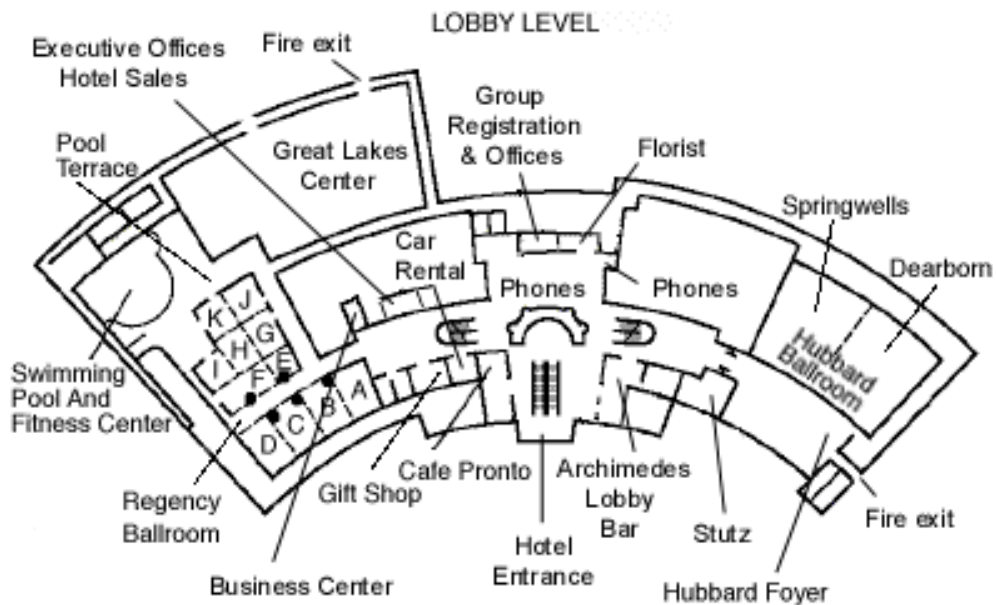
11:05 a.m. - 11:10 a.m.

Closing Remarks: Adjournment
APBI Co-chairperson

“Partnering to Reset, Recapitalize, and Restructure the Force.”

2005 TACOM APBI

Revised Agenda (continued)



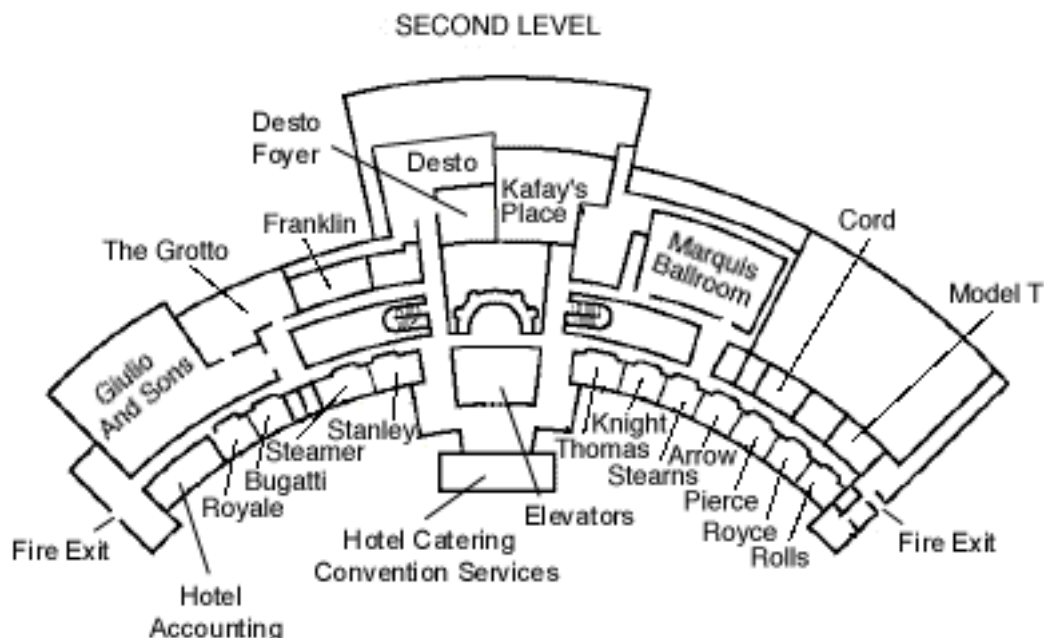
Break-out Sessions

USA TACOM LCMC Path Forward for Heavy-Duty Diesel Engine Emissions - *Hubbard Ballroom*

Defense Priorities & Allocation System (DPAS) and
International Trafficking and Arms Regulations (ITAR) - *Stearns/Knight*

Public-Private Partnerships (P3) - *Stanley/Steamer*

Collaborative Planning and Forecasting for Replenishment (CPFR) - *Pierce/Arrow*



"Partnering to Reset, Recapitalize, and Restructure the Force."

2005 TACOM APBI

Displays will feature TACOM --government only -- opportunities.

TACOM Foyer Displays

- 1 – Problem Resolution Booth
- 2 – Competition Management
- 3 – Acquisition
- 4 – Small Business
- 5 – GSIE (Including ANAD, JSMC Lima, RIA, Sierra Army Depot, Watervliet Arsenal)
- 6 – Red River Army Depot (RRAD)
- 7 – TARDEC
- 8 – Integrated Logistics Support Center (ILSC)
(Collaborative Planning and Forecasting for Replenishment (CPFR))
- 9 – Integrated Logistics Supply Center (ILSC)
(Reset)

*The Tank-Automotive & Armaments Command thanks you for attending
& we look forward to seeing you again next year.*

*The National Defense Industrial Association (NDIA) thanks you
for your participation in this year's conference
and wishes you a safe trip home.*

Displays/Hotel Floor Plan

"Partnering to Reset, Recapitalize, and Restructure the Force."

2005 TACOM APBI

~ Attendee Information ~

Message Center

For your convenience, a message board will be located at the TACOM APBI registration desk, located in the Lobby Foyer.

*Hyatt Regency Dearborn
Fairlane Town Center
Dearborn, MI 48126
phone#: 313- 593-1234
fax#: 313-982-6884*

We ask that attendees have faxes sent to the Attention of your room#, and not to the registration desk.

***Conference badges are to be worn at all times during event.
No badge = no access to ANY event venues.***

In Case of an Emergency at the:

Hyatt Regency Dearborn -- Emergency, please dial 55

General Local Information:

Hospital phone# is - Oakwood (3 miles)
(313) 593-7440

Pharmacy
local (2miles)
(closes at 10:00 p.m.) Rite Aid
5016 Greenfield Rd. at
Hubbard Rd.
(313) 581-0410

24 hour (4 miles)
5650 Schaefer Rd. at Ford Rd. Rite Aid
(313) 581-3280

Police Station
Michigan State Police (313) 348-1505
Dearborn Police (313) 943-2241

Proceedings

A hard copy of the 3-part (General Session presentations, Break-out Session briefings, and Acquisition Summary of Estimated Future Buys) proceedings for this meeting will be made available on-site.

Attendee Information

"Partnering to Reset, Recapitalize, and Restructure the Force."

2005 TACOM APBI

Attendee Information (continued)

Surveys

We appreciate any comments or suggestions you may have regarding this event. Please return the "2005 TACOM APBI, Event #6520" Meeting Survey to the conference registration desk in the Hubbard Ballroom Foyer. If you don't have the time to fill out the survey now, you can fax it to 703-522-1885 at your convenience.

Point of Contact Information ("List of Attendees" Corrections)

If any part of your contact information is incorrect on the "List of Attendees" included in this "Revised Agenda" hand-out, please stop by the Conference Registration desk to make note of the corrections on the "Master Copy" so we can update our database. We appreciate your letting us know of any errors.

Miscellaneous:

Security

For security purposes, we respectfully ask that you check any personal items (luggage, computer bags, coats, etc.) with the hotel bellman. You will need to present your room key and/or photo ID. The NDIA staff will not accept any of the above.

On-site at the Conference

You must carry all forms of valid photo ID and necessary paperwork (Corporate POC letters, passport, etc.) with you at all times.

Revised Agenda Hand-out

Please write your name at the top of your "Revised Agenda" handout. A limited number of the handouts were made to have one (1) for each registered attendee. If you lose your handout, the registration desk will not be able to give you a replacement until the conclusion of the conference.

Cell Phones/Beeper Usage

We respectfully ask that you turn off your cell phones, beepers, etc. (or turn them to "vibrate"), out of courtesy to the conference speakers and your fellow attendees.

Hotel Parking

Self-parking (outdoor) is complimentary for hotel guests and symposium attendees. Valet parking is available at the main lobby entrance of the hotel. The valet parking fee is \$7.00 for the day & \$15.00 for overnight parking, with in & out privileges.

"Partnering to Reset, Recapitalize, and Restructure the Force."

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Airport Transportation/Taxis

From Detroit Metro Airport:

Taxi: Approx \$25-\$30 for 1-4 persons
Sedan (Lincoln Town Car): \$39 for 1-4 persons
Van: \$10 per person for a party of 5 or more
Limousine: \$75.00 (Up to 8 passengers)

To Detroit Metro Airport:

Taxi: Approx \$25-\$30 for 1-4 persons
Sedan (Lincoln Town Car): \$29 for 1-4 persons
Van: \$10 per person for a party of 5 or more
Limousine: \$75.00 (Up to 8 passengers)

Transportation via Sedan, Van, & Limo available:

Mon-Thur 10am-10pm, Fri & Sat 10am-9pm, Sun 11am-10pm. Contact the Concierge for reservations.

Attendee Information (continued)

“Partnering to Reset, Recapitalize, and Restructure the Force.”



Serving "Our Army at War -- Relevant and Ready"

2005 Advanced Planning Brief to Industry

*PEO CS&CSS
and
Industry Challenges*

Presented by:

BG JOHN R. BARTLEY

Program Executive Officer

Combat Support & Combat Service Support

Innovation for Today and Tomorrow's Expeditionary Forces

28 Oct 05



Agenda

- ◆ **Portfolio & Organization**
- ◆ **Mission and Vision**
- ◆ **Project Management Offices/Direct Report Product Management Offices**
 - Overview
 - Technology Challenges
 - Opportunities for Industry
- ◆ **Summary**



PEO CS&CSS Portfolio & Organization



Program Executive Officer
BG John R. Bartley
Deputy PEO
Dr. Grace Bochenek



Force Projection
PM: COL Timothy Goddette
DPM: Ms. Patricia Plotkowski



Army Watercraft Systems
LTC Philip Schoenig



Bridging
LTC Jerry Winberry



Combat Engineer/Material Handling Equipment
LTC Carol Solesbee



Force Sustainment Systems
LTC Craig Rettie



Petroleum & Water Systems
LTC Francisco Espallat



Recovery Vehicle Management Office
Mr. Bill Madro



PEO CS&CSS
 DA Systems
 Coordinators



Test, Measurement, & Diagnostic Equipment
LTC Dwayne Morton



Sets, Kits, Outfits & Tools
LTC Jeff Carr



Tactical Vehicles
PM: COL Scott Kidd
DPM: Mr. Tony Shaw



Heavy Tactical Vehicles
LTC Lisa Kirkpatrick



Light Tactical Vehicles
LTC Kevin Peterson



Medium Tactical Vehicles
Mr. David Dopp





Innovation for Today's Expeditionary Forces...



ASV



Gunner Protection Kit (GPK) Installations



Sherpa Guided Airdrop



Armor Installations



Cougar



RG31



Cooling Vests



Balad



Buffalo



Improved Seat Restraints



Combined Laundry & Shower Facilities (LADS)



Unique Bridging Solutions



PEO-LNOs



Fire Suppression



Gunner Restraint System



RTCH



Sprung Shelters



Containerized Kitchen



TSV Mission



Force Provider

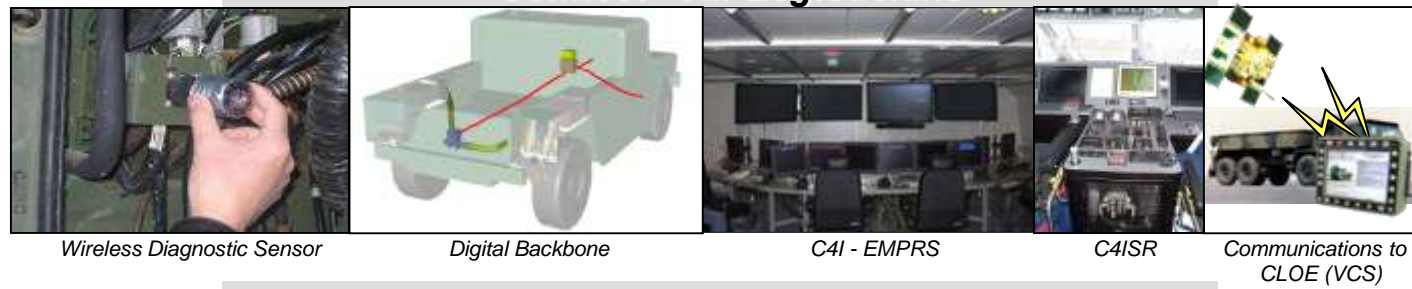


Camp Arifjan



...Innovation for Tomorrow's Expeditionary Forces

"Connect" our Logisticians



Wireless Diagnostic Sensor

Digital Backbone

C4I - EMPRS

C4ISR

Communications to CLOE (VCS)

Modernize Theater Distribution



Multi-Temperature Refrigerated Container System

Precision Airdrop

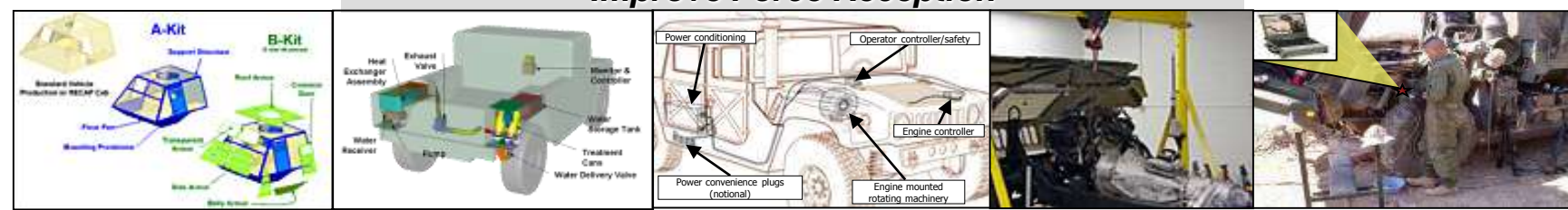
Improved Load Handling

UV/MSV System Acquisition Concepts

Trailer Strategy Concept

RIFTS

Improve Force Reception



Long Term Armor Strategy

WRUE

On-Board Vehicle Power

Rapid Repower

MSD

Integrate the Supply Chain



IETMS

PLS w/ASLMS

**Equipment rarely breaks –
When it breaks, it's easy to fix**

- Self-diagnostics and reporting
- Few tools, repairs < 20 min
- Common parts/carry spares



MISSION

Develop, acquire, field, and support materiel solutions that optimize the “System of Systems” approach to project and sustain joint forces worldwide.

VISION

Recognized Experts in Commercial Off-The-Shelf (COTS) & Non Developmental Items (NDI) (CaNDI) Acquisition, Logistics and Technology.

Project Manager

COL Timothy Goddette

Deputy PM Acquisition: Ms. Patricia Plotkowski

Deputy PM Logistics: Ms. Janet Bean

Deputy PM Technology: Mr. Jack Peterson

PRODUCT MANAGERS

- ◆ Army Watercraft Systems
 - *LTC Philip Schoenig*
- ◆ Combat Engineer/Material Handling Equipment
 - *LTC Carol Solesbee (ARNG)*
- ◆ Force Sustainment Systems
 - *LTC Craig L. Rettie*
- ◆ Petroleum and Water Systems
 - *LTC Francisco Espallat (USAR)*
- ◆ Bridging Equipment
 - *LTC Jerry Winberry (ARNG)*

PRODUCT OFFICES

- ◆ Recovery Management Office
 - *Mr. William Madro*



Force Projection ~ Products

103 Programs*

*Does not include systems in sustainment



PM Combat Engineer/Material Handling Systems

17 Systems

2.5 Cubic Yard Scoop Loaders*
4.5 & 5.0 Cubic Yard Scoop Loaders*
All Terrain Crane Pile Driving System*
All Terrain Lifter, Army System (ATLAS) II
Backhoe Loader (HMEI Type III)*
Grader SLEP*
D7 Bulldozer SLEP*
Deployable Universal Combat Earthmover (DEUCE)*
Dual Steel Wheeled Roller (DSWR)*
Engine Mission Modules (EMM)*
Grader, Motorized, Heavy*
High Mobility Eng. Excavator (HMEI I)*
Rough Terrain Container Handler (RTCH)*
Scraper, Earthmoving, 11 Cu. Yd. Abn.*
Scraper, Earthmoving, 14-18 Cu. Yd. SLEP*
Skid Steer Loader*
Water Distributor Abn. 2500 gal.*



PM Bridging

14 Systems

Bridge Erection Boat (BEB)*
Common Bridge Transporter (CBT)*
Dry Support Bridge (DSB)*
Improved Ribbon Bridge (IRB) Bays*
Rapidly Emplaced Bridging System (REBS)*
RG31 Mine Protected Vehicle*
Buffalo Mine Protected Vehicle*
Cougar Mine Protected Vehicle*
IVMMD Mine Protected Vehicle*
AVLB – Armored Vehicle Launched Bridge
M9 ACE – Combat Engineer Equipment
Expeditionary Assault Bridge (EAB)*
Bridge Adapter Pallet (BAP)
Improved Boat Cradle (IBC)

Workgroup

NATO MHE Workgroup – CE/MHE*

***MANSCEN/CASCOM Participation
Joint Programs**



PM Force Sustainment Systems

43 Systems

Advanced Low Velocity Airdrop System (ALVADS)*
Army Space Heater (ASH)*
Assault Kitchen (AK)* **Priority 2**
Authorized Stockage List Mobility System (ASLMS)*
Battlefield 12-Head Shower
Containerized Batch Laundry (CBL)*
Containerized Kitchen (CK)*
DoD Combat Field Feeding Program (6.4/6.5)*
Dual Row Airdrop System (DRAS)*
Enhanced Container Delivery System (ECDS)*
Extraction Parachute Jettison System (EPJS)*
Family of Cargo Bed Covers (CBCs)
Food Sanitation Center (FSC)*
Force Provider*
Chaplaincy Logistical Support Package (CLSP)
Containerized Chapel (CC)
Containerized Latrine System (CLS)
Containerized Self-Serve Laundry (CSSL)
Containerized Shower System (CSS)
Electronic Shop Van (ESV)*
Joint Precision-Guided Aerial Delivery Sys (JPADS)*
Priority 1
Kitch., Co. Level, Fld. Feeding - Enhanced (KCLFF-E)
Large Capacity Field Heater (LCFH)*
Laundry Advanced System (LADS)*
Lightweight Maintenance Enclosure (LME)*
Low Cost Aerial Delivery System (LCADS)*
Mobile Integrated Remains Collection System (MIRCS)*
Mobile Kitchen Trailer-Improvement (MKT-I)
Modern Burner Unit (MBU)*
Modular Command Post System
Modular General Purpose Tent System (MGPTS)
Mounted Water Ration Heater (MWRH)
Multi-Temp. Refrigerated Container System (MTRCS)
Refrigerated Container System (RCS)*
Small Unit Shower (SUS)
Soldier Crew Tent (SCT)
Space Heater Arctic (SHA)
Space Heater Convective (SHC) 35K BTU
Space Heater Convective (SHC) 60K BTU*
Space Heater: Large, Medium, Small
Tent Extendable Modular PERsonnel (TEMPER)
Thermoelectric Fan (TEF)
Ultra Lightweight Camouflage Net Sys. *(ULCANS)

ICTs

Joint Bridging Development – CE/MHE*
All Terrain Lifter – CE/MHE*
Joint Precision Airdrop System - FSS*
Theater Support Vessel - Objective – AWS*
Joint Modular Intermodal Platform - AWS*



PM Army Watercraft Systems

11 Systems

115 Ton Barge Derrick
Landing Craft Mechanized (LCM8) Mod II*
Landing Craft Utility (LCU) 2000 Material Change*
Large Tug (LT) 128' Modernization*
Logistics Support Vessel (LSV) Reproducturement*
Modular Causeway System (MCS)*
Small Tug 900 (ST900)*
Theater Support Vessel - Interim*
Harbormaster Command and Control Center* **Priority 1**
C4I Upgrade*
UNDS*



PM Petroleum & Water Systems

16 Systems

Tactical Water Purification System (TWPS) 1500 GPH*
Reverse Osmosis Water Purification Unit (ROWPU) 600 GPH*
Advanced Aviation Forward Area Refueling System (AAFARS)*
Assault Hoseline System (AHS)*
Fuel System Supply Point (FSSP)*
LHS Compatible Water Tank Rack (Hippo)*
LHS Modular Fuel Farm (LMFF)* **Priority 2**
Lightweight Water Purifier (LWP)*
Modular Base Petroleum Lab (MBPL)*
Petroleum Quality Analysis System (PQAS)*
Petroleum Test Kit (PTK)*
Rapidly Installed Fluid Transfer System (RIFTS)*
Priority 1
Tactical Petroleum Terminal (TPT)*
Unit Water Pod System (Camel)*
Versatile Tank and Pump Unit (VTU)*
Forward Area Water Point Supply System (FAWPSS)*



Recovery Vehicle Management Office

2 Systems

M88A1 Medium Recovery Vehicle RECAP*
M88A2 HERCULES*



◆ **Army Watercraft Systems**

- Integrate COTS systems software required to meet performance requirements identified in the Harbormaster Command and Control Center (HCCC).

◆ **Bridging Systems**

- Develop and integrate composite bridging materials for induction into Dry Support Bridge (DSB) and next generation bridging.
- Investigate, design, develop and integrate new capabilities for Mine Protected Vehicles (MPVs):
 - Component protection
 - Vehicle frangibility
 - Blast mitigating seating
 - Roll over prevention/vehicle control stability (V=Hull=high CG) high propensity to roll
 - Enhanced crew and vehicle capsule cooling system
- MS C follow on contract award FY07 for additional systems

◆ **Combat Engineering and Material Handling Equipment**

- Procure commercial systems that are easily modified to become C130 transportable by meeting weight, tip-off curve and floor load distribution requirements with minimal disassembly.
- Integrate and apply technologies to meet requirements for Electromagnetic Environmental Effects (E3), High Altitude Electromagnetic Pulse (HEMP), and Nuclear, Biological and Chemical (NBC) Contamination while continuing operations.
- Develop propulsion systems to meet new Tier 3 EPA non-road emissions standards (a commercial requirement).
- Develop simulators and training solutions to improve institution and unit level training.



◆ Force Sustainment Systems

- Develop smart airdrop systems using Global Positioning System (GPS), autonomous control, software integration with USAF Precision Airdrop System (PADS).
- Identify or develop alternative construction technologies and materials for parachutes that will broaden the industrial base and provide systems that are less costly and easier to maintain.
- Develop method to safely and efficiently manage, handle, treat and dispose of the waste stream (liquid and solid).
- Develop a more efficient means for the disposal of black water than collection and hauling away.
- Investigate cogeneration (energy from waste heat) for shelter heating, field feeding, and field service applications.
- Develop high efficiency insulation for refrigerated containers for reduced cooling and/or reduced wall thickness.
- Develop refrigeration technology for improved performance, reliability, and reduced environmental impact of refrigerated containers.
- Billeting subsystems are the largest component of the Force Provider System; develop expandable, rapidly deployable, and durable rigid wall shelter to replace fabric tents.
- Investigate improved ventilation and heat exchange equipment for tents.



◆ **Petroleum and Water Systems**

- Develop Department of Transportation-approved lightweight liquid containers, composite tanks (500-3000 gal).
- Develop packaged water concepts.
- Develop innovative water generation technologies (from air, exhaust, etc.).
- Develop new liquid transfer technologies for movement of liquids over long distances (100-600 miles).
- Develop next generation water purification technologies.
- Develop new liquid storage concepts to replace large fabric tanks (200,000 gal and larger).
- Develop remote gauging for collapsible fabric tanks.
- Develop GPS tracking for fuel & water systems.
- Develop innovative, rugged equipment for rapid water & fuel analyses.



Force Projection ~ Opportunities for Industry

♦ Army Watercraft Systems

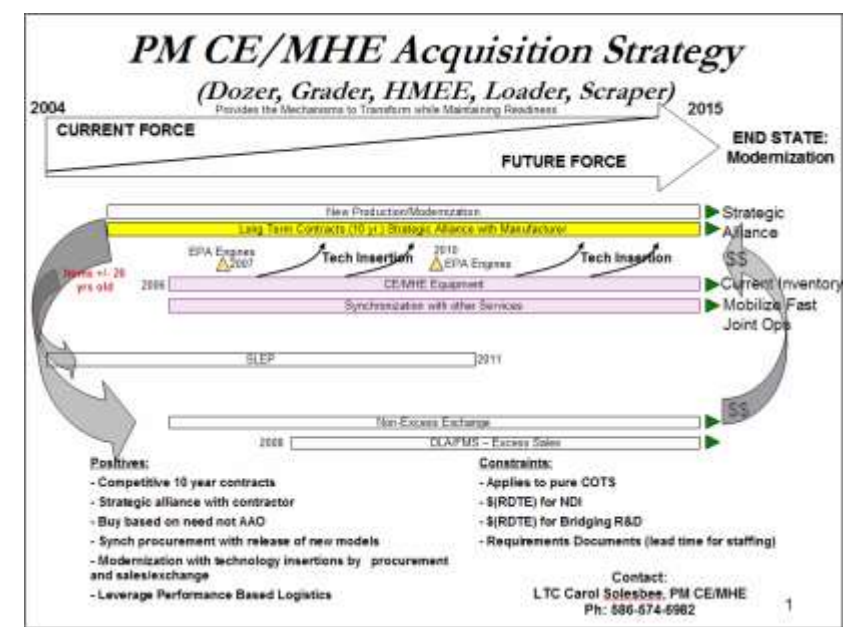
- Competitive contract forecast for the Modular Causeway Systems (3QFY06).
- Competitive contract for Harbormaster Command and Control Center (HCCC) (FY07).
- Landing Craft Utility mods procured in 2QFY06, 2QFY07, and 2QFY08

♦ Bridging Systems

- Potential for competitive contract award for protection and Mine Clearing Vehicle (MCV) capabilities/new technology (2QFY07). MS C follow on award to purchase remainder of fleet requirement.
- Competitive contract for improved/lightweight composite armor for MCV (2QFY07).

♦ Combat Engineering and Material Handling Equipment

- Award new competitive contracts for the ATLAS II, Skid Steer Loaders (SSL), and the Heavy Grader (FY07).
- Opportunities for increased Service Life Extension Program (SLEP) development and application on existing CE systems i.e. Dozers, Scrapers and Graders (FY07 and beyond).





◆ **Force Sustainment Systems**

- Competitive contract for development and production 2,000-Pound Joint Precision Airdrop System (JPADS). (FY06 – Natick)
- Competitive contract for development and production 10,000-Pound Joint Precision Airdrop System (JPADS). (FY07 – Natick)
- Competitive contract for continuing production of the Containerized Kitchen (CK) (FY08 - Natick)

◆ **Petroleum and Water Systems**

- Competitive procurement to investigate and integrate new technologies to improve Army petroleum quality and handling systems (FY07).
- Investigate high reliability components for petroleum handling equipment and storage systems (2QFY07)
- Initiate and develop improved water analysis equipment for TWPS and LWP (FY07).
- Opportunities to develop new water packaging concepts to replace bottle water (FY07).
- Opportunities to develop new liquid storage concepts and the next generation of water purification systems (FY07).
- Opportunities to develop new fuel analysis equipment (FY07).



MISSION

The lifecycle management of tactical wheeled battlefield distribution systems enabling the Modular, Joint and Expeditionary Ground Force

Project Manager

COL Scott R. Kidd

Deputy PM Acquisition: Mr. Tony Shaw

Deputy PM Logistics: Mr. Cesare Gaglio

Deputy PM Technology: Mr. Paul Skalny

PRODUCT MANAGERS

- ◆ Light Tactical Vehicles
 - PM, LTC Kevin Peterson
- ◆ Medium Tactical Vehicles
 - PM, Mr. David Dopp
- ◆ Heavy Tactical Vehicles
 - PM, LTC Lisa Kirkpatrick



Tactical Vehicles ~ Products

86 Programs



PM Light Tactical Vehicles

25 Programs

M966A0, A1 - TOW Carrier, Armored
 M996A0, A1 - 2-Litter Ambulance
 M997A0, A1, A2 - 4-Litter Ambulance
 M998A0, A1 - Cargo/Troop Carrier
 M1025A0, A1, A2 - Armament Carrier
 M1026A0, A1 - Armament Carrier w/winch
 M1035A0, A1, A2 - 2-Litter Ambulance
 M1036A0 - TOW Carrier, Armored
 M1037A0 - Shelter Carrier
 M1038A0, A1 - Cargo/Troop Carrier w/winch
 M1042A0 - Shelter Carrier w/winch
 M1097A0, A1, A2 - Heavy HMMWV
 M1113A0 - Expanded Capacity Vehicle (ECV)
 M1114A0 - Up-Armored HMMWV
 XM1151 - Enhanced Armament Carrier
 XM1152 - Enhanced Troop/Cargo/Shelter Carrier

Chassis, Light Tactical Trailer (LTT)
 M1101 - LTT, Light
 M1102 - LTT, Heavy
 M116A3 - ¾ Ton Chassis Trailer

HMMWV Add-on Armor Kits (APK)
 HMMWV Recapitalization Program (R1)
 HMMWV Repower Program (R2)
 USMC HMMWV Procurement (inc. M1043A0, A1, A2; M1044A0, A1; M1045A0, A1, A2; M1046A0, A1; M1123)
 USAF HMMWV Procurement (inc. M1116, M1145)



PM Medium Tactical Vehicles

28 Programs

M1078A1 - 2.5 Ton Std Cargo
 M1079A1 - 2.5 Ton Van
 M1080A1 - 2.5 Ton Chassis
 M1081A0 - 2.5 Ton Cargo (LVAD)
 M1083A1 - 5 Ton Std Cargo
 M1084A1 - 5 Ton Std Cargo w/HME
 M1085A1 - 5 Ton Long Bed Cargo
 M1086A1 - 5 Ton Long Bed Cargo w/MHE
 M1088A1 - 5 Ton Tractor
 M1089A1 - 5 Ton Wrecker
 M1090A1 - 5 Ton Dump
 M1092A1 - 5 Ton Chassis
 M1093A0 - 5 Ton Cargo (LVAD)
 M1094A1 - 5 Ton Dump (LVAD)
 M1096A1 - 5 Ton Long Chassis
 M1082 - FMTV 2.5 Ton Trailer
 M1095 - FMTV 5 Ton Trailer
 M1117 - Armored Security Vehicle
 XM1087 - FMTV Expansive Van
 XM1140 - FMTV High-Mobility Artillery Rocket System (HIMARS)
 XM1157 - FMTV 10 Ton Dump
 XM1148 - FMTV 8.8 Ton LHS
 XM1147 - FMTV LHS Trailer
 XM1160 - Medium Extended Air Defense System (MEADS)
 M1022A1 - 7.5 ton Dolly Set
 M200A1 - 2.5 Ton Chassis Trailer
 M103A3 - 1.5 Ton Chassis Trailer
 CKT - Containerized Kitchen Trailer



PM Heavy Tactical Vehicles

33 Programs

M977 - Heavy Expanded Mobility Tactical Truck (HEMTT) Cargo
 M985 - HEMTT Cargo w/MHC
 M978 - HEMTT Tanker, 2500 gal
 M983 - HEMTT Tractor
 M984 - HEMTT Wrecker
 M1120 - HEMTT LHS
 M1074 - Palletized Load System (PLS) w/MHC
 M1075 - PLS Truck
 M1076 - PLS Trailer
 M1070 - Heavy Equipment Transporter System (HETS)
 M1000 - HETS Semi-trailer
 M1142 - Tactical Firefighting Truck (TFFT)
 XM1158 - HEMTT-based Water Tender (HEWATT)
 M1977 - Common Bridge Transporter (CBT)
 M14 - Improved Boat Cradle (IBC)
 M15 - Bridge Adapter Pallet (CBT)
 M3/M3A1 - Container Roll On/Off Platform (CROP)
 No Model Number - Container Handling Unit (CHU)
 M1, M1077/M1077A1 - Flat rack
 M915A3 - Line Haul Tractor
 M915A4 - Line Haul Tractor Upgrade (Glider)
 M916A3 - Light Equipment Transporter (LET)
 M917A2 - 20 Ton Dump
 M878A2 Yard Tractor
 Fifth Wheel Towing Device (FWTD)
 M870A3 - 40 ton Low Boy Trailer
 M871A3 - 22.5 Ton Flatbed Trailer
 M872A4 - 34 Ton Flatbed Trailer
 M989A1 - (HEMAT)
 M967A2 5000 Gal Bulkhaul Tanker
 M969A3 5000 Gal Refueler Tanker

HEMTT RECAP
 M915 RECAP



◆ Safety:

- Reduce non-combat casualties
- Crew Compartment crush resistance
- Improved crew restraints
- Human Factors (seating, visibility, reduction of operator fatigue)
- Integrated Driver Vision Aids
- Collision avoidance
- Anti-lock brakes
- Suppression of vehicle fires
 - Predictive failure system

◆ Survivability:

- Armor protection
- Force protection/self-defense
- Vehicle control enhancement
- Reduced aural & visual signatures

◆ Reliability/Maintainability/Supportability:

- Increased reliability
- Reduced # of tools
- Reduced non-operator organic maintenance tasks
- Reduced operator maintenance tasks
- Reduced scheduled maintenance tasks and intervals
- Decreased Mean Time To Repair (MTTR)
- Reduced operator/maintenance training
- Parts commonality
- On-Board Diagnostics/Prognostics, **(Vehicle Computer System – VCS)**
 - Interactive Electronic Technical Manuals (IETMs)
 - Automated Preventative Maintenance Checklist (PMC)

Four main warfighting capabilities



◆ Distribution & Mission Enhancement:

■ Force Sustainment

- On-board power generation
- On-board water generation

■ Operational and Sustainment (O&S) cost savings

■ Power management/on-board power

■ Deployability

- Reduced curb weights
- “Quick” component/kit installation & removal, and on-board storage

■ Operational Range

- Greater distances
- Increased fuel efficiency

■ Distribution of materiel, equipment & people

■ Network Centricity (C4ISR)

- Integrated hardware/mass storage suite
- Open software architecture, incorporating:
 - Non-line of sight 2-way communication
 - Integrated blue force tracking
 - Soldier-machine interface
 - Line-of-Sight (LOS) convoy communications
 - Radio frequency identification (RFID) tracking/automated inventory control

■ Mobility

- Improved soft soil traversing characteristics
- Improved vehicle stability and handling characteristics

■ Improved vehicle ride dynamics (vibration reduction)

Four main warfighting capabilities (cont)



◆ **Competitive RFPs currently planned during FY 06**

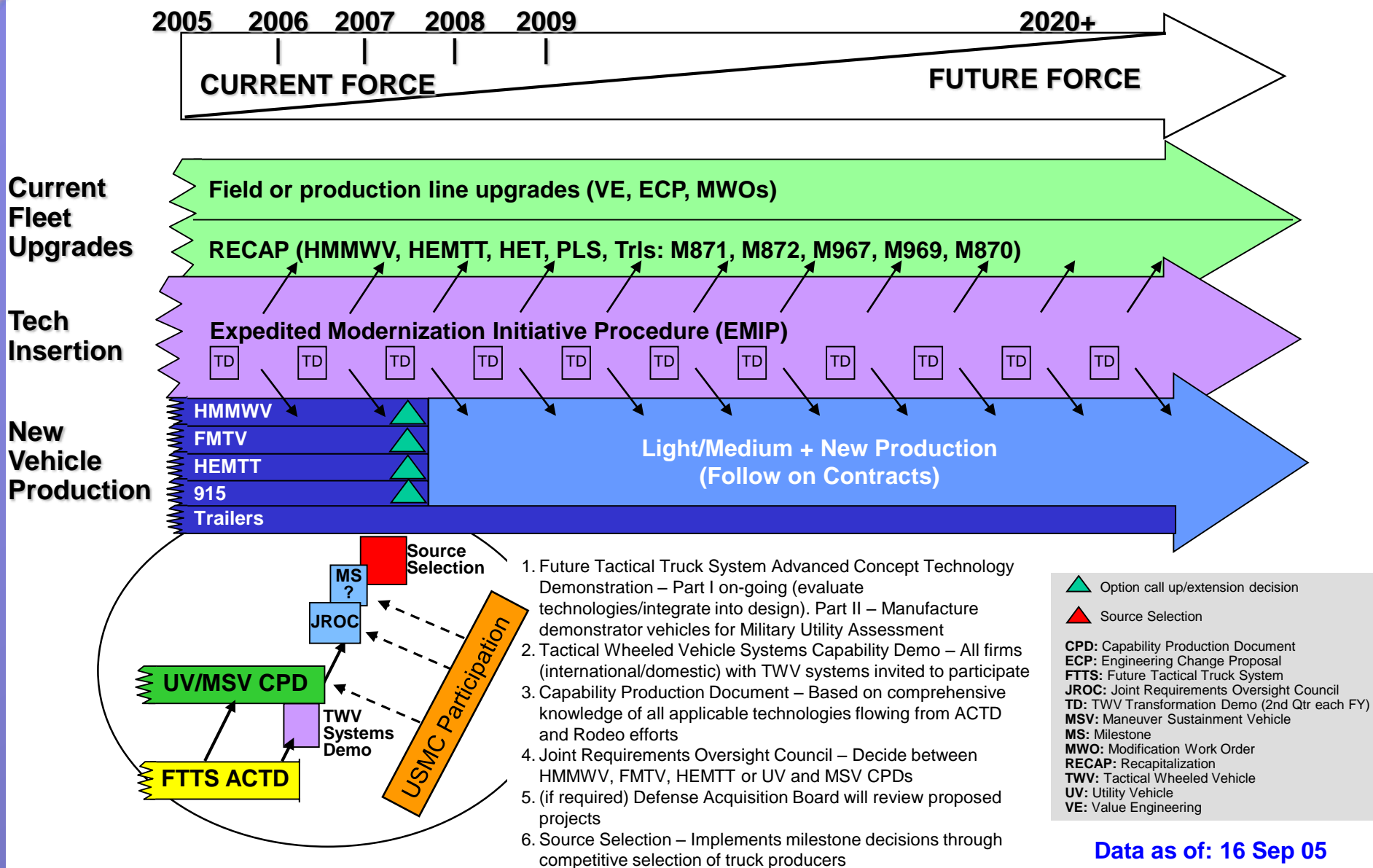
- M200A1 - Medium Tactical
 - Small Business Set Aside contract 2Q06
 - 977(ea) 2 1/2 Ton Trailer Chassis, 2 wheeled trailers
- M871 Series Modernization - Heavy Tactical
 - Competitive contract scheduled for award 2Q06
 - Approximate quantity of 700 each M871 trailers
- Tactical Vehicle Performance Based Logistics
 - Market Surveys currently being analyzed
 - Anticipate RFP in late FY 06/07 based on assumption of positive survey results and approved Business Case Analysis



TWV Transformation Strategy

TWV Health Monitored through Fleet Assessment

PEO CS&CSS





- ◆ **Expedited Modernization Initiative Procedure (EMIP) Component Technology Demonstrations**
- ◆ **Future Tactical Truck System (FTTS) System Capability Demonstration**
- ◆ **UV/MSV Follow-on Efforts**
- ◆ **Long Term Armor Strategy (LTAS)**



EMIP Component Technology Demonstrations

PEO CS&CSS

- ◆ **EMIP Process starts with Technology Application Idea (TAI), reviewed for Technology Readiness Level (TRL) and Tactical Vehicle (TV) applicability (submit TAIs to: TruckTech@tacom.army.mil)**
- ◆ **Component Technology Demonstration – 23-27Jan 06 at YPG, AZ**
- ◆ **Submissions reviewed on continuous basis**
- ◆ **Announcement websites**
 - TACOM Procurement Site (<http://contracting.tacom.army.mil/ssn/sources.htm>)
 - Fed Biz Ops:
(<http://www1.eps.gov/spg/USA/USAMC/DAAE07/EMIPTECH/SynopsisR.html>)



◆ **Purpose of Platform Systems Demonstrations**

- Assist in the refinement & development of requirements documents

◆ **Industry will be invited to showcase integrated vehicle solutions**

◆ **Systems Demonstrations Event is projected for Jul-Sep 2006 timeframe at a location TBD**

- To be announced in Fed Biz Ops Oct/Nov 2005

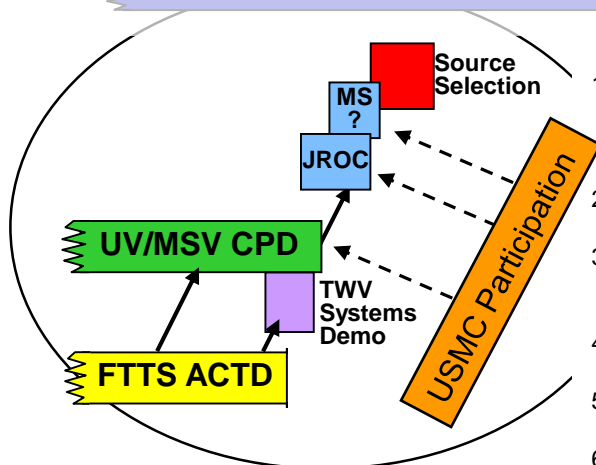
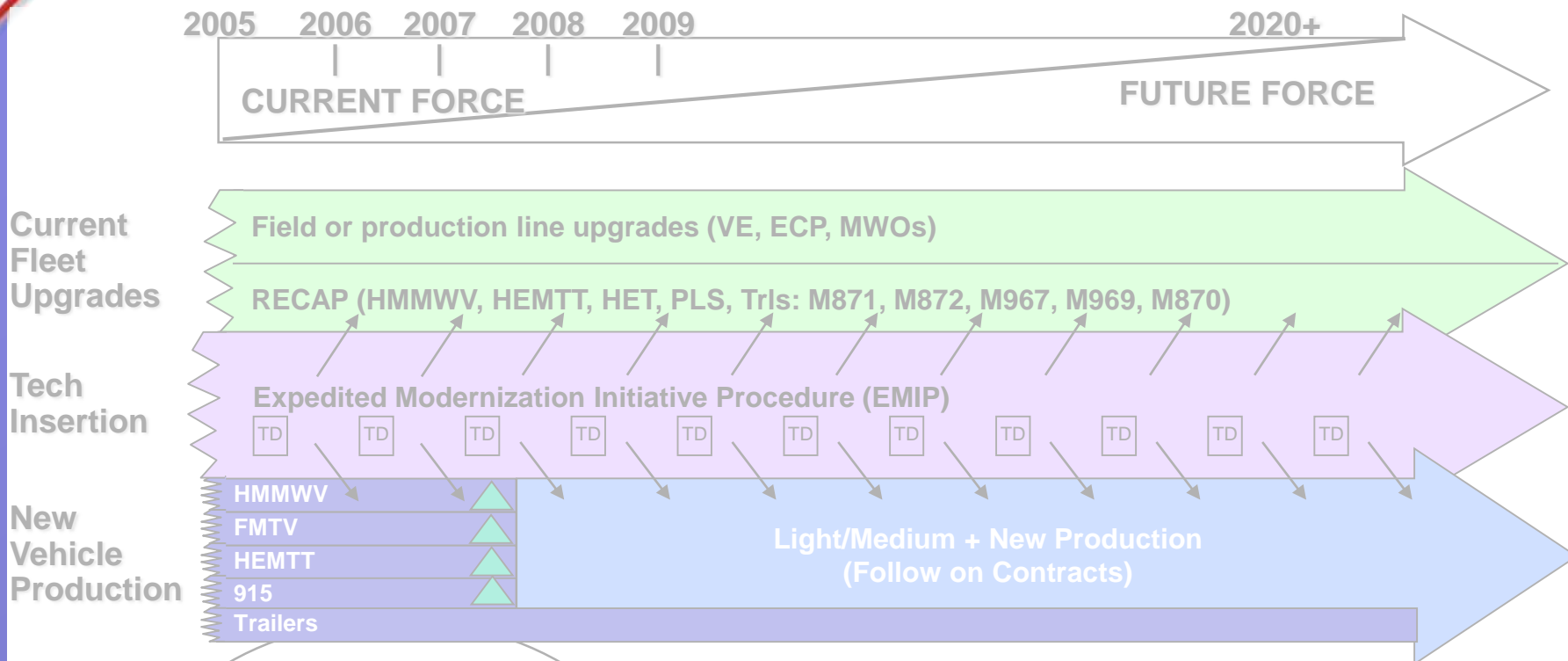
◆ **This vehicle demonstration will complement the Future Tactical Truck System (FTTS) Advanced Concept Technology Demonstration (ACTD)**

- MSV Demonstrator award: Stewart & Stevenson
- UV Demonstrator award: early Nov 05



UV/MSV Follow-on Efforts System Development and Demonstration (SDD)

PEO CS&CSS



1. Future Tactical Truck System Advanced Concept Technology Demonstration – Part I on-going (evaluate technologies/integrate into design). Part II – Manufacture demonstrator vehicles for Military Utility Assessment
2. Tactical Wheeled Vehicle Systems Capability Demo – All firms (international/domestic) with TWV systems invited to participate
3. Capability Production Document – Based on comprehensive knowledge of all applicable technologies flowing from ACTD and Rodeo efforts
4. Joint Requirements Oversight Council – Decide between HMMWV, FMTV, HEMTT or UV and MSV CPDs
5. (if required) Defense Acquisition Board will review proposed projects
6. Source Selection – Implements milestone decisions through competitive selection of truck producers

Data as of: 16 Sep 05

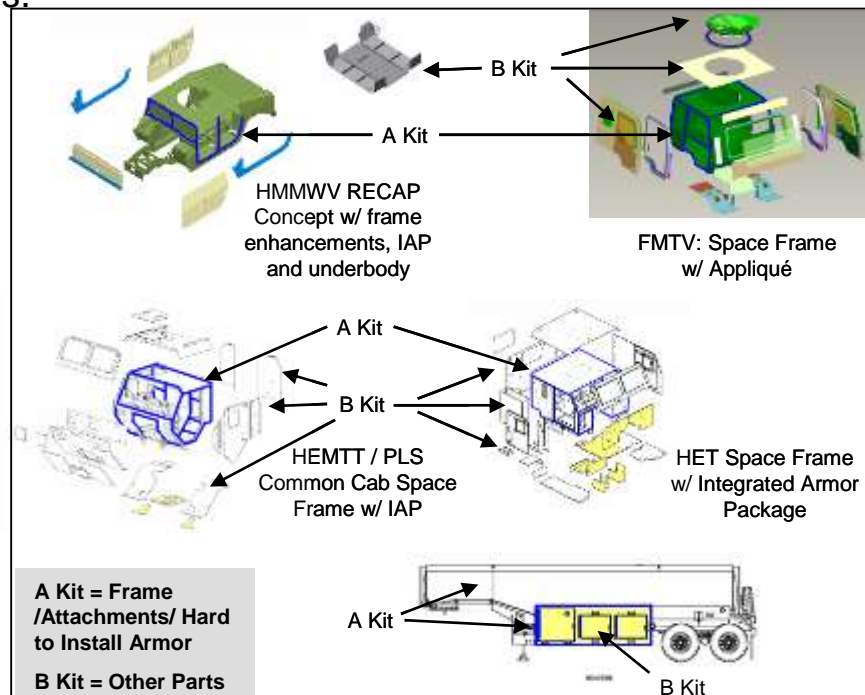


Tactical Vehicles ~ Long Term Armor Strategy (LTAS)

- ◆ **LTAS is the second generation of TWV armoring strategies. It is separate and distinct from current near-term SWA Add-on Armor (AoA) efforts which fulfilled an urgent in-theater need.**
- ◆ **LTAS allows the Battlefield Commander to adapt to changes in threat, mission, or technology.**
 - Employs a modular concept – “A-Kit and B-Kit”.
 - Emphasizes commonality between vehicle systems.
 - Utilizes lessons learned from AoA.
 - Synchronized to TWV Modernization Strategy
- ◆ **Meet Army threat requirements derived from TRADOC DCSINT assessment published on 27 March 2005**
- ◆ **Incorporate into the TWV Fleet Modernization through RECAP and new production.**

Test in two phases based on priority.

- **PHASE I**
 - HMMWV, FMTV, HEMTT
- **PHASE II**
 - HET, PLS, M915, M939



• Separate session to discuss classified information is tentatively scheduled 29 Nov 05 at Detroit Arsenal

Data as of: 14 Jun 05



Direct Report ~ *Project Management Offices*



PEO Chief of Staff
COL John S. Myers

PRODUCT MANAGERS

- ◆ Sets, Kits, Outfits, & Tools
 - *PM, LTC Jeff Carr*
- ◆ Test, Measurement, and Diagnostic Equipment
 - *PM, LTC Dwayne Morton*



PM SKOT & PM TMDE ~ Products



PM Sets, Kits, Outfits and Tools (SKOT)

38 Systems

Diving Equipment

- Diving Equipment Sets (A and B)
- Recompression Chamber
- Under Water Photo Support Set

Sets, Kits & Outfits

- Automotive Maint and Repair, FM Basic & Supplement
- General Mechanic's Tool Kit (GMTK)
- Multi Capable Maintainer Tool Kit (MCMTK)
- Individual Aircraft Armament Repairman Tool Set (IAARTS)
- Team Aircraft Armament Repairman Tool Set (TAARTS)
- Shop Equipment Mechanical Maintenance, Shelter
- Electronic Repair Tool Kit
- Small Arms Toolkit
- Standard Automotive Tool Set (SATS)

Shelter Mounted Sets, Kits, and Outfits

- Body, Explosive Ordnance Disposal (BEOD)
- Engine Fuel System Repair, Shelter Mtd /Electronic System
- Maint, Weapon Tool Kit
- Instrument & Fire Control Repair, Shelter Mounted
- Mechanical Maintenance, Shelter Mounted /Battalion
- Maintenance Sets
- Power Plant Set, Shelter Mounted
- Small Arms Repairs, Shelter Mounted
- Tool Set Contact & Emergency Repair
- Tool Set, Full Tracked Vehicle Repair

Shop Set Equipment

- Forward Repair System (FRS)
- Hydraulic System Test and Repair Unit (HSTRU)
- Pioneer Tool Outfit (PTO)/Hydraulic and Electric Tool Outfit (HETO)
- Shop Equipment, Contact Maintenance (SECM)
- Allied Trades
- Mobile Parts Hospital (MPH)
- Shop Equipment, Welding (SEW)
- Shop Set, Electrical
- Spare Parts Storage Cabinet Set
- Carpenter's Tool Kit (CTK)
- Engine Lathe
- Milling Machine
- Welding Machine
- Power Hack Saw
- Power Hack Saw (Portable)

Combat Support Equipment

- Demolition Kit
- Tool Set, Light Engineer Squad/Air Assault Kit



PM Test, Measurement, and Diagnostic Equipment (TMDE)

25 Systems

Common Embedded Diagnostics

- Wireless Diagnostics Sensor (WDS)
- Vehicle Integrated Diagnostic Software (VIDS)

Calibration Sets (CALSETS)

- CALSET 2000
- CALSETS Equipment Modernization

IFTE At Platform Automatic Test Systems

- Maintenance Support Device (MSD)
- MSD V2
- Wireless Internal Combustion (ICE) Engine Diagnostic Kit

IFTE Off Platform Automatic Test Systems

- Base Shop Test Facility Version 5 (BSTF (V) 5)
- Next Generation Automatic Test System (NGATS) (BSTF (V) 6)

General Purpose Electronic Test Equipment (GPETE)

- OS-303, Oscilloscope
- AN/USM-677, Spectrum Analyzer
- TS-4530/UPM, Portable Radar Test Set
- Test Set, Radio A
- Test Set, Portable Radio AN/PRM-35
- Signal Generator 2GHZ
- Signal Generator 26.5GHZ
- Function Generator
- Pulse Generator
- Analyzer, Data Communications
- Counter, Microwave Frequency
- Test Set, Transmission
- Oscilloscope, Low End
- Analyzer, Distortion
- Test Set, Electrical Cable
- Test Set, Pitot-static



Sets, Kits, Outfits & Tools (SKOs)

- ◆ **Affordable technology to automate the inventory and accountability of tool kits and shop sets in the field.**
- ◆ **Modularize Explosive Ordnance Disposal (EOD) Response Equipment, enabling more efficient render safe operations against unexploded ordnance and improvised explosive devices.**
- ◆ **Incorporating robotics and advanced diving components for improved gap crossing and underwater surveying.**
- ◆ **Combined Laser and Powered metal technology for Mobile Parts Hospital (MPH).**
- ◆ **Simplified computer operation of the Mobile Parts Hospital (MPH).**
- ◆ **Building a consolidated database with all SKOs and tools**
 - Must be accurate and up to date
- ◆ **Process for evaluating new technology and incorporation into existing SKOs**
 - Centrally funded vs. use of Field Operations and Maintenance funding
 - Configuration management

Test, Measurement, and Diagnostic Equipment

- ◆ **Off Platform Automatic Test Systems (OPATS)**
 - Reduce cost and size of Off-Platform testers. Combine instruments and utilize virtual/synthetic instrumentation.
 - Standardize hardware and software interfaces and specifications.
 - Provide family of interconnect devices for current systems.
 - Reduce cost and size of Electro-Optical testing assets.
 - Establish organic Electro-Optic calibration capability.
 - Integrate GCSS-Army/Common Logistics Operating Environment capabilities into Automatic Test Systems.
- ◆ **At Platform Automatic Test Systems (APATS)**
 - Embedded Diagnostics
 - A cost effective and compact ZigBee Wireless Diagnostics Sensor (WDS) for tactical vehicles equipped with Diagnostic Connector Assembly (DCA)
 - Evolve automated maintenance and diagnostics capabilities to predictive maintenance.
 - Wireless Internal Combustion Engine (ICE) kit
 - A single and compact wireless ZigBee pressure transducer with acceptable error to cover the current three ranges -30 inches Mercury (Hg) to +25 PSI, 0-1 Kilo-Pounds Per Square Inch (KPSI), 0-10 (KPSI).
 - A single compact, wireless ZigBee digital databus chip set for all digital databus interfaces including J1708/1939 9-pin, J1708 Detroit Data Link (DDL) 12-pin, J1708 6-pin, Haldex, General Motor-Universal Asynchronous Receive and Transmit (GM-UART).
- ◆ **General Purpose Electronic Test Equipment (GPETE)**
 - Transform multiple conventional GPETE instruments into a single Virtual Instrument with a plug and play functionality and fail safe mechanisms.



Competitive RFP's currently planned for FY06:

Soldier Portable Shop Sets

- ◆ **Enfire** - Consists of hand held computer, digital video camera, long & short distance laser measuring devices, GPS, bar code scanner, printer/scanner/fax, battery charger, communications interface, transport case and software.
- ◆ **Carpenter Support** - Consists of hammer/drill/drivers, circular, reciprocating, and variable speed jig saws, transport bags and selected hand tools. Contains small generator & encapsulated battery recharging station w/extension cord.
- ◆ **Urban Operations** - Components include infrared camera, explosive detectors, ventilating fans, markers, saws, remote viewing instruments, multi-industrial gas detector, elbow & knee pads, portal shields, ladders, tactical torches & welders, winches, cheesecloth, paints, lights, wire, cable ties and communicators.
- ◆ **Demolition Support** - Components consist of explosively formed penetrating, metal and plastic linear and metal conical charge forms and numerous attachment devices.
- ◆ **Pioneer Support** - Large set of tools & construction equipment; some powered, some hand tools for construction, forestry operations and mine emplacement etc.,
- ◆ **Command Post/Theater Operations Center Lighting** - Set contains commercial spotlights powered by rechargeable NiCad batteries, charging unit, spare bulbs and accessories.
- ◆ **Pioneer General Purpose** - Set contains multiple shovels, axes, picks, sledge hammers, wrecking bars, post hole augers, safety belts, blocks machetes, files, saws, hammers etc., for simple pioneering tasks.
- ◆ **Light Set** - Components include light bulbs, corded light fixtures, receptacle plugs, special electrical cords and a storage case..
- ◆ **CO2 Repair and Refill** - Consists of tools and equipment to refill and repair carbon dioxide fire extinguishers.
- ◆ **Rapid Runway Repair** - Components include sand grid sections, full panel and half panels of FRP matting, mat anchoring bolts and various tools.
- ◆ **Landing Zone Lighting** - Components include COTS flashlights and accessories (amber, infrared and white) with wand ends, ground pins and transport case.
- ◆ **Pioneer Land Clearing & Building Erection** - large set with axes, picks shovels hammers, saws ropes, ladders, tools etc., for land clearing, building erection and general construction tasks.



Competitive RFP's currently planned for FY06:

Mobile/Containerized Shop Sets

- ◆ **Tool Set Vehicle, Full Track** – Components include cleaning tools, brushes, welding tools and supplies, drills and bits and various of hand tools.
- ◆ **Auto Maintenance & Repair FM Supp #2** – Includes various maintenance stands, trestle hoist, variety of hand tools, jacks, various gauges.
- ◆ **Shop Equipment Machine Shop FM Basic Less Power** – Set includes lathes, various hand tools, gauges, calipers, various power tools, brushes, hand files, paint brushes, drill bits.
- ◆ **Shop Equipment Fuel Electric** - Components include sockets, various hand tools, tables, cabinets, power tools, cable assemblies.
- ◆ **Shop Equipment Machine Shop FM Heavy Supp #1 Less Power** - Consists of various hand tools, clamps, milling equipment, and cutters, various calipers, milling wood cutters, pipe wrenches, hacksaw, cabinets, cable assemblies
- ◆ **Artillery Shop Shelter** – Components include grinders, hydraulic pump kits, pressure tanks, and various hand tools.
- ◆ **Small Arms Repair Shelter** – Consists of a non-expandable shelter with various hand tools, cabinets, gauges, die sets, grinding machines, vices, fire extinguishers, etc.
- ◆ **Instrument & Fire Control Repair, Shelter Mounted** – Consists of a non-expandable shelter with various hand tools, cabinets, gauges, calipers, die sets, hand reamers, drill sets, vices, electric etchers
- ◆ **Shop Equipment Machine Shop** – Components include various hand tools, small part storage cabinets, cable assemblies, die and tap sets, thread cutters, drill twists, and gages.

Targetry

- ◆ **Live Fire Training Ranges** - 19 different hard-wired, pneumatic and radio controlled ranges.



Competitive RFP's currently planned for FY06:

◆ **Off Platform Automatic Test Systems (OPATS)**

- Coordinate with Army in establishing test system interfaces and standards.
- Established interface standards will open up opportunities for industry to develop their own test solutions, prompting technology development and modernization, yet interfacing with Army ATE future force products.
- Test instrument miniaturization / consolidation opportunities that have application commercially. The technology has a natural evolution toward At-Platform test and diagnostics.

◆ **General Purpose Electronic Test Equipment (GPETE)**

- Application of Performance Based Logistics in Test Equipment Modernization (TEMOD) program will allow industry an opportunity to partner in the logistics support process.



◆ How to get connected with the latest information:

- EMIP Web site: <http://contracting.tacom.army.mil/ssn/sources.htm>
- Fed Biz Ops Web Site:
<http://www1.eps.gov/spg/USA/USAMC/DAAE07/EMIPTECH/SynopsisR.html>
- PEO CS&CSS website: <http://peocscss.tacom.army.mil/>
- Involvement in Annual Technology Demonstrations (January 2006)
 - Not a Source Selection
 - On your own Dollar



Integrated Logistics Support Center (ILSC)

Contracting Opportunities

Agenda

- ❑ ILSC Mission
- ❑ Points of Contact
- ❑ Projected Business Opportunities by Product Line
 - Heavy Combat
 - Light Combat
 - Tactical
 - Deployment Equipment
 - Aircraft Armament and Small Arms
 - Field Artillery and Mortars
 - Tools and Training Systems
 - Tires
 - Chem/Bio Defense
 - Clothing/Heraldry
 - Soldier Systems
- ❑ Tires Mission
- ❑ Issues/Concerns

ILSC Mission

Mission Statement: Provide Weapon Systems
Management and Life Cycle Logistics
Support to Soldier and Ground Systems



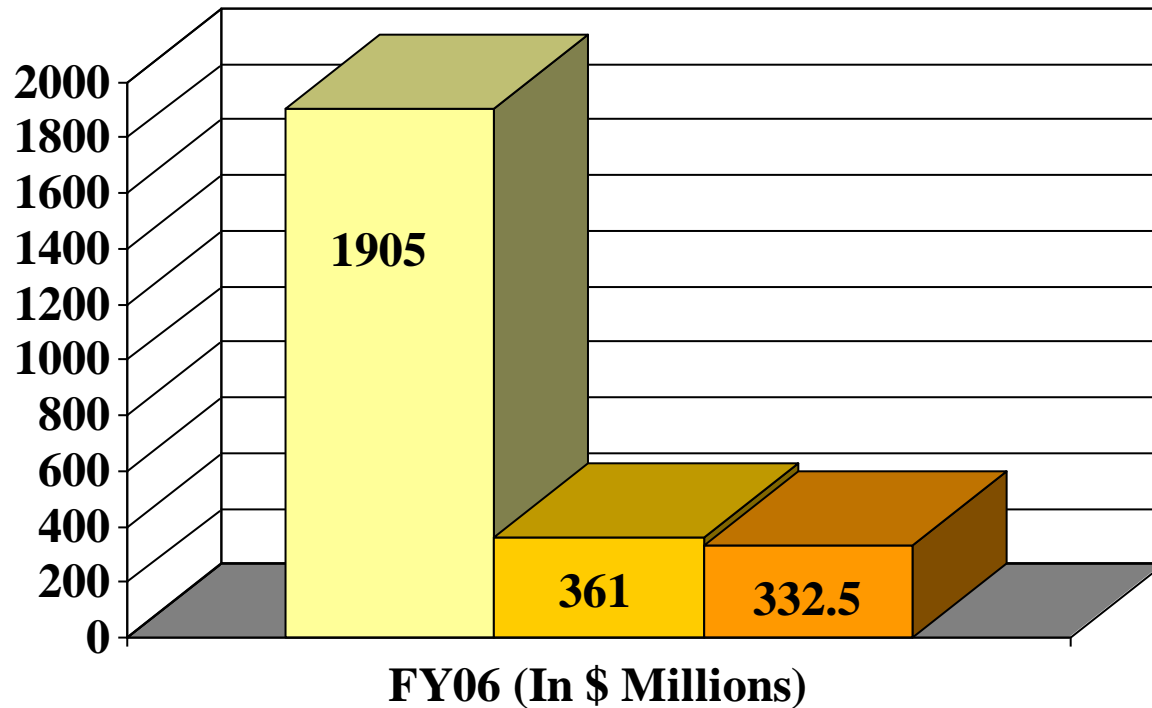
ILSC Product Support Structure



Heavy Combat

(M1 Abrams, M88, AVLB)

FY06 Projections



FY06 RESET Programs

M1A1 249 EA

M1A2 25 EA

M1A2 SEP 32 EA

M88A1 32 EA

AVLB 14 EA

Heavy Combat

(M1 Abrams, M88, AVLB)

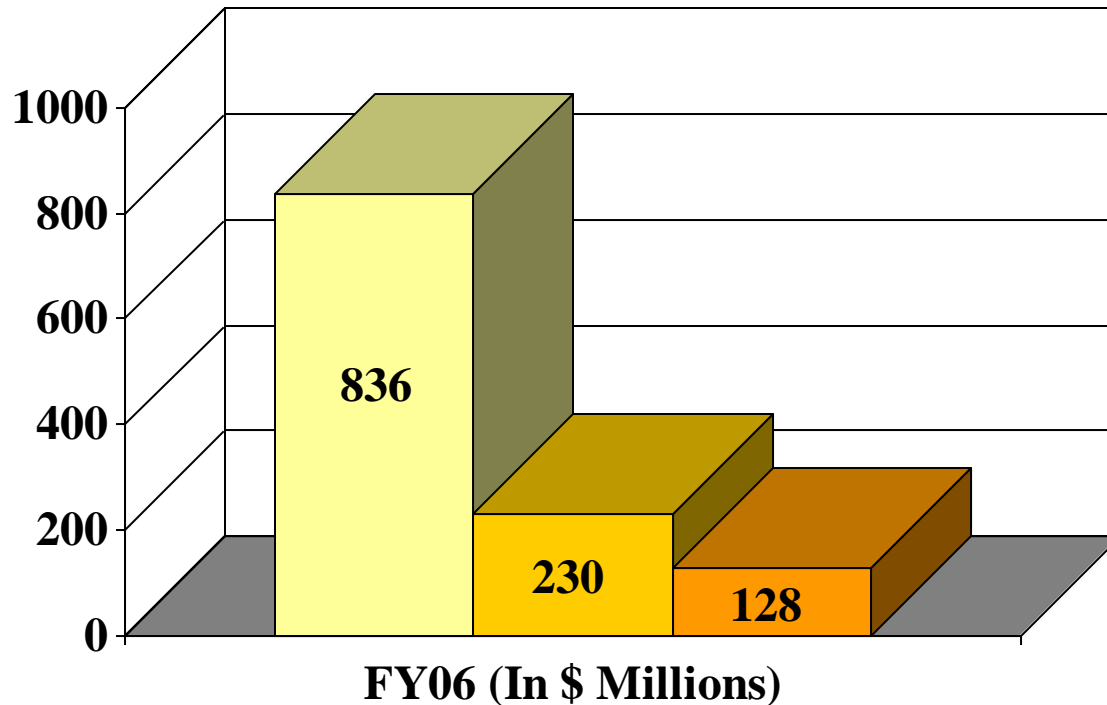
Top 10 Procurement Items

<u>NSN</u>	<u>NOMENCLATURE</u>	<u>QTY</u>	<u>DOLLARS</u>
2815-01-414-6821	Engine	24	\$10,000,000
2530-00-692-9316	Track Shoe	31,762	7,700,000
2815-00-394-9729	Engine Block	340	6,700,000
2815-00-150-7405	Cylinder Head	1,922	4,300,000
4130-01-519-4122	Vapor Compression System Unit	31	4,069,924
5963-01-474-6208	Electronic Control Unit	109	3,144,977
2815-01-233-9709	Crankshaft	218	2,900,000
2540-01-267-2912	Towbar	2,697	2,700,000
6110-01-514-7369	Revised Hull Network Box w/Container	90	2,784,600
2940-01-406-9209	Filter Element	10,143	2,748,753

Light Combat

(Bradley, M113)

FY06 Projections



■ Sales ■ Procurements ■ Repairs

FY06 RESET Programs

Bradley Organic	72 EA
BAE/RRAD	629 EA
M113A3	34 EA

Light Combat

(Bradley, M113)

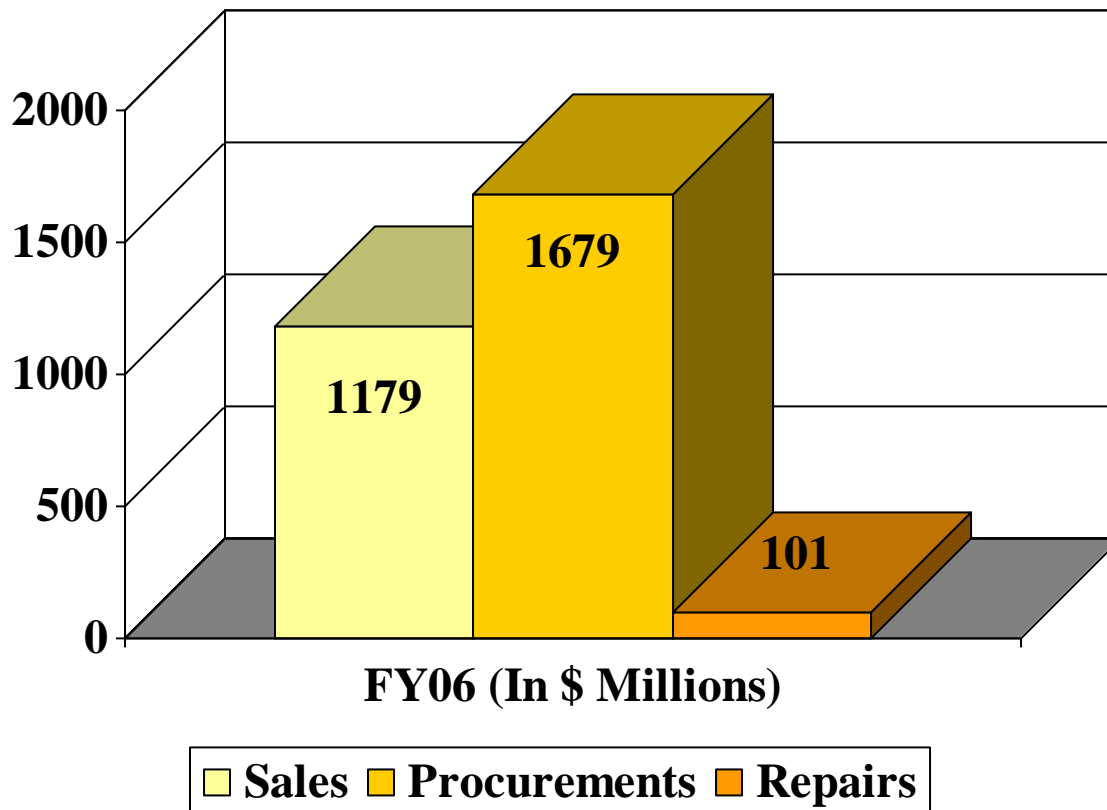
Top 10 Procurement Items

<u>NSN</u>	<u>NOMENCLATURE</u>	<u>QTY</u>	<u>DOLLARS</u>
2530-01-496-4444	Track Shoe Assembly	125,957	\$20,782,905
2520-01-397-1074	Transmission, Hydraulic	240	16,219,377
5865-01-462-8498	Sensor Assembly Unit	74	13,476,806
1005-01-462-8497	Control Box, Electric	112	9,356,816
2540-01-396-2826	Heater, Vehicular	1,514	7,529,122
2530-01-440-7615	Parts Kit, Track Shoe	722,099	5,690,140
5998-01-393-7047	Circuit Card Assembly	2,208	4,782,528
5895-01-485-3489	Processor, Turret	77	4,773,230
6115-01-458-0096	Generator, Direct Current	1,271	4,340,465
2540-01-312-4730	Shock Absorber	5,639	3,857,076

Tactical Wheeled Vehicles

(HMMWV, FMTV, M939, PLS, HET, HEMTT, M915)

FY06 Projections



FY06 RESET Programs

HMMWV	200 EA
FMTV	100 EA
M939	200 EA
PLS	248 EA
HET	247 EA
HEMTT	300 EA
M915	160 EA

FY06 RECAP Program

HMMWV	11,112 EA
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Tactical Wheeled Vehicles

(Light, Medium, & Heavy Trucks and Trailers)

Top 15 Procurement Items

<u>NSN</u>	<u>NOMENCLATURE</u>	<u>QTY</u>	<u>DOLLARS</u>
2815-01-439-6664	Engine with Container	6,824	\$ 57,635,777
2510-01-435-9690	Window	19,000	52,000,000
2510-01-435-9693	Window	16,000	45,000,000
2815-01-439-8164	Engine with Container	4,213	40,130,215
2920-01-420-9968	Generator	9,296	20,795,152
2815-01-257-3879	Engine with Container	335	14,056,265
6110-01-491-2158	EESS	114,274	6,851,869
2530-01-303-0801	Wheel	14,949	5,486,283
6115-01-504-0680	Generator	1,935	2,898,630
2520-01-472-6309	Transfer	42	2,080,176
2520-01-347-7646	Transmission Assy	69	1,686,222
2590-00-148-7961	Cable Kit	3,605	1,366,295
2540-01-385-9462	Kit, Cover, Soft	865	1,358,915
2910-00-116-8241	Pump, Fuel	361	1,029,933
2520-01-358-3160	Differential	1,040	944,538

Tactical Wheeled Vehicles

(Up-Armor HMMWV)

Top 10 Procurement Items

<u>NSN</u>	<u>NOMENCLATURE</u>	<u>QTY</u>	<u>DOLLARS</u>
2815-01-439-8164	Engine	4,213	\$ 40,130,215
2520-01-489-0850	Transmission	1,875	5,483,344
2510-01-435-9689	LF Door	750	5,100,000
2930-01-448-9439	Radiator	4,000	5,000,000
2510-01-432-3338	Hood	2,000	4,800,000
2510-01-435-9691	RR Door	700	4,600,000
2510-01-478-0306	Axle Shaft	25,000	4,500,000
2510-01-435-9694	RF Door	700	4,400,000
2510-01-435-9695	LR Door	650	4,300,000
2520-01-416-5217	Differential	1,500	2,700,000

Tactical Wheeled Vehicles

(Up-Armor HMMWV)

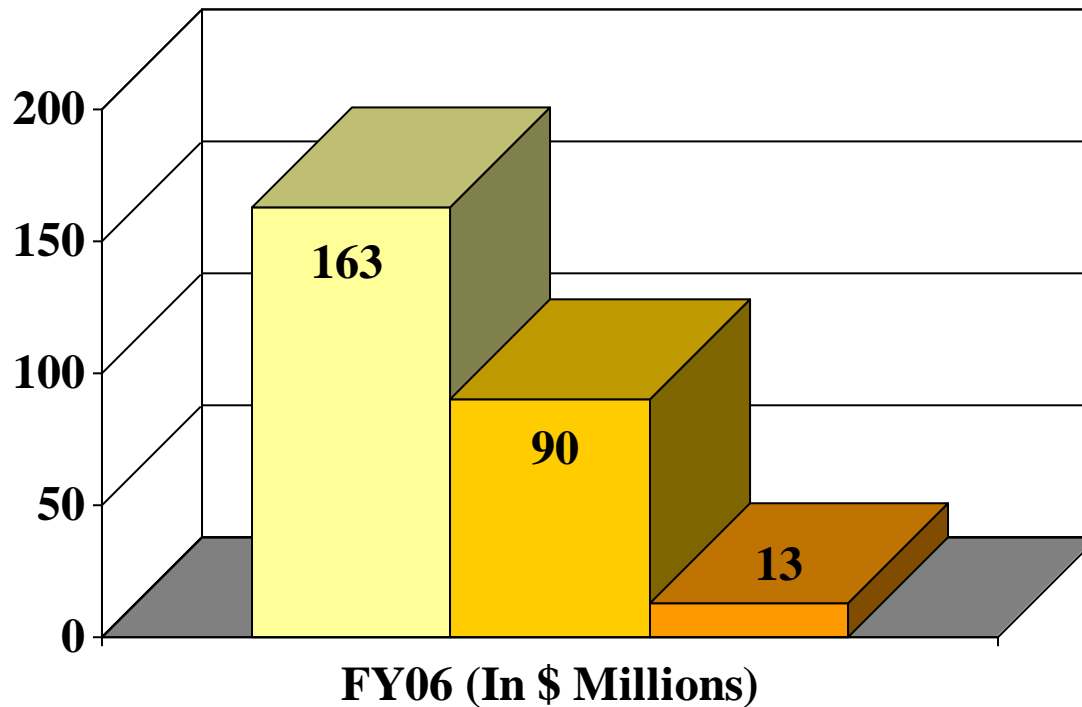
Special Interest Procurement Items

<u>NSN</u>	<u>NOMENCLATURE</u>	<u>QTY</u>	<u>DOLLARS</u>
4130-01-460-5782	Evaporator, Coil Ref	4,500	\$2,500,000
2540-01-460-2428	Duct Assembly	2,000	1,900,000
6105-01-460-4951	Motor, Direct Current	10,000	1,600,000
6105-01-460-4950	Motor, Direct Current	15,000	1,156,000
4720-01-460-2447	Hose Assy, Nonmetallic	3,500	580,000
4720-01-459-9498	Hose Assy, Nonmetallic	3,500	450,000
4130-01-460-2429	Receiver - Dehydrator	13,000	431,000
2510-01-460-4955	Cover, Air Evaporator	2500	244,000
2540-01-460-4952	Housing, Fan	3000	240,000
2540-01-460-2451	Ventilator, Air cir	1700	170,000

Deployment Equipment

(Construction, MHE, PAWS, Shipping Containers, Special Tool Kits)

FY06 Projections



■ Sales ■ Procurements ■ Repairs

FY06 RESET Programs

Construction	796 EA
MHE	1084 EA
PAWS	412 EA

Deployment Equipment

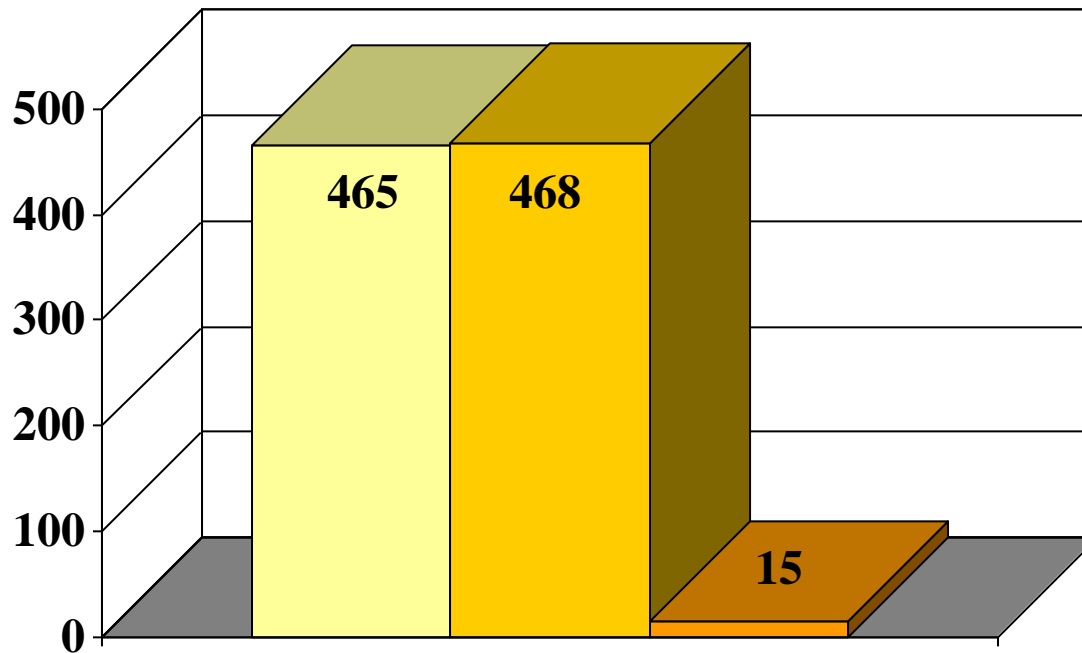
(Construction, PAWS, Shipping Containers)

FY06 Top 10 Procurement Items

<u>NSN</u>	<u>NOMENCLATURE</u>	<u>QTY</u>	<u>DOLLARS</u>
8145-01-527-2506	Shipping and St	4,992	\$ 18,317,345
5430-01-473-2320	Tank, Fabric, Col	697	16,304,224
5430-01-505-4249	Tank Assembly, Fuel	71	6,766,726
5430-01-473-2319	Tank Fabric, Col	291	3,980,007
8110-01-482-9152	Drum Fabric, Col	527	3,681,622
4320-01-483-1054	Pumping Assembly	92	3,577,696
5430-01-483-1065	Tank Fabric, Col	1,447	3,215,234
2530-01-234-1917	Track, Shoe, Veh	21,244	2,867,940
5430-01-473-2316	Tank Fabric, Col	238	2,119,628
4930-01-194-8324	Nozzle, Fuel and	1,064	1,753,472

Aircraft Armament and Small Arms

FY06 Projections



FY06 (In \$ Millions)

■ Sales ■ Procurements ■ Repairs

FY06 RESET Programs

M16A2 Rifle 12,000 EA

M203 Gren Lnch 6000 EA

Aircraft Armament and Small Arms

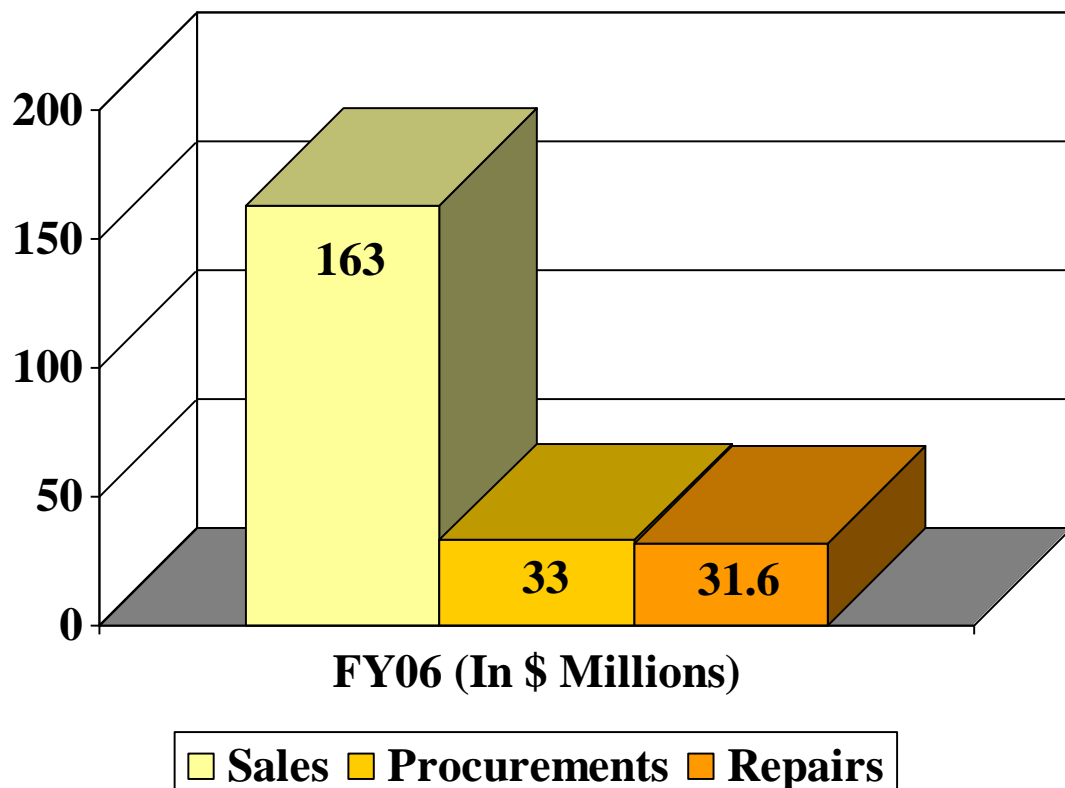
Top 10 Procurement Items

<u>NSN</u>	<u>NOMENCLATURE</u>	<u>QTY</u>	<u>DOLLARS</u>
1005-00-921-5004	Magazine, Cartridge	2,856,750	\$ 24,568,050
1005-00-701-2810	Mount, Machine Gun	3,908	19,414,944
1005-01-502-7547	Mount, Machine Gun	7,215	15,050,490
1005-01-432-3339	Kit, Ring, Lightweight	1,424	11,013,216
1005-01-452-3527	Adapter Rail	26,915	8,828,120
1005-01-452-6771	Adapter Rail	22,658	8,496,750
1005-00-726-6131	Barrel, Machine	6,410	6,948,440
1005-01-381-5431	Mount, Machine	4,768	6,584,608
1240-01-411-1265	Sight, Flex	15,605	6,242,000
1005-01-204-4376	Magazine, Cartridge	658,920	4,862,829

Field Artillery and Mortars

(Mortars, M198, M119A1, M109 How, FAASV, PADS, GLPS, Misc. Artillery)

FY06 Projections



FY06 RESET Programs

Mortars	223 EA
M198	51 EA
M119A1	8 EA
M109	89 EA
FAASV	74 EA
PADS	10 EA
GLPS	12 EA
M2A2 Aiming Circle	30 EA

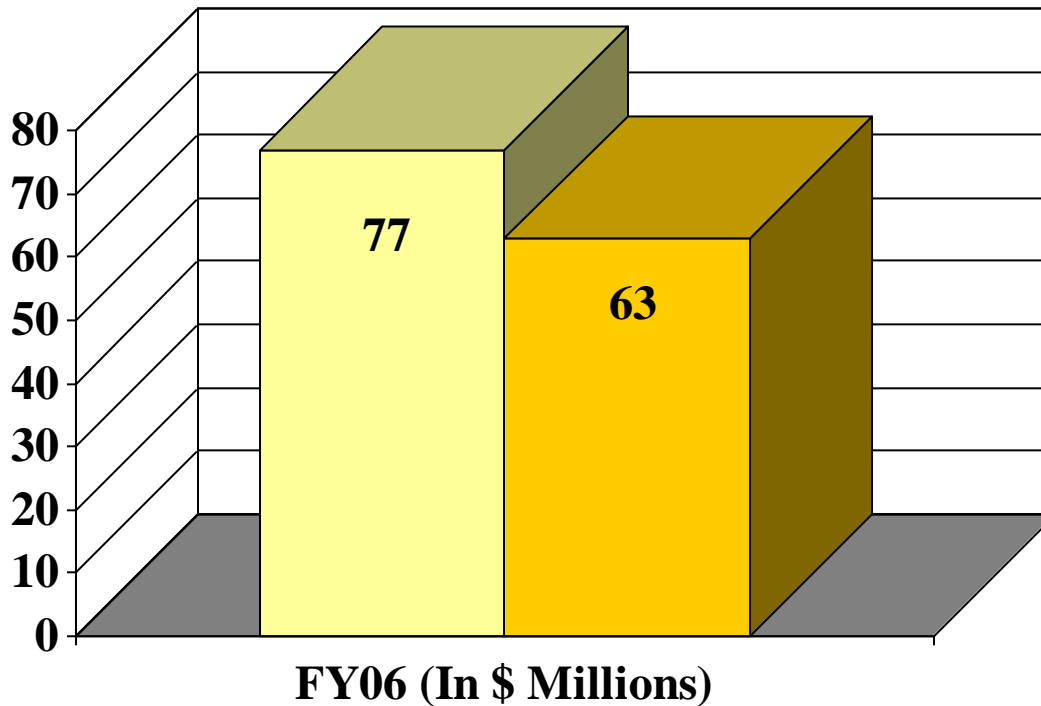
Field Artillery and Mortars

Top 10 Procurement Items

<u>NSN</u>	<u>NOMENCLATURE</u>	<u>QTY</u>	<u>DOLLARS</u>
5895-01-524-8674	PMVS and Container	51	\$ 2,320,500
7010-01-524-8672	PDCU and Container	26	2,106,000
7021-01-451-5790	ACU and Container	55	2,095,830
2920-01-442-9694	Generator AY WI	108	1,640,628
5905-01-210-0301	Sensor, Temperature	560	1,037,120
5995-01-527-6845	Cable Assembly	171	1,005,993
5995-01-529-8409	Transceiver	39	866,268
4210-01-518-0175	Extinguisher, Fire	435	863,475
2815-01-488-5555	Engine and Cont	93	854,112
1025-01-365-7042	Equilibrator, Ca	20	820,300

Tools and Training

FY06 Projections



■ Sales ■ Procurements

FY06 RESET Program

Forward Repair Sys 24 EA

Tools and Training

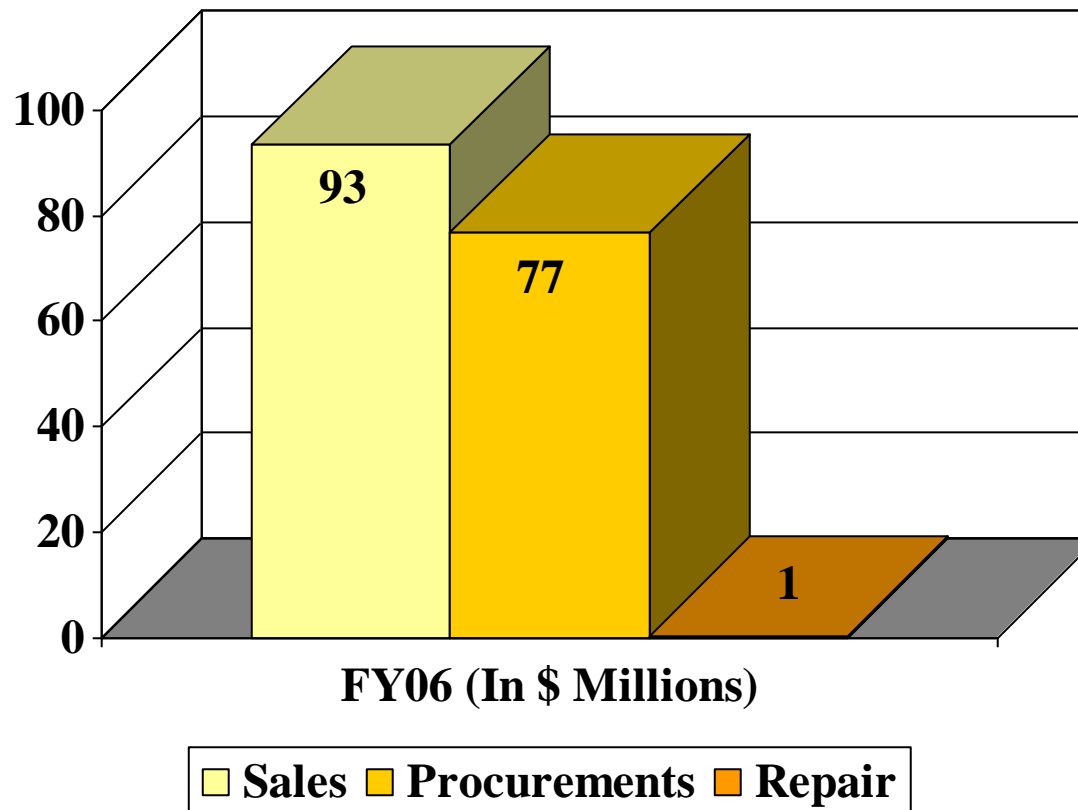
Top 10 Procurement Items

<u>NSN</u>	<u>NOMENCLATURE</u>	<u>QTY</u>	<u>DOLLARS</u>
5180-01-481-8389	General Mechanics Tool Kit (GMTK)	15,500	\$ 14,537,830
4910-01-365-9304	Towbar, Motor Vehicle	5,000	7,809,500
5180-01-502-9507	Kit, Assessment Battery (BDAR Maint)	3,714	2,495,288
5180-01-502-9504	Kit, Assessment Battery (BDAR Crew)	4,705	2,443,165
1375-01-417-7104	Blasting Machine	2,802	2,059,470
4910-01-417-1870	Test Stand, Automotive	12	1,349,520
4910-01-370-9855	Mounter and Demounter	192	1,344,000
5180-01-500-4790	Tool Kit, Small Arms Repairman	1,500	1,141,050
4910-00-289-7233	Dolly, Jack	540	750,600
5180-01-493-1663	Tool Kit, Multi-capable Maintainer	600	689,016

Chemical/Biological Defense

(Collective Protection, Masks, Decon, Smoke, Detect, Individual Protection)

FY06 Projections



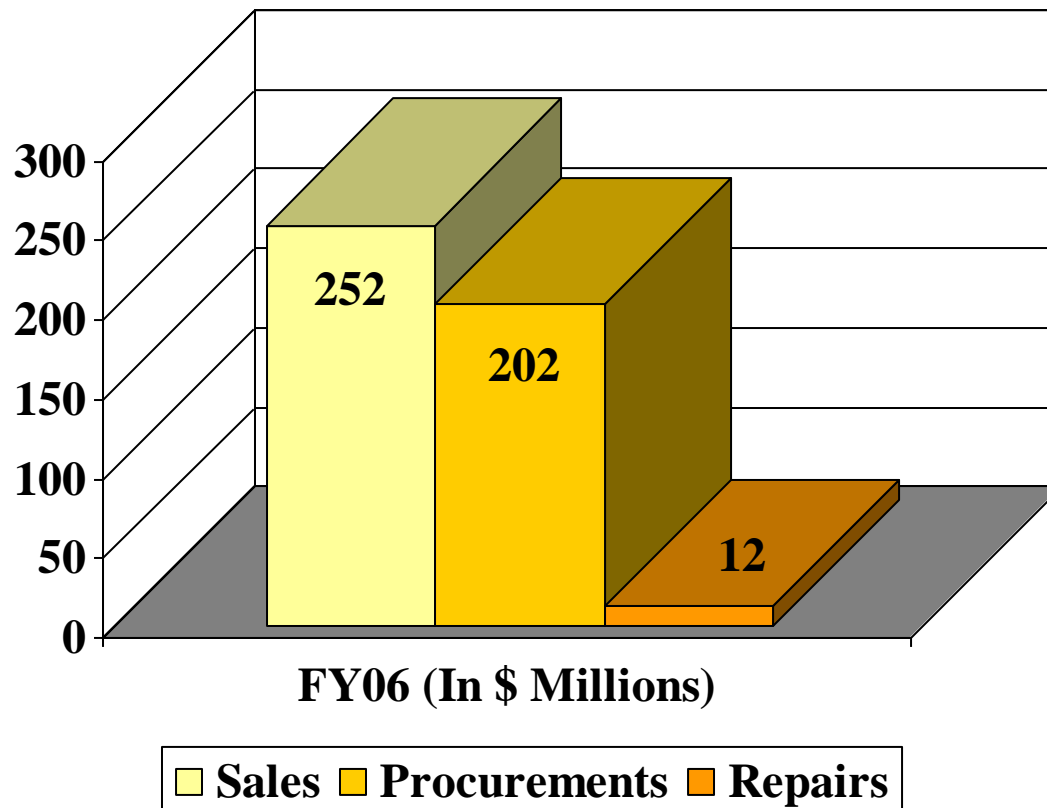
Chemical/Biological Defense

Top 10 Procurement Items

<u>NSN</u>	<u>NOMENCLATURE</u>	<u>QTY</u>	<u>DOLLARS</u>
4240-01-529-0601	Facepiece Assembly, Medium	26,000	\$ 3,097,900
1055-01-451-2285	M310 Installation Kits	982	3,093,300
6665-01-353-7700	Detector Unit, Chemical	20	2,210,620
1040-01-454-1625	M7 Grenade Discharger	4,687	1,654,511
4240-01-529-0593	Facepiece Assembly, Small	13,000	1,548,950
5895-01-528-9289	Filter, Secondary	39,666	1,085,659
6665-01-364-4953	Detector-Cooler Assembly	20	830,280
4240-01-529-2289	Canister, Chemical	38,666	568,414
4240-01-528-9287	Hood, Chem-Bio	6,067	567,414
4240-01-529-0602	Facepiece Assembly, Large	4,333	516,277

Tires

FY06 Projections



NOTE: Current BRAC moves contracting mission for tires to DLA. Privatizes all tires inventory and distribution missions.

Tires

Top 10 Procurement Items (Expiring Tire LTCs)

<u>NSN</u>	<u>NOMENCLATURE</u>	<u>QTY/LENGTH OF LTC</u>	<u>DOLLARS</u>
2610-01-333-7632	Tire	670,920 ea (5 YR)	\$134,841,502
2610-01-334-2694	Tire	60,912 ea (3 YR)	30,378,032
2530-01-477-1660	Wheel Assy	17,145 ea (3 YR)	18,580,379
2530-01-506-5915	Wheel Assy	5796 ea (3 YR)	10,942,674
2640-01-419-6202	Run-Flat Kit	124,746 ea (3 YR)	7,932,598
2530-01-532-5636	Armor Set	3528 ea (3 YR)	6,085,800
2610-01-473-3997	Tire	13,572 ea (3 YR)	3,895,164
2610-01-364-5044	Tire	5760 ea (3 YR)	3,457,958
2610-01-481-5378	Tire	11,505 ea (3 YR)	2,969,786
2610-00-204-4091	Tire	12,600 ea (3 YR)	2,329,110

Potential Contractual Pitfalls

Controllable

- Extended Administrative Lead Times
- Extended Production Time
- Quality Defects
- First Article Tests Not Passed and/or Not Timely
- Slow Response Time
- Late Deliveries from Subcontractors

Uncontrollable

- Acts of God
- Plant Problems
- Strikes
- Shortages of Raw Materials
- Cost of Raw Materials

**What's Best
For
Our Warfighters?**

Operational Capabilities at Risk

Customer Satisfaction Decreases
Readiness Declines
Backorders
Increased Costs
Slowed or Stopped Repair Programs

How You Can Help:

- ❑ Reduce administrative problems that can delay contract awards (e.g., formatting, incomplete data, timely price quotes, etc.)
- ❑ Accelerate every delivery possible – sooner is better
- ❑ Drive down costs – so we can buy more for soldiers
- ❑ Anticipate readiness driver items and be prepared to help
- ❑ Explore supply chain and performance-based support initiatives – dialogue with us on your ideas

Deployed soldiers can't afford to wait! If we can buy more for the soldiers, everyone benefits!



TACOM LCMC Advance Planning Briefing to Industry

Program Executive Office
Ground Combat Systems

Acquisition Excellence

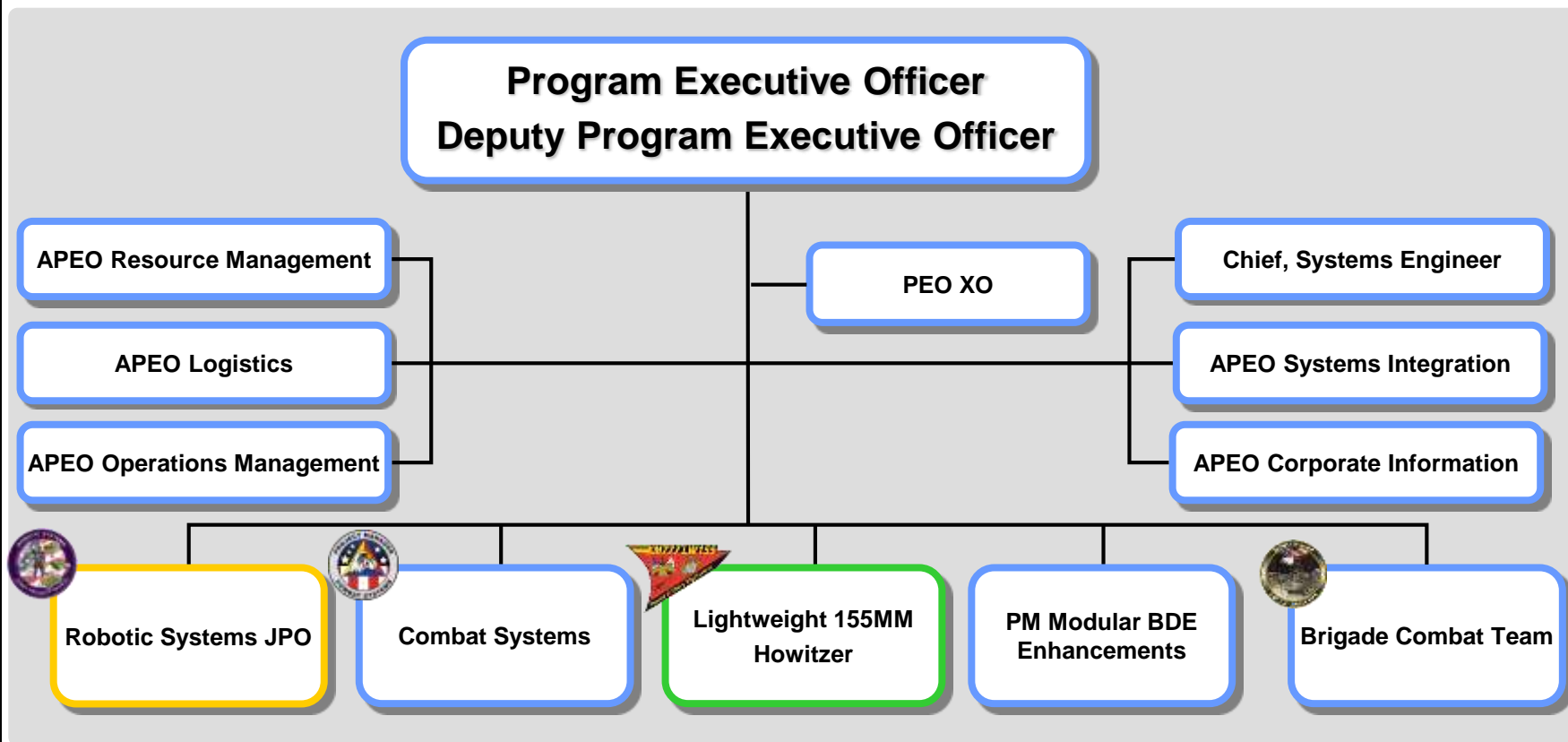
Mr. Kevin Fahey
Program Executive Officer,
Ground Combat Systems

October 28, 2005



Program Executive Office, Ground Combat Systems Structure

Program Executive Office
Ground Combat Systems



KEY

Warren

Picatinny

Huntsville

Acquisition Excellence



Program Executive Office Ground Combat Systems



Stryker Brigade Combat Team



Combat Systems

- Abrams Tank
- Bradley Fighting Vehicle
- Paladin / FAASV
- M113



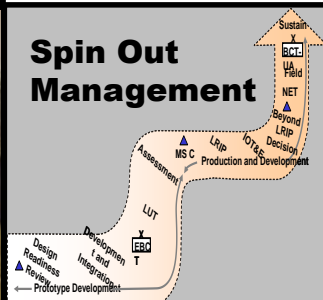
Joint Robotics Systems (Army & Marine)



Joint Lightweight Howitzer 155mm (Army & Marine)



Modular Brigade Enhancements



PEO GCS maintains a total Army perspective in managing the development, acquisition, testing, systems integration, product improvement, and fielding that places the best ground combat systems in the hands of our soldiers

Acquisition Excellence



PEO GCS Managed Systems



Combat Systems

- Abrams Tank
- Bradley Fighting Vehicle FOV
- Paladin 155mm SP Howitzer
- M113 FOV
- M707 Knight



Robotic Systems

- UA Ground Systems
- Standardized Robotic System
- Gladiator
- M60 Panther
- Miniflail
- Man Packable
- MV – 4 Flail



Stryker Brigade Combat Team

- Mobile Gun System
- Infantry Carrier Vehicle
- Medical Evacuation Vehicle
- Reconnaissance Vehicle
- Commander's Vehicle
- Engineer Squad Vehicle
- NBC Reconnaissance Vehicle
- Mortar Carrier
- Anti-tank Guided Missile
- Fire Support Vehicle

LW155 System

- M777 Howitzer
- Towed Artillery Digitization (TAD)
- M119 production



Acquisition Excellence

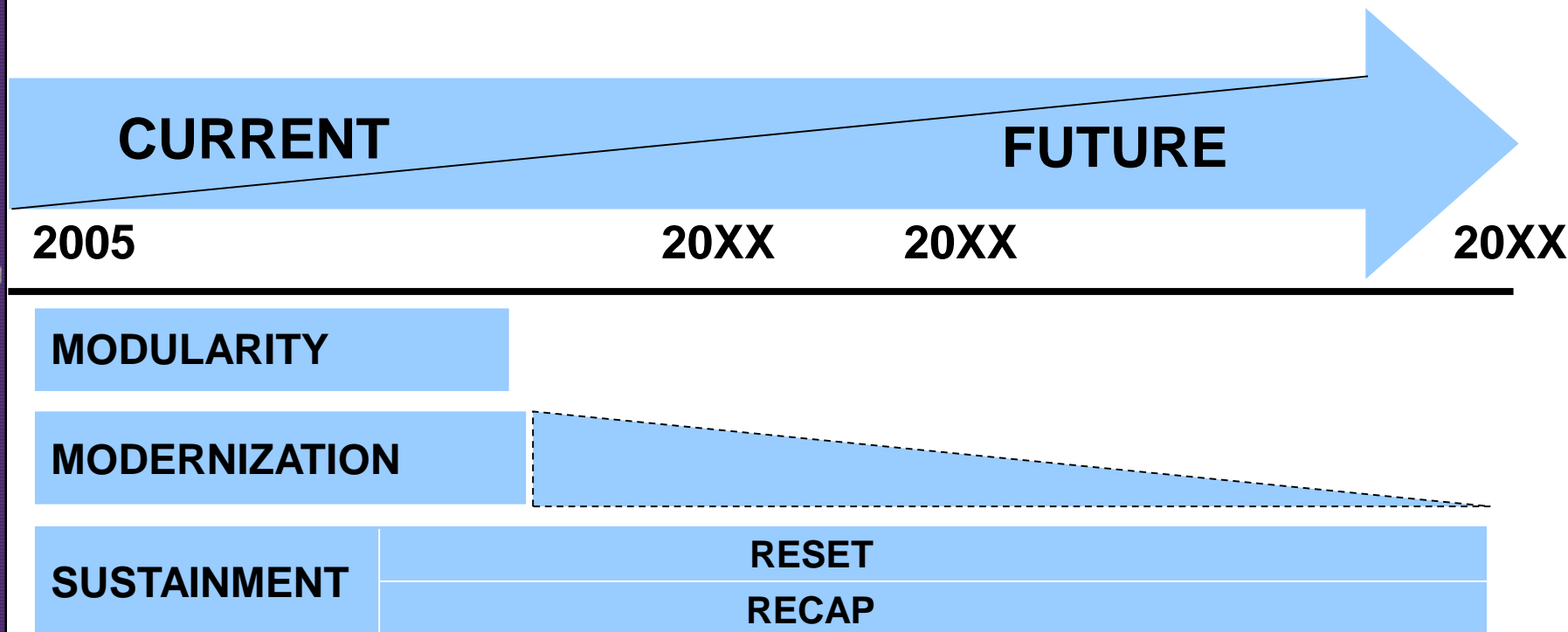


PM Combat Systems APBI

Larry D. Hollingsworth
Colonel, Infantry
Project Manager



Synchronized Through 2050



- Requires Partnerships with Industry and RDECOM
- Requires Centralized Management and Oversight
- Requires Balance between Current and Future
- Requires Centralized Funds Management (OMA and PAA)



TSM Abrams / PM Priorities

- (1) Safety Mods - (Complete by FY07)
- Modularity - 18/17 Production
- Sustainment/Recapitalization
 - AIM M1A1, M1A2 System Enhancement Package (SEP)
 - Continuous Electronic Enhancement Program (CEEP) Retrofit (588)
 - Transmission/Track Durability
 - VCSU Silent Fan
 - Voltage Regulator
 - 80GB Removable Memory Cartridges (RMC)
- Lethality
 - (2) 2nd Gen Forward Looking Infrared Radar (FLIR) for M1A1
 - (3) Ammunition Integration Canister, Mid Range Munition (MRM)
- Survivability
 - (4) Tank Urban Survivability Kit
 - (6) Belly Armor
 - Under Armor Auxiliary Power Unit (UAAPU)
- Situational Awareness
 - (5) Helmet Mounted Display/Cordless Command & Control
 - (4) Driver's Vision Enhancer
- Modernization
 - (7) Vehicle Integrated Defense / Active Protection
 - Spin Out Hardware & Integration
 - Overmatch Capabilities
 - Advanced Armor
 - Training Devices

() TSM Priority



TSM 1-N Priority Bradley

- 18 / 17 BCTs (A3 / Operation Desert Storm ODS)
- ODS Situational Awareness (2nd Gen FLIR)
- ODS Embedded Diagnostics
- Mobility
 - Power Train
 - Track
- Survivability
 - Bradley Urban Operations Kit (BUSK)
 - IED Protection
- Lethality
 - Missile Integration
 - Multi purpose 25 MM
 - Soldier as a System Integrator
- Bradley Integrated Management (BIM)
- Engineer Vehicle Mission Equipment Package
- Training Devices
- Test Measurement Diagnostic Equipment (TMDE)

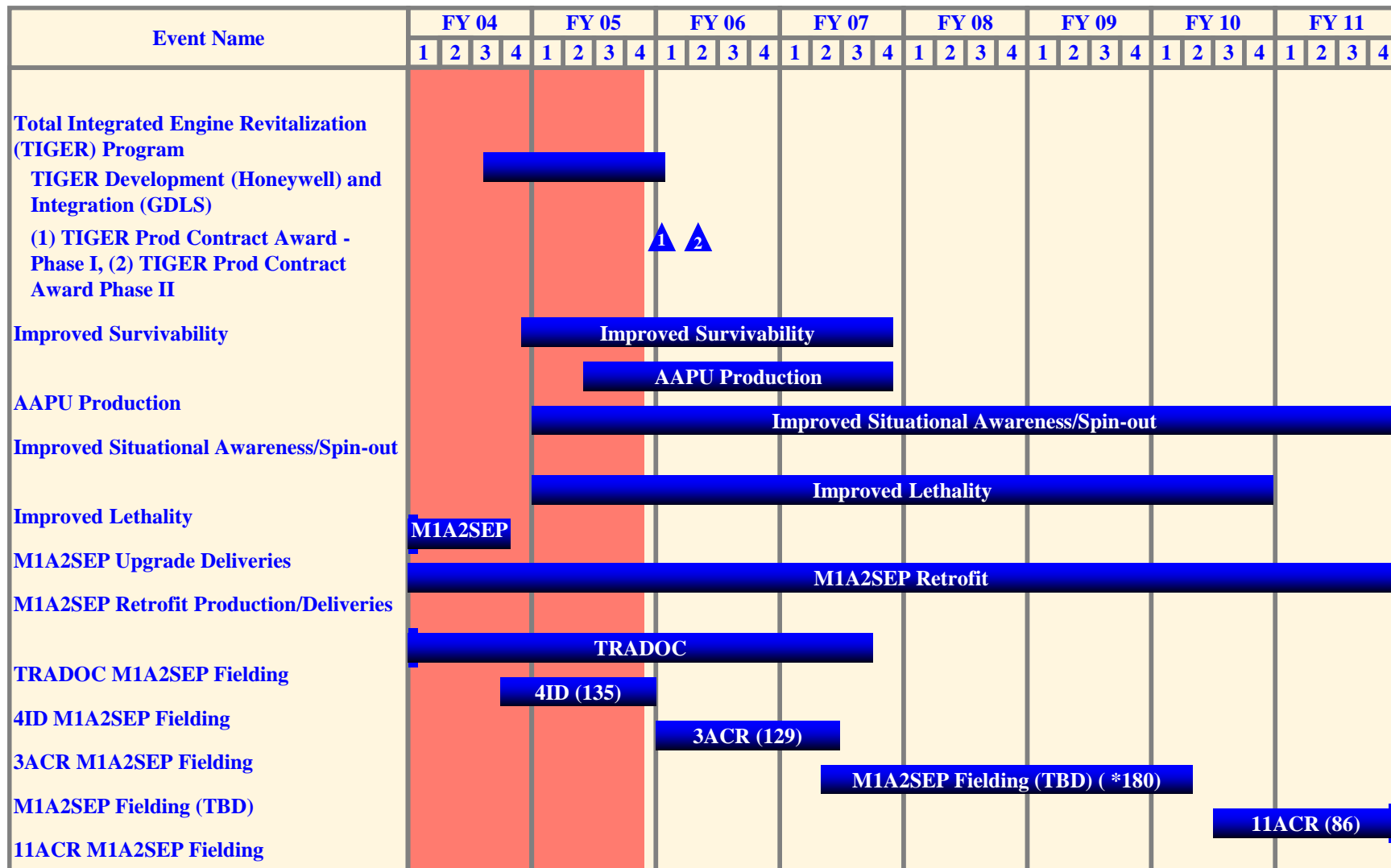


Other Requirements

- Paladin
 - RESET
 - RECAP
 - Fire Support Combined Arms Tactical Trainer
- Knight
 - Chassis Change
- BFIST
 - Fire Support Sensor System (FS3) Integration
 - Bradley Desktop Trainer



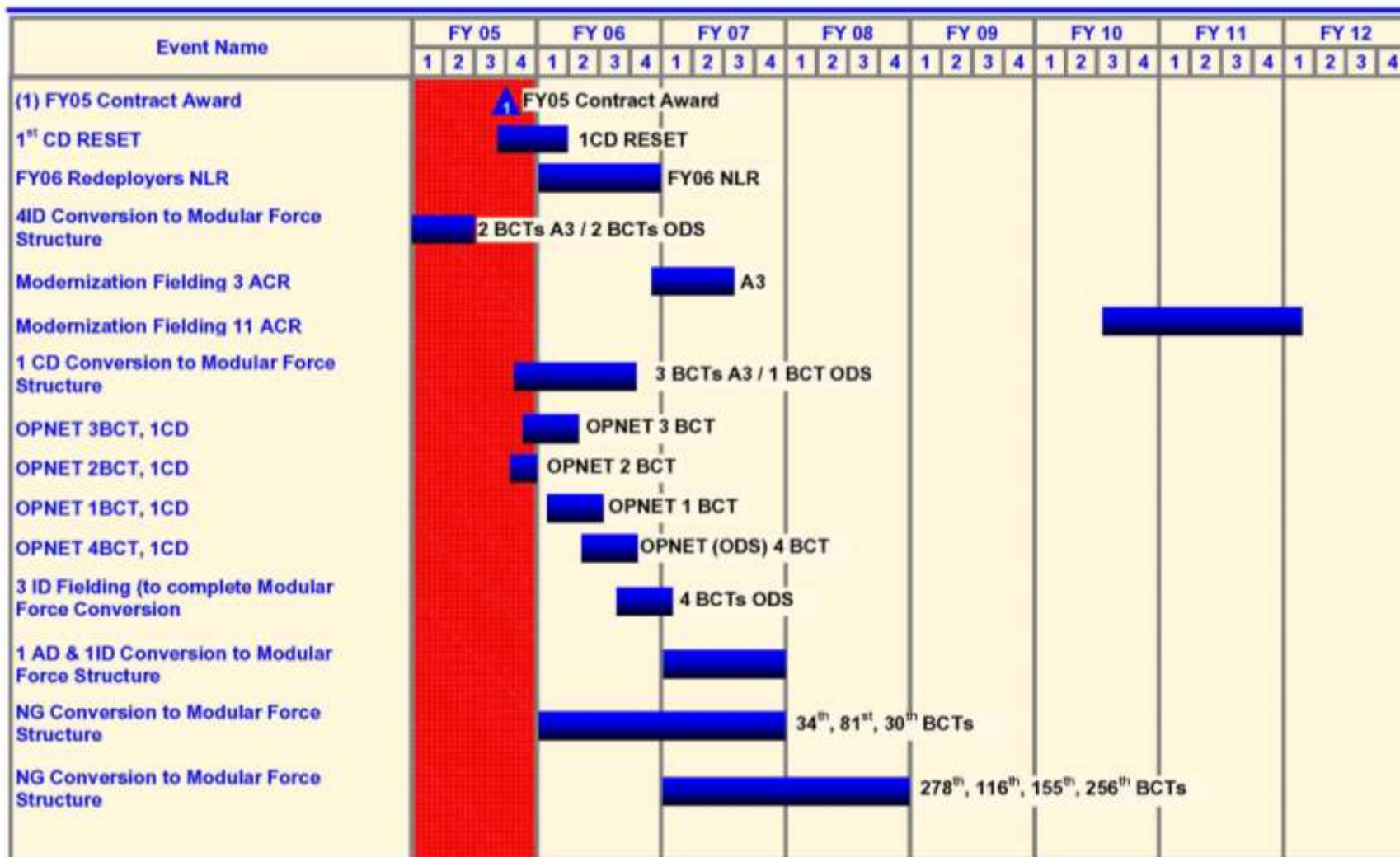
Abrams Program Schedule



Acquisition Excellence

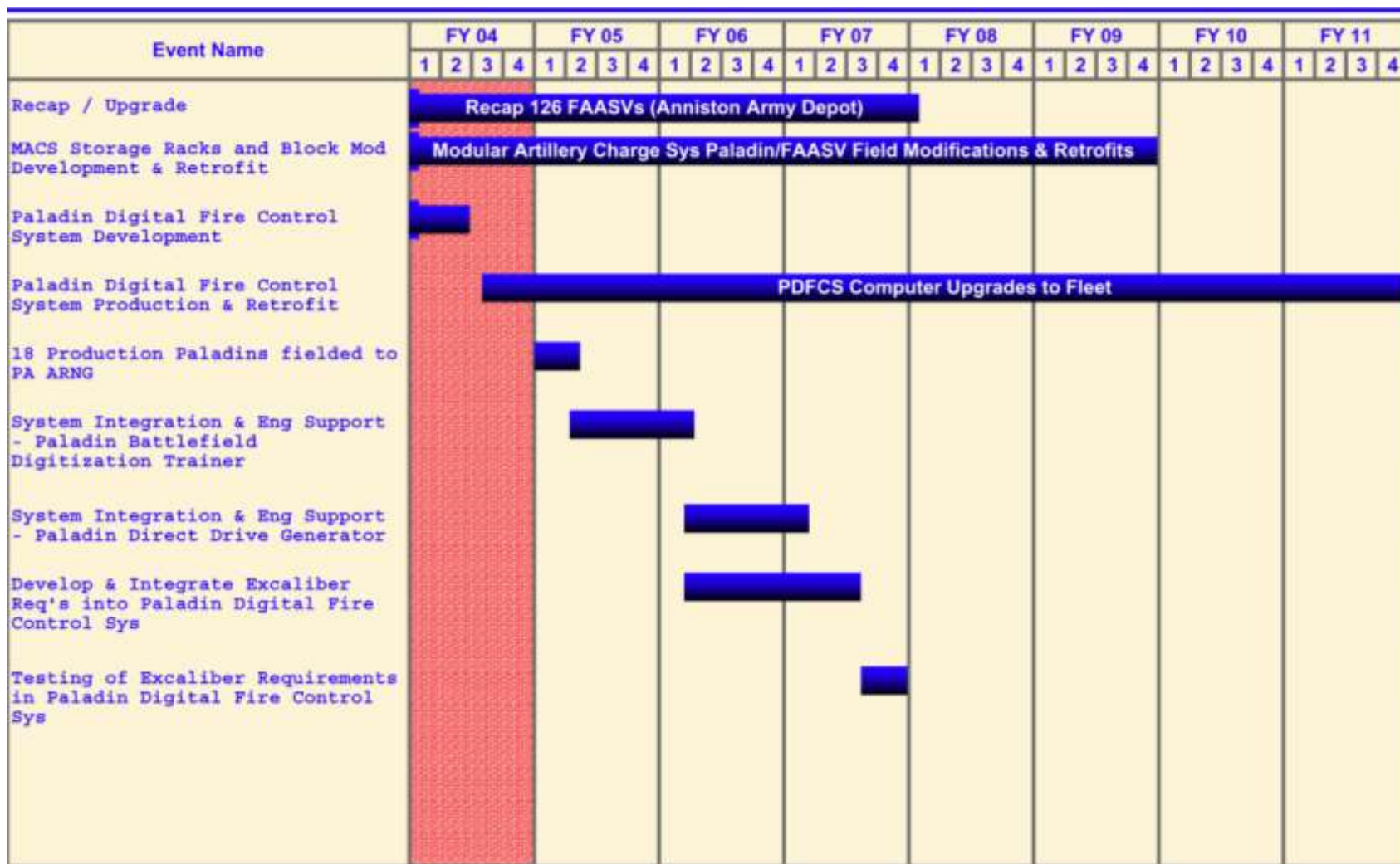


Bradley Program Schedule





Paladin/FAASV Program Schedule





Other Combat Systems

Challenges & Opportunities for Industry

- Situational Awareness
 - Integration of New Technologies to achieve interoperability with Future Combat System
 - Mounted Battle Command on the Move (MBCOTM)
- Survivability
 - Vehicle Integrated Defense Systems/Active Protection Systems
 - Loader and TC Weapon Station Improvements
 - Armor improvements/Active Armor
- Lethality
 - Muzzle Velocity System
 - Mid - Range Munition (MRM)
 - Multi function Laser Range finder
 - Target Management System
 - 3rd Gen Forward Looking Infrared Radar (FLIR)



Combat Systems

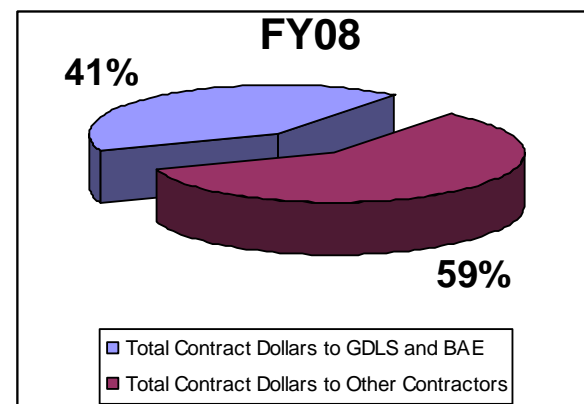
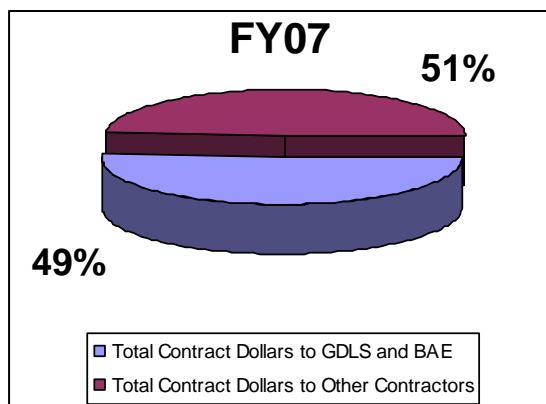
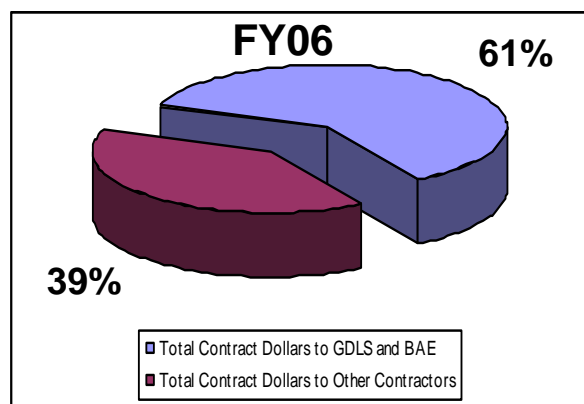
Challenges & Opportunities for Industry

- Mobility
 - Auxiliary Power Unit (APU)
 - Power Pack Durability Improvements
 - Suspension Durability Improvements
 - Hybrid Electric Drive
 - Improved Driver's Viewer
- Sustainment
 - Recapitalization
 - Reset combat equipment returning from OIF
 - Maintaining Vehicles that are not deployed with the troops (Stay behind Maintenance)
 - Embedded Diagnostics/Prognostics
 - Embedded Training
 - Electronics Obsolescence



Combat Systems Contractor Dollars

FY06 – FY08



DOLLARS IN M					
	Total Contract Dollars	Total Contract Dollars to go to GDLS & BAE	Percent of Contract Dollars for GDLS & BAE	Total Contract Dollars to go to Other Contractors	Percent of Contract Dollars for Other Contractors
FY 06	608.6	238.6	39%	370.0	61%
FY 07	554.5	269.9	49%	284.6	51%
FY 08	612.0	249.9	41%	362.1	59%

Acquisition Excellence



Robotics

Terry W. Griffin
Colonel, USMC
Project Manager



JPO Robotic Systems (FCS)



**Armed Robotic Vehicles-Assault-Light
(ARV-A-L)**



**Multifunctional Utility/Logistics and Equipment
MULE-Transport**



**Small Unmanned Ground Vehicle
(SUGV)**



Dismounted Controller



Countermine-Mule

**Armed Robotic Vehicles
ARV-RSTA**



**Armed Robotic Vehicles
ARV-Assault**





JPO Robotic Systems (Non FCS)

Joint Force



Packbot



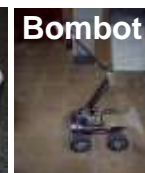
Talon



Vanguard



ODIS



Bombot

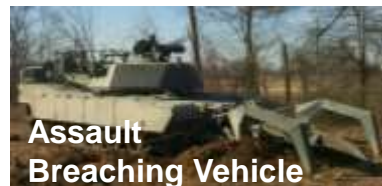
- IED Defeat Systems
- In Theater Log
- Joint Facility

USMC



Gladiator

- Lethal / Non-lethal Fire
- RSTA
- NBC Detection



Assault Breaching Vehicle

- M1 Chassis
- Mine Plow, Lane Marking
- MICLIC



Dragon Runner

- FIDO Explosives Sniffer
- Disrupter
- Dump Bed

Army



MV-4

- AP Mine Neutralization
- Wire Obstacle Breaching
- Engineer Missions



Mini Flail

- Mine Neutralization
- Contingency Systems
- Europe / OIF / OEF



Panther

Acquisition Excellence



List of RSJPO Robotic Technology Needs

- Autonomous Mobility Performance, Articulation, Mobility Algorithms
- Semi-Autonomy in Environments with Moving Persons and Vehicles
- Autonomous Navigation in Adverse Weather
- Autonomous Navigation Capability against Negative Obstacles
- Autonomous Navigation System Weight and Space Requirements
- Adequate System Control Devices
- Non-Line-of-Sight Communications Capabilities
 - Digital Communications
 - Networked Communications
 - Low Latency Global Reach Communications
 - Extended Data Link
 - Limited RF Spectrum Allocations
 - High Bandwidth
- UGV Reliability / Availability
- Anti-Tamper Capability
- Lightweight, Rugged Components
- Improved Battery Technology for Extended Duration and Life
- Non-Active (Stereo) Perception



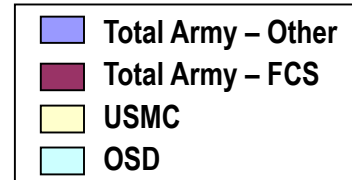
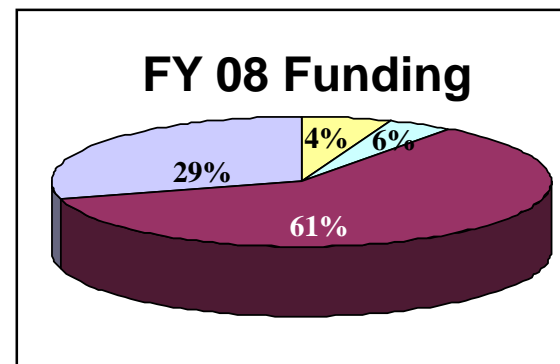
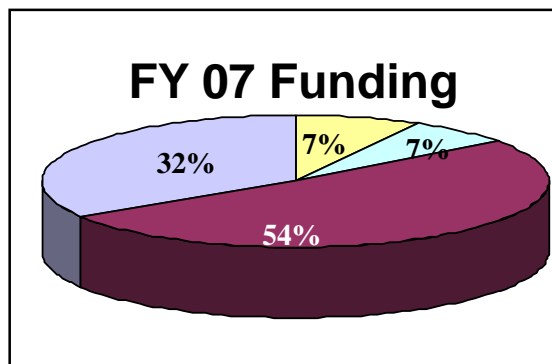
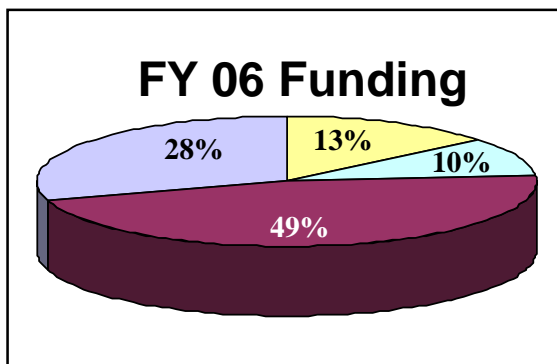
Autonomous Systems Challenges & Opportunities for Industry

- Autonomous Mobility
- Autonomous Mobility Performance
- Perception Safety (Moving Persons and Vehicles)
- Navigation Challenges (Adverse Weather, Negative Obstacles)
- System Control Devices
- Autonomous Operations
- Non-Line-of-Sight Communications
- Non-Active (Stereo) Perception
- Reliability/Availability
- Anti-Tamper Capability
- Lightweight, Rugged Components
- Improved Battery Technology



RS JPO Contract Dollars

FY 06 – FY 08



Dollars in M	USMC	OSD	ARMY	ARMY- FCS Subcontractors
FY 05	4.513	21.3	18	55.397
FY 06	25.65	17.9	55	86.445
FY 07	16.604	13.9	70.5	106.341
FY 08	11.484	7.8	56.8	116.608

Totals Include Both RDT&E and Procurement Dollars



Stryker

Peter N. Fuller
Colonel, AR
Project Manager



Stryker Family of Vehicles



Infantry Carrier Vehicle (ICV)



Commander's Vehicle (CV)



Fire Support Vehicle (FSV)



Reconnaissance Vehicle (RV)



Medical Evacuation Vehicle (MEV)



Engineer Squad Vehicle (ESV)



Anti Tank Guided Missile (ATGM)



Mobile Gun System (MGS)



NBC Reconnaissance Vehicle (NBCRV)



120mm Mounted Mortar Carrier (MC-B)

Commonality

Common Operating Picture

Common Chassis & Drive Train

Common KPP's

Common Survivability

Common TMDE, Spare Parts,
Tools & Skills



SBCT Fleet Management Strategy

CURRENT

FUTURE

2005

2011

2016

2050

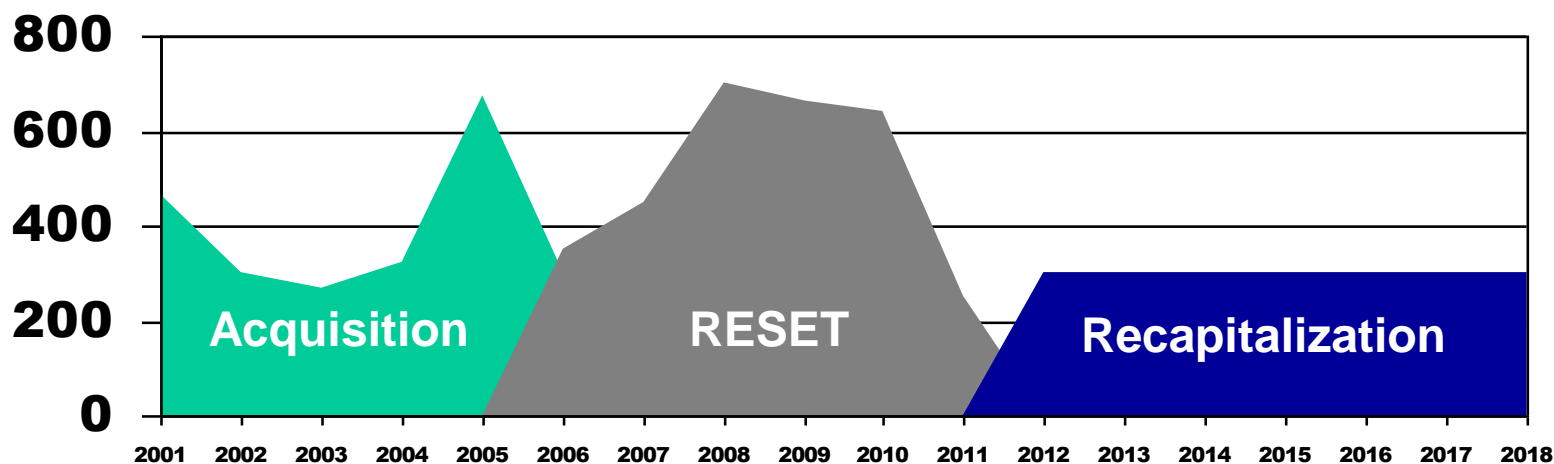
ACQUISITION

MODERNIZATION

SUSTAINMENT

RESET

RECAP



Acquisition Excellence



Stryker 1 – N List

TRADOC Approved

- Survivability
 - Active Protection System
 - IED Survivability
 - Crew Panoramic Awareness
- Environmental Control - Vehicle/C4 and/or Soldiers
- Power Management / Data Bus
 - Stabilize Power
 - Alternate Power
 - Soldier Battery Recharge
- Soldier as A System Integration - Land Warrior
- Semi Active Suspension - CTIS
- Improved Embedded Training Capability - Combat Maintainer Tasks
- Improved C4ISR Integration
 - Battle Command on the Move
 - Squad Communication to the Vehicle
 - Land Warrior
- Common Logistics Operating Environment (CLOE)
- Stryker Integrated Maintenance (SIM)



Stryker Challenges & Opportunities for Industry

- Communications:
 - Robust digital capability ensures near-seamless communications
 - Real time situational awareness and distribution of information
- Survivability:
 - Residual mobility virtually eliminates vehicle and personnel losses due to follow-on attacks
 - High hard steel structure / MEXAS ceramic armor/ Spall liner
 - Holistic survivability and force protection
 - Common Ballistic Shield Enhancement





Stryker Challenges & Opportunities for Industry

- Mobility:
 - Improved Digital Video Effect (DVE)
 - C-130 Deployable
 - Decisive Offensive action – dismounted Infantry assault enabled by fires and platforms
- Sustainment:
 - Battle Damage Repair Facility – Qatar
 - Regenerate Combat Power in Theater
 - Vehs. are immediately replaced in unit formation
 - RESET program w/Core Depot support





Stryker Challenges & Opportunities for Industry

- Interoperability:
 - Capable of Hosting and Integrating C4ISR Systems (EPLRS, FBCB2, ABCS).
 - Integrate Specific C4ISR Systems into Stryker Platforms IAW Systems Architecture
- Supportability:
 - Field and National Level Maintenance (limited wrench turning by contractor)
 - Co-located capability with unit – home station and during deployment
 - Spare Parts (including selected GFE)
 - Maintenance Augmentation After Unit is Trained
 - 90% minimum ORR during and after NET





Stryker Challenges & Opportunities for Industry

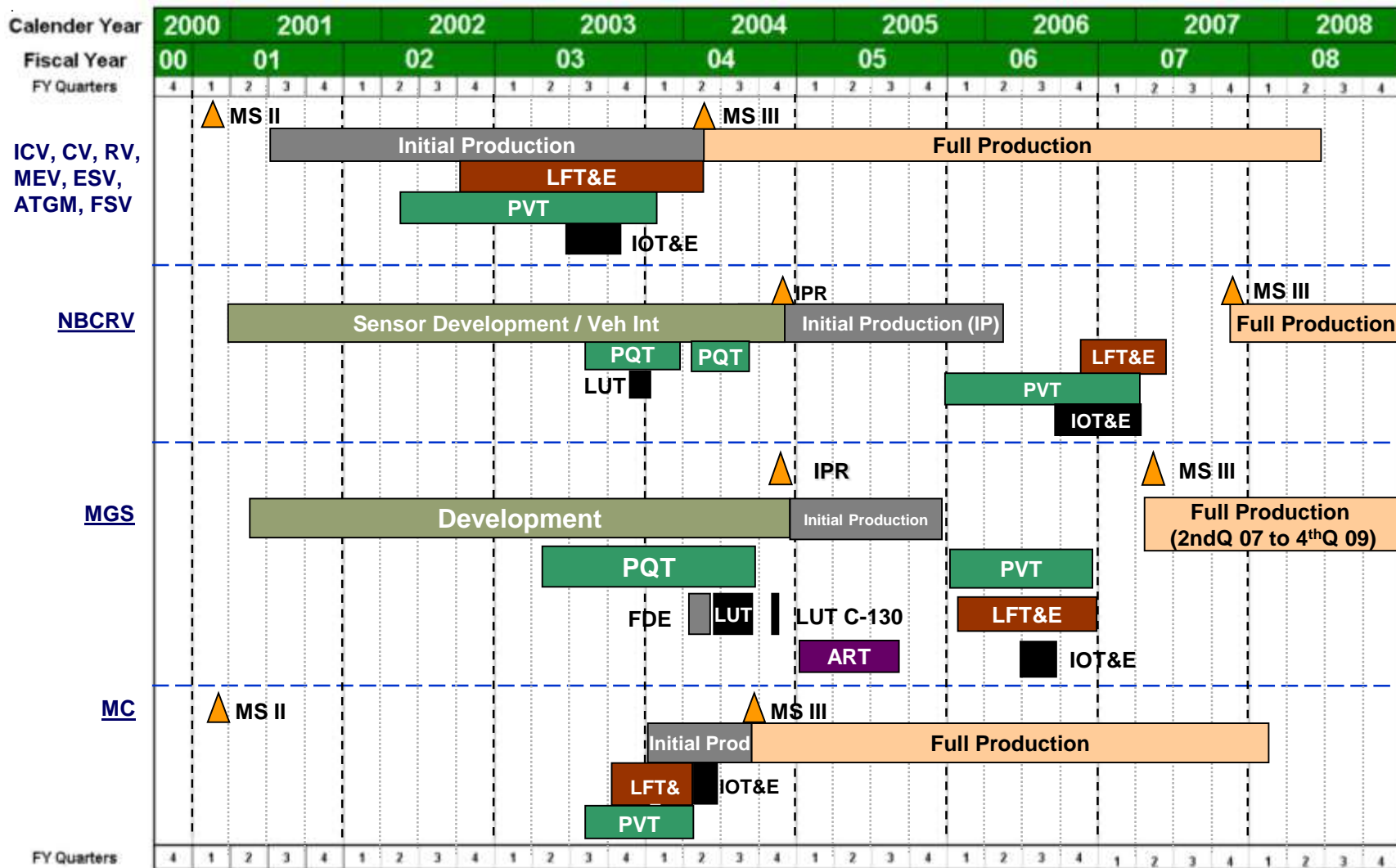
- Flexibility:
 - Missions range from mounted and dismounted peacekeeping and patrolling to full-scale urban combat
- Lethality:
 - Organic combined arms lethality
 - Baseline target acquisition is “point and shoot”
- Industry Potential:
 - Register with GDLS to become an authorized supplier/sub-contractor
 - Contact DOD E-Mail to become an authorized supplier





Stryker Program Schedule

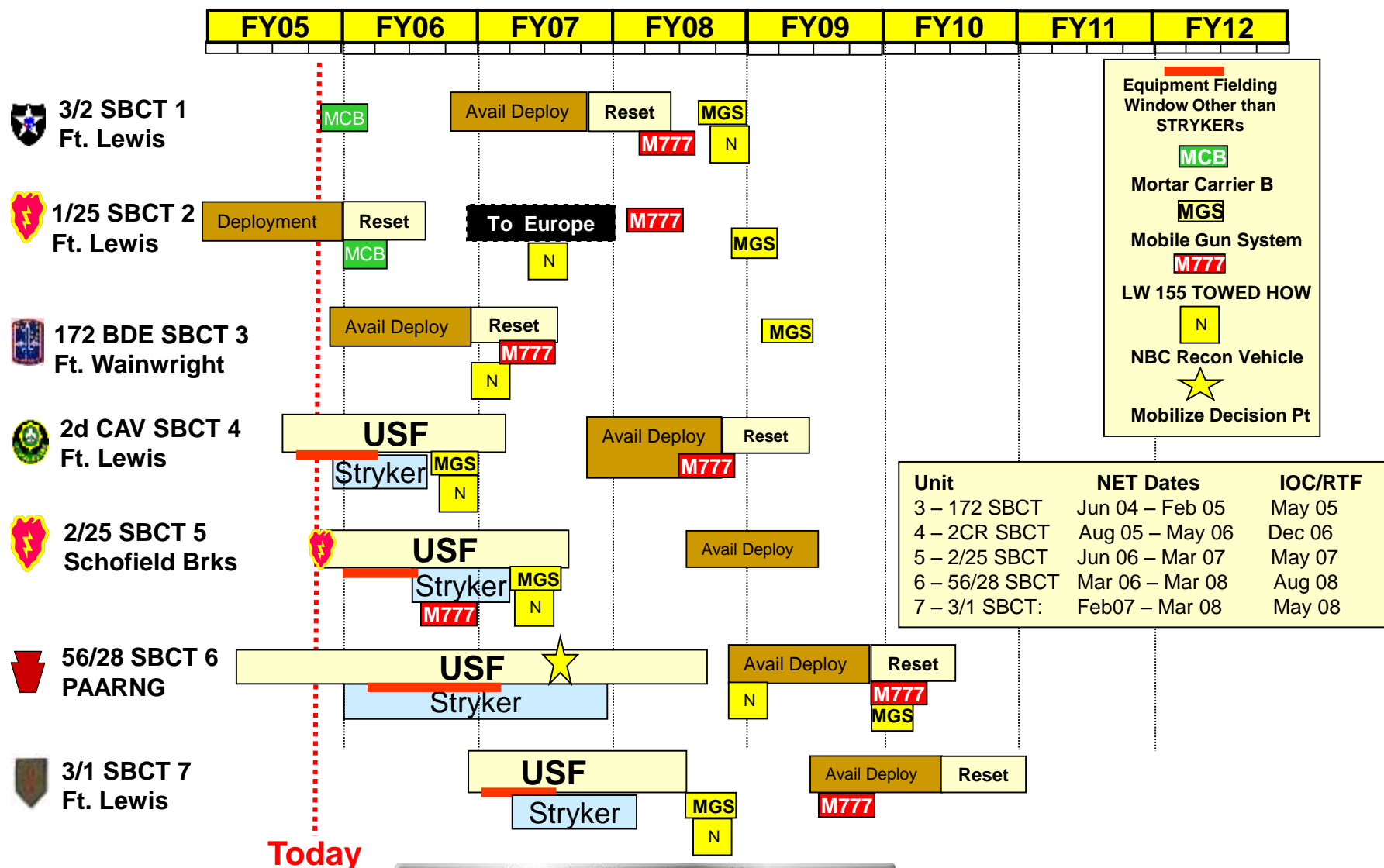
August 05



Acquisition Excellence



Life Cycle Management

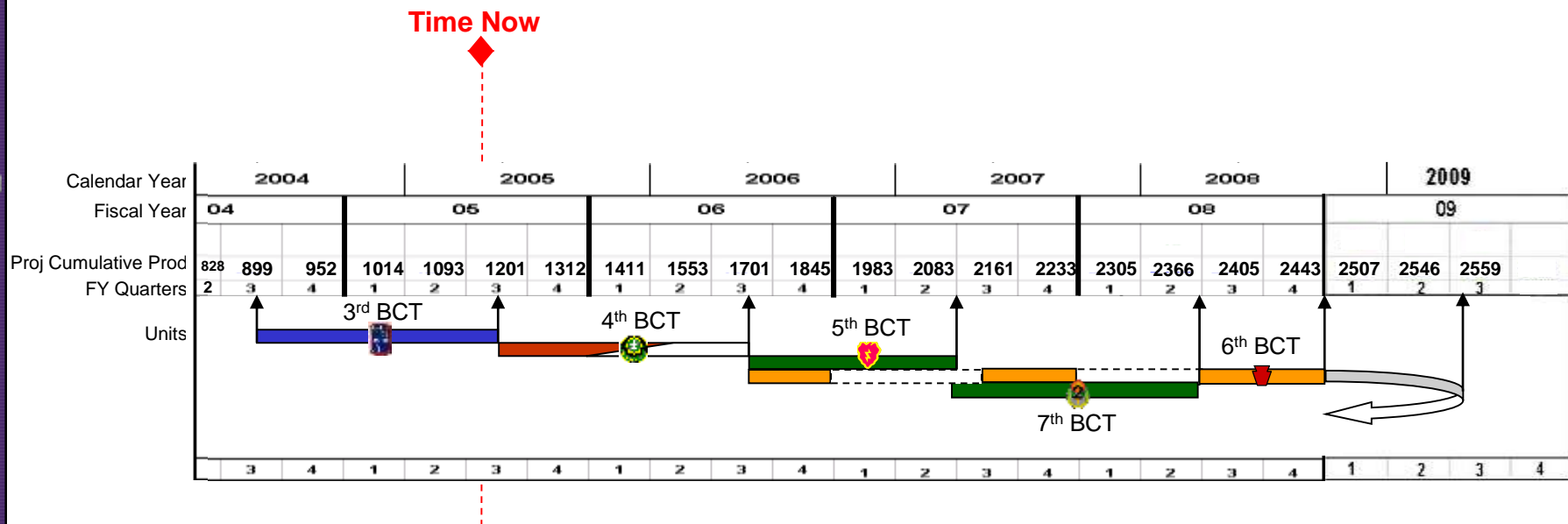


Today

Acquisition Excellence



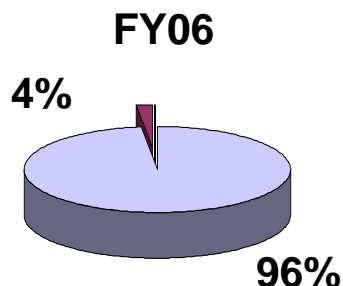
Stryker Fielding Plan



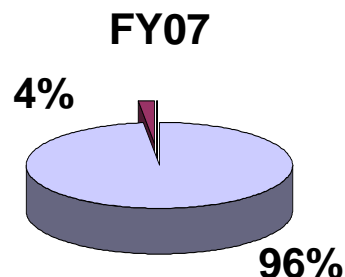


Stryker Contractor Dollars

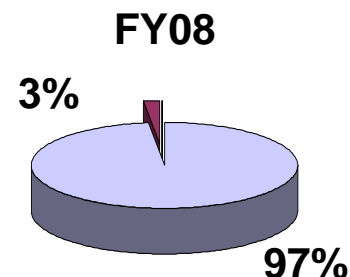
FY06 – FY08



■ Total Contract Dollars to GDLS
■ Total Contract Dollars to Other Contractors



■ Total Contract Dollars to GDLS
■ Total Contract Dollars to Other Contractors



■ Total Contract Dollars to GDLS
■ Total Contract Dollars to Other Contractors

DOLLARS IN M					
	Total Contract Dollars	Total Contract Dollars to go to GDLS	Percent of Contract Dollars for GDLS	Total Contract Dollars to go to Other Contractors	Percent of Contract Dollars for Other Contractors
FY 06	1018.238	976.821	96%	41.417	4%
FY 07	879.161	848.134	96%	31.026	4%
FY 08	861.044	834.323	97%	26.721	3%

WTCV: Does not include GFE/GFM.

OMA/Deployment/GWOT: Assumes reset, re-deployment, battle damage repair facility

OMA/PBL/TRM: Assumes full funding is received to support requirements.

Includes FY06 – FY08 dollars only.



JLW 155

Mr. James Shields
Project Manager



Joint Program Manager Lightweight 155mm Howitzer M777/A1 M119A2 M111 (IPADS)



LW155 Future Needs

- Areas of potential future benefit to LW155
- HW/SW Upgrades – Wireless Technology, Muzzle Velocity Sensor, On-Board Ballistics
- Power Management – Li Ion Batteries, Solar Charger, NATO Adaptors
- Weight Reduction
- Powered Drives (Rammer, Suspension, Azimuth, Elevation)
- Ammunition Handling/Transfer
- Alternative Ignition Technology



M777/A1

Challenges & Opportunities for Industry

- BAE SYSTEMS is the Prime Contractor for the LW155 System
 - Managed From Barrow-In-Furness, UK
 - Integration & Assembly at Hattiesburg, MS
 - Value Chain Was Competitively Selected
 - Full-Rate Production Underway
- General Dynamics ATP (Burlington, VT) is Digital Fire Control Supplier
- Cannon is Government Furnished Equipment
- Software Upgrades Through ARDEC Software Center
- Full & Open Competition for Basic Issue Items



M777 Program Schedule

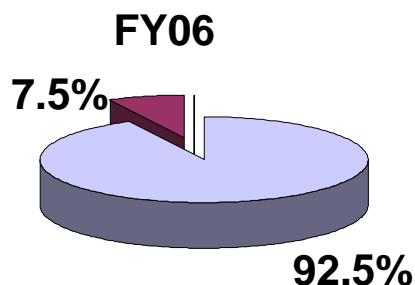
Event Name	FY 05				FY 06				FY 07				FY 08				FY 09				FY 10			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
(1) MS C - Digital Fire Control	▲ ₁																							
(2) FRP Decision (Joint)	▲ ₂																							
2/25 ID (SBCT #5)								■																
(3) IOC (M777A1)								▲ ₃																
172nd (SBCT #3)										■														
3/2 ID (SBCT #1)												■												
1/25 ID (SBCT #2)													■											
2 ACR (SBCT #4)														■										
18 FAB/1-321 (ABN)															■									
18 FAB/1-377 FA (ABN)																■								
3-321 FA																	■							
3-162 FA																		■						
PA ARNG (SBCT #6)																				■				
Towed Artillery Digitization (Block II)													Fire Control Software Upgrades											

■ = Fielding

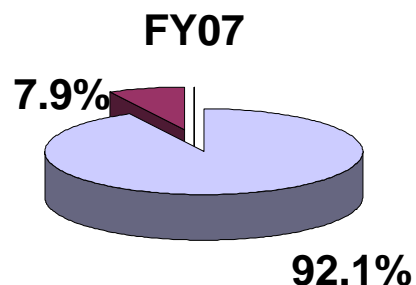


M777 Contractor Dollars

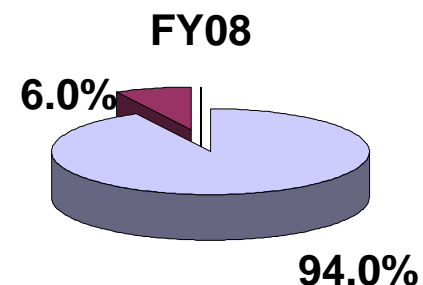
FY06 – FY08



■ Total Contract Dollars to BAE
■ Total Contract Dollars to Other Contractors



■ Total Contract Dollars to BAE
■ Total Contract Dollars to Other Contractors



■ Total Contract Dollars to BAE
■ Total Contract Dollars to Other Contractors

DOLLARS IN M					
	Total Contract Dollars	Total Contract Dollars to go to BAE	Percent of Contract Dollars to go to BAE	Total Contract Dollars to go to Other Contractors	Percent of Contract Dollars for Other Contractors
FY 06	172.8	159.8	92.5%	13.0	7.5%
FY 07	195.7	180.2	92.1%	15.5	7.9%
FY 08	310.6	292.0	94.0%	18.6	6.0%



M119A2

Future Needs

- Areas of potential future benefit to M119A2
- Digital Fire Control Upgrade
- Unique Identification (UID) Marking
- Prime Mover Integration Kits
- Alternative Prime Mover to the HMMWV



M119 Challenges & Opportunities for Industry

- Contract Support Services to Arsenals
 - RIA - Weapon Production and Integration
 - WVA – Cannon Production
- Digitization of M119A2
- Availability and Cost of 95-15 Steel - Long Term IDIQ Contracts Established with Several Vendors
- Competitive Selection of Optical Fire Control - Long Term IDIQ Contracts Established with Several Vendors
- Future opportunities for BII, Fielding, Production Consumables, etc.,



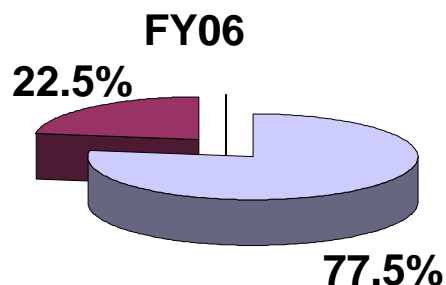
M119 Program Schedule

Task Name	2005		2006		2007		2008		2009		2010		2011		2011	
	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2
Production																
Delivery																
Fielding																

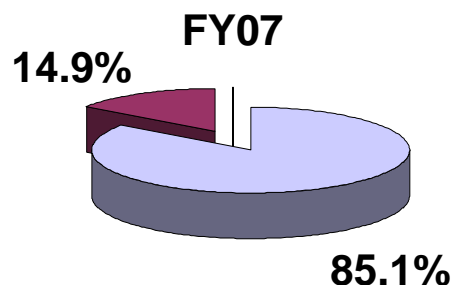


M119 Contractor Dollars

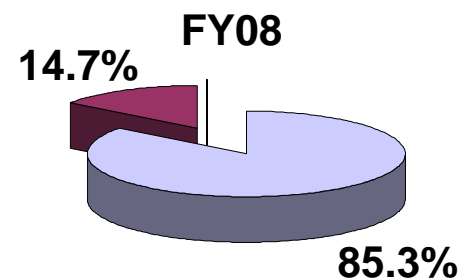
FY06 – FY08



■ Total Contract Dollars Long Term IDIQ
■ Total Contract Dollars to Other Contractors



■ Total Contract Dollars Long Term IDIQ
■ Total Contract Dollars to Other Contractors



■ Total Contract Dollars Long Term IDIQ
■ Total Contract Dollars to Other Contractors

DOLLARS IN M					
	Total Contract Dollars	Total Contract Dollars to Long Term IDIQ Contracts	Percent of Contract Dollars to go to BAE	Total Contract Dollars to go to Other Contractors	Percent of Contract Dollars for Other Contractors
FY 06	22.2	17.2	77.5%	5.0	22.5%
FY 07	6.7	5.7	85.1%	1.0	14.9%
FY 08	6.1	5.2	85.3%	0.9	14.7%



M111 IPADS Future Needs

- Areas of potential future benefit to IPADS
- Integration of GPS
- Upgrade Hardware (Display/Screen, Hard Drive, etc.,)
- Power Management



M111 (IPADS)

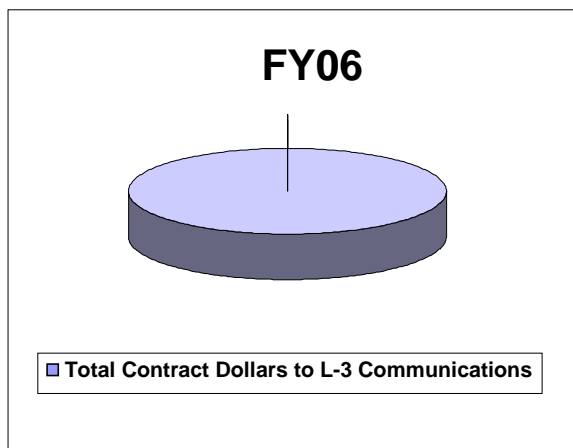
Challenges & Opportunities for Industry

- L-3 Communications is the Prime Contractor for the IPADS
 - Indefinite Delivery Indefinite Quantity (IDIQ) Contract in Place
 - Production & Fielding Underway
- Future Production Reliant Upon Potential Supplemental Funding



M111 (IPADS) Contractor Dollars

FY06 – FY08



DOLLARS IN M					
	Total Contract Dollars	Total Contract Dollars to go to L-3 Communication	Percent of Contract Dollars to go to L-3	Total Contract Dollars to go to Other Contractors	Percent of Contract Dollars for Other Contractors
*FY 06	15.1	15.1	100%	0.0	0.0%
FY 07	0.0	Not Presently Funded			
FY 08	0.0	Not Presently Funded			

*** FY06 Extended Plan**



Back Ups



M707 Knight 1-N List

- Turret Ring Redesign
- Rotate turret and fire crew serve weapons simultaneously
- Incorporate Stand-Alone Computer Unit/Forward Observer Software/Force XXI Battle Command Brigade and Below
- Easier access to Combat Observation Lasing Team Commander
- Common Remote Stabilized Sensor System (CRS3)
- Targeting station/gunners protection kit designed for M707 Knight
- Integrated Electronic Technical Manuals
- Close Air Support radio Integration
- Web seating for the gunner



BFIST M7/M3A3 1-N List

- Fire Support Sensor System (FS3)
- Desk Top Trainers



POC's

Combat Systems

DPM – Mike Asada
(586) 574-7703

Robotics

DPM – Duane Gotvald
(256) 955-7042

Stryker

DPM – Mike Viggato
(586) 753-2189

JLW155

DPM – Keith Gooding
(973) 724-5319

FCS Program Overview

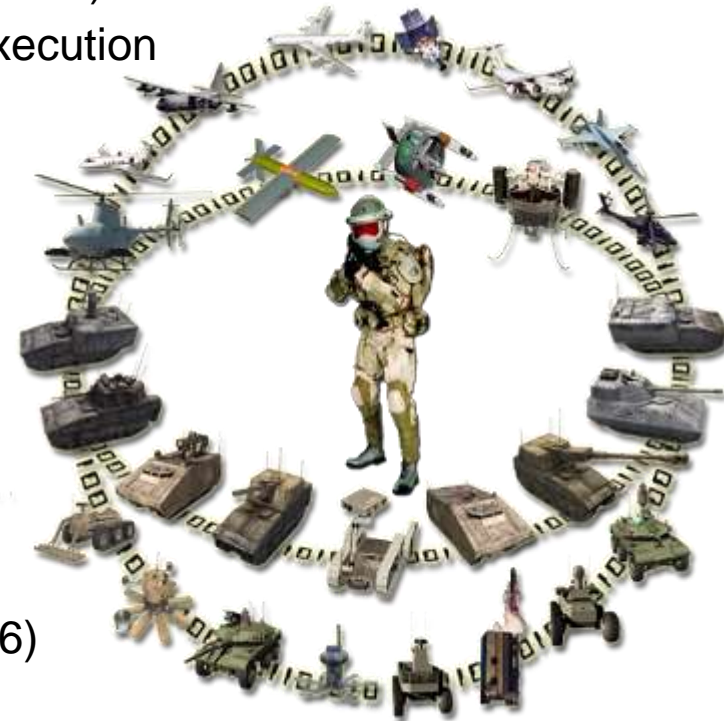
**Advanced Planning Briefing
for Industry (APBI)**

John Kelley

**Director - Supplier Management & Procurement
Future Combat Systems**

FCS Program Status

- **Program keeping pace with Army needs**
 - Accelerating needed capabilities to our soldiers
 - Integrating Modularity and FCS (Spin Outs, Experiments)
 - Transitioning from OTA to FAR; maintain focus on execution
 - Successful System-of-Systems Functional Review
- **On cost, On schedule, On performance:**
 - SPI = 99.4%, CPI = 100.4%
- **FY06 is critical ramp-up year**
 - \$3.4B President Budget
 - Broad industry ramp-up (Network and Platforms)
 - Extensive Software and Hardware deliveries
 - First major field experiment (Experiment 1.1, JEFX06)
 - Long lead for Spin Out 1
 - Initial Preliminary Design Review (IPDR)
 - Integration Phase 1 (IP1)



Program Momentum is Strong... Maintain Velocity

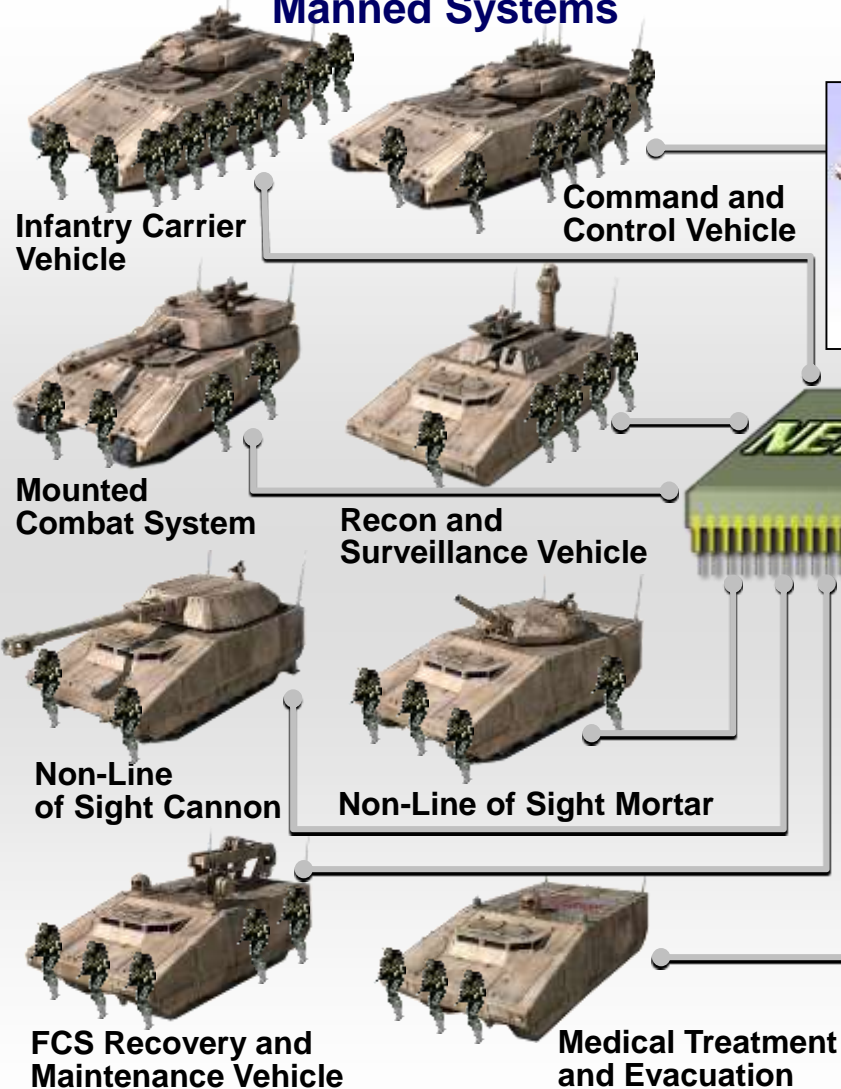
FCS User Requirements



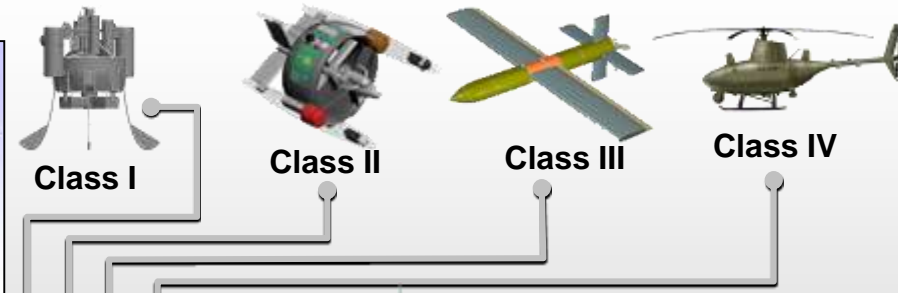
- Joint, Interagency and Multi-National Capabilities
- Increased Strategic Responsiveness
- Dominant across Full Spectrum Operations
- Campaign Quality Force
- Enabled by Knowledge
- Adaptive Modular Organizations
- 3-7 Days Self-sustainment
- FCS: Family of Systems/System-of-Systems
- Soldiers and Leaders Enabled by Technology

FCS System-of-Systems

Manned Systems



Unmanned Air Vehicles



Unattended Munitions

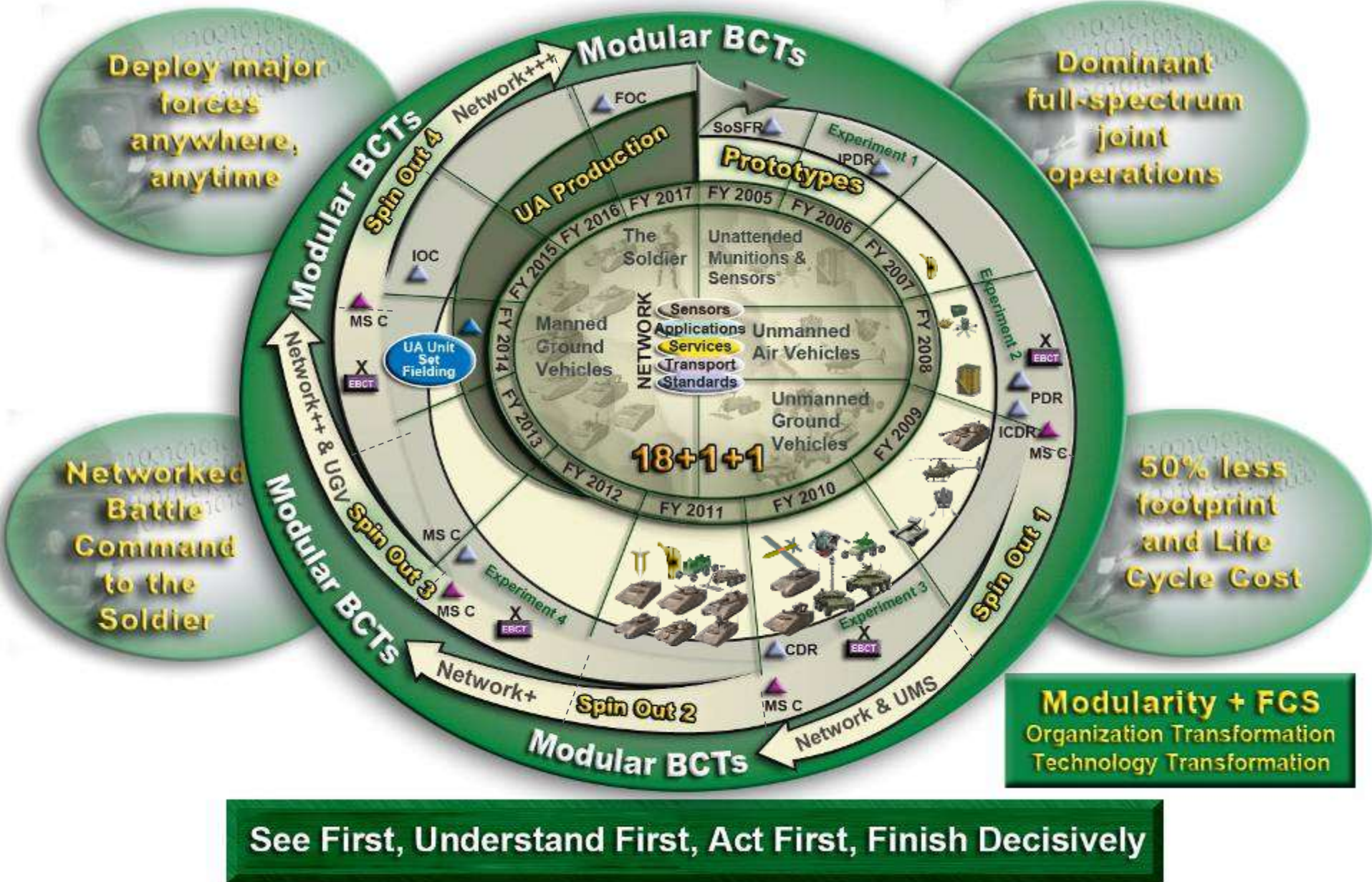


Unmanned Ground Vehicles

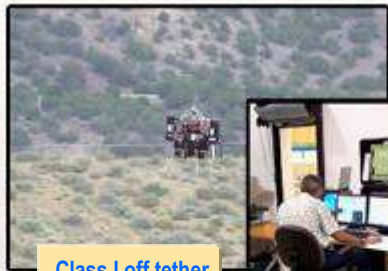


Accelerating Capabilities to Our Soldiers

FUTURE COMBAT SYSTEMS
FCS
One Team-The Army/Defense/Industry



Recent Significant Events



Class I off tether



Class IV UAV SIL



SOSIL 2005



PAM Warhead Testing



iRobot Packbot
Production Line



GDAIS Completes First
Test Station Build for ICS



120MM Cannon



Packbot on
Patrol in Iraq



GDAIS ICS Demonstrator
at Fall AUSA Symposium



Experiment 1.1 Vehicles



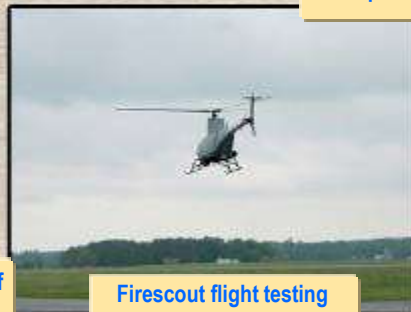
SARTI UGV



Active Protection System



Congressional Staff Tour of
Schweizer Plant (1/10/05)



Fire Scout flight testing

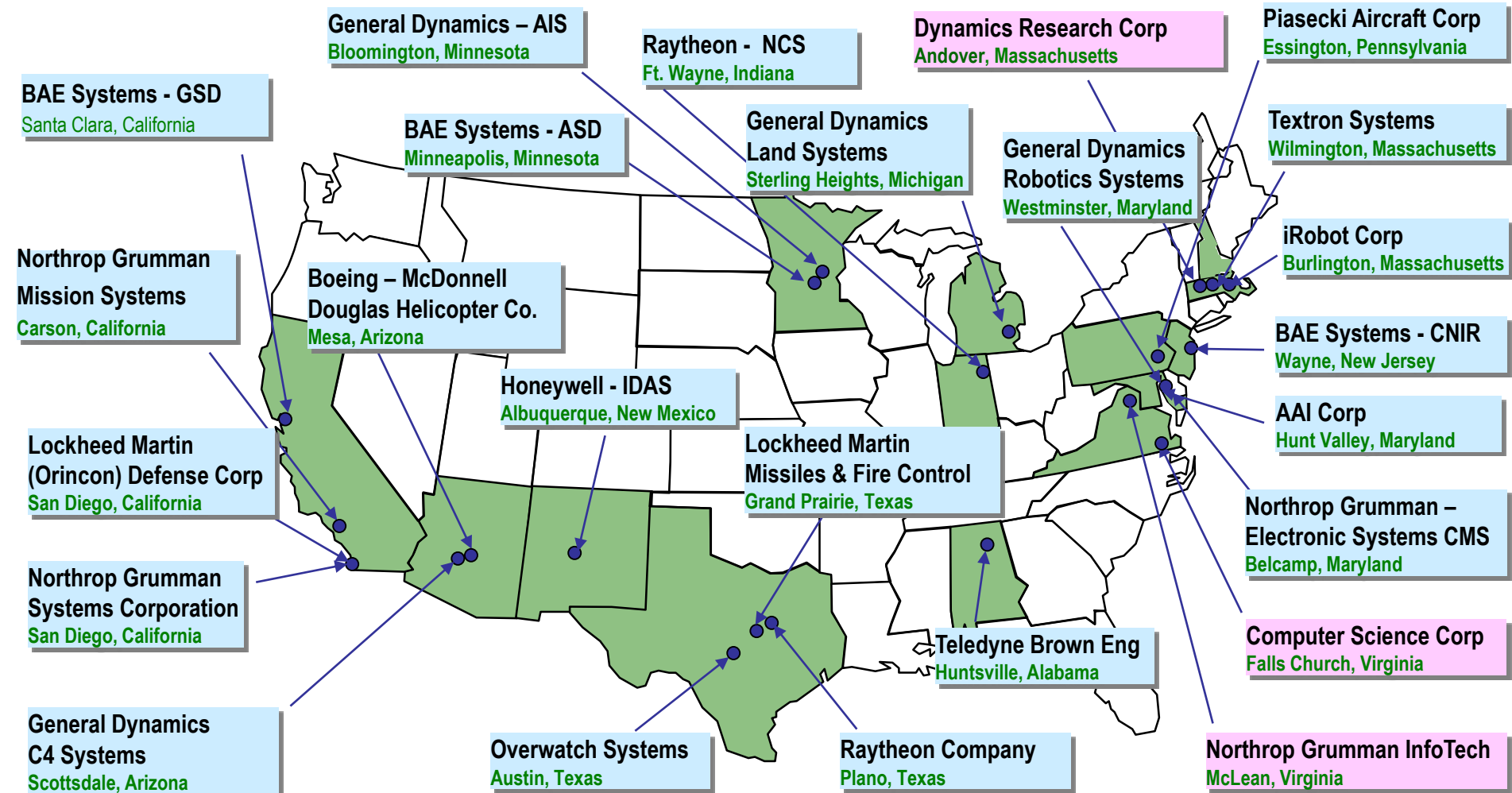


NLOS Cannon



After Action Review
Meeting Center

FCS “Best of Industry” Team



Partner Opportunities

- Opportunities for both the LSI and partners are listed on or linked to the FCS website
- Opportunities exist for 2nd and 3rd tier support to recent, pending and future selections

Example from FCS Website

FCS Business Opportunities

[Intelligence, Surveillance, and Reconnaissance](#) | [C4ISR - Battle Command](#) | [C4ISR - Network Systems](#) | [Unmanned Ground Vehicle](#) | [Unmanned Air Vehicle](#) | [Manned Ground Systems](#) | [Supportability](#) | [Training Support](#)

FCS Partner Contact Information	Business Opportunities
<i>Unmanned Ground Vehicles</i>	
General Dynamics Advanced Information Systems Bloomington, MN Review Information at Web Address www.gd-ais.com under Supply Chain Management, "How to Sell to GDAIS" Email: Systems.Support@gdc4s.com	General Purpose Processors Graphics Processors Fixed and Removable Storage Media Storage Controllers Network Switches and Routers Firewalls Network Intrusion Detection Cross Domain Guards Chassis and Chassis backplanes Power Supplies Fiber Optic Cabling and Copper Cabling Conversion Submit Supplier Information
Top	

Partner Contact Information

Partners	Contact Name	Phone Number	Email
Raytheon Network Centric Systems	Valerie King	508-490-2331	valerie_king@raytheon.com
Raytheon Network Centric Systems	Randy Whitaker	972-344-8302	r-whitaker@raytheon.com
Northrop Grumman Integrated Systems	Vicky Harper-Hall	310-814-0550	Vicky.Harper-Hall@ngc.com
Northrop Grumman Information Technology	Sandy VanDerEems	703-556-1714	Sandy.VanDerEems@ngc.com
Northrop Grumman Mission Systems	Pat Austin	703-345-7888	Pat.Austin@NGC.COM
	Jack Beckwith	310-764-9831	john.beckwith@ngc.com
Northrop Grumman Electronic Systems Corp.	Susanne Adams	410-765-8269	Susanne.adams@northropgrumman.com
Northrop Grumman Mission Systems	Pat Austin	703-968-1244	Pat.Austin@NGC.COM
General Dynamics Robotic Systems	Gerry Simmons	410-876-9200	gsimmons@gdrs.com
General Dynamics C4 Systems	Stephanie Poppe	480-441-7255	Stephanie.poppe@gdds.com
General Dynamics Land Systems	Doug Gamache	586-825-7883	gamached@gdls.com
General Dynamics Advanced Information Systems	Lynn Simmons	508-880-1658	Lynn.Simmons@gdc4s.com
	Gary Muellenberg	952-956-5457	Gary.Muellenberg@gd-ais.com
Lockheed Martin ORINCON Defense	Regina Stout	610-354-3151	regina.c.stout@lmco.com
Lockheed Martin Missiles and Fire Control	Cathy Usztan-Bedford	972-603-1268	cathy.usztan-bedford@lmco.com
BAE Systems	James Nunemaker	973-305-2604	james.nunemaker@baesystems.com
	Alex Carroll	703-668-4457	alex.carroll@baesystems.com
	John Grindle	703-668-4237	john.grindle@baesystems.com
Textron Systems	Jim Hester	978-657-1236	Jhester@systems.textron.com
	Bruce Boucher	978-618-1678	bboucher@systems.textron.com
Dynamics Research Corp.	Pam Rodgers	978-475-9090 x2584	prodgers@drc.com
Honeywell Defense & Space Electronic Systems	Bill Spofford	505-828-5548	billspofford@honeywell.com
BAE Systems	Barbara Knox	717-225-8077	barbara.knox@udlp.com
BAE Systems	Rick Richter	763-572-7904	richard.richter@udlp.com
	Lynn Arholm	763-572-6846	lynn.arholm@udlp.com
Computer Sciences Corp.	Addie Olsen	703-736-3773	aolsen@csc.com

FCS Business Opportunities

Technology Areas of Interest

Mounted and Dismounted Soldier Survivability

- Advanced Soldier Health Monitoring Systems
- Enhanced Standoff Mine Detection on Unmanned Aerial Vehicles
- Kinetic Energy Active Protection Systems
- Laser Hardened Sensor Vision
- Lightweight Appliqué Armor
- Mine Detection on Manned Ground Vehicles

Sustainment Footprint

- Advanced Line-of-Sight Lethality
- Advanced Vehicle Drive Train Components
- Failure Models for Embedded Digital Electronics and Mother Boards
- Fault Tolerant/Self-Repairing Computer Operating Systems
- Ultra High Density Energy Storage
- Ultra Reliability Prognostics

Human Factors and Training

- Advanced Remote/Distributed Training Environments and Architectures and Effects
- Methods for Training Command Decision makers Under Time Stress
- Models and Demonstrations for Human Factors in Remote Vehicle Control

Survivability

- Gap Bridging by 20-Ton and 6-Ton Vehicles
- Improvised Explosive Device (IED) and Unexploded Ordnance (UXO) Sensing and Neutralization on the Move
- Innovative Mine Detection by Dismounted Soldiers
- Mine Clearance and Neutralization by Autonomous Unmanned Vehicles

Force Lethality

- Advanced Line-of-Sight Lethality and Effects
- Advanced Mounted Combat System Ammunition

How to Get Involved with FCS



- Regularly check the FCS Website Home Page at:
www.boeing.com/fcs
- Located on this website:
 - FCS Business Opportunities of the LSI and its Partners (Contacts with websites)
 - Information on Submitting Unsolicited Proposals and Questions
 - Partners' Requests for Quotations / Information
 - FCS Business Opportunities
 - **FCS Supplier Information Submittal Form**
 - Supplier Diversity information (specific LSI / Partner Small Business contacts provided in FCS Business Opportunities Brochure)
 - FCS calendar with upcoming conferences and events
- Reach out to the LSI and Partners to express your interest and capability
- Focus on areas of technology and express interest across the One Team

FCS External Web Site

The screenshot displays the Boeing Future Combat Systems (FCS) External Web Site. The main navigation menu on the left includes: Boeing Home, Integrated Defense Systems, Phantom Works, fcs overview, what's new?, briefings, industry collaboration, archive, and questions. The central banner features a desert landscape with the SAIC logo and the text "FUTURE COMBAT SYSTEMS One Team - The Army/Defense/Industry". The right sidebar lists: BOEING, Partners, Unsolicited Proposals, Partners Requests for Information / Quotes, FCS Business Opportunities, Supplier Diversity, UAV Sensor Bid Opportunities, and UAV Aided Target Recognition Announcement. A search bar is located below the sidebar. The bottom navigation bar includes: site navigator, PRODUCTS & SERVICES, E-BUSINESS, BOEING WORLDWIDE, INVESTOR RELATIONS, EMPLOYMENT, EMPLOYEE/RETIREE, DOING BUSINESS, GEN INFO/IMAGES, CORP. GOVERNANCE, NEWS, SECURE LOGON, and a footer with Contact Us, Text Index, Site Terms, Privacy, Copyright © Boeing, All rights reserved.

Callouts from the right sidebar point to the following content:

- Partner lists and Website links
- Submission of Proposals not covered by an RFP
- Partner posted solicitations for requests for information
- Partners opportunities, contacts, and submittal form, and LSI Technology areas of interest
- Supplier Diversity information and contacts
- LSI posted solicitations (requests for information/proposals, white papers), news, and events

www.boeing.com/fcs

In Summary...

- Key partners have been identified - and their sub-tier source requirements and selections are in progress
 - Partner locations, products provided, and contacts are available on the FCS web site and in the handout we have available here today
- Our Outreach and Supplier Diversity initiatives are in place - with focused and concerted collaborative efforts to identify and incorporate the “Best of Industry”
- The FCS program - already one of the largest Government Defense programs - has just increased significantly in content and scope.
 - Additional emphasis placed on the spiraling out of capability to the warfighter after modeling & simulation and test
 - Planning for capability spirals and efforts toward previously deferred systems are now underway in conjunction with our partners
- With such a large, evolving, and dynamic program, continue to watch the FCS web site for further opportunities and developments as they are identified

FUTURE COMBAT SYSTEMS



One Team-The Army/Defense/Industry

Questions and Answers



CPFR At TACOM

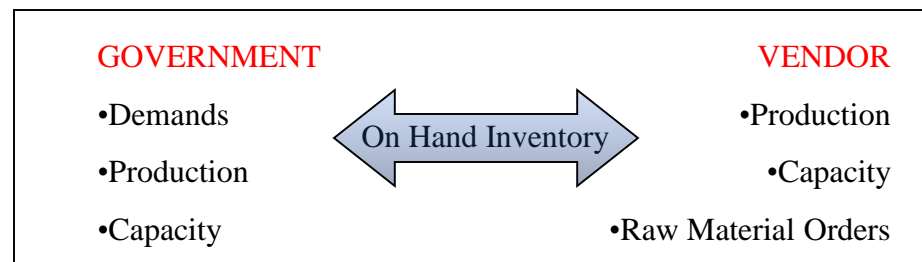
Briefer: Pat Dempsey-Klott
C, e-Business Team

AGENDA

- What is CPFR
- Definition of Collaboration
- Why is Supply Chain Collaboration Important
- Background
 - The Bullwhip Effect
 - Vendor Initiated Parts Resupply (VIPR)
- Implementation of CPFR at TACOM
- Things to Remember
- Contact Information
- Questions

WHAT IS CPFR?

- Collaborative Planning, Forecasting & Replenishment is an Industry Standard for Trading Partner Collaboration
- Voluntary Inter-Industry Commerce Standards (VICS) Sponsored New CPFR Working Group in 1996
- Purpose: To Improve the Partnership Between Government and Industry Through Collaborative Processes and Information Sharing
- Collaboration Examples:



- **CPFR = Primarily Applicable to Long Term Business Relationships**

Definition of Collaboration

“....managing interdependencies to maximize shared goals and enhance individual goals, with a focus on complex problem-solving or joint innovation.”

- Voluntary Interindustry Commerce Standards (VICS)
Secretariat for CPFR

HOW CPFR WORKS

Educate

- **Business process flow**
- **How trading partners plan and execute**

Share

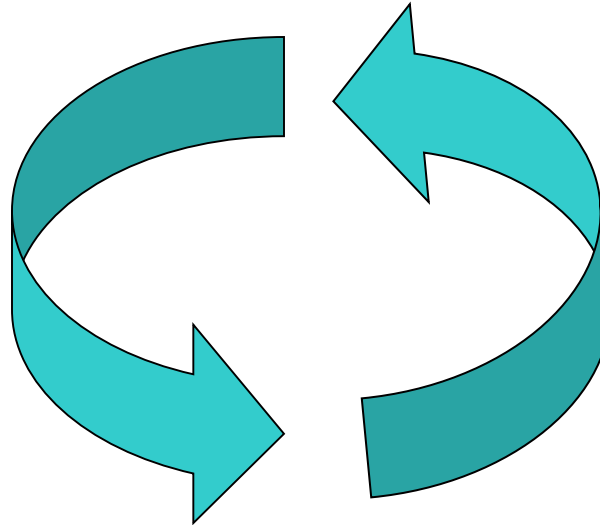
- **Information and knowledge**
 - **What to share**
 - **How to share**
 - **When to share**

Execute

- **Measure and monitor results**
- **Continuously improve**

Agree

- **When and how to collaborate**
- **Improvements and benefits that will be gained**



EXAMPLES of INFORMATION SHARING

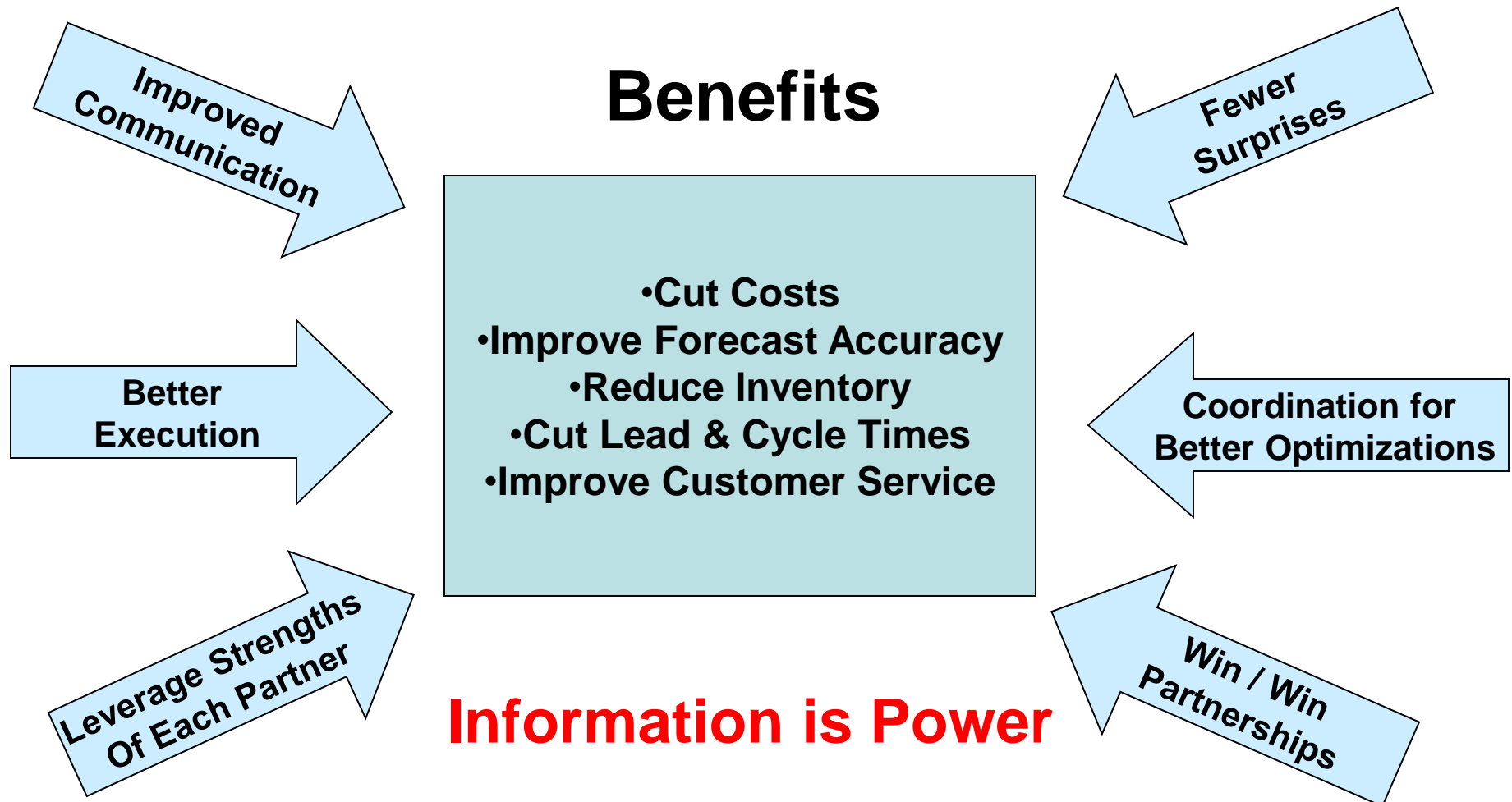
GOVERNMENT

- Active Storage Locations
- Fleet Density
- Two Year Demand history
- Safety Level Requirements
- ALT/PLT
- Base AMD
- ROWP
- Total On Hand
- Demands/Type of Demands
- Requirements Forecast
- Known Contingencies
- Funding Issues

VENDOR

- Vendor On Hand Inventory
- Production Rates
- Capacity
- Surge Capacity
- Raw Material issues
- Production Issues
- Forecasting

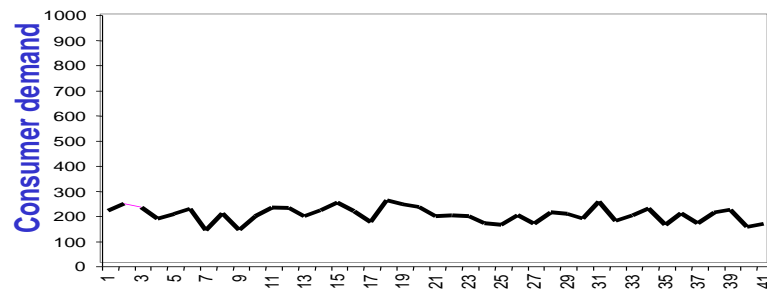
WHY SUPPLY CHAIN COLLABORATION IS IMPORTANT



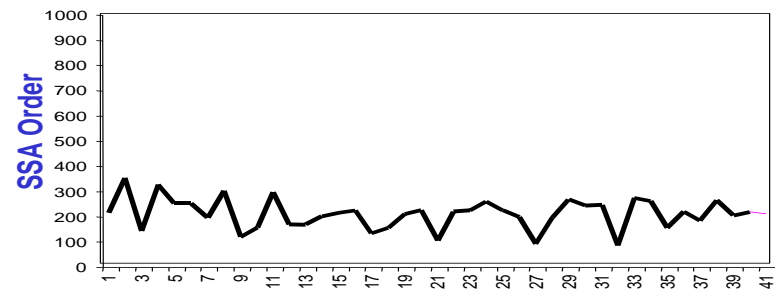
BACKGROUND

The Bull Whip Effect

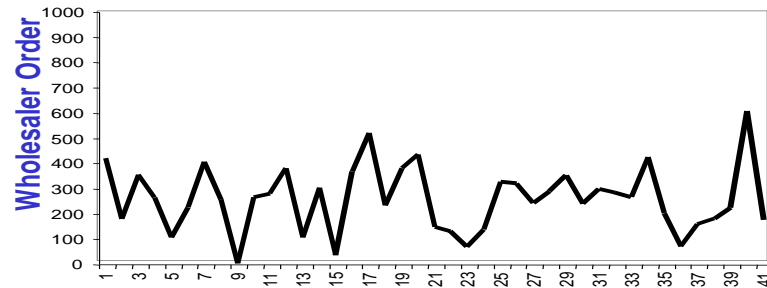
Customer Sales at SSA



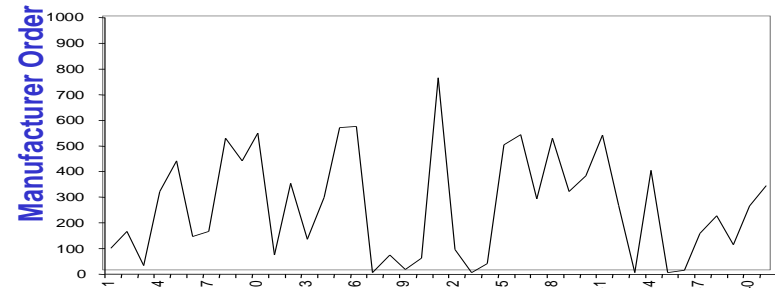
SSA's Orders to Wholesale



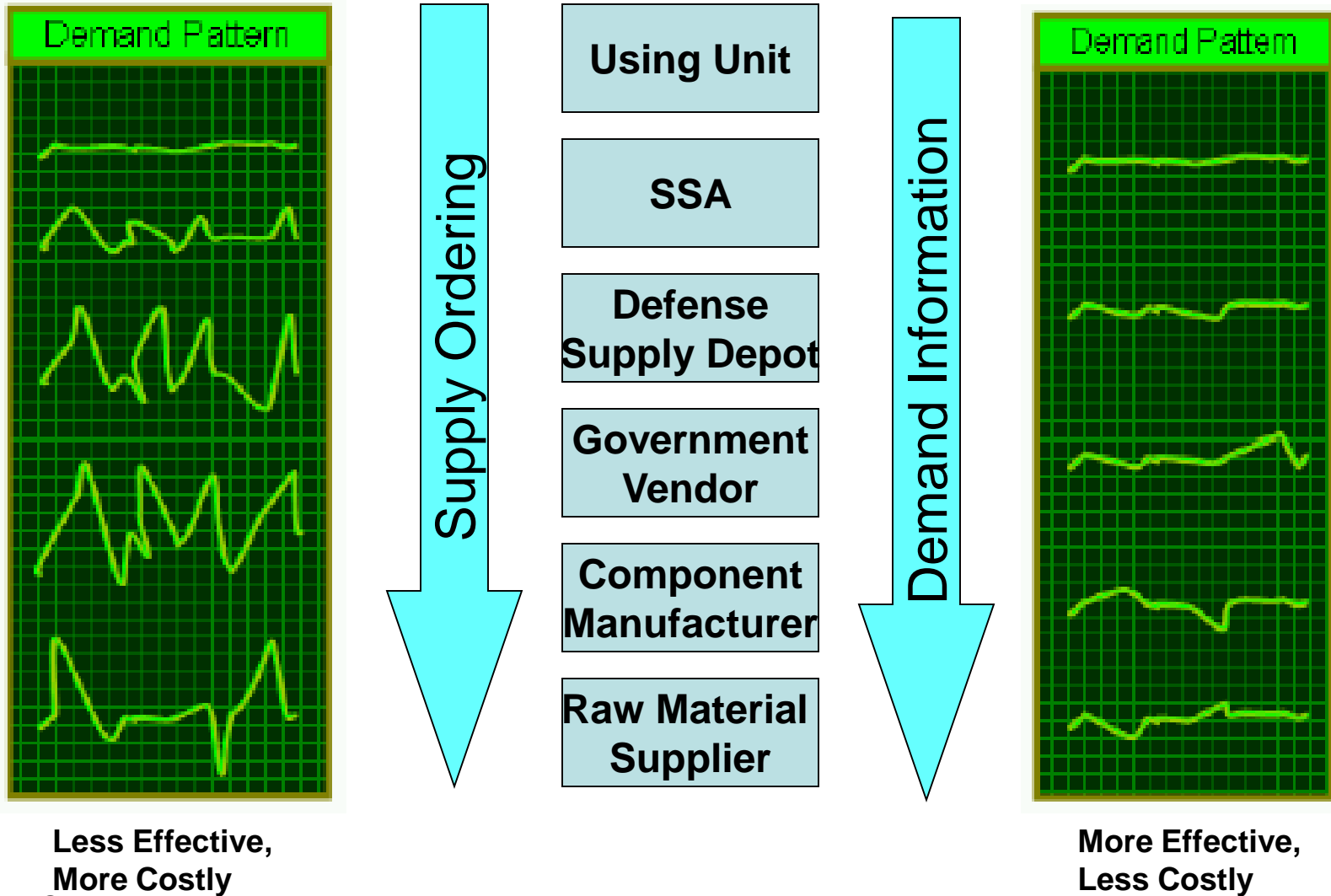
Wholesale's Orders to Manufacturer



Manufacturer's Orders with Its Suppliers



SUPPLY CHAIN EFFECTIVENESS



2-Sep-16

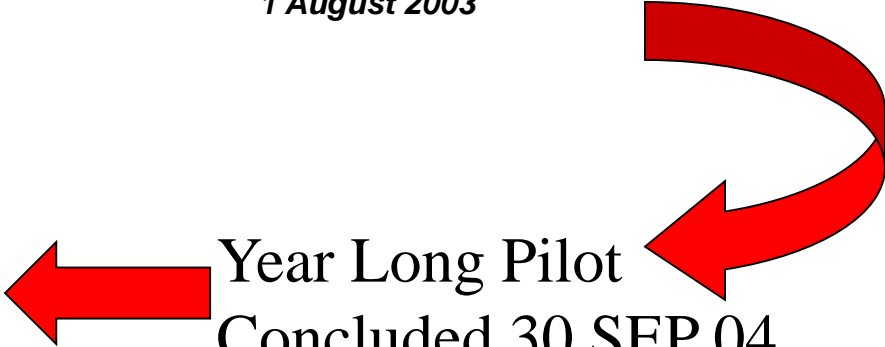
VIPR PILOT DIRECTIVE

“... closing the loop from order to retail, creating a ‘Wal-Mart’ like system for notifying suppliers when a part is issued to a consumer... extend the ERP system at DLA, and integrate the ERP system that is transforming AMC into a seamless Logistics Information network... purpose of being forward leaning with regard to automating resupply...”

Mr. Michael Wynne
Acting Under Secretary of Defense for
Acquisition, Technology and Logistics
1 August 2003

Management	Vendor	# NIINs	Total NIINs
TACOM Managed	AM General	1	21
	Barnes	8	
	Goodyear	4	
	Michelin	3	
	Oshkosh	5	
DSCC Managed	AM General	9	19
	Oshkosh	10	

Year Long Pilot
Concluded 30 SEP 04



Vendor Initiated Parts Resupply (VIPR)

VIPR RECOMMENDATIONS

- Incorporate information sharing capability and Government – Vendor collaboration into emerging Enterprise Resource Planning (ERP) systems
 - *Long Term...Institutionalize the Benefits*
- Establish a DoD collaboration standard for ERPs...OSD sponsorship
 - *Interim...Continue the Momentum*
- TACOM proposed, AMC CG endorsed:
 - TACOM and qualified vendors establish collaborative relationships
 - Exploit that collaboration to improve our Supply Chain Management Responsiveness to the Soldier
- Defense Logistics Agency
 - Continue BSM Supplier Collaboration development ...initial capability implemented February 2005 with next implementation scheduled for September 05

Why Is Supply Chain Collaboration Important to the Army?

OPPORTUNITY: Take the best practices* of industry AND the expertise of the Gov't to achieve an END STATE for the ARMY that allows for the prediction of sustainment actions, shortened lead times, and improved responsiveness to the Soldier.

***Enabling Tool** = Collaborative Planning and Forecasting for Replenishment (CPFR)

3 PRIMARY ELEMENTS of COLLABORATION

- **Planning**
 - **Develop a Collaboration Arrangement**
 - **Create a Joint Business Plan**
- **Forecasting**
 - **Sales**
 - **Orders**
 - **Collaborate on the Exceptions**
- **Replenishment**
 - **Order Generation**
 - **Delivery Execution**

*TACOM Will focus more on collaboration between Gov't and Supplier relating to joint requirements planning and forecasting in order to shorten lead times and maximize production capacity, resulting in improved responsiveness to the Soldier

Not specifically targeted in TACOM's CPFR but, will be a natural outcome

THE CPFR 9 STEPS

- **Develop Collaborative Arrangement**
 - What info are we going to Share?
- **Create Joint Business Plan**
 - How are we going to do business?
- **Create Sales Forecast –**
 - What does the future look like?
- **Identify Exceptions for Sales Forecast –**
 - What we know that the supplier doesn't
 - What the supplier knows that we don't
- **Resolve/Collaborate on Exception Items**
 - How are we going to overcome the exceptions?
- **Create Order Forecast**
 - What can we live with and move forward with?
- **Identify Exceptions for Order Forecast**
- **Resolve/Collaborate on Exception Items**

- **Generate the Orders**

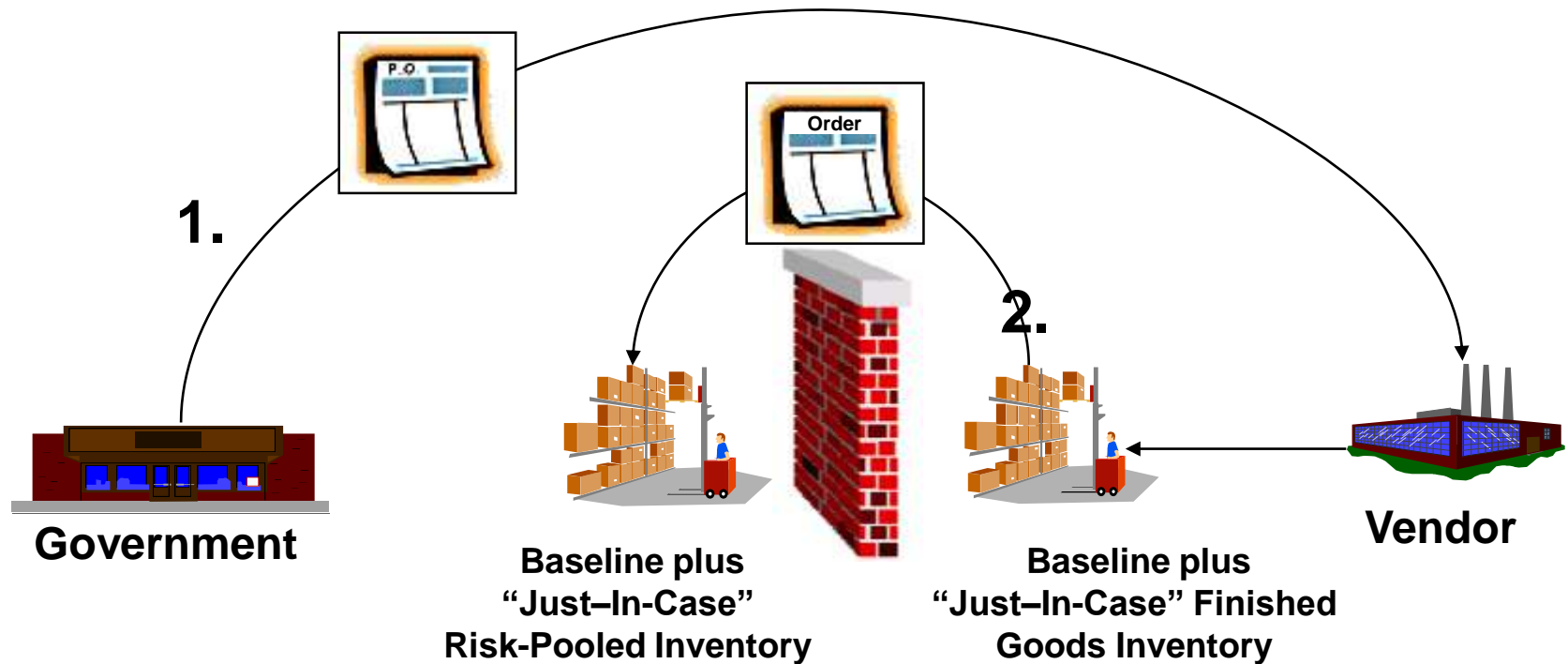


Collaboration



TACOM - Only Actions

BEFORE CPFR – LIMITED COLLABORATION

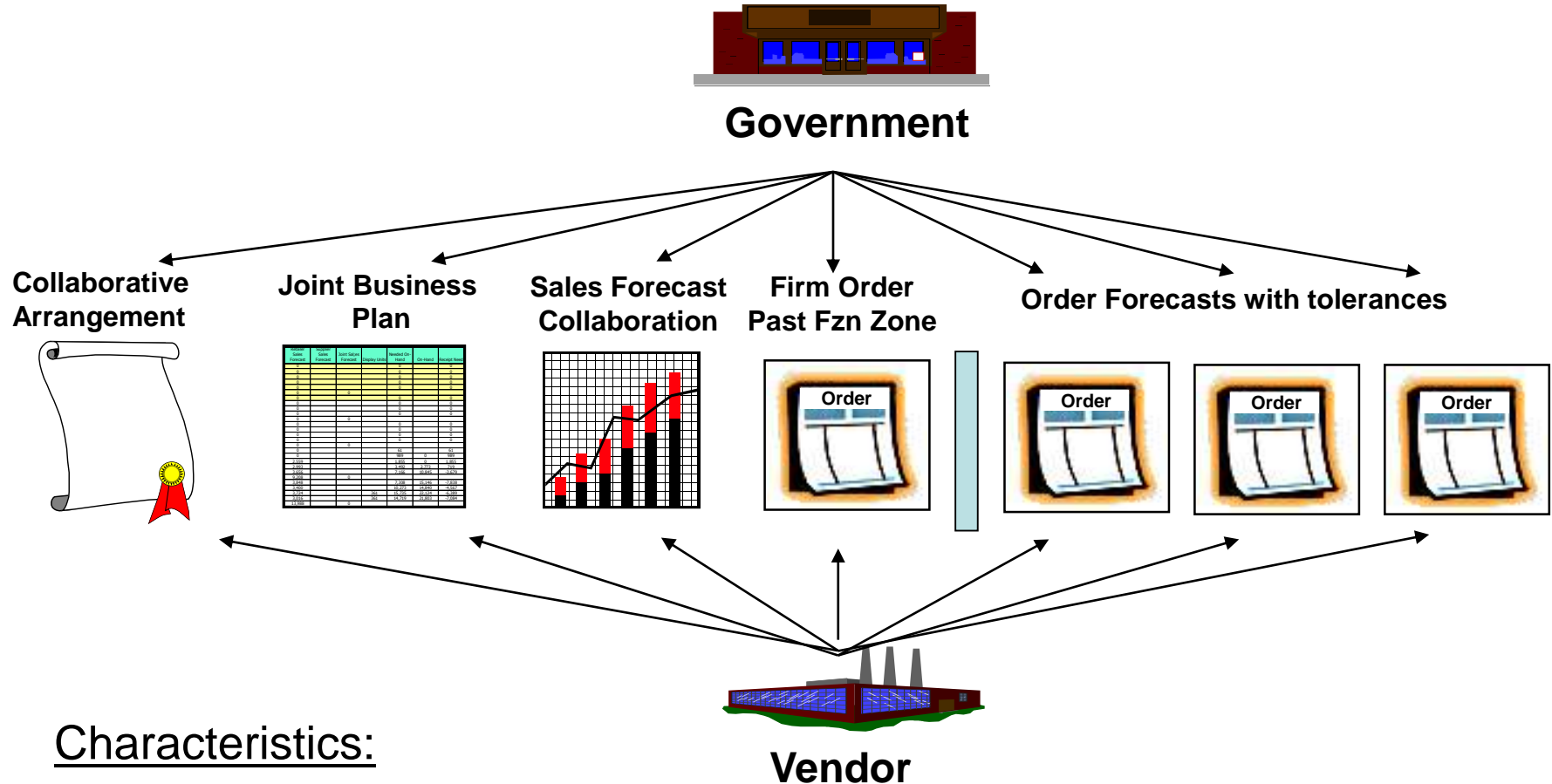


Characteristics:

- Limited visibility of future demand requirements
- Both partners forecast independently
- Outages cause adversarial relationships

Inventories to buffer against unexpected demand

POST CPFR



Characteristics:

- Dual insights provide a better forecast demand
- Long term view of demand requirements
- Both partners jointly forecast
- Earlier visibility of issues through the exceptions
- Monitor POS data via the private exchange/web portal; compare to forecast
- Focus of relationship becomes win-win

2-Sep-16

16/26

SUMMARY

- To smooth the supply chain “bull whip” you need accurate visibility of demands
- CPFR is an industry standard “guideline” for collaboration
- Collaboration requires “trust”
- Collaboration is a transformational strategy
 - **Roles and responsibilities can change**
- Collaboration facilitates long-term B2B relationships
- Collaborative partnerships must be win / win
- Collaborative benefits can be huge!

IMPLEMENTATION of CPFR at TACOM

What Do I Need to Do?

IMPLEMENTATION

- Choose an Item or Partner
- Determine What You Want to Collaborate On
- Call Us!

IMPLEMENTATION (con't)

- Choosing an Item
 - Single Item or Family of Items
 - Existing or New Long Term Contract
 - Consider a Repair Program
 - Special Program/Project

IMPLEMENTATION (con't)

- Choosing a Partner
 - Trusted/Committed Vendor
 - Existing Long Term Business Relationship with TACOM a Plus
 - A Vendor Supplying Multiple NSNs
 - Vendor Size Not an Issue

IMPLEMENTATION (con't)

- e-Business Team Will Assist You in Getting Started
 - Conduct Introductory Briefings and Facilitate Initial Meetings with Participants
 - Assist in Establishing Implementation Timeline
- Enable a Secure Interactive Web Portal for Data Sharing
- Set Up Data Feeds for Info Sharing
- Provide Any Other Guidance on CPFR As Needed

IMPLEMENTATION (con't)

Sample Web Portal Screen

VENDOR INSIGHT
ONLINE INVENTORY PORTAL



TACOM
U.S. Army Tank-automotive and Armaments Command

HOME | SECURITY POLICY | NIIN DATA | FORECAST | LOGOFF

LOGGED IN
tacomadmin : ADMIN
LATEST NEWS

MANAGE
Users
Vendors
Contracts
NIIN/NSN Data

NIIN/NSN Data
Basic View
Consumption ONLY
Due In ONLY
Due Out ONLY

HELP
Glossary

NIIN ASSET DATA
8 record(s) found

Barnes PSP FILTER RESULTS

(CLICK ON COLUMN HEADING TO SORT)

NIIN/Name [CLICK FOR DETAILS]	ADMIN LEAD TIME	PRODUCTION LEAD TIME	AVG MONTHLY DEMAND	DEMAND BASE	RO	RP	TOTAL ON HAND
009226915 REPAIR MATERIAL,PNE	0.30	3.70	79.91	12.00	554.00	417.00	374
009226919 LEAK DETECTOR,PNEUM	0.30	3.70	33.30	12.00	231.00	181.00	332
009226920 NEEDLE,INJECTOR TOO	0.30	3.70	68.67	12.00	132.00	105.00	360
009226921 REPAIR KIT,PUNCTURE	0.30	3.70	180.47	12.00	1520.00	895.00	779
009226922 INJECTOR TOOL,TUBEL	0.30	3.70	25.61	12.00	159.00	115.00	148
009226916 BOX,METAL,TIRE REPA	0.30	3.70	20.72	12.00	107.00	76.00	130
009226917 BONDING COMPOUND,TI	0.30	3.70	73.62	12.00	357.00	243.00	89
009226918 APPLICATOR,PLASTIC,	0.30	3.70	88.67	12.00	918.00	798.00	981

WARNING: DoD Sponsored Site. Usage restrictions apply. [CLICK HERE](#) to view security notice.

Things to Remember

- CPFR is a Long Term effort
 - Takes Time to Build Trust
- Both Partners Should be Open Minded
- Open Communication is Key
- Know Your Partner

CONTACT INFORMATION

Phone:

Comm: (586) 574-6695

DSN: 786-6695

e-mail: ec-edl@tacom.army.mil



Questions?



2005 TACOM LCMC APBI

“Partnering to Reset, Recapitalize, and Restructure the Force”

***MG
Mike
Lenaers***

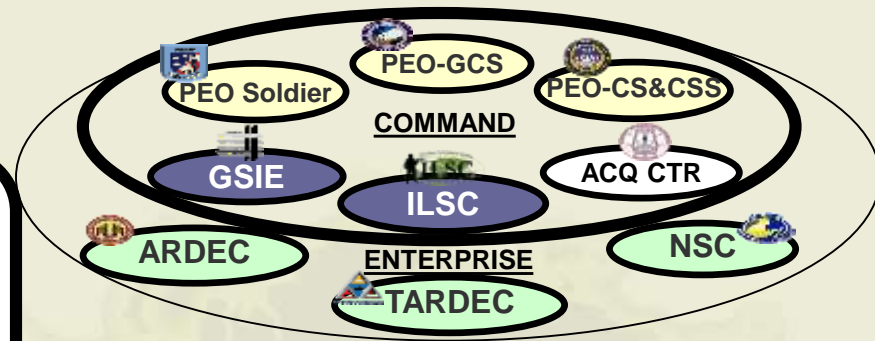
***27
October
2005***



TACOM LCMC

Mission / Product Lines / Magnitude

Develop, acquire, field, and sustain Soldier and ground systems for the Warfighter through the integration of effective and timely Acquisition, Logistics, and cutting-edge Technology



What we do (Core Competencies):

- **A**cquisition / Program Management
- **L**ogistics, Industrial Operations, and Contracting
- **T**echnology, Research, Development, Engineering

The Magnitude:

- 141 Allied Countries Own TACOM Equipment
- Every Army Unit has TACOM Equipment
- Approximately 3,000 Fielded End Items
- 29,000 Components

The TACOM LCMC Product Lines:

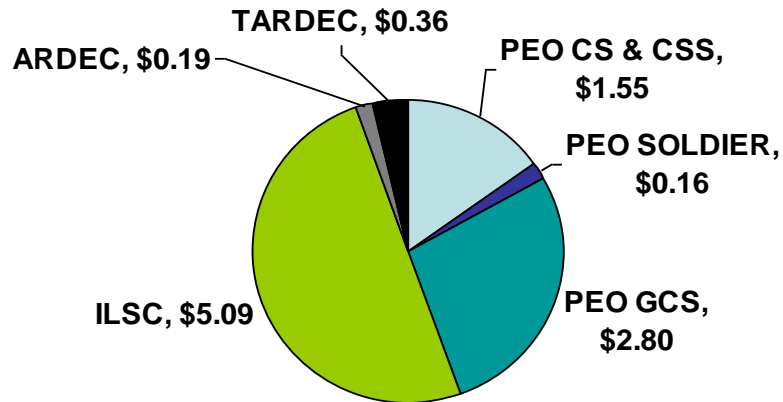
- | | |
|-------------------------------|-----------------------------|
| ▪ Combat Vehicles | ▪ Sets, Kits & Outfits |
| ▪ Trailers | ▪ Shop Equipment |
| ▪ Materiel Handling Equipment | ▪ Large Caliber Guns |
| ▪ Fuel & Water Dist Equipment | ▪ Watercraft |
| ▪ Chemical Defense Equipment | ▪ Mortars |
| ▪ Howitzers | ▪ Aircraft Armaments |
| ▪ Commercial Vehicles | ▪ Rail |
| ▪ Tactical Vehicles | ▪ Fuel & Lubricant Products |
| ▪ Construction Equipment | ▪ Rifles / Machine Guns |
| ▪ Tactical Bridges | ▪ Soldier Equipment |



We support a diverse set of product lines through their life cycles, from combat and tactical vehicles, armaments, watercraft, fuel and water distribution equipment, to soldier, biological, and chemical equipment.

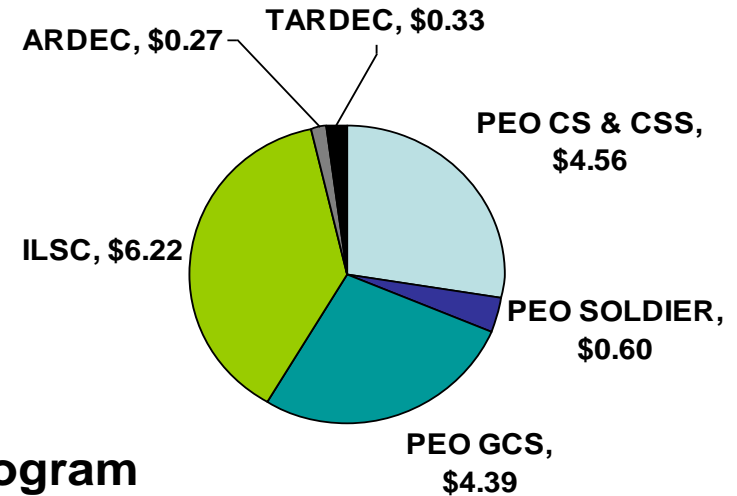
TACOM LCMC - FY05 Funding

Base Program



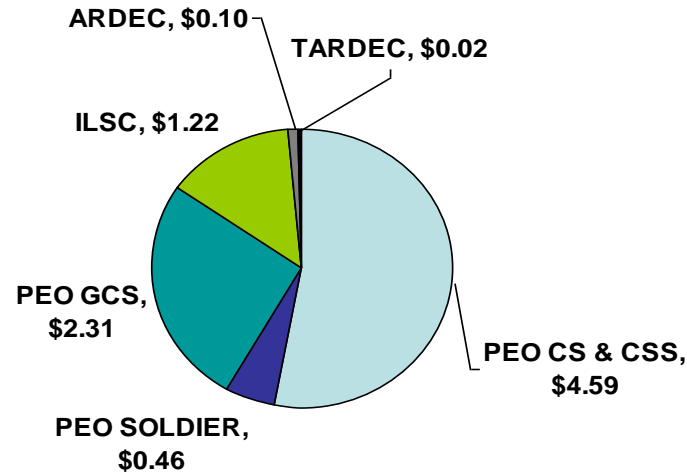
\$10.138B

Obligations



\$16.370B

Supplemental Program

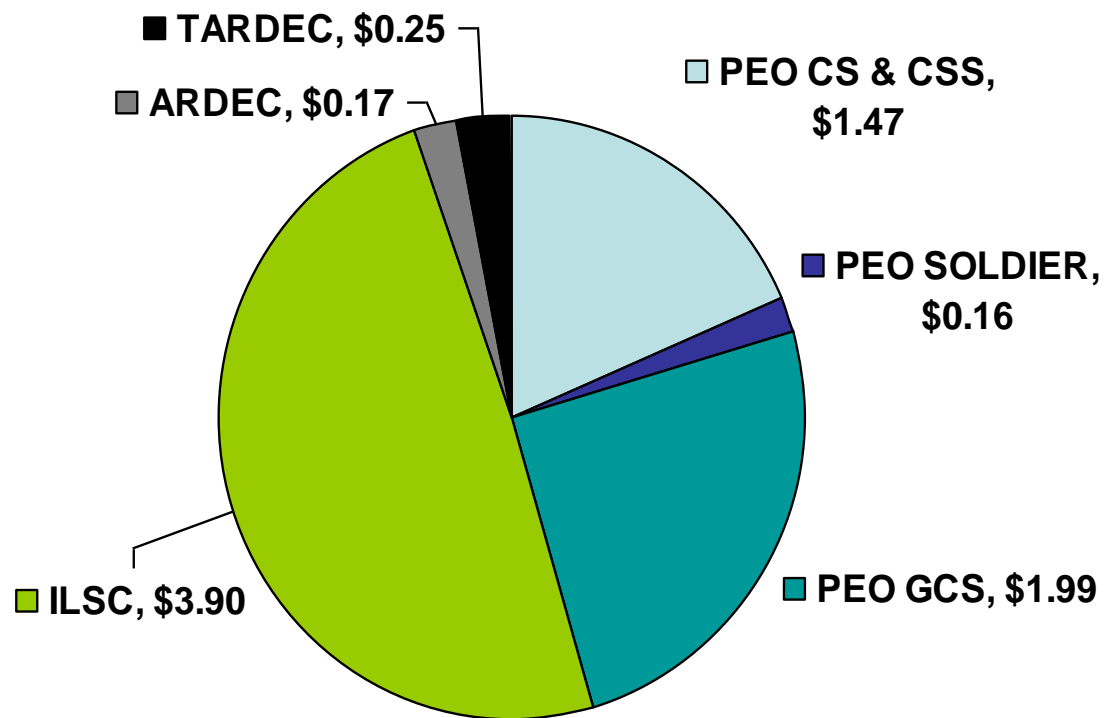


\$8.701B

TACOM LCMC

FY06 Total Obligation Authority

Base Program
(\$Billions)



\$ 7.939B

Supplemental



TACOM LCMC Supports An Army at War and Transforming

- *Global War on Terrorism - #1***
- *Modularity***

***BUILDING MODULAR BRIGADE COMBAT TEAMS
RESET & RECAPITALIZATION
Army Force Generation (ARFORGEN)***

- *Future Combat System***

TACOM LCMC's Priorities

Support to Operation Iraqi Freedom and Operation Enduring Freedom

- *Forward Repair Activity*
- *Logistics Assistance Reps (LARs)*
- *Integration Readiness Teams*
- *Vehicle Protection Kits*
- *Wheeled Vehicle Service Center*
- *Small Arms Support Center*
- *Mobile Tire Service Center*
- *Mobile Parts Hospital*

Stryker Sustainment in AOR
Team Armor Partnership
Rapid Fielding Initiative

Support to Iraqi Security Force
Support to Iraqi Ministries
Support to Afghan Security Force






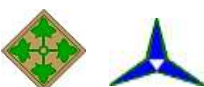






















Reset Execution
Modularity Execution



In support of Operation Iraqi Freedom TACOM LCMC personnel perform manufacturing, maintenance, assembly, repair, and upgrade in theater.

TACOM LCMC RESET & RECAPITALIZATION

(Ongoing)

							
3rd ID	101st ABN	1st AD/3BCT	3rd ACR	82nd AB 18th AB Corps	4th ID/III Corps	M1 Tank RESET at Anniston Army Depot	
1 July 04	4 Oct 04	18 Oct 04	27 DEC 04	17 Dec 04	1 Jan 05		
2039 pieces	1170 pieces	326 pieces	446 pieces	748 pieces	886 pieces		
Complete	Complete	Complete	Complete	Complete	99%		
							
FMTV RESET at Stewart & Stevenson							
							
							
10th MTN	I Corps	1st AD	1ID 1st BCT	25th ID	1st Cav	1st ID USAREUR	
1 Feb 05	1 Feb 05	23 Apr 05	15 May 05	22 Sep 05	17 Oct 05	10 Nov 05	
618 pieces	138 pieces	155 pieces	231 pieces	199 pieces	1084 pieces	255 pieces	
Complete	Complete	94%	99%	42%	21%	35%	
							

TACOM Has linked RESET and Recapitalization efforts to the Army Modularity Campaign Plan

What is Recapitalization?

The rebuild and selected upgrade of currently fielded systems to ensure operational readiness and a zero time/zero mile condition with enhanced capabilities.

Rebuild – Restores equipment to a like-new condition in appearance, performance, and life expectancy; inserts new technology to improve safety, reliability and maintainability where practical; system retains its model designation (OMA)

Selected Upgrade – Rebuild of system and adds warfighting capability improvements to address capability shortcomings; results in a new model with new life (OPA)

RECAP GOALS:

Two Paths

Rebuild - OMA



Selected Upgrade - OPA



- ✓ Enhance effectiveness & warfighting capability
- ✓ Extend service life
- ✓ Reduce Operating & Support (O&S) costs
- ✓ Improve reliability, safety, maintainability

What systems do we recap?
The criteria we consider ...

- Exceed half life metric
- Cost effective (recap vs maintain or buy new)
- Readiness trends
- O & S costs
- In fleet beyond 2020

TACOM LCMC RESET – Major Army Divisions (Future)

Equipment requirements will be finalized as units begin redeploying to home stations.



2 BCT/2ID



10th MTN/2
BCT



25th ID/1
SBCT



3rd ID



11 ACR



1 COSCOM



18th ABC HQ



3rd ACR



3/1 AD



82nd ABN/1
BCT

**Numerous Nat'l Guard / Reserve
Component unit redeployments at 20
sites & echelons above divisions/corps
at 10 separate installations**

Modularity & ARFORGEN



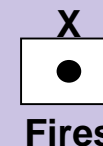
Modular Army

Intent: Create a Brigade Based Army

(Less than 4,000 Soldiers in each Brigade)



Standard maneuver brigades with organic combined arms capabilities

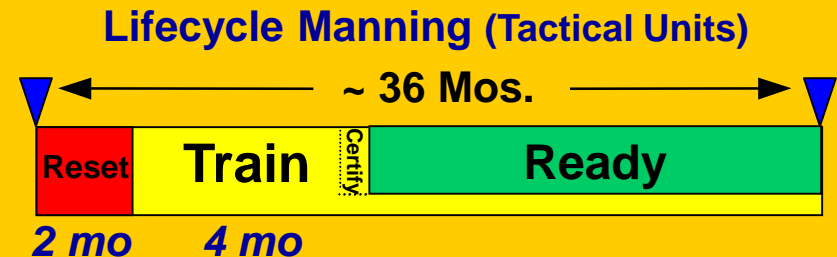


Supporting brigades with standard headquarters, but variable subordinate units

Force Stabilization

Unit Stability

- Align Soldier assignments with a unit's operational cycle (~36 months)
- Soldiers arrive, train, deploy, and depart together
- Improves cohesion and training effectiveness



Individual Stability

- Stabilize Soldiers for longer tours, reassign based solely on this criteria: Needs of the Army, Leader Development or Personal Preference.
- Improves stability and predictability for Soldiers and Families.
- NCOs and junior officers travel to schools and return to their post.

PREDICTABILITY

THE ARMY CAMPAIGN PLAN



	FY04	FY05	FY06	FY07	FY08	FY09	FY10
AC DIV BCTconvert w/ HQs							
AC BCT Builds	 4 4 3	 4 4 2	 4 3 4 4	 3 4 4 4			
ARNG DIV							
ARNG BCTs		 30 HVY 81 HVY 39 IN	 116 HVY 256 HVY 278 ACR (HVY) 56 IN 155 HVY 29 IN	 48 HVY 32 IN 53 IN 86 IN 2 IN 76 IN	 41 IN 218 HVY 1 HVY 49 IN 1 IN 149 SBCT#56 IN	 50 IN 45 IN 92 IN 2 IN 37 IN 2 IN	 55 HVY 3 IN 26 IN 3 IN 66 IN 207 IN
Army Expeditionary Force	34.7 K Restructure	- 7.5K	-15.0K	-12.2K			
		AEP 1 AEP 2	AEP 3 AEP 4	AEP 5 AEP 6	AEP 7 AEP 8	AEP 9 AEP 10	AEP 11 AEP 12
		Army Expeditionary Packages (AEP)					
STRYKER (Availability)	SBCT2	SBCT3	SBCT4	SBCT5	SBCT6		

DP Decision point for an additional 5 AC Modular Brigade Combat Teams

Army Maneuver Brigades 2004			
	AC	ARNG	Total
Airborne	4	0	4
Infantry	10	15	25
Stryker	2	0	2
Heavy	17	23	40
Total	33	38 (*15)	71



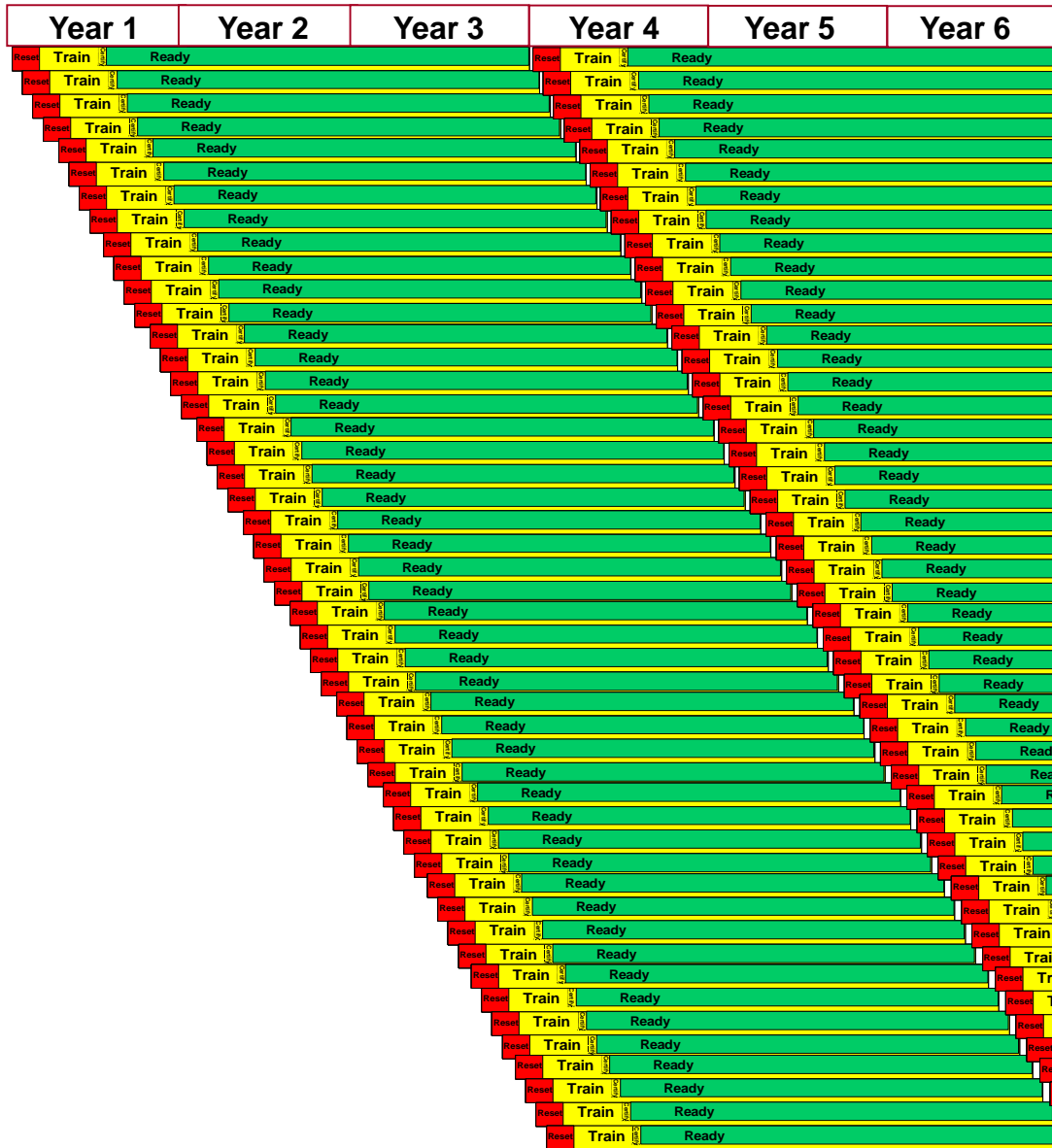
Army Maneuver Brigades 2010			
	AC	ARNG	Total
Airborne	6	0	6
Infantry	12-17	23	35-40
Stryker	5	1	6
Heavy	20	10	30
Total	43-48	34	77-82

*15 Enhanced Separate Brigades

- Increased Joint Combat Capability
- Globally Managed Deployments
- Improved Versatility

- Modular AC/RC Design
- Increased Readiness
- Increases Stability

Creating Predictably Ready Forces



Brigade Combat Teams

AC	RC
48	34

**CREATE A FLOW
OVER TIME WITH
78% OF UNITS
BEING READY**

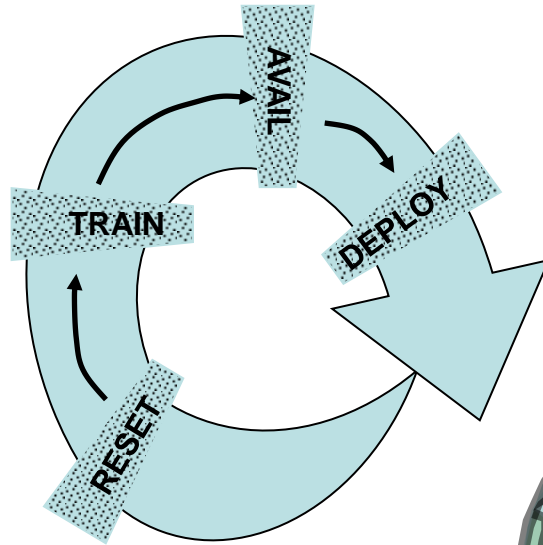
Ready & Available Forces

STILL NEED TO
WORK SUPPORT
BRIGADES

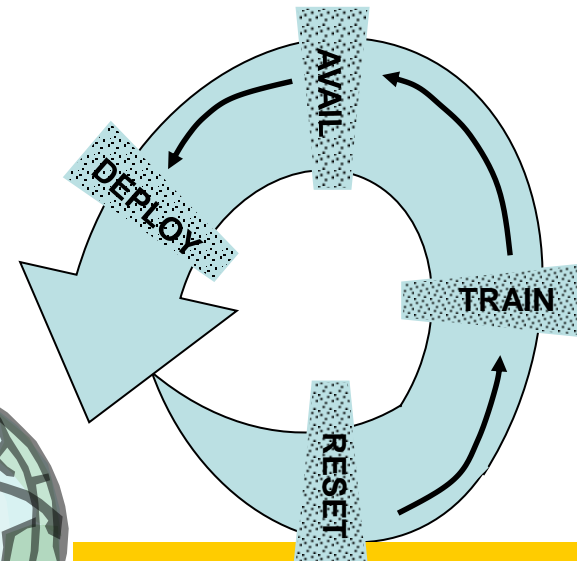
72 – 82 BCTs

8 x DIV
34 x BCT

10 x DIV
43-48 x BCT



**Reserve Component
5 Year Cycle**

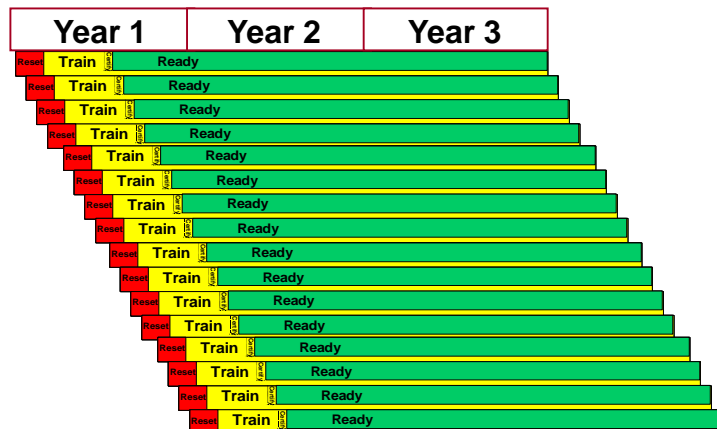


**Active Component
3 Year Cycle**

Worldwide Deployments

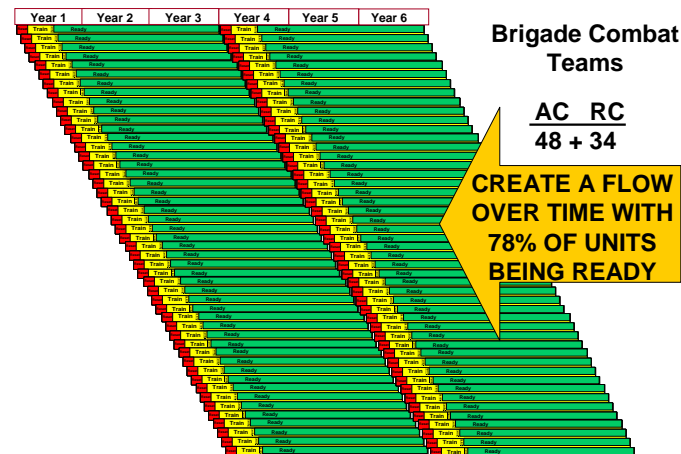
ARFORGEN

Reset Support a Continuing Requirement



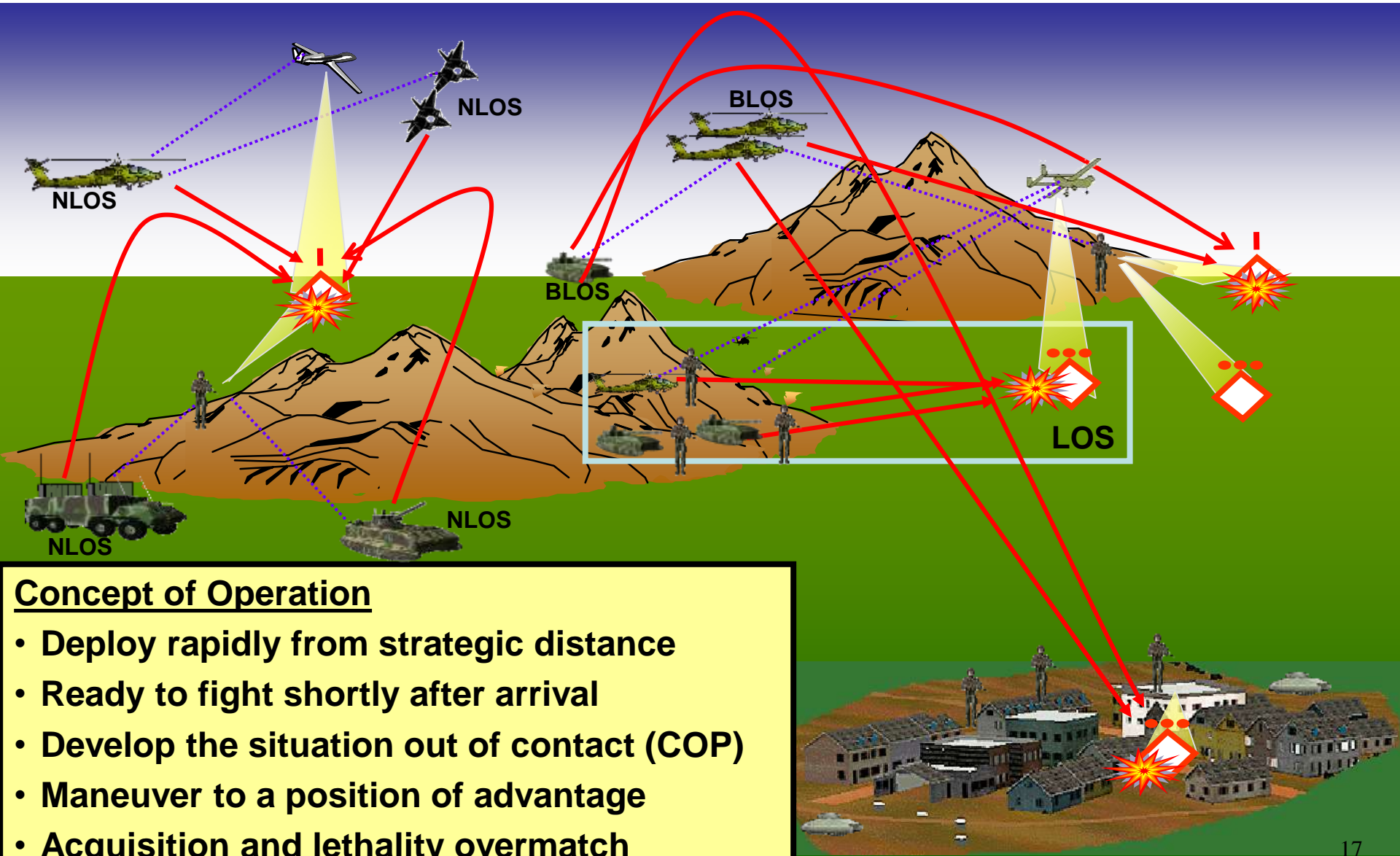
**ABOUT 14 BRIGADES
GO THROUGH RESET
EACH YEAR**

Creating Predictably Ready Forces



- **WINDOW FOR TECHNOLOGY INSERTION**
 - **HOW DO WE COMPLETE IN SHORT WINDOW?**
 - **DO WE MOVE EQUIPMENT?**
 - **DO WE CASCADE EQUIPMENT?**
- **WHO DOES THE WORK?**

Continued Commitment to Future Combat System



Concept of Operation

- Deploy rapidly from strategic distance
- Ready to fight shortly after arrival
- Develop the situation out of contact (COP)
- Maneuver to a position of advantage
- Acquisition and lethality overmatch

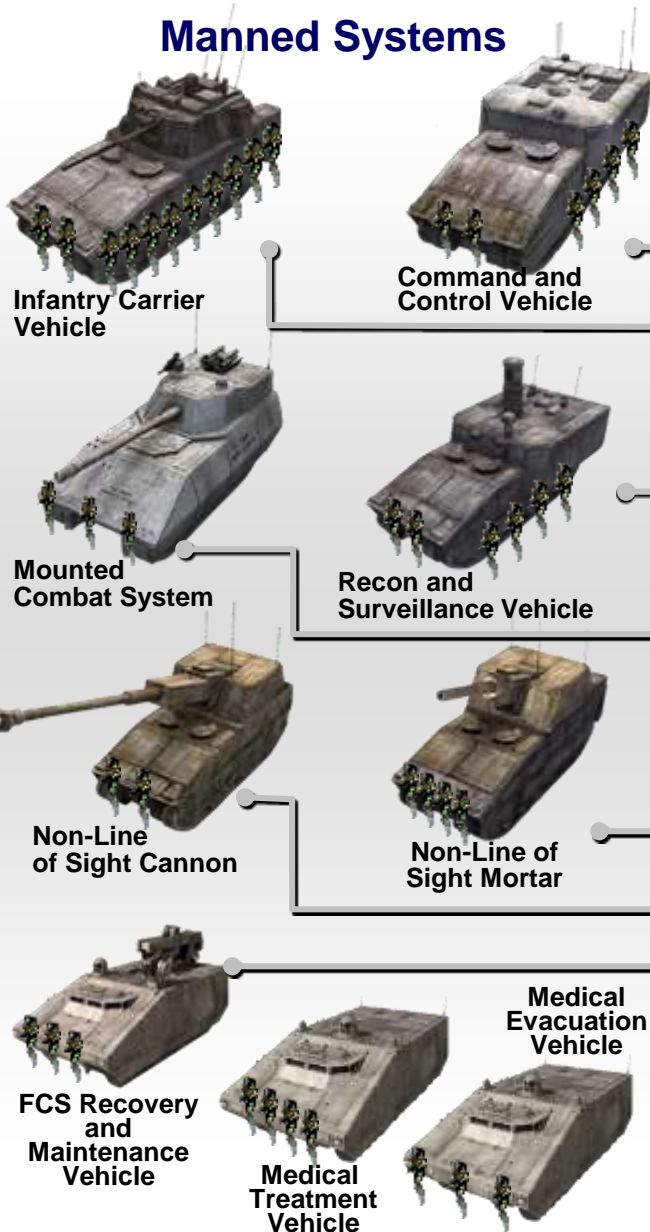
UNCLASSIFIED

Near real-time
Command and Control
and Attack Support

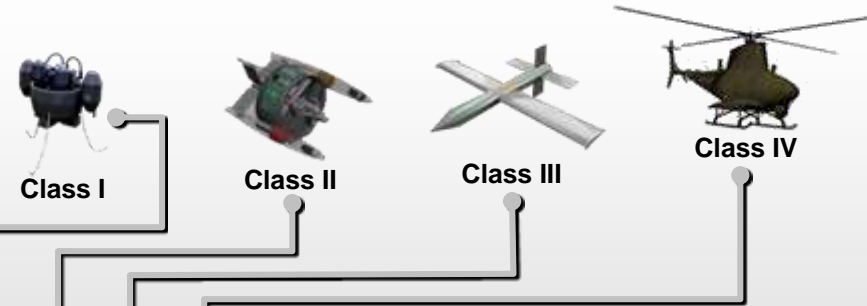
UNCLASSIFIED

FCS (BCT) System-of-Systems (SoS)

Manned Systems



Unmanned Aerial Vehicles



Unattended Munitions



Unmanned Ground Vehicles



TACOM LCMC

PART OF AN ARMY AT WAR AND TRANSFORMING



- Sustaining the Global War on Terrorism
- Supporting Army Modular Force
 - Rebalancing the Force
 - Resetting the Force
 - Recapitalization of Equipment
- Future Combat Systems



The objective is to get products to the warfighter faster, make our good products even better, minimize life cycle costs, and enhance the effectiveness and integration of our Acquisition, Logistics, and Technology communities.



TECHNOLOGY BASE INITIATIVES

ADVANCE PLANNING BRIEFING TO INDUSTRY

DR. RICHARD E. McCLELLAND
DIRECTOR

OCTOBER 2005

TECHNOLOGY THRUSTS



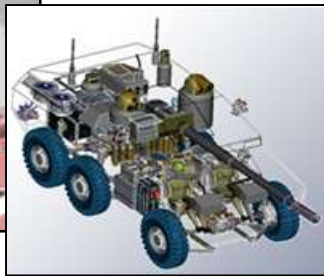
TACTICAL & COMBAT VEHICLES



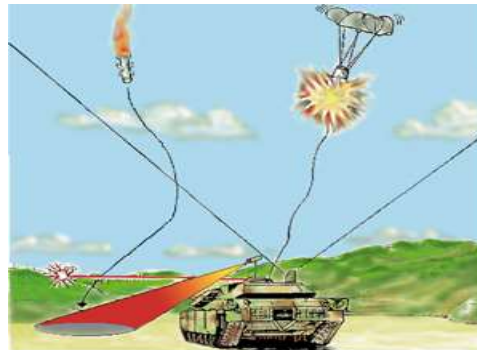
MECHANICAL COUNTERMINE



WATER GENERATION & PURIFICATION



MOBILITY ENHANCEMENTS



INTEGRATED SURVIVABILITY



BRIDGING



ROBOTICS



FUELS & LUBRICANTS

FY 06 CONTRACT ACTIONS

Existing Contracts / 06 Actions

SURVIVABILITY TECHNOLOGIES

•FCLAS Development	\$2.7M	Chang Industries
•Engineering Support	\$200K	GS Engineering
•Active Protection Analysis	\$210K	MIT / Lincoln Labs
•Engineering Support	\$300K	Booz Allen
•System Analysis	\$100K	Altarum
•Advanced ATD Structure	\$600K	BAE
•Active Defense KE System Dev	\$6M	BAE

FY 06 CONTRACT ACTIONS

Existing Contracts / 06 Actions

SURVIVABILITY TECHNOLOGIES (Continued)

•Armor Materials Support	\$300K	Sandia National Lab
•Adv Joining NDE Concepts	\$300K	Michigan State Univ
•Armor Modeling and Effects	\$600K	SWRI
•Assymetric Thyristor Switch	\$750K	Silicon Power Corp.
•FCS Laser Hardened Vision	\$950K	Boeing / McD-Douglas
•Signature Modeling Validation	\$1.5M	Thermo Analytics
•Assured Mobility Motion Sim	\$120K	Dynamic Animation Sys
•Sensor and Eye Protection	\$1.1M	Boeing / McD-Douglas

FY 06 CONTRACT ACTIONS

Existing Contracts / 06 Actions

INTELLIGENT SYSTEM TECHNOLOGIES

•Vetronics Technology Integration	\$5.5M	GDLS
•Remote Imaging for UGVs	\$250K	Lockheed Martin
•ODIS	\$2M	Kuchera
•ARV Robotics Technologies	\$3M	BAE

FY 06 CONTRACT ACTIONS

Existing Contracts / 06 Actions

WATER TECHNOLOGIES

• Water from Air	\$1M	Mesosystems/Hamilton Sundstrand
• Water Monitoring	\$2M	Wayne State University
• NBC Water Treatment	\$2M	ACTI

FY 06 CONTRACT ACTIONS

Existing Contracts / 06 Actions

MOBILITY TECHNOLOGIES

•Power & Energy SIL	\$7.8M	SAIC
•Bi-Directional DC-DC Converter	\$925K	United Silicon Carbide
•Engineering Support	\$750K	TPS
•SIL Battery Pack	\$1.0M	SAIC
•Ironless Core PM Motor	\$200K	Aerovironment
•Differential Cross-Drive Electric System	\$500K	BAE Systems
•Prismatic Cells	\$625K	SAFT
•K-Tech Heavy Spreader	\$200K	K-Tech

FY 06 CONTRACT ACTIONS

Existing Contracts / 06 Actions

MOBILITY TECHNOLOGIES (Continued)

•PM Operating Temp Rotor Cooling	\$100K	Aerovironment
•Hybrid HMMWV Battery Pack	\$250K	Qualion
•5kW Steer Motor Inverter Test	\$100K	Premag
•10kW DC-DC Converter Test	\$300K	UofM
•Hybrid Modeling & Simulation	\$100K	LTU
•Superlattice SiC Materials	\$600K	Titan
•SiC Steer Motor HMMWV Integration	\$400K	DRS
•6x6 HE Test Bed Upgrade	\$400K	NATC
•HE HMMWV Upgrade	\$900K	DRS

FY 06 CONTRACT ACTIONS

Existing Contracts / 06 Actions

MOBILITY TECHNOLOGIES (Continued)

•HPD Engine Development	\$1.45M	DDC/MTU
•Band Track Development	\$950K	CTC
•LtWt Steel Track Development	\$1.25M	CTC
•Elastomeric Research	\$850K	KRC
•Fuel Cell Consultant	\$175K	TPS
•SiC MOSFET	\$1.25M	IN SOURCE SELECTION
•Technician Support	\$400K	TPS

FY 06 CONTRACT ACTIONS

Existing Contracts / 06 Actions

BRIDGING COUNTERMINE TECHNOLOGIES

•Lightweight Vehicle Mounted Countermine	\$550K	KRC
•Advanced Modular Composite Bridge	\$6.2M	Seemann
•Field Repair Composite Bridges	\$750K	Alphastar
•Innovative Wet Gap Crossing Technologies for FCS	\$750K	Triton
•Rapidly Deployable Gap Defeat Tech for FCS	\$1.9M	QinetiQ & GDSBS
•Operational Mobility Across Gaps for the FCS / Future Force (Robotic Bridging)	\$780K	TIAX
•Novel Approaches for Maximum Performance of Lightweight Mechanical Countermine Equipment	\$70K	IN SOURCE SELECTION

FY 06 CONTRACT ACTIONS

Existing Contracts / 06 Actions

NATIONAL AUTOMOTIVE CENTER TECHNOLOGIES

•Future Tactical Truck System (FTTS)	\$17M	In Source Selection (Adv Demo Phase II)
•Ground Vehicle Modeling and Simulation	\$2.4M	Automotive Research Center (ARC)
•Logistical Surge Support	\$200K	GSI
•Engineering Surge Support	\$464k	FSSI
•Vehicle Electronic Dev and Integrations	\$500K	ASTI
•High Performance Computing	\$1.4M	HPC
•High Fidelity Platform and Terrain Mechanics	\$2.7M	DCS

FY 06 COMPETITIVE SOLICITATIONS

Note: Other Solicitations may be released in FY 06

MOBILITY TECHNOLOGIES:

POC: DAN HERRERA, 586.574.6411

➤ JP8 Reformer (2 Awards)	\$2M
➤ HMMWV / FMTV Integrated Starter /Generator	\$400K
➤ Thermal Management	\$500K
➤ Battery Chemistry Evaluation	\$100K
➤ New Solid State SiC Disconnect	\$600K
➤ High Performance Engine Research	\$1.4M

FY O6 COMPETITIVE SOLICITATIONS

INTELLIGENT SYSTEMS TECHNOLOGIES:

POC: DAVE THOMAS, 586.574.6411

➤ Human Robot Integration (HRI) \$1.2M

TARDEC ACQUISITION SUPPORT TEAM REPRESENTATIVE:

CASSANDRA MAXWELL, 586.753.2619

<http://contracting.tacom.army.mil/opportunity.htm>

FY 06 CONGRESSIONAL ADDS

Comprehensive Listing of Committee Actions

Approximately \$100M

- Adv Ground Vehicle Reliability Research
- Low Temperature Vehicle Research
- Adv Coating Systems for Ground Vehicles
- Automotive Research
- Next Generation Joining Technology Research
- Adv Affordable JP-8 PEM Fuel Cell Components for APU and Ground Vehicle Applications
- Advanced Electric Drive
- Center for Tribology and Coatings
- Defense Transportation Energy Research
- Family of Scalable Trailers (FAST)
- Gaming Technology Software Initiative
- HAMMER
- Hydrogen PEM Ambient Pressure Fuel Cell for Medium / Heavy Duty Ground Vehicle
- Nano-Engineered Multi Functional Transparent Armor
- Nano-Fuels for Adv Military Vehicle Systems
- Plasma JP-8 Fuel Reformer
- Rapid Product Development and Deployment Portal
- Transportable Synthetic Fuel Manufacturing Modules
- Unmanned Vehicle Control Technologies
- Abrams Improved Track
- Advanced Battery Development
- Adv Drivetrains for Enhanced Mobility & Safety
- Adv Technology Integration Environment
- Adv Thermal Management Controls
- All Composite Military Ground Vehicle

FY 06 CONGRESSIONAL ADDS

(Continued)

- Alternative Mobility Vehicles for Special Ops
- Anti-ballistic Windshield Armor
- Armored Composite Cab Development
- Battery Charging Technology
- Lightweight Diesel Engine Initiative
- Center for Innovative Materials Research
- MATTRACKS
- Commercially Based Logistic Support Trucks
- Component Optimization for Ground Vehicles
- Composite Armored Vehicle Technology Transition
- Composite Shelters for Future Tactical Truck & Retrofit of Current Vehicle Shelters
- Detonation System Technology
- Development of Logistical Fuel Processors
- Digital Humans and Virtual Reality for FCS
- Full Spectrum Active Protection Close-in Layered Shield (FCLAS)
- Future Light Weight Military Trailer Chassis
- HAZMAT Material Vacuum System
- HEMTT Structural Weight / Cost Reduction and Efficient Armor Integration
- High Strength Powder Metal Gears for Vehicle Transmissions.
- Hydraulic Hybrid Vehicles
- Light Weight Structural Composite Armor for Blast and Ballistic Protection
- Liquid Hydrogen Storage System
- Mobile Hydrogen Infrastructure
- Next Generation Non-tactical Vehicle Propulsion

FY 06 CONGRESSIONAL ADDS

(Continued)

- Non Line of Sight Cannon (NLOS-C) & Mortar (NLOS-M) Light Weight Technologies Including Aluminum Vehicle Design
- N-STEP Enabled Manufacturing Cell for FCS
- On-Board Secure Telematics for Combat Vehicles
- Pacific Rim Environmental Degradation of Materials
- Personal Mobility Vehicle
- Rocket Propelled Grenade Vehicle Protection System
- Secure Pervasive Computing for Combat Vehicles
- Solid Oxide Fuel Cell Materials and Manufacturing
- Split Cycle Engine Technology
- Virtual Explosives Detection Image Matching
- Adv Mobile Microgrid Liquid Fueler
- Manufacturing Systems Demo
- Power Electronic Systems Research

SMALL BUSINESS INNOVATION RESEARCH (SBIR)

FY 05/06

- 43 Phase I Awards for FY05 Valued at \$2,714,587
- 35 Phase II Selections for FY06 Valued at \$25,509,904 with an additional \$1,570,007 in Options

SMALL BUSINESS INNOVATION RESEARCH (SBIR)

➤ Pre-Solicitation – MAY 2006

➤ Open Solicitation – JULY 2006

TARDEC SBIR Managers: Mr. Alex Sandel, 586.574.7545
 Mr. Jim Mainero, 586.574.8730

Supporting National Security

TACOM APBI



Liam McMenamin
Senior Staff Officer

Office of Strategic Industries and Economic Security
Bureau of Industry and Security
U.S. Department of Commerce

www.bis.doc.gov/osies



Commerce Role Defense Priorities and Allocations System (DPAS)

TACOM APBI
October 27, 2005

Liam McMenamin
Senior Staff Officer



Defense Priorities and Allocations System (DPAS) Regulations (15 CFR 700)

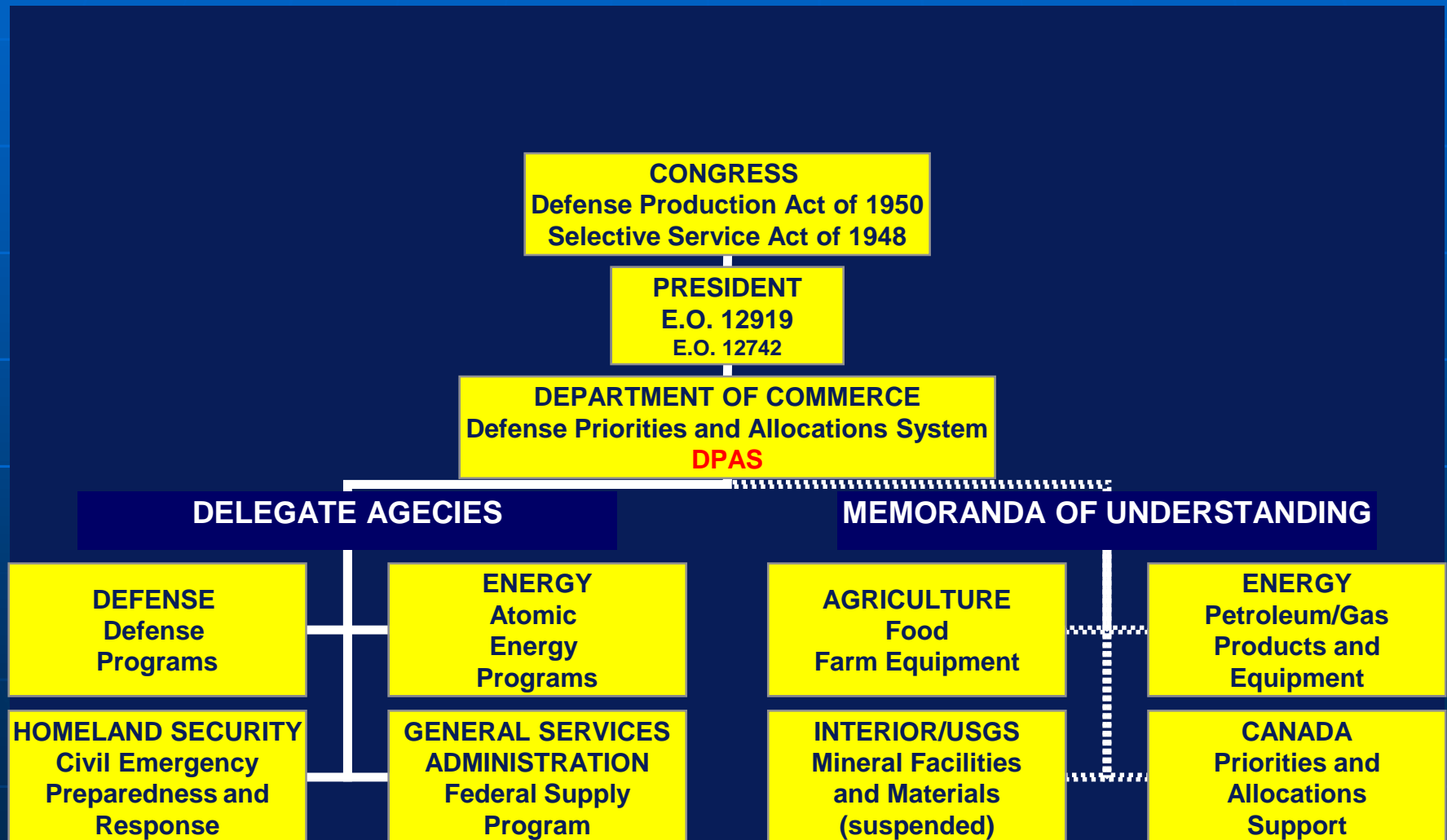
DPAS Objectives

- Keep Current Defense And Emergency Preparedness Programs On Schedule
- Provide System For Rapid Industrial Response (Acceleration / Expansion) In A National Emergency
- Minimize Disruption To Normal Company Commercial Activities

DPAS Legal Authority

- Defense Production Act of 1950
 - Acceptance And Priority Performance On Rated Contracts And Orders
 - Allocation Of Materials, Services, And Facilities Essential To The National Defense
- Stafford Act (1994 revision)
 - Priorities Authority Is Used For “Hazards”
 - Catastrophic Natural Disaster
 - Man-Caused (Terrorism) Event
 - DO-N1 Priority Rating

Commerce Delegation of DPA (Title I) Priorities and Allocations Authority for Industrial Resources



Responding to a “Rated Order”

Industry Actions

- Mandatory Acceptance Of Rated Orders
 - Except As Provided By The Rules
- Preferential Scheduling Of Rated Orders
 - Timely Delivery To Customers
- Mandatory Extension Of Priority Ratings
 - Timely Delivery From Vendors And Suppliers

DPAS In The Current Environment

- DOD Applies DPAS To 750,000 Contract Actions Annually
- DPAS Is Used To Make Sure American Men And Women Stay Safe And Prepared
- Apply Priority Rating – Insurance Policy
- Give Field Commanders Critical Items And Tools Necessary To Do Their Jobs

DPAS Responds to the 21st Century Challenges

- **Shrinking / Globalizing Defense Industrial Base**
- **DOD Commercial (COTS) Sourcing Initiatives And Dual-Use Products**
- **Supports Industry's Just-In-Time Production And Delivery Practices**

Special Priorities Assistance Program Manager Actions

- Investigate Assumptions and Facts to Determine Possible Remedies
- Coordinate With Affected parties
- Negotiate An Acceptable Solution

Special Priorities Assistance

Official Actions

- Directive – Order Requiring Supplier To Deliver Or Take Other Action Within A Specified Time Frame
- Letter Of Understanding – Informal Agreement With Supplier To Expedite Delivery or Take Other Action
- Rating Authorization – To Authorize Use Of A Priority Rating By A Foreign Entity Or Other USG Agency

COMPLIANCE

- Criminal Prosecution
- Defense Production Act
\$10,000 Fine, 1 Year in Prison, Or Both
- Selective Service Act
\$50,000 Fine, 3 years In Prison, Or Both
- Civil Injunction Under DPA
 - - Prohibit Action
 - - Enforce Compliance

Contact Information

- Liam McMenamin
Senior Staff Officer
OSIES/Room 3876
U.S. Department of Commerce
Washington, D.C. 20230
Tel: (202) 482-3634
Email: lmcmenam@bis.doc.gov
Web Site: www.bis.doc.gov
Click On Industrial Base Programs



The Soldier and Ground Systems
Life Cycle Management Command



TACOM LCMC Advanced Planning Briefing to Industry

**“Partnering to Reset, Recapitalize,
and Restructure the Force”**

26-28 Oct 05

Daniel G. Mehney
Director, TACOM LCMC Acquisition Center

Committed to Excellence – Supporting America’s Warfighters

TODAY'S TOPICS

- ACQUISITION CENTER MISSION
- CONTRACTING BUDGET
- ITEMS FOR PROCUREMENT
- FY06 BUSINESS DRIVERS
- ACQUISITION INITIATIVES
- POINTS OF CONTACT

WHAT WE BUY

Systems Acquisition

Picatinny

**R&D, Initial
Production**

**MUNITIONS
WEAPONS &
ARMAMENTS SYS
FIRE CONTROL SYS
FUZES
WARHEAD
TECHNOLOGY
FIELD ARTILLERY
SYSTEMS
LOGISTICS AND
GENERAL SUPPORT**

Warren

**R&D, Production,
Sustainment**

**FUTURE COMBAT SYS
COMBAT VEHICLES
TACTICAL
VEHICLES/TRAILERS
SUPPORT EQUIP
TACTICAL BRIDGES
FUEL & WATER
DISTRIBUTION SYS
WATER CRAFT &
RAIL CARS**

Rock Island

**Production,
Sustainment**

**COMBAT VEHICLE
ARMAMENTS
TRAINING DEVICES
CHEMICAL DEFENSE
SMALL ARMS
AIRCRAFT ARMAMENTS
MORTARS
RECOVERY VEHICLES
FIRE CONTROL SYS
CANNONS 105-165MM
ROCK ISLAND ARSENAL
INSTALLATION &
MAINTENANCE SPT**

WHAT WE BUY

Anniston Army Depot

Maintenance Mission - Core depot for all combat vehicles (less BFVS/MLRS) & associated secondary items

Ammo storage center

Chemical Munitions Center

Sierra Army Depot

Maintenance Mission – Store & perform COSIS; to include Force Provider Sys, Petroleum & Water Sys, Light Tactical Vehicle, Medium Tlrs, Large Area Maint Shelters, Bridging Sys, Landing Mats, and more

Watervliet Arsenal

Manufacturing, industrial engineering, procurement, fabrication & product assurance for Mortars, Recoilless Rifles, Cannon for Tanks, Towed & Self Propelled Artillery, and fabricate prototype models

Red River Army Depot

Maintenance Mission - Repair, rebuild, overhaul and conversion of BFVS, MLRS and associated secondary items

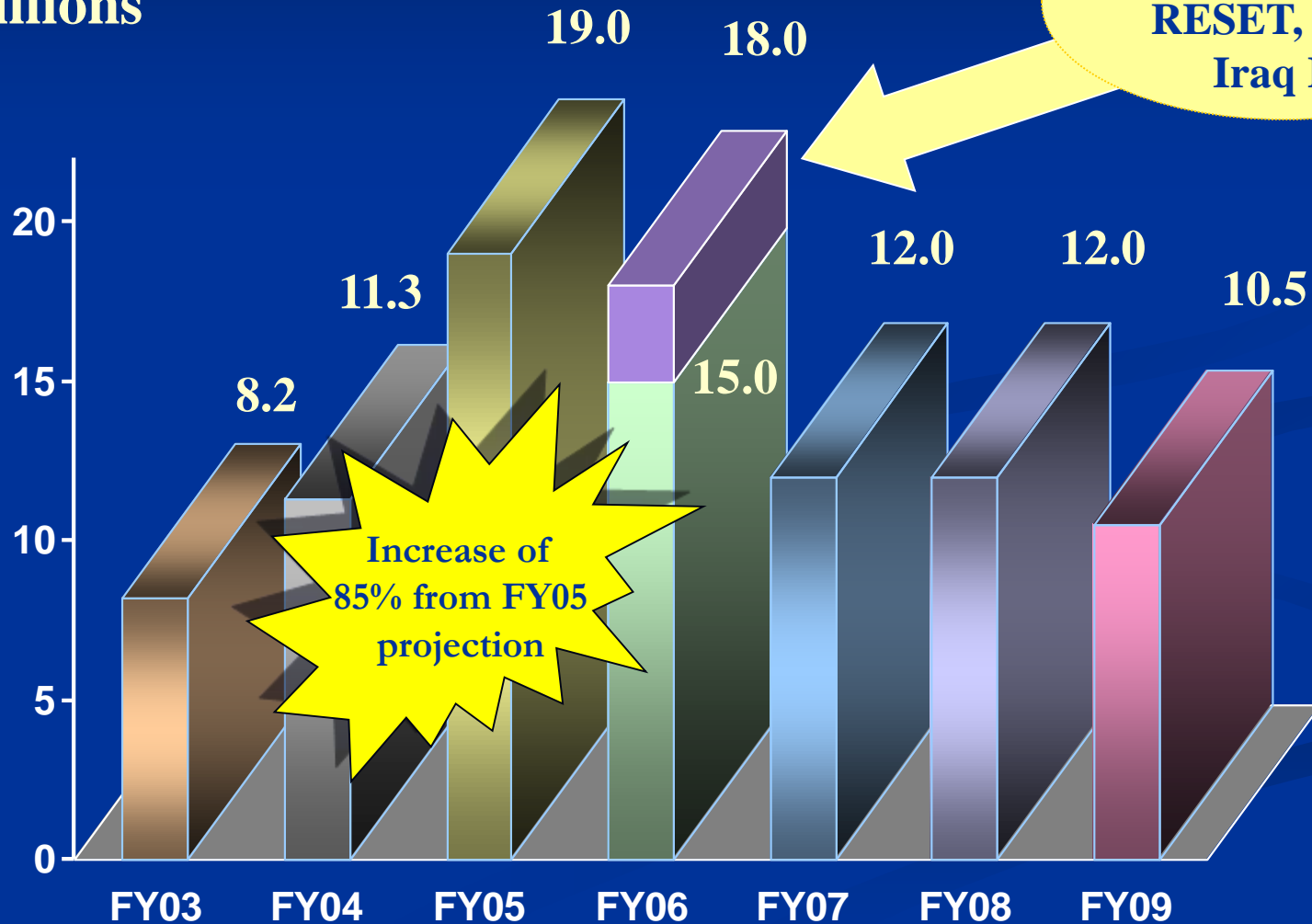
Ammo storage center

Missile Recertification Mission - Patriot/ Hawk missile

Rubber Products Mission

TACOM Total Contract Dollars Historical and Projected (All Sites)

In \$Billions



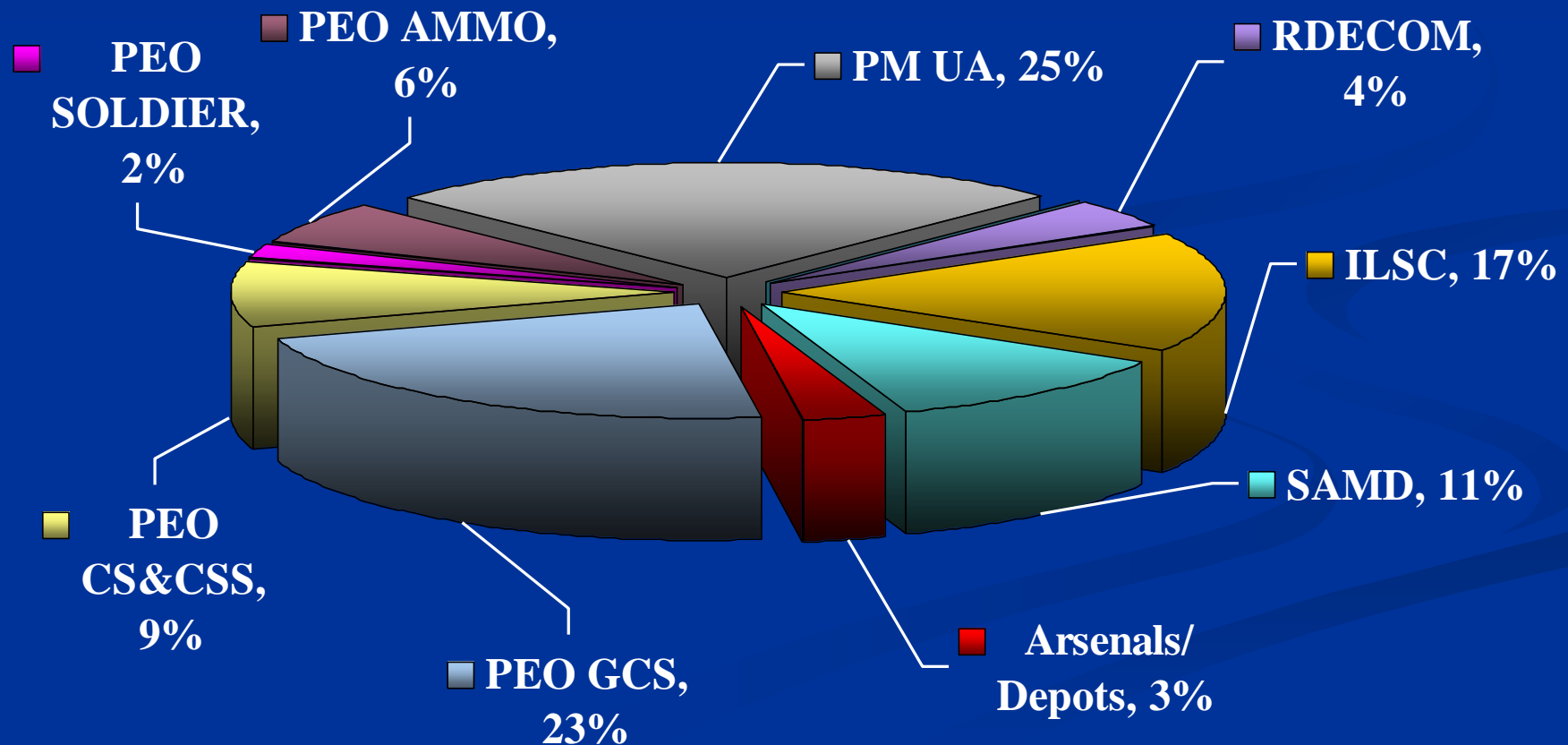
Addtl \$3B ??

RESET, RECAP,
Iraq Reqs

Increase of
85% from FY05
projection

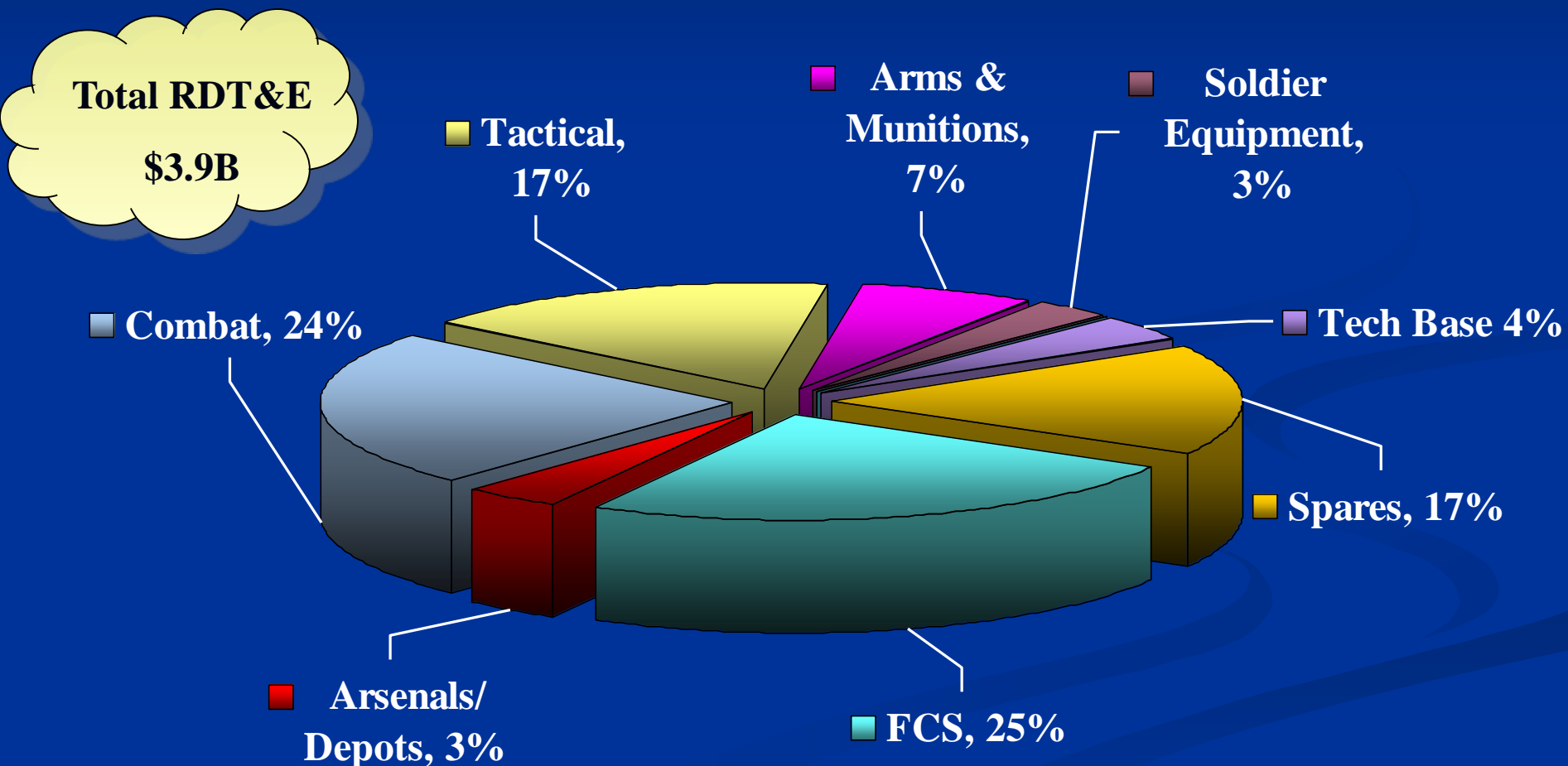
TACOM TOTAL FY06 OBLIGATION PROJECTION

Funds by Customer: \$15.00 Billion Estimated Obligation



TACOM TOTAL FY06 OBLIGATION PROJECTION

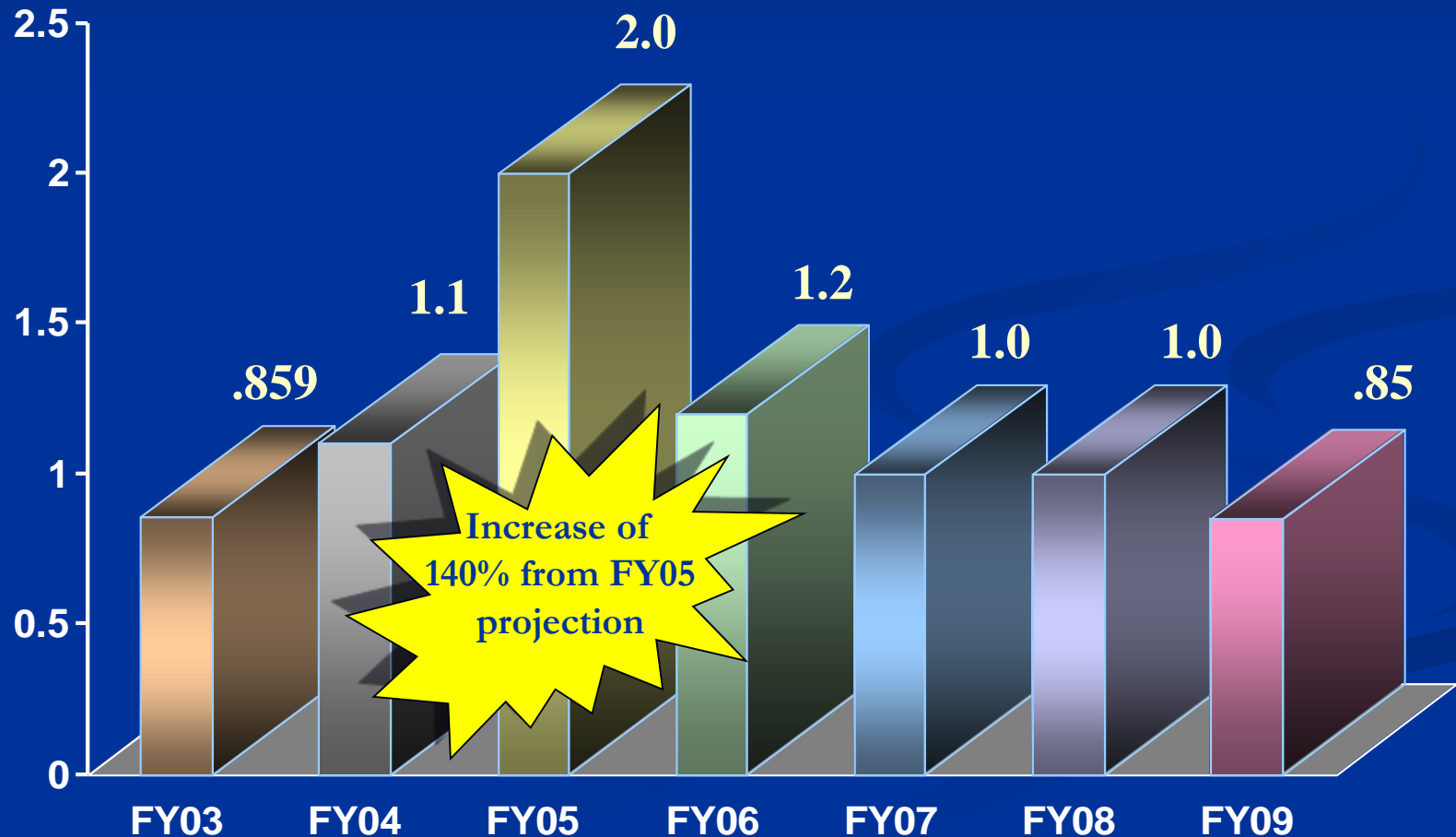
Requirements Distribution: \$15.00 Billion Estimated Obligation



TACOM-ROCK ISLAND CONTRACT \$'S

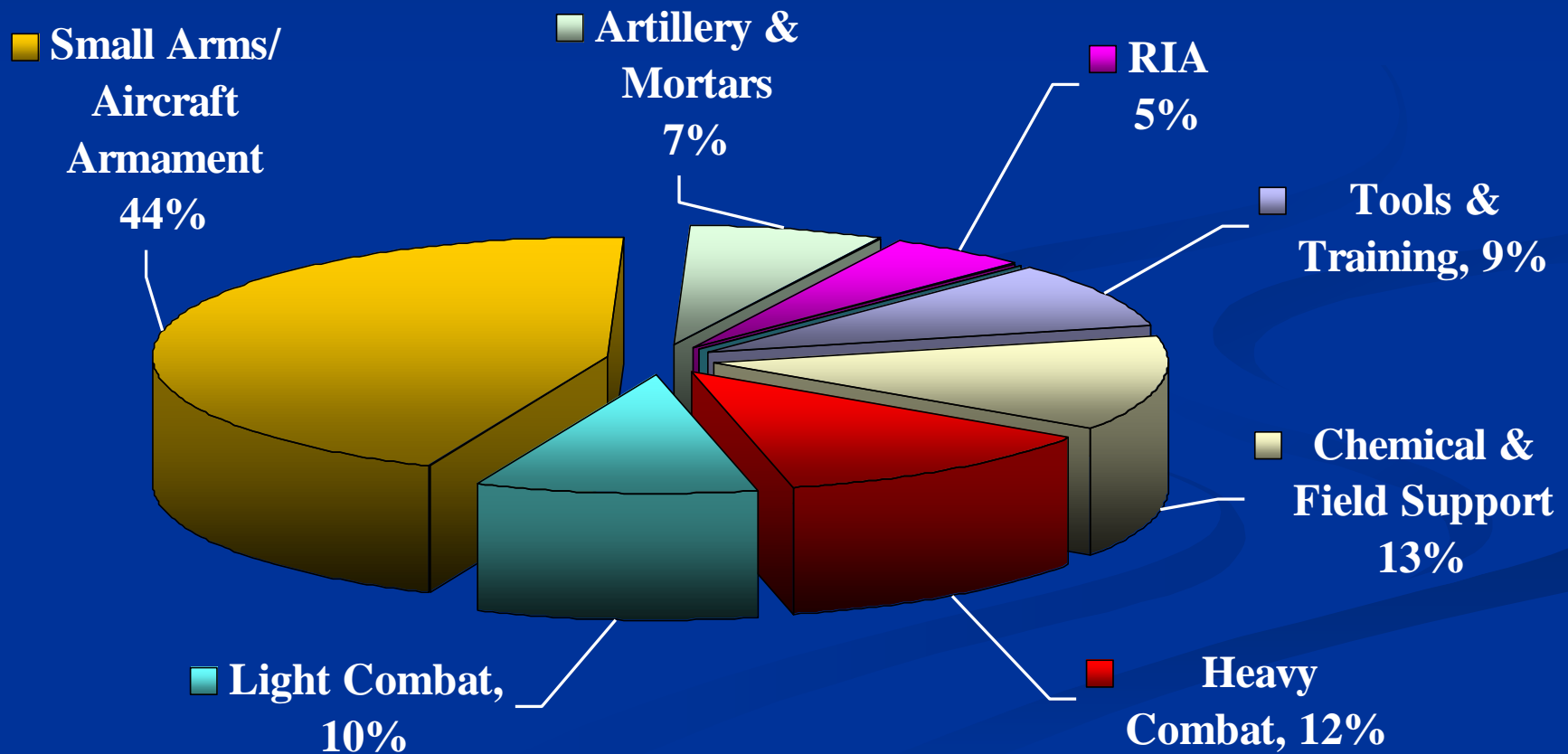
Historical and Projected

In \$Billions



TACOM-ROCK ISLAND FY06 OBLIGATION PROJECTIONS

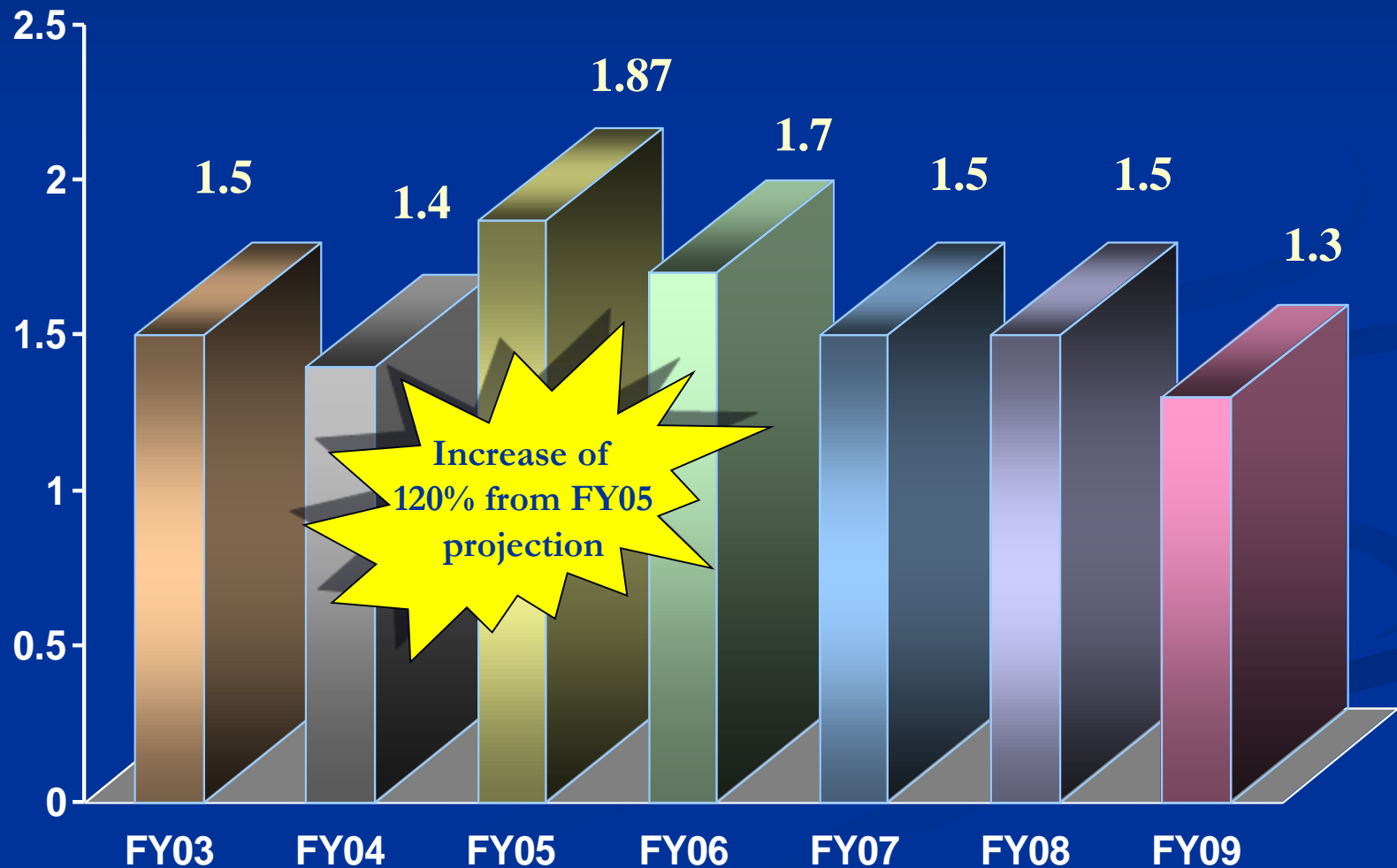
Requirements Distribution: \$1.2 Billion Estimated Obligation



TACOM-PICATINNY CONTRACT \$'S

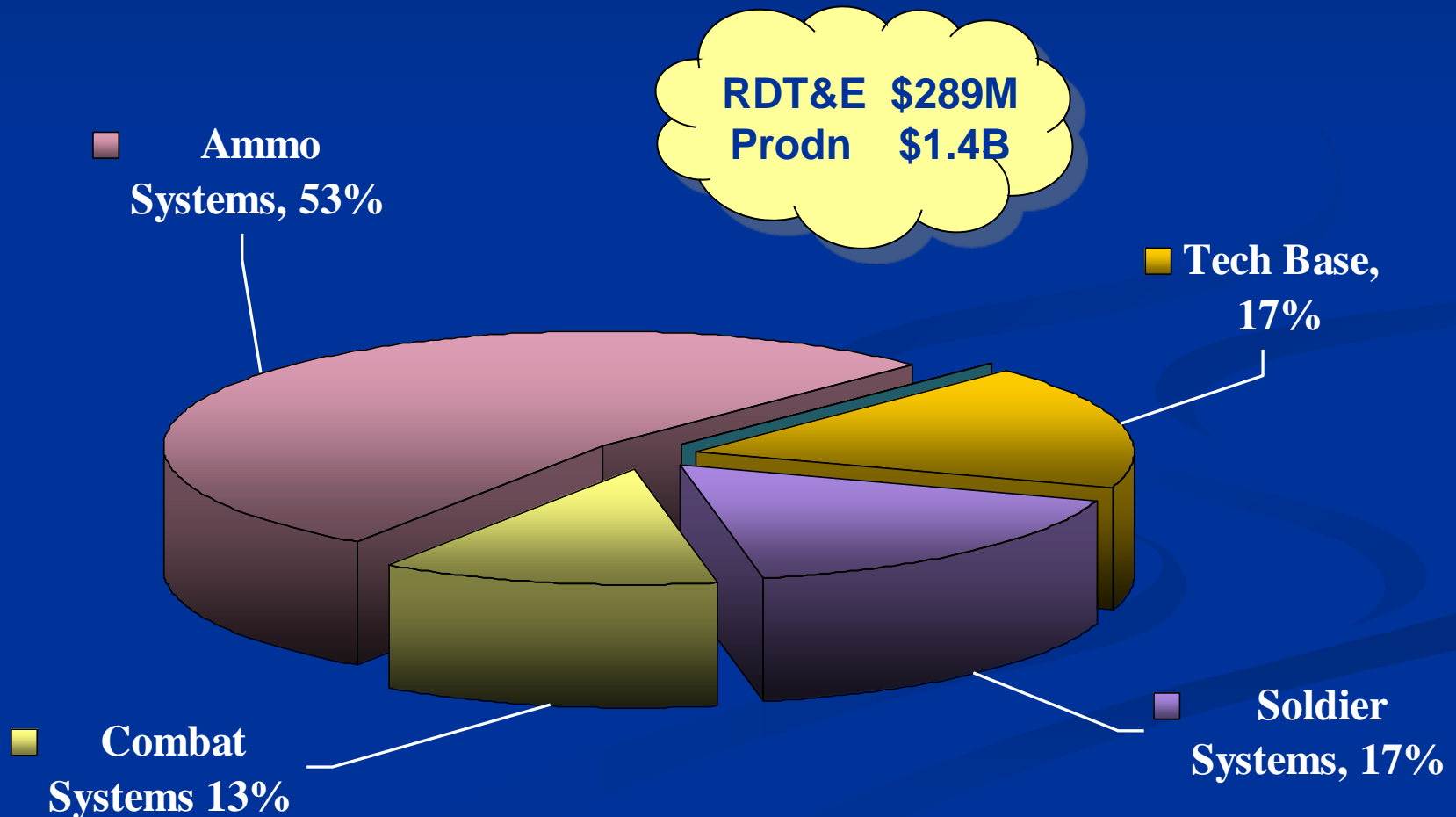
Historical and Projected

In \$Billions



TACOM-PICATINNY FY06 OBLIGATION PROJECTION

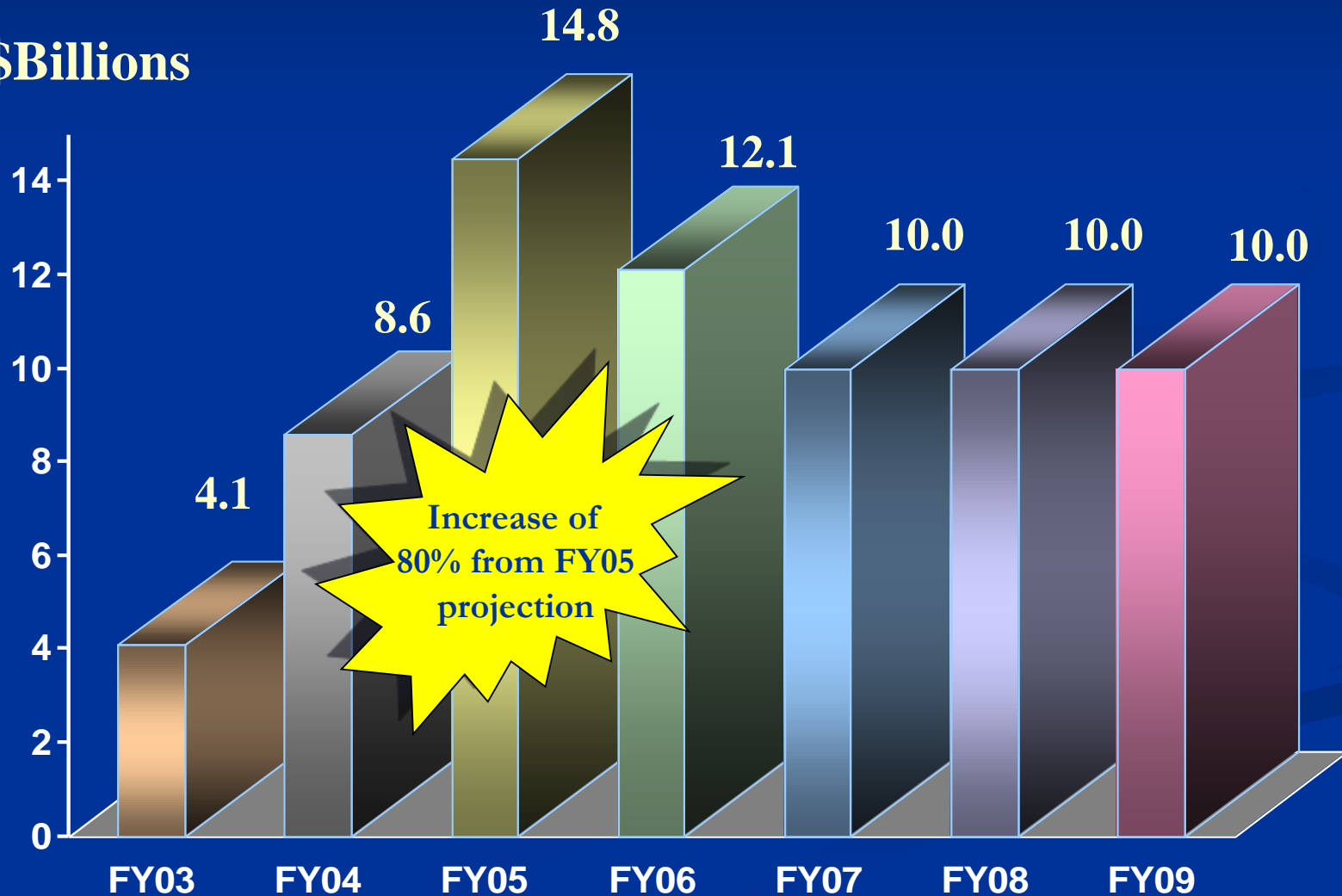
Requirements Distribution: \$1.7 Billion Estimated Obligation



TACOM-WARREN CONTRACT \$'S

Historical and Projected

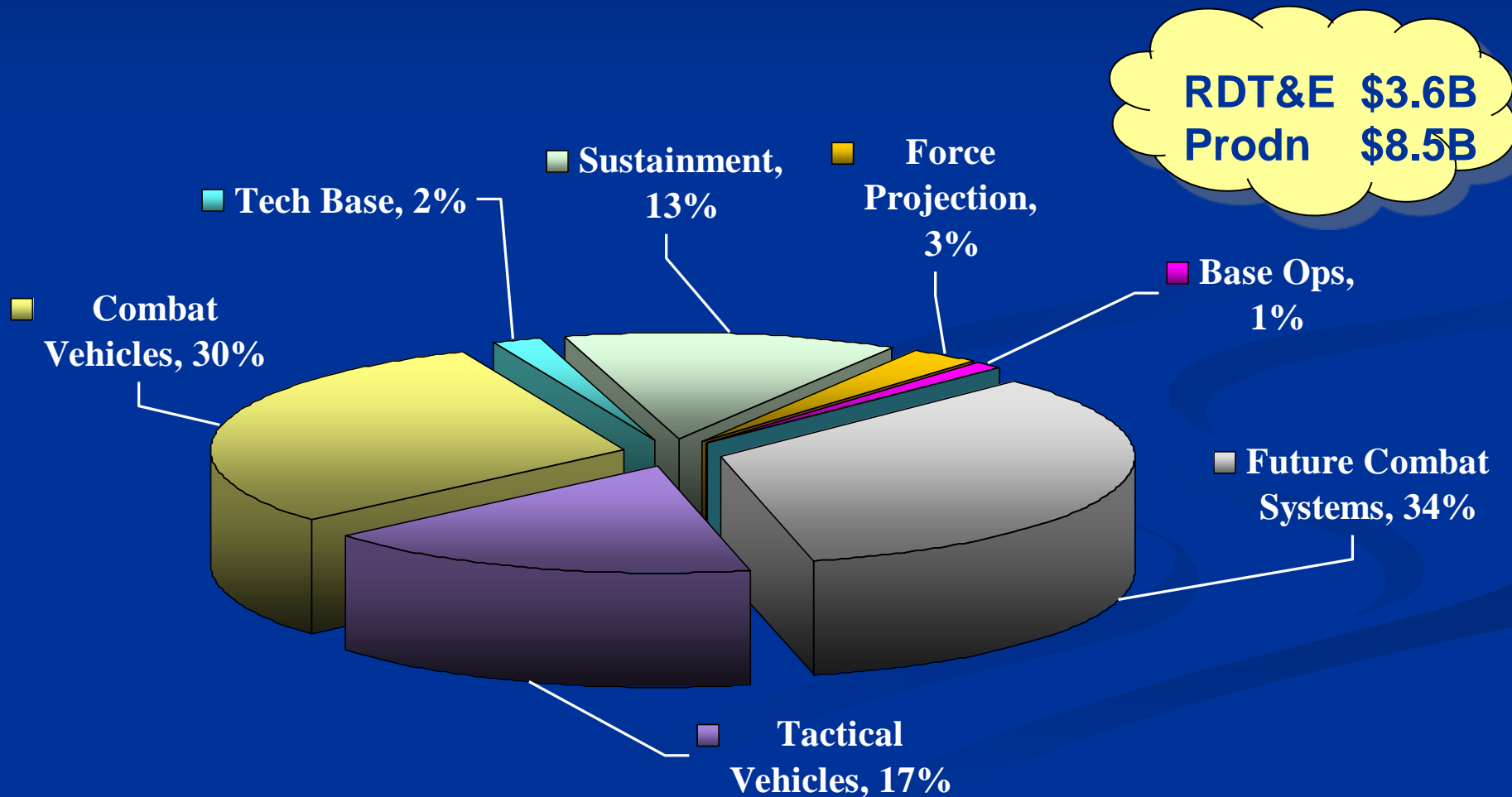
In \$Billions



TACOM-WARREN

FY06 OBLIGATION PROJECTION

Requirements Distribution: \$12.1 Billion Estimated Obligation





Advanced Planning Briefing for Industry

26 October 2005

Summary of Estimated Future Buys for
Fiscal Years 2006 & 2007



TACOM – Ground Systems Industrial Enterprise (GSIE)

Anniston Army Depot	1-6
Red River Army Depot	6-9
Rock Island Arsenal	9-10
Sierra Army Depot	11
Watervliet Arsenal	12-18

TACOM – PICATINNY

- PEO Ammunition	PM Combat Ammunition Systems (PM CAS)	19-21
	PM Close Combat Systems (PM CCS)	22
	PM Manuever Ammunition Systems (PM MAS)	23
- ARDEC (Armaments Research Development and Engineering Center)	ARDEC	24
- PM Soldier Weapons	PM Soldier Weapons	25

TACOM – ROCK ISLAND

- Foreign Military Sales (FMS)	FMS	26-28
- Program Executive Officer, Combat Service & Combat Support System (PEO, CS&CSS)	PM Sets, Kits, Outfits, and Tools (PM SKOT)	29-31
- Product Support Integrated Directorate	Aircraft Armaments & Small Arms PSID	32-34
	Field Artillery PSID	35-37
	Heavy Combat PSID	38-40
	Light Combat PSID	41-44
	Tools and Training Systems PSID	45-46
- Soldier, Bio, Chem Operations Integrated Logistics Support Center (ILSC)	Chem/Bio Defense PSID	47-49



Advanced Planning Briefing for Industry

26 October 2005

Summary of Estimated Future Buys for
Fiscal Years 2006 & 2007



TACOM – WARREN

- Integrated Logistics Support Center (ILSC)

- Program Executive Officer, Combat Service & Combat Support System (PEO, CS&CSS)

- Program Executive Officer, Ground Combat Systems (PEO, GCS)
- PM Unit of Action (PM UA)
- PM Light Armored Vehicle (LAV)
- Tank Automotive Research, Development and Engineering Center (TARDEC)

- Foreign Military Sales (FMS)
- Installation Support Group

Deployment Equipment PSID	50–53
Field Artillery & Mortars PSID	54
Heavy Combat PSID	55–62
Light Combat PSID	63–66
Tactical Vehicles PSID	67–75
PM Light Tactical Vehicles	76
PM Medium Tactical Vehicles	76
PM Heavy Tactical Vehicles	76
PM Trailers	76
PM Army Watercraft	77
PM Bridging	77
PM Combat Engineering/Material Handling Equipment	77
PM Petroleum/Water	77
PM Force Sustainment	78
PM Combat Systems	79–80
PM Unit of Action (PM UA)	81
PM Light Armored Vehicle (PM LAV)	82
National Automotive Center (NAC)	83–84
Petroleum & Water	84
Design & Manufacturing	84
Engineering Business Group	85
S&T Planning	85
Mobility	85–86
Survivability	86
Intelligent Systems	86
FMS	87–88
Installation Support Group	89



Advanced Planning Briefing for Industry

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Summary of Estimated Future Buys for Fiscal Years 2006 & 2007



TACOM - WARREN ILSC

SUMMARY OF ESTIMATED REQUIREMENTS

WARREN DEPLOYMENT EQUIPMENT PSID

NOTE: REQUIREMENTS CONTRACT (REQ CONT.) IS FOR ESTIMATED QUANTITIES

NOMENCLATURE	EXISTING (X)	NEW		FUND TYPE	FY06 QUANTITY OR SERVICE	FY07 QUANTITY OR SERVICE
		COMPETITIVE	SOLE SOURCE			
2530-01-518-3656 WHEEL, PNEUMATIC	X			AWCF	120	TBD
2530-01-477-1660 WHEEL, PNEUMATIC			X	AWCF	3641	2811
2530-01-478-0593 WHEEL, PNEUMATIC	X			AWCF	1000	1500
2530-01-527-9584 WHEEL, PNEUMATIC			X	AWCF	211	TBD
2530-01-493-5859 WHEEL AND RUNFLAT	X			AWCF	41080	46902
2530-01-506-5915 WHEEL, PNEUMATIC			X	AWCF	172	165
2530-01-506-7243 WHEEL AND TIRE			X	AWCF	831	967
2530-01-500-4619 WHEEL, PNEUMATIC	X			AWCF	0	572
2530-01-506-8319 WHEEL, PNEUMATIC			X	AWCF	0	179
2530-01-506-4125 WHEEL, PNEUMATIC			X	AWCF	455	475
2530-01-506-4132 WHEEL, PNEUMATIC			X	AWCF	285	375
2530-01-506-4136 WHEEL, PNEUMATIC			X	AWCF	137	209
2530-01-506-4133 WHEEL, PNEUMATIC			X	AWCF	0	171
2530-01-506-4129 WHEEL, PNEUMATIC			X	AWCF	0	168
2530-01-506-7315 M860A1 WHEEL ASSY			X	AWCF	521	TBD
2530-01-506-7646 WHEEL, PNEUMATIC			X	AWCF	518	493
2530-01-500-4991 WHEEL AND TIRE	X			AWCF	327	361
2530-01-506-7650 WHEEL, PNEUMATIC			X	AWCF	270	583
2530-01-514-7909 WHEEL, PNEUMATIC			X	AWCF	276	278
2530-01-514-7903 WHEEL, PNEUMATIC			X	AWCF	369	373
2530-01-506-7648 WHEEL, PNEUMATIC			X	AWCF	145	290
2610-01-334-2694 TIRE, PNEUMATIC	X			AWCF	20656	20289
2610-01-126-1576 TIRE, PNEUMATIC		X		AWCF	0	3354
2610-01-333-7632 TIRE, PNEUMATIC	X			AWCF	157846	126096
2640-01-419-6202 RUN FLAT KIT	X			AWCF	48456	47967
2530-01-443-3405 PARTS KIT, VEHICULAR	X			AWCF	30721	43189
2610-01-148-1635 TIRE, PNEUMATIC	X			AWCF	22007	13983



Advanced Planning Briefing for Industry

26 October 2005

Summary of Estimated Future Buys for
Fiscal Years 2006 & 2007



TACOM - WARREN PEO CS&CSS

SUMMARY OF ESTIMATED REQUIREMENTS

NOTE: REQUIREMENTS CONTRACT (REQ CONT.) IS FOR ESTIMATED QUANTITIES		Light	Medium	Heavy	Trailers	Watercraft	Bridging	Combat
			Petroleum & Water			Forced Sustainment		
PROJECT MANAGER, TACTICAL VEHICLES (LIGHT TACTICAL VEHICLES)	EXISTING	NEW					FY06	FY07
NOMENCLATURE	(X)	COMPETITIVE	SOLE SOURCE	FUND TYPE	QUANTITY OR SERVICE	QUANTITY OR SERVICE		
HMMWV Production	X			OPA	1783	2048		
HMMWV STS	X			OPA	93,482 hrs	93,481 hrs		
M1114 STS	X			OPA	8900 hrs	0		
HMMWV RECAP (Depot only)	X			OPA	452	310		
HMMWV Repower Kit		Limited		OPA	3327	6654		
PROJECT MANAGER, TACTICAL VEHICLES (MEDIUM TACTICAL VEHICLES)	EXISTING	NEW					FY06	FY07
NOMENCLATURE	(X)	COMPETITIVE	SOLE SOURCE	FUND TYPE	QUANTITY OR SERVICE	QUANTITY OR SERVICE		
A1 Rebuy Trucks	X			OPA	2186	3779		
Trailers	X			OPA	1125	1219		
PROJECT MANAGER, TACTICAL VEHICLES (HEAVY TACTICAL VEHICLES)	EXISTING	NEW					FY06	FY07
NOMENCLATURE	(X)	COMPETITIVE	SOLE SOURCE	FUND TYPE	QUANTITY OR SERVICE	QUANTITY OR SERVICE		
HEMTT New Production	X			OPA	258	407		
HEMTT RECAP	X			OPA	399	579		
PLS	X			OPA	152	65		
PLS Trailer	X			OPA	263	102		
Container Handling Unit (CHU)			X	OPA	429	211		
CROP		X		OPA	166	197		
Tactical Fire Fighting Truck (TFFT)			X	OPA	8	31		
Common Bridge Transporter (CBT)	X			OPA	56	4		
M915A3 Truck Tractor	X			OPA	131	20		
M916A3 Light Equipment Transporter	X			OPA	49	30		
PROJECT MANAGER, TACTICAL VEHICLES (TRAILER VEHICLES)	EXISTING	NEW					FY06	FY07
NOMENCLATURE	(X)	COMPETITIVE	SOLE SOURCE	FUND TYPE	QUANTITY OR SERVICE	QUANTITY OR SERVICE		
M969A3 Tanker	X			OPA	97	130 (FMS)		
M871A3	X			OPA	91	21		

TACOM FUTURE BUYS

Summary listing on the Web.....

**[http://contracting.tacom.army.mil/futurebuys/
FY06/INDEX.CFM](http://contracting.tacom.army.mil/futurebuys/FY06/INDEX.CFM)**

..... Table of Contents links to individual programs

..... Information available for six (6) months

..... Requirements are best estimates

PROCNET

TACOM Procurement Network

Your Source for Business Opportunities

FY06 Contracting Business Drivers

- *INCREASED SCOPE IN MISSION*
 - IRAQ/AFGHANISTAN/FMS REQUIREMENTS

- *UP TEMPO MISSION CONSIDERATIONS*
 - RESET/MODULARITY
 - TACTICAL VEHICLE SYSTEMS
 - REPAIR PARTS
 - FUTURE COMBAT SYSTEMS
 - STRYKER FIELDINGS

ACQUISITION INITIATIVES

- Performance Based Logistics
- Purchasing & Supply Management (PSM)
- Consumable & Repairable Transfer
- Increased Oversight

Contracting Points of Contact

ACQUISITION CENTER



<u>OFFICE</u>	<u>SITE</u>	<u>POC</u>	<u>PHONE</u>
Director, Acquisition Center	WARREN	Dan Mehney	(586) 574-7025
Associate Director for Contracting	WARREN	Martin Green	(586) 574-7026
Competition Advocate/Ombudsperson	WARREN	LaRuth Shepherd	(586) 574-6597
Production/Ind Base Mgt Division	WARREN	Prince Young	(586) 574-7216
Chief of Contracting Office	PICATINNY	Bruce Berinato	(973) 724-3219
Chief of Contracting Office	ROCK ISLAND	Lynn DeRoche	(309) 782-3223
Chief of Contracting Office	ANNISTON	Kathy Harvey	(256) 235-6231
Chief of Contracting Office	RED RIVER	Robert McDonald	(903) 334-3989
Chief of Contracting Office	SIERRA	Sue Ritz	(530) 827-4836
Chief of Contracting Office	WATERVLIET	Deborah Jones	(518) 266-5309

Contracting Points of Contact (cont.)

ACQUISITION CENTER



<u>OFFICE</u>	<u>SITE</u>	<u>POC</u>	<u>PHONE</u>
R&D/UA	WARREN	Scott Sinelli	(586) 574-7300
Tactical Vehicles	WARREN	Louise Lather	(586) 574-6176
Deployment/Support Equip	WARREN	John Bruce	(586) 574-7447
Brigade Combat Team	WARREN	Connie Tucker	(586) 753-2020
Future Combat Systems	WARREN	Pam Demeulenaere	(586) 574-7251
Combat Vehicles	WARREN	Art Siirila	(586) 574-7247
Combat Vehicles	ROCK ISLAND	Mary Donovan	(309) 782-7946
Artillery & Mortars	ROCK ISLAND	Sally McGlone	(309) 782-4524
Aircraft Arm/Small Arms	ROCK ISLAND	Kristan Mendoza	(309) 782-5553
Tools & Training Systems	ROCK ISLAND	Sean O'Reilly	(309) 782-2433
Chem Bio Defense	ROCK ISLAND	Kevin Sommer	(309) 782-2706

Contracting Points of Contact (cont.)

ACQUISITION CENTER



<u>OFFICE</u>	<u>SITE</u>	<u>POC</u>	<u>PHONE</u>
Close Combat Systems	PICATINNY	Val Colello	(973) 724-3398
Grnd Cbt & Tact Armaments	PICATINNY	Greg Gorman	(973) 724-5961
Mortar Sys & Ammo	PICATINNY	Jeff Boyle	(973) 724-6632
Soldier Weapon Sys	PICATINNY	Phil Grottendick	(973) 724-2854
Emerg Tech & Lethal Contr	PICATINNY	Dan Grinter	(973) 724-3245
Maneuver Ammo Sys	PICATINNY	Larry Visconti	(973) 724-6289
Combat Spt Sys	PICATINNY	Steve Trauger	(973) 724-4748
Combat Ammo Sys	PICATINNY	Paul Milenkowic	(973) 724-5391

Contracting Points of Contact (cont.)



SMALL BUSINESS OFFICE



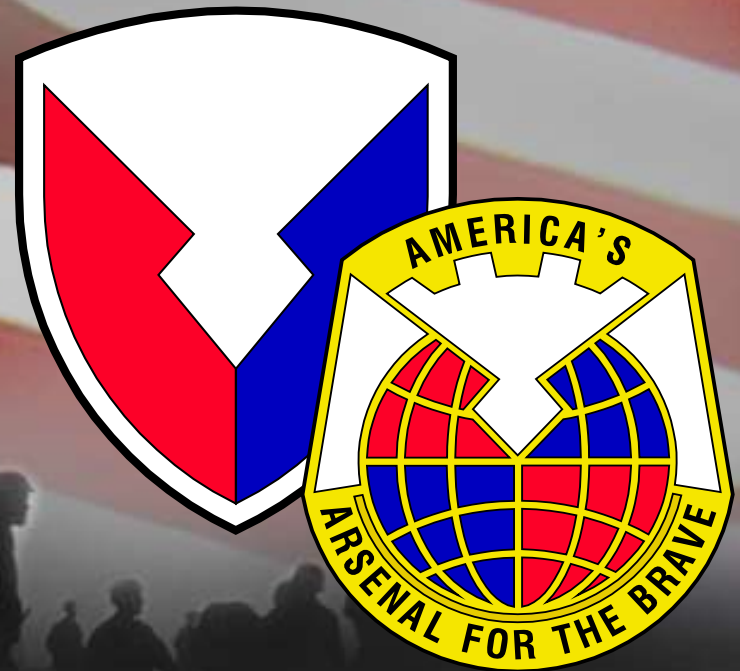
<u><i>SITE</i></u>	<u><i>POC</i></u>	<u><i>PHONE</i></u>
Warren	Patricia Redding	(586) 574-5388
Picatinny	Rick Burdett	(973) 724-4106
Rock Island	Larry Negaard	(309) 782-6709
Anniston	Sandra Turner	(256) 235-7346
Red River	Robert McDonald	(903) 334-3989
Watervliet	Deborah Jones	(518) 266-5309
Sierra	Susan Ritz	(530) 827-4836

Public-Private Partnerships With Industry

**Advance Planning Briefing to Industry
(APBI)
26-28 October 2005**

Richard (Rick) Riney
Public-Private Partnership
Industrial Base Capabilities Division
HQ U.S. Army Materiel Command

U.S. Army Materiel Command



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

What is a Public-Private Partnership?

-P3-

**Army-owned and
operated facilities...**

-Maintenance depots

-Manufacturing arsenals

-Ammunition plants

❖ Contractual agreement between an Army-owned and operated facility and one or more private industry or other entities to perform work or utilize the Army's facilities and equipment.


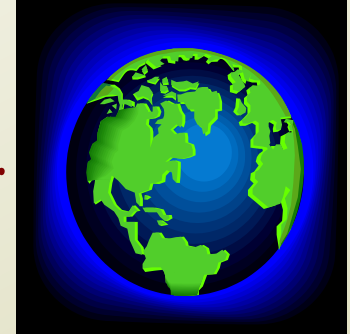
❖ Includes one or more of the following:

- ✓ Articles or services to industry.
- ✓ Industry leasing equipment or facilities to perform work for public or private sector.
- ✓ Work sharing arrangements.
- ✓ Teaming arrangements where Army facility and industry contract jointly .

State of the World

- *Transformation*
- *Global War on Terrorism*
- *Market & Defense Globalization*
- *Increased Joint Operations*

Critical Global Industrial Base for the 21st Century



*Organic
Industrial
Base
Evolution*



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

Benefits to Industry

Benefits:

- ✓ Access to advance technology industrial production machinery.
- ✓ Access to new chemical processes for metal finishing.
- ✓ Use of hard to receive hazardous waste permits.
- ✓ Minimize of process flow.
- ✓ Sign of long term use agreements.
- ✓ Avoid duplicate investment cost on short/long term contracts.
- ✓ Decrease in capital investment cost.

Statutory Authorities

General Statutory Authority

10 USC 2474: Designated Centers of Industrial and Technical Excellence (CITEs).

Participate in Public Competitions

10 USC 2208j

10 USC 2470

Section 8032 PL 108-37

Lease or Use Army Property

10 USC 2667

10 USC 2474

Sale of Articles and Services to Persons Outside DOD

10 USC 2208(h)

10 USC 2539b

10 USC 4543

22 USC 2770

Other

❖ **Armament Retooling and Manufacturing Support (ARMS) Initiative**

10 USC 4551-4555

❖ **Arsenal Support Program Initiative (ASPI)**

Pub Law 106-398

**Def App Bill FY2003
(Expires 1 OCT 2005)**

❖ **Providing Government Property to Contractors**

FAR Subpart 45.3

AMC's Public-Private Partnership Goal and Objectives

Goal:

Improve the output and performance of AMC organic facilities through increased participation by the private sector via industrial partnerships or cooperative activities.

Objectives:


- ✓ Enhance support to the warfighter via stronger cooperative partnership relationships with industry.
- ✓ Leverage industry's best practices.
- ✓ Improve organic operations efficiencies.
- ✓ Reduce and offset cost of ownership of organic facilities.
- ✓ Leverage private investment in Army facilities.

HQ AMC's

Actions to Support Partnerships

❖ Private Industry Awareness

- ✓ Established a publicly viewed webpage (<http://www.amc.army.mil/partnering/>) to create awareness of partnership opportunities, to include: POC's, facility links, and legislation.
- ✓ Participate in Advance Planning Briefings to Industry
- ✓ Champion Partnering through Industry Forums

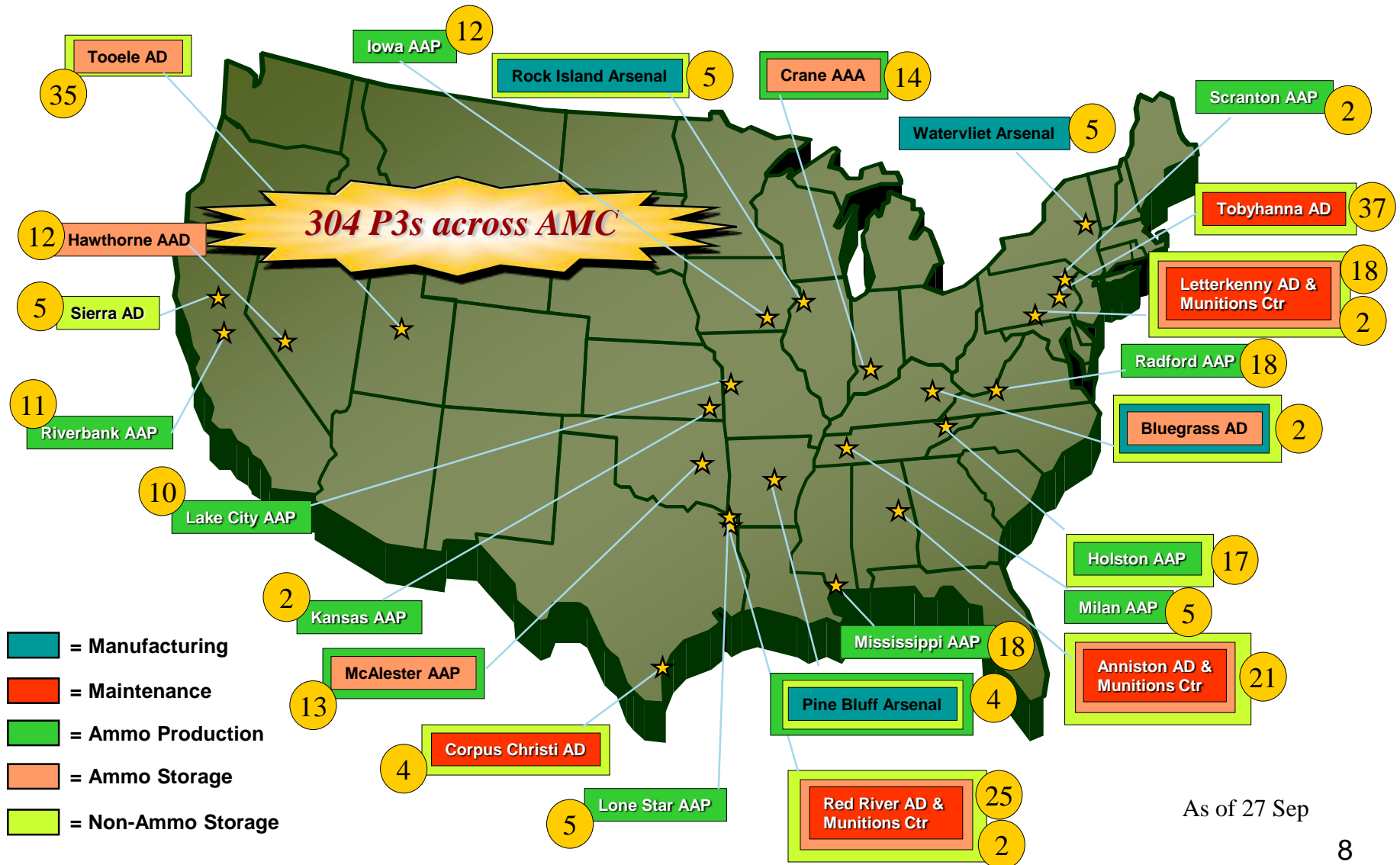


Leverage Industry's
Strengths

❖ AMC Facility Support

- ✓ Update Army Knowledge On-Line Partnership Knowledge Center (<https://www.us.army.mil/suite/kc/881063>)
- ✓ Support Partnership Legislation
- ✓ Conduct on-site Partnership Tutorials at Army Materiel Command installations

Number of Public-Private Partnerships (P3s) Across AMC's Industrial Facilities



AMC Partnership Examples

❖ Maintenance Army Depots (ADs)

- ✓ Anniston AD
 - General Dynamics, BAE, Honeywell
- ✓ Corpus Christi AD
 - Sikorsky Aircraft Corp, GE Aircraft Engines, The Boeing Company
- ✓ Letterkenny AD
 - Lockheed Martin JAVELIN Joint Venture, Lechmotoren US, Edgewood Chemical Biological Center (ECBC)
- ✓ Red River AD
 - BAE, Marvin Land Systems, GS Engineering
- ✓ Tobyhanna AD
 - Northrop Grumman, Engineering & Professional Services, BAE

❖ Manufacturing Arsenals

- ✓ Pine Bluff Arsenal
 - Lindsay & Osborne, Battelle,
- ✓ Rock Island Arsenal Joint Manufacturing and Technology Center
 - Alliant Tech Systems, Grainger Tools, PB-NAMMO Demil LLC
- ✓ Watervliet Arsenal
 - Egyptian Co-Production, Hartchrom Inc, GD Land Systems

❖ Army Ammunition Plants (AAPs)

- ✓ Crane Army Ammunition Activity
 - SNC Canada, Gradient Technologies
- ✓ Holston AAP
 - Railcar Solutions, Transit Mix, Kingsport Railcar Services
- ✓ Iowa AAP
 - General Dynamics, L3, U.S. Army Corps of Engineers
- ✓ Kansas AAP
 - Dyno Nobel, Lindsey & Osborn Partnership
- ✓ Lake City AAP
 - Stealth Garments, Valentec, Fort Osage School
- ✓ Lone Star AAP
 - American Dehydrated Foods, TEC Liners, Area Z Recreation

❖ Ammunition Storage

- ✓ Anniston Munitions Center
 - AMTEC
- ✓ Blue Grass AD
 - Lockheed, Air Force
- ✓ Hawthorne AAD
 - Space & Missile, Marines Dockery
- ✓ Letterkenny Munitions Center
 - ADK, BAE Deep Digger
- ✓ Red River Munitions Center
 - RRAD, DDRT, TRMD
- ✓ Tooele AD
 - General Atomics, Technical Ordnance, Dyno Nobel

❖ Mobility Facility

- ✓ Sierra AD
 - FEMA, Tyonek, Highland Engineering

- ✓ McAlester AAP
 - Boeing, General Dynamics, National Forge
- ✓ Milan AAP
 - Ordnance Systems Inc, SNC TEC, American Ordnance
- ✓ Mississippi AAP
 - Boeing, Power Dynamics, Dept. of Energy
- ✓ Radford AAP
 - New River Energetics, Alliant Painting, U.S. Cellular
- ✓ Riverbank AAP
 - Cingular, Sierra Railroad, Medical Relief Foundation
- ✓ Scranton AAP
 - DCAA, Pennsylvania Environmental Partnership

Watervliet Arsenal

This reduces Army's cost of ownership, preserves critical mission skills, Permits modernization of facilities and infrastructure

❖ Arsenal Support Program Initiative (ASPI):

- ✓ Site Manager Partnership Contract with ABTP for two years at no cost. ABTP markets unused and underutilized space and assets to commercial/Government customers, negotiates agreements and acts as facility manager.
- ✓ Partnering Contract with Hartchrom Albany Inc
- ✓ CRDA partnership to provide WVA space to two research and development companies
- ✓ Oak-Mitsui Inc facility utilization and purchase of service by WVA workforce
- ✓ Elmhurst Research Inc rental of office space.
- ✓ CRADA arrangements with Benet Labs supports partnering for space and services on-site with two Research and Development Companies - Oak Mitsui and Elmhurst Research
- ✓ Extreme Molding is leasing space for a start-up injection molding business with future expansion plans

❖ Direct Sales

- ✓ General Dynamics - M256 cannon for the Korea K-1 Tank upgrade program,
- ✓ General Dynamics - M68A1 Cannon for the Army Stryker vehicle Mobile Gun System
- ✓ Wilburt & Company - Thin foil booms

❑ Hartchrom Inc. – Chrome plating barrels/components, as of 19 Aug 05



Rock Island Arsenal (RIA)

Utilizing ASPI

Identified foundry, plating, heat treat and forge operations as potential areas for expansion of our ASPI program

- ❖ TDF Corporation provides computer support to various tenants at Rock Island Arsenal.
- ❖ Quad City Area Labor Management provides in-kind training for Rock Island Arsenal employees.
- ❖ General Dynamics Ordnance and Tactical Systems provides a wide variety of services to the Joint Munitions Command.
- ❖ Modular Furniture Inc tears down and sets up office systems on Rock Island Arsenal.
- ❖ 5 T Office Services provides computer repair services to Rock Island Arsenal and its tenants.
- ❖ FR Countermeasures provides a wide variety of services to the Joint Munitions Command.
- ❖ Work with the Quad City Development Group on an agreement that allows them to market the facility. This will reduce processing time, cost of multiple leases, and enhance marketing efforts.
- ❖ Success with the ASPI program ... 7 facility use contracts in place, 5 are for administrative space, 1 for storage space, and 1 for production space.

Rock Island Arsenal (RIA)

Numerous Success Stories with Public-Private Partnering Agreements

- ❖ **United Defense Limited Partners...** Production of turrets and crew production baskets on the BMP-2 Opposing Forces Surrogate and for the upgrade of gun Mounts for the M109 Howitzer
- ❖ **CMRED...**Center for Manufacturing Regional Economic Development for the sale of various supplies and services not commercially available in support of area businesses.
- ❖ **Depot Systems...** For the sale of various supplies and services for both DOD and commercial application.
- ❖ **Alliant Techsystems...** For the sale of gun mounts and spare parts for the M1A1.
- ❖ **Focus Hope...** Mobile Parts Hospital development and production.
- ❖ **Log Value...** Government security qualification
- ❖ **Pendulum Management...** Government security qualification

–90 BPA's in place with local vendors to provide additional capacity, as of 19 Aug 05

Ground Systems Industrial Enterprise



TACOM/GSIE has significant successes with partnering. This is a Basic Ordering Agreement for ArmorWorks to send work to five Army facilities.

- **Partner: ArmorWorks, Tempe AZ, uses state-of-the-art ceramic and composite materials to construct high tech armor systems.**

- **Subcontract for metal manufacturing to:**

- **Anniston Army Depot**
- **Red River Army Depot**
- **Sierra Army Depot**
- **JMTC-Rock Island Arsenal**
- **JMTC-Watervliet Arsenal**



Corpus Christi Army Depot (CCAD)

CCAD is leveraging their CITE designation to create depot workload and provide for private sector use of their facility.

**Apache
Chinook
Blackhawk
T700
T55**

❖ Utilize Memorandums of Agreement to develop a number of Original Equipment Manufacturing Partnering efforts.

❖ Partners include:

- ✓ Sikorsky Aircraft Corporation
- ✓ General Electric Aircraft Engines
- ✓ Honeywell International Corporation
- ✓ Boeing Company Aerospace Support



❖ These agreements represent three major weapon systems and two major engines that CCAD overhauls.

Letterkenny Army Depot

AM General

- Provides Powertrains and unique parts for HMMWV



Melton Industries

- Provides engines for Power Generation Systems



Penn Metal Fabricators

- Metal Components and Trailers for Mobile Kitchens



Military Systems Group

- Gun Mounts and Engineering for Special Operations Vehicles



Edgewood Chemical Biological Center

- Biological Shelters and Filters



AAI

Shadow 200 UAV



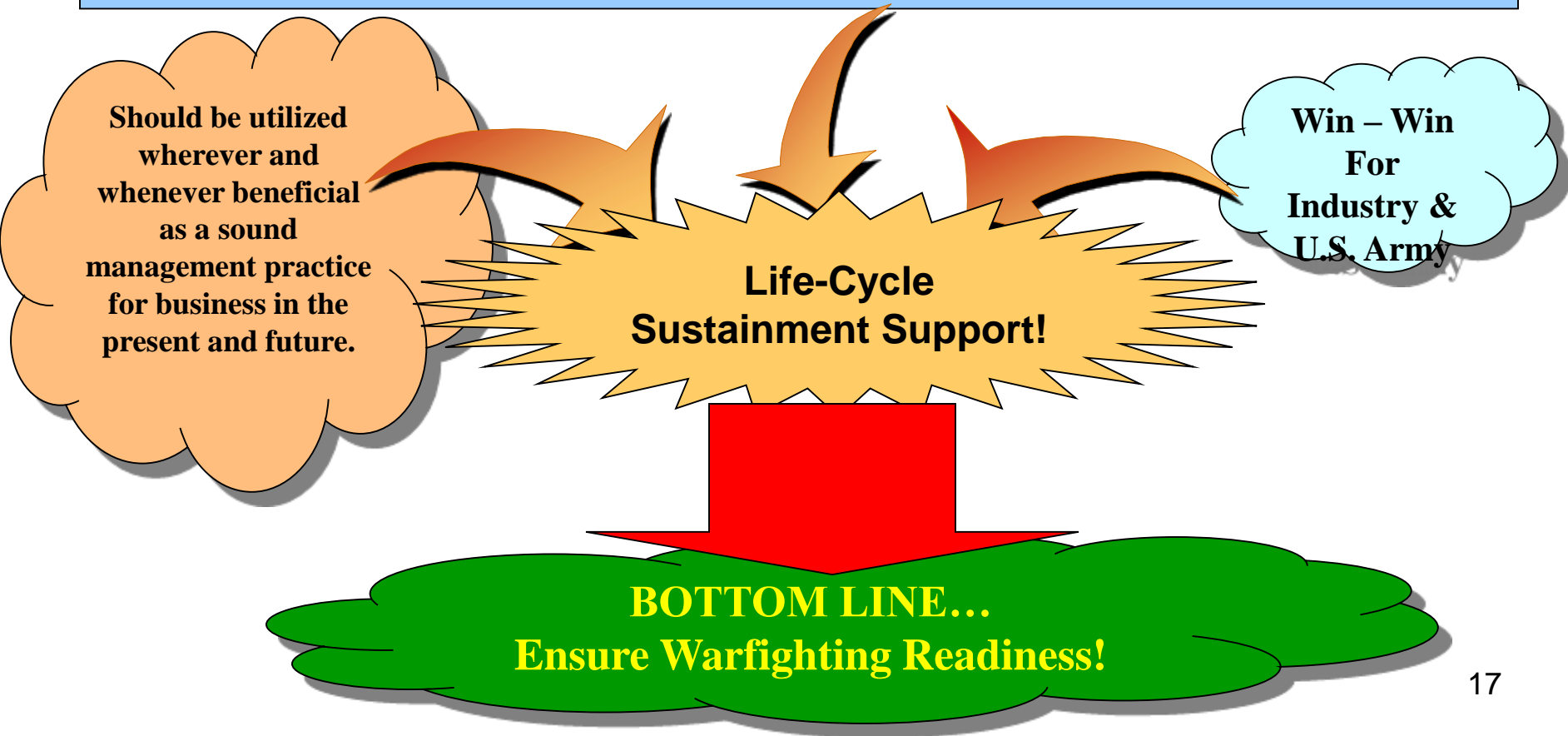
McAlester Army Ammunition Plant



- Harpoon Warhead
- High Speed Anti Radiation Missile (HARM)
- Joint Standoff Weapon (JSOW)
- Extended Range Guided Munition (ERGM)
- Commercial Explosive Charges
- 500 lb. Bombs
- 1000 lb. Bombs
- 2000 lb. Bombs
- Demilitarization
- Pallets

Conclusion

- ❖ The U.S. Army Materiel Command is committed to strong and mutually beneficial working relationships with our Industry Partners.
- ❖ The Public-Private Partnership process has proven to be a dynamic and effective tool in forging such relationships.



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U.S. Army/TACOM LCMC Path Forward for Heavy Duty Diesel Vehicles/Engines

October 27, 2005

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Acknowledgements

- BG Patrick O'Reilly
- Ms. Violet Kristoff,
TACOM Legal Office



Agenda

- **2006/2007 Heavy-Duty On-Road Fuel and Engine Exhaust Emission Standards**
 - Regulation Approach
 - Potential Impacts on DOD
 - DOD interaction with EPA
 - Current production Systems under an NSE*
- **Blanket NSE* for Exhaust Emissions Status and Discussion**
- **Pollution Control Technology Discussion**
 - Evolution of Emission Controls
 - Exhaust Gas Recirculation
 - After Treatment Devices
- **Fuels and Lubricants Discussion**
- **Solution Pathways**

*National Security Exemption

Regulatory Approach

EPA finalized motor vehicle diesel fuel regulations and the heavy duty diesel on-road exhaust emissions regulations in January 2001.

Took a dual approach to reduce air emissions by:

1. Reduction in diesel fuel sulfur content to 15ppm starting June 2006.
 - Enable the use of exhaust system aftertreatment devices
 - JP-8 specification calls for < 3000 ppm!
2. Establish stringent exhaust emission standards - effective January 2007.
 - Require aftertreatment device(s)

(Both regulations implemented with a phased approach)

Potential Impacts to DoD

- **Ground tactical vehicles (i.e. HEMMT, PLS, HMMWV) fielded in the U.S. required to meet the fuel 15 ppm sulfur regulation**
 - JP-8 does not meet this requirement
- **Procure vehicles with pollution control technology**
 - Potential performance degradation (fuel consumption, reliability, durability)
 - The current leading pollution control technology candidates are intolerant to high sulfur fuel
- **Nebulous world wide operation since low sulfur fuel is not available world wide:**
 - Low sulfur diesel fuel is an enabler for pollution control devices

(Combat vehicles (i.e. Abrams, Bradley, Stryker) are automatically exempt under 40 CFR, 89.908)

DoD Interaction with EPA

- Fuel and Emissions Strategies

- Seek NSE for JP-8 exclusion from 2006 diesel fuel regulations

In 1995, EPA determined that JP-8 did not meet EPA's definition of diesel fuel, thus is not regulated as such today. (letter from EPA to Ms. Goodman, DUSD, 1995.)

- Seek NSE from meeting MY2007 diesel heavy-duty, on-road exhaust emissions standards

- End Result:

- DoD provided data to EPA in 2003 on tactical vehicles to obtain a NSE from 2006 diesel fuel regulations
- 'blanket NSE' granted for MY 2007+ diesel heavy-duty, on-road exhaust emission standards (August 23, 2005)
- **THESE NSEs ARE ONLY FROM THE ON-ROAD, HEAVY-DUTY EMISSION AND FUEL REGULATIONS**

Approach for MY 2007+ Exhaust Emissions NSE

- **Typical engine characteristics supplied to EPA for an exhaust emissions NSE:**
 - Engine model, engine compliance status, name of Vehicle Family, time frame for the NSE, contract # (if available)
- **Today, PM TV does not have the above information for the future tactical vehicle, thus NSE strategy is:**
 - Establish a generic NSE, using vehicle family names
 - Provide additional information at the time of contract award
 - Transfer the NSE to engine manufacturers upon contract award

“Blanket” NSE for Exhaust Emissions Status and Discussion

- **“EPA hereby approves your blanket NSE request for all the DOD ‘tactical fleet’ that is subject to regulations at 40 CFR Part 85 and Part 86. This ‘tactical fleet’ includes the tactical military vehicles (TMWs) specified on the ‘Tactical On-Highway Fleet’ list (Enclosure 1) and all other TMVs meeting the requirements of the foregoing ‘tactical vehicle’ definition.’ – August 23, 2005; K. Jennings, Manager, Engine Programs Group (EPA)**
- **Tactical On-Highway Fleet (Enclosure 1):**
 - Light Tactical Vehicle: HMMWV
 - Family Medium Tactical Vehicles: MTV, LMTV
 - Heavy Tactical Vehicles: HEMTT, HET, PLS, Line Haul Tractor, Light Equipment Transporter, Heavy Dump Truck, Engineer Tractor
 - Current R&D: Smart Truck, FTTS, COMBATT, HMEE

“Blanket” NSE for Exhaust Emissions Status and Discussion

- **Tactical Vehicle Definition:** A motor vehicle designed to military specifications **or** a commercial design vehicle modified to military specification to meet direct transportation support to combat or tactical operations **or** for training of personnel for such operations.
- **EPA Acknowledgements**
 - High sulfur fuel used in future engines that include aftertreatment could result in engine failure, drivability problems, and permanent destruction of the emission control system
 - “New TWV procurements can’t contain engines with pollution control technology that is intolerant to sulfur without affecting reliability”
 - The military will integrate 2004 on-road, heavy-duty emissions compliant engines into propulsion systems ***whenever technically feasible***

Terms & Utilization of the “Blanket” NSE

- Terms of the “blanket” NSE from 2007 standards
 - The Army/TACOM will integrate 2004 emission standard compliant engines into propulsion systems *whenever technically feasible*
 - must meet vehicle mobility/propulsion requirements
 - After formal selection of a production contract, the Army shall supply EPA with vehicle details (type, engine model, quantity)
 - Subsequent formal transfer of NSE to engine manufacturer.
- TACOM process for NSE transfer for each contract
 - Develop contract language
 - Contractor will complete a standard form
 - Government review
 - Request NSE transfer from EPA to Contractor

Future Issues: Non-Road Equipment

- The EPA definition of the *nonroad engine* is based on the principle of mobility/portability, and includes engines installed on (1) self-propelled equipment, (2) on equipment that is propelled while performing its function, or (3) on equipment that is portable or transportable, as indicated by the presence of wheels, skids, carrying handles, dolly, trailer, or platform [40 CFR 1068.30]. **In other words, nonroad engines are all internal combustion engines except** motor vehicle (highway) engines, stationary engines (or engines that remain at one location for more than 12 months), engines used solely for competition, or engines used in aircraft.
- Effective May 14, 2003, the definition of nonroad engines was changed to also include all diesel powered engines—including stationary ones—used in agricultural operations in California. This change applies only to engines sold in the state of California; stationary engines sold in other states are not classified as nonroad engines.
- **Examples of regulated applications include farm tractors, excavators, bulldozers, wheel loaders, backhoe loaders, road graders, diesel lawn tractors, logging equipment, portable generators, skid steer loaders, or forklifts.**

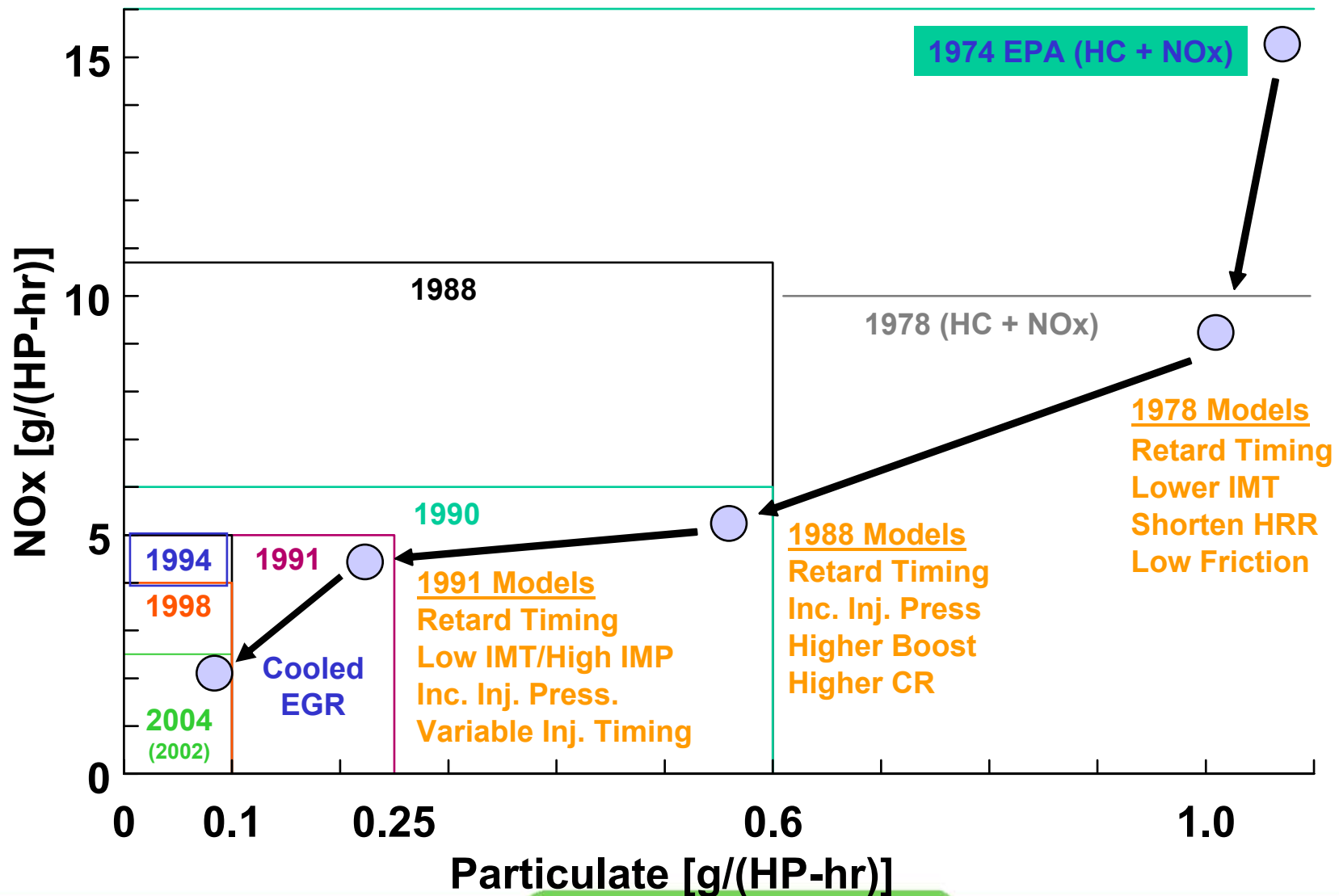
Future Issues: Non-Road Equipment

- **Non-Road regulations**
 - EPA has taken a similar approach with non-road equipment by reducing sulfur in the diesel fuel and exhaust emission standards as a single system, finalized June 2004.
 - Fuel regulations starting in July 2007 (500 ppm)
 - phase in period to June 2010 (15 ppm)
 - Exhaust emissions regulations begin MY2008 (Tier 4)
 - Impact on DoD is similar to heavy-duty on-road vehicle regulations
 - **STRATEGY: Obtain a NSE from fuel as well as exhaust emissions regulations/standards**

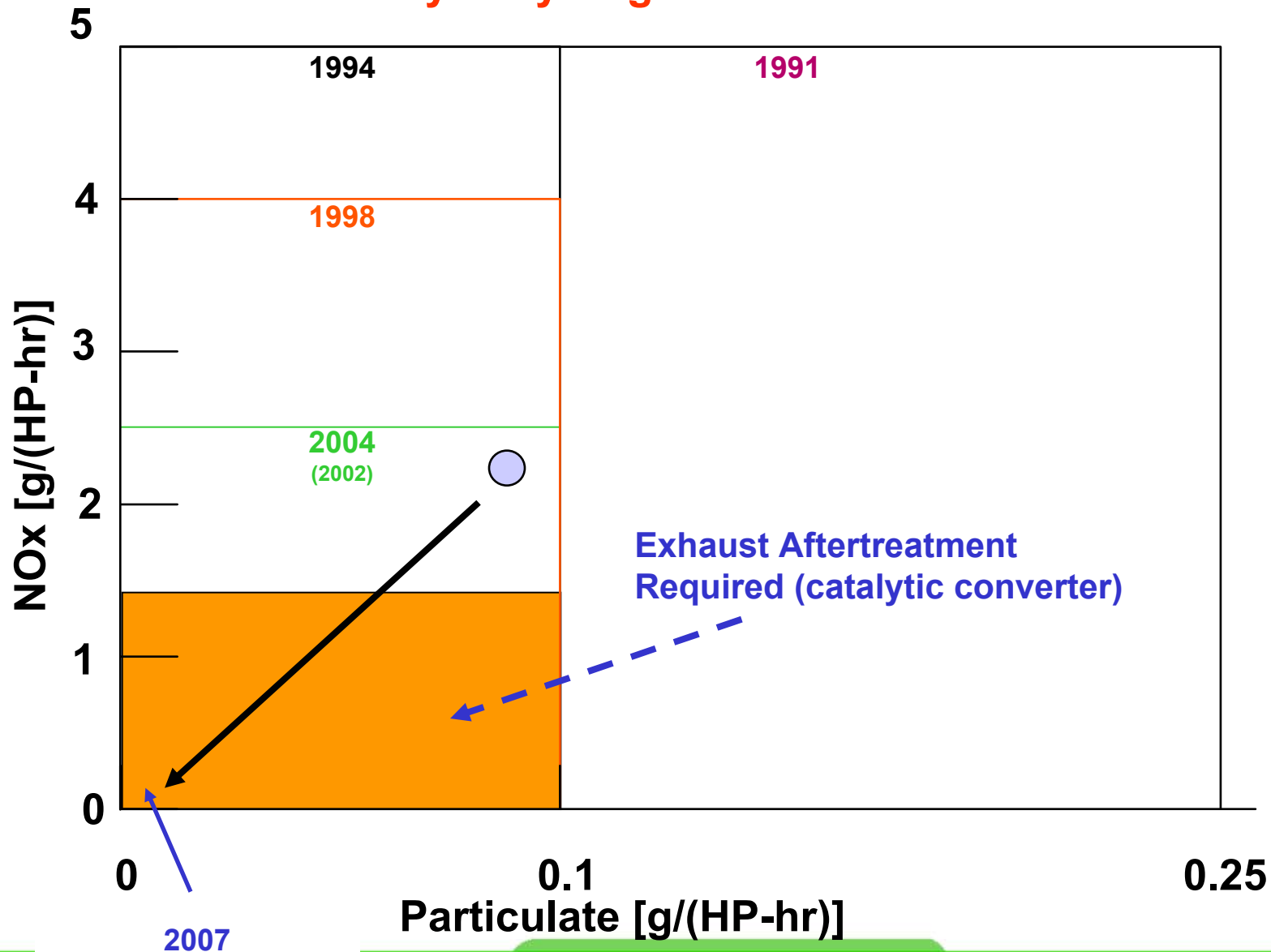


Emission Control Technology Discussion

Evolution of Heavy-Duty Engine Emission Control – 2002/2004



Evolution of Heavy-Duty Engine Emission Control – 2007



Approved standards

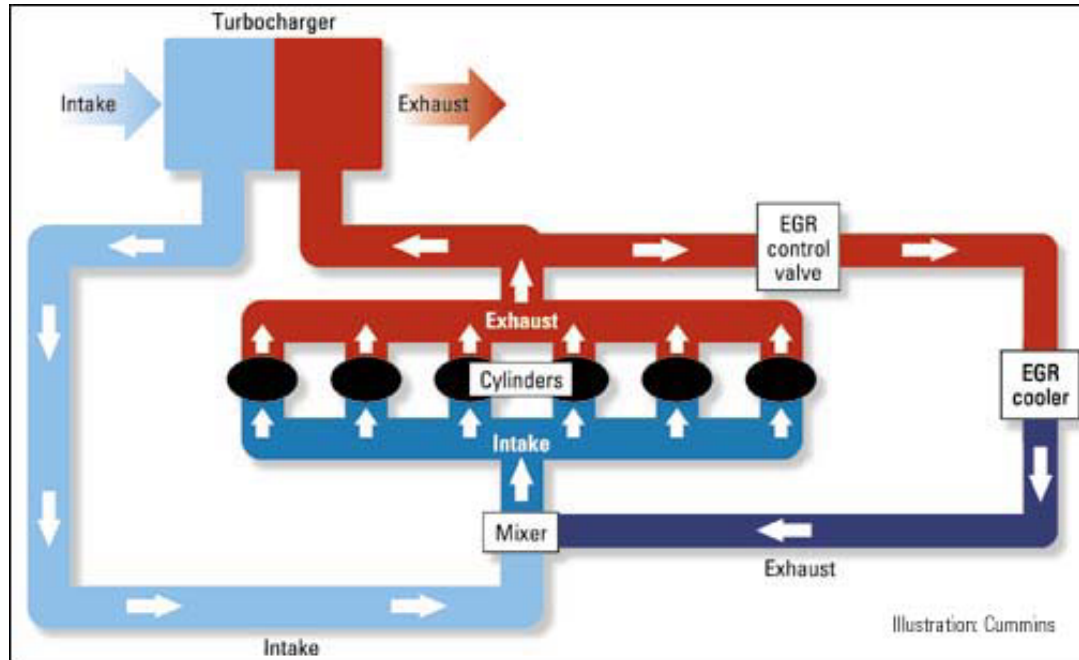
Impact of 2002/2004 Standards on Commercial Heavy-Duty Diesel Engines

- Cooled Exhaust Gas Recirculation (EGR)
- ACERT™ – Advanced Combustion and Emissions Reduction Technology

Impact of 2007/2010 Emission Standards on Commercial Heavy-Duty Diesel Engines

- Cooled Exhaust Gas Recirculation (EGR) with advanced combustion and closed-loop engine system controls
- ACERT™ – Advanced Combustion and Emissions Reduction Technology plus aftertreatment (catalytic converter) and closed-loop engine system controls along with low pressure EGR loop
- New combustion regimes that may require specified fuel properties

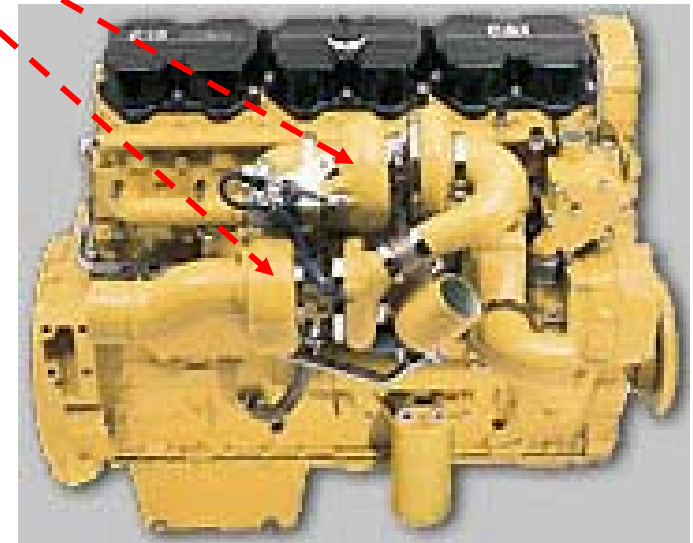
What is cooled EGR?



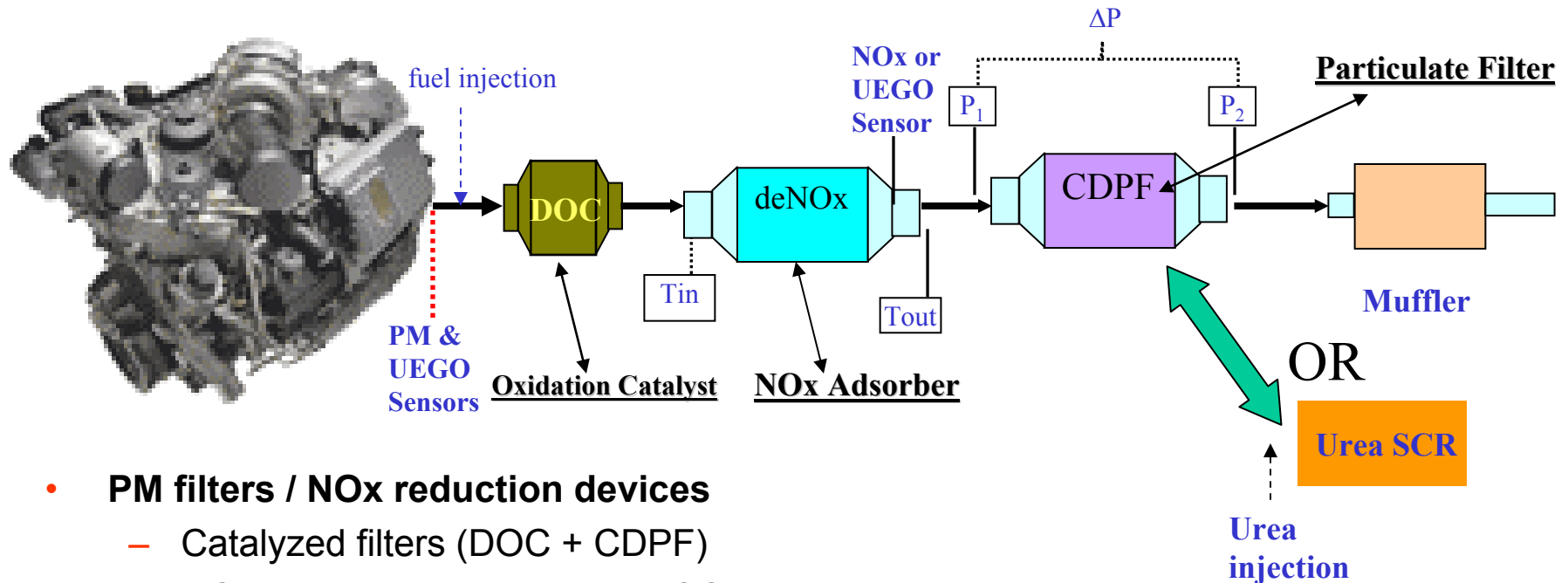
- Reduce nitrous oxides (NO_x) through 'cooler' combustion temperatures
- Recirculate and cool exhaust gas downstream of turbine (turbocharger) ; require back pressure restriction to flow exhaust gas to intake system (**fuel economy penalty**)
- **Cool exhaust gas 400 – 800 F** before dumping into intake system; **additional engine system cooling requirement (~30% for heavy-duty engines and ~10% for light duty engines)**; **non-ram air scenarios will have additional fuel economy penalty**
- Temperature control of EGR crucial in order to avoid formation of **sulfuric acid that expedites engine wear and reduces durability of EGR cooler**
- This concept introduces particulates into cylinder ; **requires more frequent oil change w/o certification of proper lubricant**

What is ACERT™?

- Caterpillar trademark non-EGR solution
- Limited variable intake valve timing ; **extra valve train sophistication**
 - ‘cooler’ combustion temperatures
- **Two stages of turbocharging (single stage for smaller displacement engines)**
- **Additional charge air cooling necessary** ; increase in required engine system heat rejection – **not as significant impact as cooled EGR**
- **Passive oxidation catalyst** (catalytic converter)
- **Fuel economy penalty** comparable to EGR engines



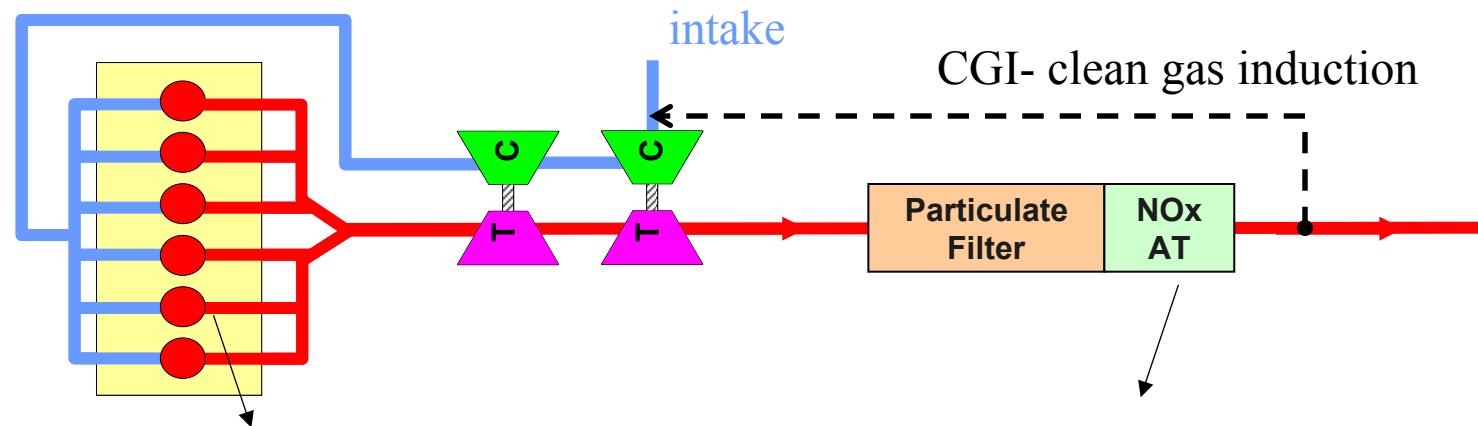
2007 (2010) Emission Issues : Aftertreatment Devices (example)



- **PM filters / NOx reduction devices**
 - Catalyzed filters (DOC + CDPF)
 - NOx trap (adsorber) vs. Urea SCR (selective catalytic reductant)
 - Additional space claim , **conservatively 5 x engine displacement**
- **NOx trap requires 15 ppm fuel sulfur level**
- Likely to include high levels of EGR in additional to NOx aftertreatment device
 - higher heat rejection (~ 50% increase vs. MY1998)
- Push toward new oil formulation to extend CDPF lifetime
- Urea SCR requires on-vehicle, urea storage tank

2007 (2010) Emission Issues : Aftertreatment Devices (example)

Potential ACERT Solution



Engine NOx Technology

Advanced
Diesel
Combustion

Aftertreatment NOx Technology Options

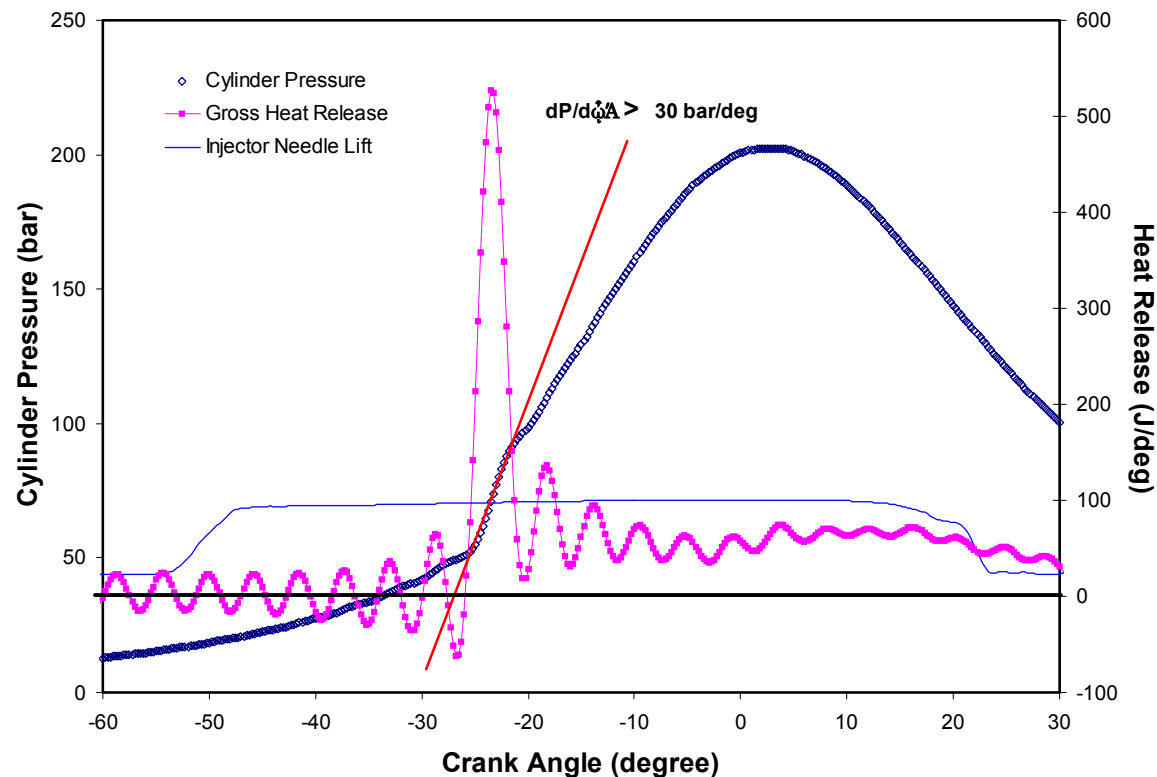
DeNOx
Catalyst

NOx
Adsorber

Urea
SCR

New Combustion Regimes

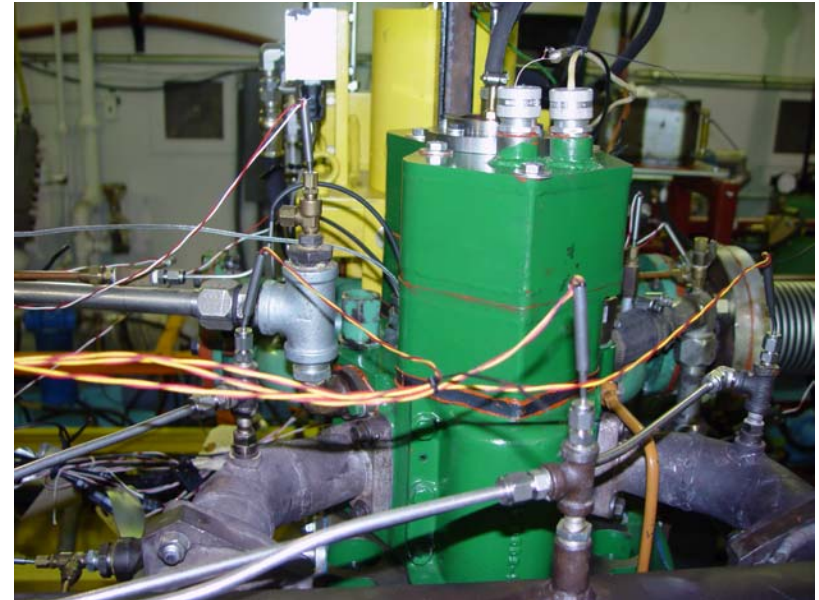
- High Pressure Rise Strategies: HCCI, PCCI, etc.
 - fuel ignition quality and evaporation characteristics important
 - JP-8 'loose' property specifications, i.e. CN dependent on supply source



Fuels and Lubricants Discussion

JP-8 Property Specifications

- **Sulfur content:** max. 3000 ppm
- Aromatics: max. 25%
- Specific gravity: 0.775 – 0.84
- Evaporation Characteristics:
 - 10% recovery: max. 205 C (186 C)
 - End point: max. 300 C (330 C)
- Net Heating Value: min. 42.8 MJ/kg
- **Cetane Index:** none



JP-8 Fuel Sulfur Content

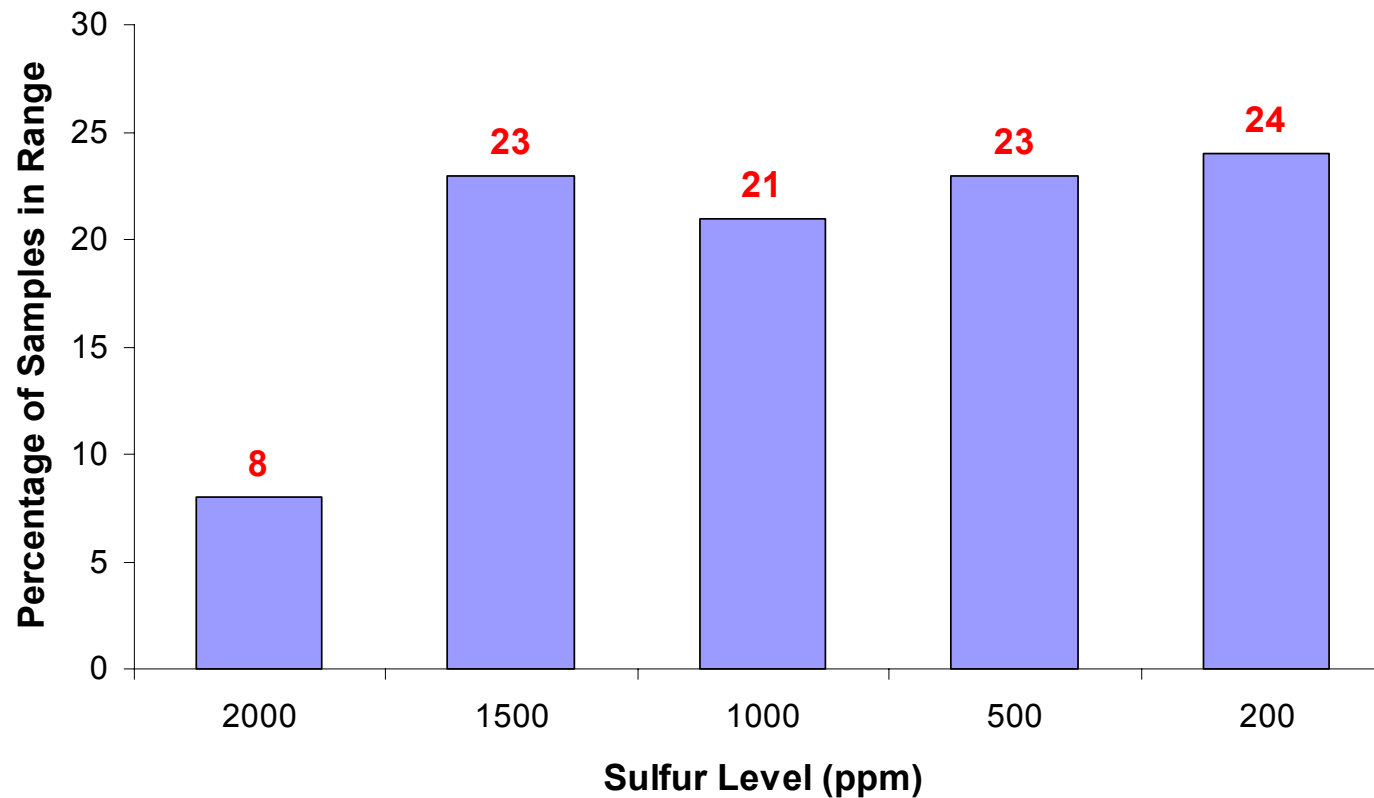
Example: Fuel Supply in Iraq

- **2002 Petroleum Quality Information System (PQIS) report**
 - 44 million gallons procurement sample
 - **971 ppm mean sulfur (70 to 1500 ppm range)** based on < 50 samples
- **2004 PQIS Report and early 2005 samples**
 - 878 ppm mean sulfur
 - note: 52% of samples > 1000 ppm and 24% samples < 200 ppm)
- **Reference – MIL-DT-83133 JP-8 allows up to 3,000 ppm sulfur.**


JP-8 Fuel Sulfur Content

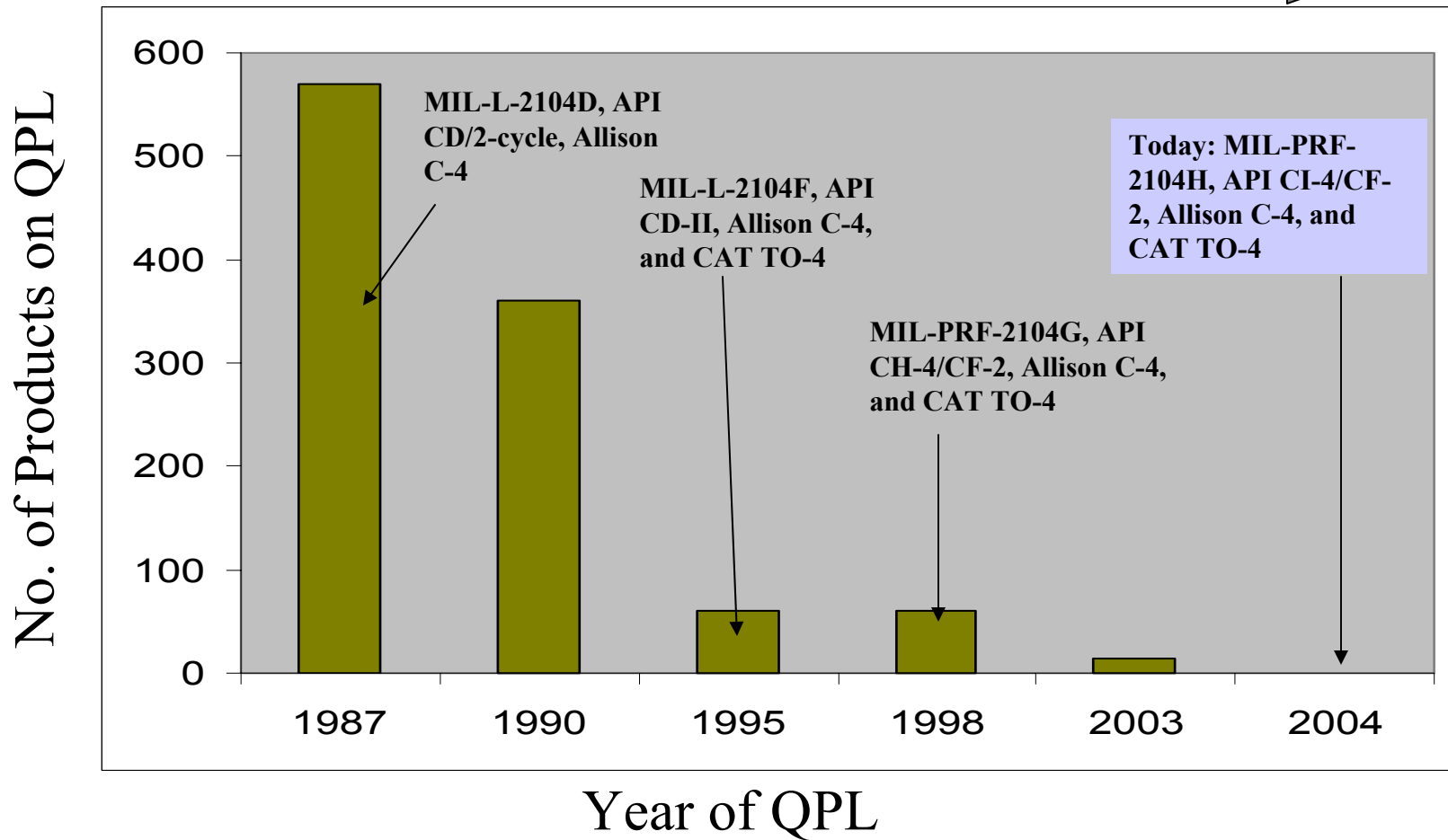
Example: Fuel Supply in Iraq

JP-8 Sulfur Concentration Samples from Iraq (2004)



Impact of Emission Standards on Military Heavy-Duty Diesel Engine/Transmission Oils (E/TO)

Increasing performance and test costs 



Why is this happening? Several reasons:

- Reduction directly related to oil change interval issue associated with emission standards
- **Engine test costs have increased dramatically with each new API performance category (i.e. API CG-4, CH-4, CI-4....CJ-4)**
 - From 1998 cost of 200K per oil to 2004 cost of 400K per oil
- Combined engine and transmission performance are critical for reducing military logistics but more expensive - transmission test costs addition \$20K
 - ex. 2003 sample: M1, M2, and M915 (Allison Transmissions)
- Designing a dual engine-transmission lubricant is technically challenging and required formulators incur additional R&D expense
- **Lubricant formulators do not receive enough return on investment to justify the high test and R&D costs required to develop and produce military products**
 - **Military does not contribute to testing cost**

Impact of Emission Standards on Military Heavy-Duty Diesel Engine/Transmission Oils (E/TO) – Performance concerns

- US Market Drivers for lubricants
 - Ultra-low-sulfur fuels (ULSF)
 - Compatibility with pollution prevention devices
- Some additive technologies proven to work well with higher sulfur fuels will not be allowed in the future
 - Additives with phosphorus and ZDDP (zinc dialkyl dithiophosphate)
 - Due to ‘poisoning’ of pollution devices
- Military exposure to high sulfur fuels raises concerns regarding engine protection with lubricant technology developed around ULSF
 - Concerns to Logistic and Maintainability
- Unknown impact of future engine oils on transmission performance
 - No commercial interest.

Solution Pathways – Short Term to 2002/2004 Heavy-Duty On-Road Emission Standards

- EGR Engines
 - Issues: increased heat rejection and system volume, fuel and lubricant compatibility
 - Solution: employ EPA granted waiver, remove EGR system, recalibration of engine to meet military performance demands
- Non-EGR Engines
 - Issue: JP-8 compatibility
 - Solution: ensure JP-8 compatibility with engine system and compliance with military performance demands

Solution Pathways – Long Term to 2007/2010 Heavy-Duty On-Road Emission Standards

- All engine systems heading toward some type of aftertreatment system with advanced combustion and closed loop control
 - NOx trap, catalyzed filters (CDPF/DOC), urea or fuel based SCR
 - HCCI, PCCI, and other more 'homogeneous combustion modes'
 - LTC : low temperature combustion for light loads, possible regeneration strategy
 - Heavy use of cooled EGR (~50% heat rejection increase vs. MY 1998)
 - possible low pressure cooled EGR in some cases
 - Exhaust sensors for temperature(s), pressure(s), NOx concentration, O₂ concentration
 - Closed loop control package for monitoring and regenerating aftertreatment devices
 - Commercial diesel fuel properties may require tighter combustion related property specifications for advanced combustion system operating modes



Solution Pathways – Long Term to 2007/2010 Heavy-Duty On-Road Emission Standards

- Engine systems **must be modified** to meet military requirements
 - Use of blanket waiver for MY 2007+ engine systems
 - Removal of EGR system
 - Removal of aftertreatment devices
 - Recalibration
 - Ensure high sulfur fuel tolerant and oil compatible components



THANKS!



**PETE'S NEW ENVIRONMENTALLY
FRIENDLY FAMILY VEHICLE**



2005 TACOM APBI

CHUCK SCHWINGLER
U.S. DEPARTMENT OF STATE
DIRECTORATE OF DEFENSE
TRADE CONTROLS



REGISTRATION



- WHAT IS REGISTRATION?
 - A means to provide the U.S. Government with information on who is involved in manufacturing, exporting and /or brokering certain commodities.
 - A prerequisite for obtaining export licenses and other approvals from the State Department.



Who Must Register?



- Any company or individual who -
- Manufactures defense articles
- Exports defense articles
- Furnishes defense services
- Engages in brokering activities
- Authority –ITAR 122.1 and 129.3



How Do You Register



- Statement of Registration
- Form DS 2032
- Must be signed by a senior official
- Transmittal Letter

Must be signed by the same senior official

Letter is different from the transmittal letter submitted with export licenses. Must be completed in its entirety.



Exemptions



Applicant Assumes Responsibility for Correct Use and Risk of Violation – You Become A Licensing Officer

Ensure Responsible Officials Have Thorough Knowledge of Exemption/Conditions/Requirements: Beware Extrapolations!

Exemptions vs Exceptions: Only ITAR Provides Exemptions

Monitor Use and Ensure Compliance



Destination Control Statement ITAR 123.9(b)



- Refer to ITAR 123.22 “Filing of Export Licenses and SED’s with Customs”
- On SED, Cite specific exemption language “22 CFR 123



Canadian Exemption

22 CFR 126.5



- For end use in Canada by a Canadian Registered Person
(Organized under the laws of Canada IAW Defense Procurement Act)
- Canadian Federal or Provincial Governments
- Permanent or Temporary Import or Export
- Except for 22 CFR 126.5 (b)(1) thru (b)(20)



Canadian Exemption 126.5



- **Recordkeeping Requirements extremely important-
-5 years**
 - Description of the technical data,
 - Name of recipient end-user,
 - Date and time of export
 - Method of transmission.
- **Defense articles and technical data must remain in
Canada**
- **Be careful of business meetings!**



Summary



- **Fun part of the ITAR**
- **Do Not Need Prior Approval-No Waiting period**
- **Not For Prohibited Parties**
- **Follow Record Keeping Requirements**



Ground Systems Industrial Enterprise

Business Opportunities



Frederick L. Smith
Ground Systems Industrial Enterprise

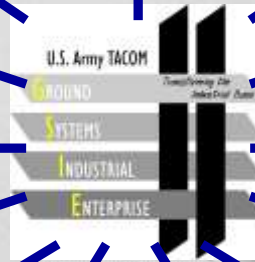
Transforming the Industrial Base

Tank-automotive & Armaments COMmand

Enterprise Integration



Industry



Transforming the Industrial Base

Full Spectrum Capabilities

**Engineering
&
Prototyping**



Manufacturing



**Field
Services**



**Maintenance
& Overhaul**



Transforming the Industrial Base

Enterprise 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

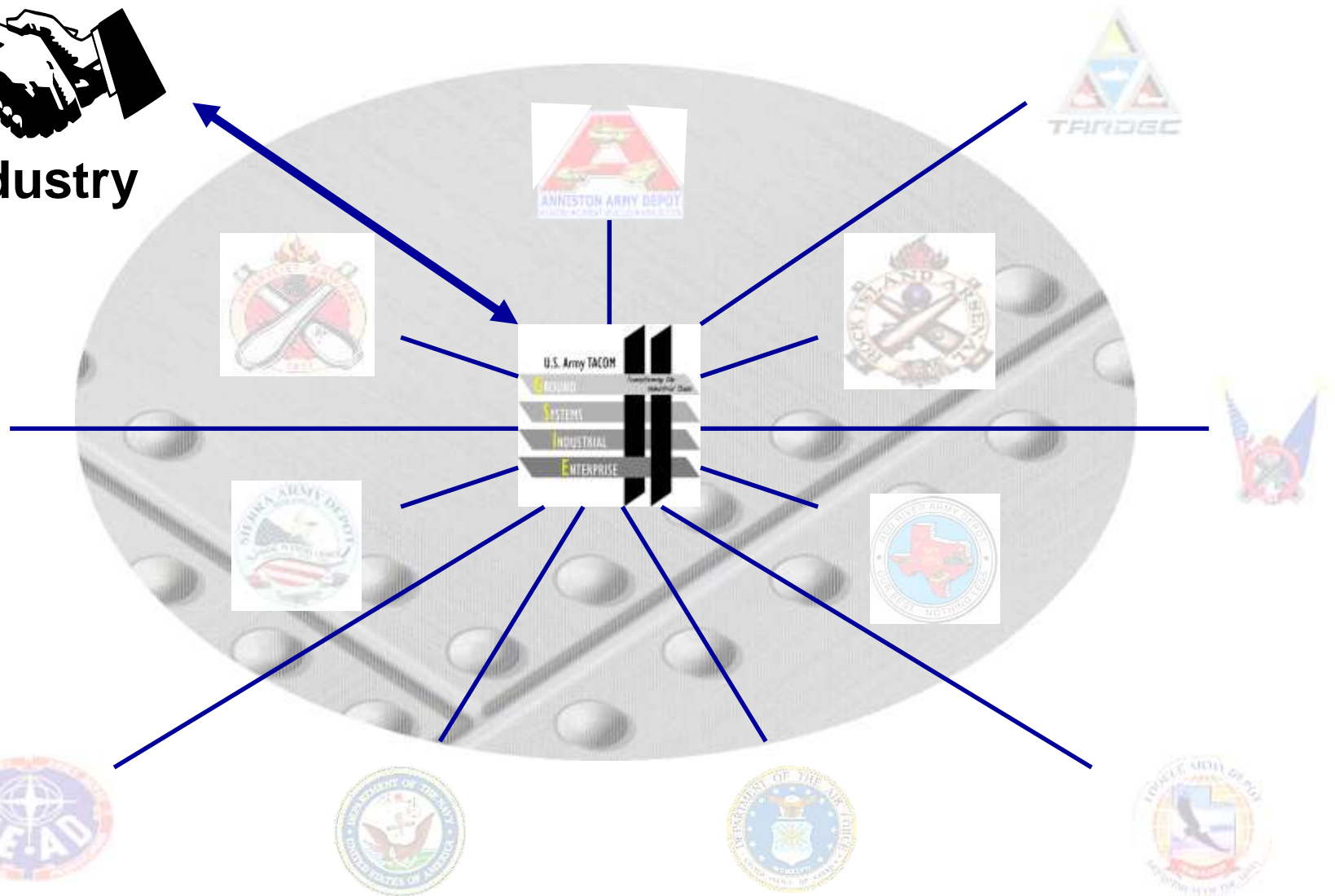
Enterprise Resources

- 8,800 employees
 - 350 engineers
 - 350 welders
 - 500 machinists
- 32 million square feet of floor space
- 4,300 pieces of industrial plant equipment
- 500 computer numeric controlled machine tools
- 36,000 acres of high desert storage
- 7,100 foot runway



Enterprise Integration

- Serves as single point of entry for Enterprise
- Will match capabilities to allow a requirements single contract mechanism
- Coordinate and manage production at multiple sites
- Serves as single point of contact for installation production issues
- Can deploy industrial skills at a moment's notice
- Maximizes flexibility for changing requirements
- Capitalizes on existing Public-Private Partnerships arrangements

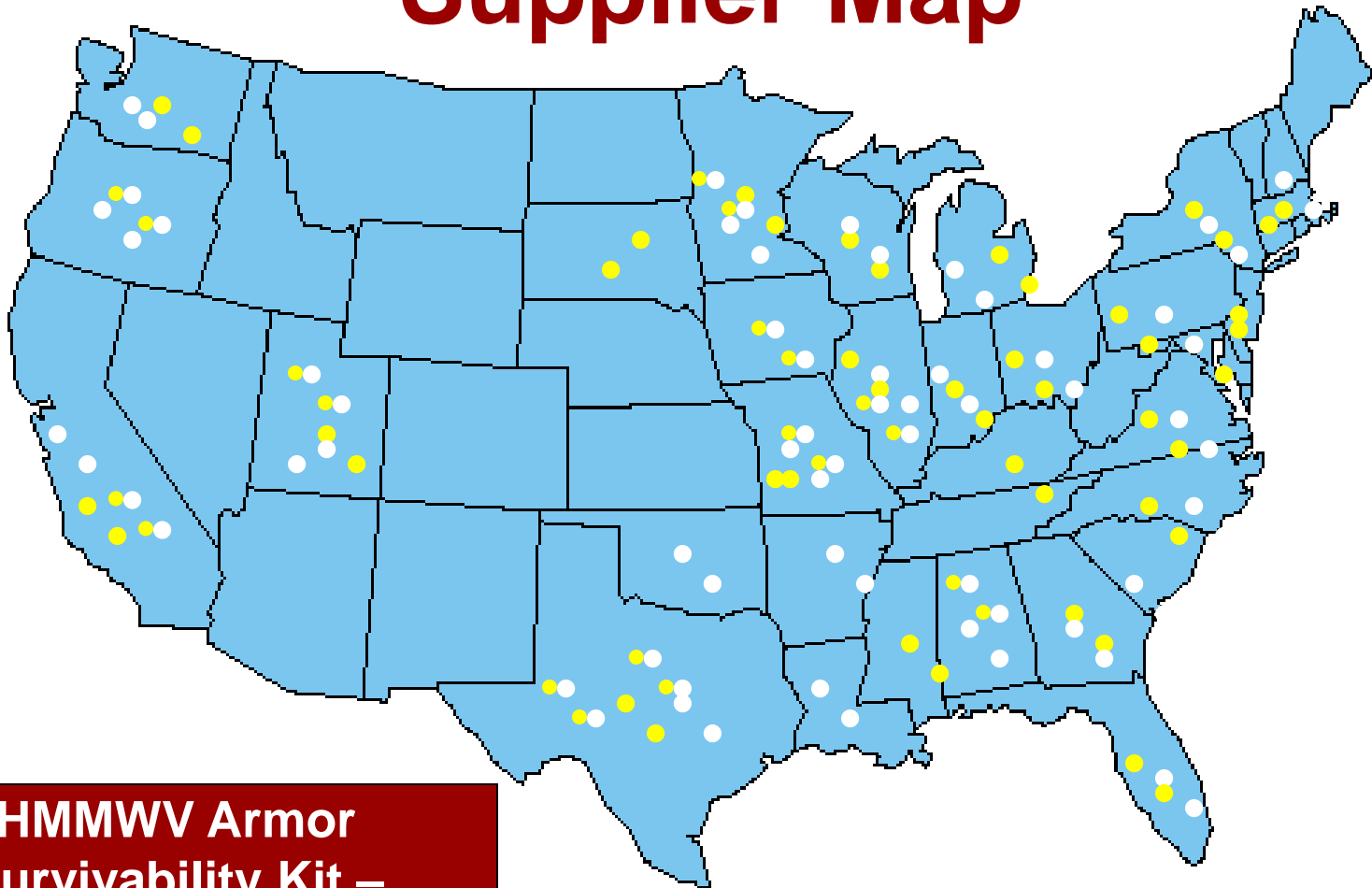


7 of 15

Enterprise Opportunities for Industry

- **Armor programs**
 - HMMWV AoA
 - M939/M969
- **Outsourced capabilities**
 - Laser cutting
 - Welding
 - Painting
- **Outsourced parts**
 - Standard hardware
 - Standard shop supplies (CARC paint, welding wire)
- **Centrally procured**
 - Armor steel/standard steel
 - Ballistic glass

Supplier Map



**HMMWV Armor
Survivability Kit –
19 DoD installations
105 Suppliers in 25 states
3 countries**

**M939 Add on Armor -
158 Suppliers in 26 States**

What the Enterprise Can Offer Industry

- Unique capabilities for your business
- Surge capabilities
- Capitalization cost avoidance
- Deployable resources
 - Skilled personnel
 - Equipment
- Business reforms
- Responsive and proven contract mechanisms
- Arsenal Support Program Initiative (ASPI)

Legislative and Financial Reforms

- **Authorization Bill 10 U.S.C. §4544**
 - Consolidates/clarifies public-private partnership authority at arsenals/depots
 - Lacked a deposit of proceeds provision to reimburse working capital fund – fix pending
- **DOD FMR change allows sites to**
 - Enter into fixed price agreements
 - Enter into multi-year agreements
 - Price work using less than fully burdened rate under certain conditions
 - Accept private funding incrementally

Enterprise Partnerships and Contract Mechanisms

- **Partnership Types**
 - Direct Sales
 - Facility use
 - Subcontracting
 - Teaming
 - Workshare
 - Arsenal Support Program Initiative (ASPI)
- **Partnership processes at the Enterprise level**
 - Direct sales agreements
 - Basic ordering agreement

Arsenal Support Program Initiative (ASPI)

- **What is ASPI?**

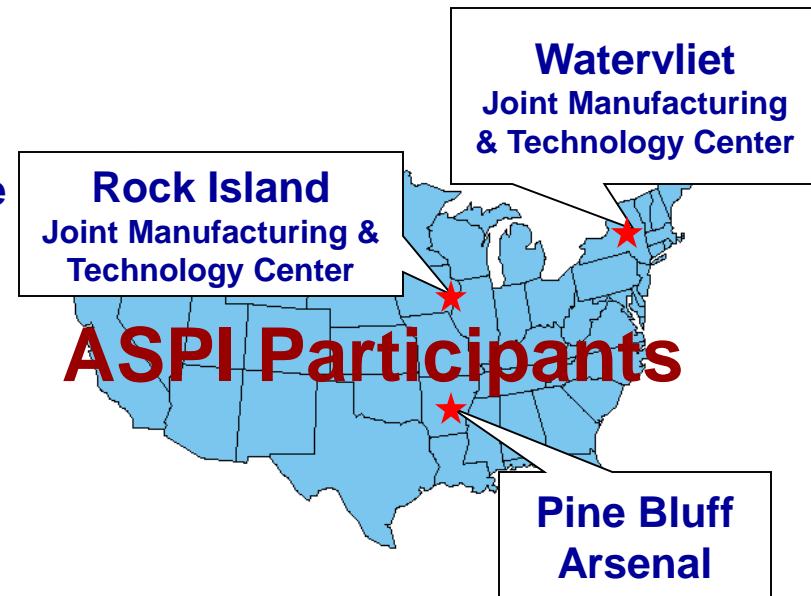
- Congressionally mandated program to encourage commercial use of excess facilities at US Army Arsenals

- **Why should you be interested?**

- Available industrial, warehouse and administrative facilities
- Monies available to prepare for occupancy
 - Upgrade facilities – “build-to-suit”
 - Remove existing equipment
 - Install computer and phone lines
- Competitive lease rates
- State and local matching grants available

- **Are there other benefits?**

- Building and grounds maintained
- Private police and fire protection
- Access to MWR facilities
- Security



Enterprise Partnerships



United Defense



- 97 current partnering agreements
- Over \$100M in value
- Industry benefits
 - Reduces capital expenditure
 - Provides available surge capability
- Army benefits
 - Maintains critical skills
 - Utilizes facility capacity
- Win/win

**Realizing a unified
Government/Industry
base today!**



Raytheon



Ground Systems Industrial Enterprise



On Point for America

Points of Contract:

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Frederick L. Smith 309-782-3560 frederick.l.smith@us.army.mil

Transforming the Industrial Base

2005 TACOM APBI

Partnering to Reset, Recapitalize, and Restructure the Force



General Session Presentations

2005

Keynote Address

2005 TACOM APBI

2020



LTG Joseph L. Yakovac, Jr.
Military Deputy to the Assistant Secretary of the Army
(Acquisition, Logistics and Technology)
27 October 2005



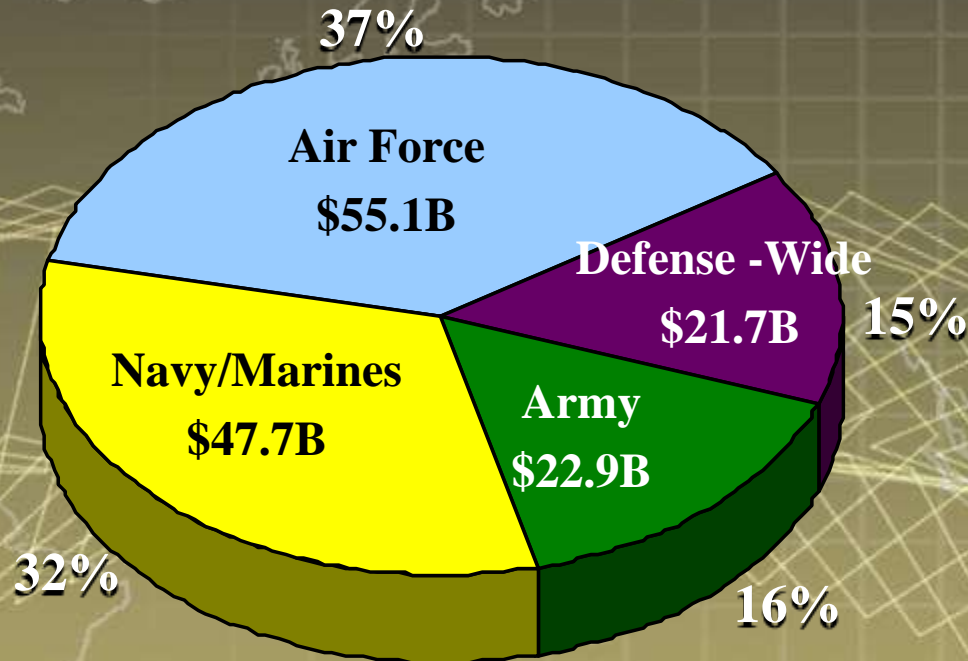
Challenges

A world map is visible in the background, rendered in a light yellow/green color. Overlaid on the map is a complex network of thin, yellow lines that connect various points across the globe, suggesting a global network or communication system. The map and network lines are set against a dark, textured background with a grid pattern.

- **Programs**
- **People**
- **Industrial Base**

Department of Defense Research, Development and Acquisition (RDA) Dollars*

FY06: \$147.4B*



***Budget Request Pending Congressional Approval**

FY06 Top Twenty DoD Research, Development and Acquisition (RDA) Programs*

(\$M)

1. BMDS	7,775	11. DD(X)	1,085
2. Joint Strike Fighter	5,822	12. P-8 MMA	964
3. F/A-22	4,304	13. Stryker	916
4. FCS	3,405	14. MEADS	887
5. C-17	3,402	15. CVN-21	873
6. F/A-18E/F Hornet	2,880	16. TSAT	836
7. SSN 774	2,845	17. EA-18G	750
8. V-22A/CV-22 Osprey	1,883	18. MH-60R	704
9. Chem/Bio Defense	1,549	19. CH-47 Upgrade	660
10. EELV	1,499	20. Longbow Apache Block III	637

*RDA funding only

Recapitalization Process

Two Paths:

Rebuild

Selected Upgrade

M1A1 AIM XXI*
UH-60A
CH-47D
M9 ACE
M88A1
PATRIOT
FIREFINDER
ELEC SHOPS
FAASV
HMMWV

Zero Time/Zero Mile
Maintenance Standard

Zero Time/Zero Mile
Maintenance Standard

Technology

Body Insertion

\$26.1B / 5 yrs

**Same Model-
New Life**

**New Model-
New Life**







M1A2 SEP*
AH-64D
UH-60M
CH-47F
HERCULES *
BRADLEY A3*
M113 A3
HEMTT

One Outcome:

- Extended Service Life
- Reduced Operating and Support (O&S) Cost
- Improved System Reliability, Safety, Maintainability, and Efficiency
- Enhanced Capability

* Currently in production

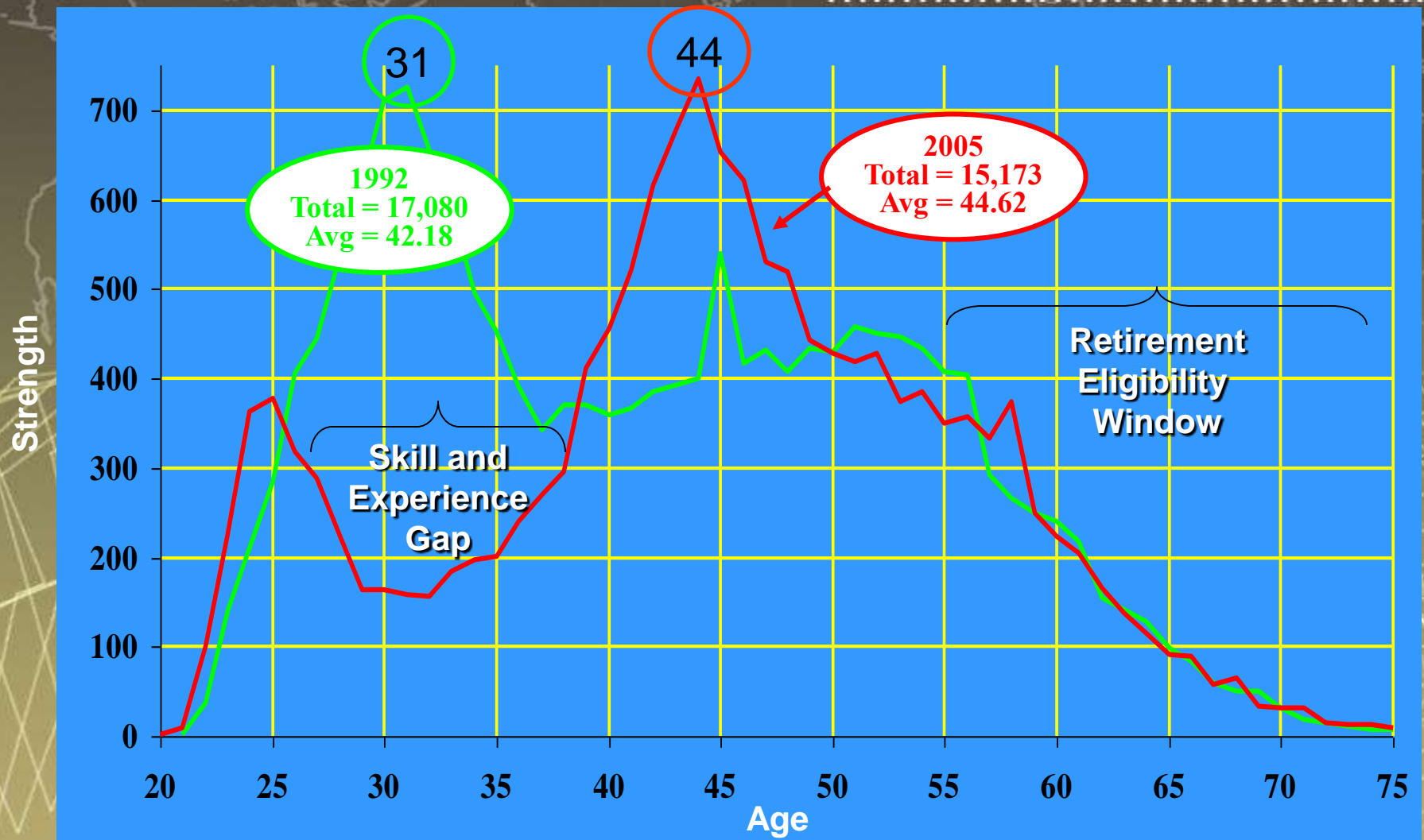
“Need It Now” Is Working Because:

- :01**  **Supplementals, Supplementals, Supplementals, ...!**
- :02**  **Operational Needs Statements Vice The JCIDS Process.**
- :03**  **Access To Infrastructure Within The Theater.**
- :04**  **Time (Not Always Adequate) To Integrate Solutions, Minimally Test, And Train To Use Prior To Deployment.**
- :05**  **Acceptance Of Contractor Support Throughout The Theater.**
- :06**  **Supply Chain Able To Support New / Low Density Capabilities.**

When :01  Goes Away – Then What?

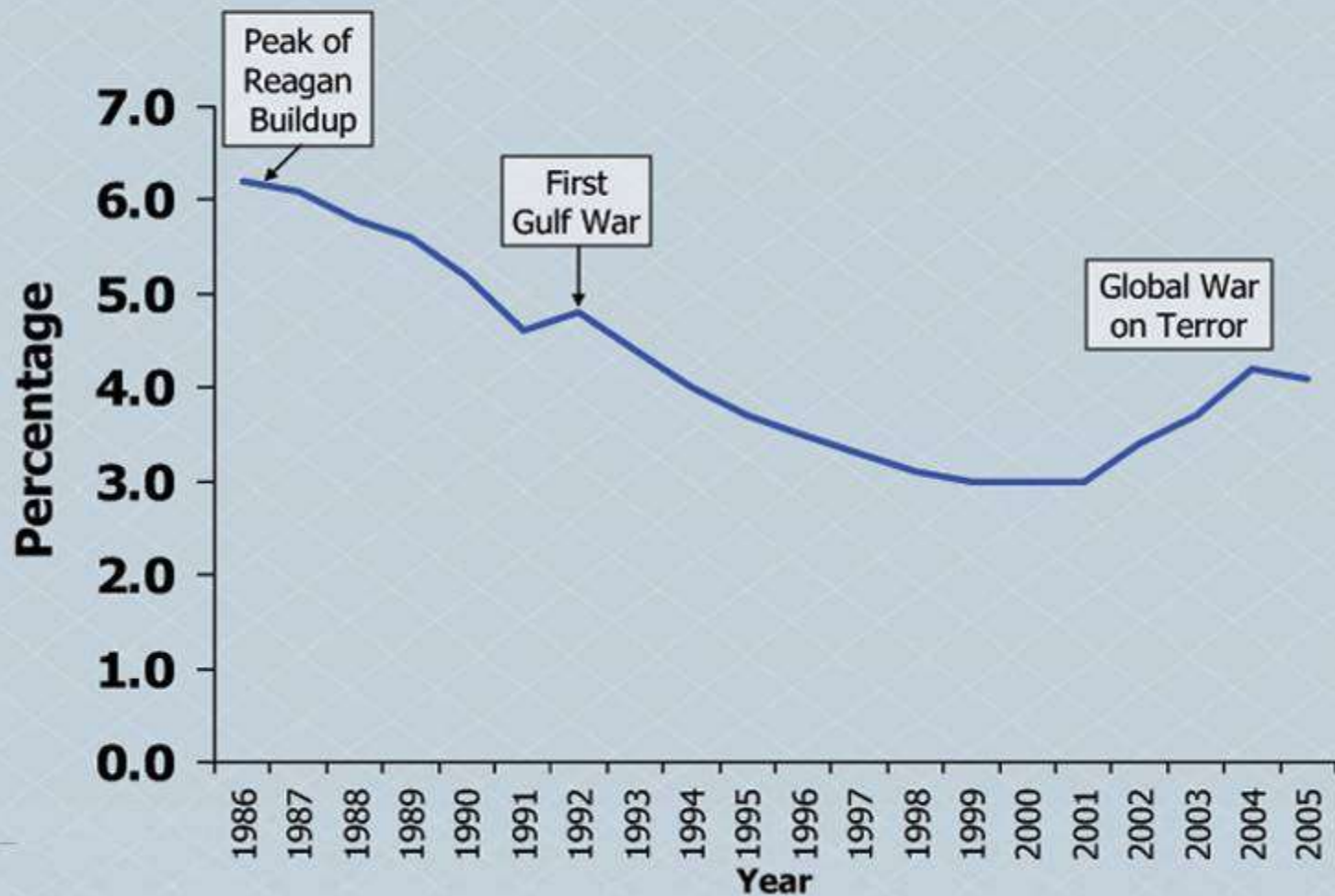
Future Army Career Program-16*

Workforce - 2005



*Engineers and Scientists

National Defense as a Percent of GDP



Source: DOD

EQUIPPING

THE WARFIGHTER

AROUND THE WORLD

