Tactical Wheeled Vehicles Conference, Monterey, CA.

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INDUSTRIAL COMMITTEE OF TANK & AUTOMOTIVE PRODUCERS (ICTAP)

Dave Longley, Recorder
United Defense

ICTAP CHARTER

- **PURPOSE: Forum for principal managers at TACOM and Senior Executives from industry to meet and review issues of common interest and concerns**
- **OBJECTIVES:**
  - **Forum for discussion and exchange of views**
  - **Feedback from senior industry representatives**
  - **Discuss DoD, Army and TACOM Policies**
  - **Discuss emerging issues in Government and Industry which affect readiness of tank/automotive systems**

ICTAP MEMBERSHIP

GOVERNMENT

- CG TACOM
- PEO GCSS
- Director, TARDEC
- Director, IMMC
- Director, Acquisition Center
- Deputy for Acquisitions
- Ex. Direction Operations, TARDEC
- Director Defense Supply Center, Columbus

NDIA

- Vice President

*Permanent Member

(Membership 2 Years-1/2 Rotate Yearly)

INDUSTRY

- Oshkosh*
- AM General*
- Steward & Stevenson SVC*
- GM Canada
- Caterpillar
- Allison Transmission
- United Defense*
- General Dynamics Land Sys*
- Premier Prof. Systems
- Motor Products Intl.
- Lear Siegler SVC
- Barnes & Reinecke
- LAU Defense Systems

ICTAP CHARTER (Continued)

- VP Operations NDIA, in coordination with CG TACOM, Appoint a Chairman
  - 1st Chairman: Tom Rabaut, President and CEO, United Defense
  - Current Chairman, James Armour, President and CEO, AM General Corp.
  - Serves 2 Years
- ICTAP meets 2-3 times per year
  - 4 meetings to-date

ICTAP

- **Four meetings since chartered in March '97**
  - **NDIA hosted inaugural meeting**
  - **Industry hosted second meeting**
  - **TACOM hosted third meeting**
  - **Industry hosted fourth meeting**
- **Topics for discussion are generated by Government/Industry/NDIA Members**

ICTAP

- **First Meeting**
  - **June 1997**
  - **Hosted by NDIA**
  - **General Exchange of Information**
- **Agenda**
  - **TACOM: Goals/Objectives**
  - **TARDEC: Status of Programs**
  - **Industry: Company Organizations**
  - **Charter Discussion**

ICTAP

- **Second Meeting: November 1997**
  - **Host: United Defense, Anniston, AL**
- **Agenda:**
  - **MG Beauchamp: State of TACOM**
  - **MG Michitsch: Industry Study-AAN**
  - **Mr. Weinberg, Caterpillar: Best Value**
  - **Mr. Mehney, TACOM: Acquisition Reform**
  - **Tour/Briefing: Anniston Army Depot**
  - **Tour UDLP M113 Facility - Partnering**

ICTAP

- **Third Meeting: May 1997**
  - **Host: TACOM, MG Beauchamp**
- **Agenda**
  - **MG(R) Greenberg: NDIA Overview**
  - **Col. Doughtery: DLA/DSCC Overview**
  - **Mr. Holly:**
    - **» TACOM Focused Sustainment Concept**

ICTAP

- **Third Meeting (Continued)**
  - **Mr. Young: TACOM Industrial Base Management**
  - **Mr. Siegel: PM Abrams, Obsolescence Integrated Circuits**
  - **Mr. O'Bryon: OSD/DOT&E, Live Fire Testing Status**

ICTAP

- **Fourth Meeting: December 1998**
  - **Host: Pulse Tech**
- **Agenda**
  - **MG Beauchamp: TACOM Reorganization**
  - **Al Puzzouli: Deputy PEO, GCSS**
    - **Creation of PEOs**
    - **Who, Where, What is PEO, GCSS**
    - **Managing Systems Life Cycle Costs**
    - **How PEO, GCSS Manages**

ICTAP

- **Agenda (Continued)**
  - **LTC Cooper: PM Abrams**
    - **Challenges Now Through 2030**
    - **O&S Cost Initiatives**
      - **Engine Modernization**
      - **Contractor Logistic Support (CLS)**
      - **Abrams Integrated Management (AIM)**
      - **Modernization Through Spares**

ICTAP

- **Agenda (Continued)**
  - **Mr. Art Adlam: TACOM**
    - **Simulation Based Acquisition, Government Perspective**
    - **SBA ⟶ SMART**
    - **SBA At TACOM**
      - **Virtual Mock-Up**
      - **Man-In-The-Loop Motion Base Simulation**
      - **Virtual Factory**

ICTAP

- **Agenda (Continued)**
  - **Simulation Based Acquisition - Industry Perspective**
    - **What is it?**
    - **UDLP Initiatives**
      - **Culture**
        - **» IPPTs**
      - **Process**
        - **» Simulation Based Design**
        - **» Simulation - Emulation - Stimulation**
        - **» Integrated Product CAD/CAM**

ICTAP

- **Agenda (Continued)**
  - **Environment**
    - » **Common Operating Environment**
    - » **Virtual Enterprise Environment**
    - » **System Integration Environment**

ICTAP

- **Next Meeting: 19 April, Atlanta, GA**
  - **Host: NDIA**
- **Agenda (tentative)**
  - **Focus Sustainment Update: TACOM**
  - **Reorganization of Foreign Military Sales**
  - **TACOM Reorganization - Deputy for Corporate Management**

ICTAP

- **Publishing an article on Simulation Based Acquisition: *"A New Way To Help The Soldier"***
  - **National Defense Magazine (Jan/Feb)**
  - **Other Defense/R&D/Academic Journals**
- **ICTAP Minutes and Briefings on TACOM Web Page**

REMARKS AS PREPARED FOR DELIVERY BY

The Honorable Paul J. Hoeper
Assistant Secretary of the Army (RD&A)
Keynote Address
1999 Tactical Wheeled Vehicles Conference
"How Healthy is Our Fleet?"
Monterey, California
February 1, 1999

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Earlier this month, I went on a staff ride to Manassas with some of the senior military leaders in Army Acquisition and some of the senior folks from the Industry side. On a Staff Ride, we go out to a battlefield with an Army Historian, walk the terrain and learn about the factors that defined the outcome of the battle. Yesterday, as I flew out here, I fell to musing about the role of tactical wheeled vehicles at the First Battle of Bull Run.

At that time, our tactical wheeled vehicles were mule-drawn wagons. A six-mule wagon could haul a maximum of 4000 pounds on good roads in the best of conditions. In practice, the load seldom exceeded 2000 pounds and half of that was feed for them Army's mules and horses. A wagon could travel between 12 and 24 miles per day. You can see how the tactical wheeled vehicles of the day limited the reach and effectiveness of the armies.

At the beginning of the Civil War, around the time of the First Battle of Bull Run, the standard for the Union Army was 28 wagons per thousand men. By 1864, the growing recognition of the value these vehicles created caused the Union to increase this ratio to 36 wagons per thousand men. On the "march to the sea", Sherman's army operated

with 40 wagons per thousand soldiers. Much had changed since First Bull Run, but many of the principles of ground warfare remain essentially unchanged. Tactical wheeled vehicles were important then, and they are important now.

The Battle of First Bull Run occurred during a time of revolution in military affairs. Up to that time, it was the largest battle fought on the American continent, with about 18,000 soldiers engaged on each side. The commanders in that battle had never commanded forces on this scale, so the battle tactics stopped at the regimental level. First Bull Run marked our first use of rifled shot and rifled artillery – technological advances that dramatically changed tactics.

We are now in a similar period of revolution in military affairs. The application of information technology to warfare has enormous implications to both strategy and equipment. Our business practices are also changing dramatically. It is not simply, as is sometimes said, that we must achieve a revolution in business affairs to pay for the revolution in military affairs. Yes, we need to find efficiencies, and it is terribly important to do so. We will not be able to buy all that we need if we cannot find those efficiencies. But the operational needs of the Army demand, by

themselves, that we change our ways of doing business. It will not be possible to field the weapon systems essential to the digitized force and the Army After Next without changing the way we develop, acquire, and support them.

We will have the fundamental platforms we are digitizing today for, perhaps, twenty-five to thirty years. During that time, we will add platforms to the system of systems that will be the digitized force of the future, and will be part of the Army After Next. We want the systems we will add in the future to be compatible with the systems we plan to field by 2000. And we want the ability to upgrade the systems we are building today to the performance that we know technology advances will make possible for future systems.

The fact that we are going to have many of our platforms in place for so many years means that we will need to modernize them significantly over time. We may give the wrong impression when we say that seventy percent of the platforms for the Army After Next are fielded now or shortly will be. That is true enough, in terms of the outside appearance. Many of our Tactical Wheeled Vehicles (HMMWV, FMTV, PLS, HETS) in the field today will be part of the Army After Next. They will probably look

much the same as they do today. We do not plan to give them a cosmetic face-lift, but they will get numerous transplants. Our 33-Ton Truck/Trailer, the Palletized Load System (PLS), will still look like today's PLS, but it will have more efficient commercial engines with a digitized cab that incorporates both a Movement Tracking System and a "Sealed Hood" concept. This digitized cab will give our soldiers enhanced mobility, capacity, reliability, and situational awareness.

Digitization, as with the digitized cab in PLS, is the application of information technologies to Army weapon systems so our soldiers and leaders can acquire, exchange, and employ timely information throughout the battlespace. Whether built in a platform or added capability, digitization depends on information and communication technologies. It is the Army's highest research, development and acquisition priority. We have all seen the rapid advances of the past fifteen years, since IBM brought out its first personal computer. The computer chips that these technologies depend on are doubling in power every eighteen months. Our time to field for a fairly large system is about twelve years. How can we keep the systems we will field in the next few years compatible with the systems we will be fielding ten or

twenty years from now? Both will be part of the digitized Army of 2020.

We will have to change the way we do business. We used to design point solutions for specific platforms using military-unique components and architectures. To succeed in the future, we must use open architectures that allow horizontal technology integration across systems of systems. It is not simply that commercial information technologies are cheaper, although they can be. Nor is it always true that commercial solutions are more capable than the point solutions we have incorporated in the past. It will often be possible to design a military-unique solution that is more capable than anything presently available from the commercial market. The problem is that we take an average of twelve years to field a major system, while the power of the computer chips on which the commercial digital technology depends doubles every eighteen months. The most important reason for us to gain access to commercial technology is not to save money; it is to get on the commercial innovation cycle using an open architecture. If we do this, we will gain the ability to modernize our weaponry through the timely insertion of communications and information technology – brain transplants.

The use of open architectures that accept commercial upgrades is not limited to digital technologies. A major goal of the FMTV program was to simplify the overall support system. Specifically, commonality of components was a design criterion. As a result, there is more than eighty- percent commonality between the Light Medium Tactical Vehicle (LMTV) and the Medium Tactical Vehicle (MTV). This translates to a reduction in inventory and material handling requirements, as well as simplified operator and maintenance training. The approach also allows insertion of improved technologies, as we are doing with the current buy.

As we modernize to add capability, we must also bring down operation and support (O&S) costs. One important initiative in this area is Modernization Through Spares. Tires and batteries are major cost drivers for our Tactical Wheeled Vehicles. Let's take our Heavy Expanded Mobility Tactical Truck (HEMTT) fleet – 12,600 strong – each with eight tires. That's more than 100,000 tires. By capitalizing on the modernization through spares initiative, we replaced the old tires with ones that have a higher load rating, improved tread design, and are common with PLS and the Heavy Equipment Transporter System (HETS). The new tire can even be patched.

I want to apply this concept to the rest of the fleet. As we explore all areas to cut O&S costs and, at the same time, reduce the logistics burden, it seems to me that a significant reduction in the different types of tires we use and carry around is important. Some have mentioned a fifty percent reduction. I don't know what the answer is, but we need to take a serious look at this.

I also mentioned that batteries are a major cost driver in our Tactical Wheeled Vehicles. What is being done to address this problem? The PLS program is replacing its current 145 amp alternator with a 200 amp that provides more output during high load events. Also, a master disconnect switch has been added to prevent the constant draw of current placed on the battery by the Electronic Control Units. Together, these improvements are extending battery life in PLS.

How do we come to grips with the fact that we must either invest in the future or else consume ourselves with O&S costs? The Army will continue to recapitalize our vehicles where it makes sense. We are completing a very successful 2-1/2 ton remanufacturing program this year that helped modernize our medium fleet and control increasing O&S costs while the Family

of Medium Tactical Vehicles (FMTV) program was ramping up. We will begin the same type of program for the HEMTT fleet starting in Fiscal Year 2000 in order to maintain readiness and control O&S costs until the Future Heavy Tactical Truck program is in place around the 2010 time frame. The HEMTT remanufacturing program will also provide an opportunity to adjust the mix of HEMTT variants by converting cargo trucks into HEMTTs with a Load Handling System similar to PLS.

O&S costs can make up 70 to 80 percent of a system's total life cycle cost. Reducing total ownership costs for Army systems is a high priority. The acquisition and logistics communities have instituted reform initiatives targeting lower system ownership costs. All of us charged with giving soldiers what they need must work together on this: those involved in combat development, requirements determination, training development, financial management, materiel development, and logistics. Integrated Process Teams or IPTs, with representatives from these functional disciplines, are a program tool for identifying total ownership cost reduction opportunities. Our plan is to find ways to save both acquisition and O&S dollars during system design as well as through deployed system modifications and upgrades. I have already given you an example of deployed system

modifications, so let me try to give you an example in system design.

Considering the earliest stages of development, the Army developed the 21st Century Truck concept with a primary goal to reduce emissions and improve fuel economy in future light, medium, and heavy commercial and military trucks. Last September, I approved the implementation plan for 21st Century Truck. It is consistent with Army After Next goals to reduce the fuel requirements of a deployed force. Technology areas will focus on propulsion, vehicle intelligence, advanced materials, aerodynamics, and alternative fuels. The key to this effort will be to develop a strong, enduring partnership among government, commercial industry, and academia. I am pleased by the support we have received from major commercial truck, powertrain, and component manufacturers.

In the area of modifications and upgrades, we discovered that our High Mobility Multipurpose Wheeled Vehicles (HMMWVs) go through a lot of glow plugs. These are the devices that raise the temperature of the fuel and air mixture in diesel engines when the engine is not hot enough to create combustion. HMMVWs have a protective control box in the ignition that is supposed to

turn on the glow plugs under appropriate conditions. The problem is that soldiers will often turn the ignition on and off repeatedly when they try to start a HMMVW on a cold day. This confused the electronics on our HMMVWs and allowed the glow plugs to reach two thousand degrees Fahrenheit, when they burned out. It is not that the protective control box was badly designed. It was constrained by the technology of the time – our HMMVWs were designed fifteen years ago. Glow plugs are one of the top ten cost drivers in HMMVWs.

To solve this problem, our Tank Automotive and Armaments Command (TACOM) formed a team comprising TACOM's Research, Development and Engineering Center (TARDEC), the Acquisition Center, the HMMWV program manager and the Integrated Material Management Center to analyze the problem. To get the solution into the field, TACOM teamed with Lau Technologies. The result is a new, solid state device based on state-of-the-art commercial technologies. The form factor is exactly the same so replacement is easy.

What did we get? TACOM and Lau have solved our glow plug burnout problem, which used to be one of the top ten cost drivers on HMMVWs. The new protective control box also allows engines to start if several glow plugs are burned out through

normal wear. The bottom line is that we have reduced O&S costs, improved reliability, and given our soldiers an extra margin of safety all at the same time.

I am glad to have this chance to talk to you about how we will provide for the needs of the digitized army and the Army After Next. I have talked about new systems, open architecture, modernization through spares, and recapitalization. All are tactics aimed at our overall strategy of completing digitization and preparing for the Army After Next while dramatically bringing down O&S costs and reducing our logistics footprint. During the next few days, we will have a chance add new ideas. The really good ideas will come from working together. We have big problems to solve. Let's work together and get on with it.

CONGRESSIONAL PERSPECTIVE

1999 TACTICAL WHEELED VEHICLES CONFERENCE
February 1, 1999

Michael Chase
William Daoulas
J. David Willson

FY 1999 CONGRESSIONAL ACTION ON DEFENSE

- Regular Appropriation Bill
- Supplemental Bill
  - $9 Billion
  - "Emergency"
  - Increased FY 1999 Base for FY 2000
  - Less Pressure for FY 1999 Reprogramming/Rescissions
  - Will Not Happen Again This Year

106TH CONGRESS

- Leadership Changes
  - New House Speaker
  - New SASC Chairman/Subcommittee Chairman
  - New HAC Chairman/Subcommittee Chairman
- Staff Changes
- Other Changes
  - Smaller Republican Majority in the House
  - Fewer Veterans
  - New House and Senate Rules

106th CONGRESS LEGISLATIVE AGENDA

- Impact of Impeachment Proceedings
- Issues Intertwined:
  - Social Security
  - Education
  - Tax Cuts
  - Defense Increase
  - Surplus
- New Budget Agreement/Summit?

DEFENSE BUDGET FOR FY 2000

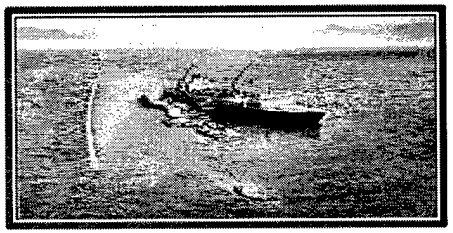
- President's Budget Increase Will Not Be Cut By Congress
- Firewalls Are Down in FY 2000
- Congressional Defense Increases Dependent on Resolution of Other Issues
- Trucks Continue to be Low Priority

FORCE XXI

SPEARHEAD OF LOGISTICS

TRANSPORTATION CORPS



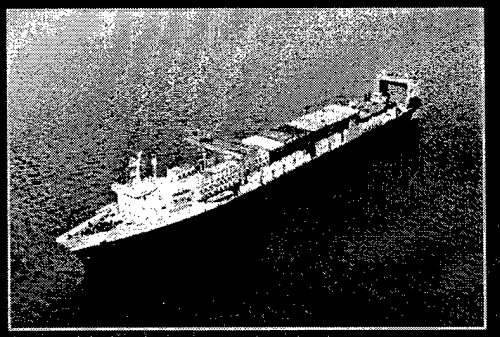




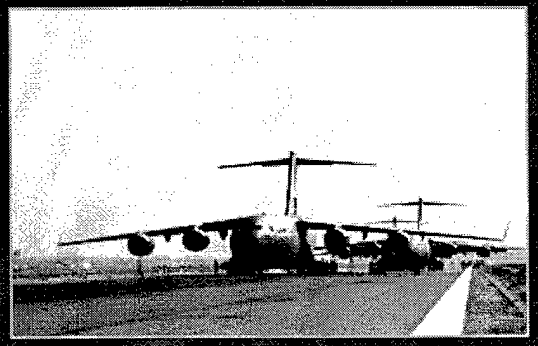


Chief of Transportation
BG Gilbert S. Harper





Strategic Transportation



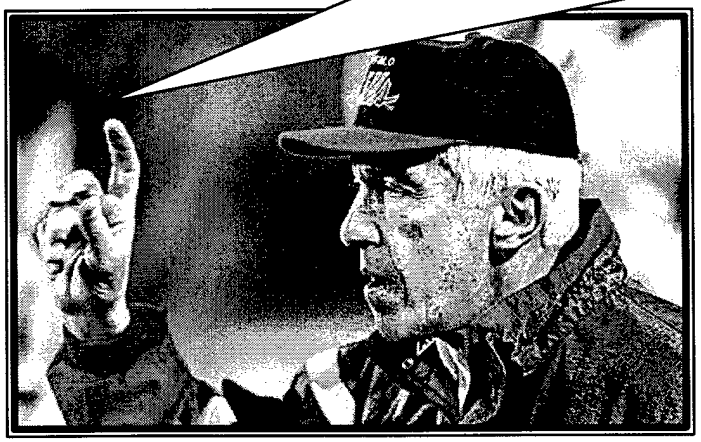
SPEARHEAD OF LOGISTICS



If you look at war as a sport....

"In 1939, Hitler had the best Army, the best equipment, the best organization and the whole country behind him. But in 1945, Berlin stood in ruins because Hitler could not win on the road."

—Marv Levy, former Head Coach, Buffalo Bills.



..... A power projection Army must be able to win on the road.

"A task without vision is drudgery.

A vision without a task is a dream.

A task with a vision is victory."

— Unknown

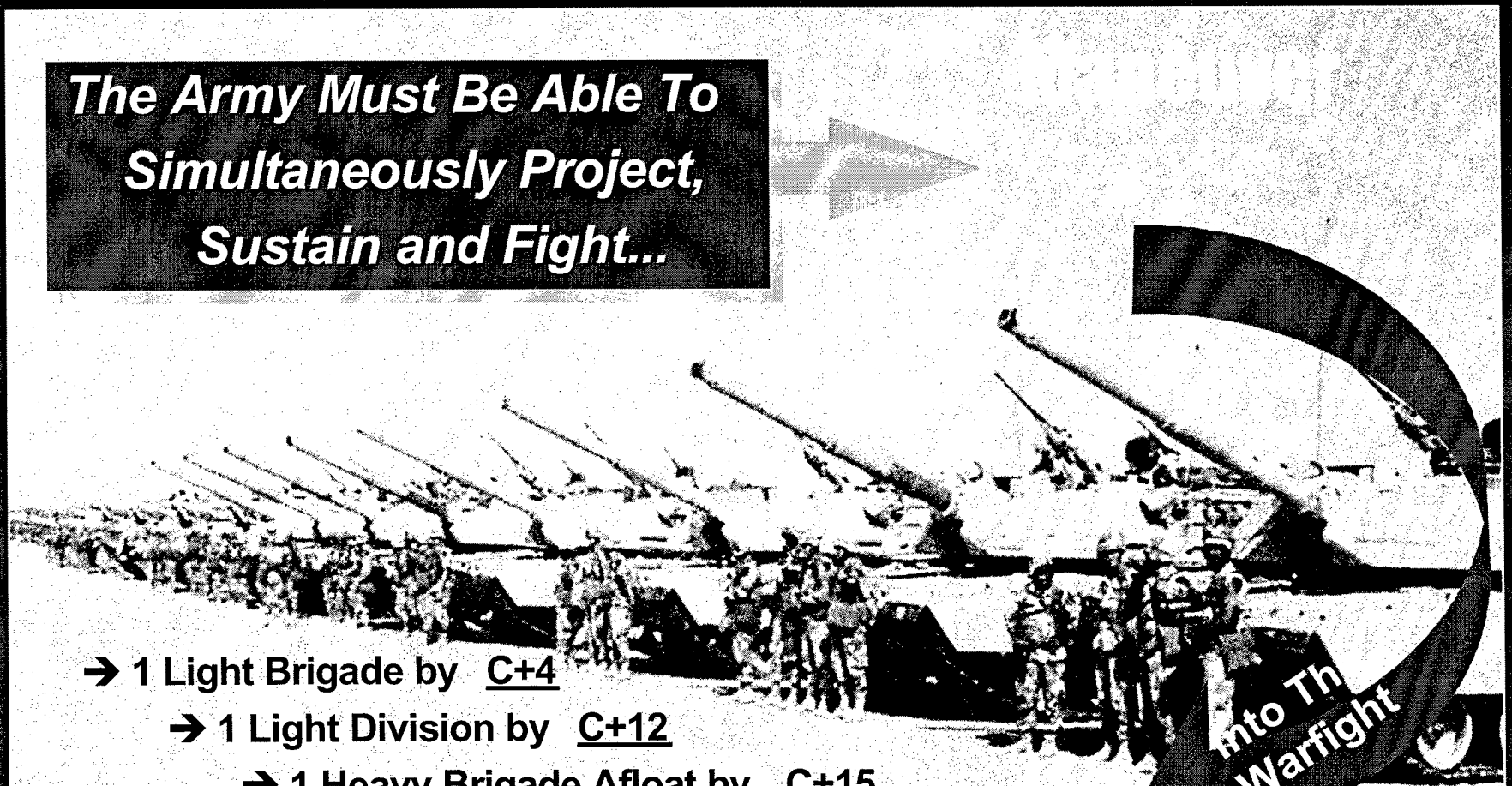
AMERICA'S ARMY
TRANSPORTATION CORPS
STRATEGIC VISION

- The Transportation Corps will lead America's Army in the transition to an integrated, transportation-based global distribution system capable of efficient operations in peace and war. It will serve as a combat force multiplier by anticipating and fulfilling wartime theater support demands with unprecedented speed and flexibility.
- The Transportation Corps will lead in the development of force deployment, transportation-based distribution doctrine and integrated training. It will emphasize increased velocity through modernization, synchronization and adaptability in support of our force projection Army.
- The Transportation Corps will leverage emerging technologies and thrive on the digitized battlefield. It will provide movement control and direct delivery to deployed forces in a dynamically fluid, nonlinear battlefield in Force XXI and into the Army After Next.
- The Transportation Corps' soldiers and civilians will lead and perform multifunctional and joint logistics roles. Professional development will produce ethically, technically and tactically sound leaders.
- The Transportation Corps will lead the Department of Defense in deployment and power projection training and education. The Transportation Corps' soldiers and civilians will provide the professional transportation and distribution logistics expertise in Joint Commands and Defense Agencies.

GILBERT S. HARPER
Brigadier General, U.S. Army
Chief of Transportation

THE TASK Dominant

The Army Must Be Able To Simultaneously Project, Sustain and Fight...

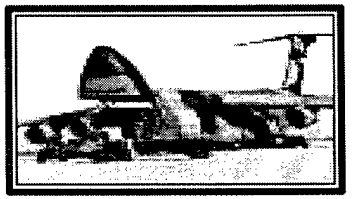


- ➔ 1 Light Brigade by C+4
- ➔ 1 Light Division by C+12
- ➔ 1 Heavy Brigade Afloat by C+15
- ➔ 2 Heavy Divisions from CONUS by C+30
- ➔ 5 Division Contingency Corps with CSS by C+75



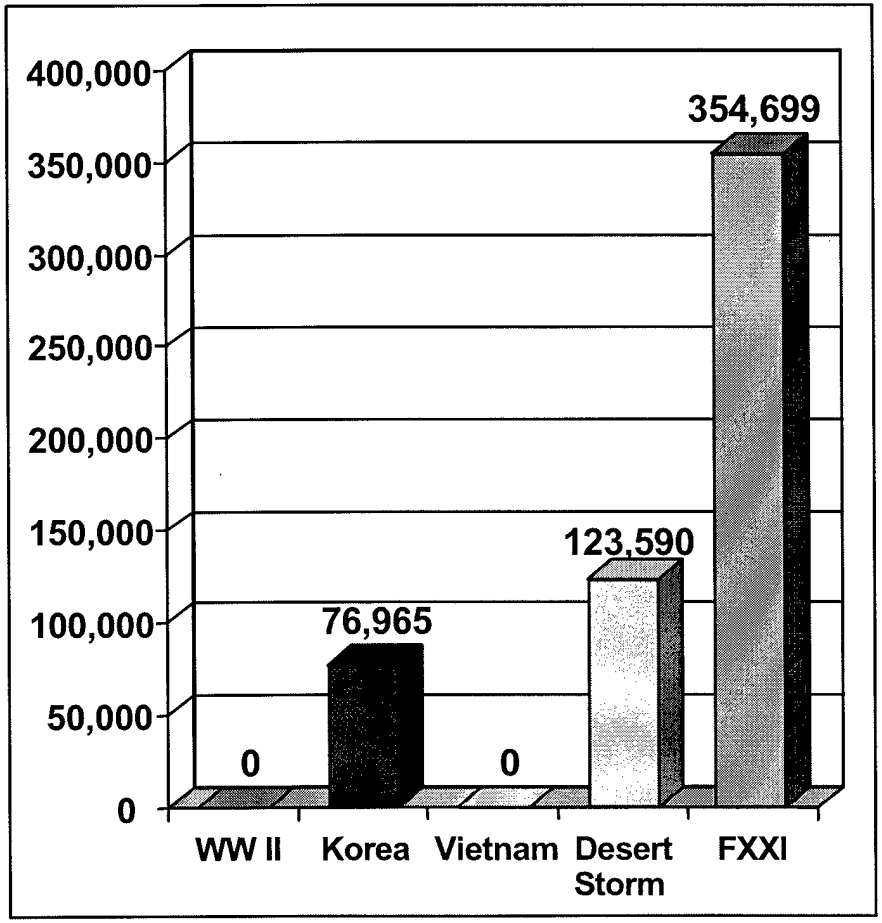
Army Deployment Comparisons

Tons of Supplies & Equipment

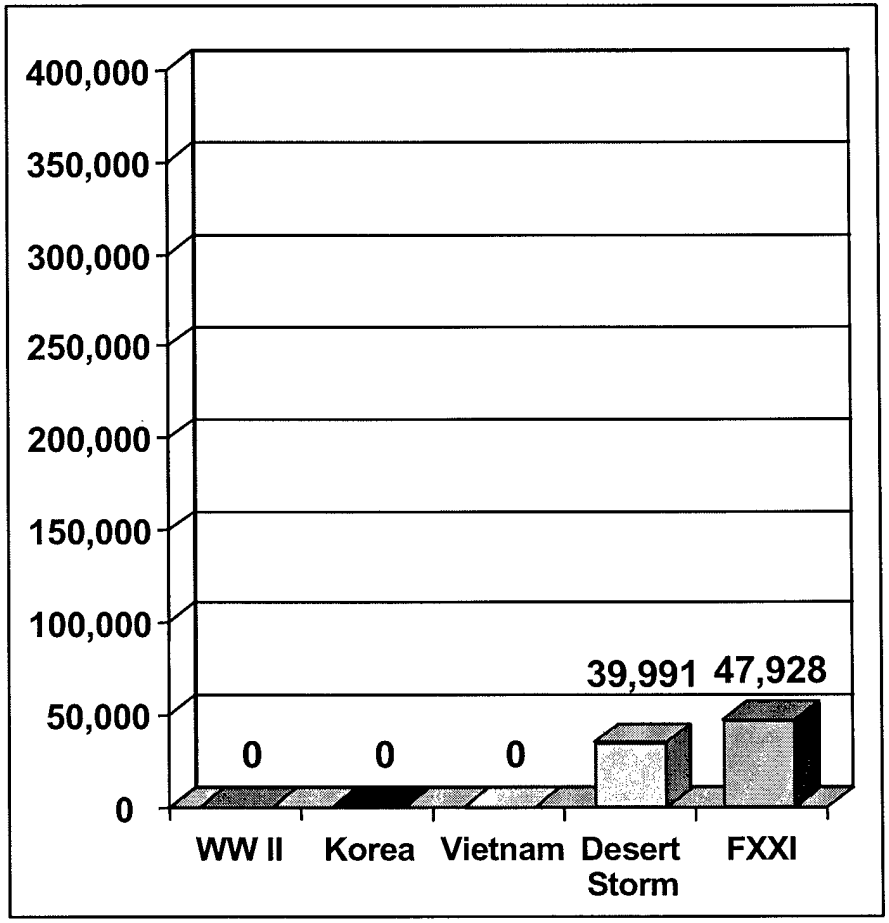


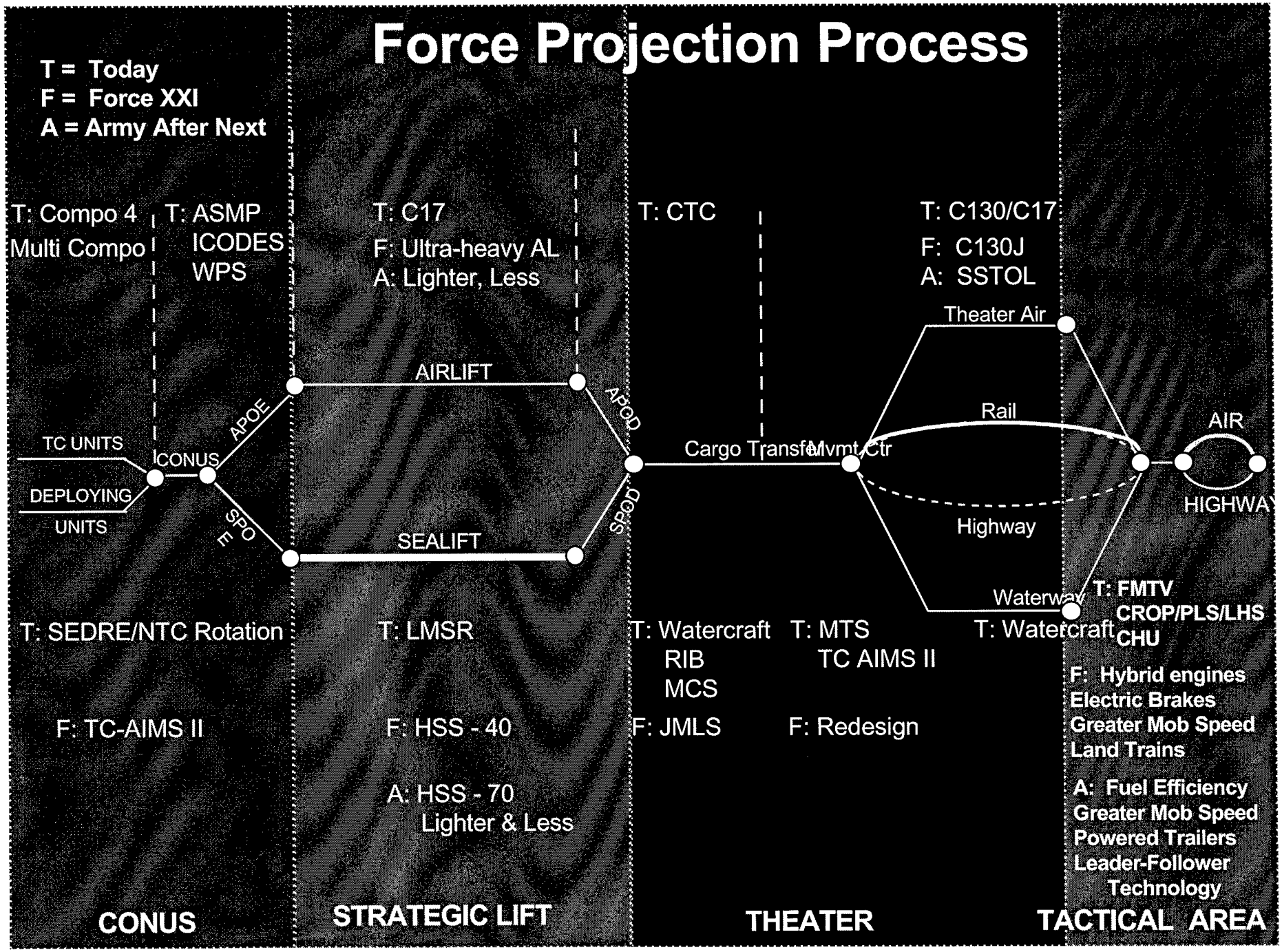
First 30 Days

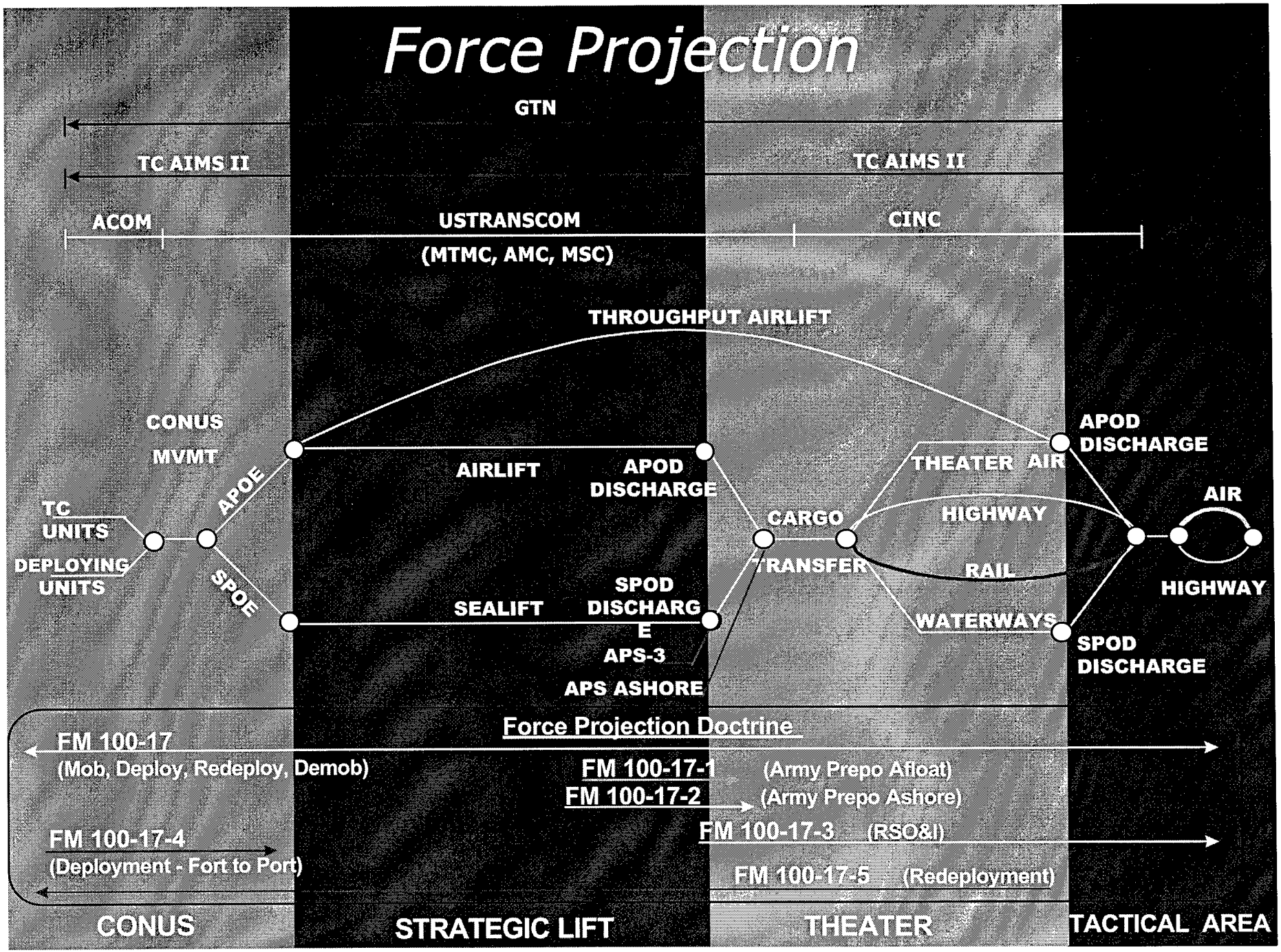
SEALIFT



AIRLIFT




Force Projection Process
T = Today
F = Force XXI
A = Army After Next
T: Compo 4
Multi Compo
T: ASMP
ICODES
WPS
T: C17
F: Ultra-heavy AL
A: Lighter, Less
T: CTC
T: C130/C17
F: C130J
A: SSTOL
Theater Air
AIRLIFT
APOE
APOD
Rail
AIR
TC UNITS
CONUS
Cargo Transfer
Mvmt Ctr
DEPLOYING
UNITS
SPOE
SPOD
Highway
HIGHWAY
SEALIFT
Waterway
T: FMTV
CROP/PLS/LHS
CHU
T: SEDRE/NTC Rotation
T: LMSR
T: Watercraft
RIB
MCS
T: MTS
TC AIMS II
T: Watercraft
F: Hybrid engines
Electric Brakes
Greater Mob Speed
Land Trains
F: TC-AIMS II
F: HSS - 40
F: JMLS
F: Redesign
A: HSS - 70
Lighter & Less
A: Fuel Efficiency
Greater Mob Speed
Powered Trailers
Leader-Follower
Technology
CONUS
STRATEGIC LIFT
THEATER
TACTICAL AREA

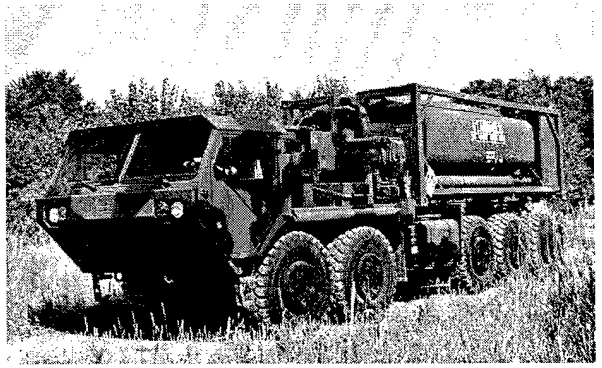

Force Projection
GTN
TC AIMS II
TC AIMS II
ACOM
USTRANSCOM
(MTMC, AMC, MSC)
CINC
THROUGHPUT AIRLIFT
CONUS
MVMT
AIRLIFT
APOD
DISCHARGE
APOD
DISCHARGE
THEATER AIR
AIR
TC
UNITS
DEPLOYING
UNITS
APOE
SPOE
CARGO
HIGHWAY
TRANSFER
RAIL
HIGHWAY
SEALIFT
SPOD
DISCHARG
E
WATERWAYS
SPOD
DISCHARGE
APS-3
APS ASHORE
Force Projection Doctrine
FM 100-17
(Mob, Deploy, Redeploy, Demob)
FM 100-17-1
(Army Prepo Afloat)
FM 100-17-2
(Army Prepo Ashore)
FM 100-17-3
(RSO&I)
FM 100-17-4
(Deployment - Fort to Port)
FM 100-17-5
(Redeployment)
CONUS
STRATEGIC LIFT
THEATER
TACTICAL AREA

Operational and Tactical Transportation









The Future

"The Future ain't what it used to be"

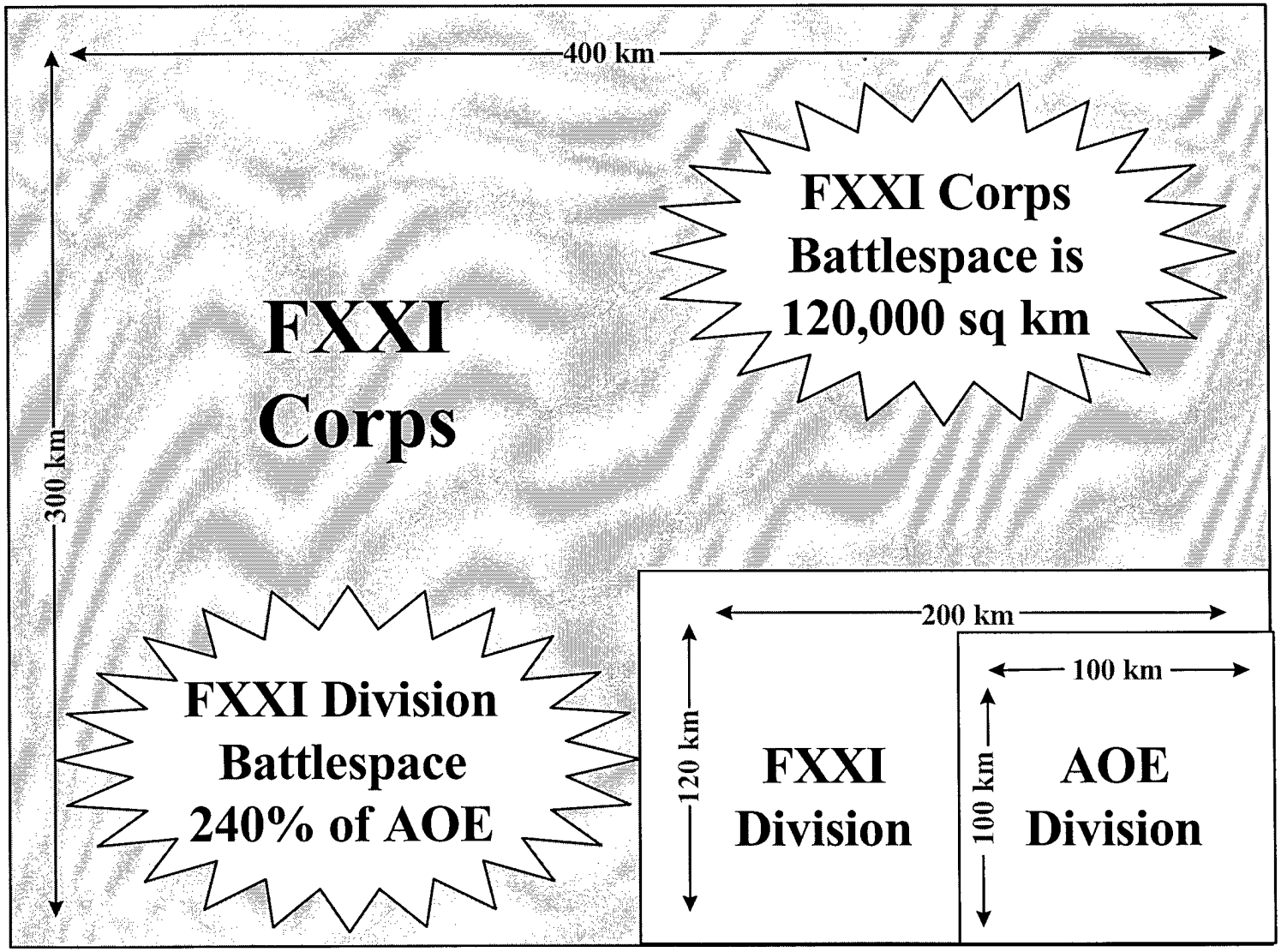
— Yogi Berra



BATTLESPACE

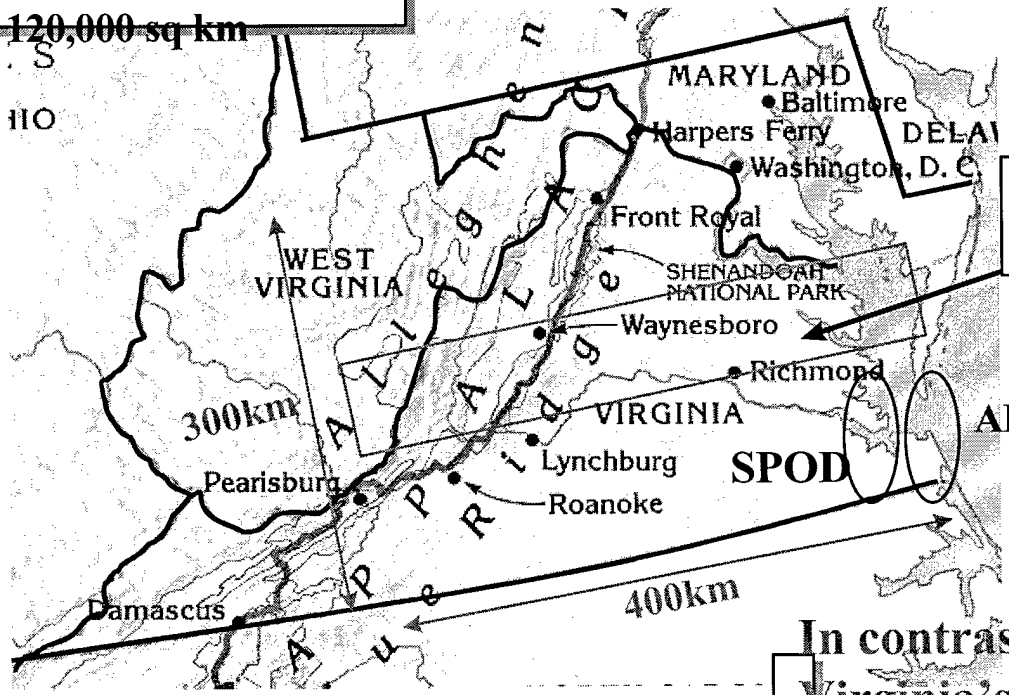
Force XXI

The Expanding Battlefield



Challenging The Laws of Physics

~~FXXI:~~
Corps XXI's area is 300km x 400km
~~This equates to 120,000 sq km~~



Corps XXI's Area of Operation

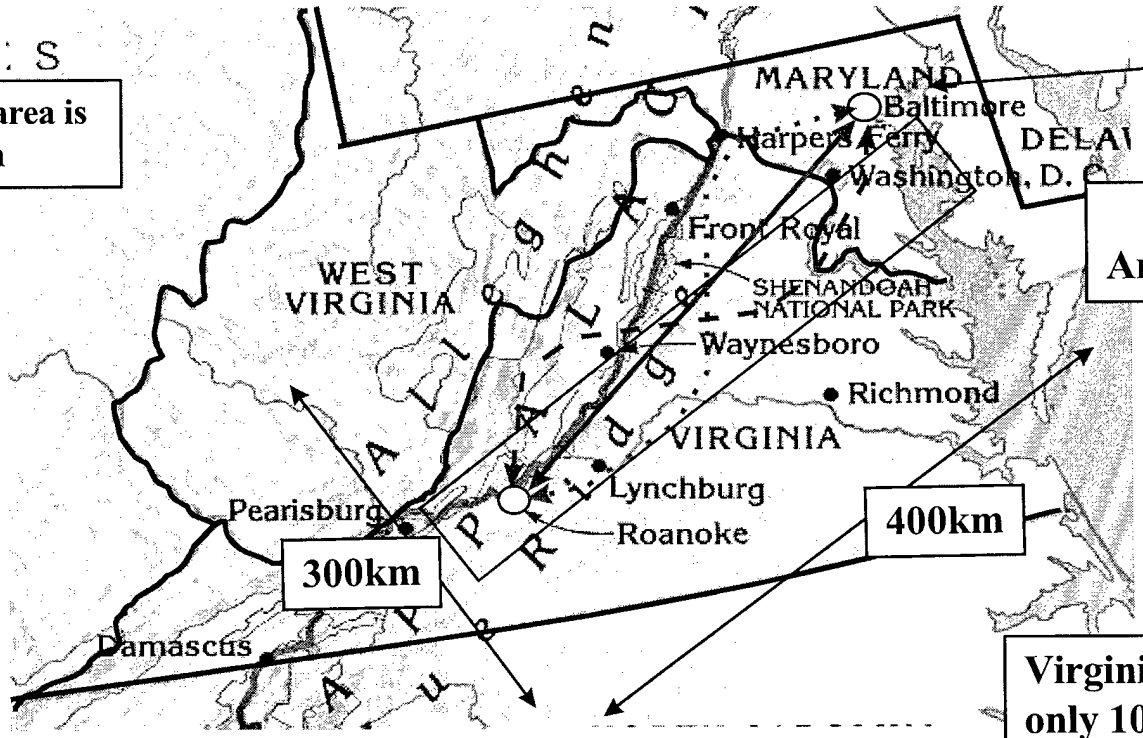
APOD

SPOD

In contrast:
Virginia's size is only 105,586 sq km

Road Distance

The Rest of the Story



Corps XXI's area is 120,000 sq km

SPOD

Corps XXI's Area of Operation

Virginia's size is only 105,586 sq km

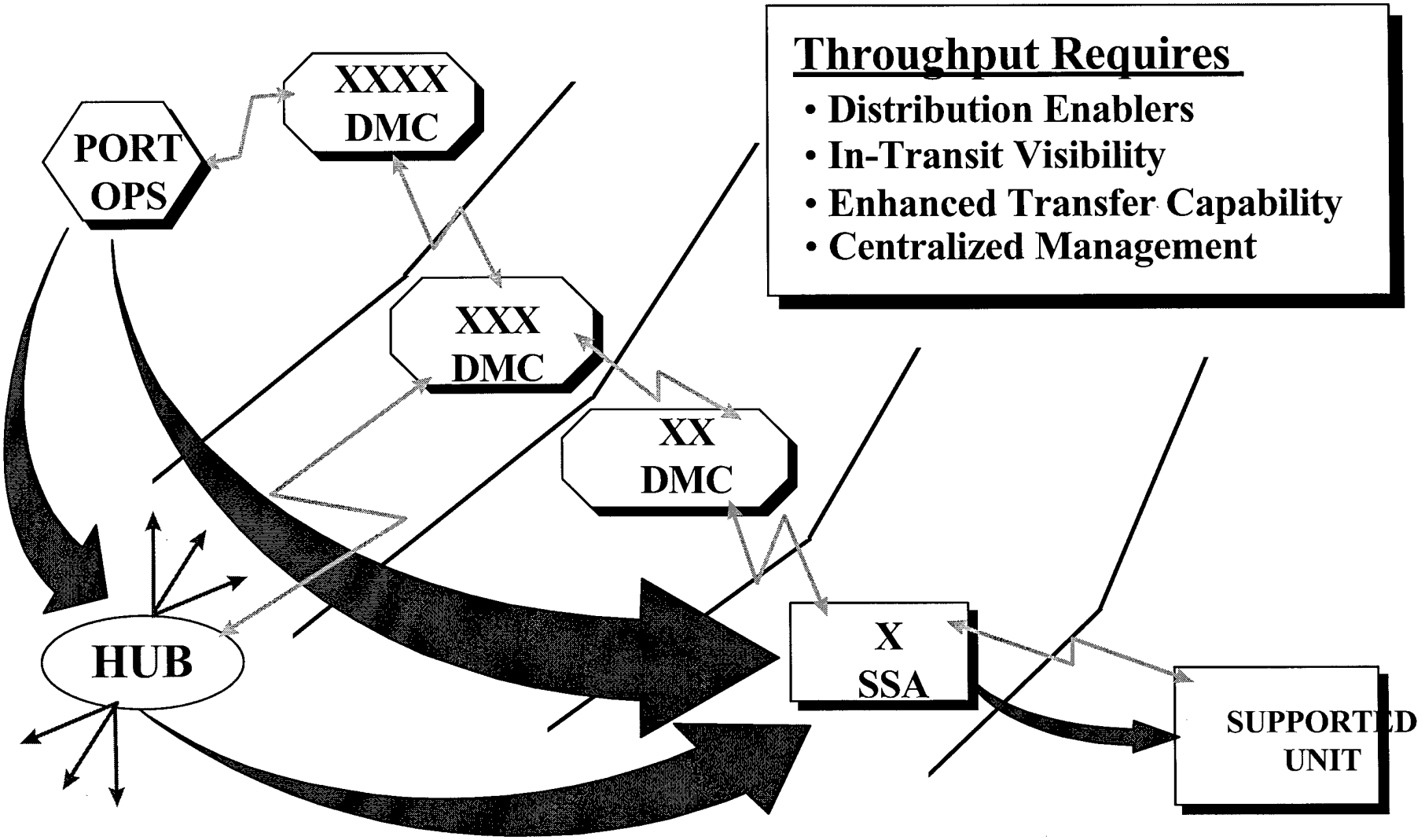
Distance:

Straight Line	370 km	
Interstate (40km/hr)	483 km	12 hrs
Secondary Rd (25km/hr)	579 km	23 hrs

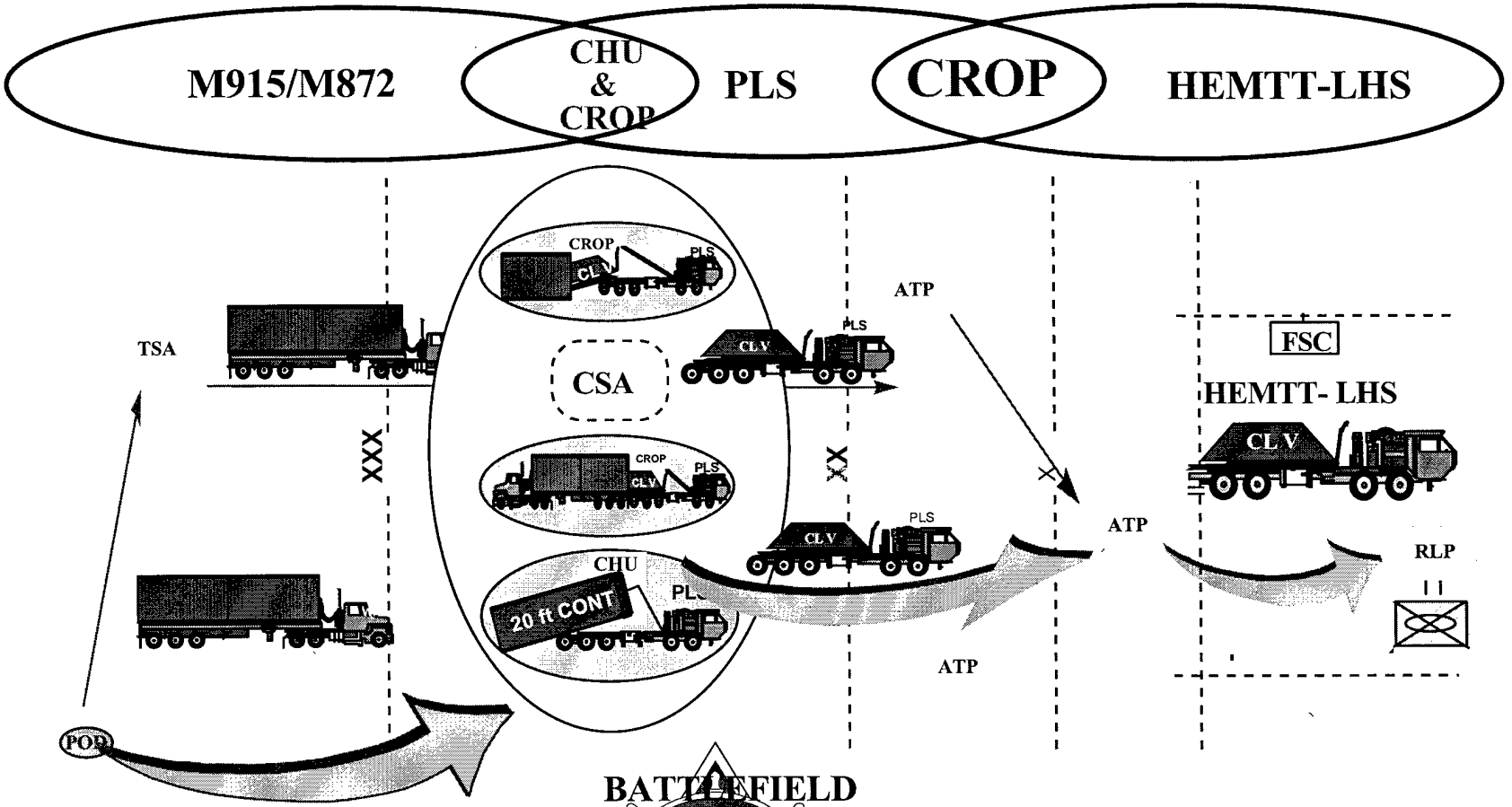
TRANSPORTATION BASED LOGISTICS

Force XXI

Focused On Throughput



Battlefield Distribution Enablers Linkage



"REVOLUTION IN MILITARY LOGISTICS"

BATTLEFIELD DISTRIBUTION

THROUGHPUT THAT IS FASTER THROUGHPUT THAT IS GREATER

SPEARHEAD OF LOGISTICS

TRANS BASED DISTRIBUTION

"REVOLUTION IN MILITARY AFFAIRS"

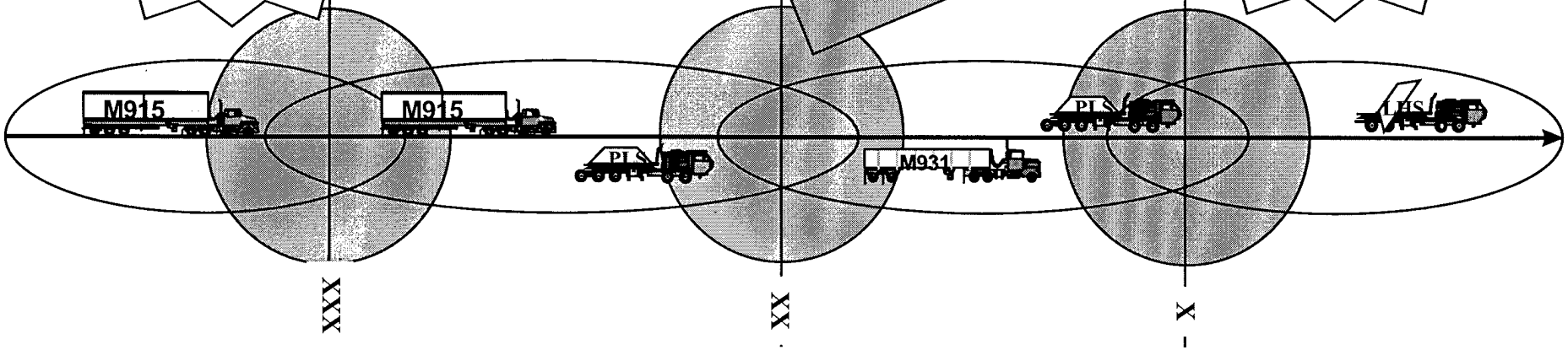
Intermodal Transfer Challenges

Need Enhanced Transfer Capability

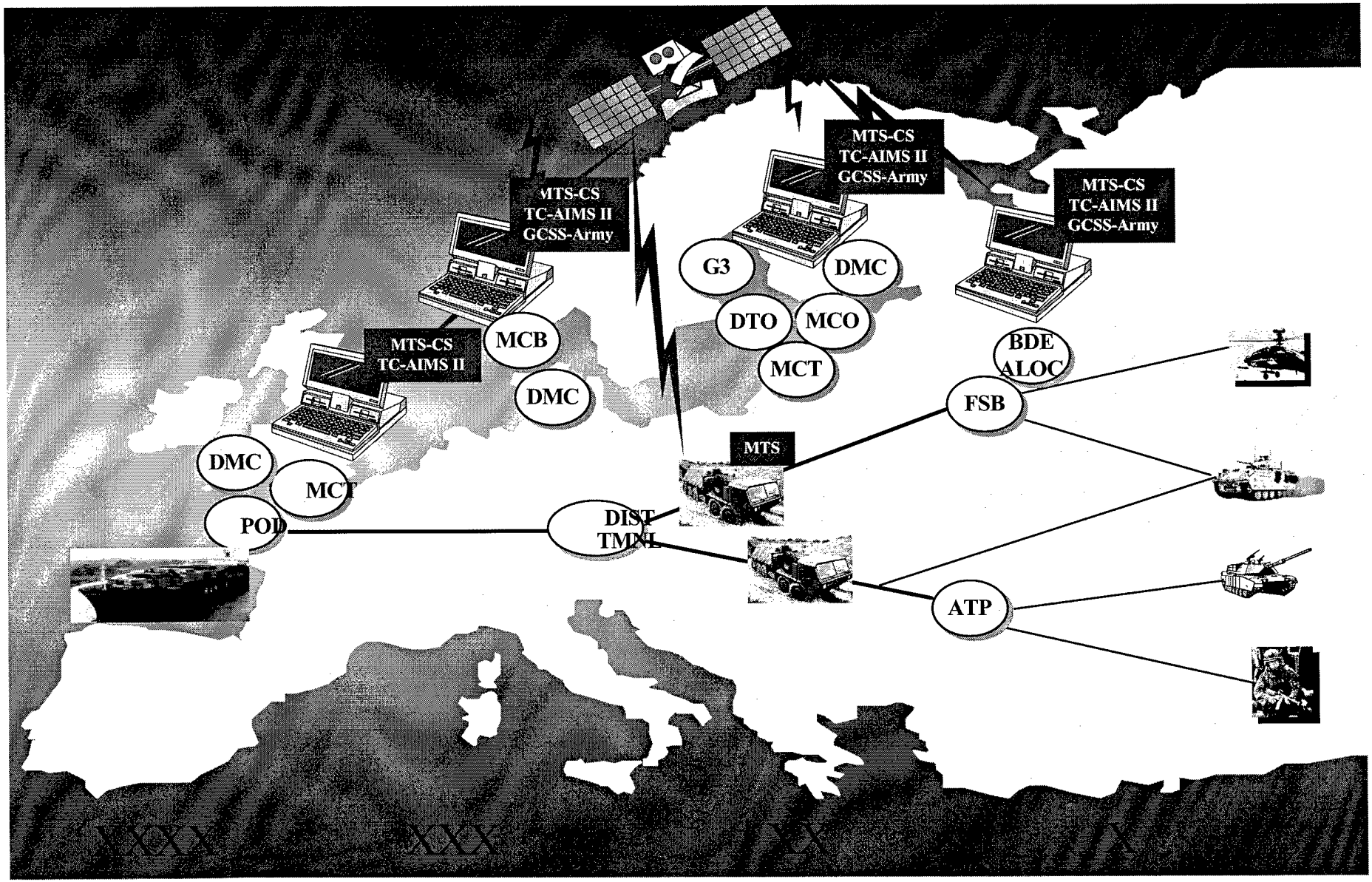
- **Transfer from tractor/trailer to PLS/LHS**
- **Container Handling**
  - **40 ft Containers**
  - **CROP Insertion/Extraction**
- **Transporting Container Handling Equipment**
- **Air Transportability**
- **Rough Terrain**
- **Mud**

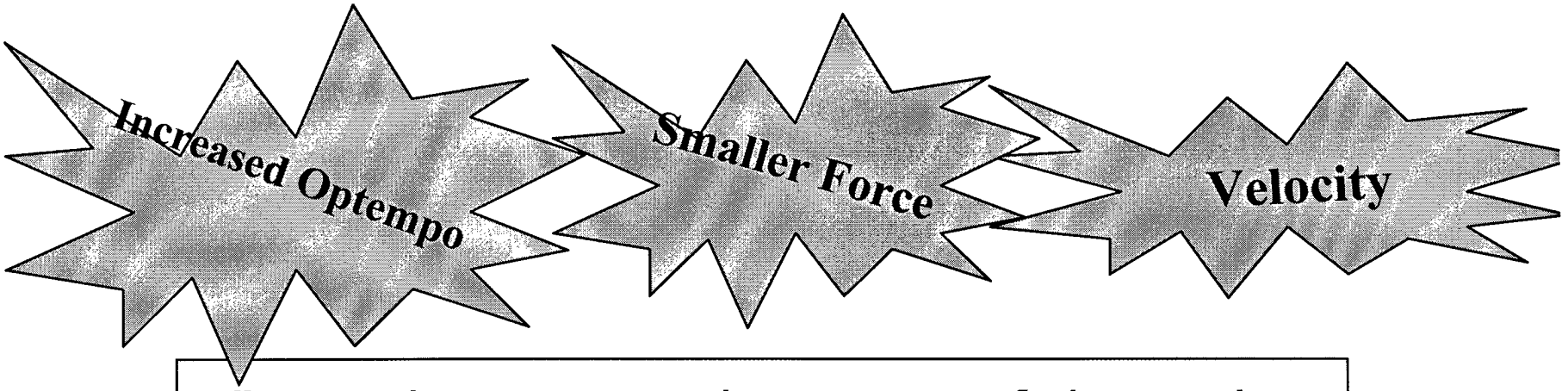
Minimize Handling

Maximize Speed



In-Transit Visibility





"We only win at war because we fight another government. If we fought private industry we would not last until noontime."

— **R.I. Fitzhenry**

We need industries help



What Can Industry Do to Make our TWV's Better?

☛ Increased Range
- Division battle space increased by 240%
- Need Larger fuel capacity
- More fuel efficient engines

☛ Increased reliability
- Need reduced mechanical failures
- Improved sub-component reliability
- reduce the number of critical parts
- Combine/simplify subsystems to reduce failure modes

☛ Lightweight & Rugged
- Larger battle-space
- More dependence on air transport
- Must withstand effects of terrain

☛ Better maintainability
- 11% fewer Division personnel
- Limited number of vehicles – no extras
- Improve diagnostics/prognostics
- Improve trouble-shooting methods
- Quick replacement parts and components
- Lube for life components

☛ Better fuel economy
- Army Goal-50% reduction in fuel consumption
- More fuel efficient power plants

☛ Reduced O&S Cost
- Less Defense $
- Better to buy beans and bullets than wiper blades
- Top O&S drivers for trucks – batteries, tires, light bulbs, brake pads, and glow plugs.

☛ Increase Economic Useful Life
- Short $ - can't buy new as often.
- Modernization through spares
- Increased corrosion protection

☛ Modularity
- Same as maintainability
- Must replace forward, fix to the rear

☛ Crew Protection
- Protect crew from injuries
- Improved vehicle survivability
- Lighter weight protection to increase payload



Transportation Summit
16-17 DEC 1998
TACOM

- Improve the communications between the Combat Developer and Materiel Developer.

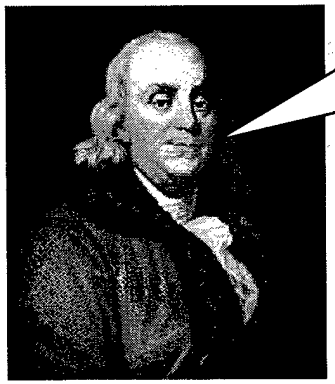
- Achieve a stronger alliance with industry.

- Develop a team strategy to efficiently adopt commercial technology in the "Spiral Modernization" of our legacy fleets.

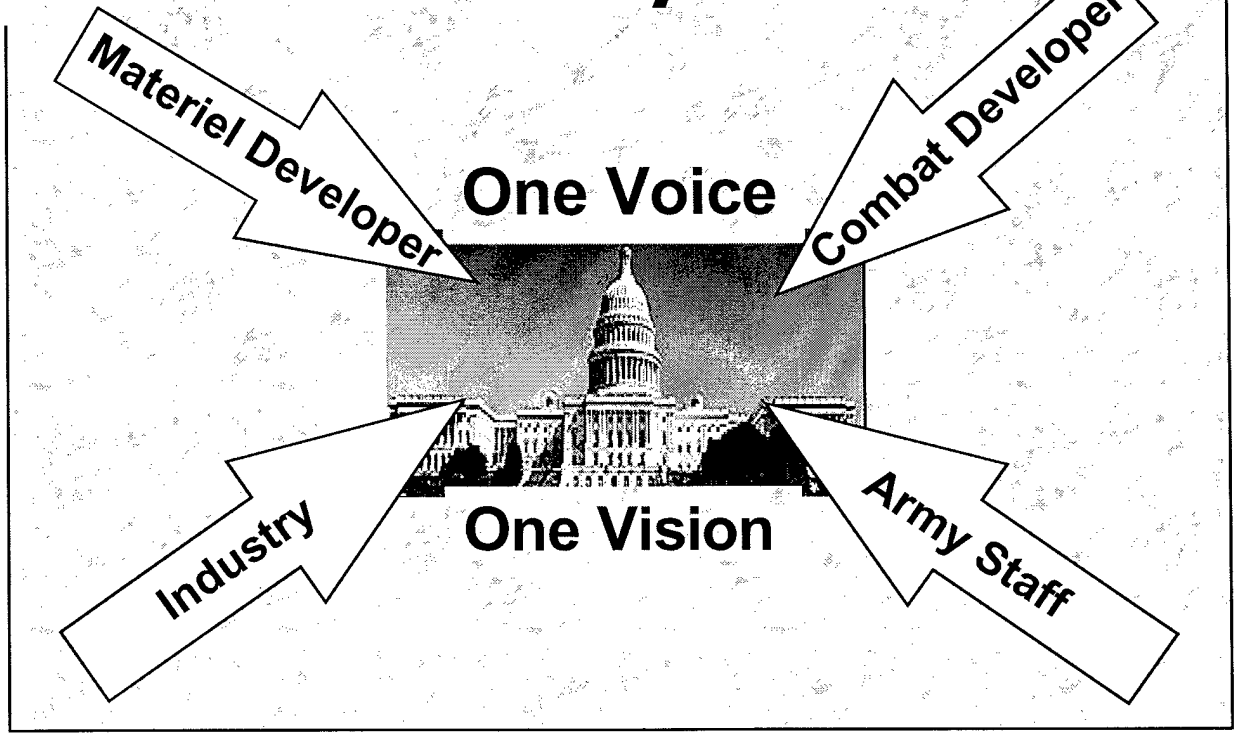
- Speak with one voice

"We must indeed all hang together, or, most assuredly, we shall all hang separately."

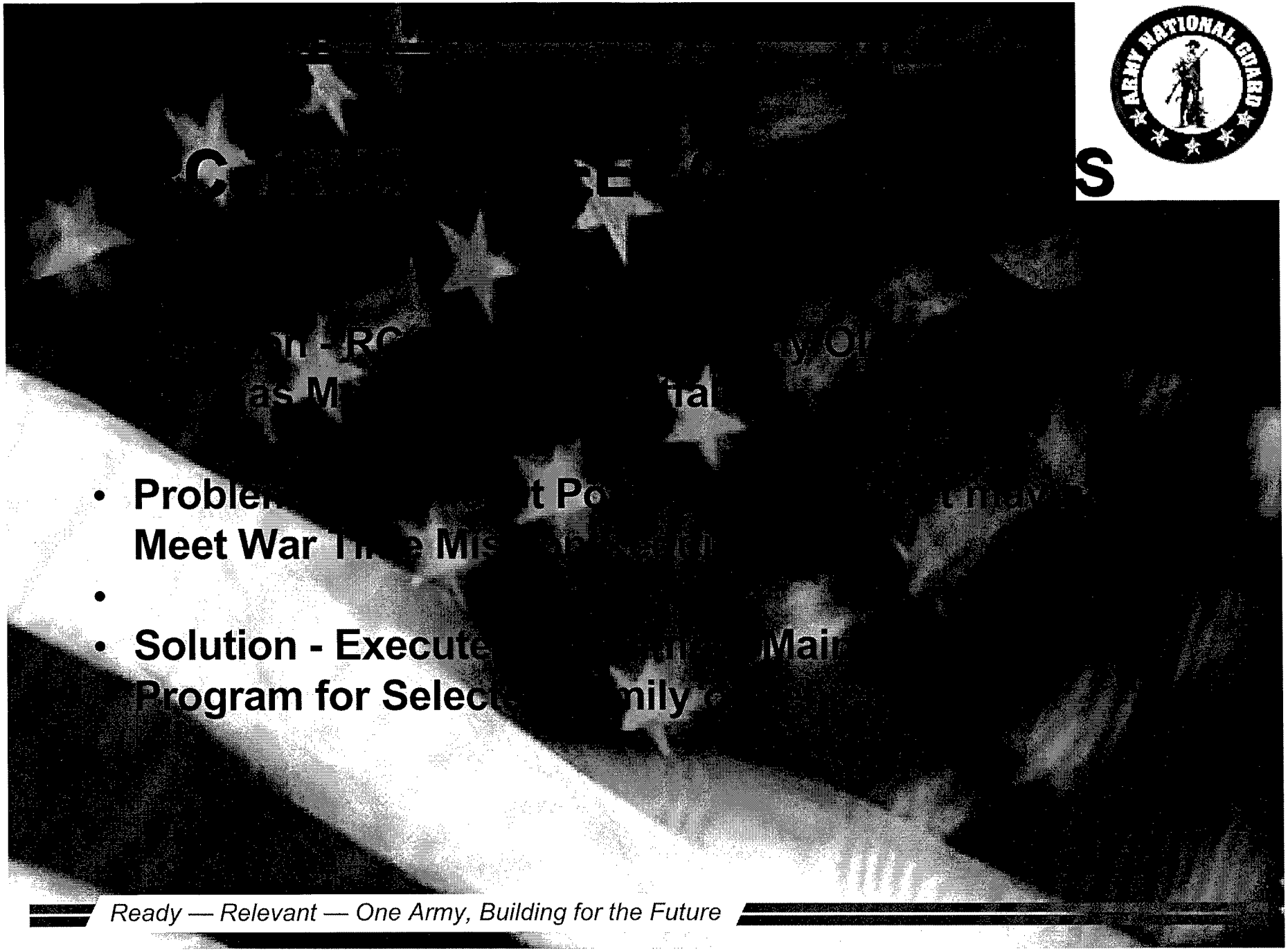
--Benjamin Franklin's reply in response to a John Hancock remark that the revolutionaries should be unanimous in their action; made at the signing of the Declaration of independence on July 4, 1776.



Army Tactical Wheeled Vehicle Community




ARMY NATIONAL GUARD
TACTICAL W
SUSTAINMENT
Ready — Relevant — One Army, Building for the Future

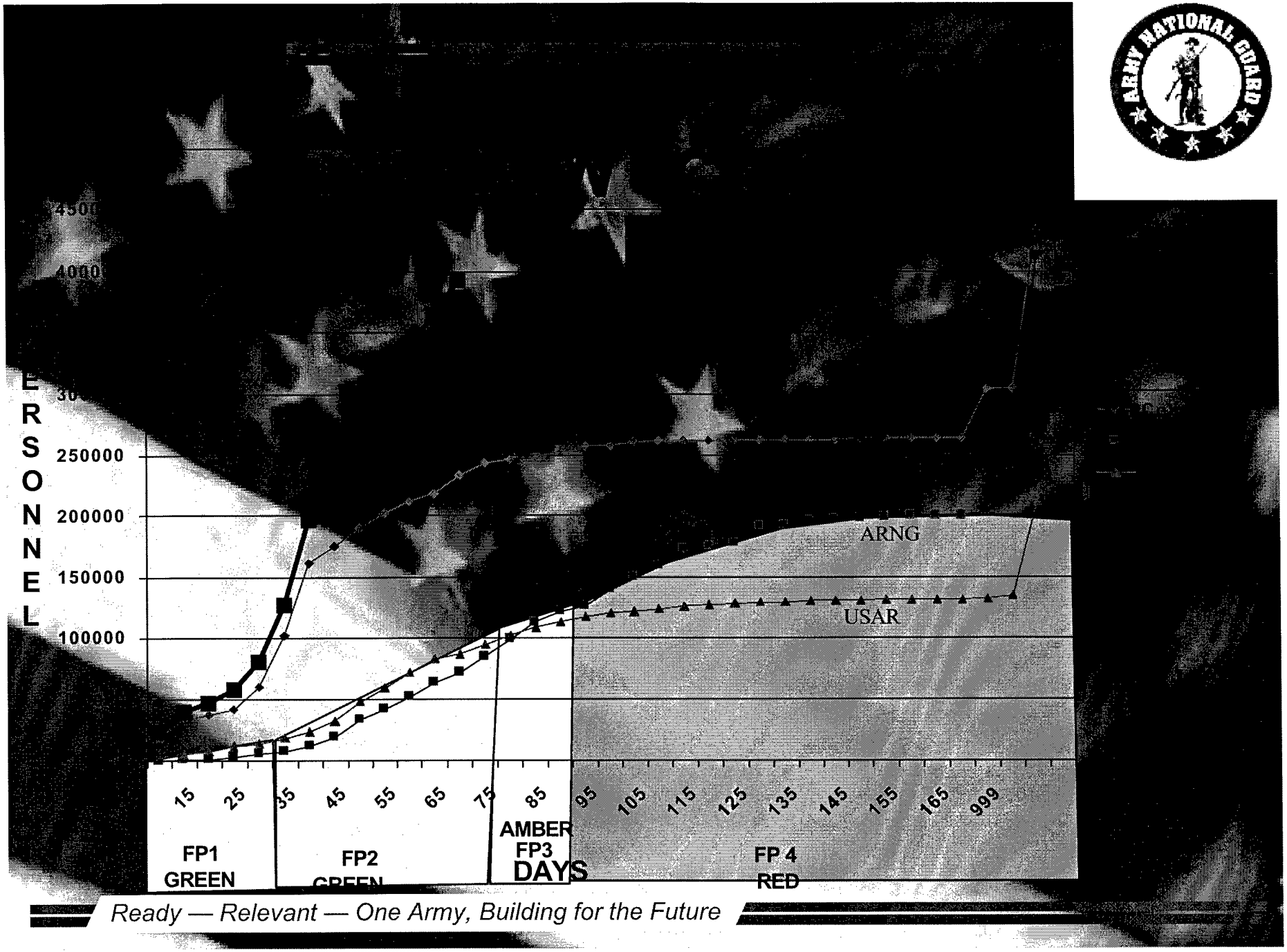


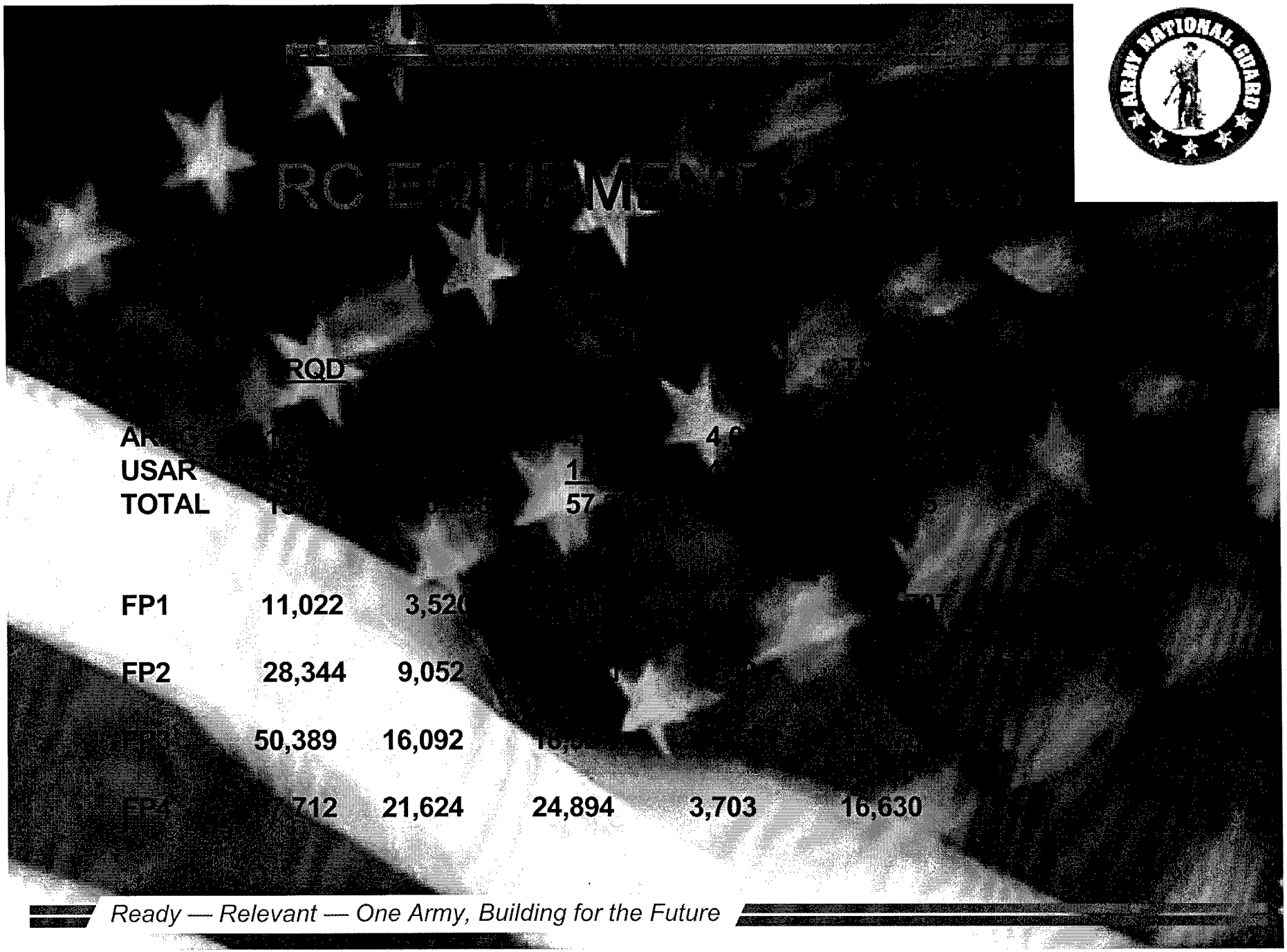
S

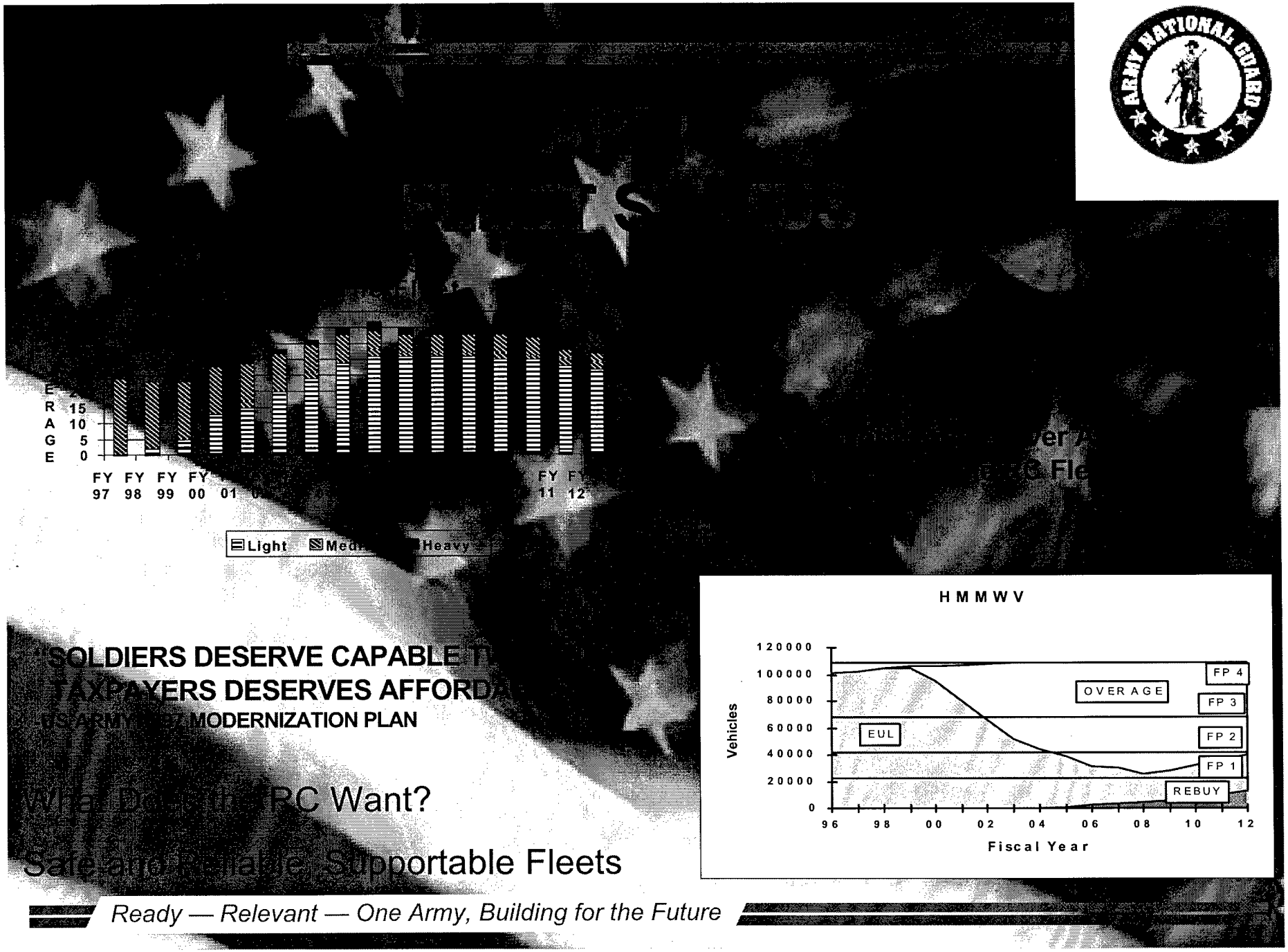
- Proble t Po
  Meet War Mis
- Solution - Execute Mai
  Program for Selec nily



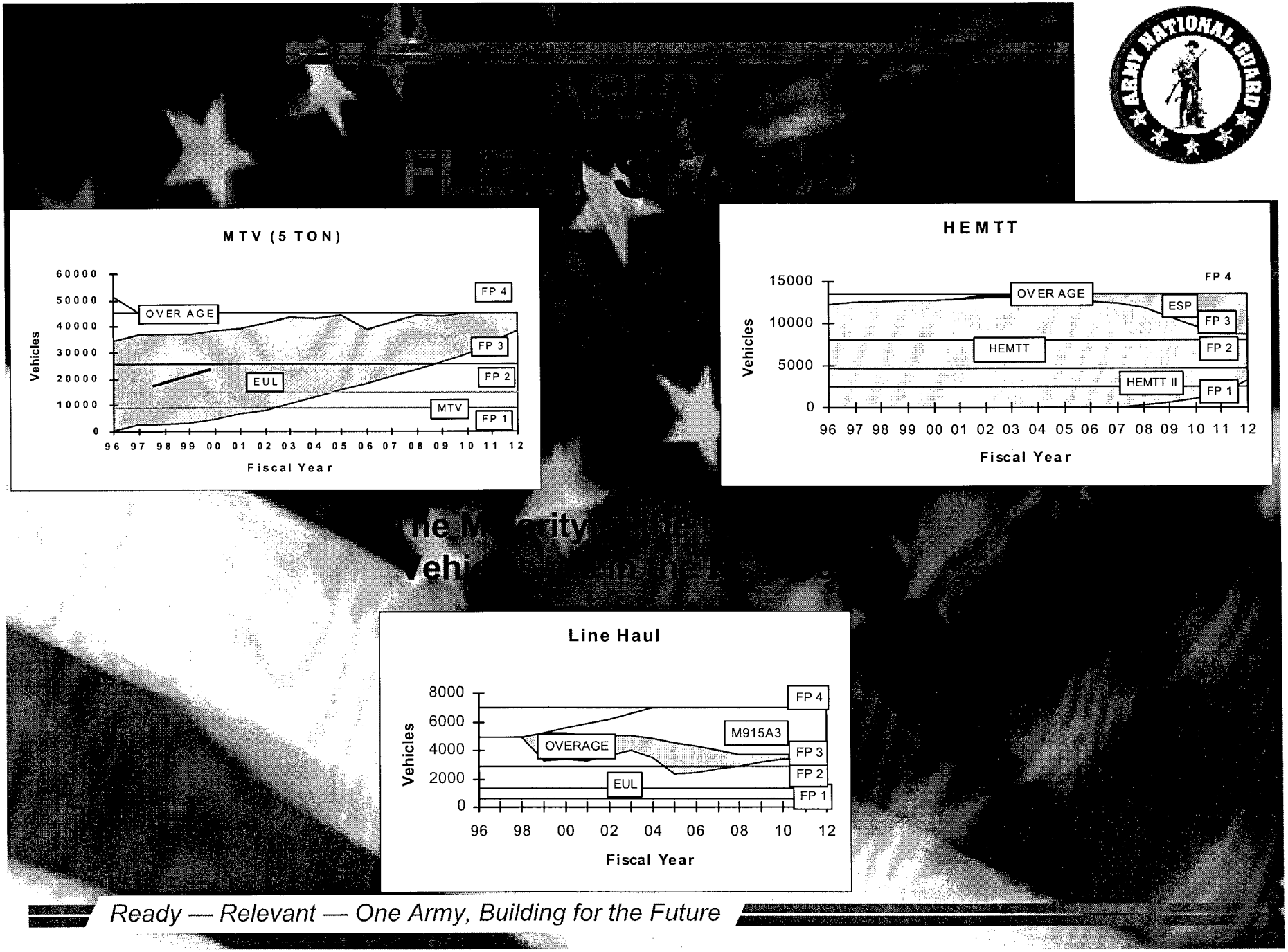
- Shortag[illegible] F[illegible] stitu[illegible]
  Exacerbate[illegible]
- Equipment is Pre[illegible] scad[illegible]
- [illegible]ascaded Vehicle[illegible] ece[illegible] ive[illegible]
  [illegible]e by the AC
- [illegible]ation is Stretched Over the Next[illegible]

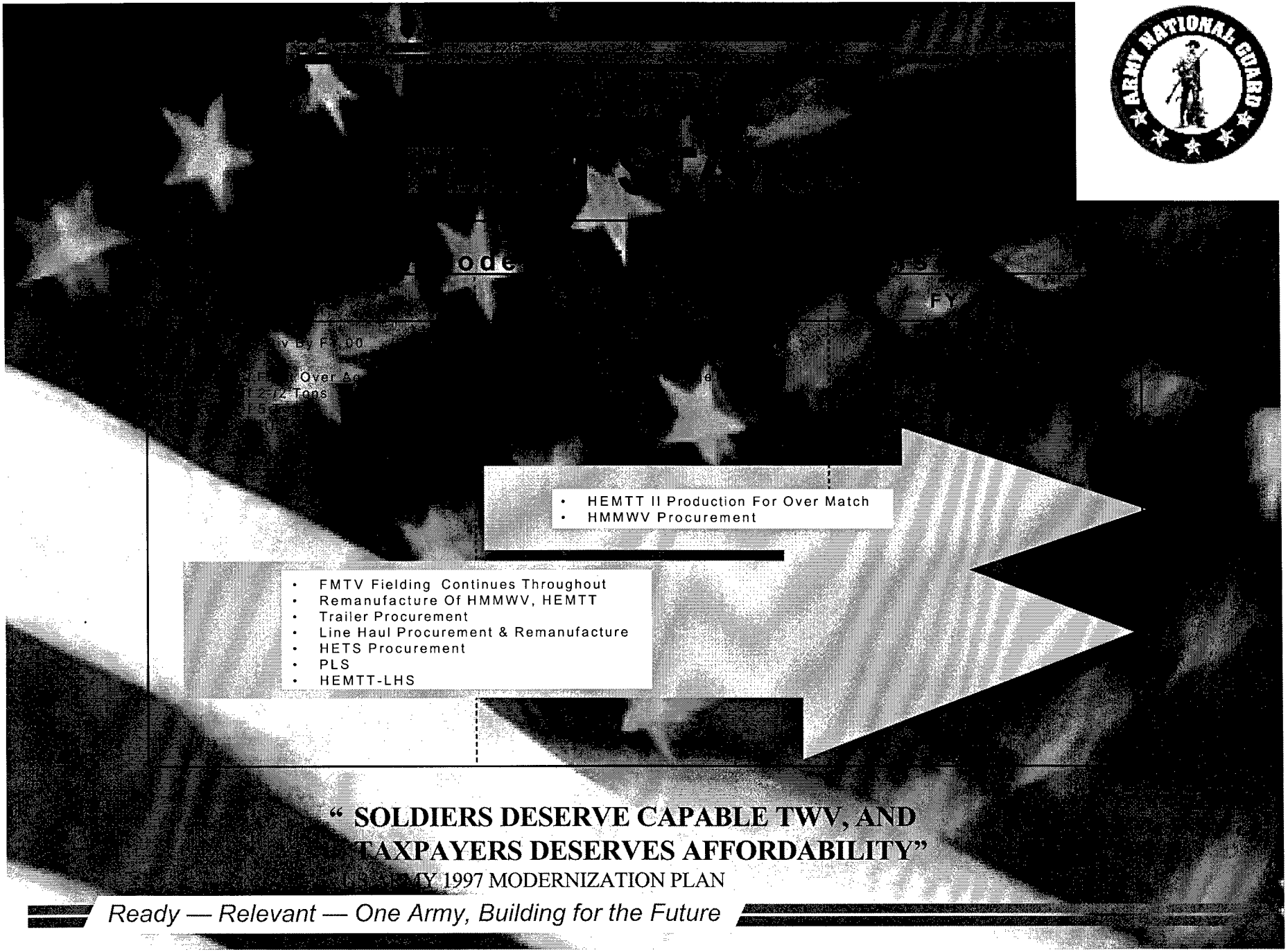

ARMY NATIONAL GUARD
4500
4000
ERSONNEL
250000
200000
150000
100000
ARNG
USAR
15
25
35
45
55
65
75
85
95
105
115
125
135
145
155
165
999
FP1
GREEN
FP2
AMBER
FP3
DAYS
FP 4
RED
Ready — Relevant — One Army, Building for the Future

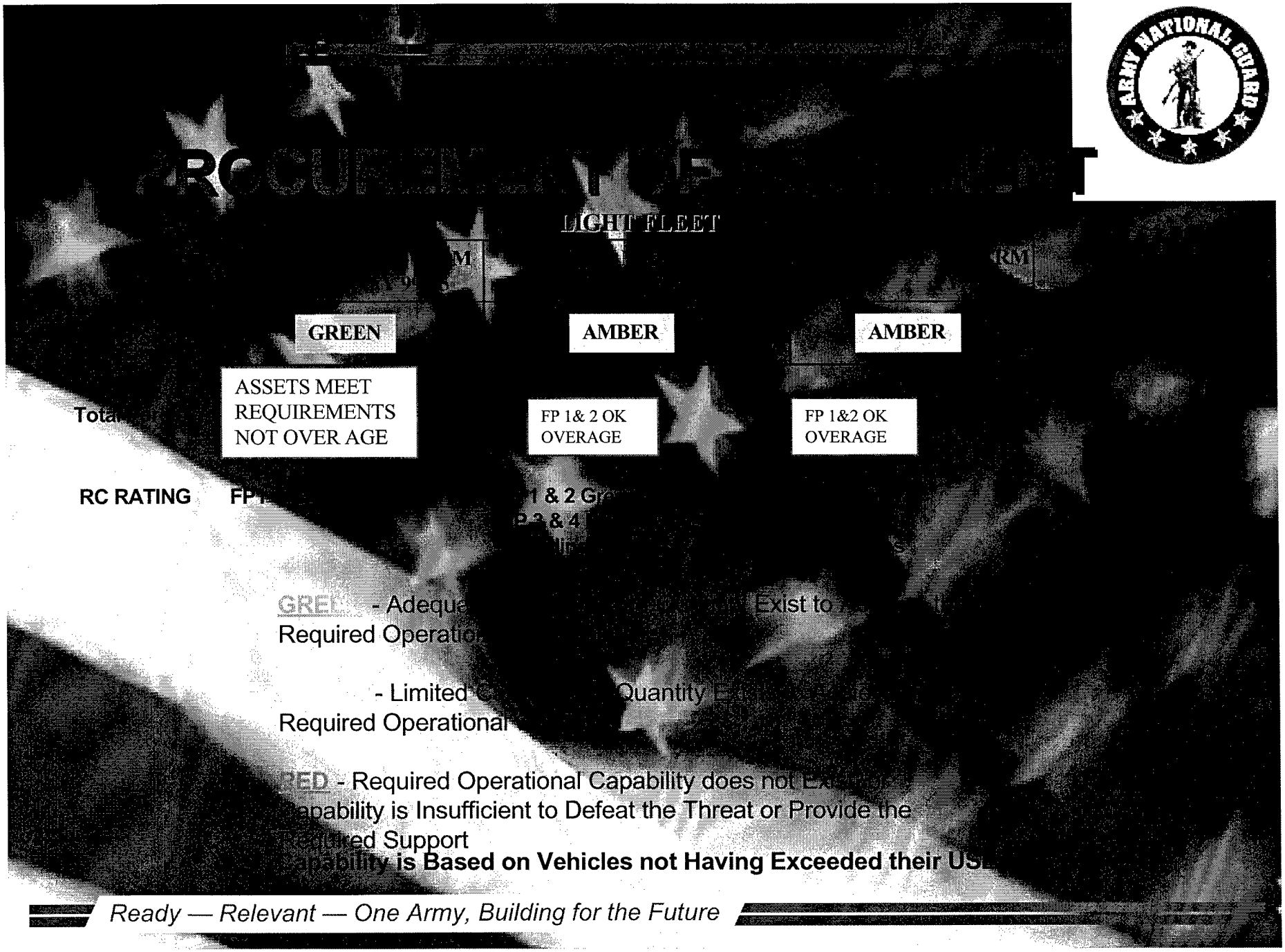

RC EQUIPMENT
RQD
AR
USAR
TOTAL
1
57
4,6
FP1 11,022 3,52
FP2 28,344 9,052
50,389 16,092
712 21,624 24,894 3,703 16,630
Ready — Relevant — One Army, Building for the Future

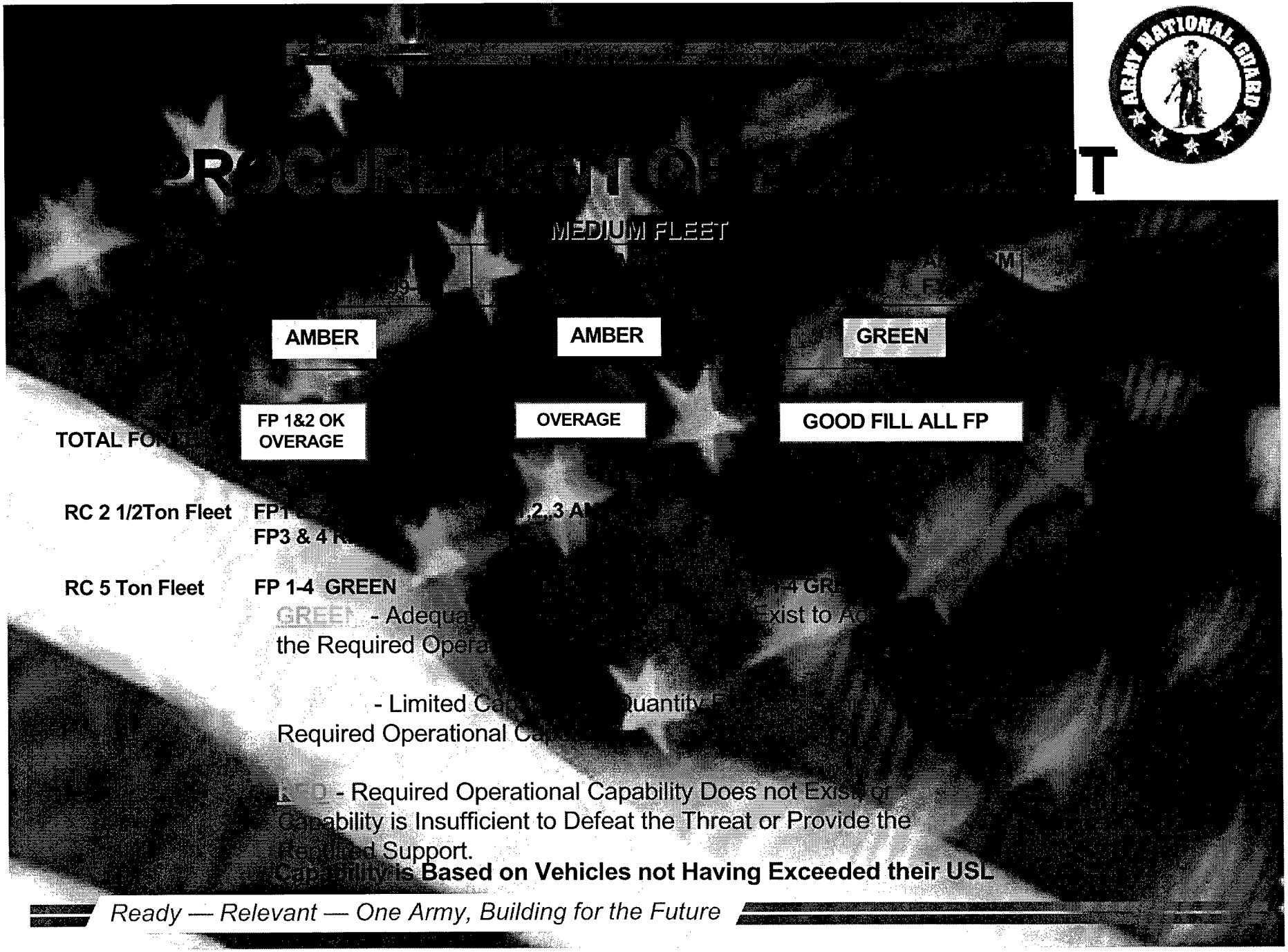


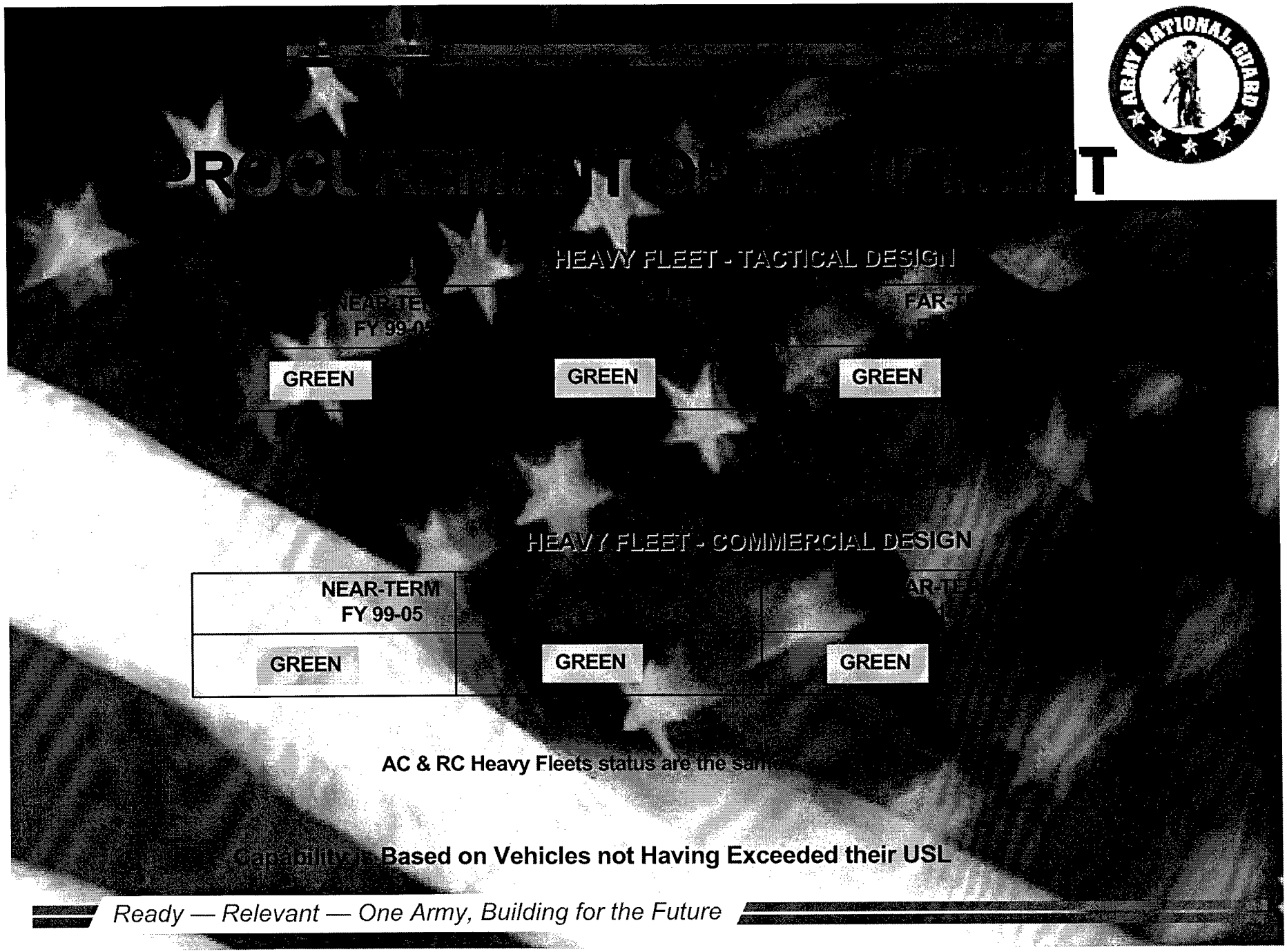
Ready — Relevant — One Army, Building for the Future

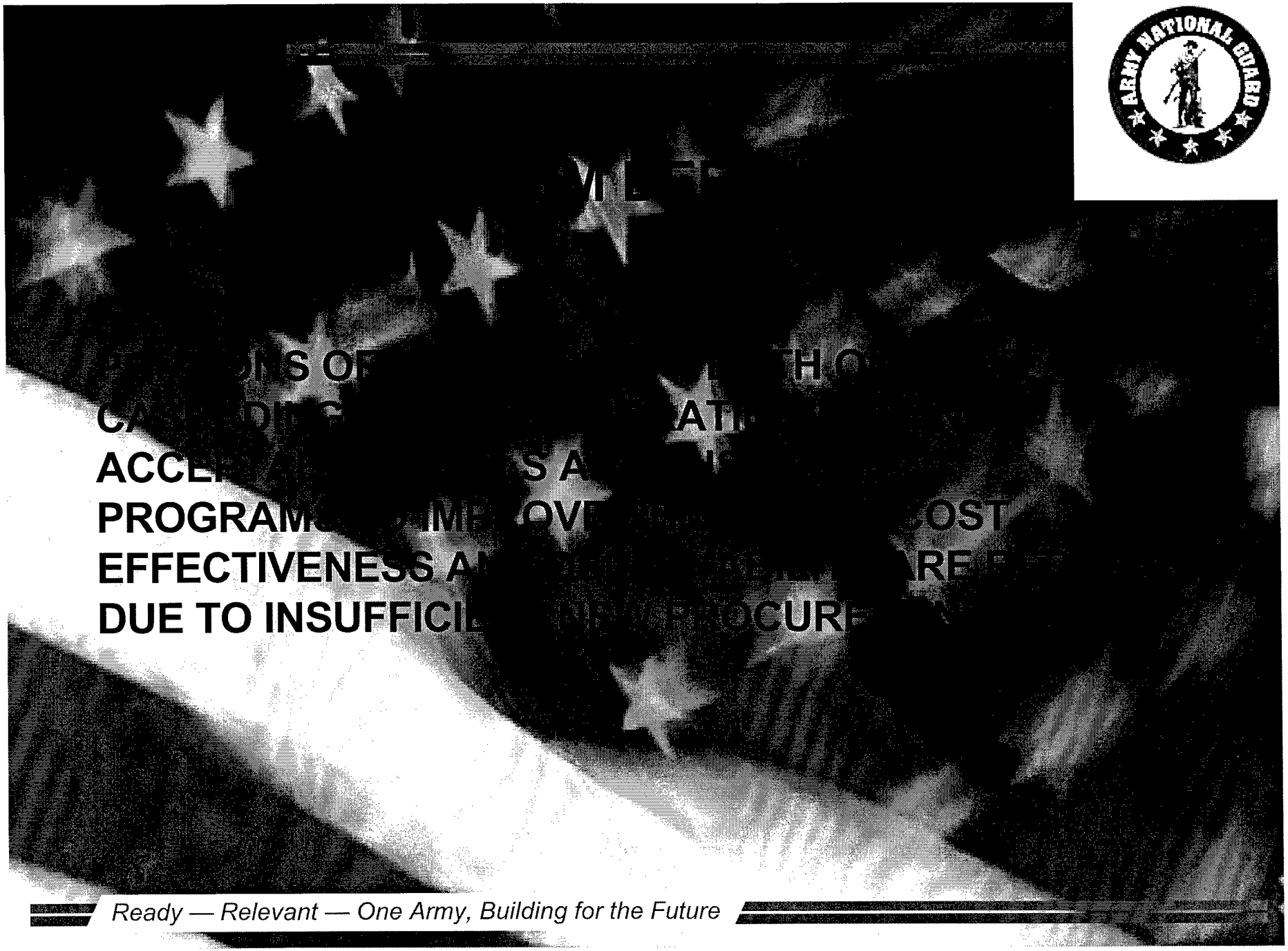

MTV (5 TON)
60000
50000
40000
30000
20000
10000
0
Vehicles
OVER AGE
EUL
MTV
FP 4
FP 3
FP 2
FP 1
96 97 98 99 00 01 02 03 04 05 06 07 08 09 10 11 12
Fiscal Year
HEMTT
15000
10000
5000
0
Vehicles
OVER AGE
ESP
FP 4
FP 3
HEMTT
FP 2
HEMTT II
FP 1
96 97 98 99 00 01 02 03 04 05 06 07 08 09 10 11 12
Fiscal Year
Line Haul
8000
6000
4000
2000
0
Vehicles
FP 4
M915A3
OVERAGE
FP 3
FP 2
EUL
FP 1
96 98 00 02 04 06 08 10 12
Fiscal Year


FY
• HEMTT II Production For Over Match
• HMMWV Procurement
• FMTV Fielding Continues Throughout
• Remanufacture Of HMMWV, HEMTT
• Trailer Procurement
• Line Haul Procurement & Remanufacture
• HETS Procurement
• PLS
• HEMTT-LHS
" SOLDIERS DESERVE CAPABLE TWV, AND
TAXPAYERS DESERVES AFFORDABILITY"
Y 1997 MODERNIZATION PLAN
Ready — Relevant — One Army, Building for the Future

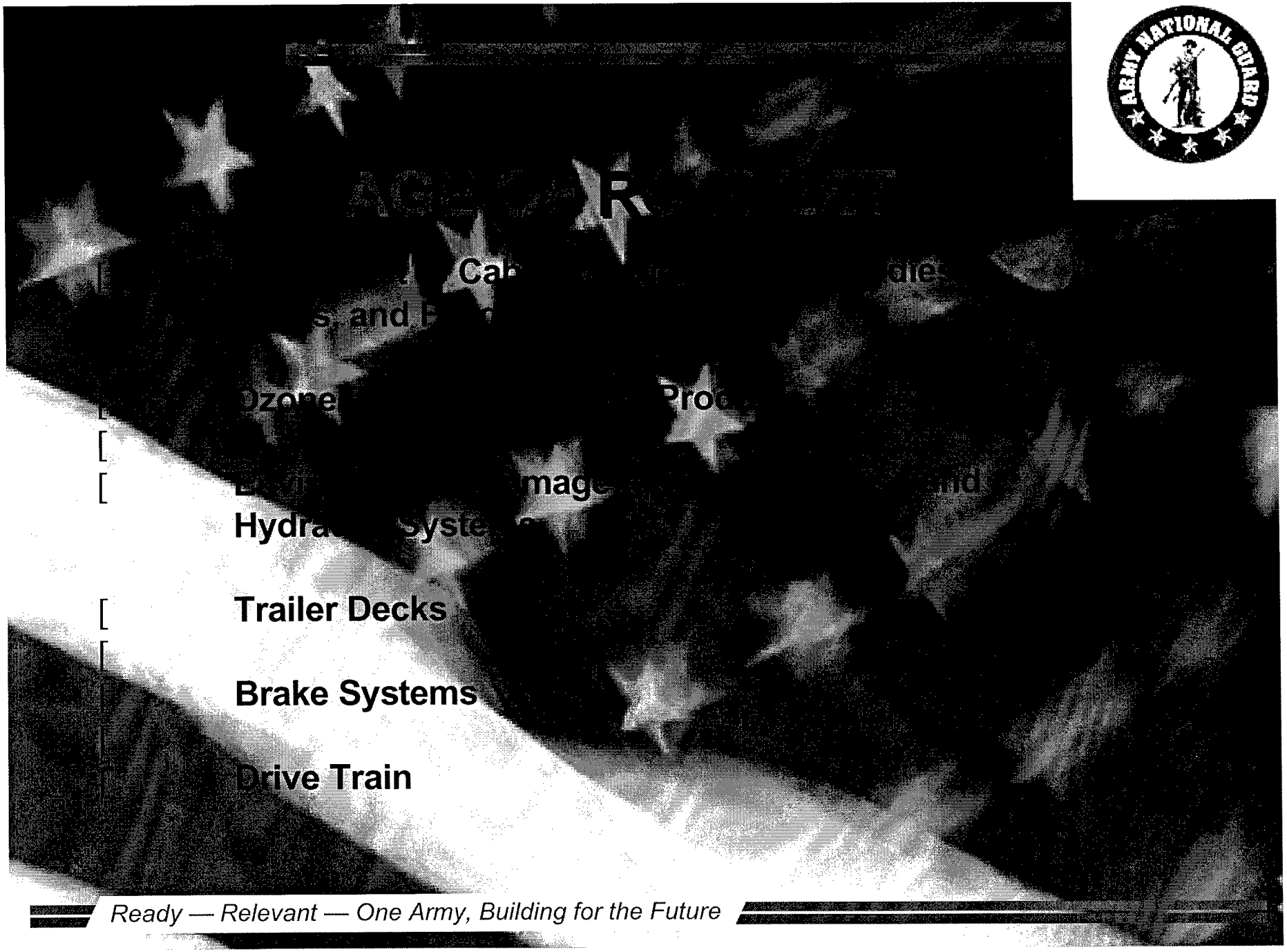

RC CURRENT FORCE
LIGHT FLEET
GREEN
AMBER
AMBER
ASSETS MEET REQUIREMENTS NOT OVER AGE
FP 1& 2 OK OVERAGE
FP 1&2 OK OVERAGE
RC RATING
GREEN - Adequate
Required Operational
- Limited
Required Operational
RED - Required Operational Capability does not Exist
Capability is Insufficient to Defeat the Threat or Provide the Required Support
Capability is Based on Vehicles not Having Exceeded their US


PROCUREMENT
MEDIUM FLEET
AMBER
AMBER
GREEN
FP 1&2 OK
OVERAGE
OVERAGE
GOOD FILL ALL FP
RC 2 1/2Ton Fleet
RC 5 Ton Fleet
FP 1-4 GREEN
- Limited Ca
Required Operational Ca
- Required Operational Capability Does not Exist or
Capability is Insufficient to Defeat the Threat or Provide the
Required Support.
Capability is Based on Vehicles not Having Exceeded their USL

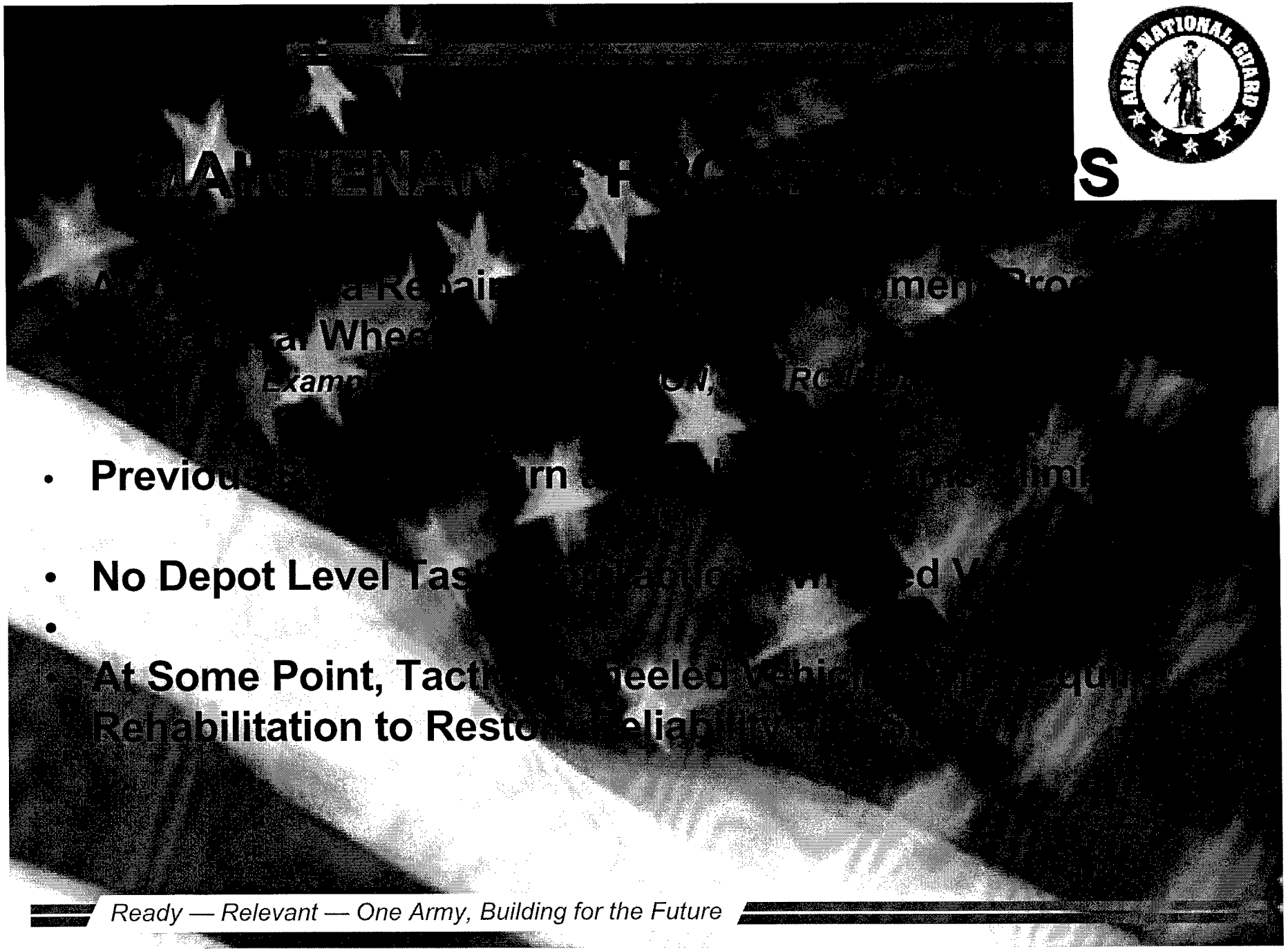

HEAVY FLEET - TACTICAL DESIGN
NEAR-TE
FY 99-0
FAR-T
GREEN
GREEN
GREEN
HEAVY FLEET - COMMERCIAL DESIGN
NEAR-TERM
FY 99-05
AR-TE
GREEN
GREEN
GREEN
AC & RC Heavy Fleets status are the sam
Capability is Based on Vehicles not Having Exceeded their USL



Ready — Relevant — One Army, Building for the Future

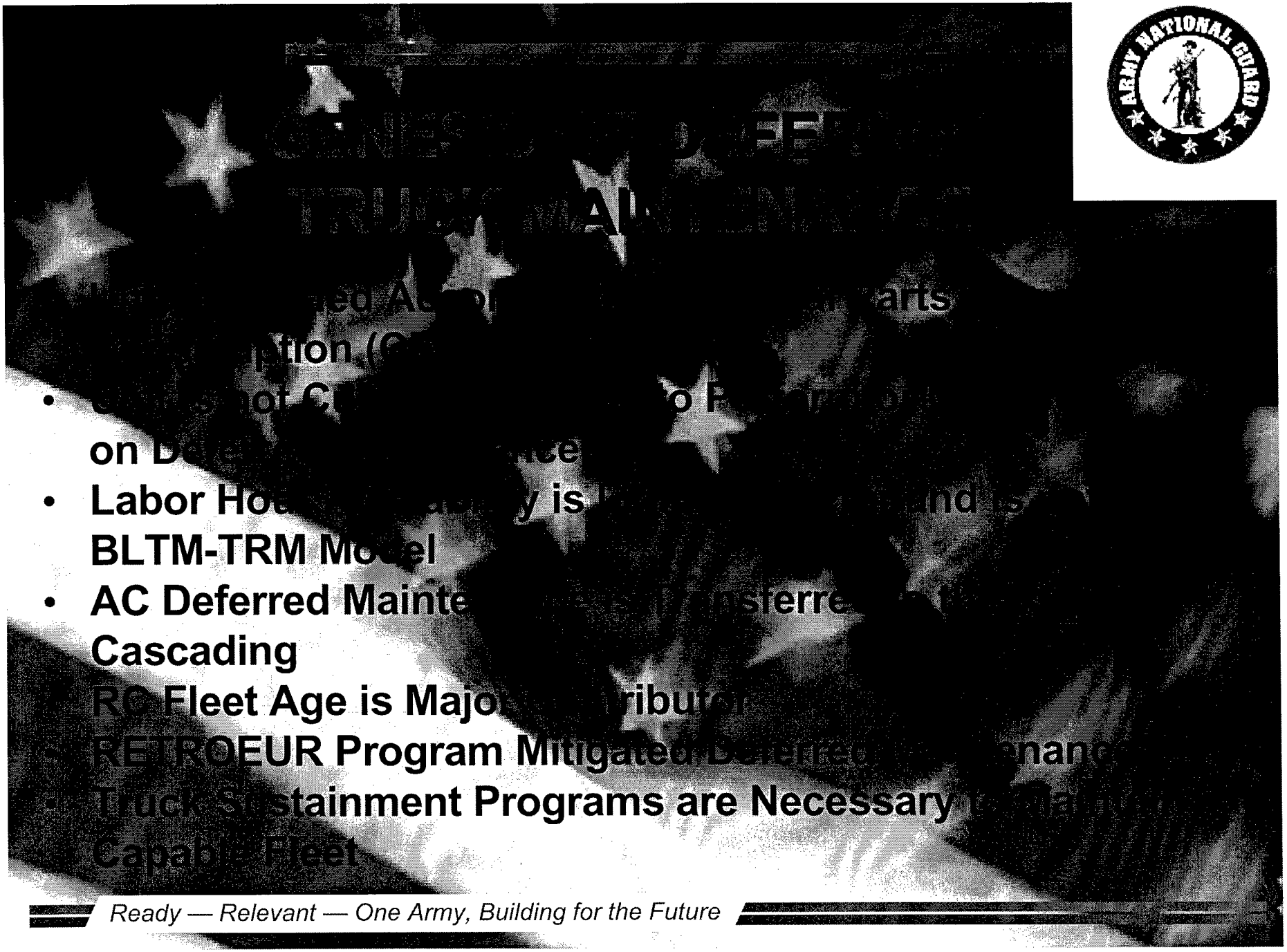


Ready — Relevant — One Army, Building for the Future

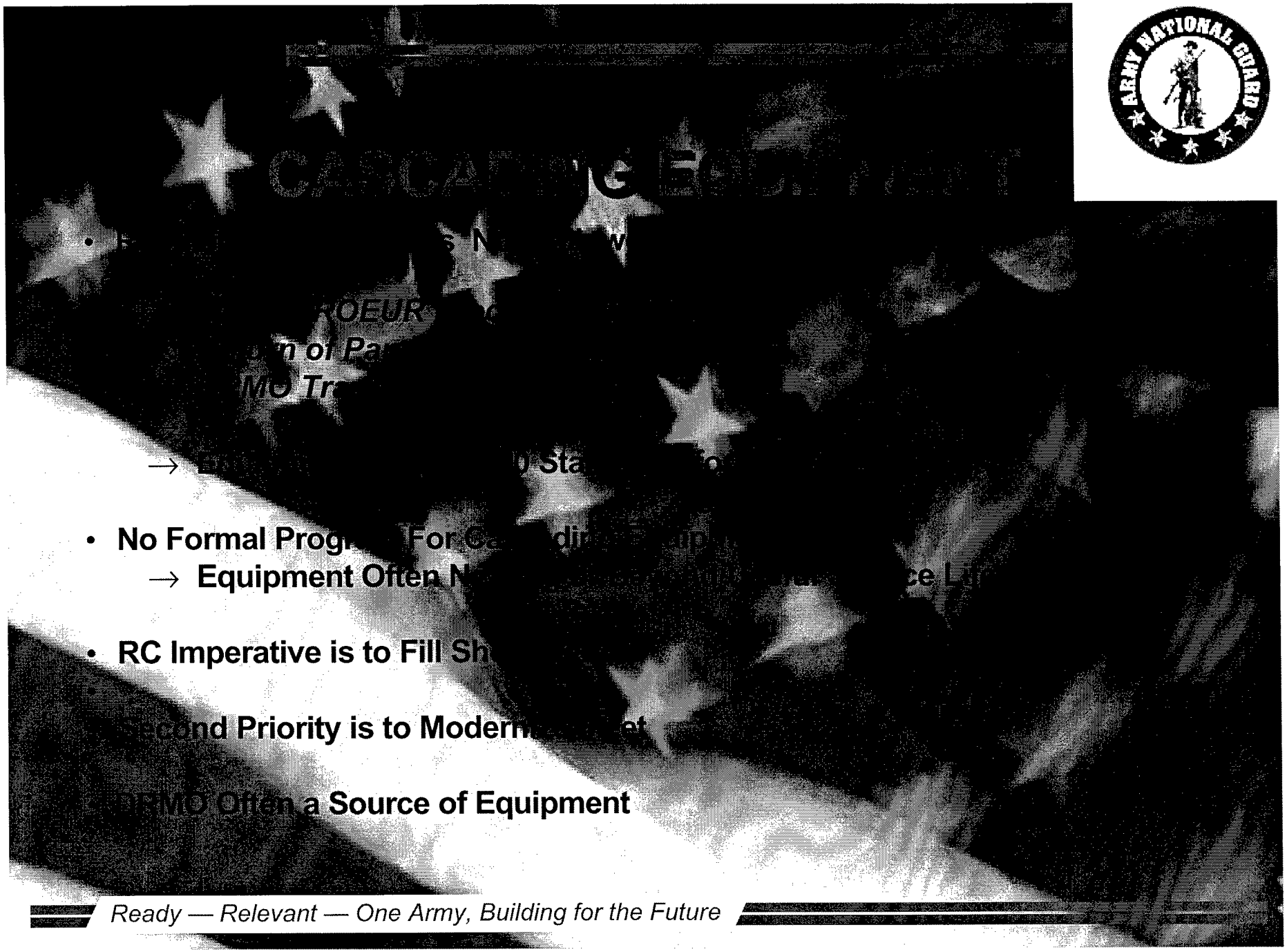


MAINTENANCE [illegible] S

- Previou[illegible]rn
- No Depot Level Tas[illegible]
- At Some Point, Tacti[illegible]
  Rehabilitation to Resto[illegible]

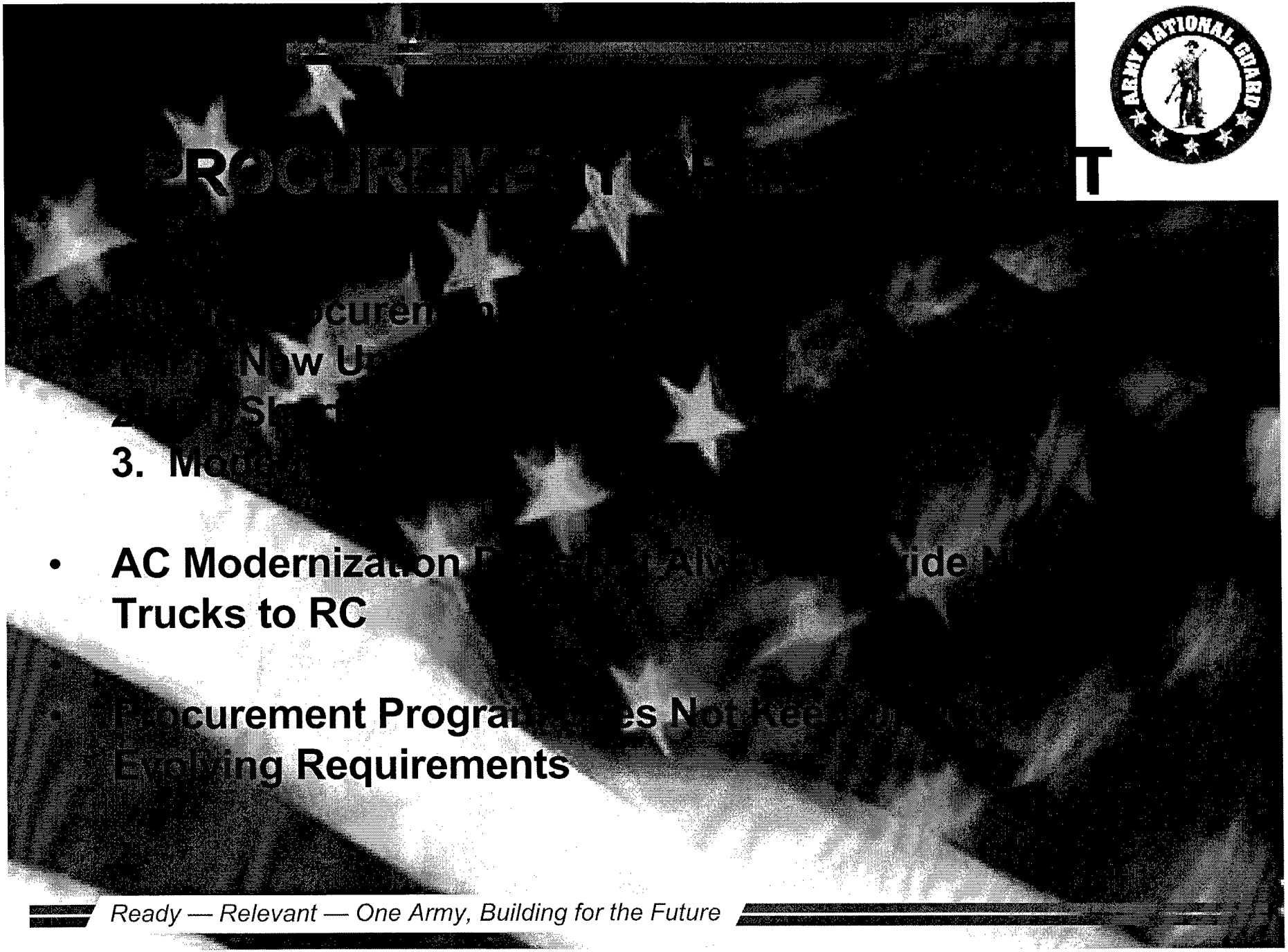


- Labor Hour Data is [illegible] and is [illegible] BLTM-TRM Model
- AC Deferred Maint[illegible] Transferred [illegible] Cascading
- RC Fleet Age is Major [illegible] Contributor
- RETROEUR Program Mitigated Deferred [illegible] Enhanc[illegible]
- Truck Sustainment Programs are Necessary [illegible] Capable Fleet

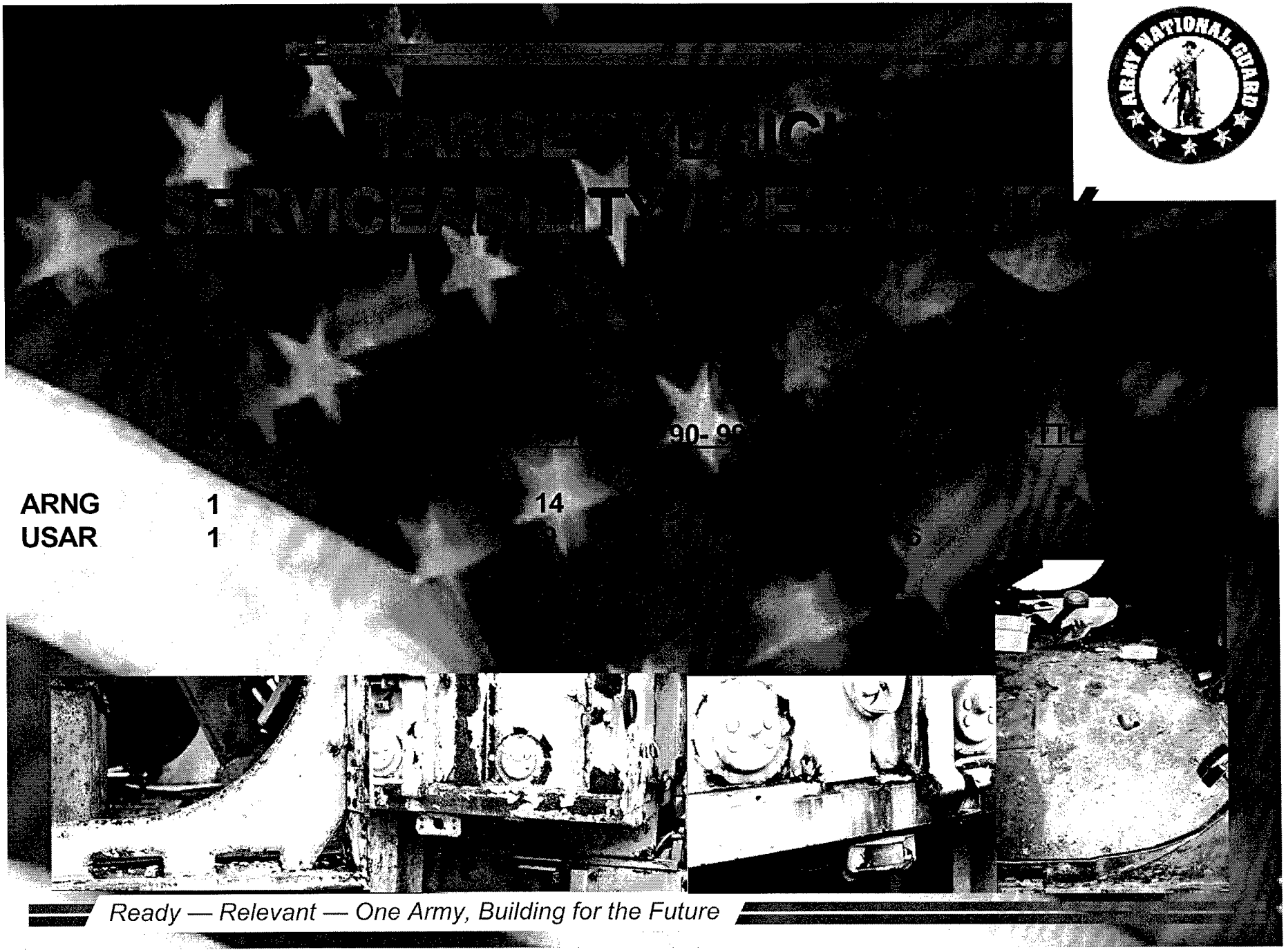


CASCADING EQUIPMENT

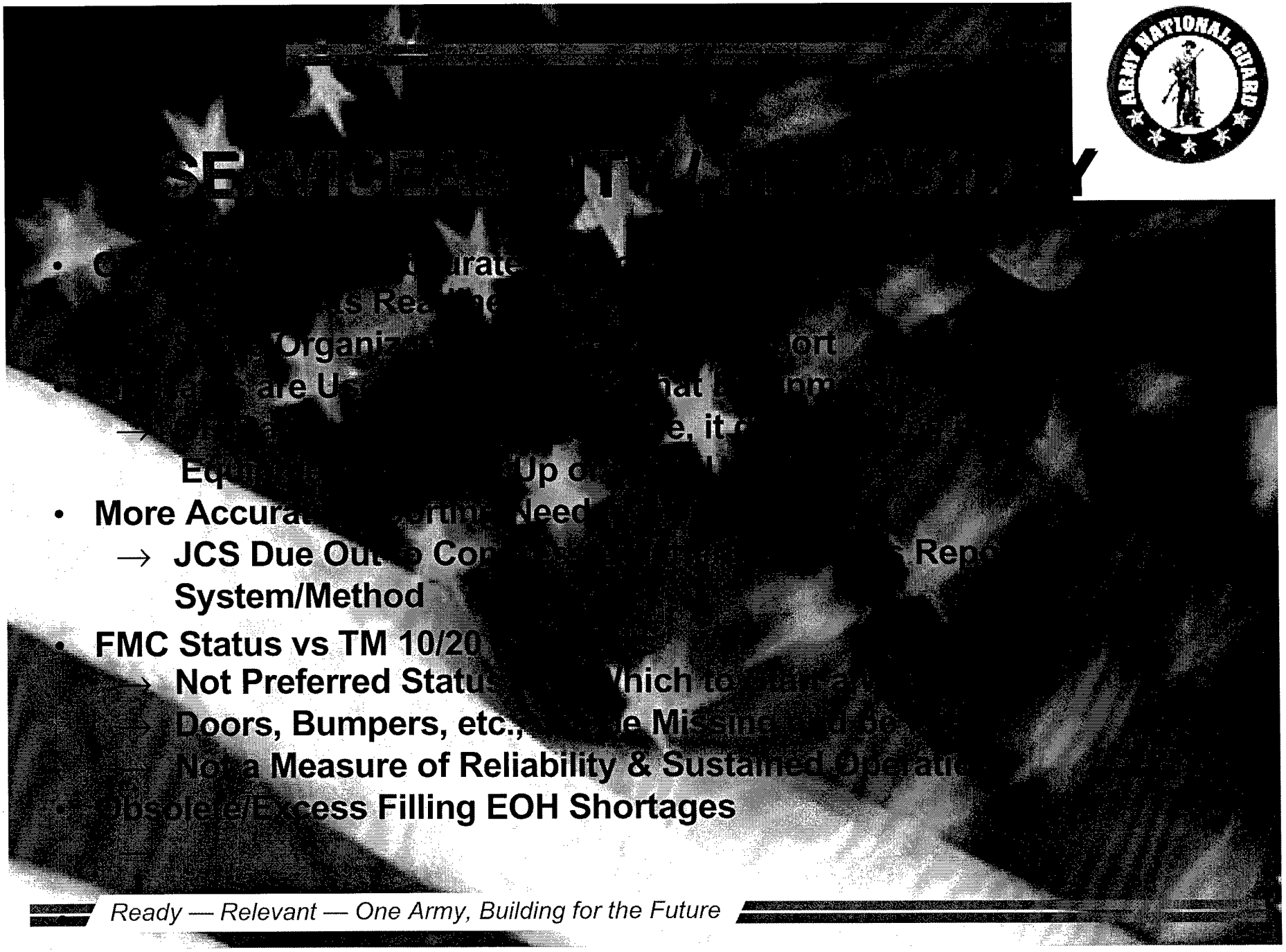
- [illegible] New [illegible]
  - [illegible] EUR[illegible]
  - [illegible] of Pa[illegible]
  - [illegible] MO Tr[illegible]
    - → [illegible] Sta[illegible]
- No Formal Prog[illegible] For Ca[illegible] dir[illegible]
  - → Equipment Often N[illegible] ce L[illegible]
- RC Imperative is to Fill Sh[illegible]
- Second Priority is to Modern[illegible]
- ARMO Often a Source of Equipment



Ready — Relevant — One Army, Building for the Future

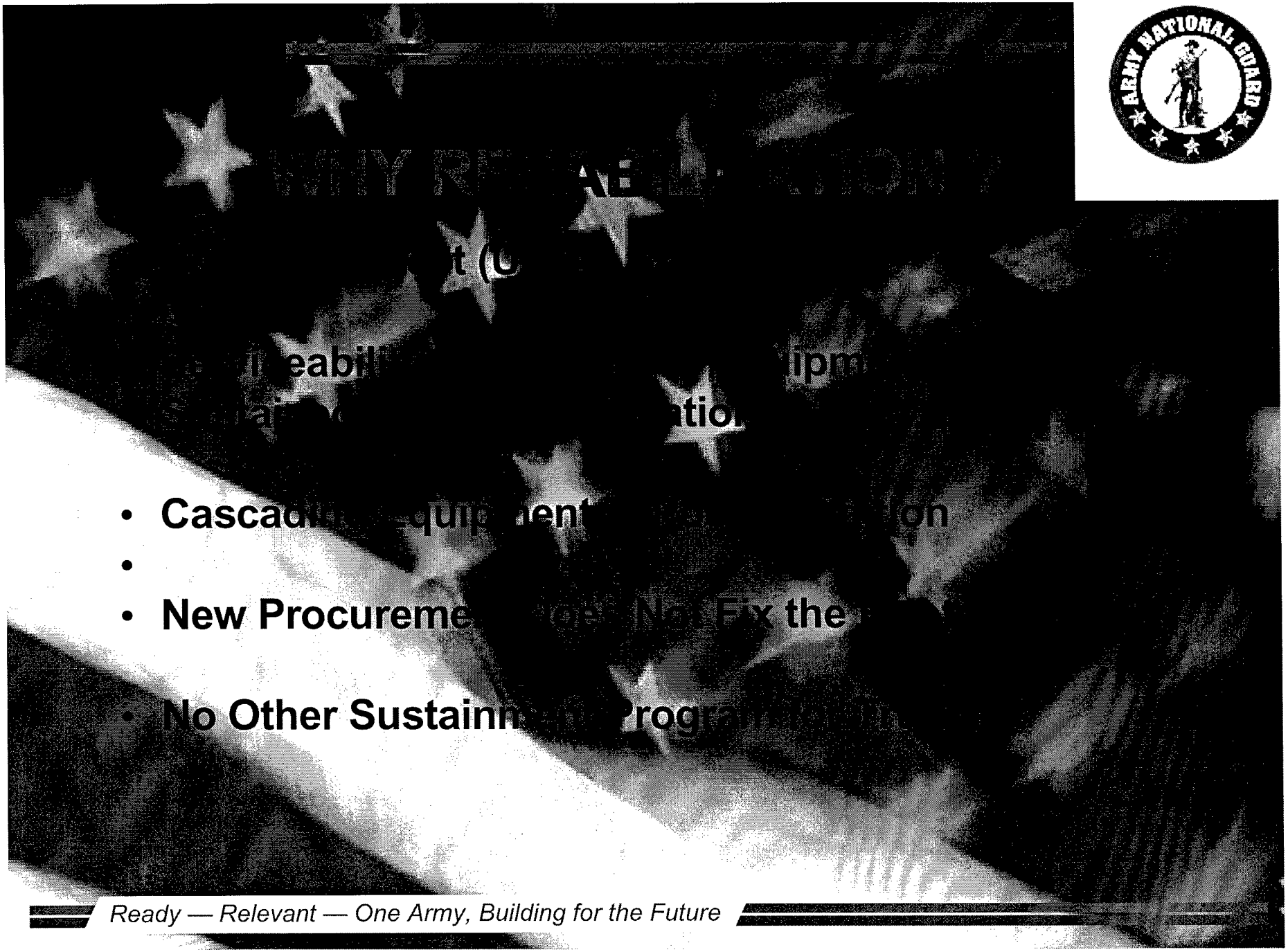


Ready — Relevant — One Army, Building for the Future



- [illegible]
  - → [illegible]
  - → [illegible]
  - → [illegible]
  - → [illegible]
- More Accura[illegible]
  - → JCS Due Out [illegible]
    System/Method
- FMC Status vs TM 10/20[illegible]
  - → Not Preferred Statu[illegible]
  - → Doors, Bumpers, etc.,
  - → Not a Measure of Reliability & Sustained Operati[illegible]
- Obsolete/Excess Filling EOH Shortages

Ready — Relevant — One Army, Building for the Future



- Cascading Equipment
- New Procurement Does Not Fix the
- No Other Sustainment Program


WELCOME NATIONAL

U.S. ARMY RESERVE

1908 - 1998 90 YEARS U.S. ARMY RESERVE

State of the Army Reserve Briefing for the 1999 Tactical Wheeled Vehicles Conference

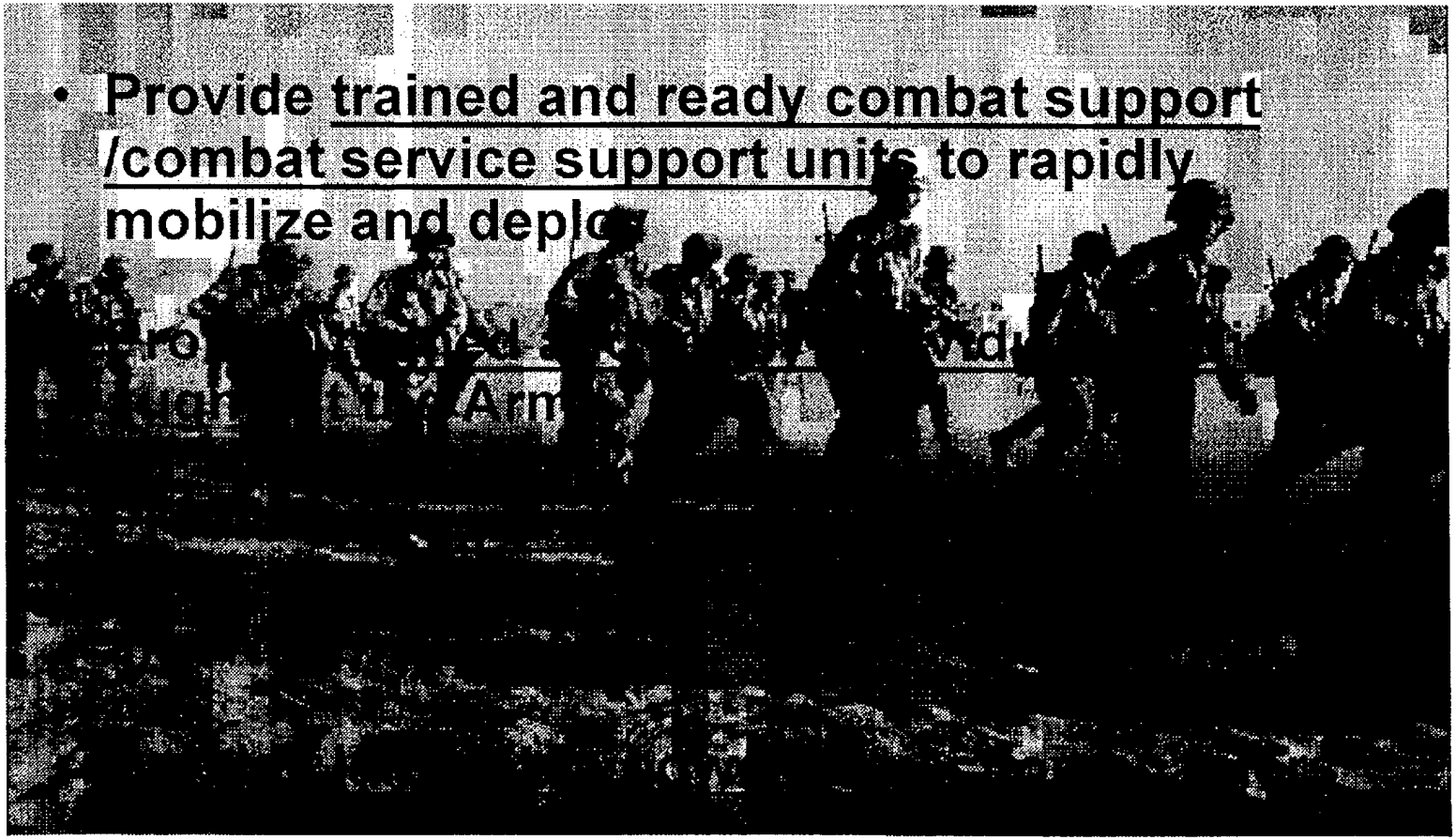


BG James R. Helmly
Deputy Chief, Army Reserve

AGENDA

- Today's USAR Environment
- Tactical Wheeled Vehicles Status
- Initiatives
- Summary

Missions


• Provide trained and ready combat support /combat service support units to rapidly mobilize and deplo

U.S. ARMY RESERVE

AMERICA'S ARMY RESERVE

Engaged Worldwide in Peace - Prepared for War

1908 - 1998 90 YEARS U.S. ARMY RESERVE

Trained and ready
- Combat service support/combat support
- 424 Force Support Package units
- 73% of the RC forces deployed for Bosnia

Power projection
- Transportation Terminal Units
- Garrison support
- Installation medical support



JOINT ENDEAVOR/JOINT GUARD

Training readiness enablers
- Initial Entry Training
- Lane training/battle simulations
- Skill training/professional education/ROTC

Trained soldiers
- Joint Readiness Units
- Individual Mobilization Augmentee
- IRR mobilization pool



FULL SPECTRUM CAPABILITIES

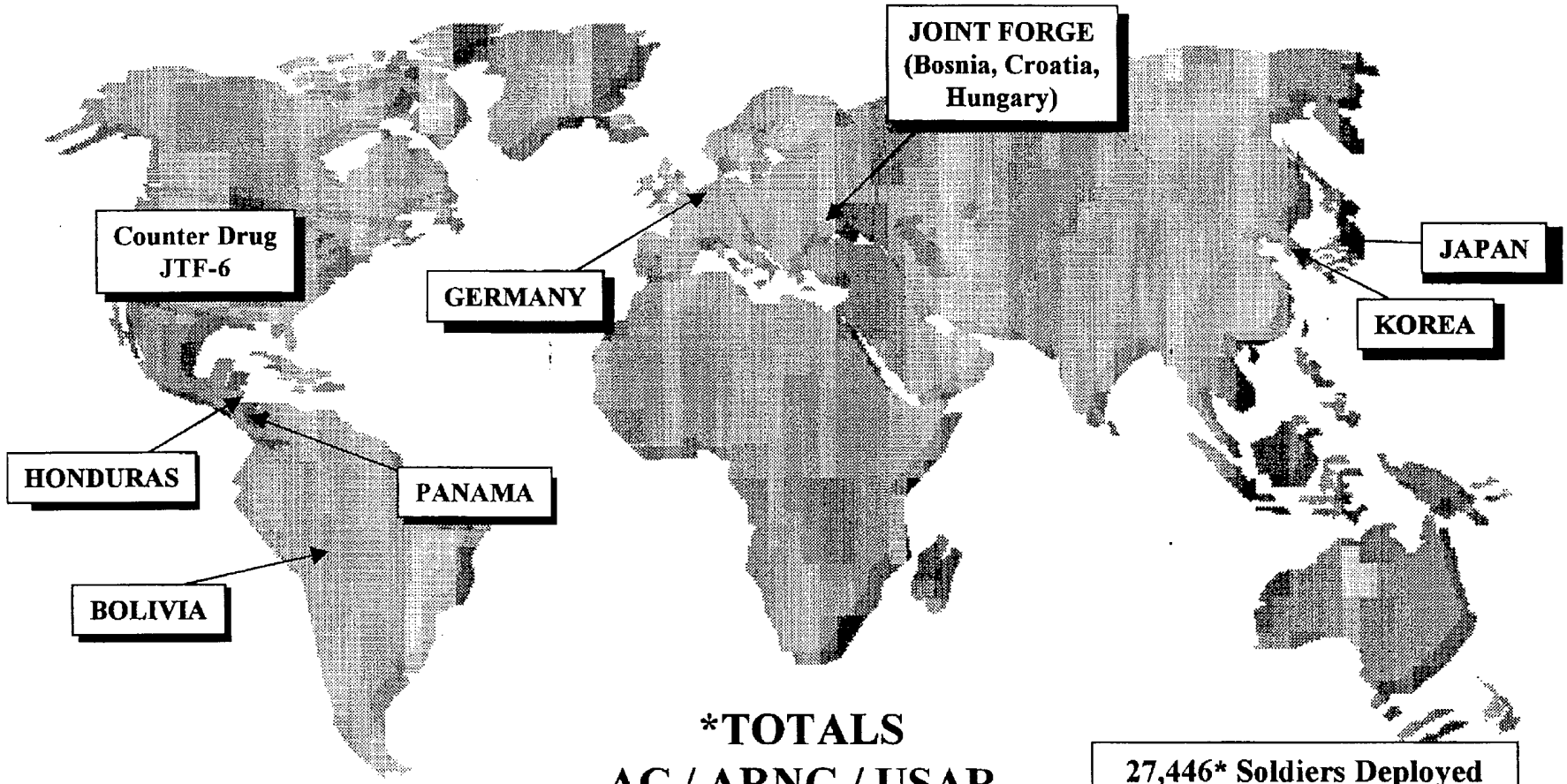
- Fully Engaged
- Ready, Relevant, Reliable
- Unique Capabilities
- Supporting the Nation & America's Army

Forward Presence
Peace Enforcement
Humanitarian Support
Domestic Support/Community Assistance
Partnership for Peace
Overseas Duty Training

U.S. ARMY RESERVE

1908 - 1998 90 YEARS U.S. ARMY RESERVE

Army Reserve OPTEMPO

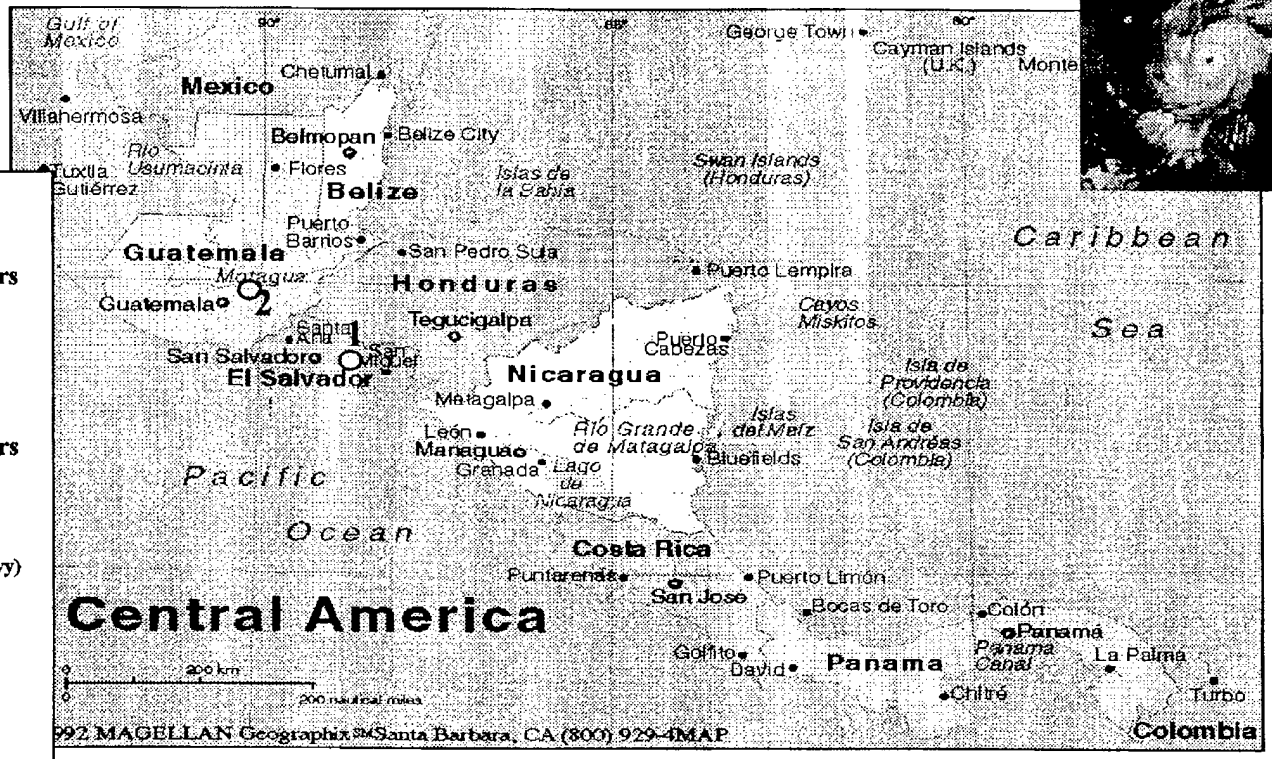


***TOTALS**
AC / ARNG / USAR
23,821 /2,157 /1,468
(As of 21 January 1999)

27,446* Soldiers Deployed on CONOPS or Exercises in 58 Countries.

DISASTER RELIEF
HURRICANE MITCH





USAR TASK FORCES

1 - GUATEMALA

(Approximately 1,500 soldiers from 21 units from March-August 1999)

2 - EL SALVADOR

(Approximately 1,900 soldiers from 26 units from March-August 1999)

- Engineer Battalions (Combat)(Heavy)
- Engineer Companies
  - Combat Support Equipment
  - Dump Truck
  - Bridge
  - Well Drilling
- Military Police Companies (Guard)
- AG Companies (Postal)
- Hospitals (Cbt)(Spt)
- Vetinary Detachments
- Field Services Companies
- Water Purification Teams
- Civil Affairs Teams
- Public Affairs Teams
- Signal Corps Teams
- Direct Support Maintenance Sections
- Direct Support Supply Companies
- Chaplain Teams

MISSION: Plan, organize, and deploy two Task Forces (El Salvador and Guatemala) in support of USCINCSO's disaster relief effort in Central America with a deployment window of 15 Mar 99 through 15 Aug 99.

U.S. ARMY RESERVE

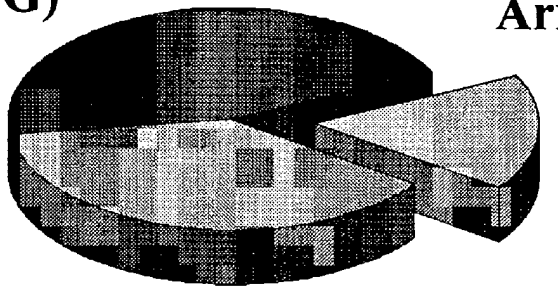
1908 - 1998 90 YEARS U.S. ARMY RESERVE

America's Army in Transition

FY 99 By Component (MTOE ONLY)

National Guard (NG) 45%

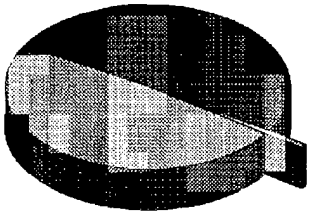
Army Reserve (USAR) 17%



Active Component (AC) 38%

*Cbt

NG 56%



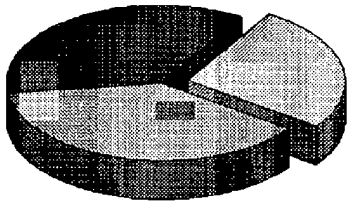
USAR 1%

AC 43%

*Cbt Spt

NG 36%

USAR 26%

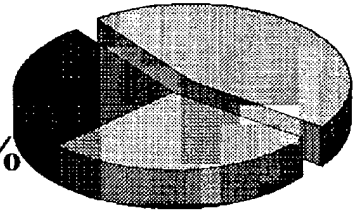


AC 38%

*Cbt Svc Spt

USAR 45%

NG 27%



AC 28%

*MTOE Units Totals Only

SOURCE: SAMAS. MF9812. FY99LOCKED FORCE AS OF 27 JAN 99

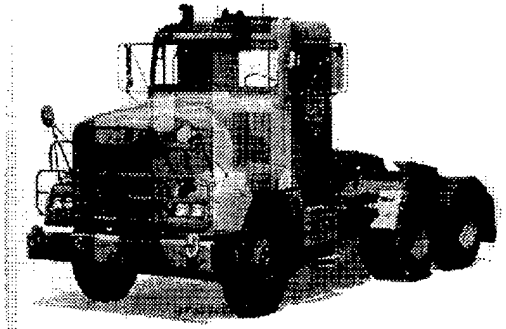
U.S. ARMY RESERVE

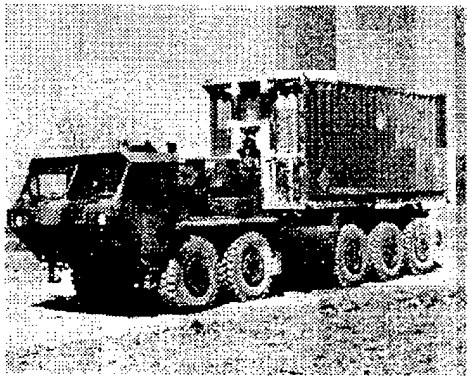
1908 - 1998 90 YEARS U.S. ARMY RESERVE

America's Army's Battlefield Logisticians

USAR Core Competencies
(percent of Total Army assets)

- Petroleum Supply Battalions - 92%
- Railway Units - 100%
- EPW Brigades - 100%
- Chemical Battalions - 75%
- Petroleum Groups - 50%
- Medical Brigades - 85%
- Transportation Groups - 80%
- Water Supply Battalions - 100%
- Motor Battalions - 78%
- Civil Affairs units - 97%









Common USAR Equipment
(Required Unit Equipment)

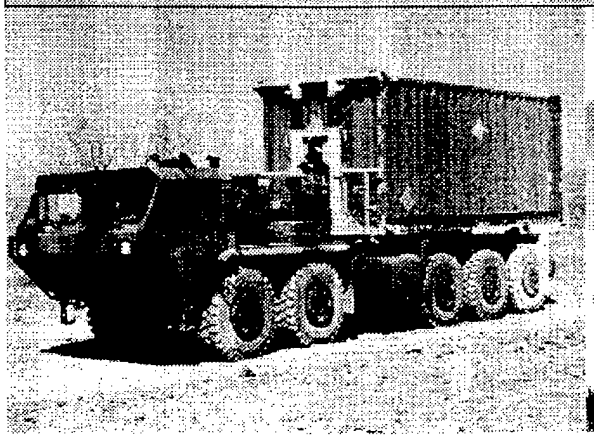
- HETs - 485
- HMMWVs - 10,143
- 5 Ton Trucks - 8,084
- 2 1/2 Ton Trucks - 4,676
- Line Haul Tractors - 2094
- Palletized Load Systems - 711
- HEMTT Wreckers - 339
- 20 Ton Dump Trucks - 456
- Tactical Firetrucks - 79
- HEMTT Common Bridge Trans - 284

Mission Success Requires A Modernized, Well-Maintained, Tactical Wheeled Vehicle Fleet

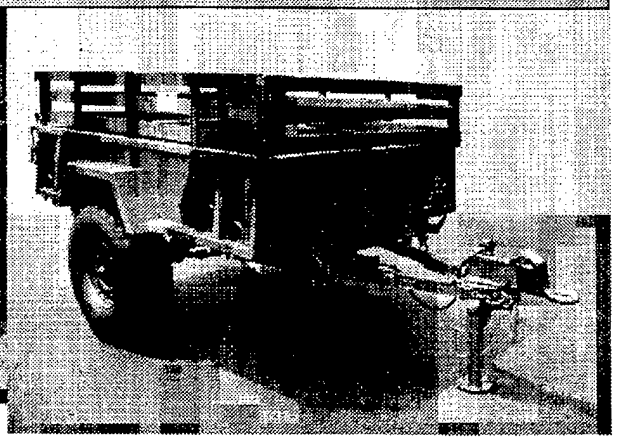




Army Reserve
Tactical Wheeled Vehicles Status



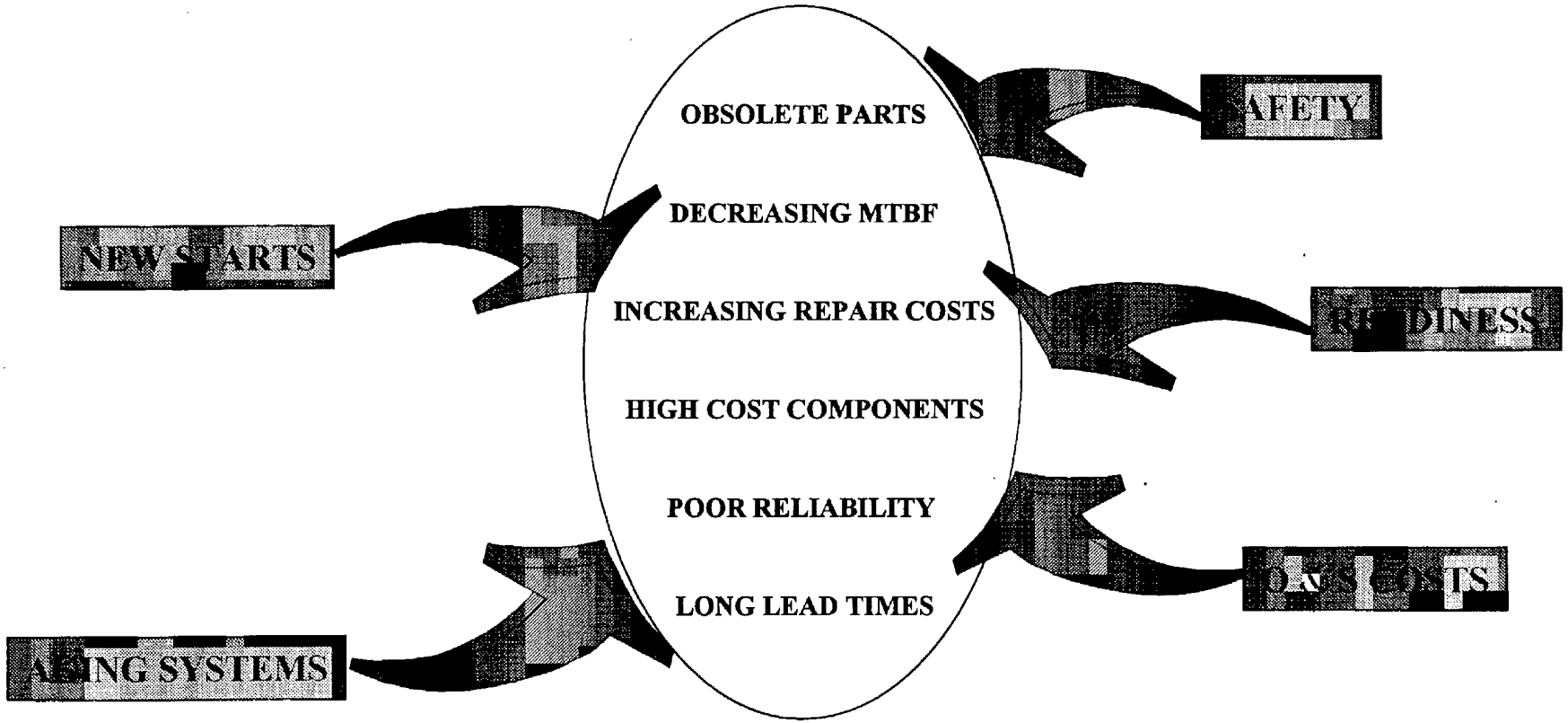




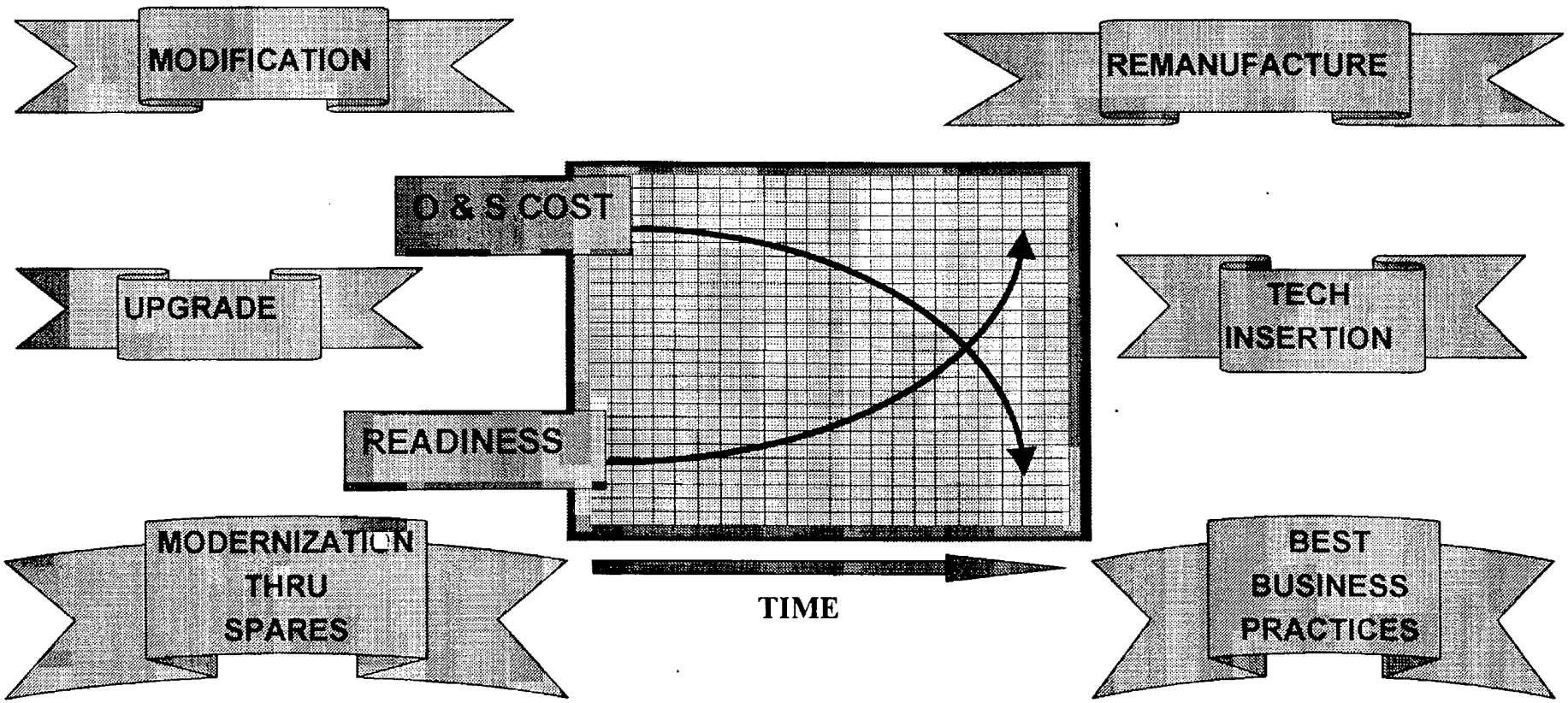
U.S. ARMY RESERVE

1908 - 1998 90 YEARS U.S. ARMY RESERVE

USAR TRUCK FLEET SCENARIO



USAR/INDUSTRY PARTNERSHIP SOLUTIONS



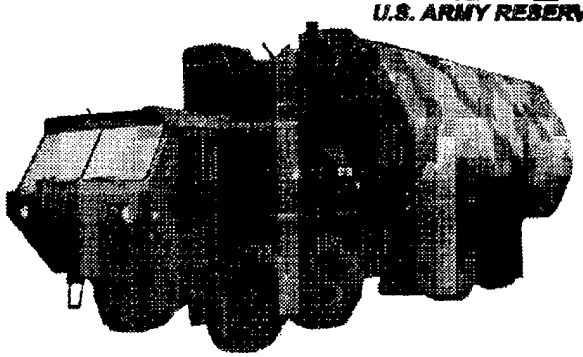
America's Army Reserve ..... the Future Direction

Partnering With The Truck Industry

- REMANUFACTURE
- TECH INSERTIONS
- PRODUCT IMPROVEMENTS
- REPAIR PARTS DISTRIBUTION
- MODERNIZATION THRU SPARES
- NEW BUYS
- PRODUCTION SURGE
- MULTI-USE/PURPOSE VEHICLES
- MILITARY ADAPTATION OF COMMERCIAL MODELS

USAR fielding strategy is tiered to field FP1&2 with new vehicles and remanufacturing the remaining vehicles for the lower tiers.

SUSTAINMENT INITIATIVES



HEMTT Common Bridge Transport (CBT):

	QTY	NEW COST	CONVERSION	COST SAVING
FY95	100	$10,300,000	$8,500,000	$1,800,000
FY96	102	$10,506,000	$8,670,000	$1,836,000
FY97	28	$2,884,000	$2,380,000	$ 504,000
FY98	10	$1,030,000	$ 850,000	$ 180,000
FY99	40	$4,120,000	$3,400,000	$ 720,000

- Army Reserve Has Five MTOE Multi-Role Bridge Companies
- Combines Both Float and Fixed Bridging Into One Unit
- Will Be FSP 1 or 2
- Each Company Authorized 56 CBTs
- HEMTT CBT Is a Pacing Item.
- .USAR Initiated a Program to Convert HEMTTS to the CBTs to Meet Requirement

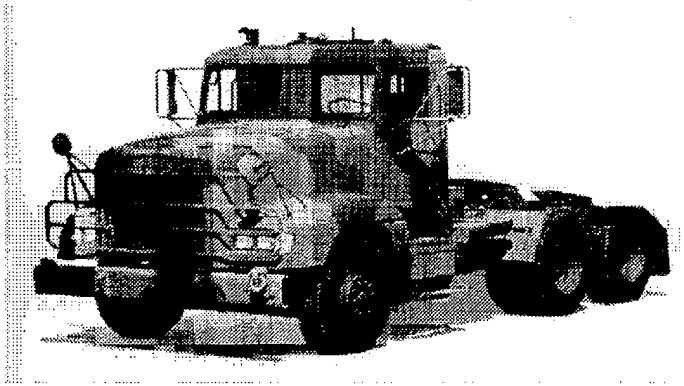
WORK TO BE COMPLETED AT VARIOUS SITES IN U.S. (OSHKOSH, WI)

U.S. ARMY RESERVE

America's Army Reserve

1908 - 1998 90 YEARS U.S. ARMY RESERVE

Working With The Trucking Industry to Break Paradigms



M915 TO M915A4:

FY98	QTY	NEW COST	REFURB	COST SAVING
	2	$ 234,000	$ 169,000	$ 65,000
FY99	60	$7,020,000	$5,070,000	$1,950,000

Tactical Wheeled Advanced Technology Demonstrator--Proven Performance:

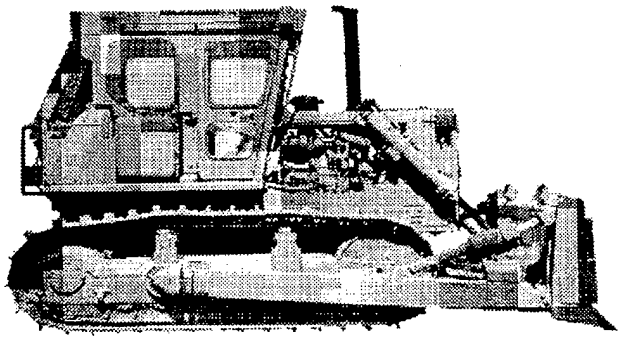
- Army Reserve Force XXI Contribution
- Showcased Potential Applications of Emerging Technologies
- Decreased Costly Vehicle Life Cycle Maintenance
- Enhanced Crew Performance and Safety
- Developed Smart Business Practices

Safety Package
Electronic Stroke Alert
Collision Avoidance System
Heads-Up Display

Efficiency Package
Dial your Oil Change
Never Lo Oil System
Prelube Starter

Enhancement Package
Muffler Silencer
Preheat System
Rust Protectant

OTHER INITIATIVES



D7F Dozers:

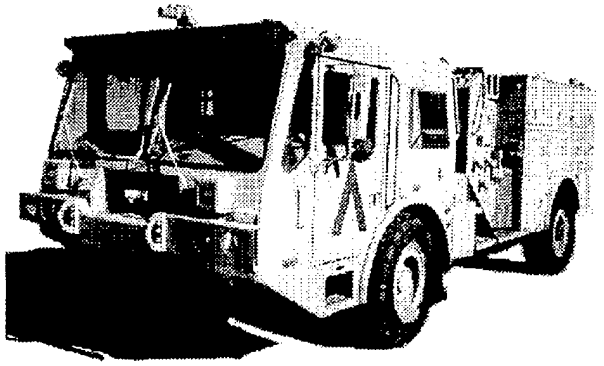
	QTY	NEW COST	REFURB	COST SAVING
FY96	151	$36,240,000	$12,042,000	**$24,198,000**
FY97	73	$17,520,000	$ 5,822,000	**$11,698,000**
FY98	6	$ 1,440,000	$ 418,600	**$1,021,4000**

USARC Conducted Comprehensive Inspection and Analysis of the Total USAR D7F Fleet.

- **TACOM/Partners in Industry Designed and Implemented a Total Rebuild Program.**
- **Took Broken Down System, Refurbished It, Returned New System-With a New Warranty.**
- **230 of the USAR D7F Fleet Has Been Refurbished.**

WORK TO BE COMPLETED AT VARIOUS CATERPILLAR SITES IN U.S. (IL, WI, AL, SC, IA, NY, MI, AK, PA, CA, FL, MA, VA, NM, KY, MD, AR, PR, OK, MN, CO)

FUTURE INITIATIVES



Fire Truck Assessment:

FY99	QTY	EST NEW COST	EST GLIDER COST*
	75	$26,250,000	$15,000,000

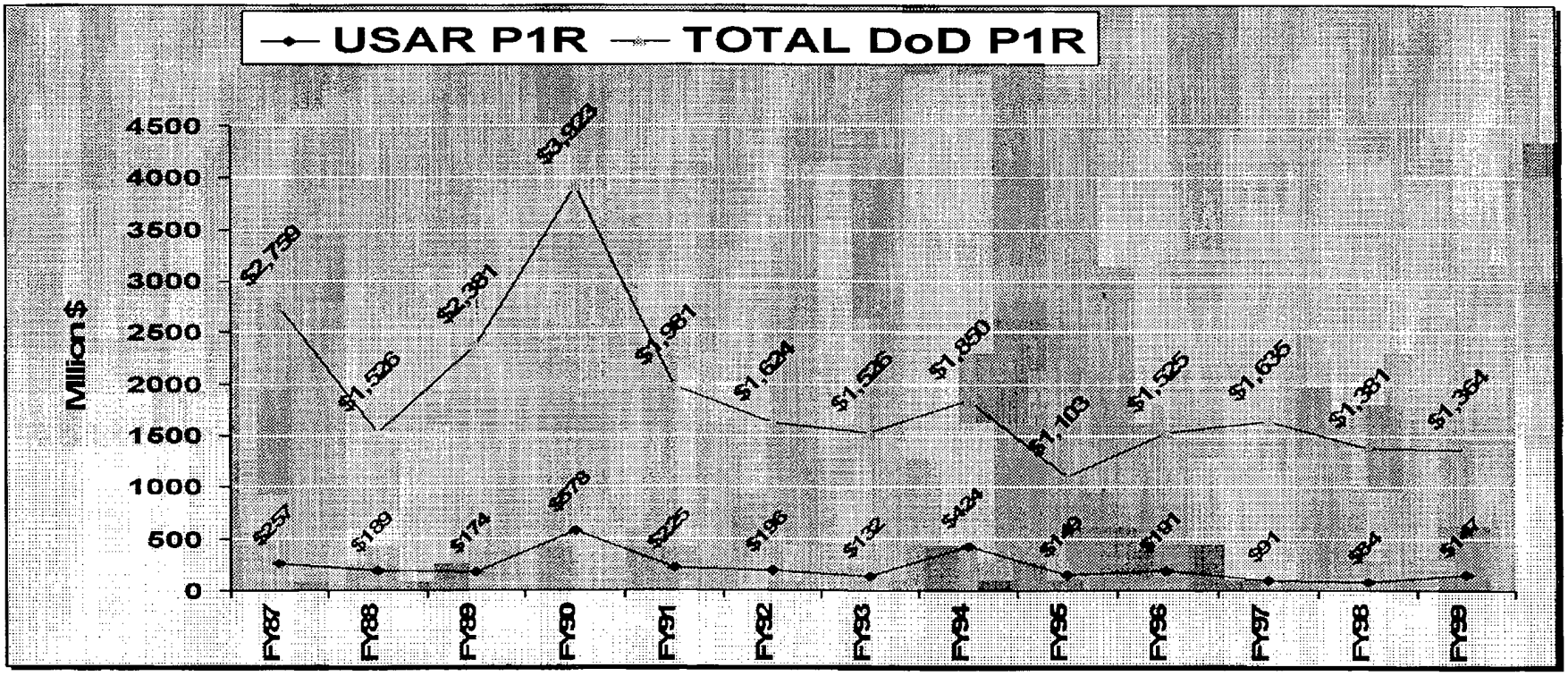
- **Industry Partner Conducted Comprehensive Inspection and Analysis of the Current Army Reserve MAC I Fire Trucks.**
- **Objective to Identify and Document Any Major Safety or Operational Problems and Shortfalls.**
- **Visited 13 Sites, Major Manufacturers, and Interfaced With Users and TACOM.**
- **Recommendations Provided for Best Method of Overcoming the Problems and Shortfalls.**
- **Options Include IROAN Program, Gliding the Fire Trucks, Partial Upgrades, or Buying New Vehicles. Decision Pending.**
- **DA Prepared to Buy HEMTT Firetrucks for USAR.**

***Gliding Firetruck would require retaining the chassis and axles**

U.S. ARMY RESERVE

1908 - 1998 90 YEARS U.S. ARMY RESERVE

Reserve Components Procurement Exhibit (P-1R)



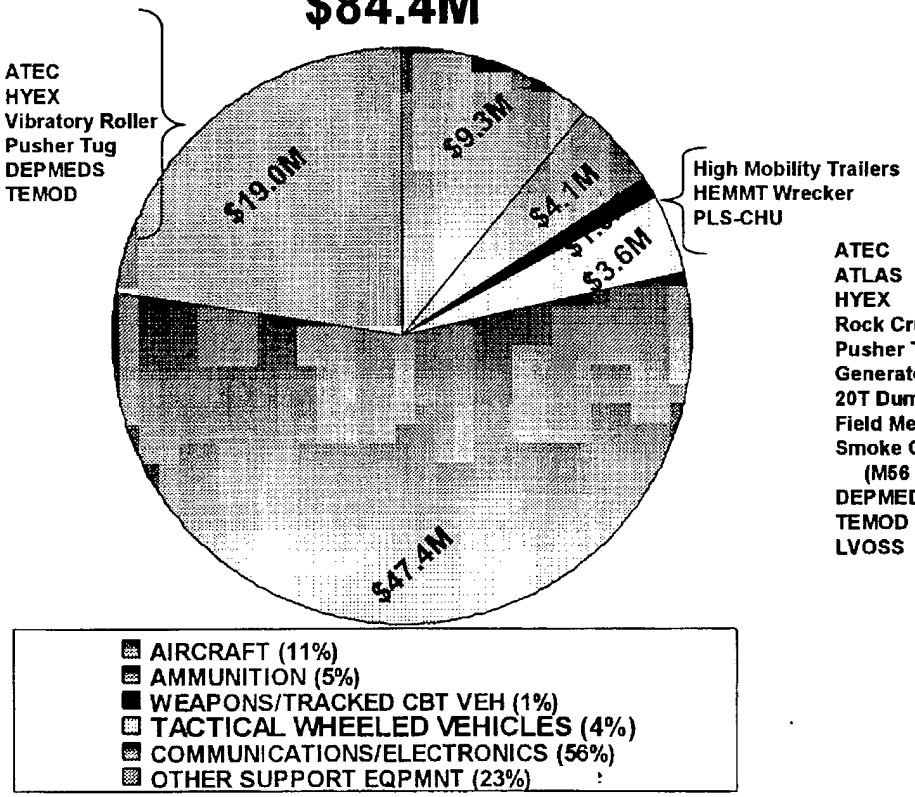
The Reserve Components Procurement Exhibit (P-1R) is a subset of the Department of Defense Procurement Programs (P-1) exhibit and reflects the Service estimate for those funds which will be used to procure equipment for the National Guard and Reserve. (Does not include NGREA or Congressional Adds.) The P-1R is only a snapshot of a point in time. Fiscal resources, programmatic, and priority changes may have revised data shown above.

U.S. ARMY RESERVE

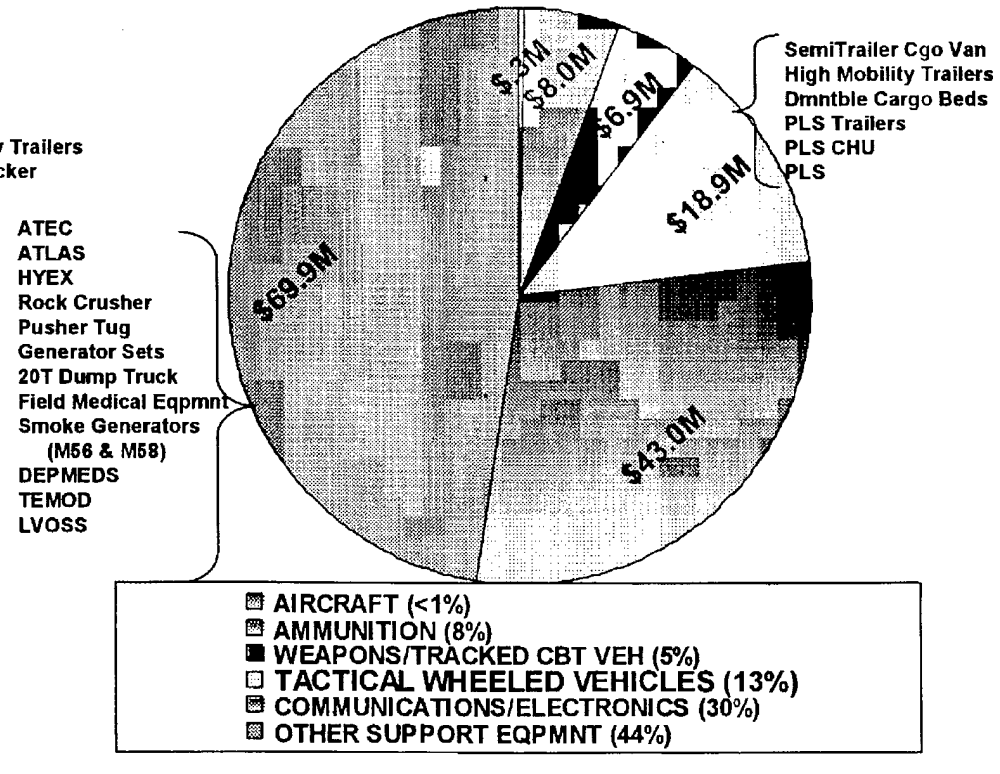
1908 - 1998 90 YEARS U.S. ARMY RESERVE

PRESIDENT'S BUDGET
P1R

FY98 P1R
$84.4M

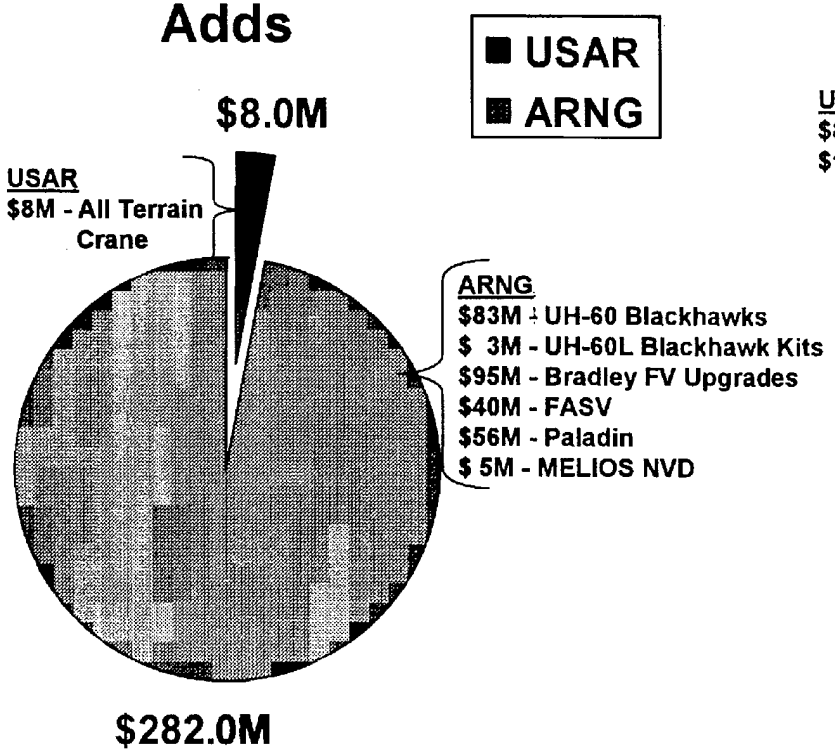


FY99 P1R
$147.0M



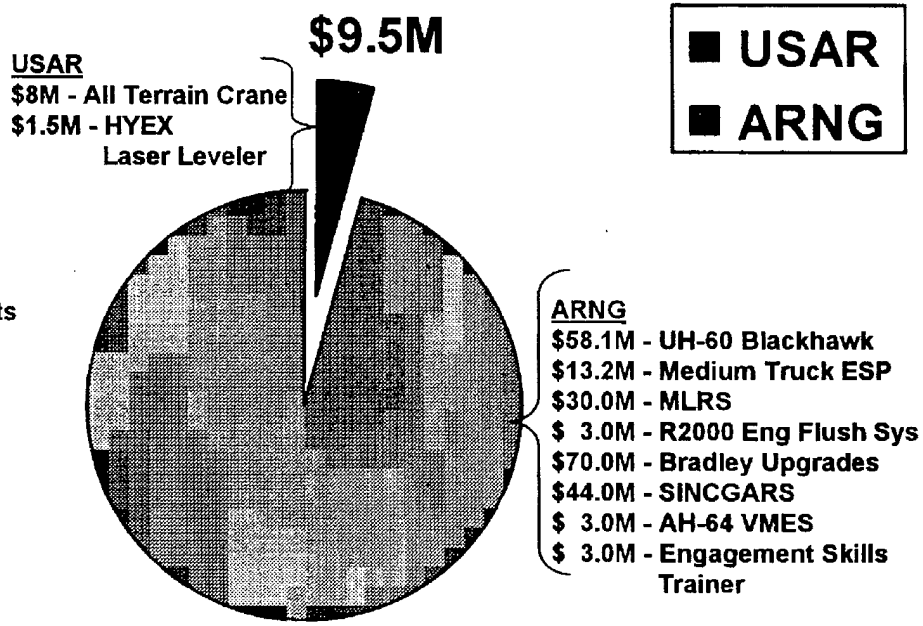
CONGRESSIONAL ADDS

FY98 Congressional Adds



$282.0M

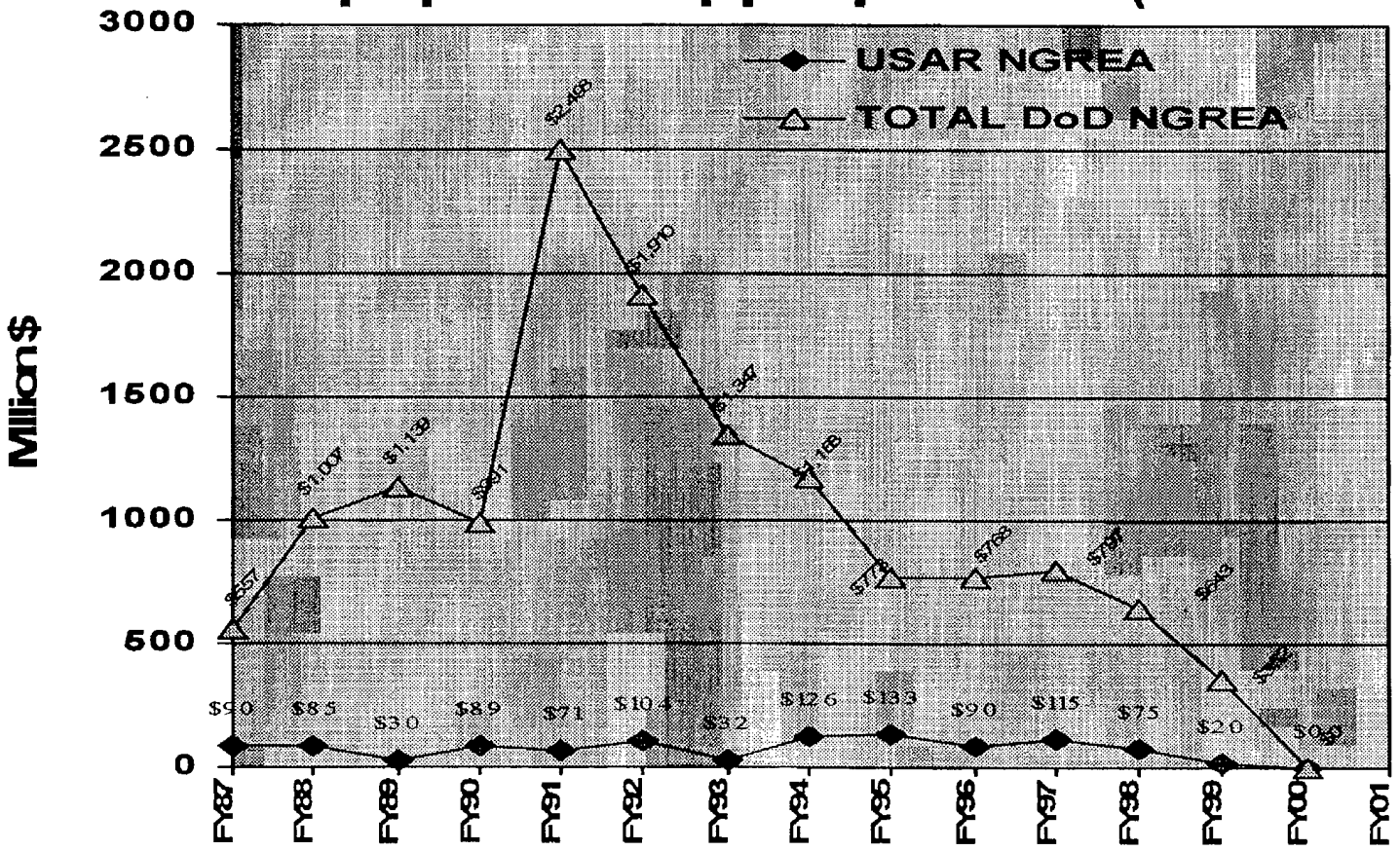
FY99 Congressional Adds



$224.3M

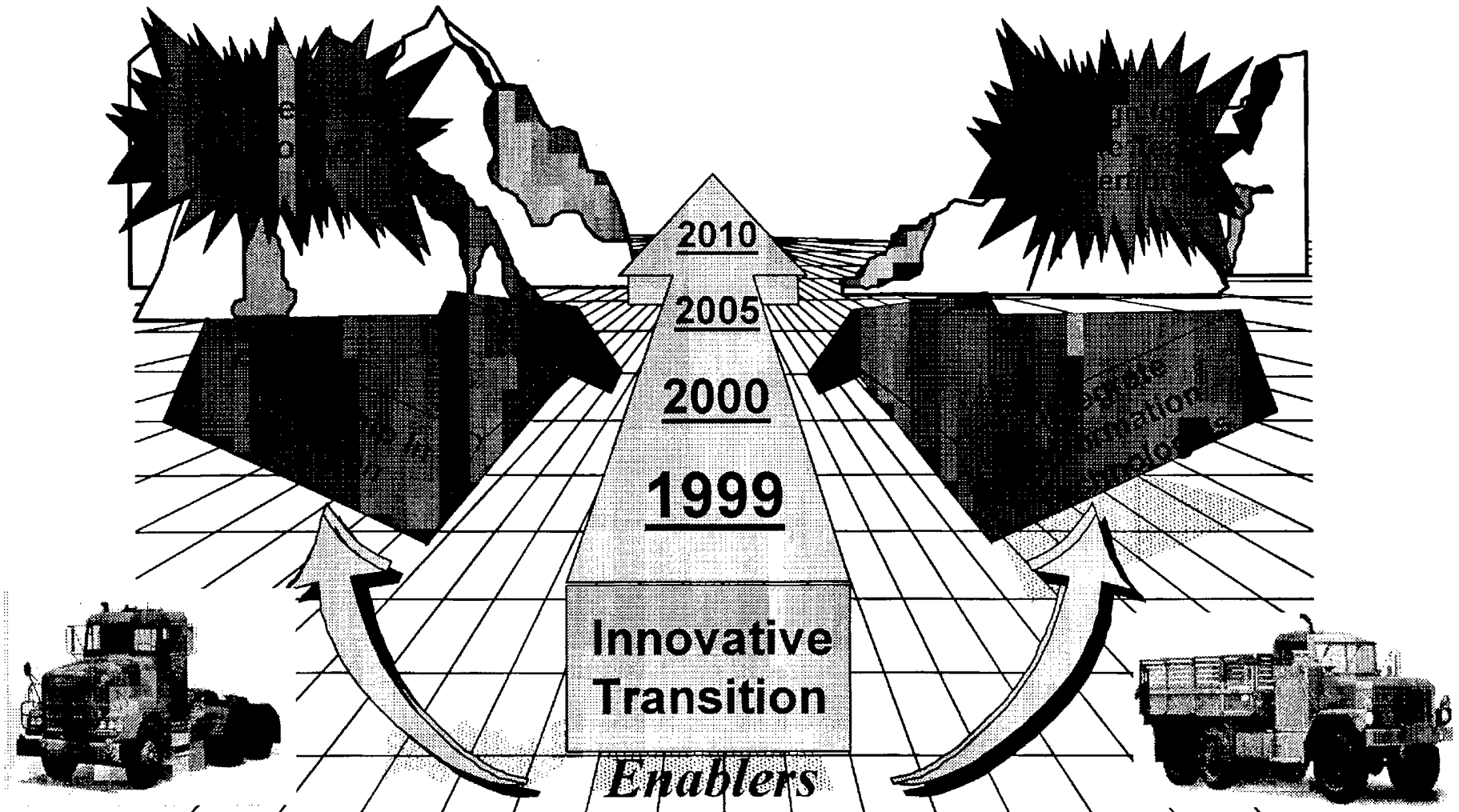
CONGRESSIONAL ADDS ARE COMBAT ARMS AND COMBAT SUPPORT ORIENTED

National Guard & Reserve Equipment Appropriation (NGREA)



Long ... exp... DoD ... DA to fund Reserve Component Equipment P... ent ... NGR... ...ining NGREA reduces the flexibility needed to p... pro... equip... ...tion.

What We Need From Industry



The USAR's Future Is In Partnership With Industry

America's Army Reserve

A value-added leader in America's Army and the Nation ...

... trained, ready, and relevant ... enabling the Army in peace and war to achieve total victory.



"Mission first, soldiers always"


GEN Wilson
ARMY
MATERIEL
COMMAND
Tactical Wheeled
Vehicle Conference
1 February 1999
AMERICA'S
ARSENAL FOR THE BRAVE
Relevant, Responsive & Ready!

The Army's Materiel Command



Strategic Intent: "To Be the Army's Materiel Command... Relevant, Responsive, and Ready!"

The Army Vision

The World's Best Army, a full spectrum force – trained and ready for victory. A Total Force of quality soldiers and civilians.

- ✔ A values-based organization
- ✔ An integral part of the Joint Team
- ✔ Equipped with the most modern weapons and equipment the Country can provide
- ✔ Able to respond to our Nation's needs
- ✔ Changing to meet the challenges of today...tomorrow...and the 21st Century

"Soldiers Are Our Credentials"

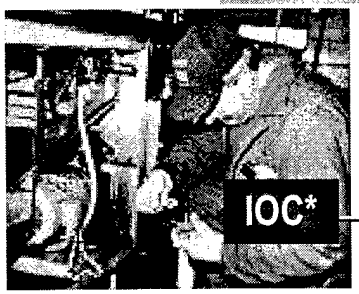
The AMC Vision

"The Leader in *equipping* and *sustaining* America's Army through *superior technology* and *responsive support* assuring worldwide power projection and decisive victory."

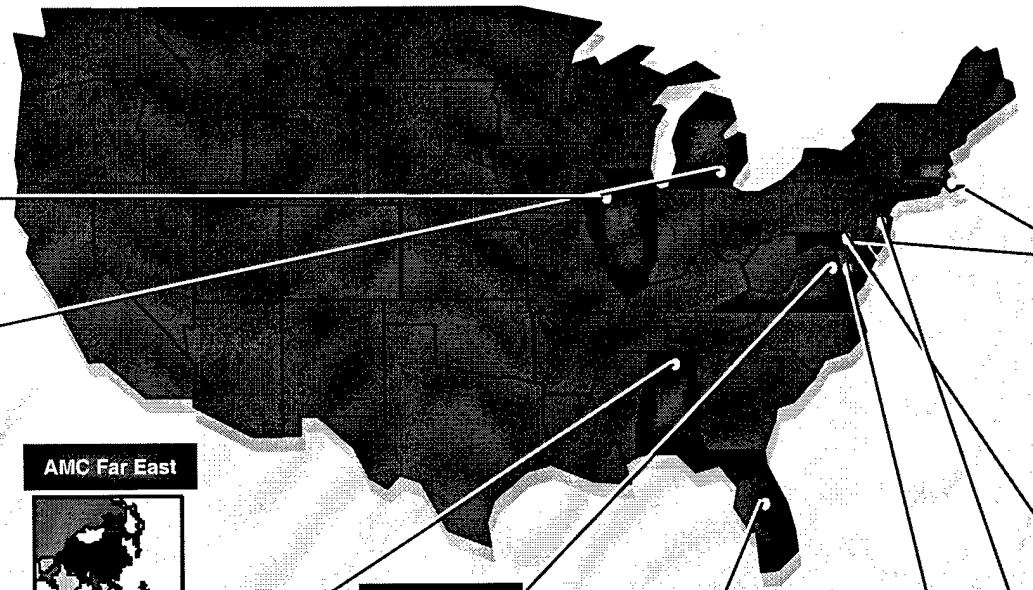
"America's Arsenal for the Brave"

1399.Tact -2 01/29/99

America's Arsenal For The Brave



IOC*





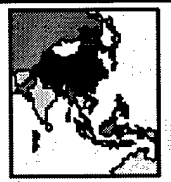
SBCCOM*

TACOM

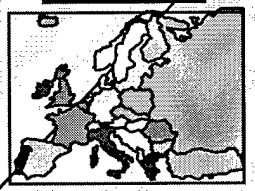




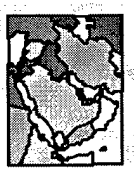
AMC Far East



AMC Europe

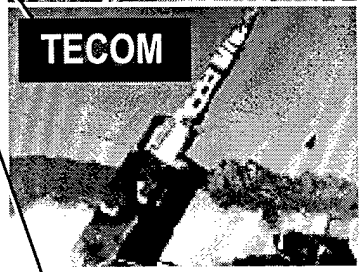


AMC Saudi Arabia (PM SANG)

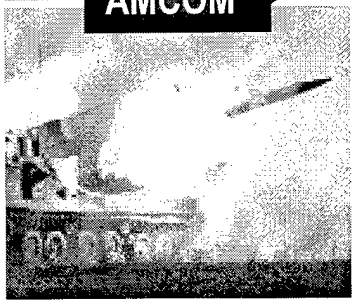




TECOM



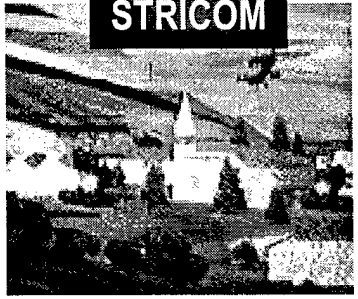
AMCOM



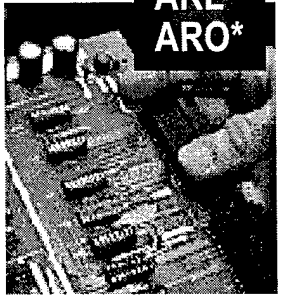
USASAC



STRICOM



ARL*
ARO*



CECOM



* Major Restructure on 1 October 98

AMC Business Includes

Ammunition Wholesale Stockpile

Total: 3.2 Million Tons

$22.4B Conv Ammo
$10.8B Missiles
$33.2B Total

FY98* Expenditures

$19.5 Billion

$8.0B Direct

$11.5B Reimbursable from Non-AMC Customers/FMS

*Awaiting Final FY98 Figures

Inventories

$7.27 Billion

(Wholesale Secondary Items)

Requisitions Processed

1.2 Million Army
6.8 Million DLA

(Secondary Items)

$3.4B Sales $1.2B Credits



People

58,158 Civilians
2,714 Military
200,000+ Family Members

Research, Development, & Acquisition

17	AMC R&D Labs
9	Test Centers/Ranges
120+	College/Universities
74%	of Army S&T Funds
40%	of Army RDA Funds
148	Patents
371	ACAT I-IV Programs

Depot Maintenance

$1.7 Billion FY98

Contracting (FY98)

>24K Actions (>$25K each)
82% Productivity (Qty)
47% Productivity ($$$)

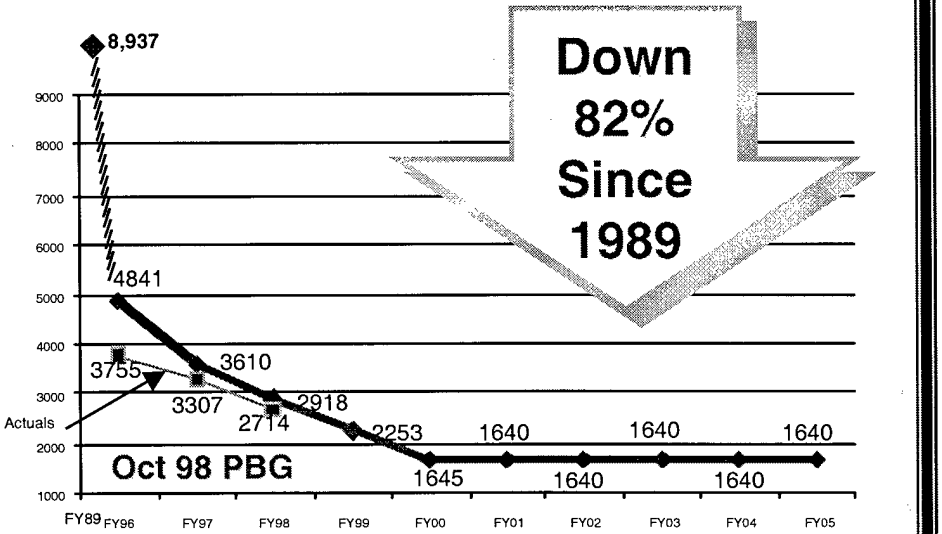
Outsourcing Trend (FY98)

Depot Maintenance 35%
Tech Base 67%
BASOPs 28%

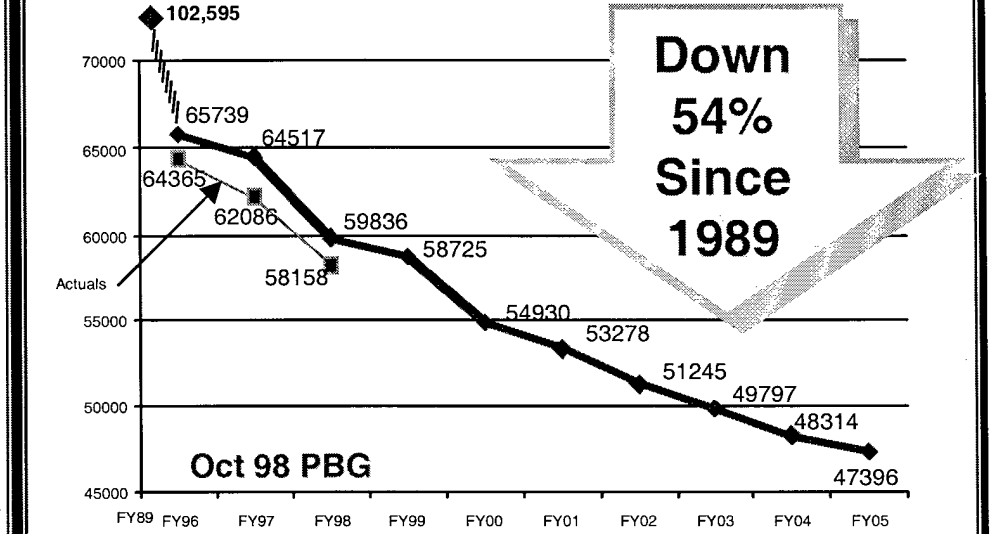
1399.Tact -4 01/29/99

AMC's Manpower Targets

Military



Civilian



Current Program Budget Guidance Calls for:

- Eliminating 1,074 (or 39.5%) of Soldiers Between End FY98 and FY01
- Eliminating 10,762 (or 18.5%) of AMC Civilian Workforce Between End FY98 and FY05

Retirement Eligible:
1989: 15%
2004: 50%

Average Age of AMC Workforce:
1989: 42.1
Today: 47.0

1399.Tact -5 01/29/99

AMC Today – And Into the Future – Means...







Logistics Power Projection

Technology Generation/ Application

Acquisition Excellence

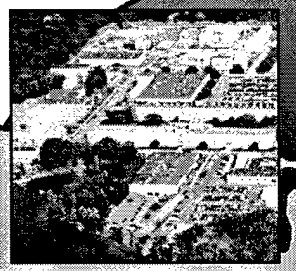
Information Technology
- A Key Enabler -

Generate Warfighting Capability...One-of-a-Kind Integrator...Capital Asset

1399.Tact -6 01/29/99

Logistics Power Projection

Shifting Focus from Stockpiles in Theater to Power Projection of Mobil Stocks



CONUS BASED ARMY

...Sealift

Now...13 2001...16

...Airlift

Now...47 2006...120

- LOGCAP
- APS
- Wholesale Log Mod
- ISM
- Single Stock Fund

WORLDWIDE DEPLOYMENT REQUIREMENT

1399.Tact -7 01/29/99

Army Pre… Stocks (APS)
– Geograp…

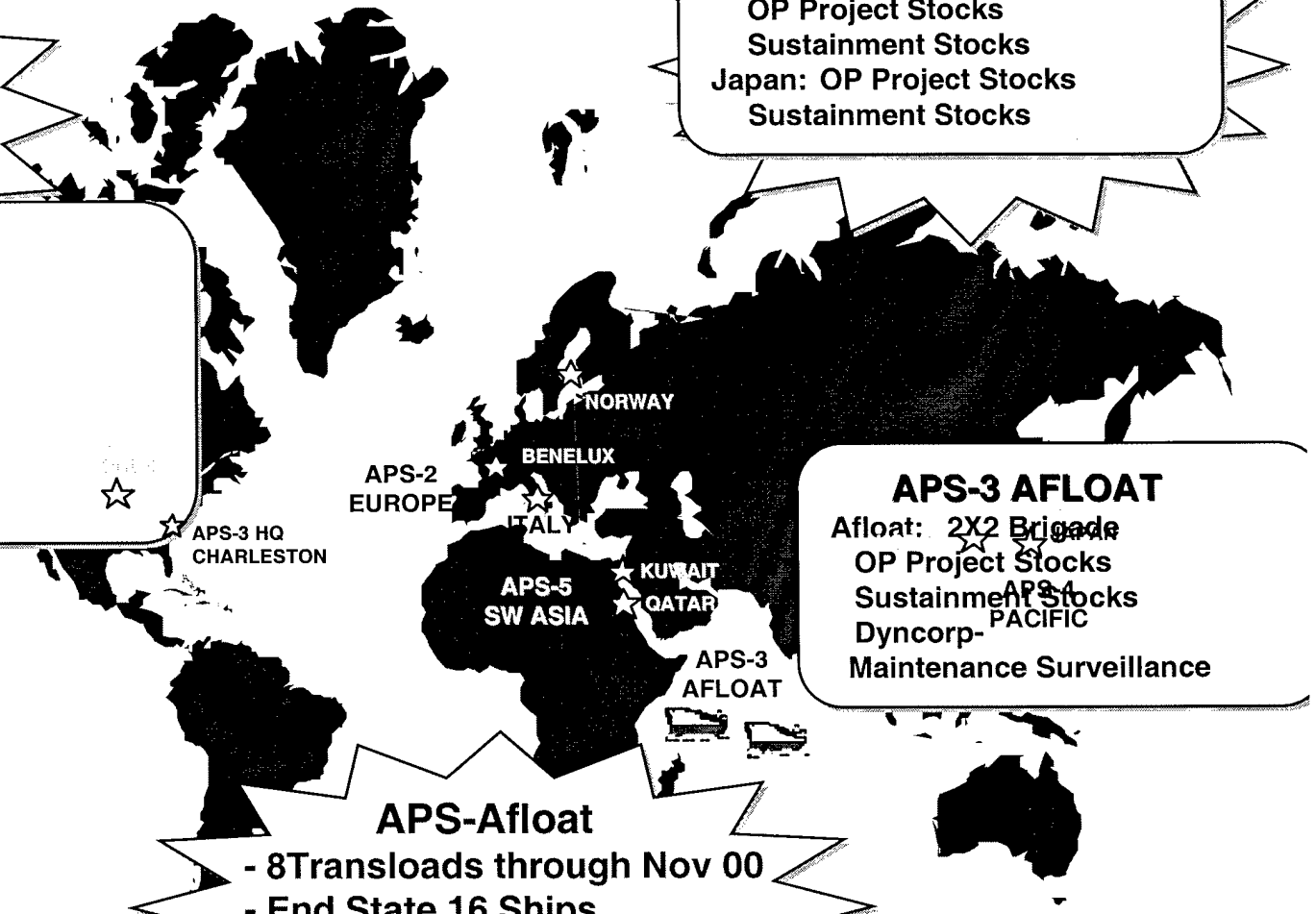
OP Project Stocks
Sustainment Stocks
Norway:
155 SP FA Battalion
Sustainment Stocks

APS-4 PACIFIC
Korea: 2X1 Brigade
OP Project Stocks
Sustainment Stocks
Japan: OP Project Stocks
Sustainment Stocks

Sustainment Stocks (DPG Based)
$6.9B Required
-$2.1B in Offsets
$2.5B On Hand

APS
CONU

APS-5 SW ASIA
Kuwait:2X1 Brigade
Sustainment Stocks
OP Project Stocks
ITT Corp
Qatar: 2X1 Brigade
Sustainment Stocks
LSI Corp



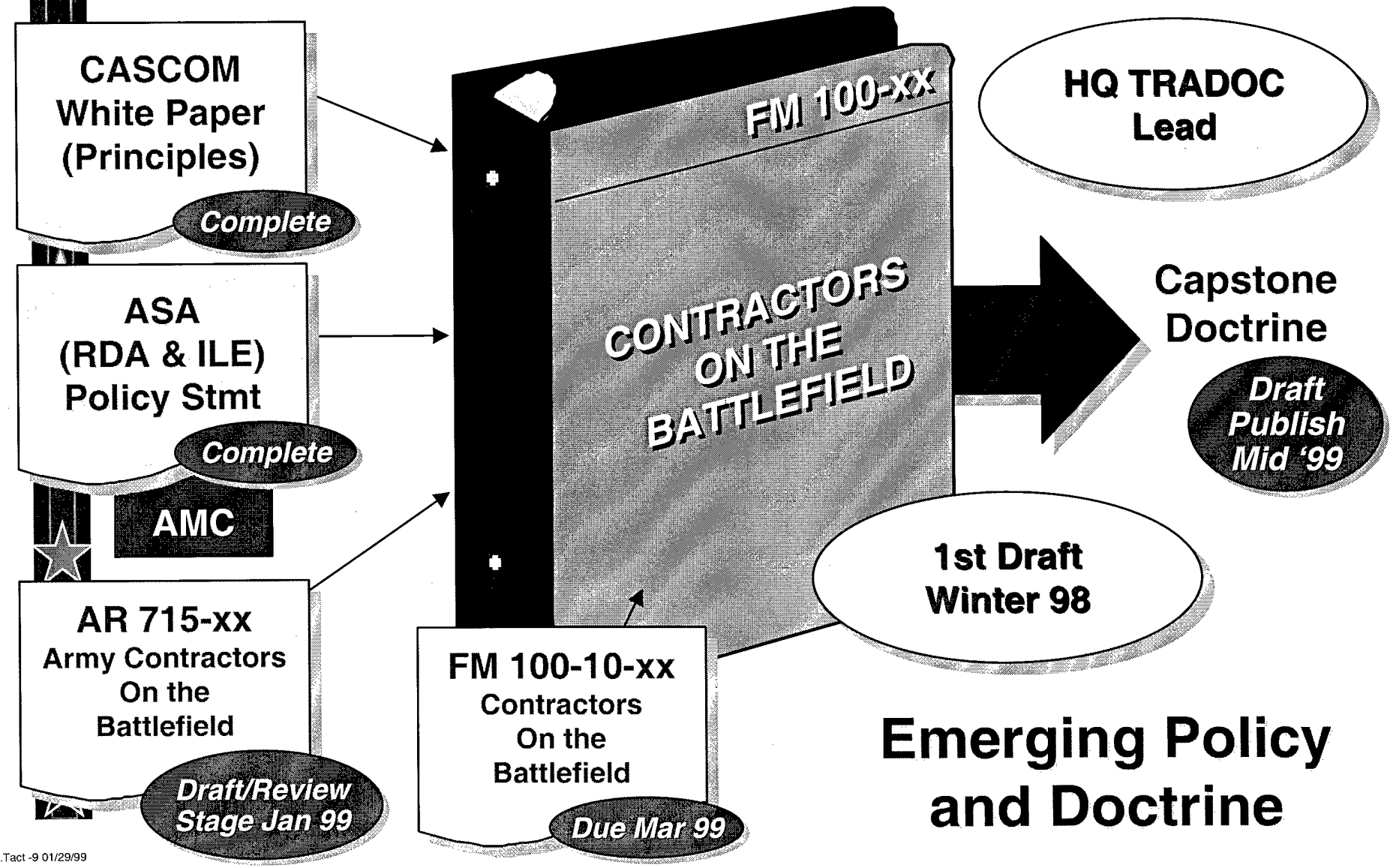
APS-3 AFLOAT
Afloat: 2X2 Brigade
OP Project Stocks
Sustainment Stocks
Dyncorp-
Maintenance Surveillance

APS-Afloat
- 8Transloads through Nov 00
- End State 16 Ships
- 30-36 Months Maint Cycle

5 Locations;
$6.9B Requirement;
Project & Sustainment Stocks

1399.Tact -8 01/29/99

Civilian Contractors on the Battlefield



Emerging Policy and Doctrine

1399.Tact -9 01/29/99

America's Ability to Fight & Win is Priority #1

Civilian Contractors on the Battlefield Play an Increasingly Important Role

- Civilian Contractors are Integral to Army Field Sustainment
- Pressure to Outsource & Privatize are Increasing & Make Good Business Sense... in many cases
- Challenges Related to Contractors on the Battlefield Must be Addressed





Acquisition Excellence

REVOLUTIONIZING ACQUISITION

Administrative Lead Time/
Procurement Lead Time Reduction

Modeling &
Simulation

Credit Card

Prime Vendor Support

Virtual Testing

Modernization thru Spares

Best Value

Cost as an
Independent
Variable

COTS

Roadshows

Past
Performance

Performance Specifications

Partnering

Integrated Product &
Process Development

OSCR/TOC

Electronic Commerce /
Electronic Data Interchange

Army Single
Process Initiative

Corporate
Contracting

1399.Tact -11 01/29/99

WE NEED INDUSTRY HELP...
Administrative/Production Lead Time (ALT / PLT)

THE PROMISE

$M	FY 97	FY 98	FY 99	FY 00	FY 01	FY 02	FY 03	POM TOTAL
Cost	0	0	0	0	0	0	0	0
Savings (SMA DBOF)	195*	50	27	14	14	12	10	322
NET	195	50	27	14	14	12	10	322

PLT Represents 77% of Our Current Lead Time

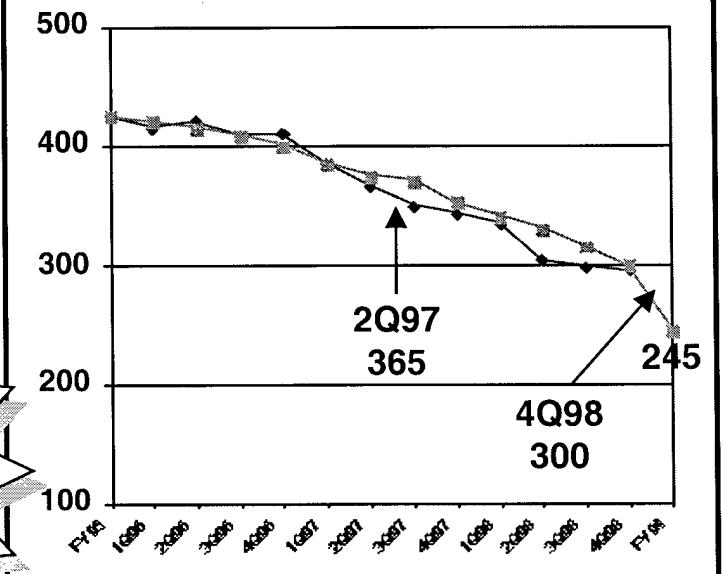
*** FY97 savings of $195M taken in FY97 BES**

Initiatives:

- Long Term Contracting
- Electronic Ordering
- Ordering Officers
- Data Base Scrubs
- Best Value w/ schedule as an Independent Variable

IDIQ
(Indefinite Delivery Indefinite Quantity)
Multi-year Multiple Items

ALT/PLT GOALS: DOLLAR WEIGHTED

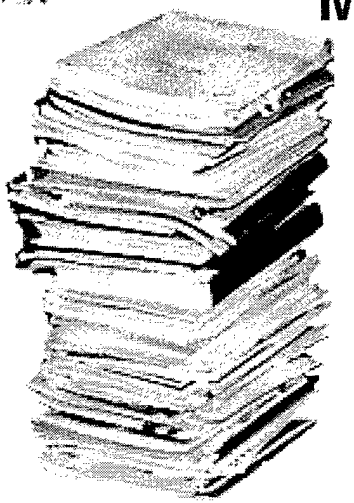


REMARKS:
AMC GOAL is 245 Days by end of FY 99

1399.Tact -12 01/29/99

Acquisition Excellence

MIL SPECs AND STDs REFORM



100% Scrubbed

Army Completed Review of 12,354 Specs & STDs



1994 ——— 1998

DUSD(AR) PAT
Team Led by
AMC Principal Deputy
for Acquisition

BLUEPRINT FOR CHANGE

STDs:

176	Canceled
131	Inactivated
139	Converted

SPECs:

2108	Canceled
2922	Inactivated
776	Converted
3890	Transferred to DLA
2212	Retailed as Detail (Includes 1458 by Institute of Heraldry

Challenging Four Year Goal Successfully Completed in Oct 98

SECDEF, 1994
"...moving to greater use of performance and commercial specifications is one of the most important actions that DoD must take to ensure we are able to meet our military, economic and policy objectives in the future."

A Case Study in Progress!

1399.Tact -13 01/29/99

Electronic Contracting

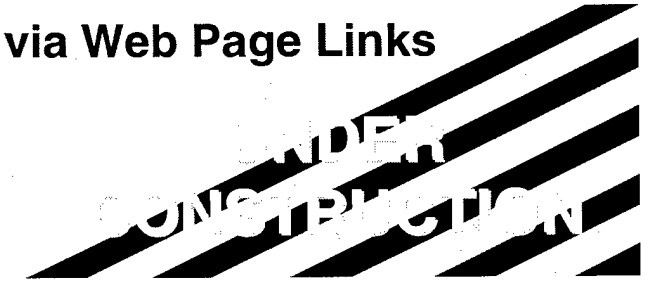
We're on the Web

Moving to "Paper–Free" Acquisition

- "One Stop" Entry Point for Industry into AMC

Business Process:

- Contracting Opportunities Across Army via Web Page Links
  - View RFPs / IFBs / RFQs
  - View Attachments / Exhibits "Online"
  - Automated Link to Tech Data Packages
  - Electronic Downloading via Modem



Policy:

- Contracting Guides
- Past Performance Pamphlet
- FAR / DFAR Links

www.army-acquisition.net

Acquisition Business Web Site

"Serving the U.S. Army Acquisition Community"

Army Contracting Opportunities

Your entry to all open Army Solicitations

Acquisition Business

Solicitations,
Executive Information System,
Electronic Commerce Links,
Solicitation Maintenance,
Registration and Feedback

Source Selection Resource Center

Obtain Source Selection Guidance:
- Best Value
- Past Performance
- Oral Presentations
- Debriefings

Acquisition Tool Set

Bid & Response Gathering:
- Requirements Feedback
- Download Documents

1399.Tact -14 01/29/99

AMC Science & Technology Team

42% S&T Outsourced

71% S&T Outsourced

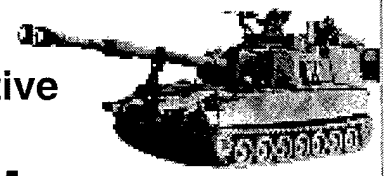
Army Research Laboratory (ARL)	Technology Program Annexes: Armament, Aviation, Tank-Automotive, Missile	Research, Development & Engineering Centers (RDECs): Communications-Electronics, Natick & Edgewood
6.1 Basic Research	**6.2 Applied Research**	**6.3 Advanced Tech. Dev.**
• High Pressure Atomization →	• High Performance Engines →	• Advanced Combat Vehicle Propulsion System
• Diagnostic / Prognostic Sensors →	• Predictive Maintenance Algorithms →	• Integrated Maintenance System

ARL & RDECs provide the S&T necessary for decisive victory.

1399.Tact -15 01/29/99

AMC R&D Partnerships with Industry and Academia





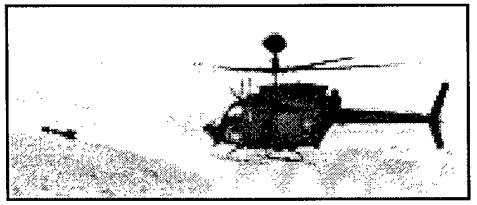
National Automotive Center
TACOM

Dual use Automotive Technology with...

- DoD Agencies
- Dept of Education
- Dept of Commerce
- Dept of Transportation
- Academia
- Industry

Chrysler
Ford
General Motors

$19M





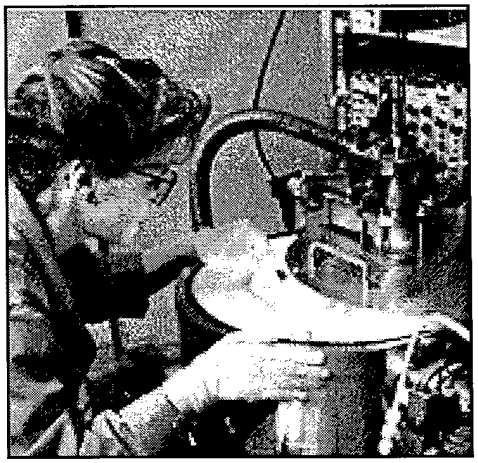
National Rotorcraft Technical Center
AMCOM

Collaborative Rotorcraft R & D between...

- Army and Navy
- NASA
- Fed Aviation Admin (FAA)
- Academia
- Industry

Sikorsky
Boeing
Bell

$2M



Army Federated Labs
ARL

Partnering Science and Technology with...

- Universities
- HBCU/MI
- Industry
- Telecomm
- Adv Sensors
- Adv Displays

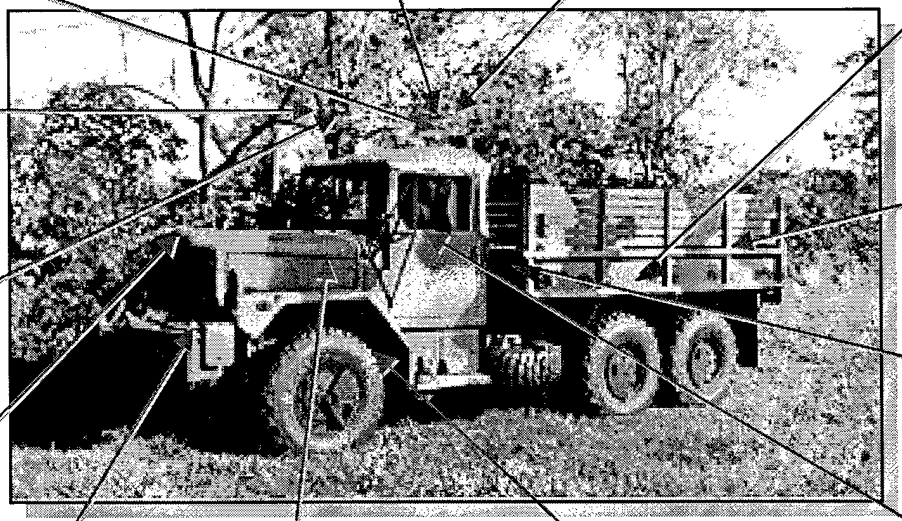
Lockheed Sanders
MIT
Motorola

$22M

Partnering is critical to making technology work for soldiers.

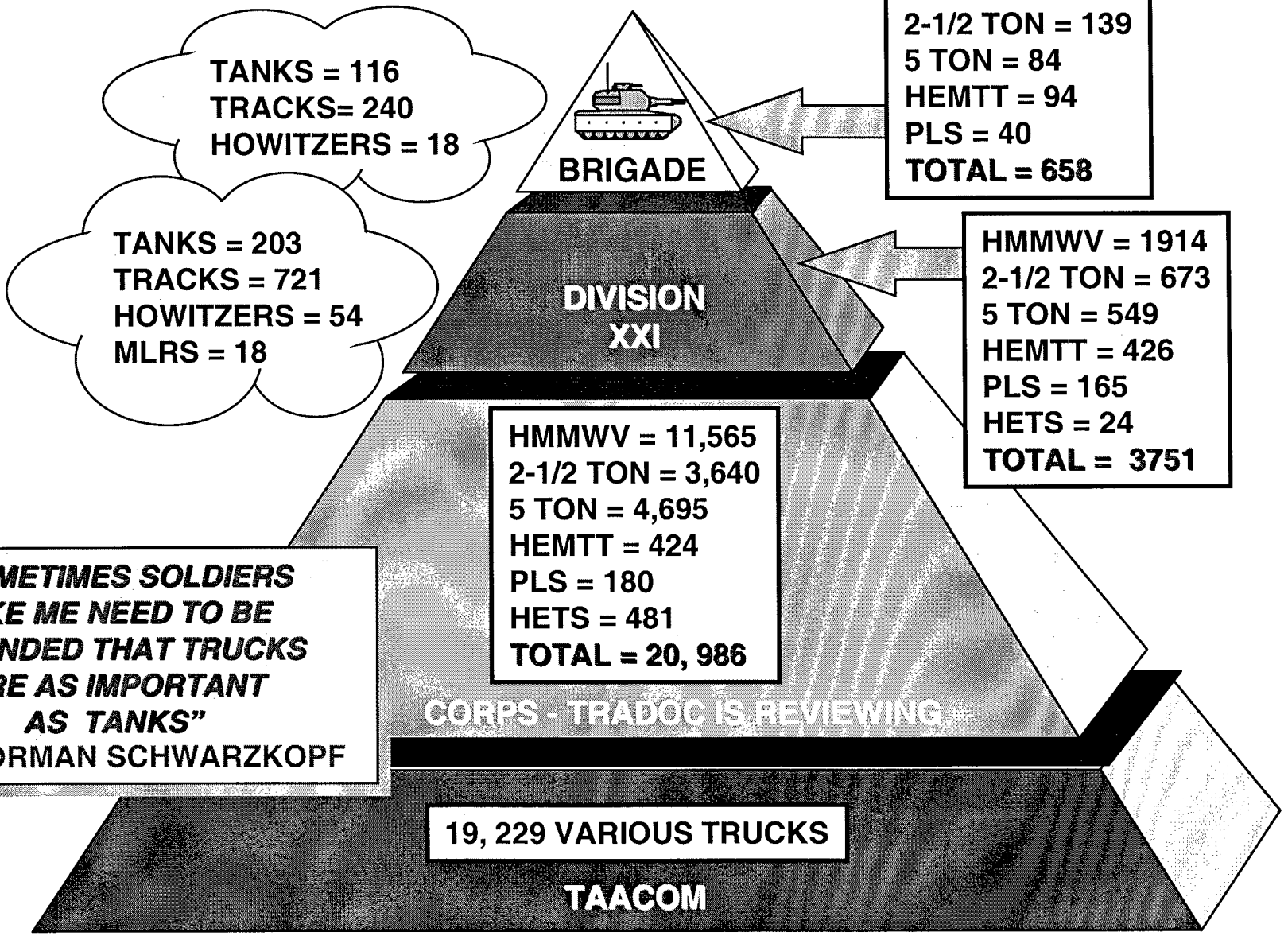
Technology Generation and Application

ARL Project:
Reduce Fuel Consumption by 75% before 2020



- Driver Interface Devices
- Movement Tracking System with GPS Technology
- Driver Vision Enhancement (Night Vision Technology)
- Run Flat Tires With Countermine Capability
- Enhanced Crash Protection
- Anti-Lock Braking
- Smart Diagnostics
- Electro-mechanical Suspension
- Lightweight Diesel Engine
- Smart Battery Smart Charger / Fuel Cells
- Advanced Fuel Injection
- Tire Inflation Status Monitoring System
- Lightweight Armor

Trucks: What It Takes

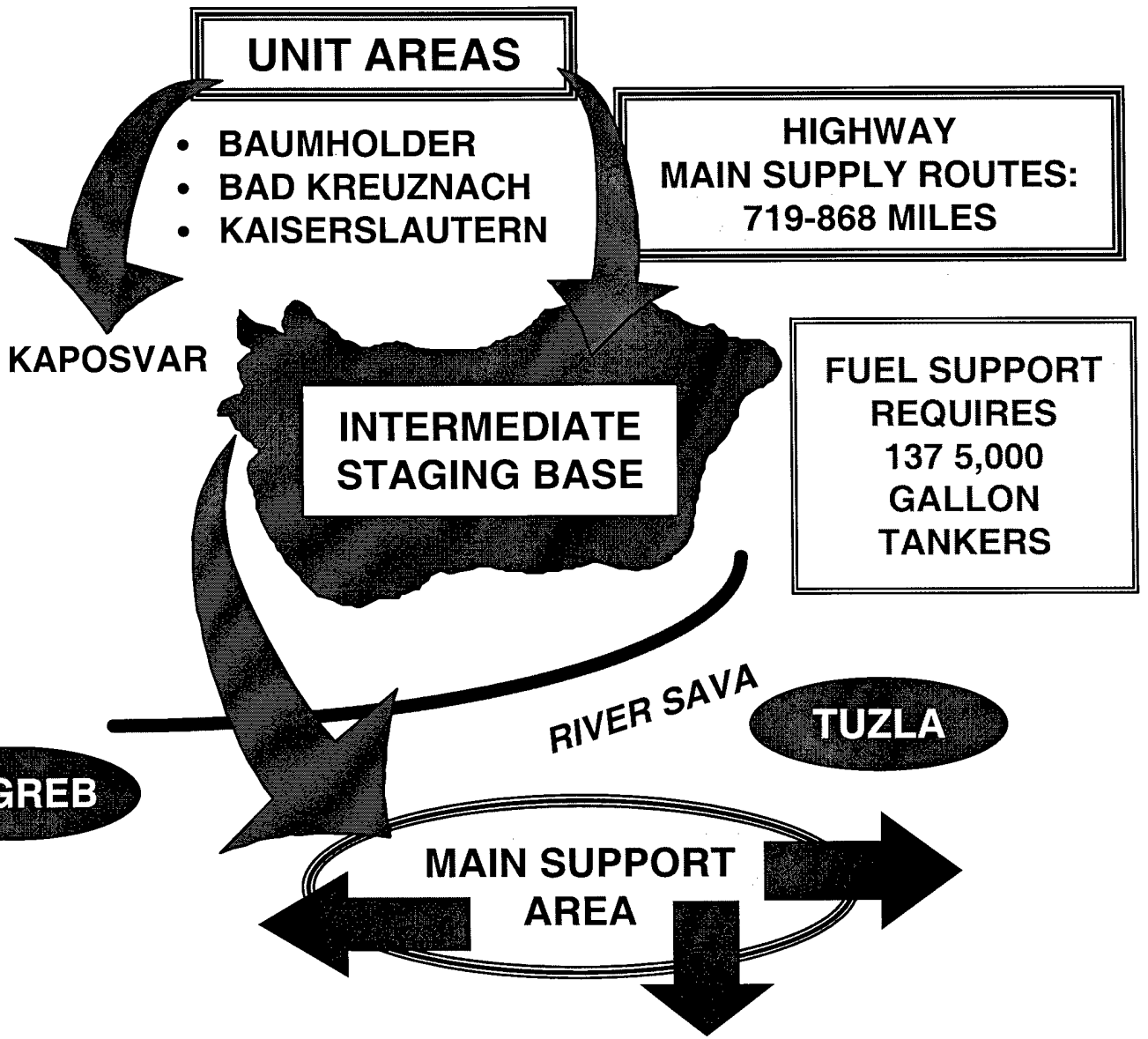


"SOMETIMES SOLDIERS LIKE ME NEED TO BE REMINDED THAT TRUCKS ARE AS IMPORTANT AS TANKS"
GEN. NORMAN SCHWARZKOPF

America's Army - Bosnia Deployment

TRUCKS IN BOSNIA TO DATE:

CUCV = 420
HMMWV = 3,452
2-1/2 TON = 558
5 TON = 1,675
ENGR TRK = 58
LINE HAUL = 79
HEMTT = 330
PLS = 108
HETS = 72
TOTAL = 5,077



1399.Tact -19 01/29/99

Truck Requirements

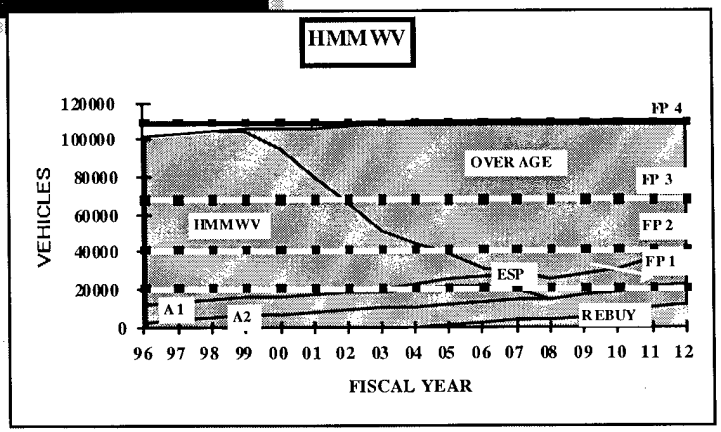
Support the Fleet

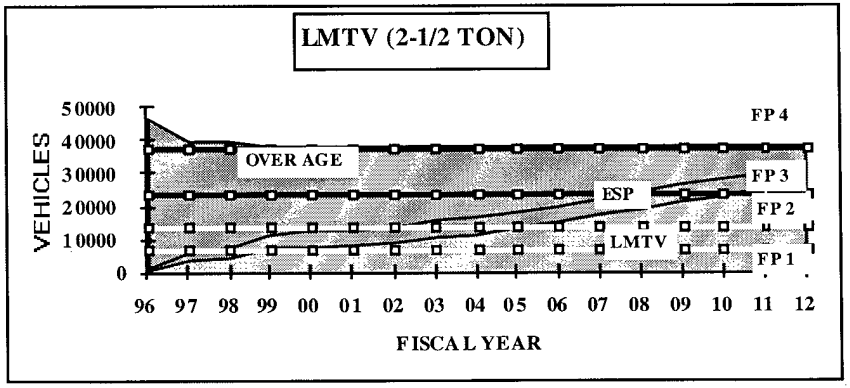
Light	124,170
Medium	83,551
Heavy	30,474
Total	238,195

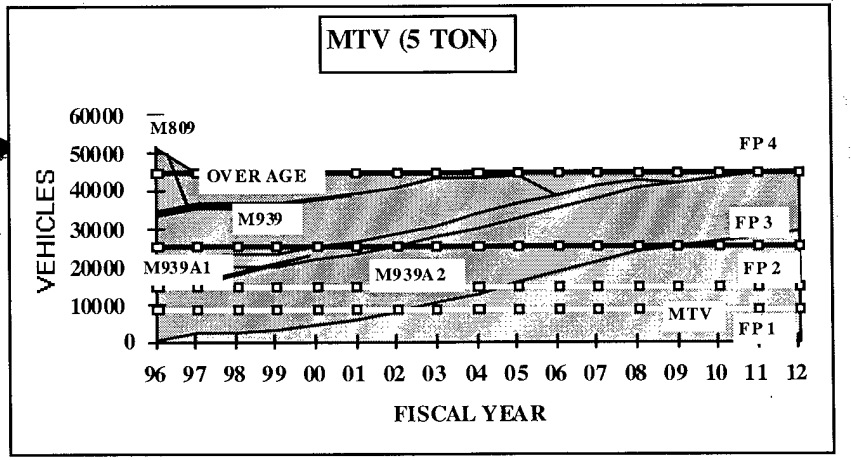
Does Not Include COMPO 4

By FY 97
90% 2.5 Tons
34% 5 Tons
OVER AGED!

By FY 00
77% 2.5 Tons
22% 5 Tons
OVER AGED!

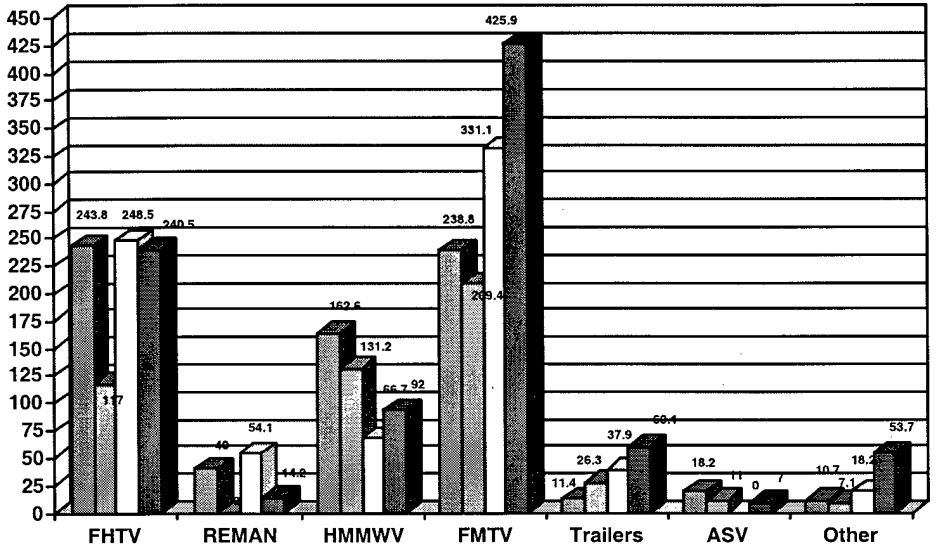




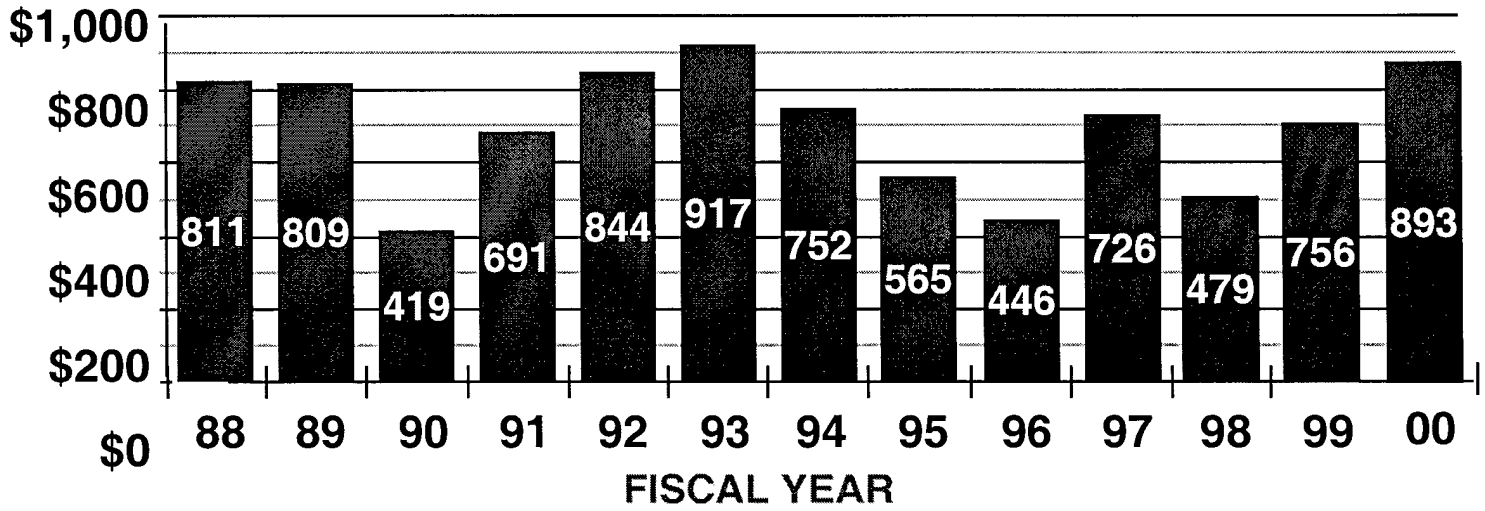


Trucks Update & Procurement Trends

Tactical and Support Vehicles - 1997 - 2000



- 1997 TOTAL $725.7M
- 1998 TOTAL $479.3M
- 1999 TOTAL $756.M
- 2000 TOTAL $893.5M



WE NEED INDUSTRY HELP...
Partnering With Industry

National Automotive Center Examples

- Lightweight Diesel Engine - Cummins
- Protective Coatings - Polymer
- Smart Diagnostics - Hughes
- Run Flat Tires with Countermine Capabilities - Hutchinson
- Electro-mechanical Suspension System - University of Texas

Conclusions

- Change in Environment From Military-Industrial Complex to an Industrial-Military Complex
- Requirements Based on Capability Instead of Threat
- AMC Has an Increased Role in TWV
- Budget Pressures Are a "Fact of Life"
  - Congressional Plus-Ups Have Helped in the Past
  - Keen Interest in FMTV Production
  - Other Customers Continue to Support Remanufacture
- Trucks Will Be More Important Than Ever in the Paradigm Shift From a Supply-Based Distribution System to a Transportation-Based Distribution System, Especially PLS
- Industry Has Truly Served the Army Well

Thanks For Your Support to the Army

1999 TACTICAL WHEELED VEHICLE CONFERENCE - "HOW HEALTHY IS OUR FLEET?" ODCSOPS PERSPECTIVE

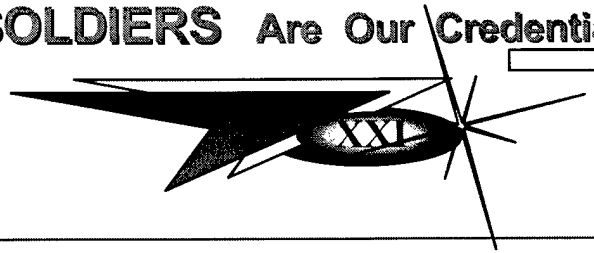
FEBRUARY 1, 1999

COL(P) MICHAEL A. VANE
DIRECTOR OF INTEGRATION
ODCSOPS

TOPICS



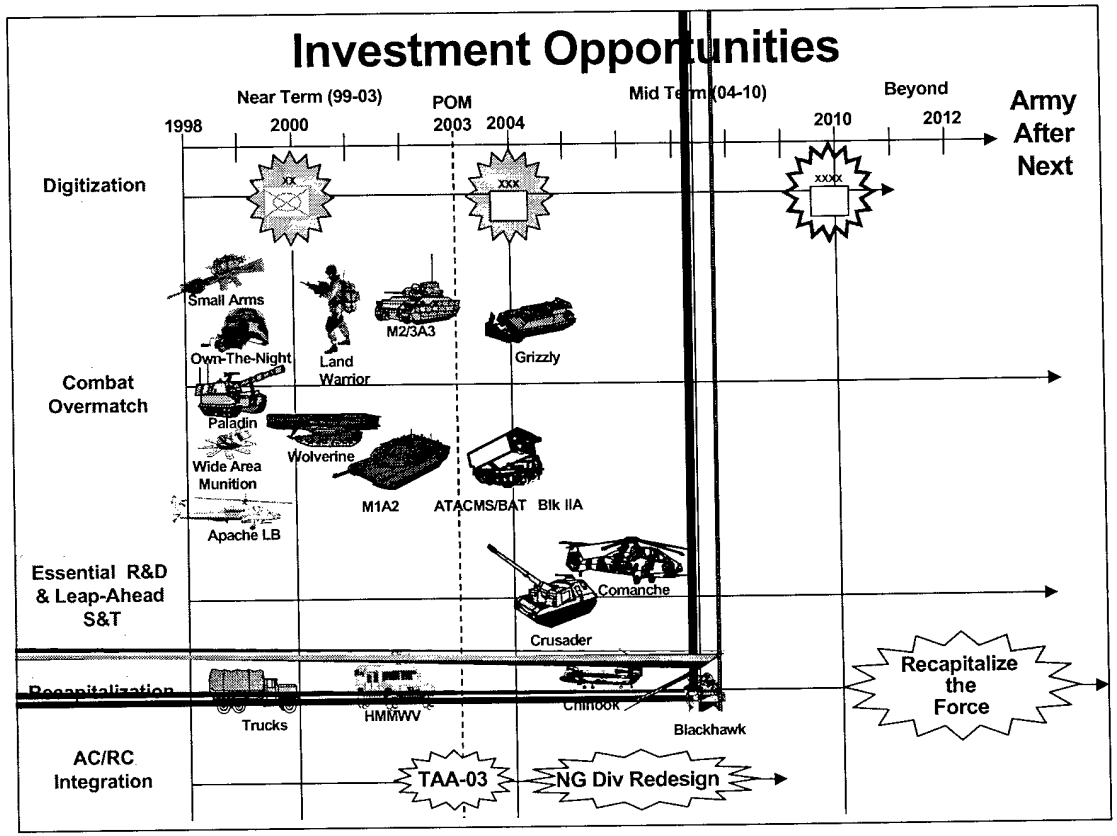
- MODERNIZATION AND FUNDING
- INITIATIVES
- NEW DIVISION DESIGN
- ECONOMIC USEFUL LIFE
- FLEET STATUS
- SUMMARY



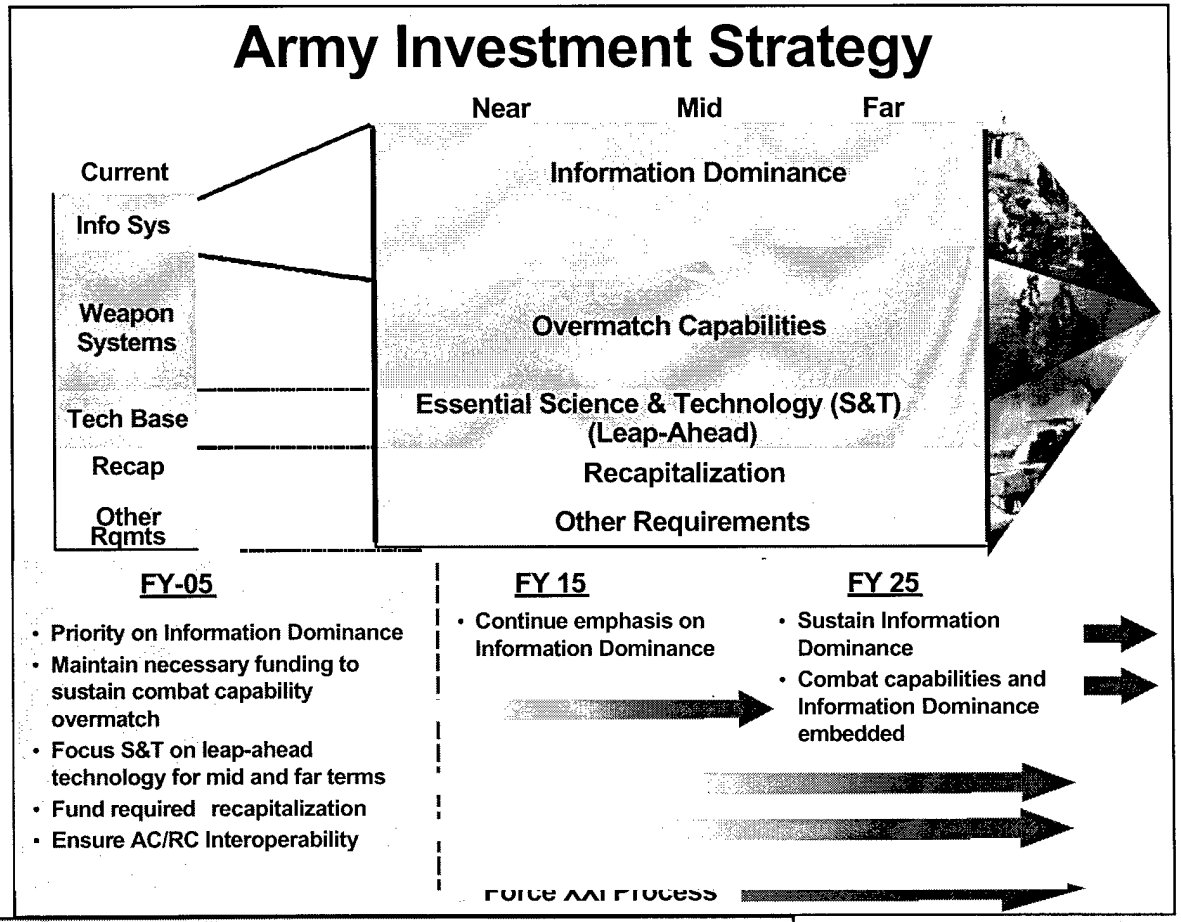
ARMY TOP 10

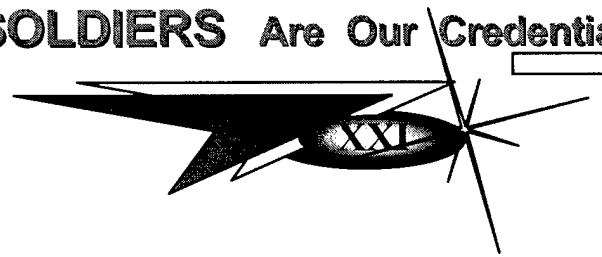
1. Non offset funding for all Contingency Operations
2. Quality of Life Issues (Pay, Pay reform, Retirement benefits, Housing and Medical)
3. Support Army Endstrength & Manyears (AC; RC; Civ) Initiatives
4. Fund O&M as allocated and at least to the requested level:
   - Ground OPTEMPO and Flying Hours (All Components)
   - BASOPS and RPM
   - Depot Maintenance
5. Fund Digitization, FORCE XXI and AECP as Requested
   - Technologies across C4I and weapons platforms
   - FDD by FY 00 and an FDC by FY 04
6. Total Army Force Integration.
7. Critical Warfighter Initiatives
   - Comanche
   - Crusader
8. Institutional Training Policy
9. Preserve MILCON (1+1 Barracks initiative and Deployment Platforms).
10. Strategic Mobility (infrastructure, Prepo Bde Sets and Strategic Lift).

ARMY INVESTMENT OPPORTUNITIES



ARMY INVESTMENT STRATEGY



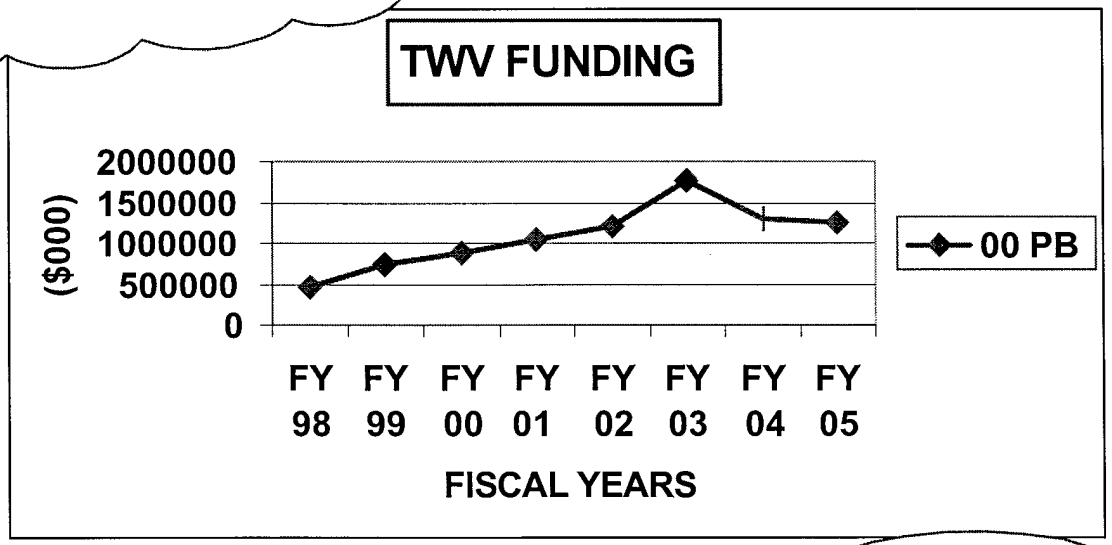


FUNDING FACTS

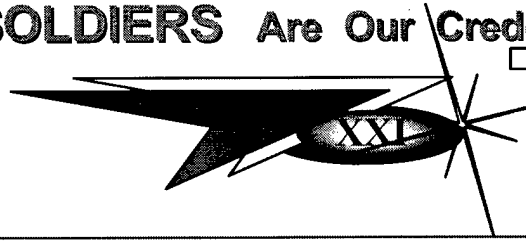
- **DEFENSE BUDGET IS 3 PERCENT OF THE GROSS DOMESTIC PRODUCT.**
- **DEFENSE BUDGET IS 15 PERCENT OF THE FEDERAL BUDGET.**
- **THE ARMY BUDGET IS 25 PERCENT OF THE DEFENSE BUDGET.**
- **RESEARCH DEVELOPMENT AND ACQUISITION (RDA) IS 19 PERCENT OF THE ARMY BUDGET .**
- **TRUCK PROCUREMENT IS 7 PERCENT OF THE RDA BUDGET .**

FUNDING PROFILE

$1.1B AVG PER YEAR 98-05
$1.2B AVG PER YEAR 00-05



RC FUNDING
$382M AVG PER YEAR 98-05
$473M AVG PER YEAR 00-05



NATIONAL AUTOMOTIVE CENTER (NAC)

- PART OF THE TANK-AUTOMOTIVE AND ARMAMENTS COMMAND (TACOM)
- DOD FOCAL POINT FOR COLLABORATIVE AUTOMOTIVE R&D WITH INDUSTRY , ACADEMIA AND OTHER GOVERNMENT AGENCIES
- RESPONSIBLE FOR ACCELERATING THE INFUSION OF COMMERCIAL TECHNOLOGY INTO MILITARY LAND WARFARE SYSTEMS
- LEVERAGES DOD INVESTMENT IN MILITARY LAND WARFARE SYSTEMS THROUGH STRATEGIC, COST-SHARED PARTNERSHIPS; ARMY'S LEADER IN DUAL-USE APPLICATION
- FOCUS IN FIVE TECHNOLOGY AREAS: FUEL EFFICIENCY, VEHICLE MODERNIZATION, SAFETY, MAINTENANCE AND LOGISTICS, AND MANUFACTURING INNOVATION
- PRESENT INITIATIVES: HYBRID ELECTRIC, ADVANCED DIESELS, FUEL CELL HYBRIDS, NEXT GENERATION TACTICAL TRUCK TECHNOLOGIES, WASTE OIL REUTILIZATION, SMART TRUCK TECHNOLOGIES, AND COLLABORATIVE DESIGN

CREW PROTECTION



Image by 55th Signal Co. (Combat Camera)

MOVEMENT TRACKING SYSTEM

REQUIREMENT

33,379 (EST)

EXPANDED FROM PLS TO ALL TWV.

Near-Real Time Position Locations of Mobile Unit
Messaging Capability to Re-direct Mobile Unit Due to:

- Congestion
- Enemy Situation
- Change in Plan (Destination Unit Moved, or Priority Shift)

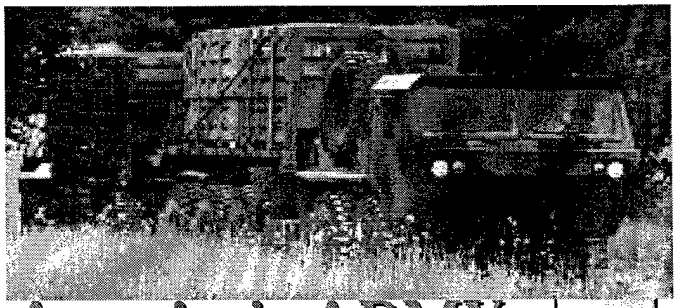


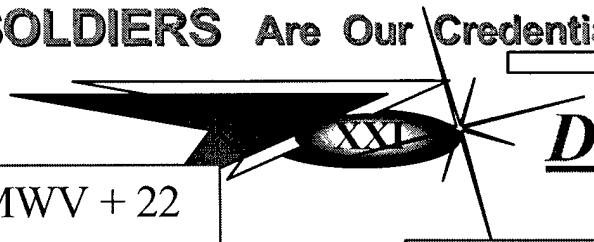
WRAP PROGRAM

CONTROL STATION
(not dependent on landline)



I/O Device w/ Map
Subscriber Controller
GPS Antenna
Satellite Antenna





DIVISION DESIGN COMPARE

- HMMWV + 22
- ASV + 29
- LMTV -102
- MTV - 57
- HEAVY +84

- TRAILERS -25
- TRUCKS -24

INCREASE IN HEAVY MORE EXPENSIVE VEHICLES.

AOE vs D-XXI HEAVY MECH DIVISIONS

TACTICAL WHEELED VEHICLES

		AOE	DXXI				AOE	DXXI				AOE	DXXI	
LIN	TYPE	QTY	QTY	Δ	LIN	TYPE	QTY	QTY	Δ	LIN	TYPE	QTY	QTY	Δ
D34883	DOLLY MOBILIZER, M1022	7	7	0	T45465	HEMAT, TRL, M989A1	71	208	137	T96838	FLT BED TRL, 7.5-TON, M1073	22	8	-14
G34805	DOLLY MOBILIZER, M720	13	10	-3	T58161	HEMTT, TNKR W/W, M978	26	33	7	W95811	1-1/2T TRL, M105	54	36	-18
S70027	SEMI TRL, FLT BED, M871	115	44	-71	T59048	HET, TRACTOR, M1070	24	24	0	W98825	WATER TRL, M149	199	184	-15
S70243	SEMI TRL, WRKR, M270	1	1	0	T59278	HEMTT, CGO, M977	112	25	-87	Z06421	ASV	0	29	29
S70517	SEMI TRL, LOWBED, M172	10	6	-4	T60081	LMTV, CGO, M1078	582	505	-77	Z36068	LMTV, TRL, M1082	503	352	-151
S70859	HET TRL, M1000	24	24	0	T60149	LMTV, CGO W/W, M1078	137	103	-34	Z36204	1-1/4T TRL, M1102	100	144	44
S73372	SEMI TRL, 5,000 GAL, M969	70	74	4	T61103	TRUCK TRAC, LINE HAUL	1	0	-1	Z36272	3/4T TRL, M1101	404	460	56
S74832	SEMI TRL, VAN, M749/M750	23	15	-8	T61239	MTV, TRACTOR, M1088	241	187	-54	Z62562	HMMWV, EXP CAP, XM1113	61	59	-2
S75038	SEMI TRL, VAN, M146	5	0	-5	T61307	MTV, TRAC W/W, M1088	12	16	4	Z62630	HMMWV, ARMD, XM1114	133	106	-27
S75175	SEMI TRL, VAN M129	55	46	-9	T61494	HMMWV, CGO, M998	1201	1237	36	Z90712	MTV, TRL, M1095	38	34	-4
T07679	HMMWV, HVY, M1097	326	368	42	T61562	HMMWV, CGO, W/W, M1038	126	98	-28	Z94047	MTV, TANKER, M1091	56	32	-24
T38844	HMMWV, AMBULANCE, M997	27	27	0	T61704	MTV, LWB, M1085	33	17	-16	Z94560	MTV, EXP VAN, M1087	44	72	28
T39518	HEMTT, CGO W/W, M977	53	132	79	T61772	MTV, LWB W/W, M1085	1	0	-1		**TOTALS**	**5527**	**5478**	**-49**
T39586	HEMTT, CGO, M985	36	48	12	T61908	MTV, CGO, M1083	133	173	40		***DISCOM***	1733	2631	898
T39654	HEMTT, CGO W/W, M985	6	6	0	T63093	HEMTT, WRKR, M984	51	37	-14		***NON_DISCOM***	3794	2847	-947
Z40639	HEMTT - LHS	0	0	0	T87243	HEMTT, TNKR, M978	159	145	-14		**% of DIV in DISCOM**	31.4%	48.0%	16.7%
T40999	PLS, W/O MHE, M1075	9	111	102	T92242	HMMWV, ARMT CR, M1025	18	19	1	B83002	BED CGO, PLS, M1077	108	324	216
T41067	PLS, W/MHE, M1074	54	54	0	T93484	LMTV, VAN, M1079	56	65	9	Z27727	CONTAINER LIFT KIT (CLK)	3	10	7
T41135	MTV, CGO W/W, M1083	9	4	-5	T93761	PLS, TRL, M1076	9	45	36					
T41203	MTV, CGO W/MHE, M1084	39	15	-24	T94709	MTV, WRKR, M1089	38	33	-5					

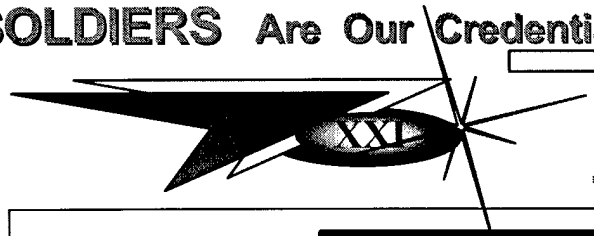
UPDATED 8/10/98

America's ARMY

CURRENT FLEET AGE BY FORCE PACKAGE AND COMPO

FLEET	EUL	R3		FP 1			FP 2			FP 3			FP 4	
			AC	NG	AR	AC	NG	AR	AC	NG	AR	AC	NG	AR
CUCV	11	1997	11.7	11.7	11.7	11.8	11.7	11.8	11.7	11.7	11.7	11.7	11.7	11.8
HMMWV	14	1999	7.2	7	6.3	7.3	5.9	8.1	7.2	7.3	6.9	7.7	8	7.9
2.5 T	20	2013(LMTV)	18.8	25.6	27.4	27.5	28.6	27.5	27.1	26.5	27.6	27.4	27.5	27.4
5 T	22	2015(MTV)	9.8	16.3	10.4	12.4	23.7	18	13.1	17.6	12.1	18.6	20.8	14.9
M915	20	1998	13.6	12.4	7.6	14.3	3.3	0	15.5	11.7	12.6	17.9	15.3	14.8
HEMTT	20	2004	10	9.7	9.7	10.2	10.7	9.4	10.3	10.1	9.6	10.2	9.9	10
PLS	20	2012	2.1	2.1	2.1	2	0	0	2	2	2.1	2	2	2.1
HET	20	2012	3.1	3.3	4.4	5.7	0	0	7.7	6.2	3.5	18.5	18.5	14.8
LET/MET	20	1998	11.4	7.2	9.8	7.5	0	7.5	14.8	11.9	11.8	12.6	11.8	10.8
ALL			10.1	13.3	11.3	11	10.3	12.4	11.9	14.3	12.6	15.8	16.4	14.5

VEHICLE AGE BY FORCE PACKAGE SHOWS RESULTS OF FIELDING PRIORITIES.



OVERALL FLEET AGE

FLEET AVERAGE AGE 1998 vs END POM/EPA

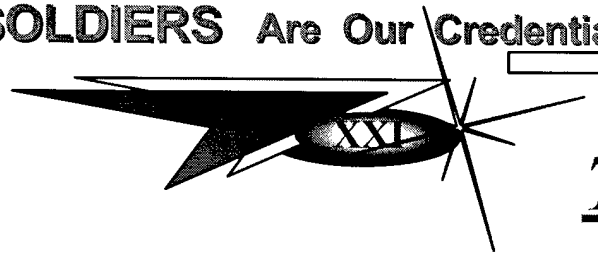
VEHICLE	ECONOMIC LIFE	MAX FLEET AVE AGE OBJECTIVE	% OVER	FLEET AVERAGE AGE 1998	FLEET AVERAGE AGE 2014
CUCV	12	6	21	12.6	N/A
HMMWV	15	7.5	0	7.9	17.0
SUSV	15	7.5	0	7.1	22.9
M151	15	N/A	100	20.7	N/A
M880	7	N/A	100	20.1	N/A
2-1/2 TON	20	10	85	23.3	13.8
5 TON	22	11	29	14.3	6.9
PLS	20	10	0	2.4	16.0
HEMTT	20	10	0	10.7	6.7
ENG TRAC	20	10	0	12.8	15.7
LINE HAUL	20	10	0	14.5	12.8
HET	20	10	31	6.2	14.8
YARD TRAC	10	5	100	16.6	8.3
TOTAL AVG		8.8	23	13.0	13.5

FUNDING IN POM AND EPP JUST MAINTAINS AGE



TACTICAL WHEELED VEHICLE USEFUL LIFE DETERMINATION PROGRAM (TWVULDP)

- METRIC CURRENTLY USED TO DETERMINE FLEET REPLACEMENT TIMES.
- MID 1980'S METHODOLOGY.
- UPDATE REQUIRED BASED ON NEW DATA AVAILABLE FOR FLEET MANAGEMENT.
- IPT FORMED IN OCTOBER TO REVIEW. JOINT OPS/SARD CHAIR.
- FLEET PLANNING OFFICE IN TACOM HAS PROGRAM LEAD.
- LIGHT FLEET FIRST TO BE REVIEWED.
- FINAL REPORT OCTOBER 1999.

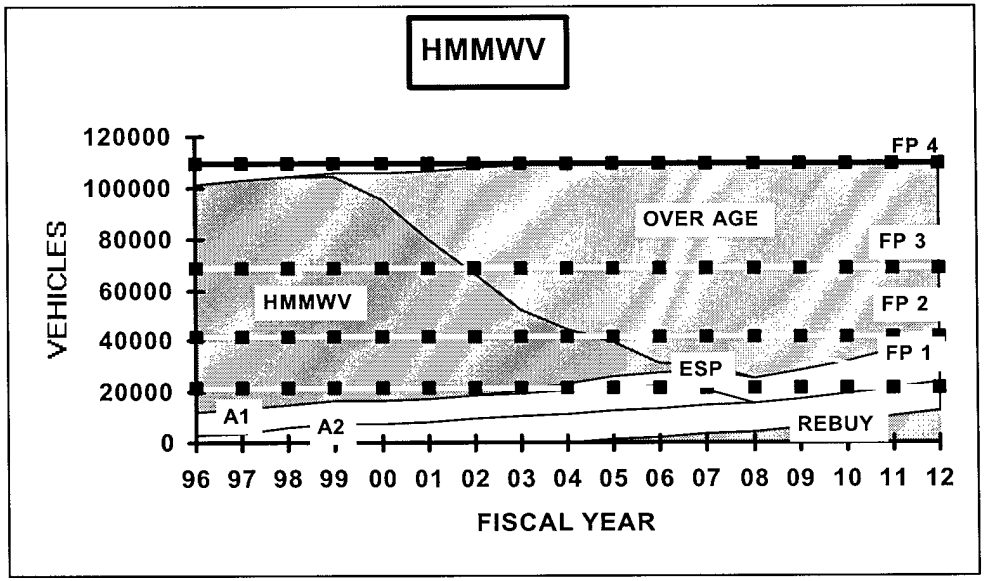


TWV FLEET STATUS

- **LIGHT**
- **MEDIUM**
- **HEAVY TACTICAL**
- **HEAVY COMMERCIAL**

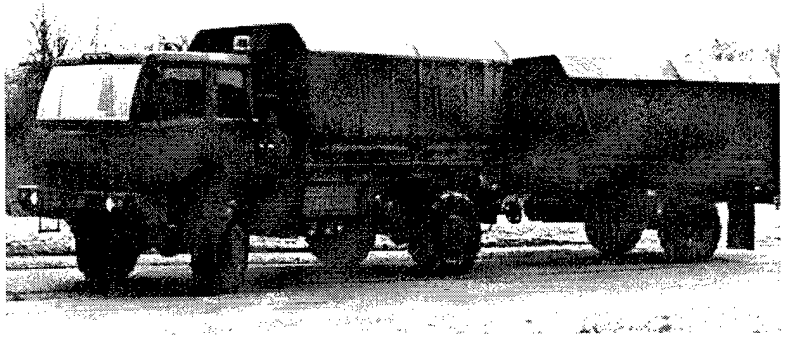
HMMWV STATUS

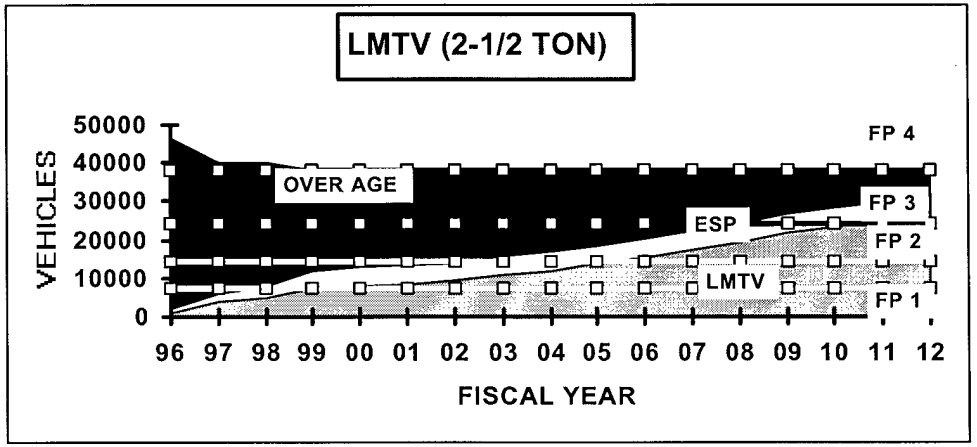




WILL REQUIRE ADDITIONAL FUNDING TO COMBAT OVER AGE PROBLEM. ANALYSIS BASED ON AoA TO BE SUBMITTED TO CONGRESS THIS QUARTER.

LMTV (2-1/2 TON STATUS)

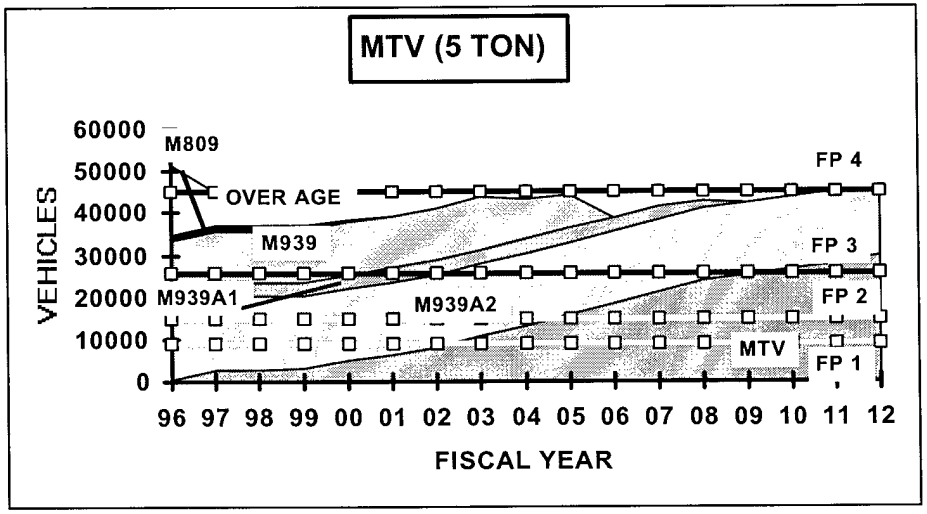




MOVEMENT OF FUNDS FROM ESP HELPS IMPROVE VEHICLE FILL!

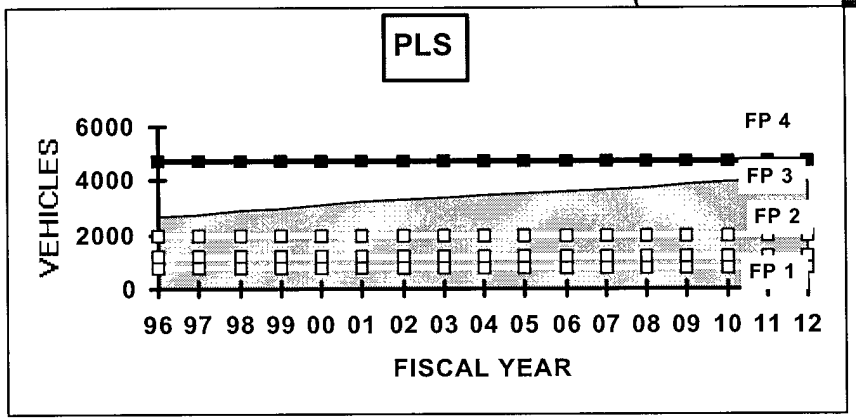
MTV (5-TON) STATUS



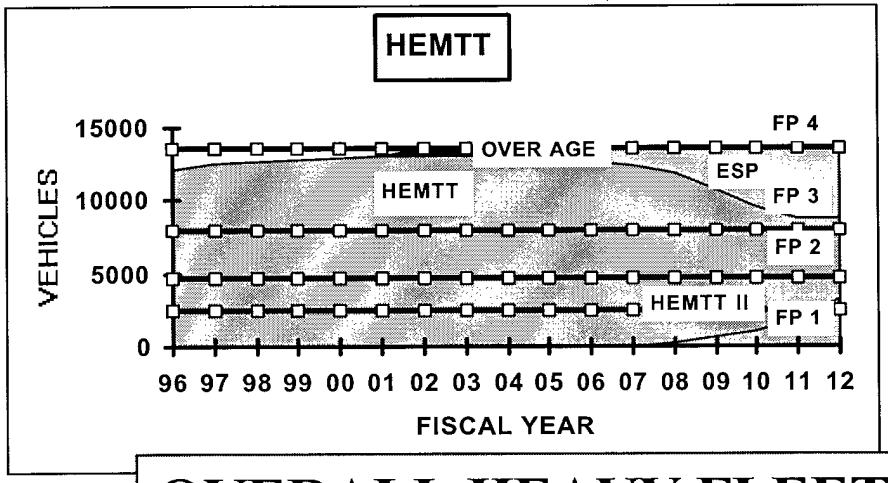


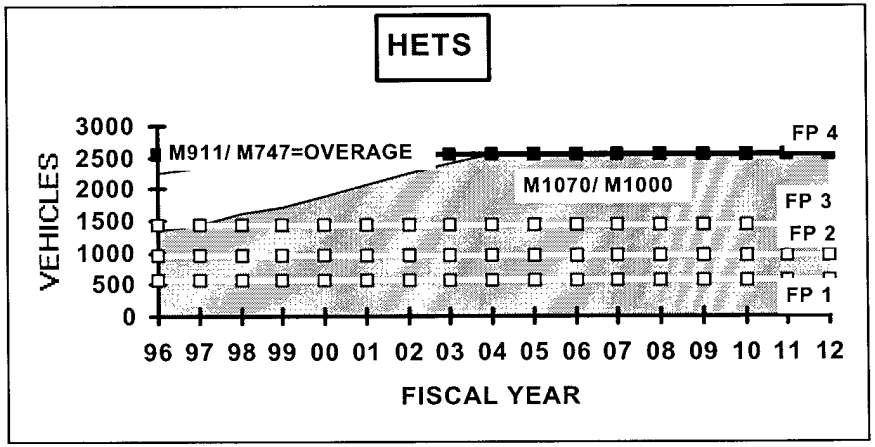
OVERALL THE FIVE TON FLEET REMAINS IN GOOD SHAPE.

HEAVY TACTICAL TRUCK STATUS



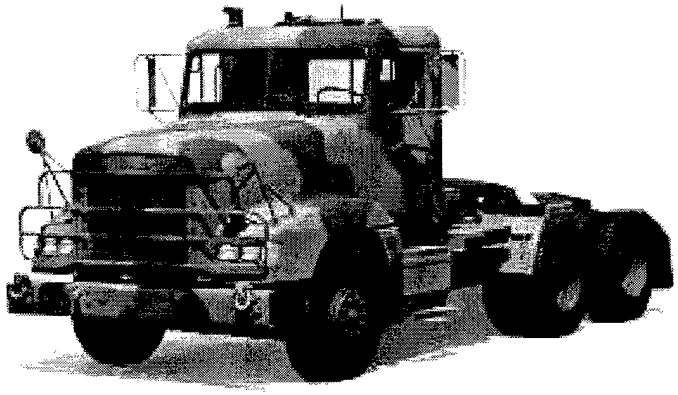


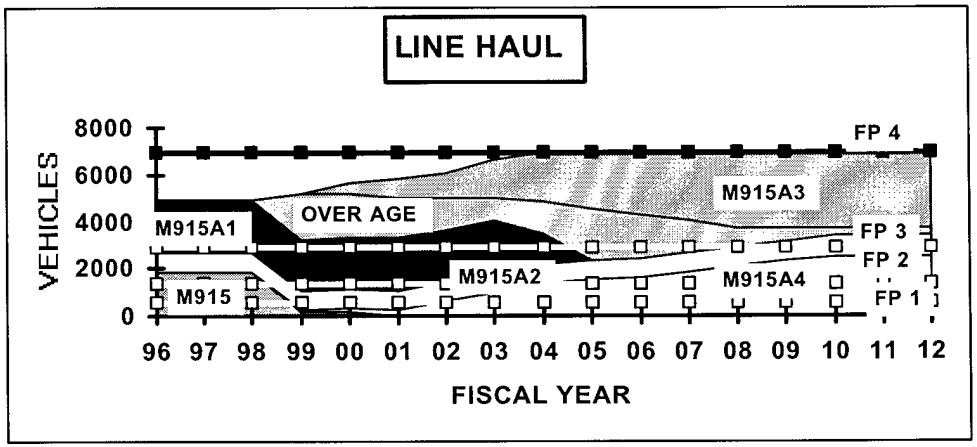




OVERALL HEAVY FLEET IN GOOD SHAPE

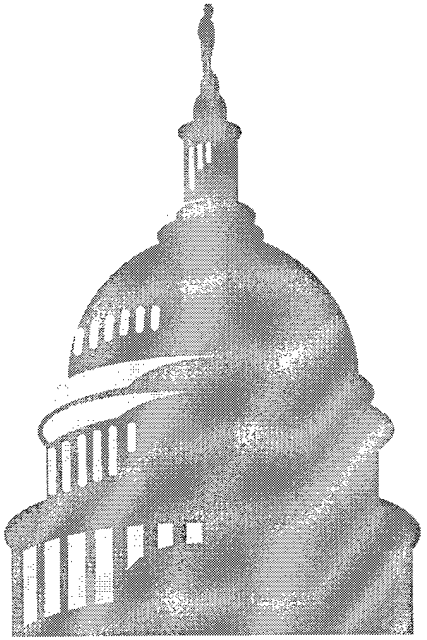
LINE HAUL TRACTOR STATUS





LINE HAUL FLEET IN GOOD SHAPE. MAJORITY OF NEW TRUCKS ARE FOR NG AND AR.

CONGRESSIONAL, SUPPORT



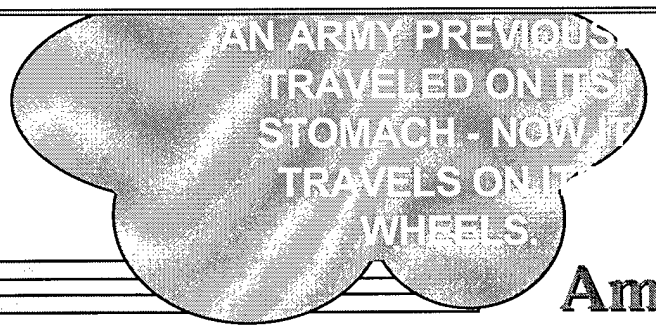
KEY PLUS UPS:

- **$3.8M FORWARD REPAIR SYSTEM - HEAVY(FRS-H) - WRAP FUNDING**
- **$55M HMMWV PRODUCTION.**
- **$13.2M 2-1/2 TON EXTENDED SERVICE PROGRAM (ESP).**
- **$6M SELF LOAD/OFF-LOAD TRAILER.**

OVERALL: +$82.6M - $26.9M = NET $55.7M

SUMMARY

- FUNDING FOR TACTICAL WHEELED VEHICLES CONTINUES TO HOLD UP WELL.
- LIGHT FLEET AoA BASE FOR FUTURE COURSE.
- NATIONAL GUARD AND ARMY RESERVE TO RECEIVE NEW TRUCKS AND TRAILERS
- METRIC TO DETERMINE FLEET REPLACEMENT UNDER REVIEW.
- THANKS TO INDUSTRY AND CONGRESS FOR CONTINUED SUPPORT OF PROGRAMS.



1999 NDIA Tactical Wheeled Vehicles Conference

Marine Corps Systems Command

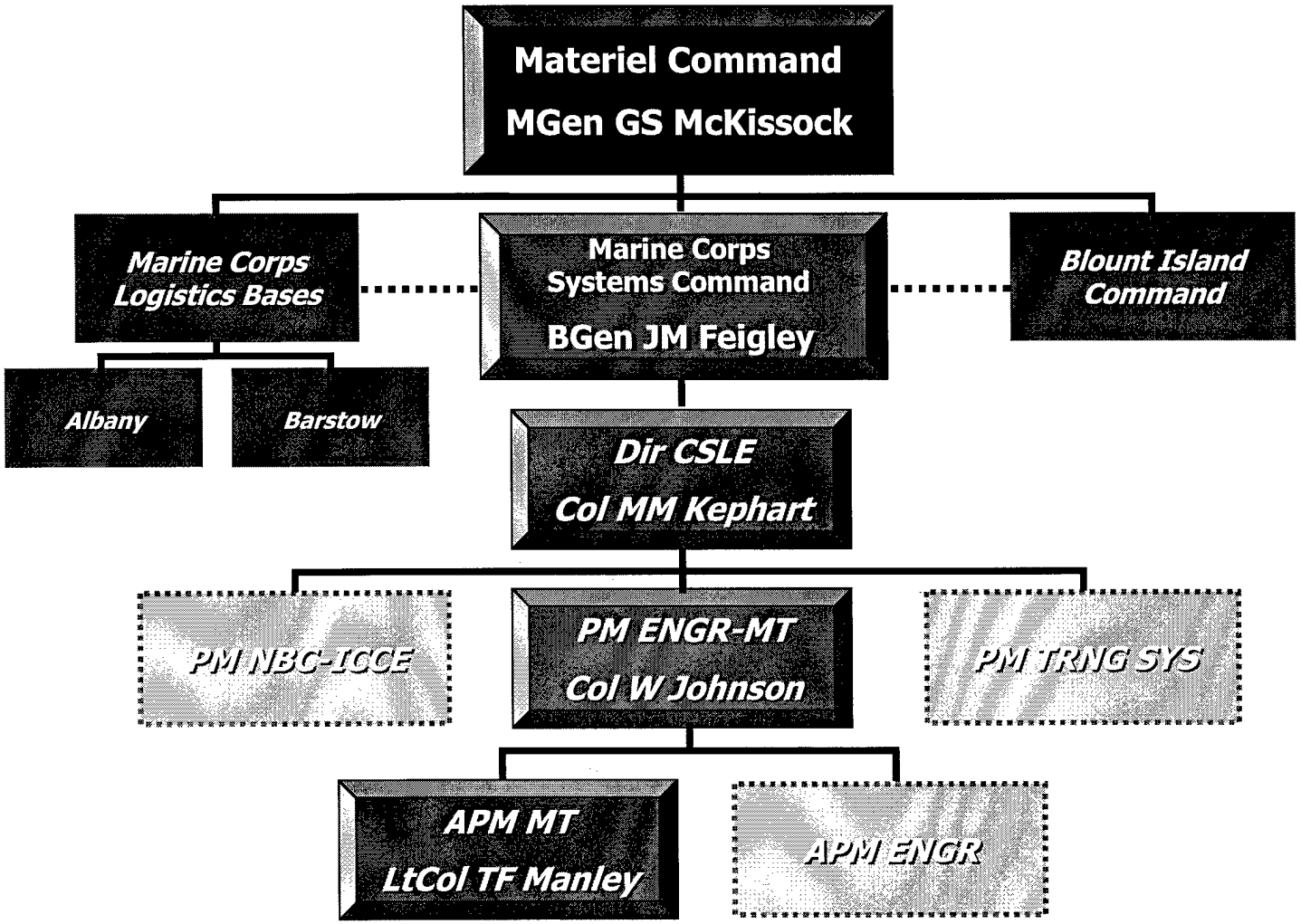
Col Mike Kephart, USMC

Director, Combat Support & Logistics Equipment

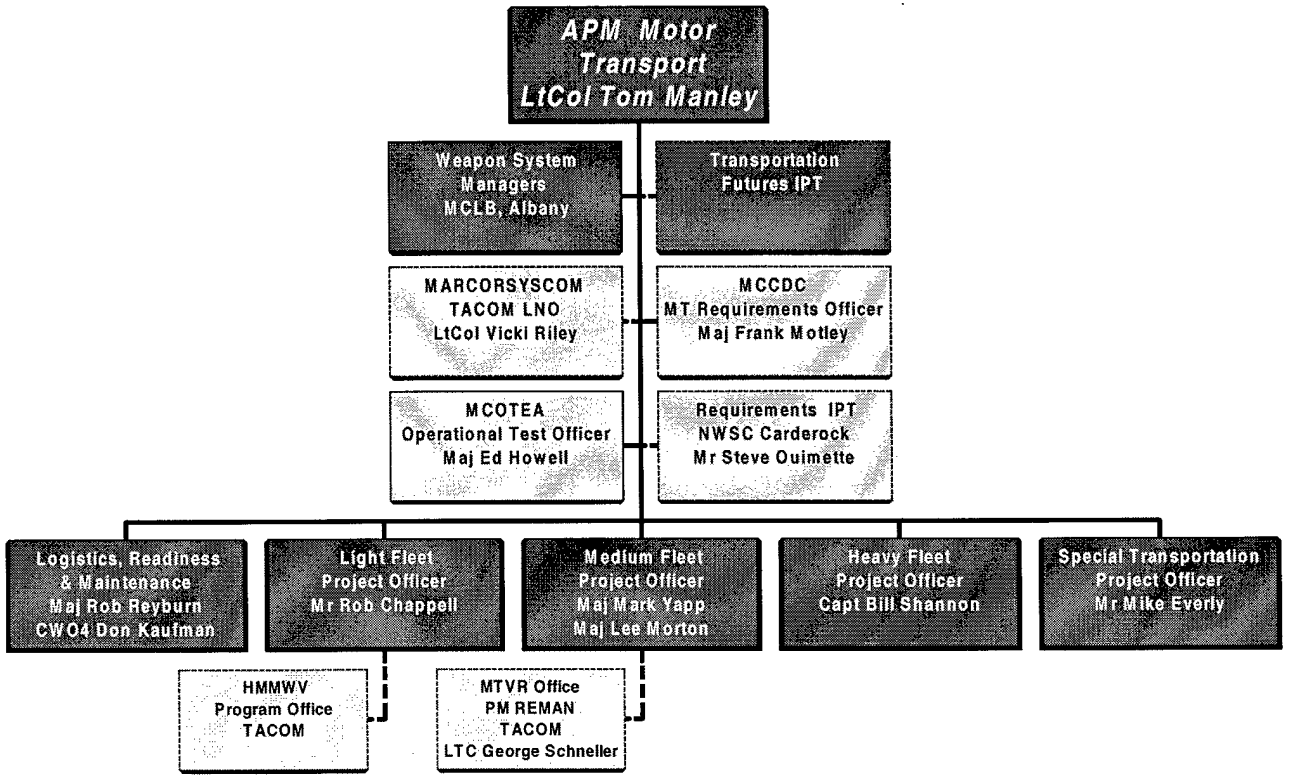
Agenda

- Marine Corps Materiel Command
- CSLE Organization
- Programs
- Future Challenges
- What You Can Do

Marine Corps Materiel Command



APM Motor Transport



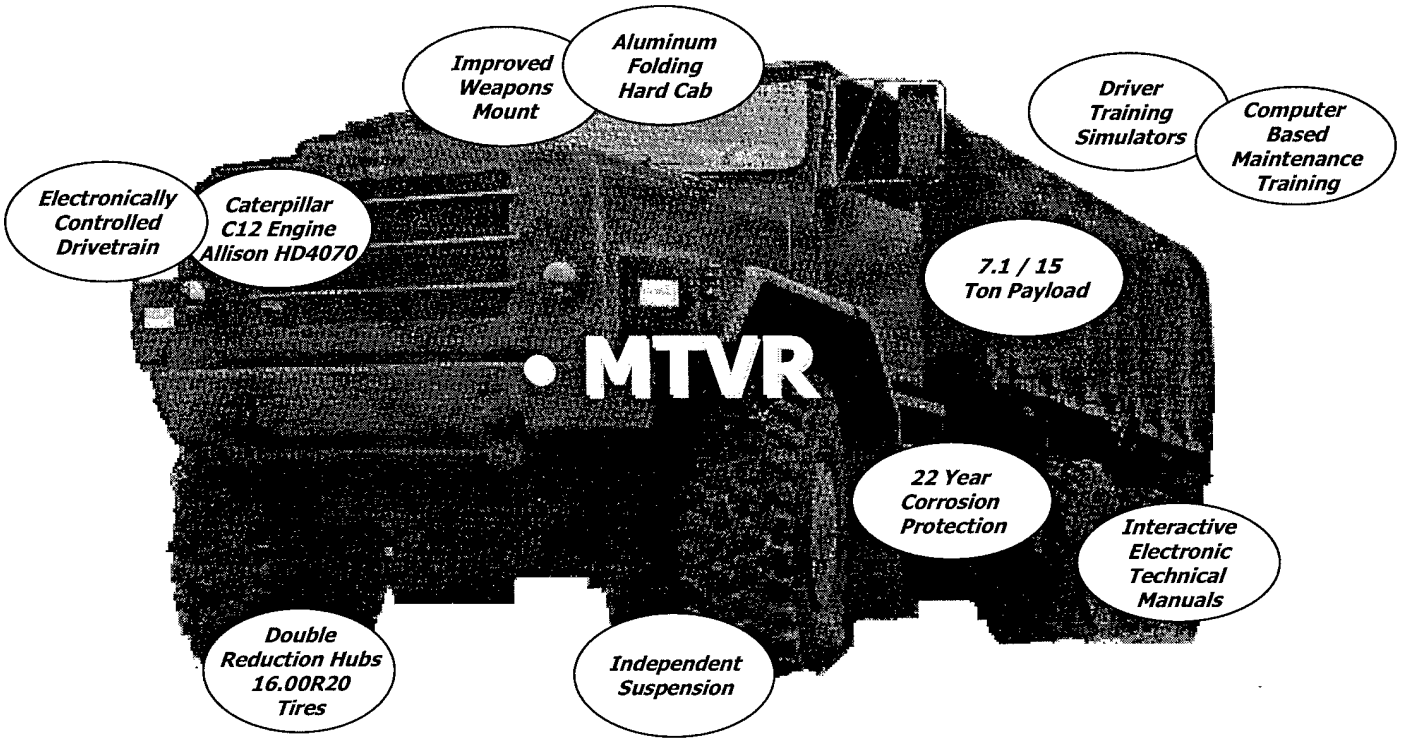
Mission: **Provide the management and support for Materiel Life Cycle Management (MLCM), to include research, development, acquisition & sustainment, of Motor Transport and associated transportation systems in order to support OMFTS and STOM while reducing TOC.**

Light Fleet



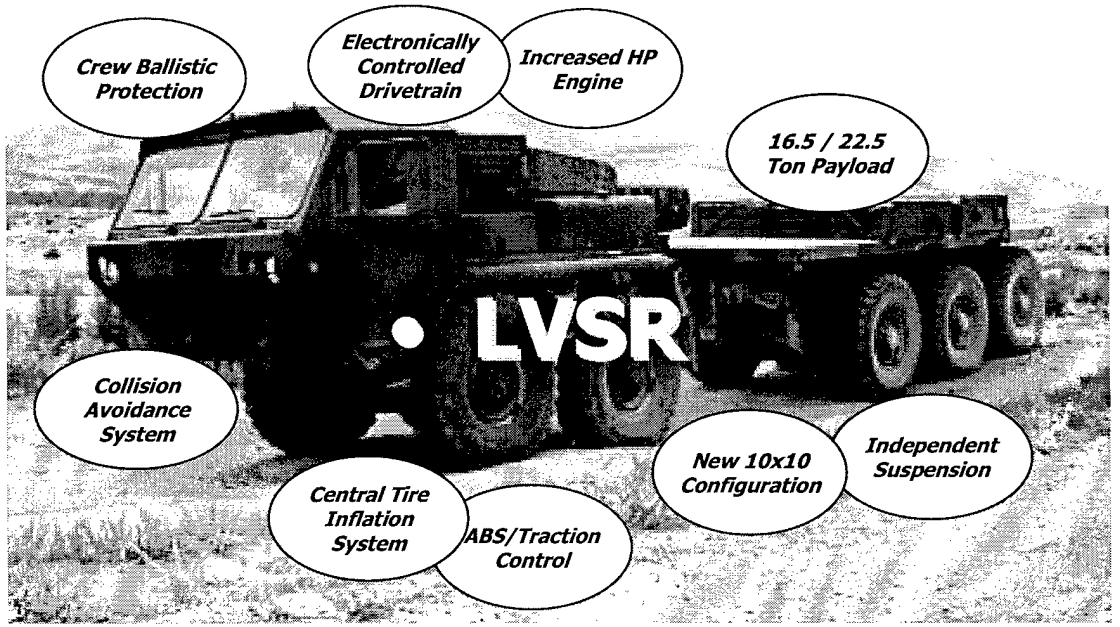
- *HMMWV*
- *M101A3 / M116A3 Trailers*
- *Internally Transportable - Light Tactical Vehicle (IT-LTV)*

Medium Fleet



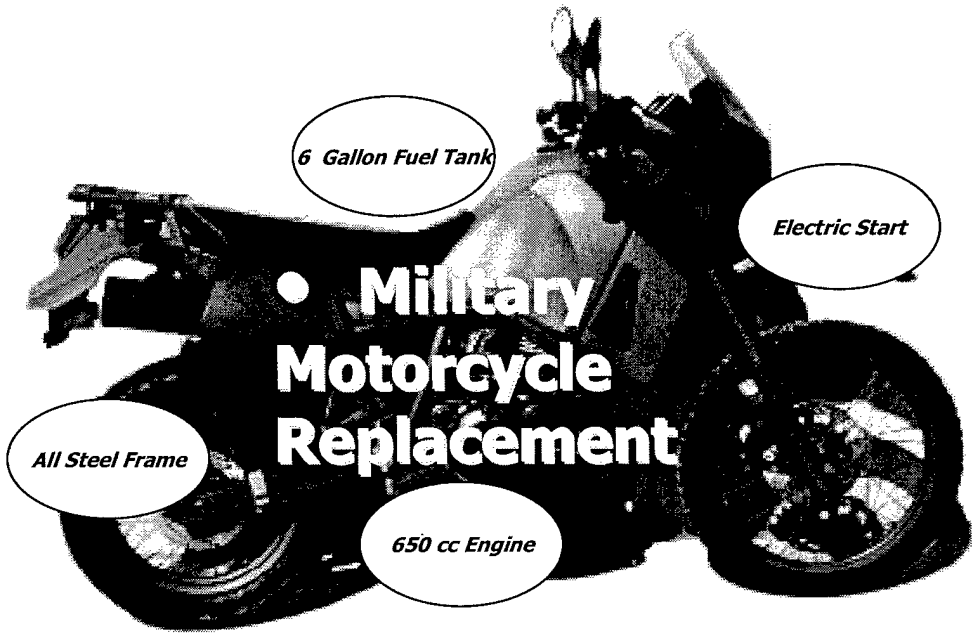
- **M809/939 5-Ton Series Trucks**
- **Medium Trailers**
  - M105 / M149 / M353 Trailers
  - MTVR Trailers

Heavy Fleet



- ***M870A2 Lowbed Semitrailer***
- ***Tactical Fuel Transport & Refueling***
  - **M970 Refueler Semitrailer**
  - **Aircraft Refueling Capability (ARC)**
- ***Commercial Tractor***

Special Fleet



- *P-19A Crash, Fire & Rescue*
- *Heavy Equipment Transporter (70+ Ton)*
- *Motor Transport Modification Program*

Transportation Futures IPT

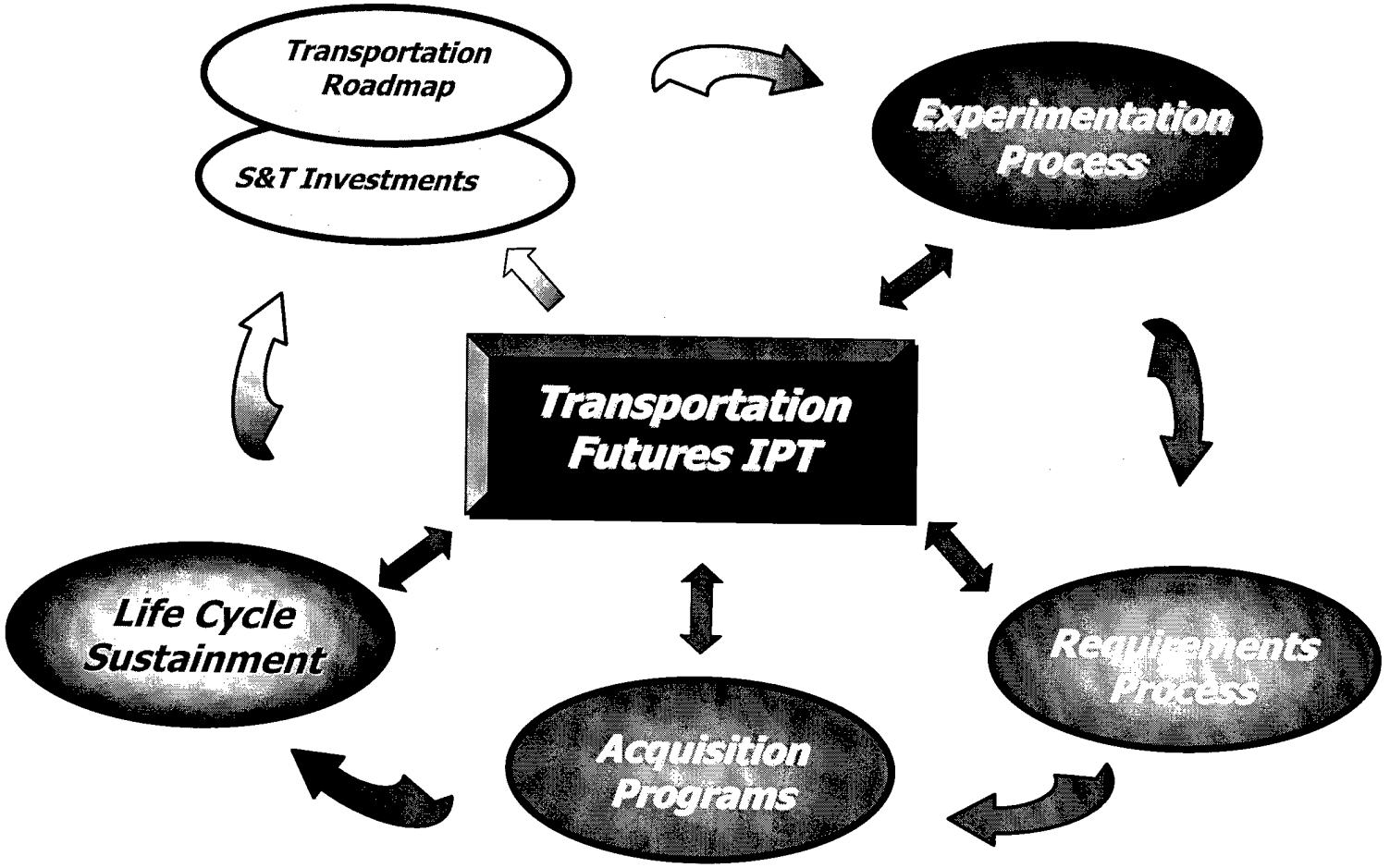
Mission: Establish & execute a mutli-disciplinary approach to addressing all the issues related to fielding the current & future fleet of transportation & distribution assets to support future Marine Corps Operations

- ***Goals***
  - **Establish, refine & reinforce transportation systems acquisition**
  - **Identify & analyze applicable emerging technologies**
  - **Examine strategies to streamline procurement & fielding**
  - **Identify, analyze & resolve critical programmatic issues**
  - **Provide historical visibility into the decision making process**

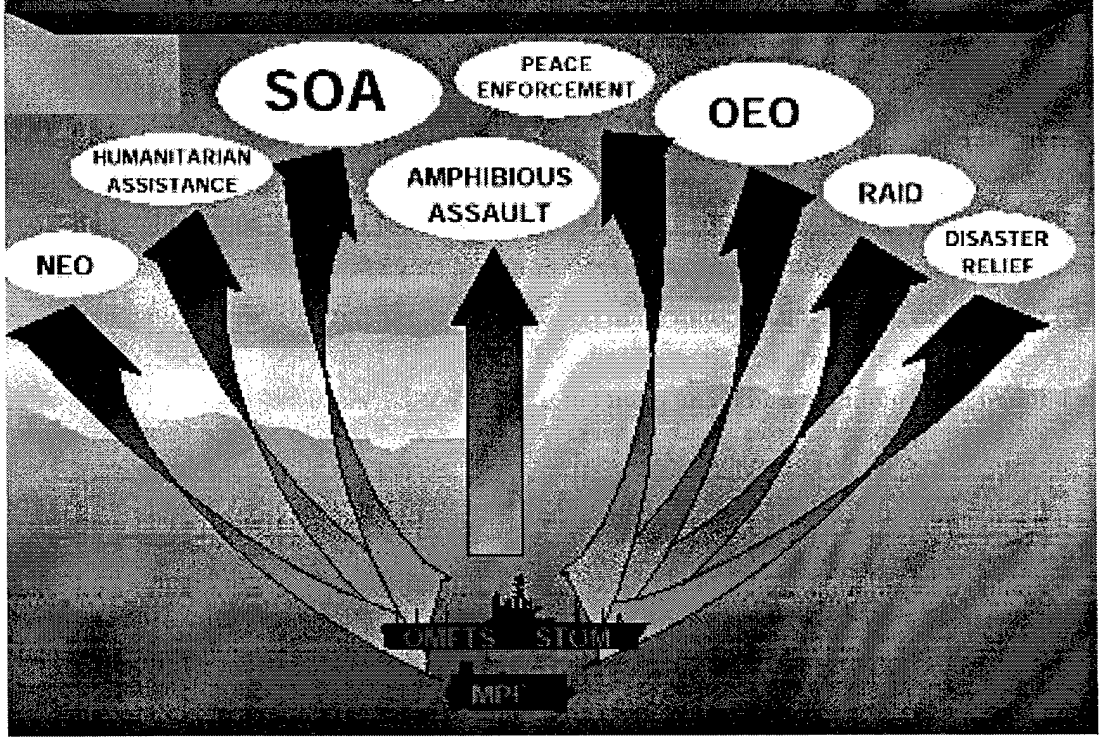
- ***Meets Quarterly***

Provide the Marine Corps Transportation "Roadmap"

Transportation Futures IPT



Motor Transport & Seabased Logistics in Support of OMFTS



- → Primacy of the Sea Base — Reduce or Eliminate the Footprint
- → Reduced Demand — Seabased Support - Light Force Ashore
- → In-stride Sustainment — Automated Logistics for Maneuver Units
- → Adaptive Response — Expanded Missions - Joint Support
- → Reconstitute at Sea — Build & Restore Combat Power

Reduce Burden of Logistics Support

- ***Precision Logistics vs Traditional Logistics Tail***
- ***Logistics Support Systems That ...***
  - Use less fuel
  - Require little or no maintenance over a given period, e.g., a month
  - Can predict internal failures
  - Leverage Technology
    - → Maintenance free batteries
    - → Reusable filters
    - → Onboard oil analysis

Logistics Focused on Supporting Operational Forces

Reduce Total Ownership Costs

- ***Maintenance***
  - Shorter, more responsive repair part pipelines
  - More precise repair parts accountability
  - Predictive maintenance capabilities
- ***New Technology***
  - Fewer, more reliable batteries
  - Reusable filters & Onboard oil analysis
- ***Industry Experience & Best Practices***

Do It Cheaper By Doing It Smarter

Corrosion Protection

- ***Corrosion is #1 Maintenance Problem***
  - Marine Corps environment
  - BIG impact on vehicle life
- ***Two Approaches***
  - Design into new system *(MTVR & HMMWVA2)*
  - Fixing Existing Systems
    - → Less clear solutions
    - → Potentially more difficult & costly than new
- ***What Is Out There & What Can Work?***

Makes Otherwise Sound Vehicles Unserviceable

Best Use of Technology

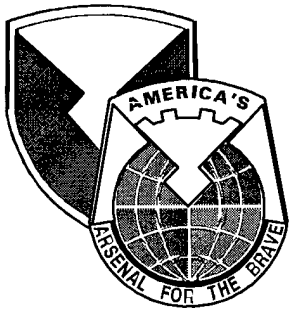
- ***What is Out There?***
- ***Is It Applicable for ...***
  - Insertion into existing systems
  - Design into new systems
- ***What Is Impact on TOC?***
- ***Improve the Process***
  - Models & Simulation throughout System Life Cycle
  - Integrated Process & Product Development

More Questions Than Answers

What You Can Do

- ***Let Us Know of Ways to Answer Challenges***
- ***Ideas for the MT Modification Line***
  - **Existing Commercial Solutions versus New Design**
  - **Talk to Project Officers**
- ***Better Ways to Facilitate ...***
  - **Government - Industry Cooperation**
  - **Teaming**

Give Us Your Ideas for Solutions



TACOM

Mobility and Firepower
for America's Army



QUALITY ASSURANCE

SUBCOMMITTEE REPORT

1 FEBRUARY 1999

Briefer: Ronald Scholtes
Date: February 1, 1999

Tank-automotive & Armaments COMmand

Committed to Excellence



NEW APPROACH



- MID-YEAR MEETINGS
- TESTING COMMUNITY PERSONNEL JOINED OUR SUBCOMMITTEE



AUGUST 1998 TOPICS



- DLA POLICY FOR ISO 9000
- USING COMMERCIAL TEST STANDARDS
- ELECTRONIC DD250 PROCESS
- NATIONAL AUTOMOTIVE CENTER PROJECTS

3/4

JANUARY 1999 TOPICS

- ACQUISITION REFORM UPDATE
- CURRENT NATIONAL AUTOMOTIVE CENTER PROJECTS
- ISO 9000 PROGRAM
- CONTRACTOR PERFORMANCE CERTIFICATION PROGRAM
- ELECTRONIC DD250 PROCESS
- TESTING USING COMMERCIAL STANDARDS

POINTS OF CONTACT

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  Commercial (219) 258-7523
  Email - wbotich@amgeneral.com

- Mr. Ronald Scholtes

  TARDEC, Engineering Business Group
  Commercial (810) 574-6153
  Email - scholter@tacom.army.mil

DEFENSE SECURITY COOPERATION AGENCY: THE CHANGING ENVIRONMENT AND FMS RE-ENGINEERING

MR ROBERT KELTZ
DEPUTY DIRECTOR,
DSCA

1 FEBRUARY 1999

SECURITY COOPERATION:
A KEY POLICY TOOL FOR THE 21st CENTURY

- BUILD INSTITUTIONS TO KEEP AMERICANS SAFE AND THE WORLD PEACEFUL
- SUSTAIN OUR PROSPERITY AND EXPAND GLOBAL ECONOMY
- PROMOTE AMERICAN PRINCIPLES & VALUES

- TO ENHANCE OUR SECURITY WITH MILITARY FORCES THAT ARE READY TO FIGHT
- TO BOLSTER AMERICA'S ECONOMIC REVITALIZATION
- TO PROMOTE DEMOCRACY ABROAD



- COALITION BUILDING
- FORWARD PRESENCE
- INTEROPERABILITY
- REGIONAL STABILITY
- CRISIS MANAGEMENT
- THEATER DETERRENCE

MILITARY ASSISTANCE PROGRAM

- FMS SALES = $8.6B & FMS DELIVERIES = $13.9B IN FY98
- SALES TO 137 COUNTRIES AND INT'L ORGANIZATIONS
- PIPELINE OF $70B IN PRIOR YEAR SALES
- OVER $3B IN GRANT ASSISTANCE IN FY97 - FY99
- IMET PROGRAMS OF $50M WITH 118 COUNTRIES IN FY99
- DSCA OVERSEES 15,000+ FMS CASES WORTH $222B
- DSCA MANAGES $370M IN FY99 ADMINISTRATIVE BUDGETS
- SECURITY ASSISTANCE FY98 WORK-YEARS: 5,246
- 712 SAOs IN OVERSEAS SA ORGANIZATIONS

FUNCTIONAL VIEW OF SECURITY ASSISTANCE COMMUNITY

5,246 WORK YEARS ***FY 98***

HEADQUARTERS
(135)

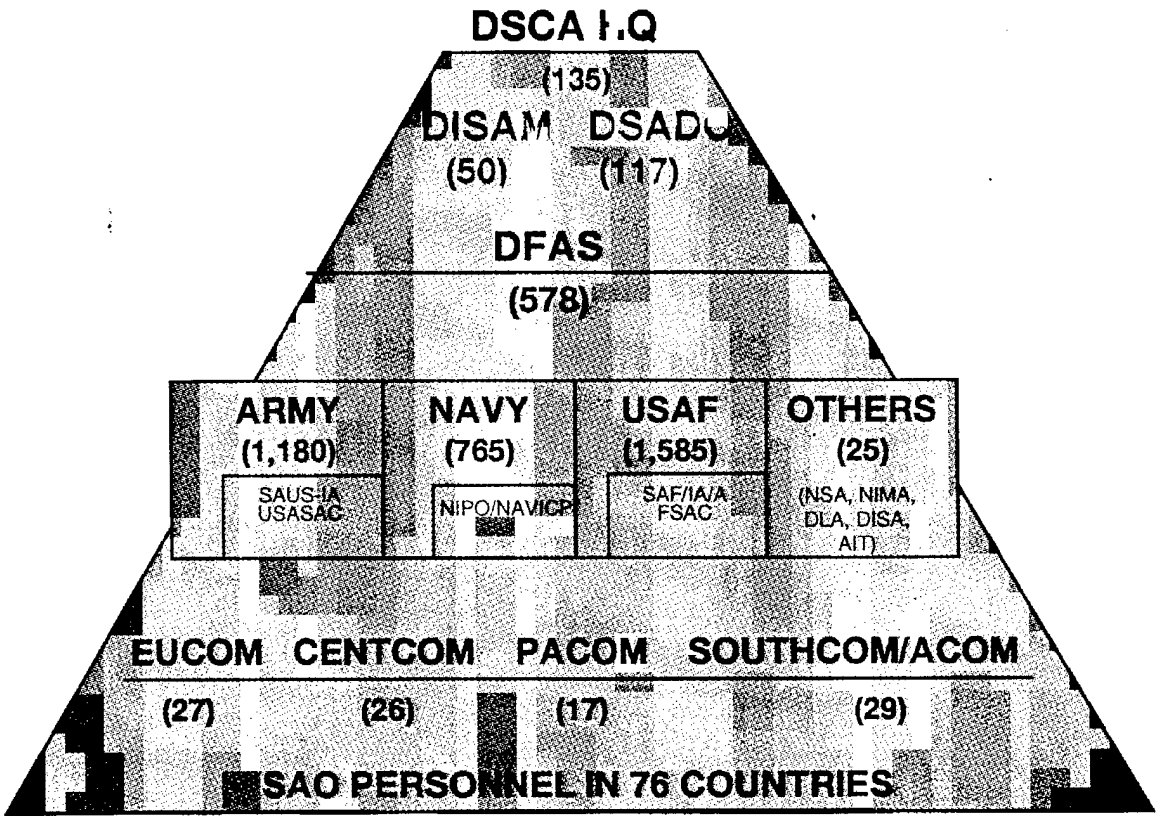
DSCA ACTIVITIES
(167)

FIELD AGENCIES
(578)

IMPLEMENTERS
(3,555)

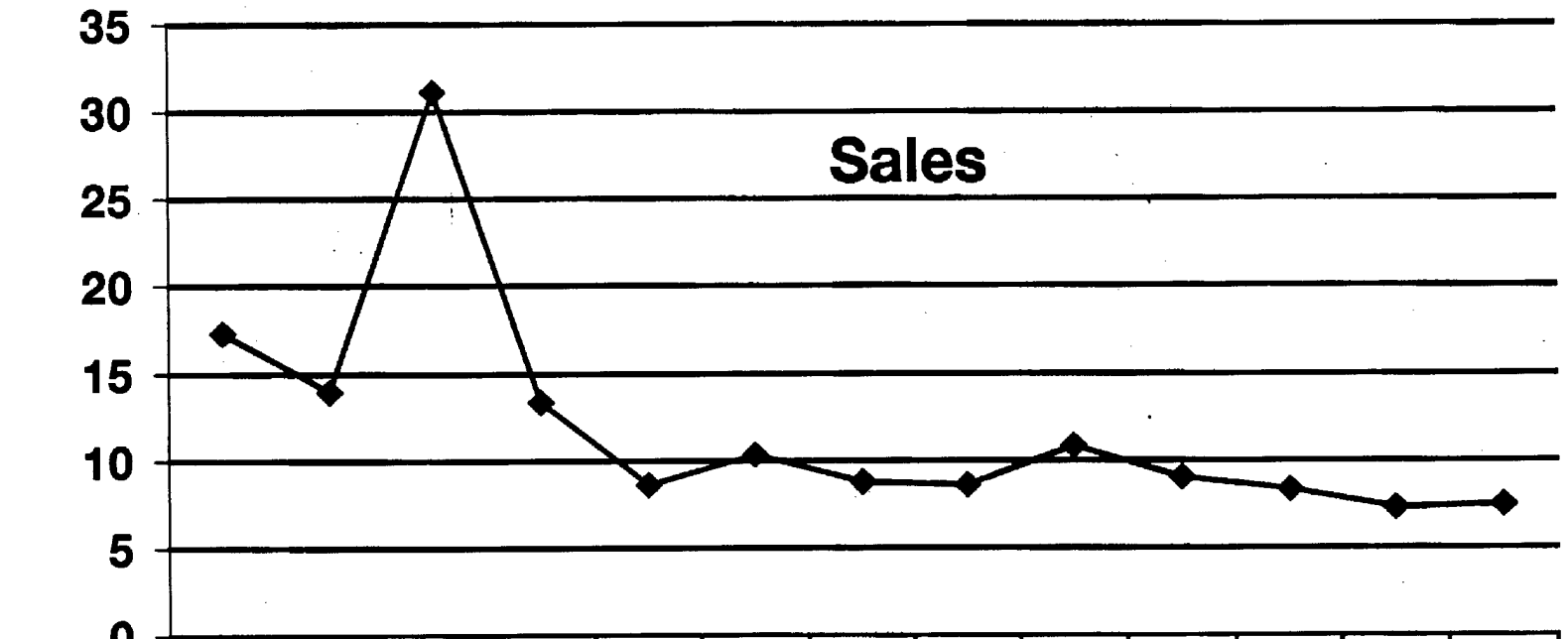
UNIFIED COMMANDS
(99)

SAO'S
(712)



FOREIGN MILITARY SALES:
WORLDWIDE SALES

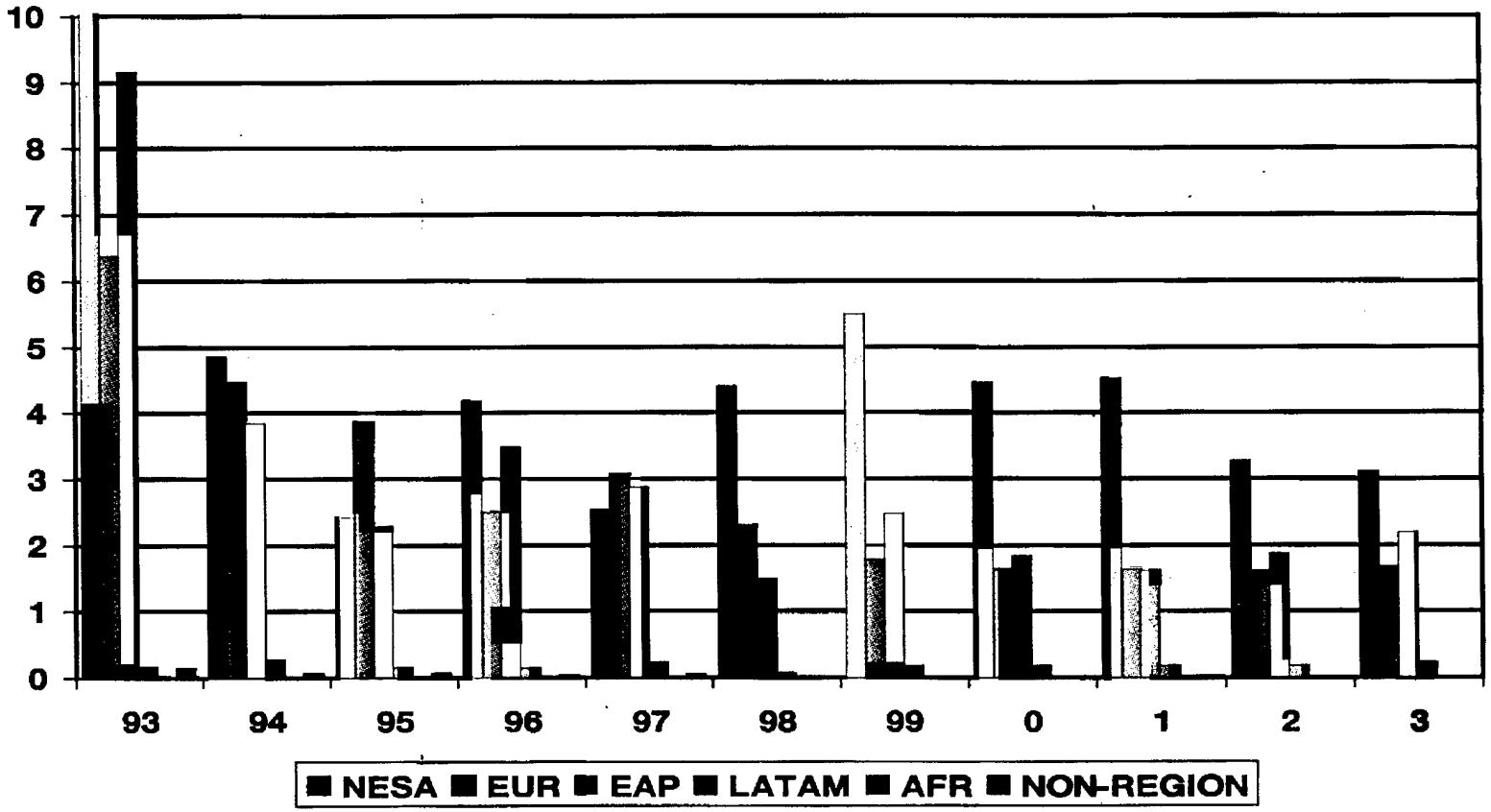
$ Billions



	91	92	93	94	95	96	97	98	99	0	1	2	3
Sales	17.3	13.9	31.1	13.3	8.6	10.3	8.8	8.6	10.8	9	8.3	7.3	7.5

FOREIGN MILITARY SALES:
Regional Breakdown

(in Billions)



U.S. GOVERNMENT TACTICAL WHEEELED VEHICLE SALES

- NOT REALLY ANY NEW SALES PENDING OR ON HORIZON
  - ➤ SOME MINOR SUSTAINMENT CASES FOR EXISTING FLEETS
- BULK OF SALES GO ON DIRECT COMMERCIAL BASIS (CUSTOMER PREFERENCE)
- VARIABLES AT WORK IN MARKETPLACE THAT WE CAN'T CONTROL
  - ➤ DESIRE OF CUSTOMERS TO GO INDIGENOUS WHENEVER POSSIBLE
  - ➤ MANY VIABLE PRODUCERS

DSCA MAJOR EFFORTS

External

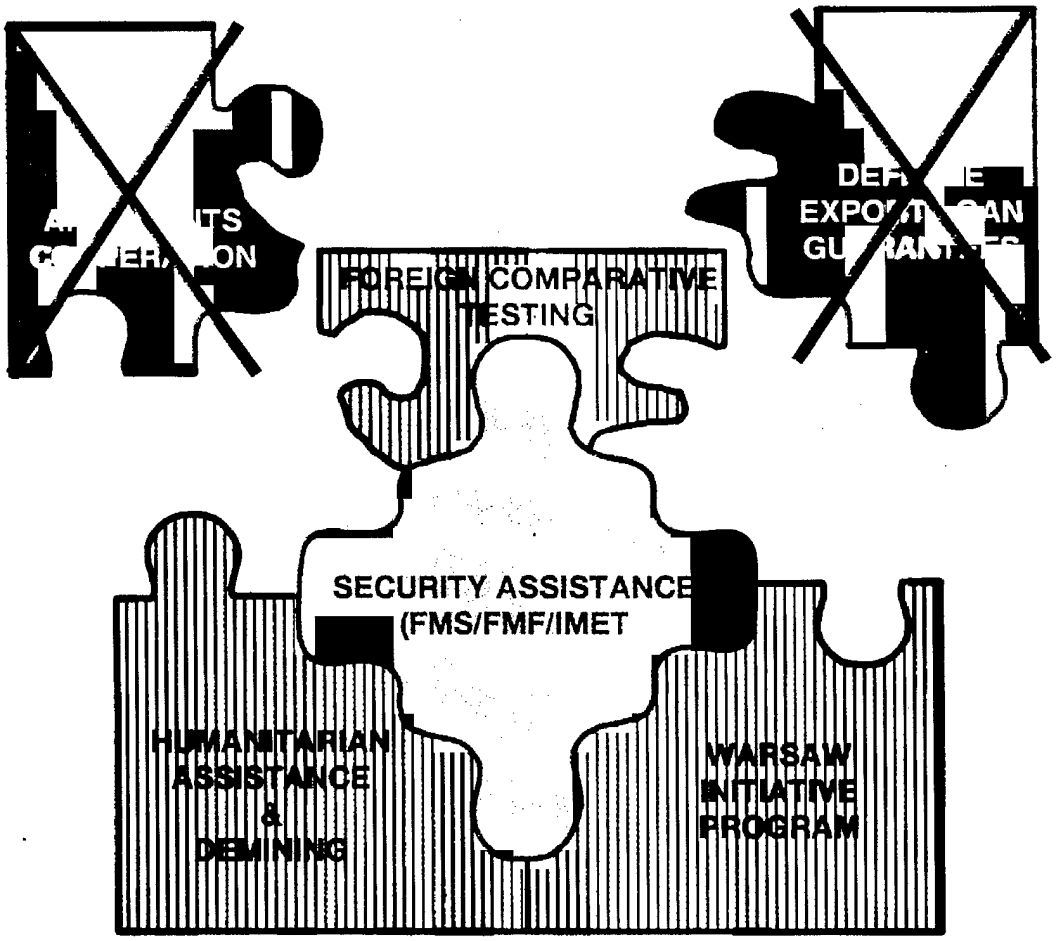
- RE-ENGINEER THE FMS PROCESS AND MEET CUSTOMER NEEDS
- MAINTAIN SECURITY ASSISTANCE TRUST FUND SOLVENCY
- MAINTAIN SOLVENCY OF CUSTOMER TRUST FUNDS
- ENSURE CONTINUED VIABILITY OF AGENCY

Internal

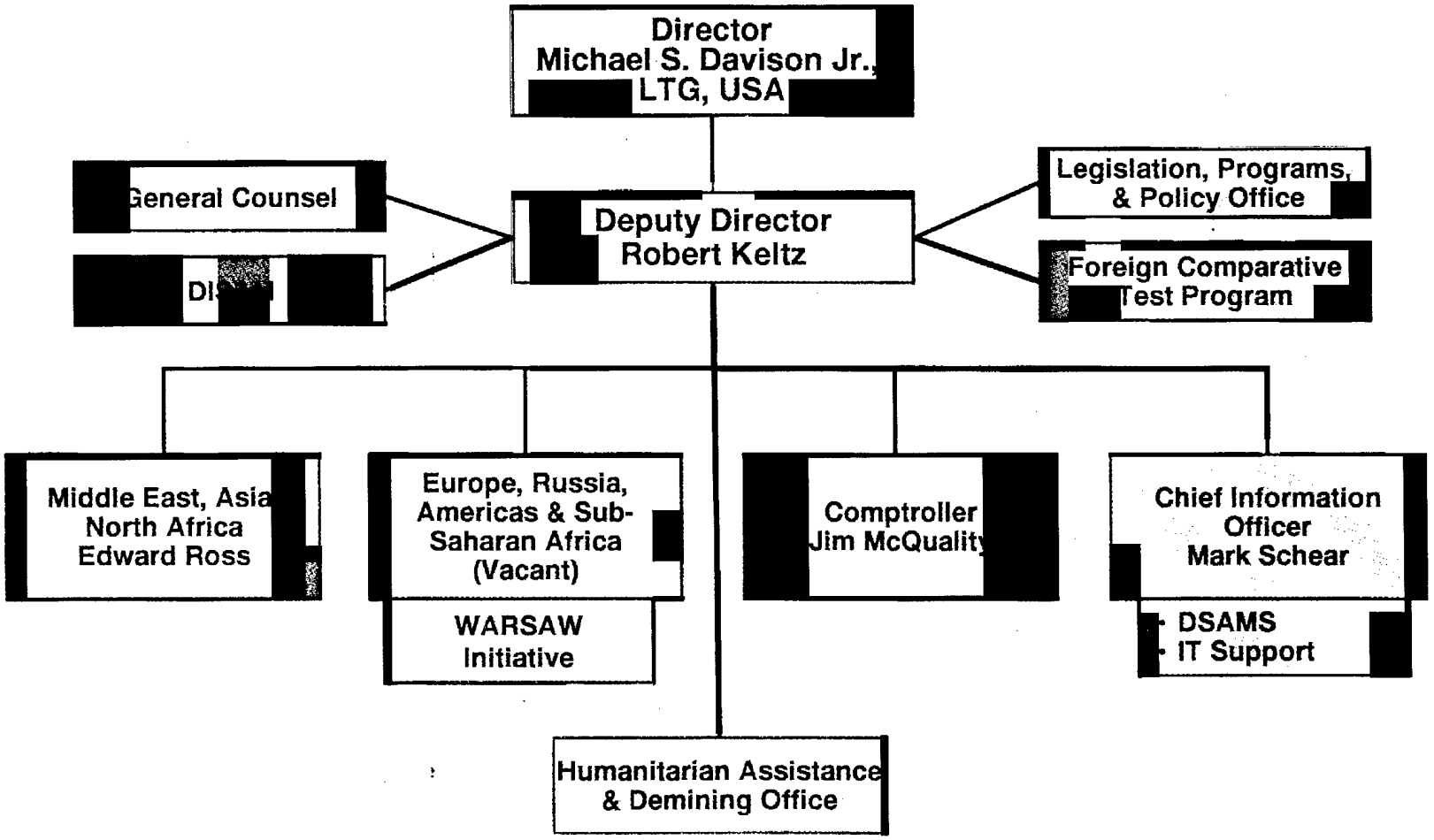
- IMPLEMENT AGENCY 5 YEAR STRATEGIC PLAN
- COMPLETE AGENCY'S BUSINESS PERFORMANCE PLAN FOR DEFENSE MANAGEMENT COUNCIL
- DEVELOP & FIELD DSAMS

FUNCTIONS ACQUIRED UNDER DEFENSE REFORM INITIATIVE

- HA/D PROGRAMS TRANSFERRED TO DSCA - MARCH 1998
- WARSAW INITIATIVE (PFP) PROGRAM MANAGEMENT FUNCTIONS - AUG 98
- FOREIGN COMPARATIVE TEST PROGRAM - AUG 98
- INTERNATIONAL ARMAMENTS COOPERATION/DEFENSE EXPORT LOAN GUARANTEE PROGRAM - NOT COMING TO DSCA



DEFENSE SECURITY COOPERATION AGENCY (DSCA)



AGENCY STRATEGIC PLANNING

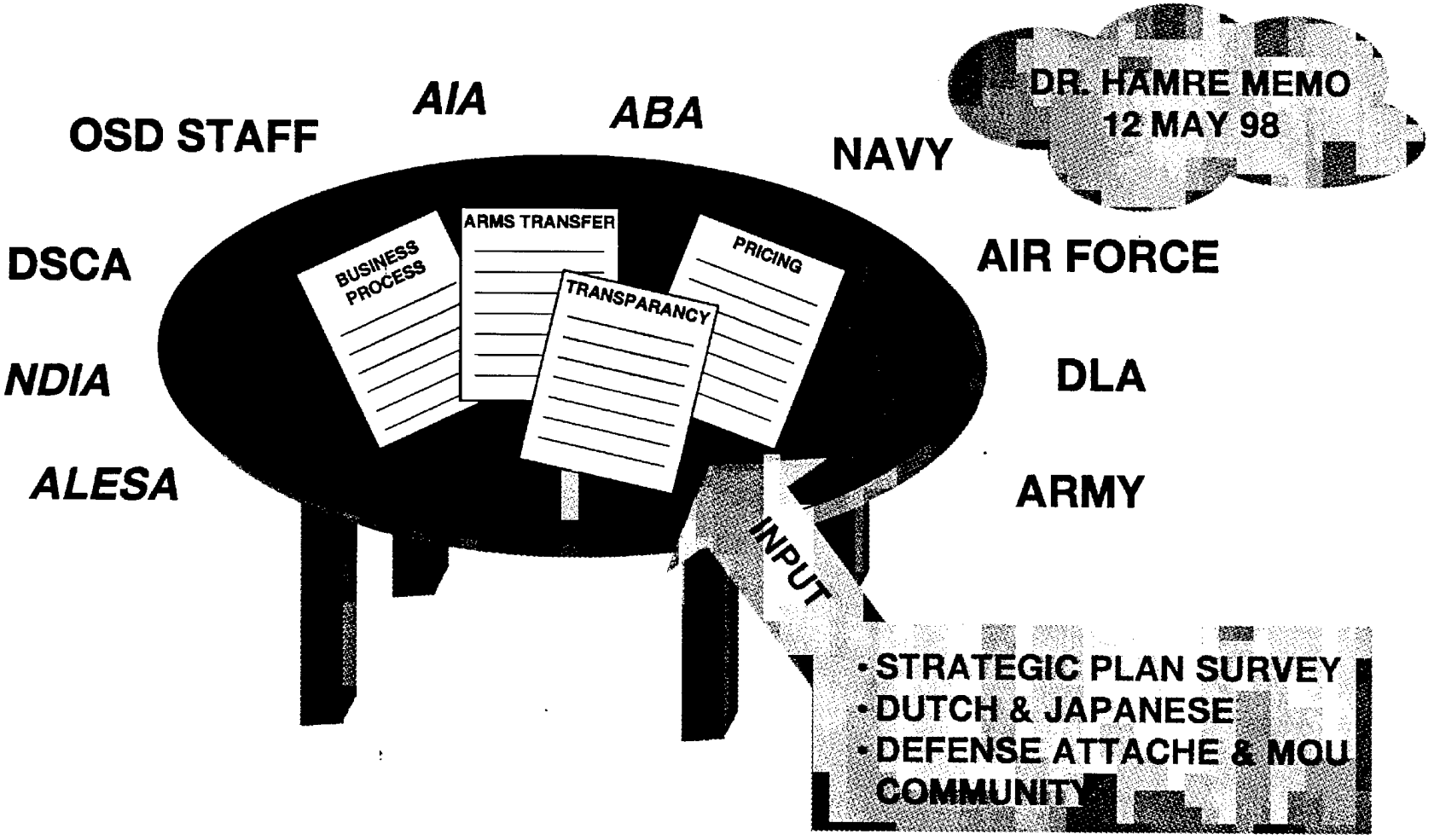
- RESPONDS TO THE GOVERNMENT PERFORMANCE AND RESULTS ACT
- DEPSECDEF DIRECTION REQUIRES PERFORMANCE CONTRACTS FOR ALL DEFENSE AGENCIES
- PLAN SETS SPECIFIC, MEASURABLE PERFORMANCE OBJECTIVES FOR DSCA
  - ➤ BASIS FOR PERFORMANCE CONTRACT BETWEEN DSCA DIRECTOR AND THE DEPSECDEF
  - ➤ WILL BE PART OF THE DSCA ANNUAL PROGRAM OBJECTIVE MEMORANDUM (POM) SUBMISSION

RE-ENGINEERING THE FMS SYSTEM



- FMS SYSTEM FACING CHALLENGES
- INDUSTRY WANTS MORE FROM FMS SYSTEM
  - ➤RAPID POLICY DECISIONS
  - ➤STRONGER ADVOCACY
  - ➤MORE SUPPORT FOR SALES EFFORTS
- MAJOR CUSTOMERS WANT:
  - ➤GREATER PARTICIPATION
  - ➤SHORTER TIMELINES
  - ➤FASTER RELEASE APPROVALS
  - ➤FEWER SURCHARGES

DEVELOPING A CONSENSUS FOR CHANGE



NEEDED ACTIONS

TRANSPARENCY*
(9 & 23 NOV)

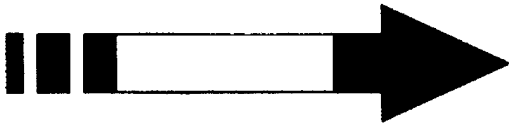
- **RELATIONSHIP WITH INDUSTRY**
- **LOA PREPARATION**
- **CONTRACT PREPARATION**



- **RELATIONSHIP WITH INDUSTRY POLICY MEMO***
- *DSCA POLICY MEMO*
- *FOREIGN CONTRACTING POLICY MEMO*

PRICING, COST RECOVERY*
(18 NOV & 9 DEC)

- **NTE/FFP LOAs**
- **ADJUST FMS SURCHARGES**
- **USG COST RECOVERY**
- **ALTERNATIVES TO DFAS/DCMC**



- *LEGISLATIVE CHANGE*
- *ACTIVITY BASED COSTING ANALYSIS*
- *LEGISLATIVE CHANGE*
- *POSSIBLE OUTSOURCING*

*** Presented to DPACT 26 Jan 99**

NEEDED ACTIONS

TECH TRANSFER
(30 NOV & 14 DEC)

- **ARMS TRANSFER POLICY REVIEW GROUP**
- **IMPROVE BUREAUCRATIC PROCESS**
- **FOREIGN DISCLOSURE**



- **ATPRG POLICY MEMO (18 DEC 98)***
- *POSSIBLE ITAR REVISIONS*
- *ASSESSMENT OF INFORMATION RELEASE CRITERIA*
- *USDP/POLICY ON ACCESS*

METRICS/PROCESS RE-ENGINEERING
(18 DEC)

- **DEVELOP PERFORMANCE MEASURES**
- **RE-ENGINEER ENTIRE SECURITY COOPERATION PROCESS**



- **METRICS EFFORT BEGUN (OCT 98)**
- *CONTRACTOR SUPPORT IMPLEMENTED*

*** Presented to DPACT 26 Jan 99**

CURRENT ACTIVITIES

- 8 JAN - FINAL COORDINATION WITH INDUSTRY ON 1ST TWO WHITE PAPERS
- 11 JAN - DPACT COORDINATION
- 26 JAN - DPACT
- 8 FEB - MEET WITH MILDEPS TO COORDINATE RE-INVENTION EFFORTS

COMPLETING REMAINING GROUNDWORK

TWO WHITE PAPERS TO BE FINISHED

- **ARMS TRANSFER & TECHNOLOGY/DATA RELEASE**
  - ➤ DSCA AND DUSD(PS) COOPERATIVELY REWRITE PAPER
  - ➤ VET PAPERS THROUGH DoD COMMUNITY AND INDUSTRY
  - ➤ TARGET COMPLETION DATE 15 MARCH
- **METRICS & PROCESS RE-ENGINEERING**
  - ➤ PAPER BEING CO-DEVELOPED WITH MILDEPS AND DLA
  - ➤ TARGET COMPLETION DATE 29 MARCH

THE FUTURE

- SECURITY COOPERATION REFLECTS ON USG AND DEMONSTRATES COMMITMENT TO SECURITY NEEDS OF OUR FRIENDS AND ALLIES
- SECURITY COOPERATION WILL CONTINUE TO BE AN IMPORTANT TOOL FOR POLICY MAKERS
- WE CAN EXPECT:
  - ➤ CONTINUED SCRUTINY OF FOREIGN AID REQUESTS
  - ➤ CONTINUED PRESSURE TO REDUCE MANPOWER RESOURCES
  - ➤ INCREASED COMPETITIVE MARKET FOR SMALLER DEFENSE BUDGETS

AGENCY VISION

TO BE THE PREMIER AGENCY RECOGNIZED AND RESPECTED FOR LEADERSHIP, EXPERTISE, INNOVATION, AND RESULTS IN SECURITY COOPERATION...

- **A HIGHLY QUALIFIED TEAM OF MOTIVATED PROFESSIONALS**
- **VITAL TO SUPPORTING US INTERESTS AND SECURITY RELATIONSHIP**
- **THE INTERNATIONAL PARTNER OF CHOICE**

...MASTERING THE CHALLENGES OF A CHANGING GLOBAL ENVIRONMENT.

Decisive

Supportive

Committed

Accessible

21ST TAACOM

UPDATED USAREUR HAZARDOUS MATERIEL HANDLING REQUIREMENTS

HOW DOES IT AFFECT FLEET READINESS?

1

21ST TAACOM

AGENDA

- BACKGROUND
-
- ISSUES
- HAZMAT DRIVER'S LICENSING REQUIREMENTS
- HAZMAT UNIT SAFETY OFFICER REQUIREMENT
- HAZMAT TRANSPORTATION WAIVERS
- JOINT VEHICLE INSPECTION
- ANNUAL B3 VEHICLE CERTIFICATION
-
- CONCLUSIONS

21ST TAACOM

BACKGROUND

- MARCH 1998 - SUPPLEMENTAL AGREEMENT TO SOFA GOES INTO EFFECT

- AUTHORIZES NATO HOST NATIONS TO ENFORCE COMPLIANCE WITH LOCAL ENVIRONMENTAL AND HAZMAT REGULATIONS AND LAWS BY U.S. FORCES STATIONED IN EUROPE

- U.S. FORCES UNABLE TO IMMEDIATELY COMPLY WITH EUROPEAN REGULATIONS AND LAWS

- U.S. FORCES FORCED TO ADOPT "PHASE-IN" COMPLIANCE

21ST TAACOM

ISSUES

- WAIVER OF REQUIREMENTS PREVENTING U.S. FORCES FROM TRANSPORTING HAZMAT OVER EUROPEAN HIGHWAYS

- CONDUCT USAREUR AND GERMAN FEDERAL MINISTRY OF TRANSPORT JOINT VEHICLE INSPECTION

- WAIVER OF REQUIREMENT FOR ANNUAL B3 VEHICLE CERTIFICATION

21ST TAACOM

HAZMAT DRIVER'S LICENSING REQUIREMENTS

- EFFECTIVE 1 JANUARY 1999, ALL U.S. TRANSPORTERS (MILITARY AND CIVILIAN) OF HAZMAT IN EUROPE ARE REQUIRED TO BE LICENSED IAW ACCORD EUROPEEN RELATIF AU TRANSPORT DES MATIERES DANGEROUSE PAR ROUTE (ADR)
-
- TO MEET THIS REQUIREMENT, USARERUR WILL:
  - MAXIMIZE USE OF HAZMAT 11 COURSE, VILSECK, GERMANY
  - MAXIMIZE USE OF MACOM DRIVER'S ACADEMIES
  - EMPLOY MOBILE TRAINING TEAMS

5

21ST TAACOM

HAZMAT UNIT SAFETY ADVISORS

- EFFECTIVE 1 JANUARY 2000, ALL U.S. FORCES, DETACHMENT SIZE AND LARGER, ARE REQUIRED TO HAVE AT LEAST ONE UNIT SAFETY ADVISOR TRAINED AND CERTIFIED IAW ADR
-
- UNIT SAFETY ADVISOR IS RESPONSIBLE AND ***PERSONALLY LIABLE*** FOR TRANSPORTATION OF HAZMAT

- USAREUR IS DEVELOPING ALTERNATIVE COURSES OF ACTION FOR THE TRAINING AND CERTIFICATION OF UNIT SAFETY ADVISORS

21ST TAACOM

JOINT VEHICLE INSPECTION

- SEPTEMBER 1998 - USAREUR AND GERMAN FEDERAL MINISTRY OF TRANSPORT CONDUCTED A JOINT VEHICLE INSPECTION

- PRELIMINARY RESULTS:
  - MECHANISM TO LIMIT VEHICLE TOP SPEED
  - TANKERS REQUIRE SWITCH TO DISCONNECT VEHICLE BATTERY
  - VEHICLES REQUIRED TO HAVE NON-FLAMMABLE TARPS AND CANVASES
  - SHIELDING REQUIRED AROUND ALL WIRING
  - TANKERS MUST BE DOUBLE WALLED AND SPECIALLY REINFORCE
  - VEHICLES REQUIRED TO HAVE ABS

21ST TAACOM

JOINT VEHICLE INSPECTION (CONT'D)

- USAREUR STILL AWAITING OFFICIAL INSPECTION RESULTS
-
- USAREUR HAS NOTIFIED TACOM OF INSPECTION AND PRELIMINARY RESULTS FOR FUTURE VEHICLE MODIFICATION AND PROCUREMENT REQUIREMENTS
-
- FUTURE ACTIONS DEPENDENT UPON GERMAN MINISTRY OF TRANSPORT RECOMMENDATIONS

- WILL REQUEST WAIVER OF CURRENT DEFICIENCES; FUTURE PROCUREMENTS MUST MEET ADR STANDARDS

21ST TAACOM

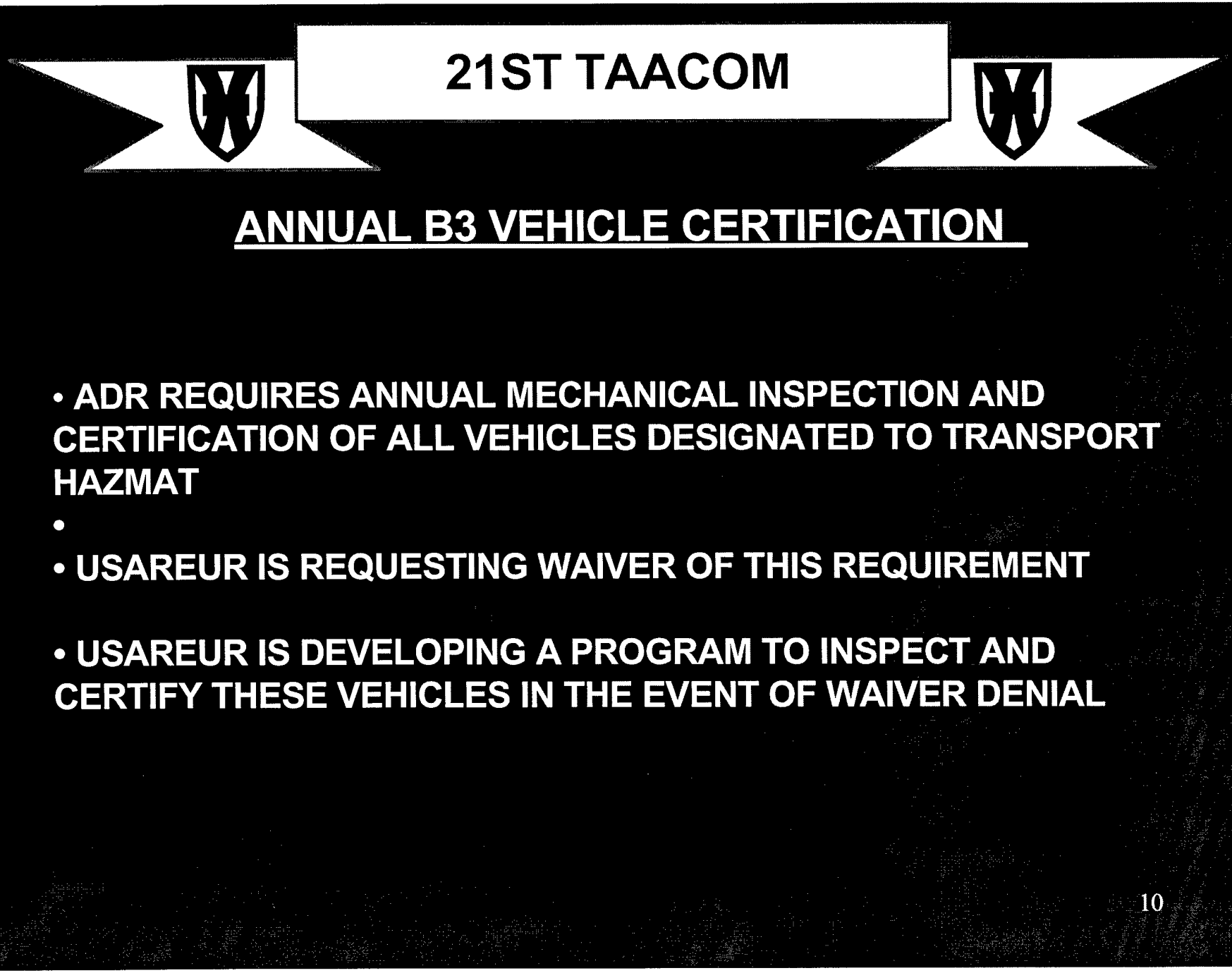
HAZMAT WAIVERS

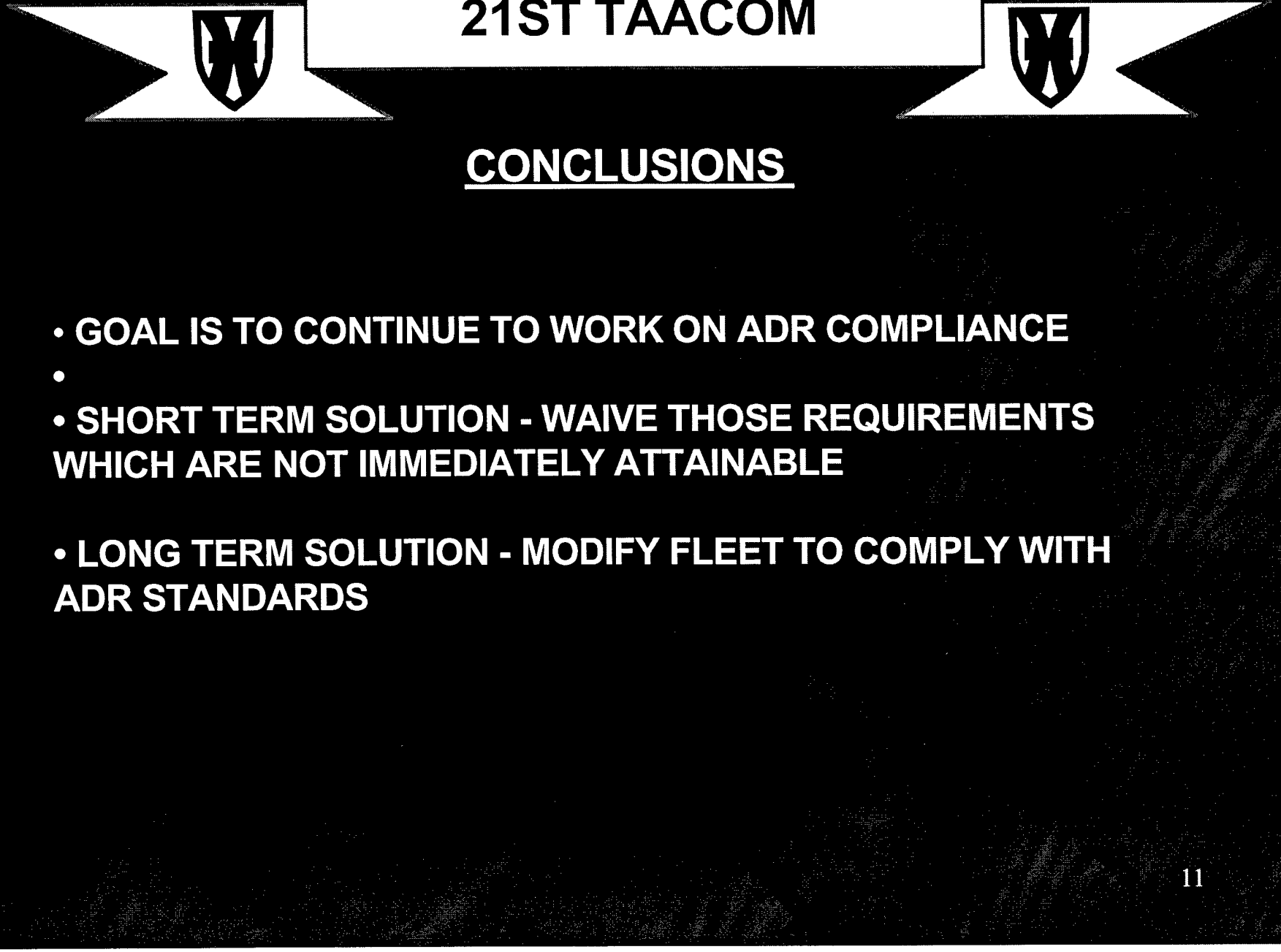
- DECEMBER 1998 - USAREUR SUBMITTED 18 WAIVER REQUESTS TO ALLOW U.S. FORCES TO CONTINUE TRANSPORTATION OF HAZMAT
-
- WAIVER REQUESTS VARY FROM OPERATIONAL PROCEDURES TO VEHICLE OWNER IDENTIFICATION ON THE VEHICLE TO VEHICLE ROUTE DETERMINATION

- ALL WAIVERS INITIALLY APPROVED; AWAITING FINAL CONFIRMATION FROM FEDERAL MINISTRY OF TRANSPORT

- TRANSPORT OF HAZMAT CONTINUES UNTIL 30 JUNE 1999 WHEN FINAL CONFIRMATION MUST BE RECEIVED

9


21ST TAACOM
ANNUAL B3 VEHICLE CERTIFICATION
• ADR REQUIRES ANNUAL MECHANICAL INSPECTION AND CERTIFICATION OF ALL VEHICLES DESIGNATED TO TRANSPORT HAZMAT
•
• USAREUR IS REQUESTING WAIVER OF THIS REQUIREMENT
• USAREUR IS DEVELOPING A PROGRAM TO INSPECT AND CERTIFY THESE VEHICLES IN THE EVENT OF WAIVER DENIAL
10


21ST TAACOM
CONCLUSIONS
• GOAL IS TO CONTINUE TO WORK ON ADR COMPLIANCE
•
• SHORT TERM SOLUTION - WAIVE THOSE REQUIREMENTS WHICH ARE NOT IMMEDIATELY ATTAINABLE
• LONG TERM SOLUTION - MODIFY FLEET TO COMPLY WITH ADR STANDARDS
11


21ST TAACOM
FUTURE TACTICAL WHEELED VEHICLES
12

21ST TAACOM

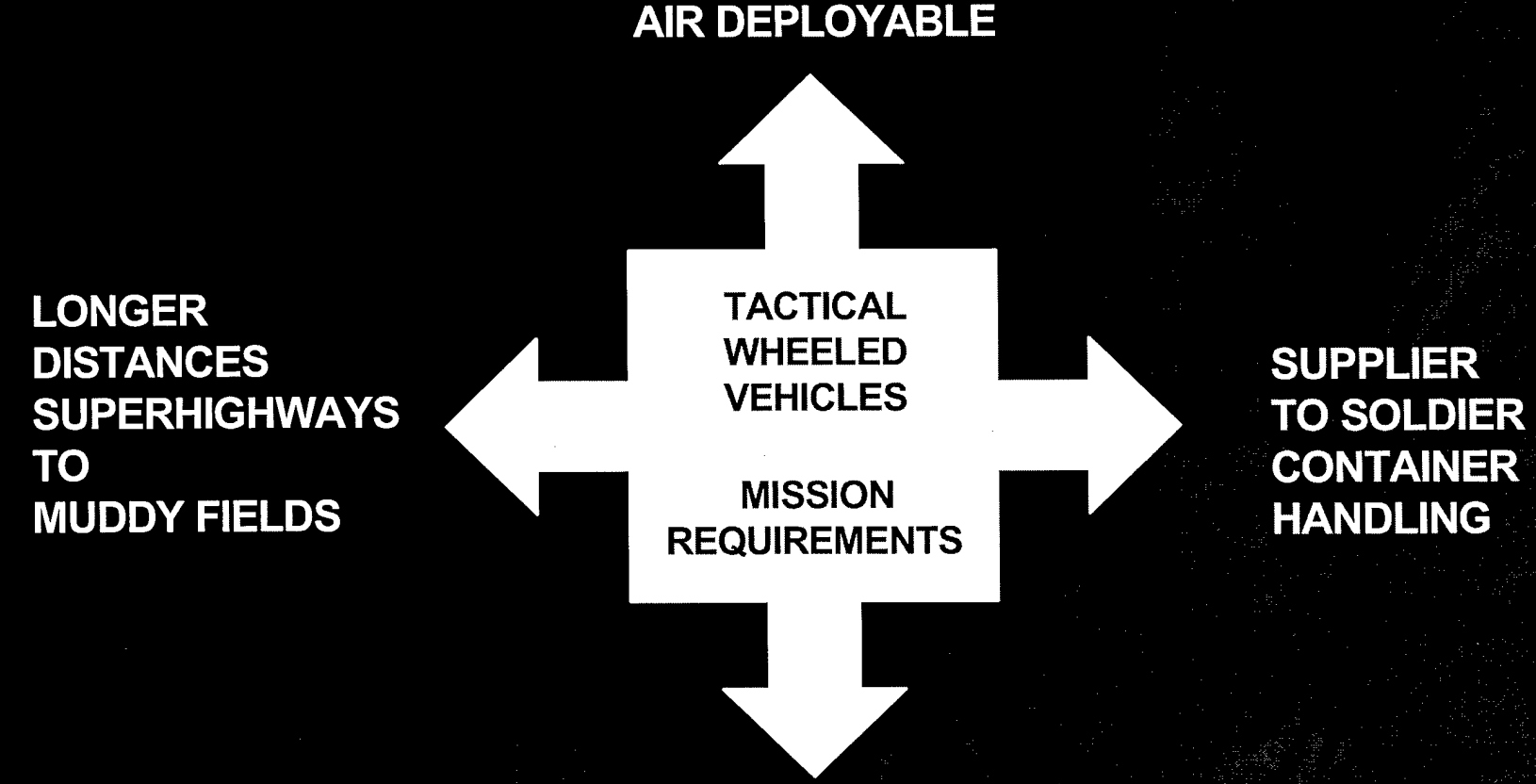
AGENDA

- MISSION REQUIREMENTS
- FUNCTIONAL REQUIREMENTS
- ORGANIZATIONAL STRUCTURES
- INDUSTRY SUPPORT

13

21ST TAACOM

MISSION REQUIREMENTS



14

21ST TAACOM

FUNCTIONAL REQUIREMENTS

MEETS WORLD WIDE REGULATIONS



IN TRANSIT VISIBILITY

INCREASED VELOCITY

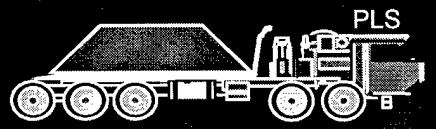


CREW PROTECTION

DECREASED SUPPORT COSTS

MODULAR





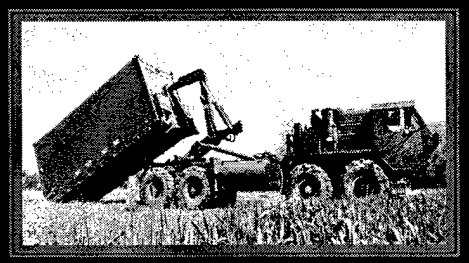
FLEXIBLE

INCREASED OPTEMPO

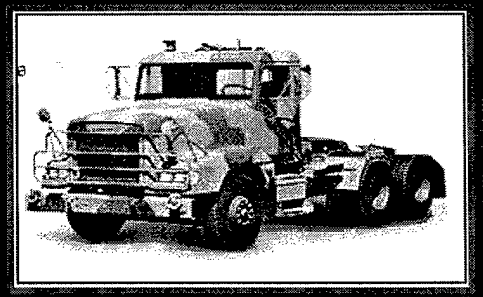
MATERIEL INVENTORY IN TRANSIT TO NEED

21ST TAACOM

ORGANIZATIONAL STRUCTURES



- MODULAR
- VARIETY OF CAPABILITY
- FLEXIBLE
- EXPRESS SERVICE
- MULTI-CAPABLE DRIVERS
- SIMPLIFIED LOGISTICS





16

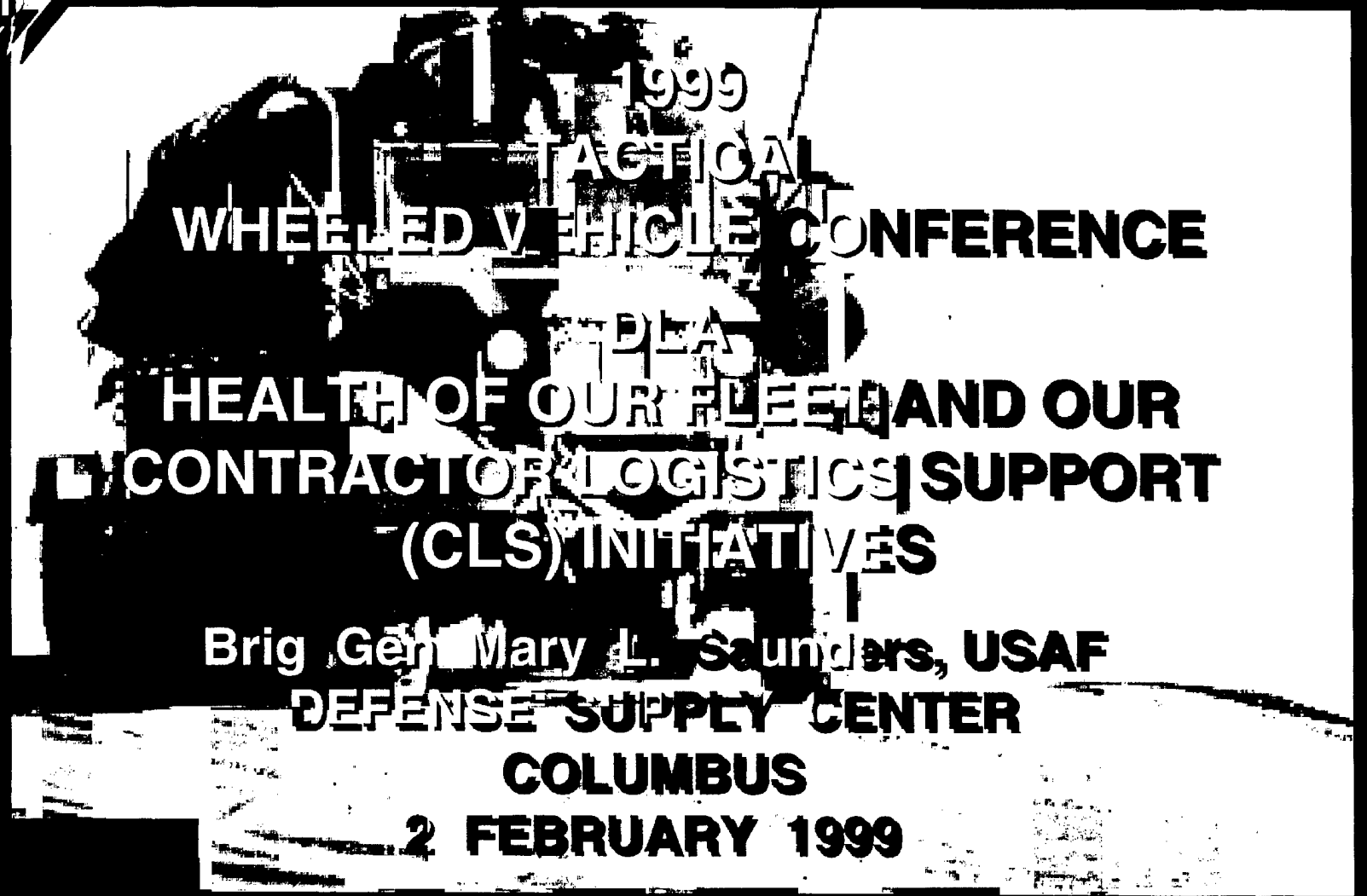
21ST TAACOM

INDUSTRY SUPPORT

- USE PROVEN TECHNOLOGY
- CASH IN ON COMMERCIAL DEVELOPMENTS
- LESS FUNDING FOR LOGISTICS
- VEHICLES MUST PASS WORLD WIDE REQUIREMENTS
- FEWER TRANSPORTATION NODES
- INCREASED USE OF CONTAINERS
- NEED MORE INTEGRATED AND INDEPENDENT MHE

DEFENSE LOGISTICS AGENCY

Defense Logistics Agency
America's Logistics Combat Support Agency



1999 TACTICAL WHEELED VEHICLE CONFERENCE

DLA

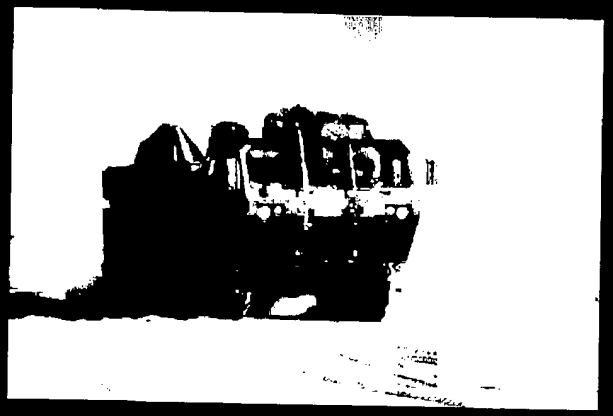
HEALTH OF OUR FLEET AND OUR CONTRACTOR LOGISTICS SUPPORT (CLS) INITIATIVES

Brig Gen Mary L. Saunders, USAF
DEFENSE SUPPLY CENTER
COLUMBUS

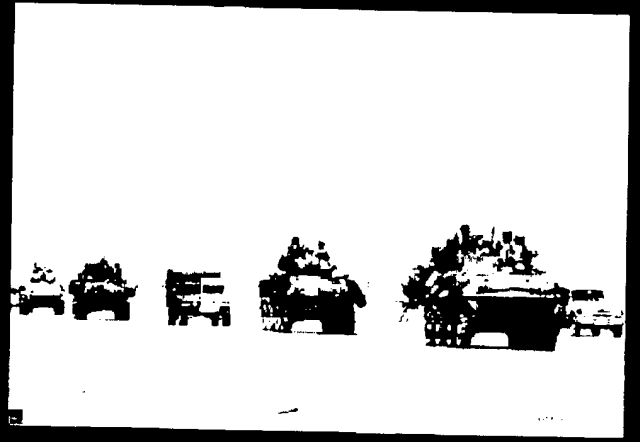
2 FEBRUARY 1999

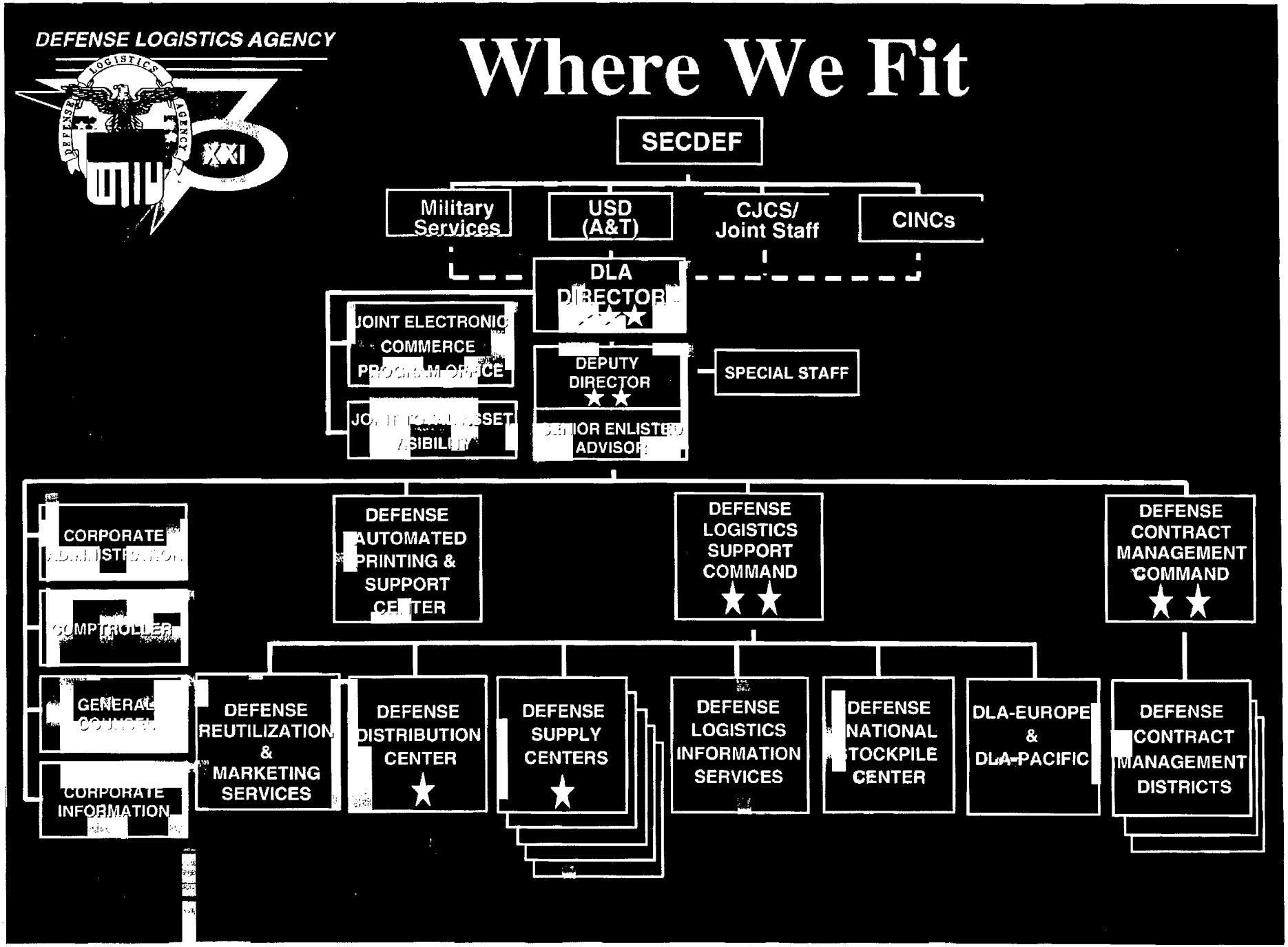
DEFENSE LOGISTICS AGENCY

DLA



- WHO WE ARE
- HOW WE DO BUSINESS
- HOW WE MEASURE HEALTH / SUCCESS
- CLS INITIATIVES
- SUMMARY




DEFENSE LOGISTICS AGENCY
Where We Fit
SECDEF
Military Services
USD (A&T)
CJCS/ Joint Staff
CINCs
DLA DIRECTOR
JOINT ELECTRONIC COMMERCE PROGRAM OFFICE
DEPUTY DIRECTOR
SPECIAL STAFF
ADVISOR
CORPORATE
COMPTROLLER
GENERAL COUNSEL
CORPORATE INFORMATION
DEFENSE AUTOMATED PRINTING & SUPPORT CENTER
DEFENSE LOGISTICS SUPPORT COMMAND
DEFENSE CONTRACT MANAGEMENT COMMAND
DEFENSE REUTILIZATION & MARKETING SERVICES
DEFENSE DISTRIBUTION CENTER
DEFENSE SUPPLY CENTERS
DEFENSE LOGISTICS INFORMATION SERVICES
DEFENSE NATIONAL STOCKPILE CENTER
DLA-EUROPE & DLA-PACIFIC
DEFENSE CONTRACT MANAGEMENT DISTRICTS

DEFENSE LOGISTICS AGENCY

DLA

OUR MISSION...

To provide acquisition and integrated logistics support to America's Armed Forces in peace and war--around the clock, around the world.



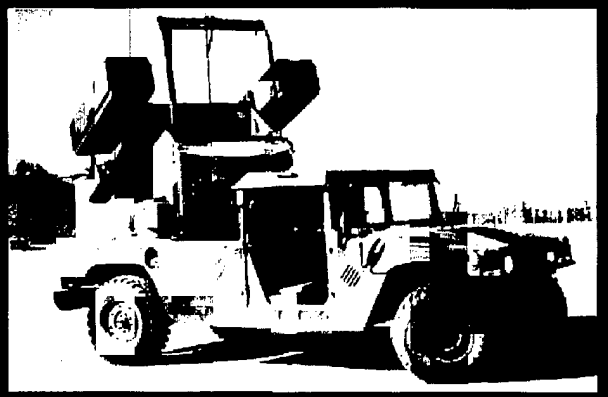
VISION...

To be America's logistics combat support agency... the warfighter's partner of choice for integrated life cycle solutions through teamwork and technology.

DEFENSE LOGISTICS AGENCY

OUR STRATEGIC GOALS





1. Consistently provide *responsive*, best value supplies and services to our customers.

2. Serve as a *catalyst* for the Revolution in Business Affairs and Acquisition Reform.

3. Ensure our workforce is enabled to deliver and sustain *world class performance*.

4. Rapidly *exploit technology* to provide agile, responsive, interoperable solutions.

5. Aggressively pursue *partnerships* with industry and our suppliers.

"We must have a logistics system which tailors what we provide *to* [illegible] *customers require* - not what is convenient for us - and does so in dramatically reduced time frames, reliably and consistently."

DEFENSE LOGISTICS AGENCY

Preparing for the Future What Does the DLA Strategic Plan Do?

- **Right Focus**
  - On Warfighter Readiness & Capability
  - Ties DoD Goals and Direction to the Workplace
- **Right Size**
  - Major Infrastructure Changes
- **Right Enablers**
  - Business Process Change
  - Smaller, Multi-skilled Workforce
  - Acquisition Reform
  - Partnerships with Customers and Industry
  - Information Technology
- **Linked to POM**

DEFENSE LOGISTICS AGENCY

Defense Logistics Support Command

1394 Weapon Systems Supported

- $11.6B Inventory
- $12B Annual Sales
- $25M Annual Reutilization/ Disposals
- $27M Receipts and Issues annually
- All DoD Wholesale Inventories

Functions:

- Supply Management
- Procurement
- Distribution
- Logistics Information Management Support
- Stockpile Management
- Reutilization Marketing
- Energy Support Management

Activities

Defense Supply Centers
Defense Reutilization & Marketing Service
Defense Distribution Center
Defense National Stockpile Center
Defense Logistics Information Service
DLA Europe
DLA Pacific

DEFENSE LOGISTICS AGENCY

DLA: An Integral Part of the Warfighting Team

[illegible]	PE[illegible]J[illegible]O[illegible]	PRO[illegible]IDER SERVICES	DL[illegible]
	Subsisten[illegible]		100%
II	Clothing,[illegible]		100%
III	Bulk Fue[illegible]		100%
IV	Pkg POL[illegible]		100%
V	[illegible]mmo[illegible]	100%	
VI	Comfort[illegible]s		10[illegible]
VII	End Items	100%	
VIII	Medical		100%
IX	Reparables	100%	
X	Non Reparabl[illegible]s	4%	96%
	Energy		100%
	Log Info	10%	90%
	Reutilizat[illegible]	10%	90%

DEFENSE LOGISTICS AGENCY

DLA
Where We Are

Wholesale

- Defense Supply Center Philadelphia & DISC
  LEAD CENTER
  TROOP & GEN SUPPLY
- Defense Supply Center Columbus OH
  LEAD CENTER
  LAND & SEA
- Defense Supply Center Richmond VA
  LEAD CENTER
  AVIATION
- Defense Energy Support Center - Ft. Belvoir VA

Retail

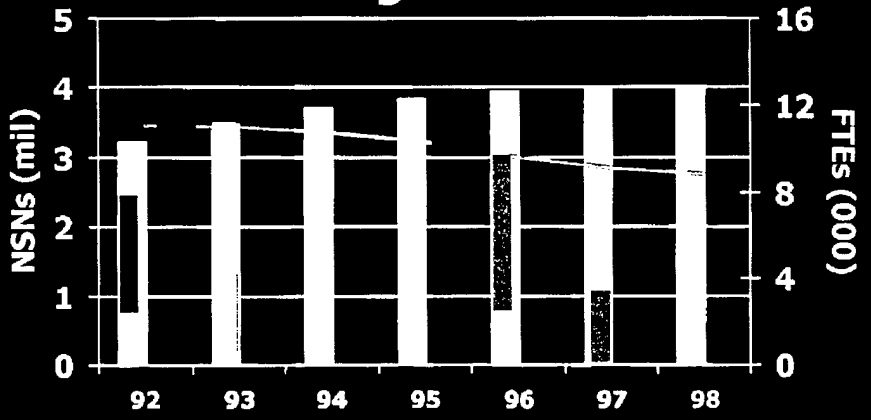
1995
12 Customer Assistance Reps

1999
71 Customer Support Reps
CONUS/OCONUS
At Major Activities

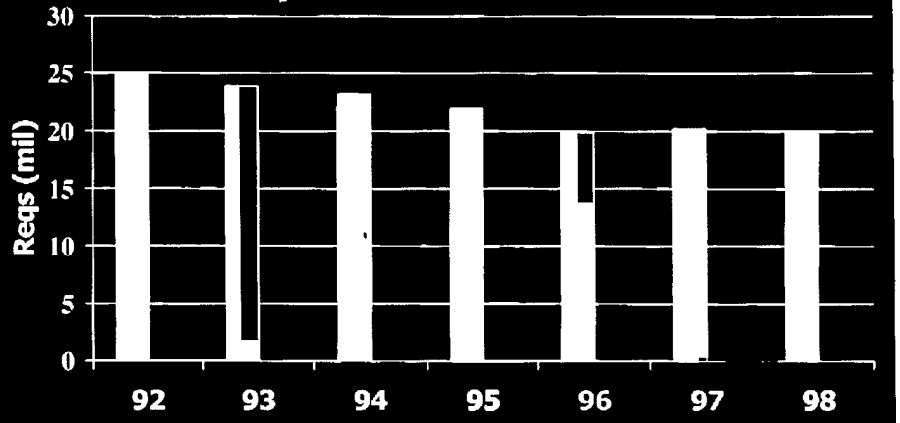
DEFENSE LOGISTICS AGENCY

Volume - - ICP Workload (Non - Energy)

NSNs Managed vs DLA FTEs

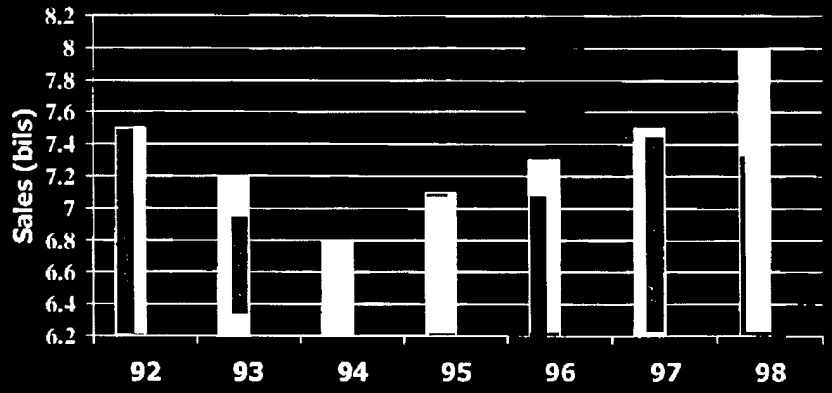


Requisitions Processed



Fortune 500 -
DLSC Ranks 92d
$14.3 Billion

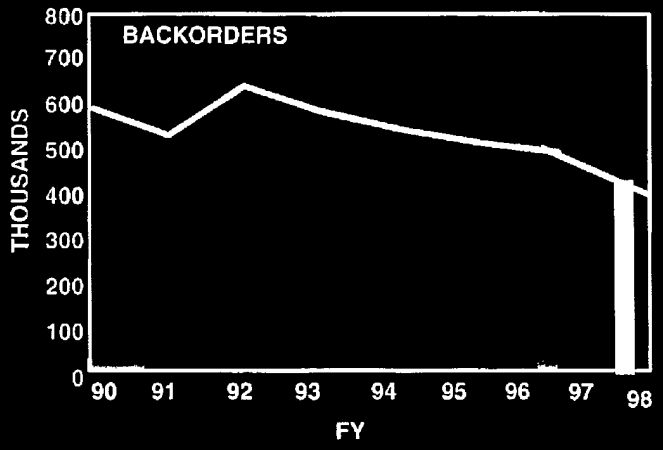
Gross Sales



DEFENSE LOGISTICS AGENCY

System Performance

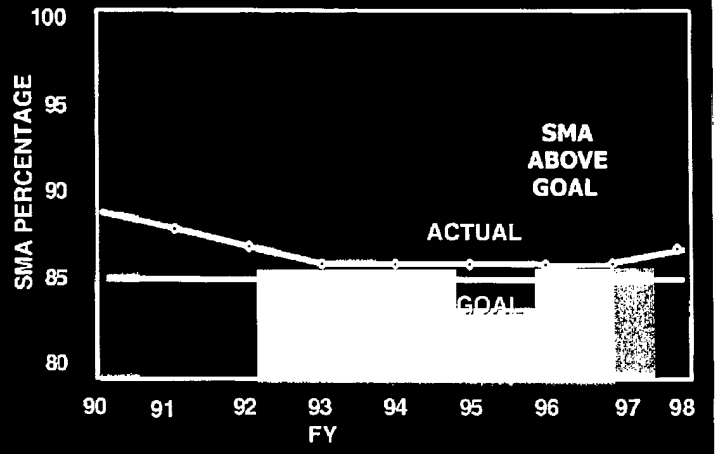
Backorders



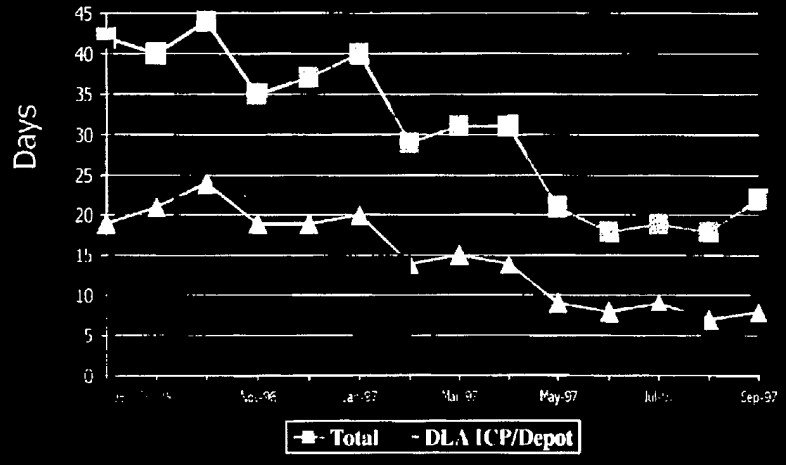
Line Items Transferred from the Services--
1992-1995: 763K
1996-1998 : 152K

Internal Realignment--
1996-1999: 650K

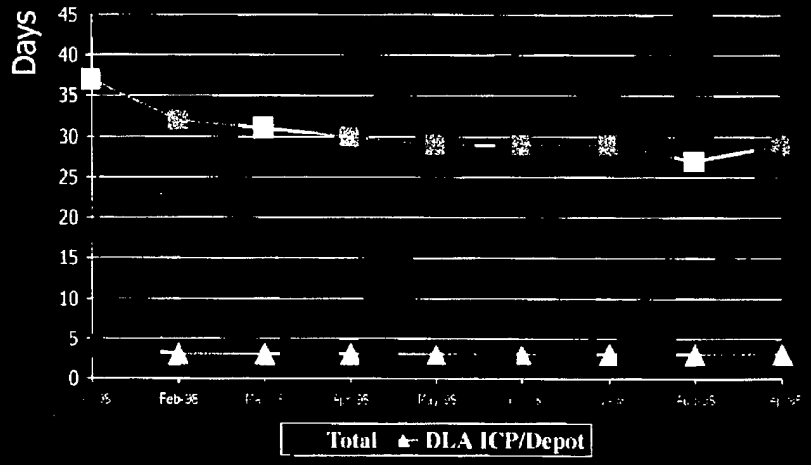
Supply Materiel Availability (SMA)



Logistics Response Time



Logistics Response Time - With (LMARS)

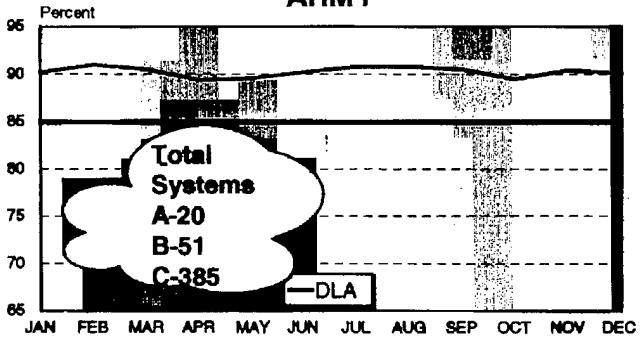


DEFENSE LOGISTICS AGENCY

SUPPLY AVAILABILITY BY SERVICE

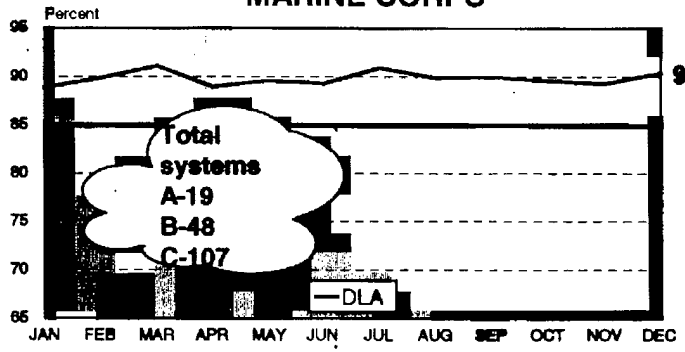
DLA GOAL 85%

ARMY



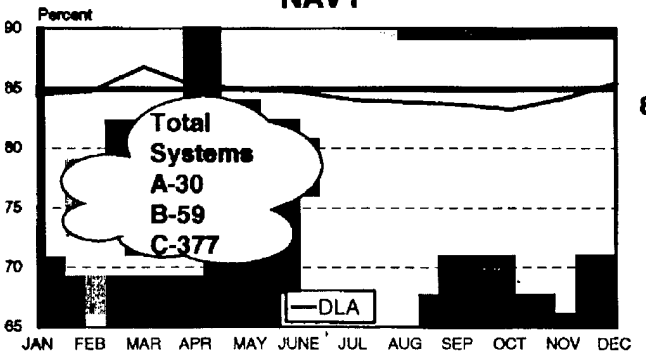
90.1

MARINE CORPS



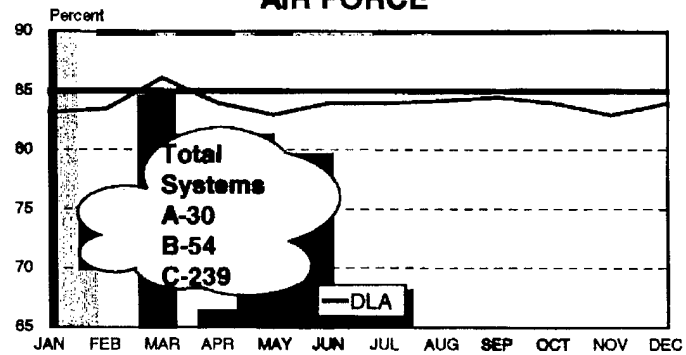
90.4

NAVY



85.5

AIR FORCE



84

Overall Weapon System Supply Availability - 87.5%

DEFENSE LOGISTICS AGENCY

Weapons Systems Performance Measures

Weapons Systems Categorized by Criticality in Support of National Military Strategy

	Services		
	Total	ARMY	USMC
Level A: Most Critical	98	20	19
Level B: Critical	202	51	48
Level C: Less Critical	1094	385	107
All Levels	1394	456	174

With emphasis on readiness drivers for any key Weapon System

Below Goal Dec 98

	Army	USMC
Level A:	0	1
Level B:	0	2
Level C:	15	5

DEFENSE LOGISTICS AGENCY

Focusing on Weapon System Support

Tiered Inventory Investment

TIER 1 MOST ESSENTIAL 87%

TIER 2 ESSENTIAL 85%

TIER 3 LESS ESSENTIAL 83%

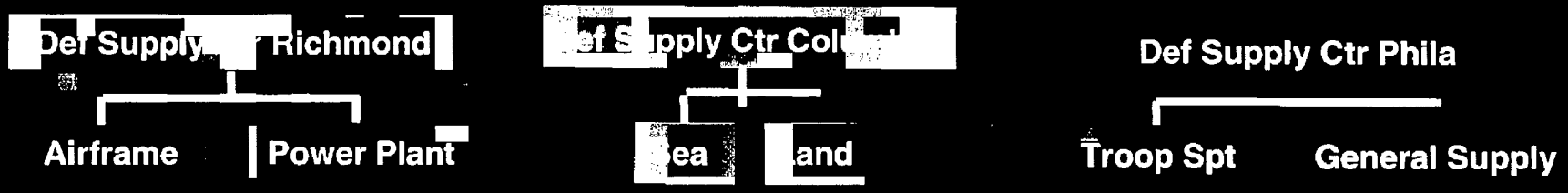
- Business vs Readiness Trade - off
  - Business: Fast - moving, low - cost, low risk items
  - Readiness: Items critical to weapon systems and military operations
- Optimize support within resource constraints
- Weapon system coding essential

DEFENSE LOGISTICS AGENCY

Focusing on Weapons System Support

Lead Center Concept...

- Establishes Centers of Excellence
  - *DSCC - Land and Sea*
  - *DSCR - Aviation*
  - DISC / DSCP - Troop Support & General Supply
- Provides Single Wpns System Point of Contact at the Program Level (Weapon System Support Manager)
- Works with Service Pgm Mgrs to Resolve Fleet Wide Readiness / Supply Support Issues for DLA Supported Weapon Systems
- Acts as the Primary Catalyst for Inter - Agency Support



DEFENSE LOGISTICS AGENCY

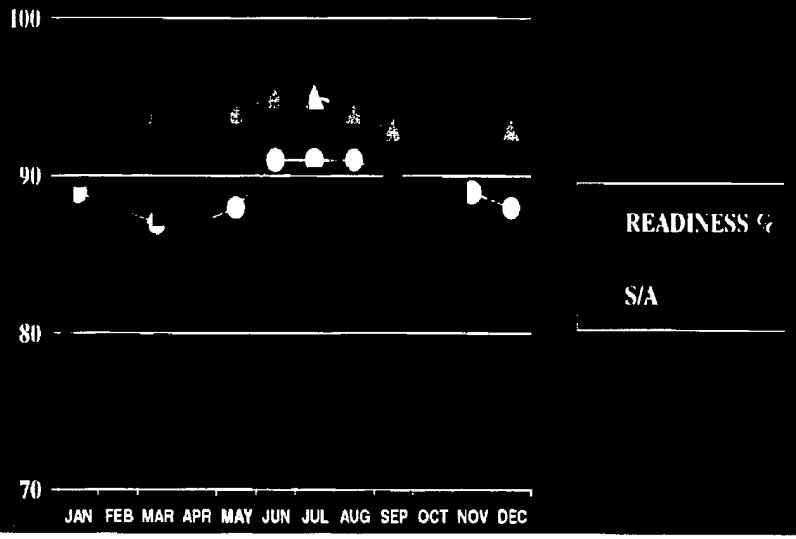
TACTICAL WHEELED VEHICLES HEALTH

LEVEL	SYSTEM	C	NSNS MGD BY DLA	DEC FMC	DEC S/A
A	HEMTT	ARMY	9,347	89	90
A	HMMWV	ARMY	7,035	93	88
A	HMMW	USMC	5,451	89	91
A	LVS	USMC	7,391	89	92
A	TRACTOR RT	USMC	1,718	91	94
B	Firetruck P19/20/23	AF	1,777	92	94
B	PLS	ARMY	5,805	93	91
C	HET	ARMY	5,626	95	85
C	FMTV	ARMY	7,187	98	86
C	TRUC Serie	ARMY	,651	93	87

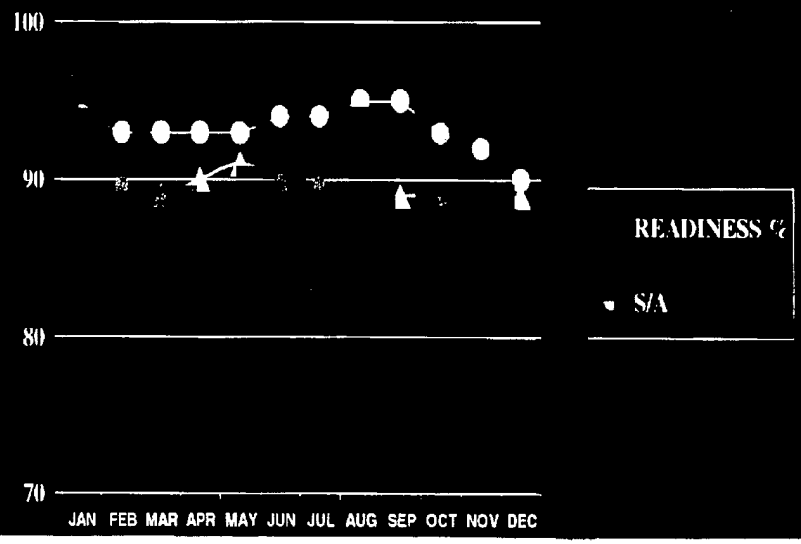
DEFENSE LOGISTICS AGENCY

READINESS AND SUPPLY AVAILABILITY

HMMWV



HEMTT



HMMWV	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
READINESS	94	94	94	94	94	95	95	94	93	94	94	93
S/A	89	88	87	87	88	91	91	91	90	89	89	88

HEMTT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
READINESS	91	90	89	90	91	90	90	88	89	89	89	89
S/A	94	93	93	93	93	94	94	95	95	93	92	90

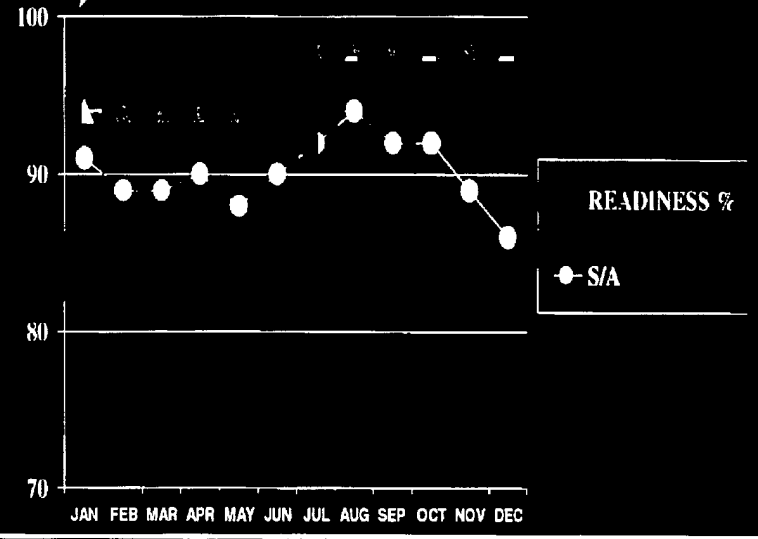
TOTAL NSNS	7,035
EC1 NSN	1,802
AVG MO DMDS	82, 992

TOTAL NSNS	9,347
EC1 NSNS	2,021
AVG MO DMDS	37,003

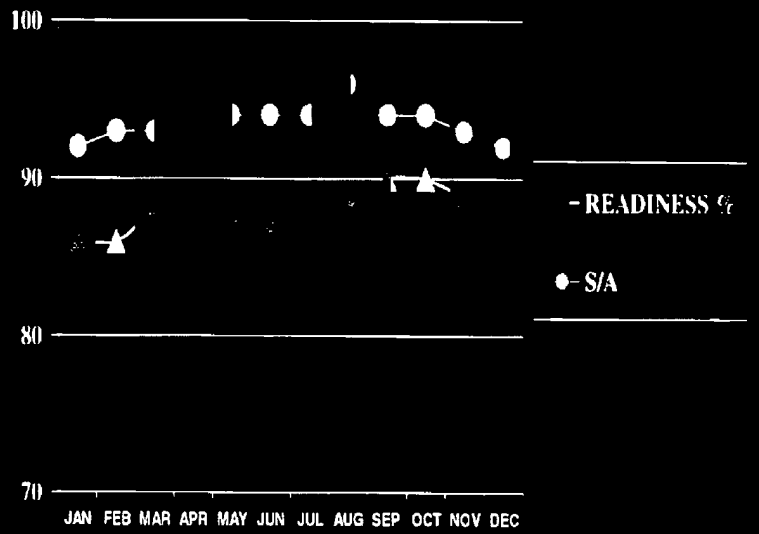
DEFENSE LOGISTICS AGENCY

READINESS AND SUPPLY AVAILABILITY

FMTV



LVS



FMTV	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
READINESS %	95	97	96	93	91	91	95	97	97	97	97	97
S/A	91	89	89	90	88	90	92	94	92	92	89	86
LVS	**JAN**	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JUL**	**AUG**	**SEP**	**OCT**	**NOV**	**DEC**
READINESS %	86	86	88	89	88	87	89	89	90	90	89	89
S/A	92	93	93	93	94	94	94	96	94	94	93	92

TOTAL NSN	7,187
EC1 NSN	1,640
AVG MO DMDS	16,067

TOTAL NSNS	7,391
EC1 NSN	1,515
AVG MO DMDS	3,280



Contractor Logistic Support DLA Corporate Strategy

- PARTNER with Service Project and Program Managers
- Obtain best value from existing DoD Inventories
- Leverage Wholesale Contracting Resources
- Tailor CLS to customer, system, commodity, region

DEFENSE LOGISTICS AGENCY

CONTRACTOR LOGISTICS SUPPORT

POSSIBLE PROs:

- Modernization Through Spares
- Reduced Cycle Times
- Reliability Based Logistics & Trigger Based Item Management
- Single Logistics Face to the Warfighter for the System
- Reduced Government Logistics Footprint
- Cost Savings for the Specific Weapon System's Support

POSSIBLE CONs:

- May not effectively use existing Service / DLSC investment in inventory / pipeline
- Degrades nationally leveraged buying power for consumables (as well as common reparables) across systems
- May drive up the total cost of logistics support across DoD
  - Unless infrastructure / investment intelligently used
- Multiple Contractors on the Battlefield
- Poor integration in requesting and receiving support

DEFENSE LOGISTICS AGENCY

WHAT DLA OFFERS

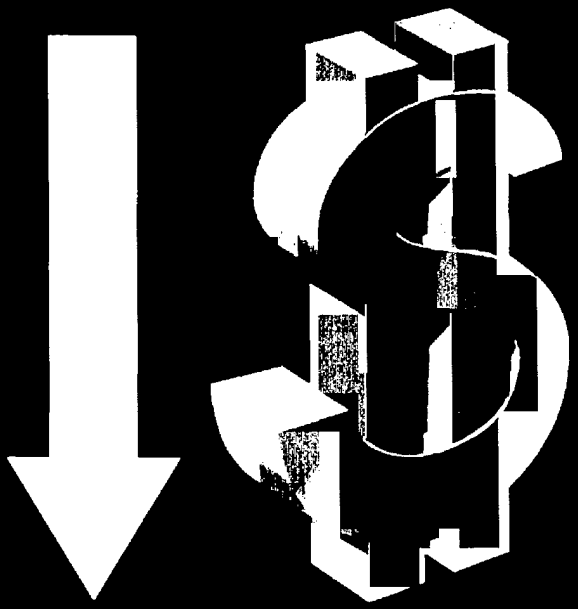
- Over 35 Years Experience in Supply Chain Management for Consumable Materiel Support to the Warfighter
- Nationally Leveraged Buying Power Across Weapons Systems / Military Services
- Inventory of Critical Consumable Parts for Weapon Systems
  - Surge and Sustainment
- Recognized Government Leader in EC / EDI
- Extensive Warehouse / Distribution Network
  - New: Dedicated Truck Service for Time Definite Delivery and Tailored Logistics Support
- Innovative Methods of Support Using Best Commercial Practices

DEFENSE LOGISTICS AGENCY

DLA ELECTRONIC COMMERCE

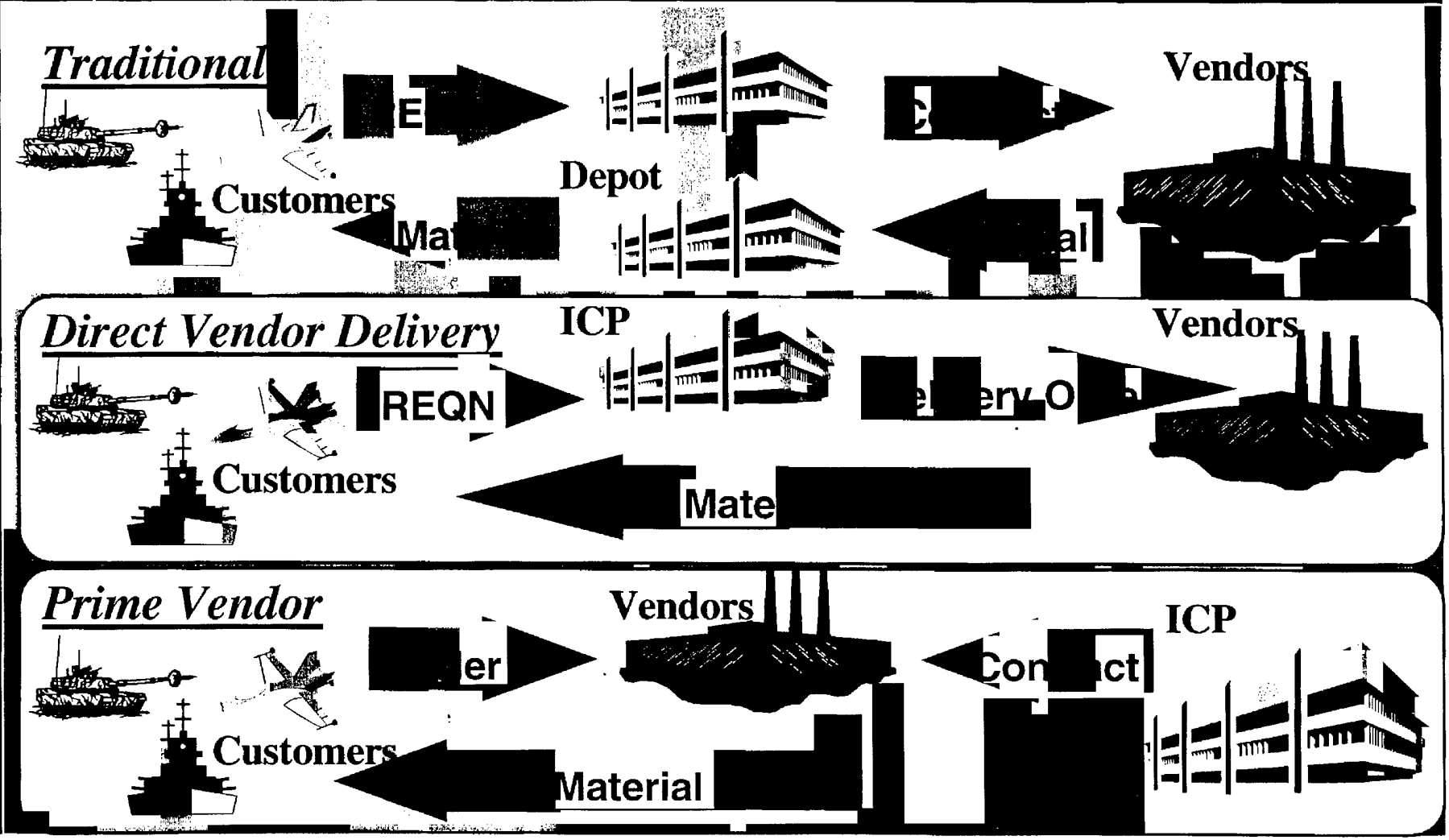
INITIATIVES

- E Check
- E Commerce
- E Data Interchange
- E Document Access
- E Document Mgmt



DEFENSE LOGISTICS AGENCY

Direct Vendor Delivery/ Prime Vendor Arrangements



DEFENSE LOGISTICS AGENCY

Shift to Commercial Practices ...Prime Vendor/ Virtual Prime Vendor



PRIME VENDOR
- Pharmaceutical
- Medical/Surgical
- Mail Order Pharmacy
- Subsistence
- Clothing & Textile
- Wood Products
- Marine - Life Saving and Diving
- Material Handling
- Metals
- HAZMAT Systems
- Fleet Automotive

VIRTUAL PRIME VENDOR
- C-130
- Maintenance, Repair & Operations
- Industrial Prime Vendor (Benchstock)
- C-5
- VPV Uniforms

EMERGING CORE COMPETENCY
Value Added Services delivered with supplies

Manager of Suppliers - NOT Supplies

▲ = Initial Award

▲ = Future Award

DEFENSE LOGISTICS AGENCY

ICP WORKLOAD
Contract Actions

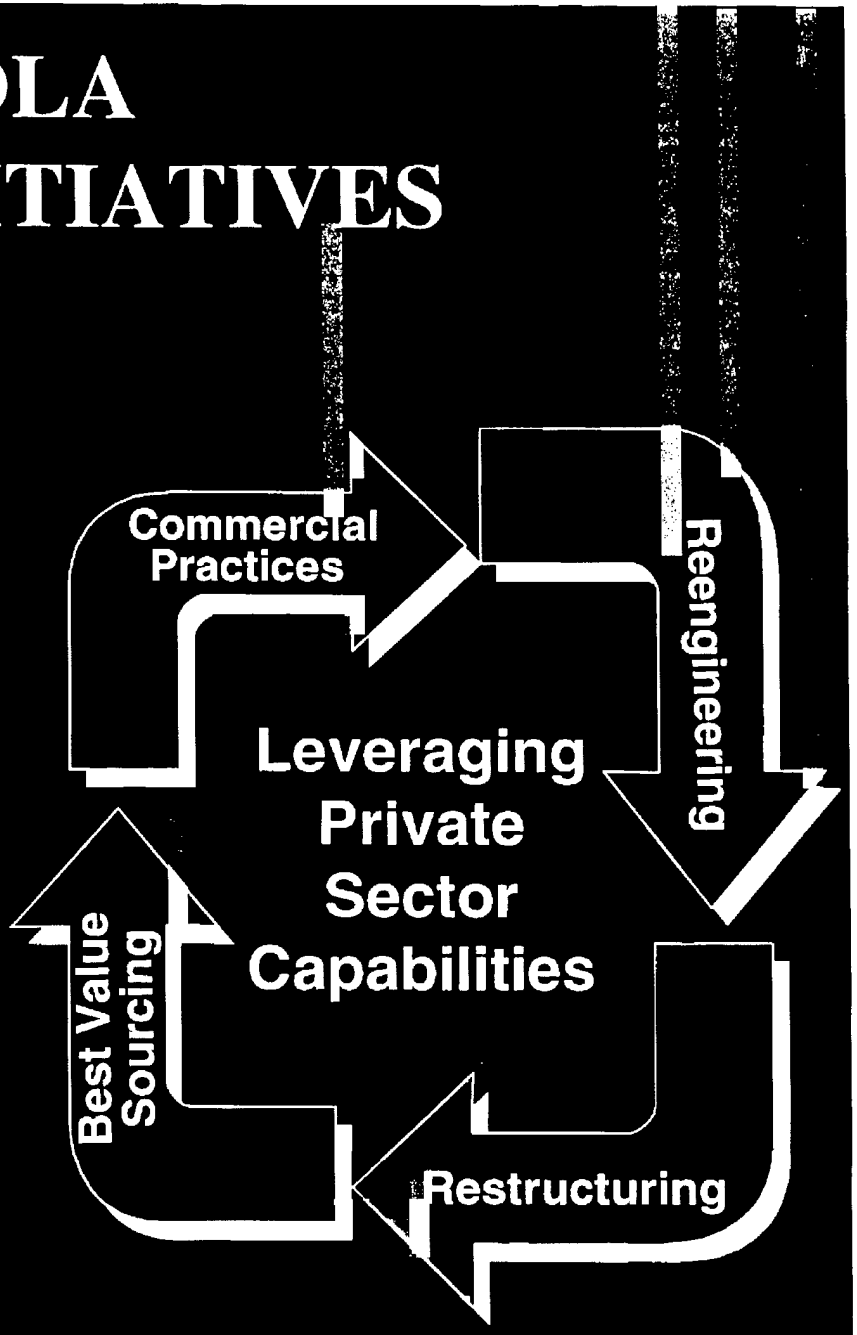
	FY95	FY96	FY97	FY98
Prime Vendor	$551.8M	$827.8M	$1.06B	$1.3B
Virtual Prime Vendor	0	0	$7.8M	$14.4M
Corporate Contracts	$3.5M	$28.9M	$89.3M	$86.2M
Long Term Contracts	$2.6B	$2.1B	$2.3B	$3.6B
Total Obligated	$3.1B	$3.0B	$3.3B	$6.4B

DEFENSE LOGISTICS AGENCY

DLA CLS INITIATIVES

- Prime Vendor
- Virtual Prime Vendor
- Prime Vendor Overseas
- Industrial Prime Vendor
- EMALL
- Re-Refined Oil
- MTVR
- Corporate Contracts

FLEXIBLE
TAILORED



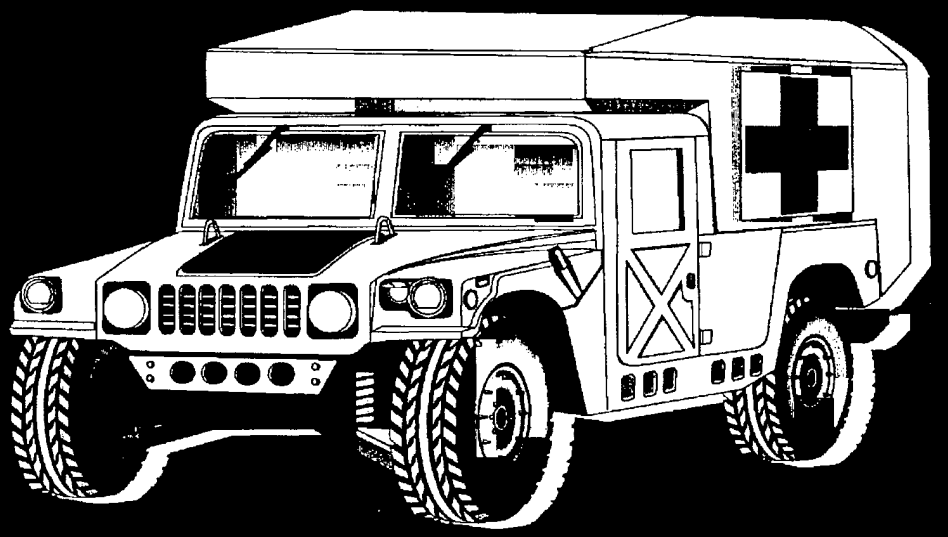
DEFENSE LOGISTICS AGENCY

PRIME VENDOR

What it is: One Vendor under long term contract. Provides all materiel in a Product Line or Commodity to a Major Customer. Commercial Materiel using existing distribution systems.

Examples: Subsistence and Medical

Volume: $ 1.3 Billion FY98



DEFENSE LOGISTICS AGENCY

VIRTUAL PRIME VENDOR

What it is: Regional Focus to provide parts and tech support, inventory mgmt, requisitioning and forecasting for specific weapon system support

Examples: Fleet Automotive Support Initiatives (FASI)
Covering AMG (5Tons, HMMWVs)
Oshkosh (LVS, P19 Firetruck)
Caterpillar (D7 Dozer, 621B Scraper)
Award Projected 2Q99 (Camp Pendleton)
(Camp Lejeune)

Volume: 2, 180 NSNs Annual Dollar $14.9M

DEFENSE LOGISTICS AGENCY

PRIME VENDOR OVERSEAS

What it is: One Vendor provides centralized support coverage for commercially available parts to support Overseas customers

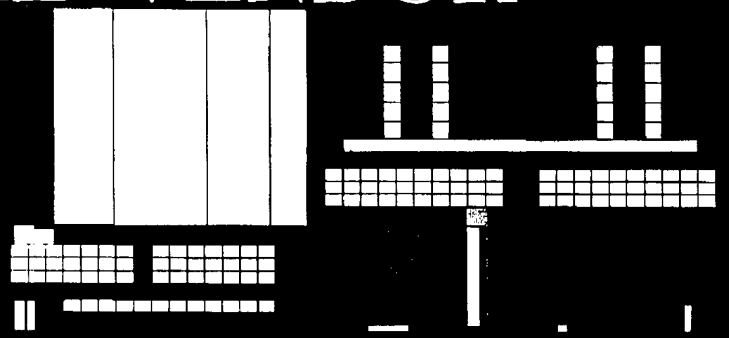
Examples: Prime Vendor Overseas supports 800 Contractors Cage Codes for part number and overseas requests submitted via MILSTRIP using Project Code JZC

Volume: 1252 NSNs, Price Listing, Estimated Annual Dollar $5M



DEFENSE LOGISTICS AGENCY

INDUSTRIAL PRIME VENDOR



What it is: Aligns Prime Vendor Relationship to Industrial Posture.
Promotes horizontal integration across Weapon Systems.
Exploits emerging technology across Industry.

Examples: Types of Items targeted: O'Rings, Bolts, Screws, Nuts, Fasteners, Seals, Couplings, Rivets. Targeted customers include large maintenance operations.

Volume: Currently 43,000 NSNs Annual Demand Value $22 M

DEFENSE LOGISTICS AGENCY



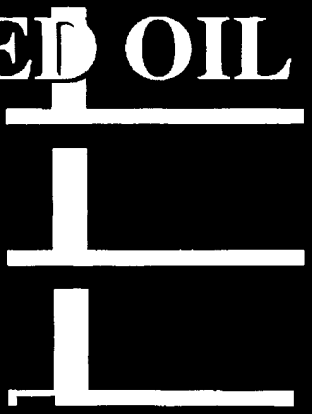
What it is: Customer Shopping via Internet to Access Both DoD and Vendor Inventory. Includes robust search engine via Part#, NSN, Manufacturer, Vendor Catalog

Examples: Allows customer shopping and decision point purchasing via DoD Standard Requisitioning or IMPAC Credit Card

Volume: Currently 2 million items, 9 Vendors

DEFENSE LOGISTICS AGENCY

RE - REFINED OIL



What it is: Closed Loop Delivery of new and pick up of old 10W30/15W40 Oil

Examples 7 Day Delivery of bulk and packaged products via Direct Vendor Delivery. Current Customers Ft. Carson Ft. Riley, Ft. Hood.

Volume 12 NSNs, 13 Military Bases, 5 Federal Agencies

DEFENSE LOGISTICS AGENCY

Medium Tactical Vehicle Replacement



What it is: Tailored CLS to support USMC Medium Tactical Vehicle Fleet. Intent to replace with more robust vehicles and lifecycle logistics support.

Examples: MTVR is a 5 year logistics support contract designed to decrease order ship time, reduce retail stockage and costs.

Volume: Current Coverage for 5,666 vehicles with increase options

DEFENSE LOGISTICS AGENCY

DLA Corporate Contracts Highlighting Tactical Wheeled Vehicles

COMPANY	TOTAL COVERAGE #NSNs/PART#s	ANNUAL $	DELIVERY	[illegible]TER
AMGEN	560/N/A	9.3M	DVD 21DAYS	5 5 Year
CUMMINS	529/Price List	5.5M	DVD 7 DAYS	94/2 Year
Stewart & Stevenson	256/N/A	1.2M	DVD 10/30 DAYS	98/5 Year
BTMC	167/Price List	1M	DVD 30 DAYS	98/5 Year
KOMATS	418/Price List	2.6M	DVD 5 DAYS	97/5 Year
NAPA	0/200K	1.5M	DVD 5 DAYS	6/Impac Card
OSHKOSH	1717/N/A	7.4M	DVD 10 DAYS	95/5 Year
GROVE N. AMERICA	1443/Price List	1M	DVD 10 DAYS	98/5 Year

DEFENSE LOGISTICS AGENCY

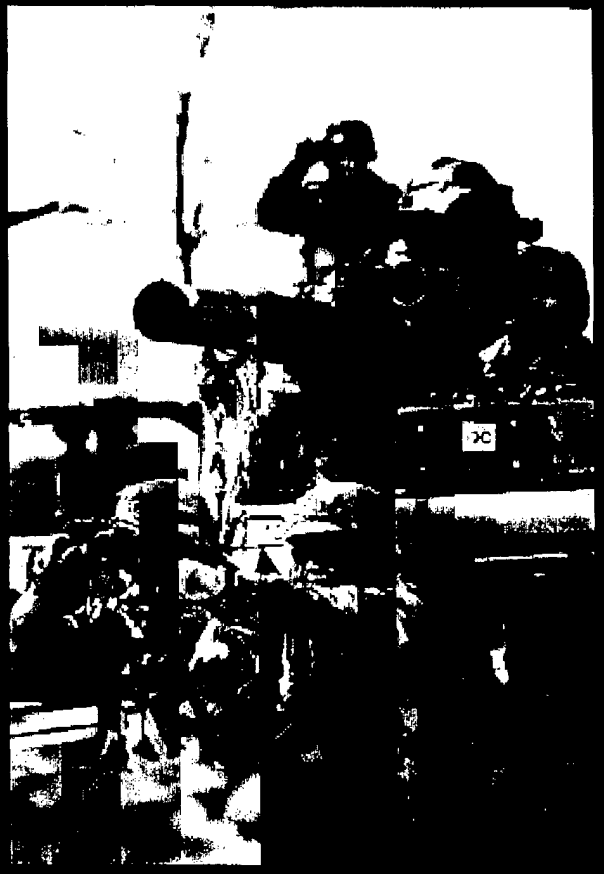
SUMMARY
One Team - One Focus

Weapon System Focus

Readiness Driver for DoD

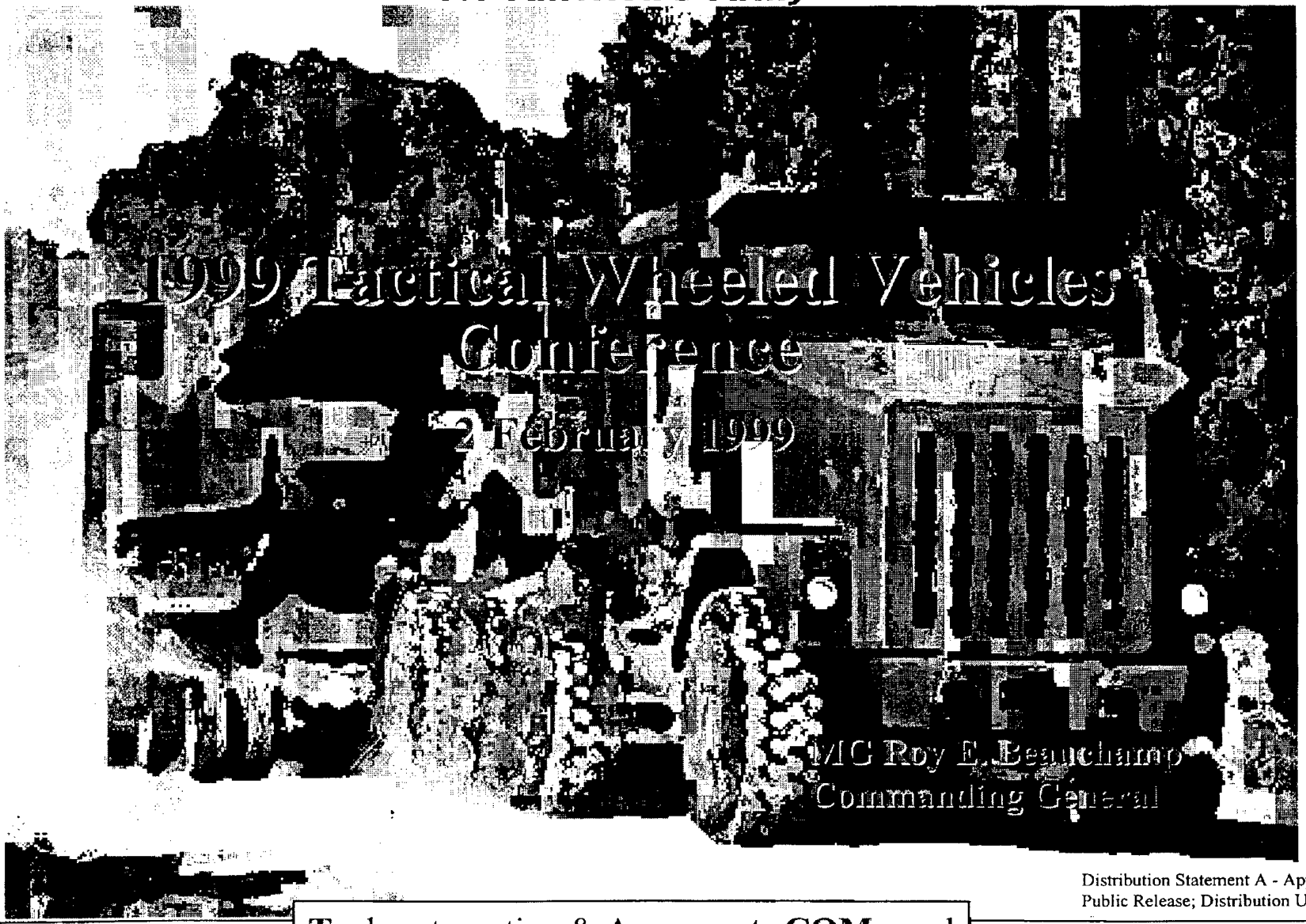
Expectations ↑ Resources ↓

CLS Leader and Partner



TACOM

Mobility and Firepower for America's Army



1999 Tactical Wheeled Vehicles Conference

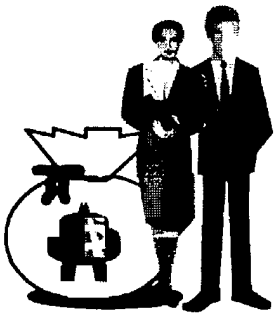
2 February 1999

MG Roy E. Beauchamp
Commanding General

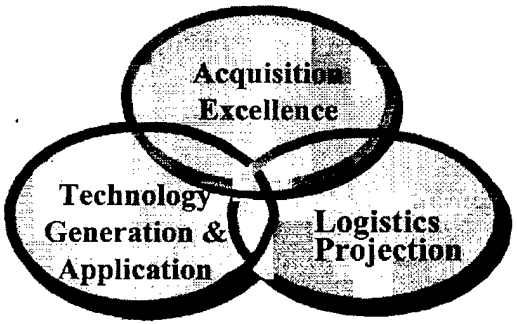
Distribution Statement A - Approved for Public Release; Distribution Unlimited

Briefing Outline





- TACOM
- TACOM and Trucks
  - Army Fleet/Distribution
  - Procurement
  - Research and Development
  - Sustainment
- Need Your Help!





Our Higher Headquarters

Department of Defense

Department of the Army

Army Materiel Command

Tank-automotive & Armaments COMmand



A Common Vision

Taking America's Army into the 21st Century

Army Vision

The World's Best Army, a full spectrum force- trained and ready for victory. A Total Force of quality soldiers and civilians:

- A values-based organization
- An integral part of the Joint Team
- Equipped with the most modern weapons and equipment the Country can provide
- Able to respond to our Nation's needs
- Changing to meet challenges of today . . . tomorrow . . . and the 21st Century.

ank-automotive & rmaments mand

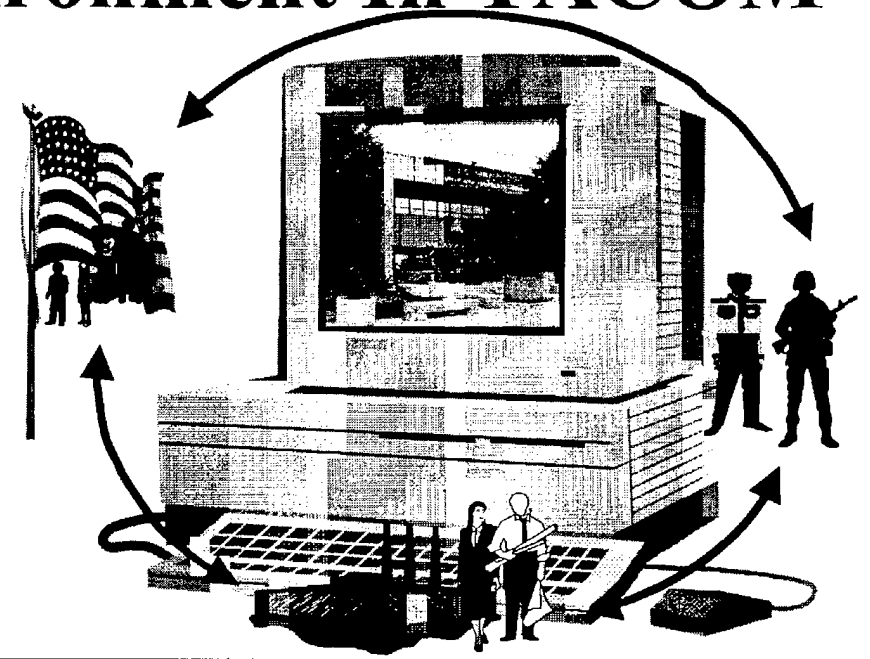
- **To make the technology and sustainment syste..is work for soldiers through the seamless integration of S&T, R&D, Acquisition, Log Sustainment and Soldier Readiness.**
- **To create a business environment at TACOM where every associate understands the requirement to control costs and manage from the customer perspective and understands their inherent responsibility to do so.**

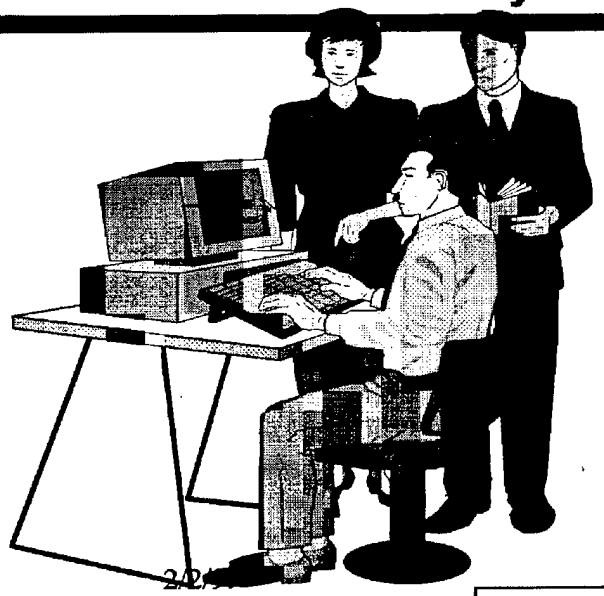
Army Materiel Command Strategic Vision

The leader in equipping and sustaining America's Army through superior technology and responsive support assuring worldwide power projection and decisive victory.

Vision For The Future Business Environment In TACOM

A fully integrated business environment connected by a fully integrated data environment using commercial business processes to integrate business operations within each organization, across major Commands, across Services, across DoD and across Industry.



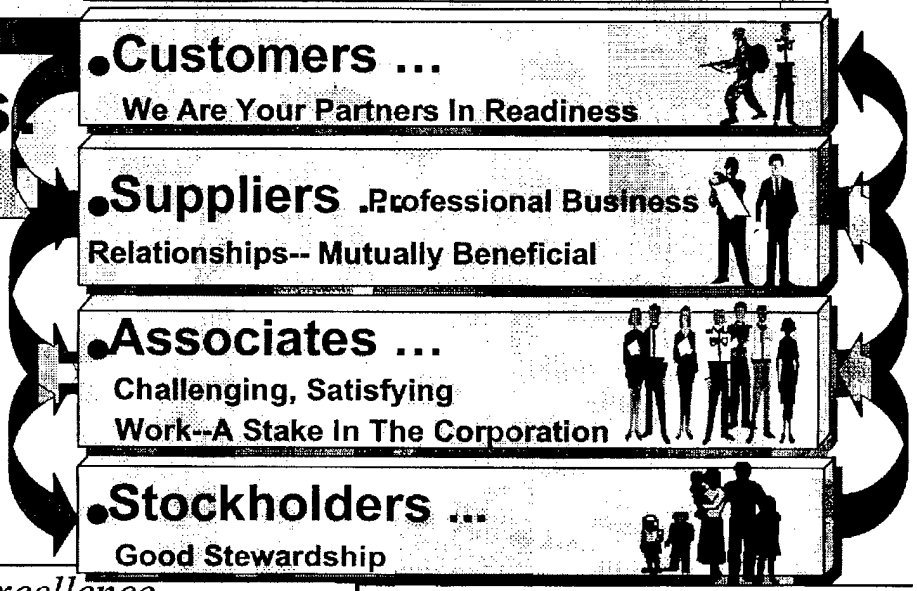


A corporate management structure for which the organizing principle is multi-functional work teams to institutionalize the concept of integrated process teams; a highly decentralized structure which uses the integrated data environment to link desk top "servers" to facilitate the transformation of data into actionable information to enable more efficient, fully integrated business operations at reduced cost.

COMMON GOALS

- Manage From the Customer Perspective...
- Increase Customer Satisfaction
- Reduce the Cost of Doing Business
- Work the Partnerships

COMMITMENT TO OUR



TACOM MISSION

-To Generate Warfighting Capability for the Army

-To Sustain the Warfighting Readiness of the Army

-To manage the Army's Investment in S&T, R&D and Sustainment for the Army

-Serve as the Life Cycle Manager and Integrator for Ground Combat and Support Equipment

FORCE XXI

3,269 Weapon Systems
32,048 NSNs
300 Systems in Acq Pipeline

Tank-automotive & Armaments COMmand

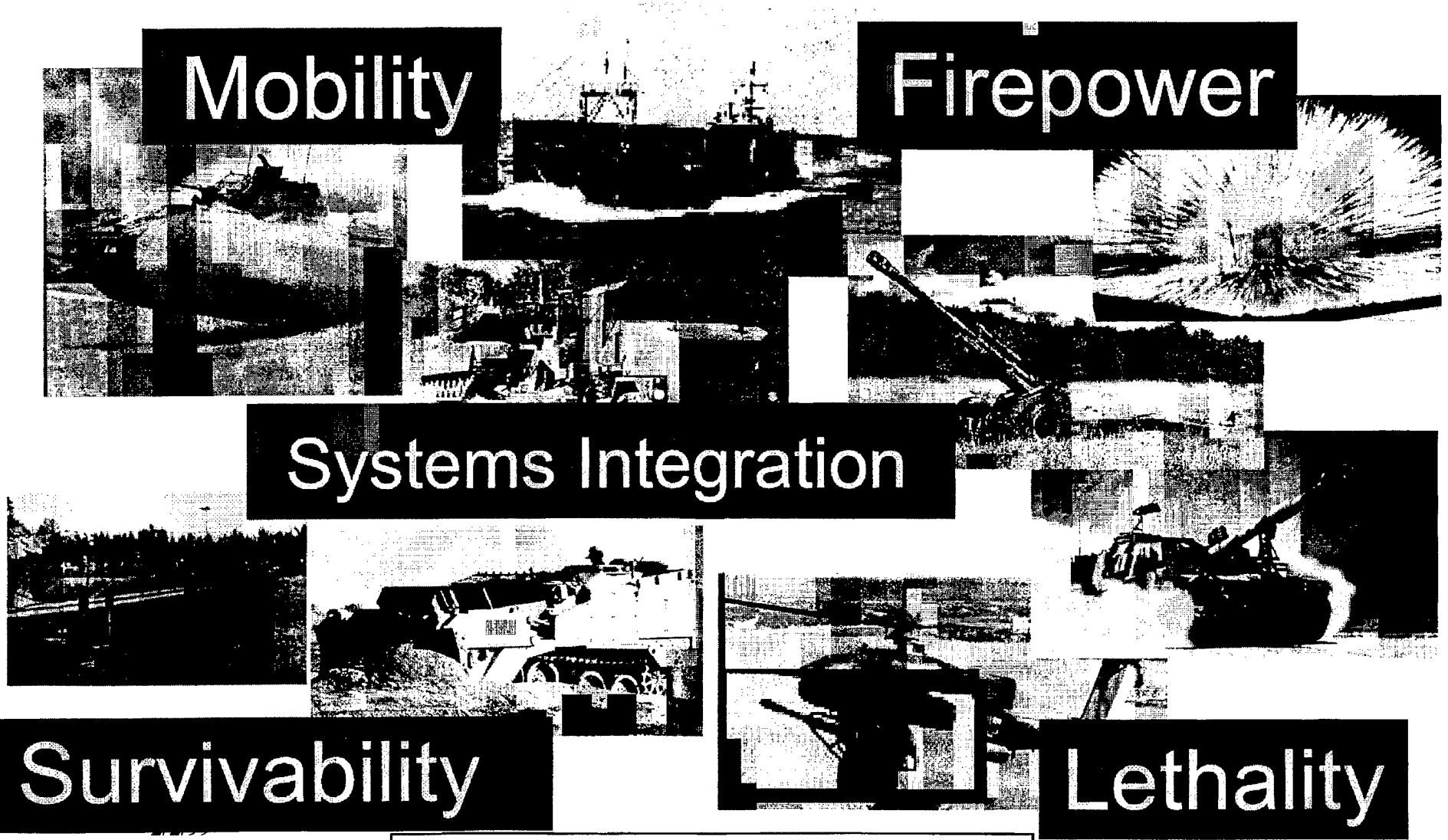
Research, Develop, Field and Support
Mobility and Armament Systems Total Life Cycle

To Support Army Readiness

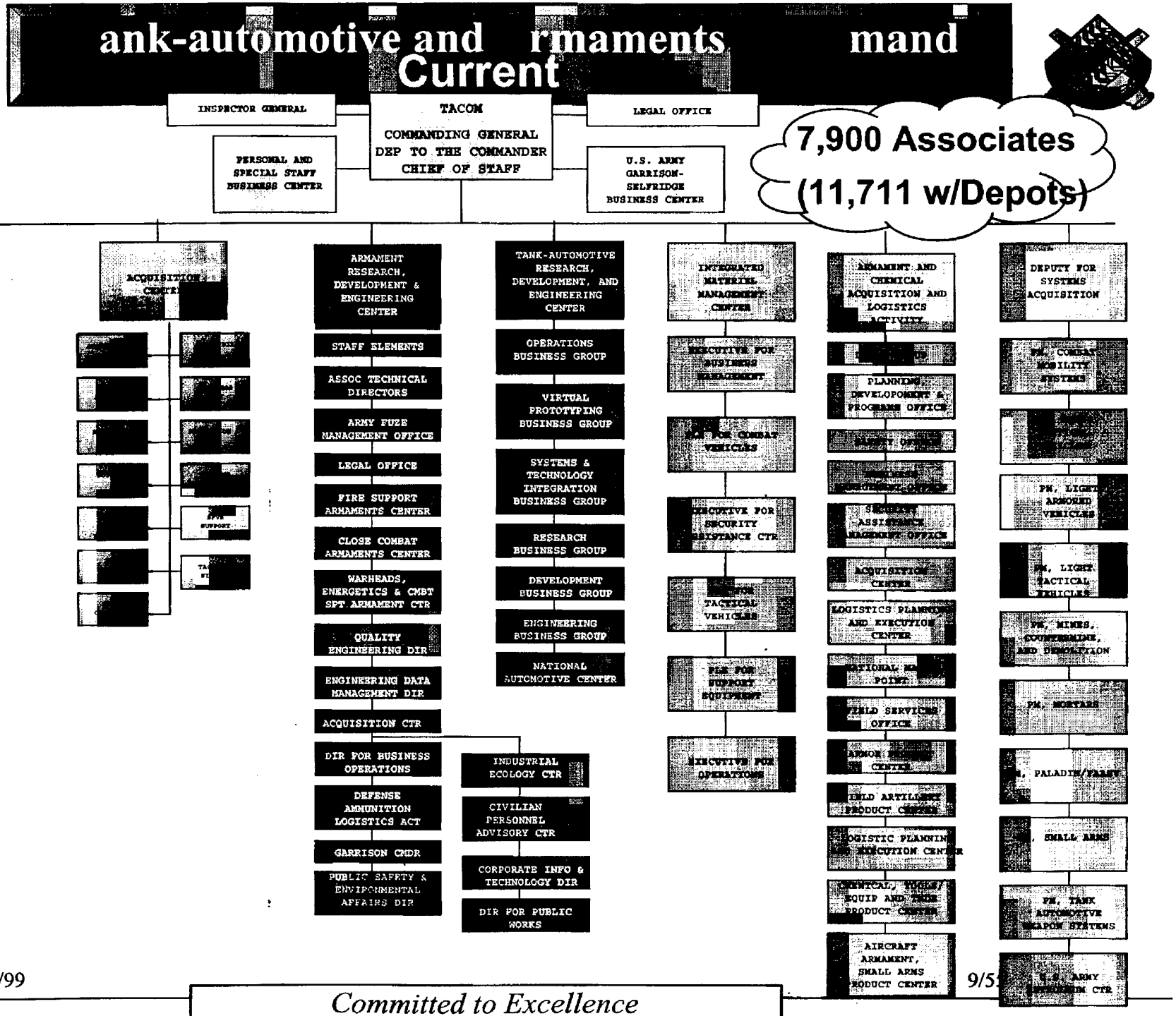
- Combat Vehicles
- Tactical Vehicles
- Trailers
- Construction Equipment
- Materiel Handling Equipment
- Tactical Bridges
- Fuel & Water Distribution Eqpt
- Sets, Kits & Outfits
- Shop Equipment
- Chemical Defense Equipment
- Howitzers
- Large Caliber Guns
- Mortars
- Rifles
- Machine Guns
- Ammo
- Aircraft Armaments
- Demolitions & Explosives
- Rail
- Watercraft
- Petro & Lub Eqpt

Tank-automotive & Armaments COMmand

We Are Your Partners In Readiness

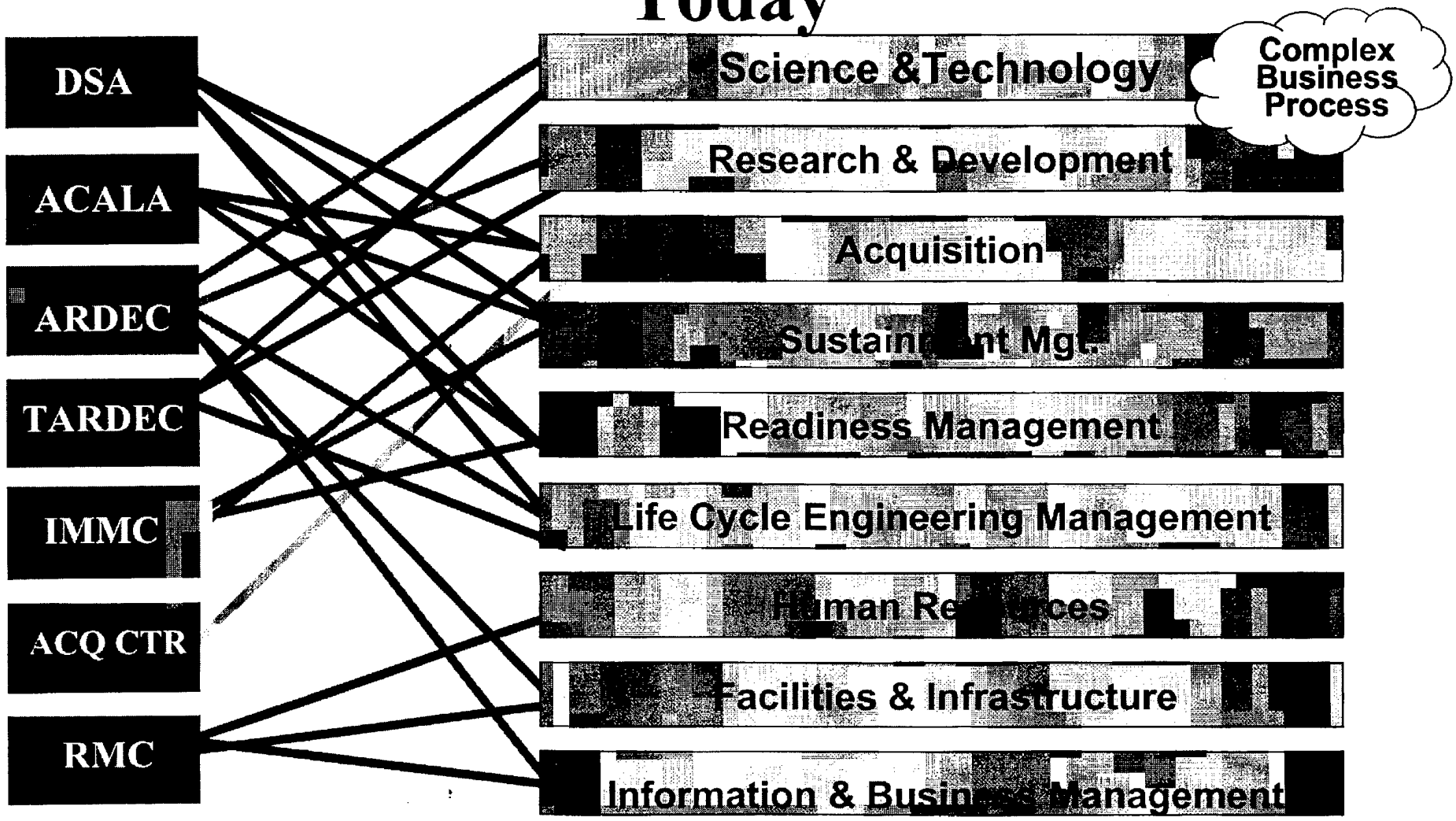


ank-automotive and rmaments mand Current

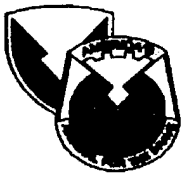


Current Corporate Process

Today



How we will do it - Structure TACOM of the Future (Concept)





FY 04
5,994 Associates
(9,490 w/ Depots)

STAFF

CG
Dep to the Cdr
CofS

ANAD
RRAD

DEPUTY FOR CORPORATE MANAGEMENT

- Command Programs
- Director of Business Ops
- Director of Readiness
- Director of Infrastructure Ops
- Director of Security Assistance
- Director of Corporate Contracting
- Corporate Information Ofc

DEPUTY FOR RESEARCH DEVELOPMENT & ENGINEERING CDR PICATINNY (DUAL HATTED)

- Business Opns Office
- DIR ARMAMENTS RDE
- Integration & Transition Office
- DIR TANK AUTO RDE
- Fire Support
- Close Combat
- Warheads, Energetics & Combat Support
- DALA
- Research
- Development
- Engineering S
- NAC
- STI

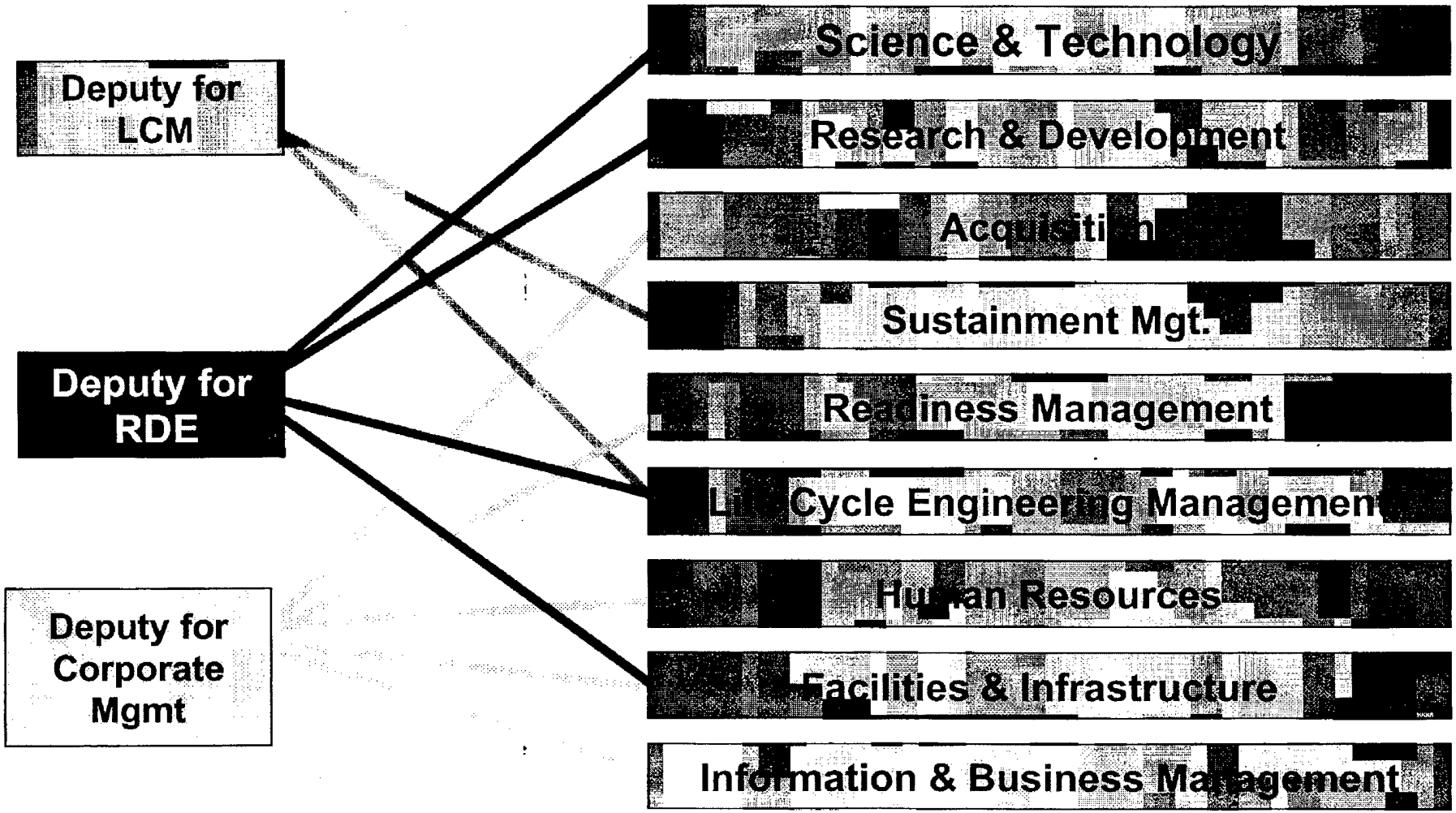
DEPUTY FOR LIFE CYCLE MGT

- BUSINESS OPNS OFFICE
- DIR COMODITY BUS *
- DIR SYSTEMS ACQ
- Heavy mbat CBU
- Artillery CBU
- Light mbat CBU
- rmament CBU
- Tactica CBU
- SKO CBU
- Support E CBU
- gistics gration Office
- PM TAWS
- PM HTV
- PM SMALL ARMS
- AV
- D

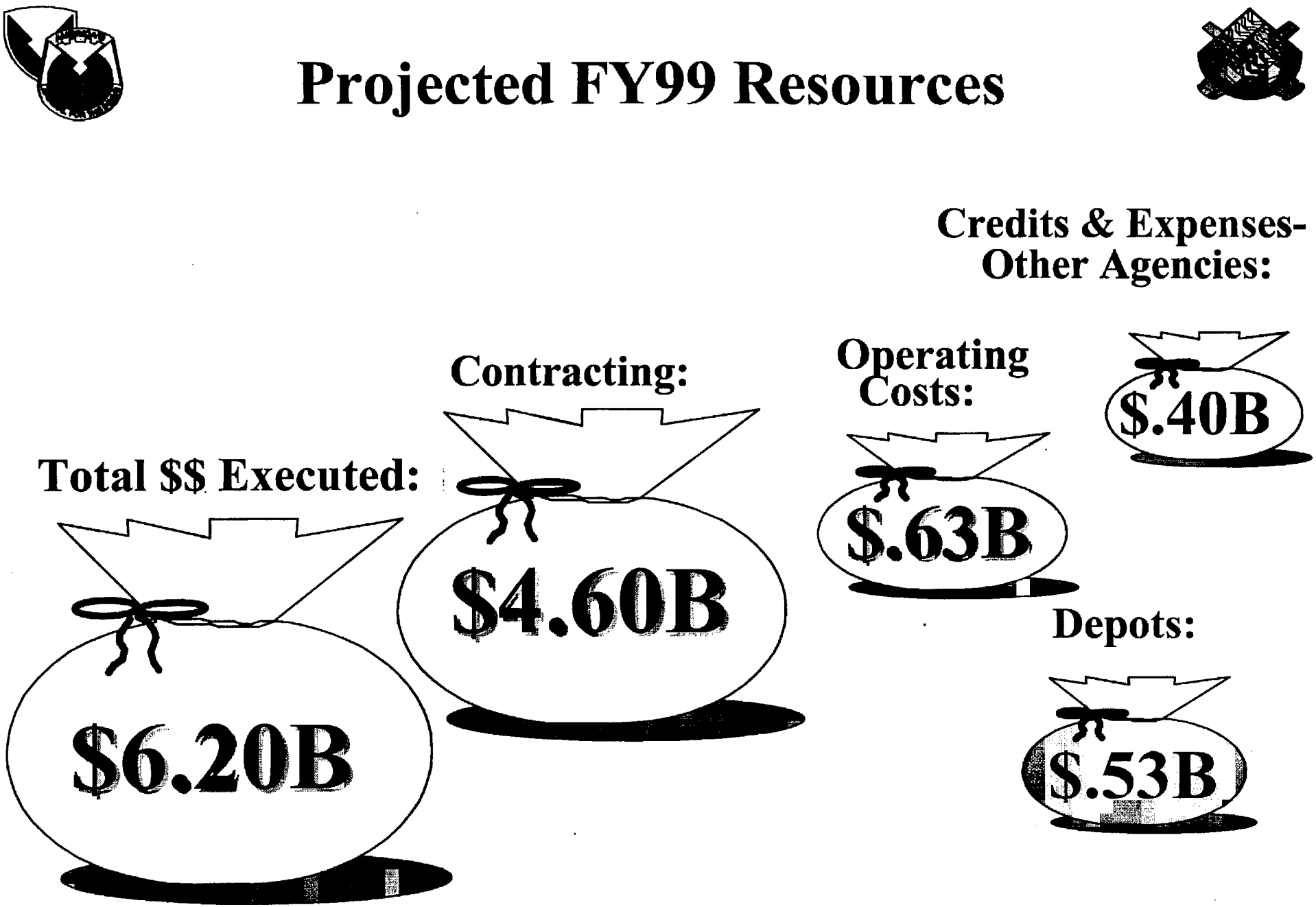
*ACALA Site Mgr.

Integrated Corporate Process

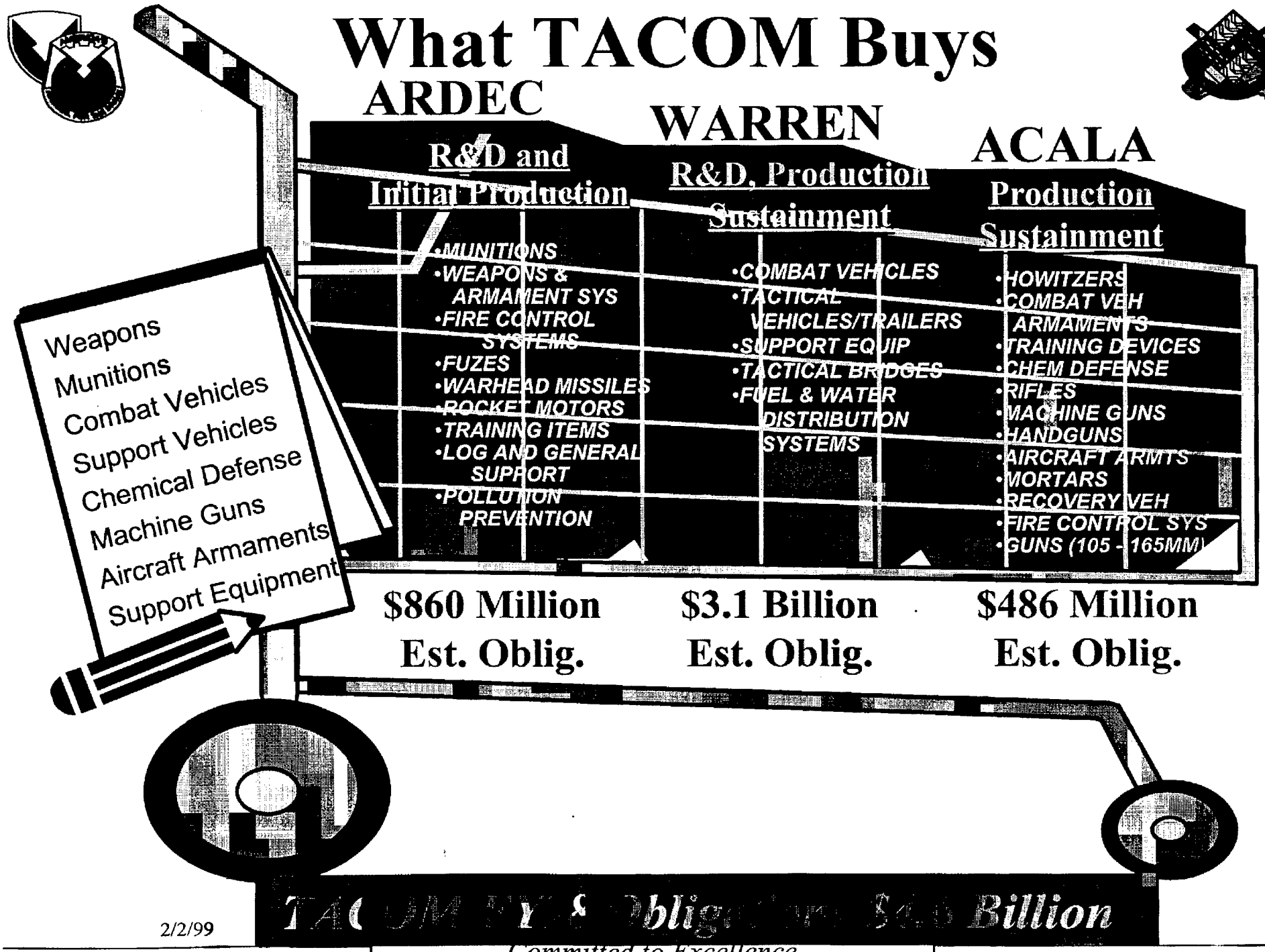
Tomorrow



Projected FY99 Resources

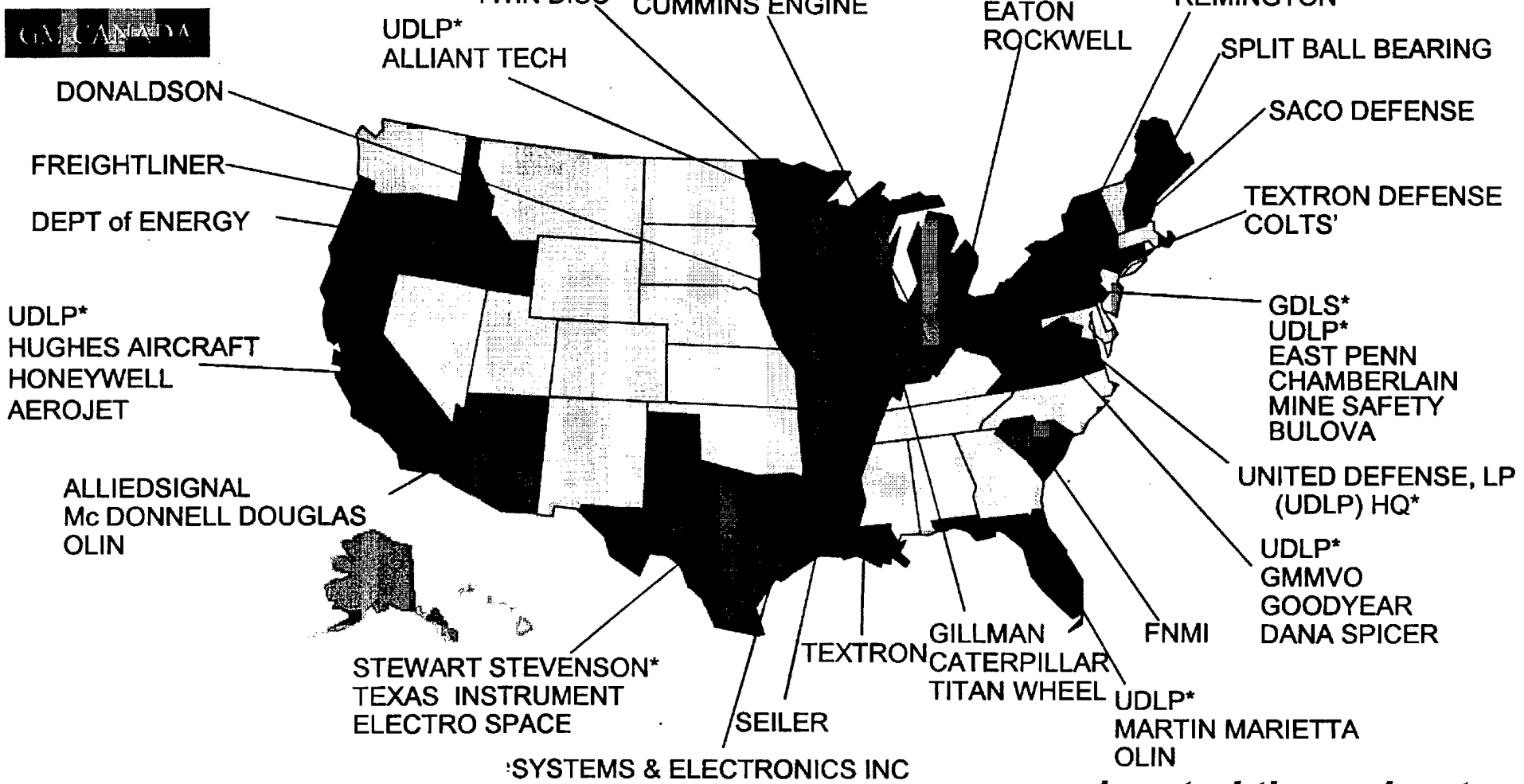


What TACOM Buys



Weapon System Prime And Major Subcontractors In 24 States

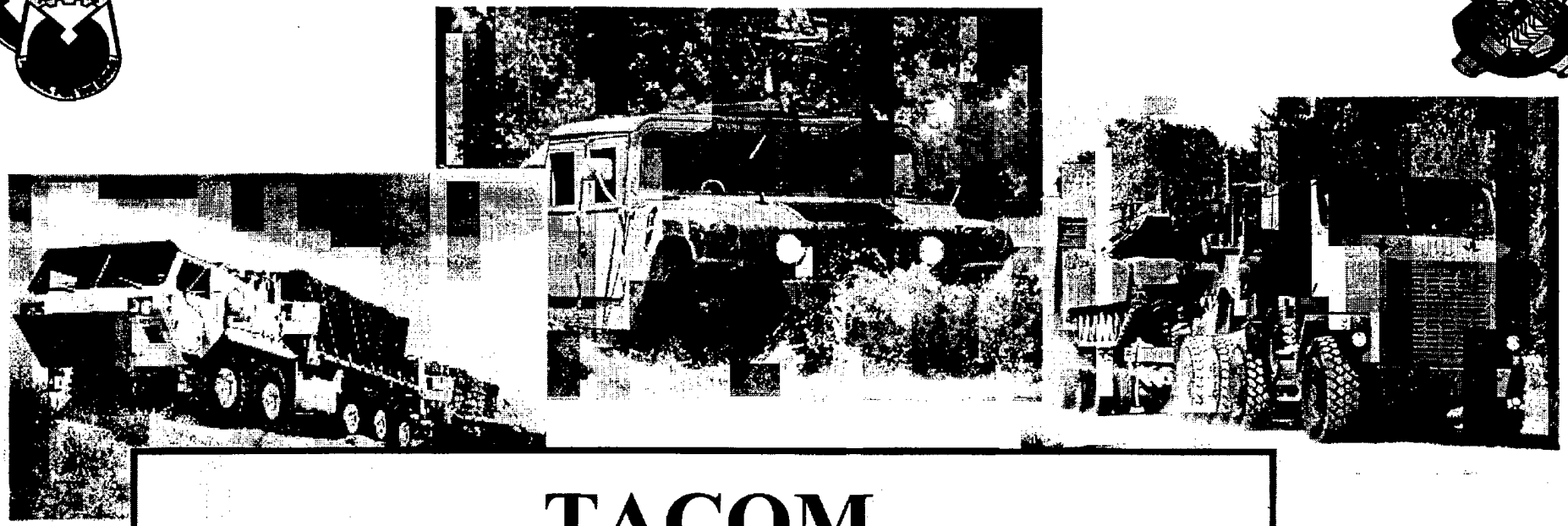
Over 2,050 Contractors Support Us...



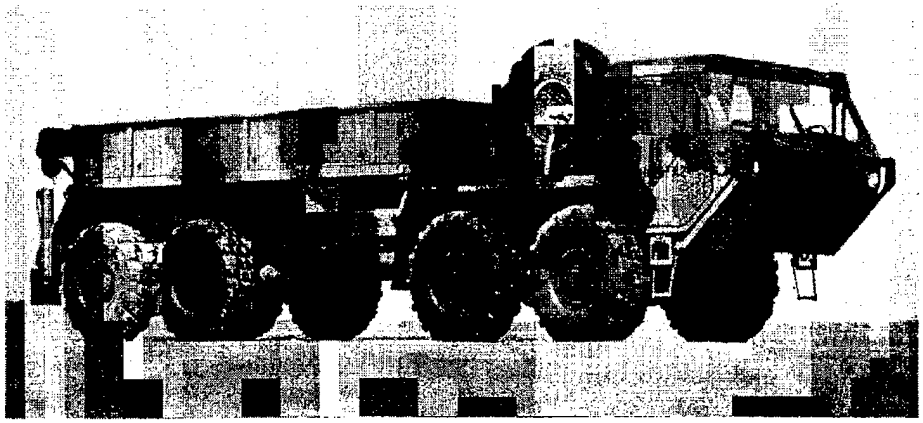
...located throughout the United States!

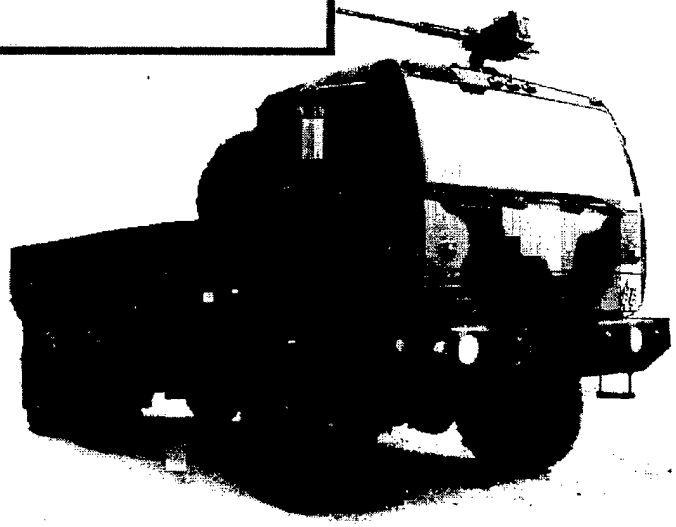
* Prime Contractors
No Contractors located in Alaska and Hawaii
As of Mar 1998 2/2/99

15/55



TACOM
Tactical Wheeled Vehicles





Tactical Wheeled Vehicle Fleet

LIGHT TRUCKS/TRAILERS	
DENSITY TRUCKS:	123,996
HISTORICAL OR%:	94%
CURRENT OR%:	92%
AGE RANGE:	NEW - 16 YRS
AVG AGE:	9 YRS
DENSITY TRAILERS:	21,035
HISTORICAL OR%:	97%
CURRENT OR%:	99%
AVG AGE:	20.8 YRS

MED. TRUCKS/TRAILERS	
DENSITY TRUCKS:	96,210
HISTORICAL OR%:	91%
CURRENT OR%:	92%
AGE RANGE	NEW - 27 YRS
AVG AGE:	18.7 YRS
DENSITY TRAILERS:	64,113
HISTORICAL OR%:	96%
CURRENT OR%:	94%
AVG AGE:	8 - 31 YRS

ONLY 9500 TRAILERS ARE REPORTABLE.

HEAVY TRUCKS/TRAILERS	
DENSITY TRUCKS:	26,440
HISTORICAL OR%:	92%
CURRENT OR%:	90%
AGE RANGE:	NEW - 20 YRS
AVG AGE:	10.8 YRS
DENSITY TRAILERS:	25,281
HISTORICAL OR%:	97%
CURRENT OR%:	97%
AVG AGE:	15.2 YRS

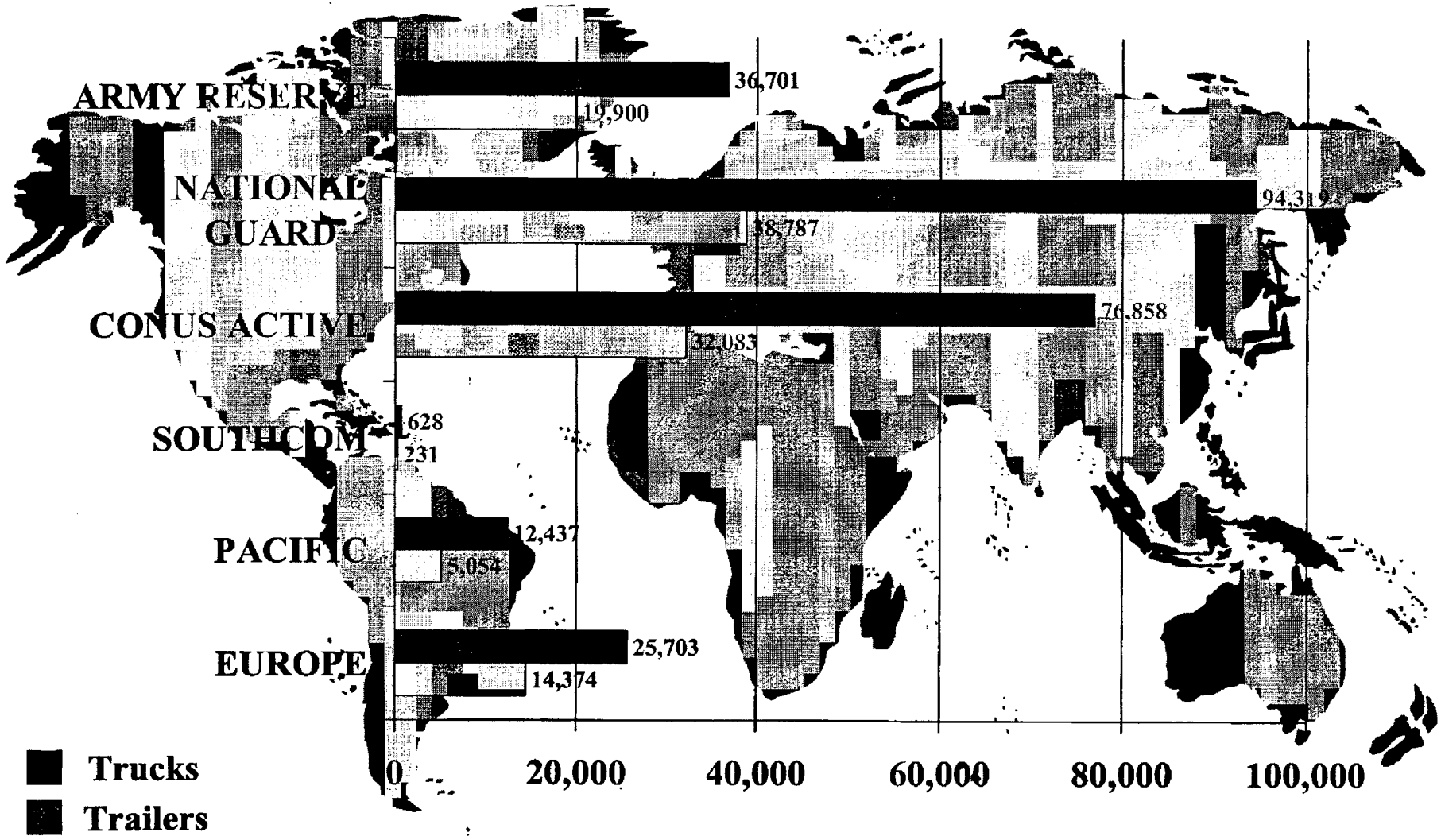
DENSITY FLATRACKS: 10,468
NOT OR% REPORTABLE.

U.S. ARMY


Where The Army's
Tactical Wheeled
Vehicle
Fleet
Is Located

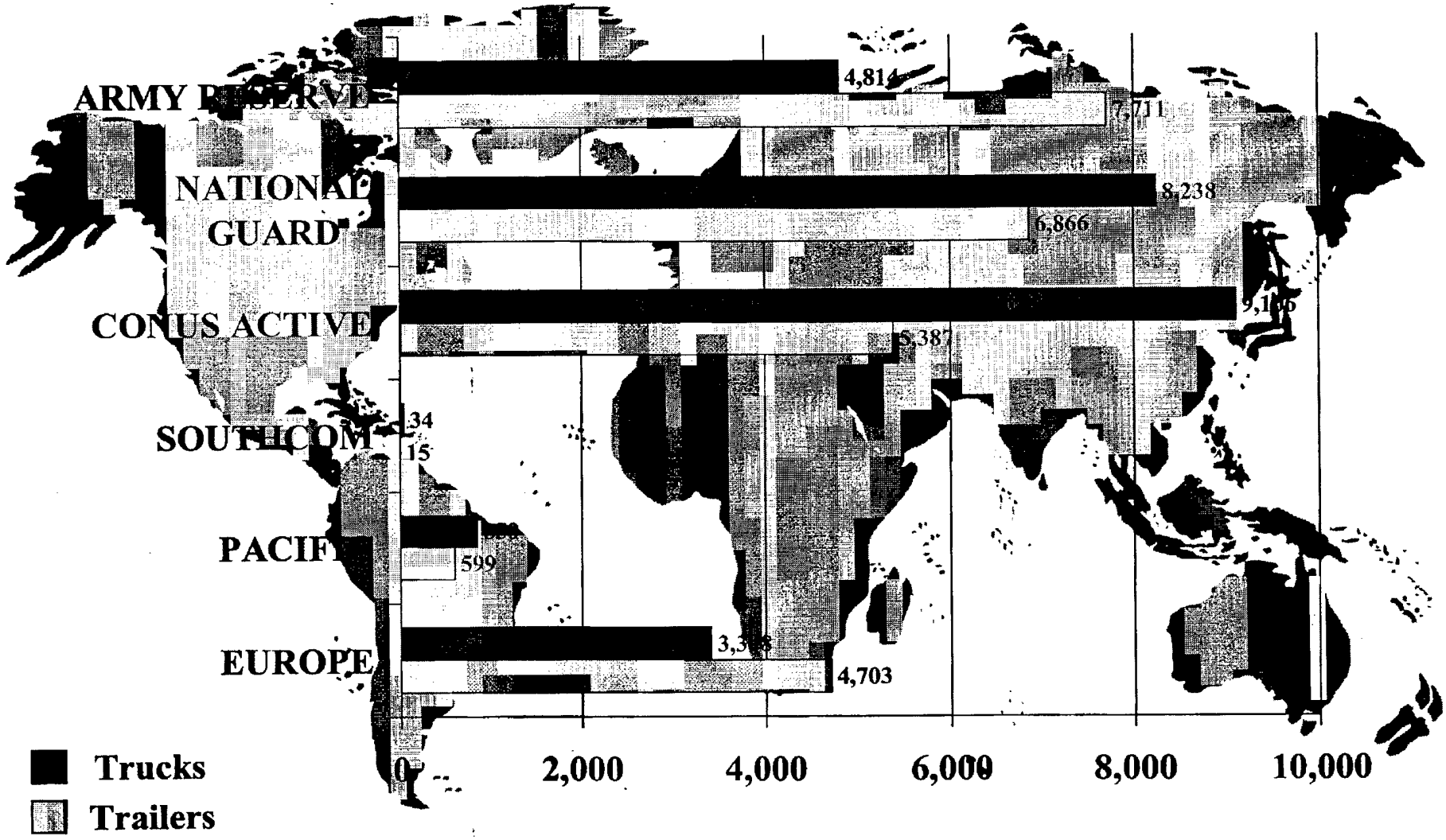
Tactical Wheeled Vehicle and Trailer Fleet

246,646 Trucks 110,429 Trailers



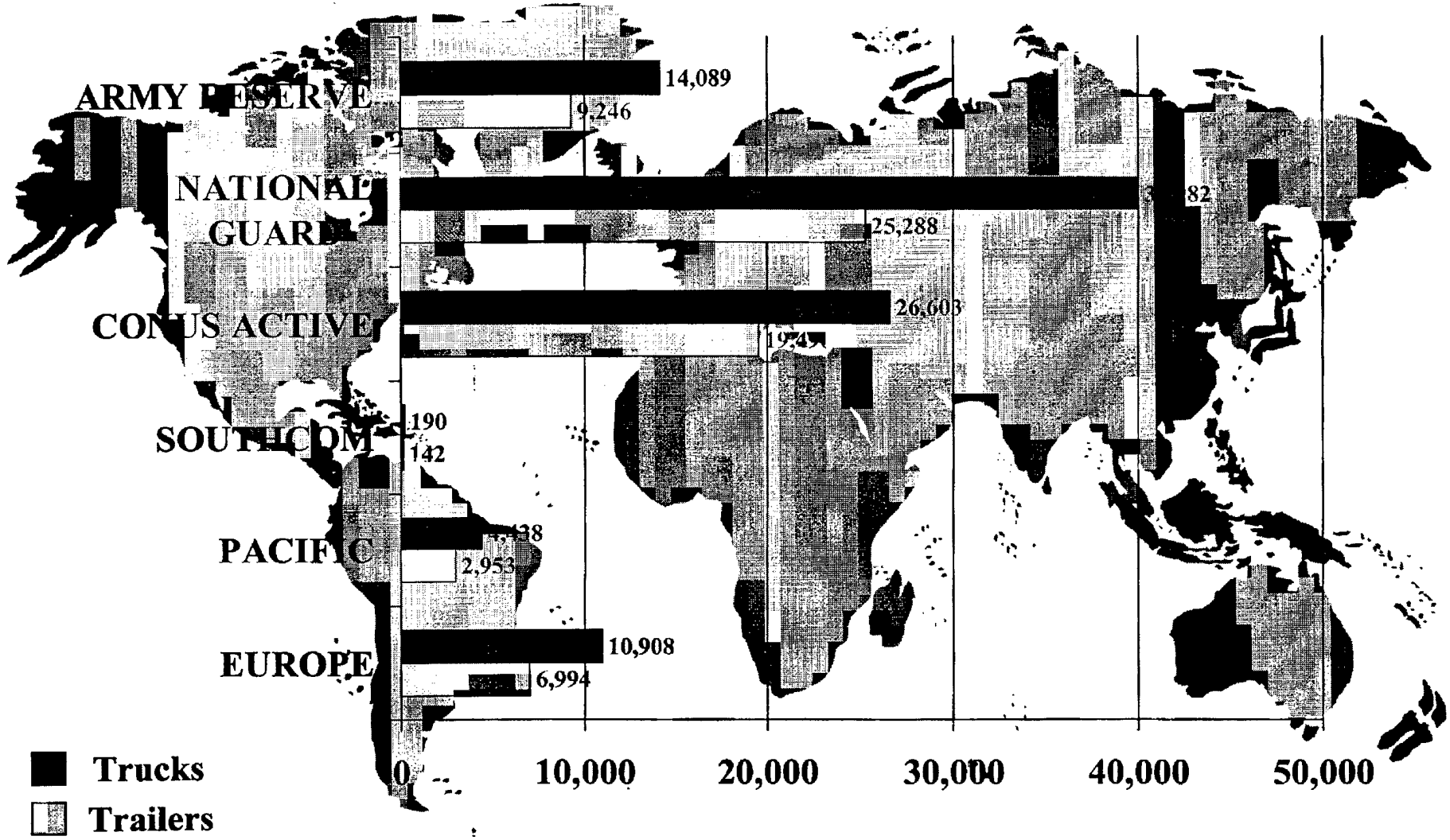
Heavy Tactical Wheeled Vehicle Fleet

26,440 Trucks 25,281 Trailers



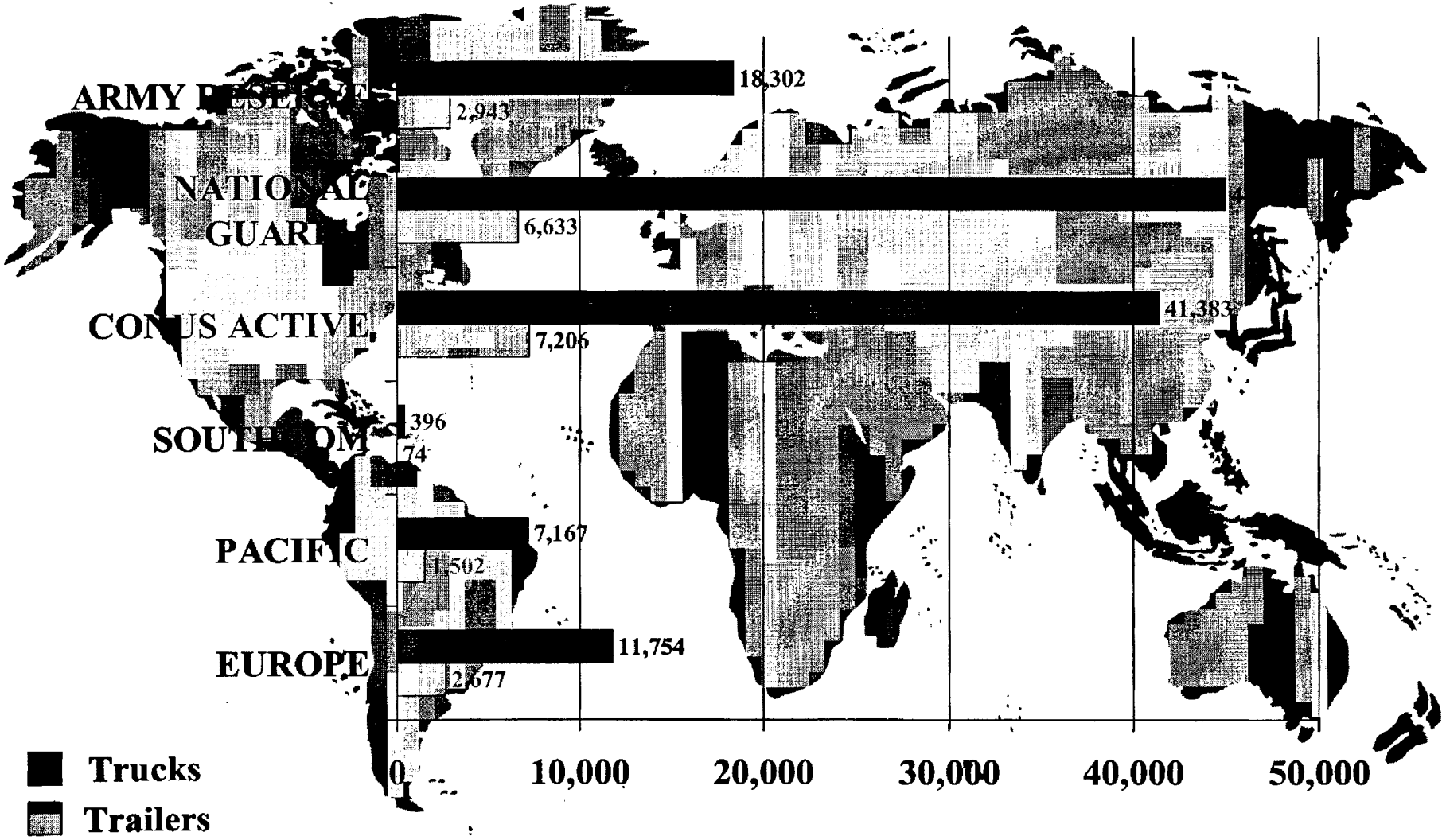
Medium Tactical Wheeled Vehicle Fleet

96,210 Trucks 64,113 Trailers

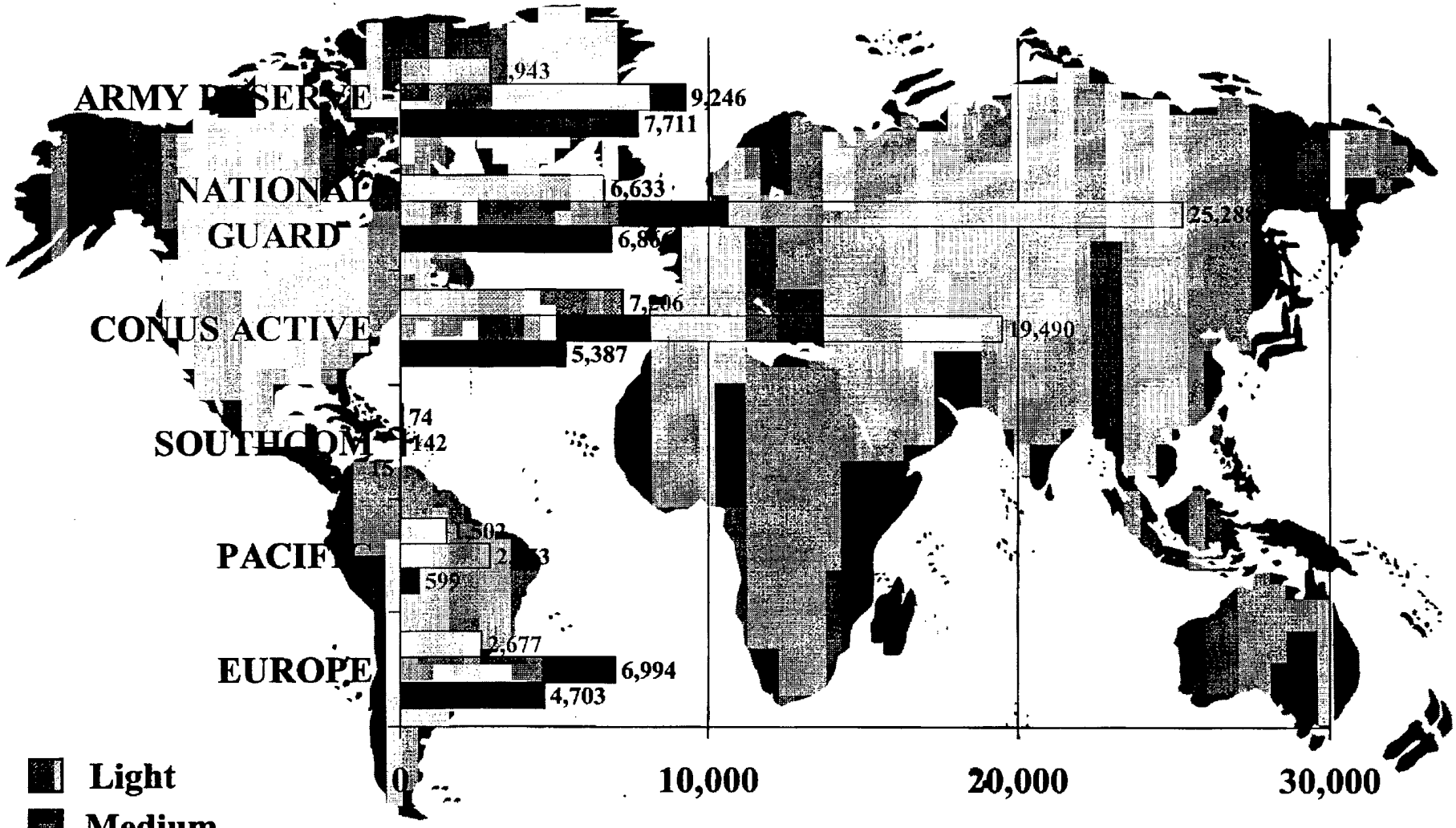


Light Tactical Wheeled Vehicle Fleet

123,996 Trucks 21,035 Trailers



Trailers
110,429

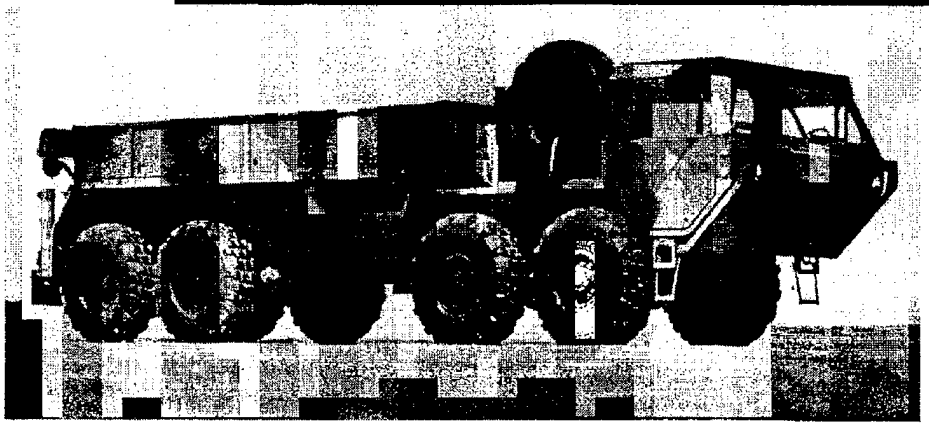


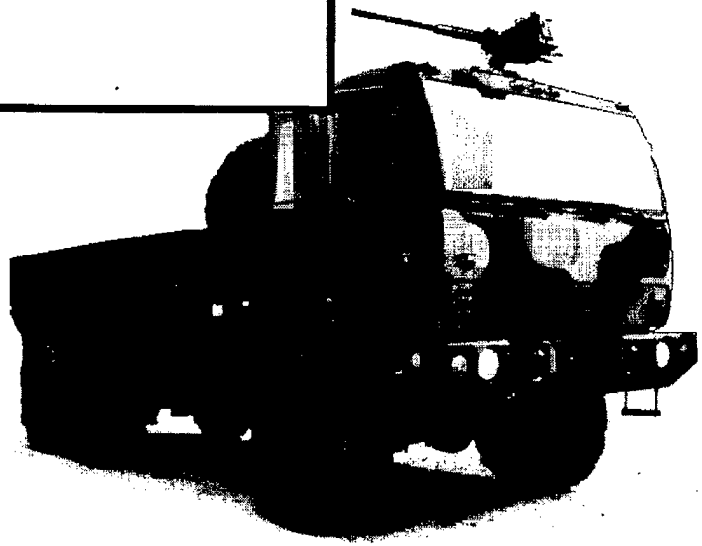
Tactical Wheeled Vehicles Operation and Support Cost

- Fleet cost $1.7 billion to operate and support in FY98
- Operation and Support Cost Drivers:
  - Labor/ Mechanic
  - Parts (Engines, Tires, Batteries, etc.)
  - Petroleum, Oil and Lubricants

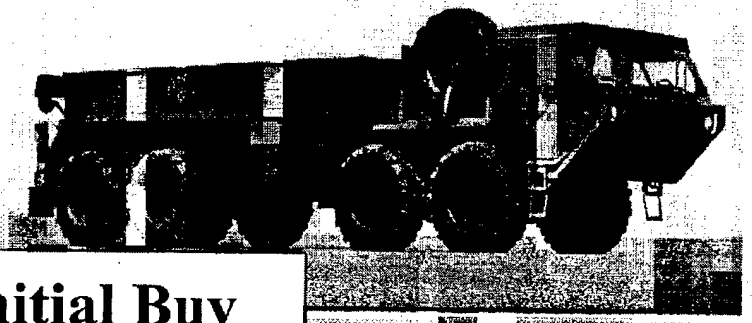


Tactical Wheeled Vehicle Procurement





Building to the 21st Century
Maintaining Capability



Initial Buy

"New Buys" w/Modifications.

Rebuild/
Remanufacture

Future Tactical
Wheeled Vehicle

Upgrade
Rebuild
Remanufacture
Modernize
through Spares





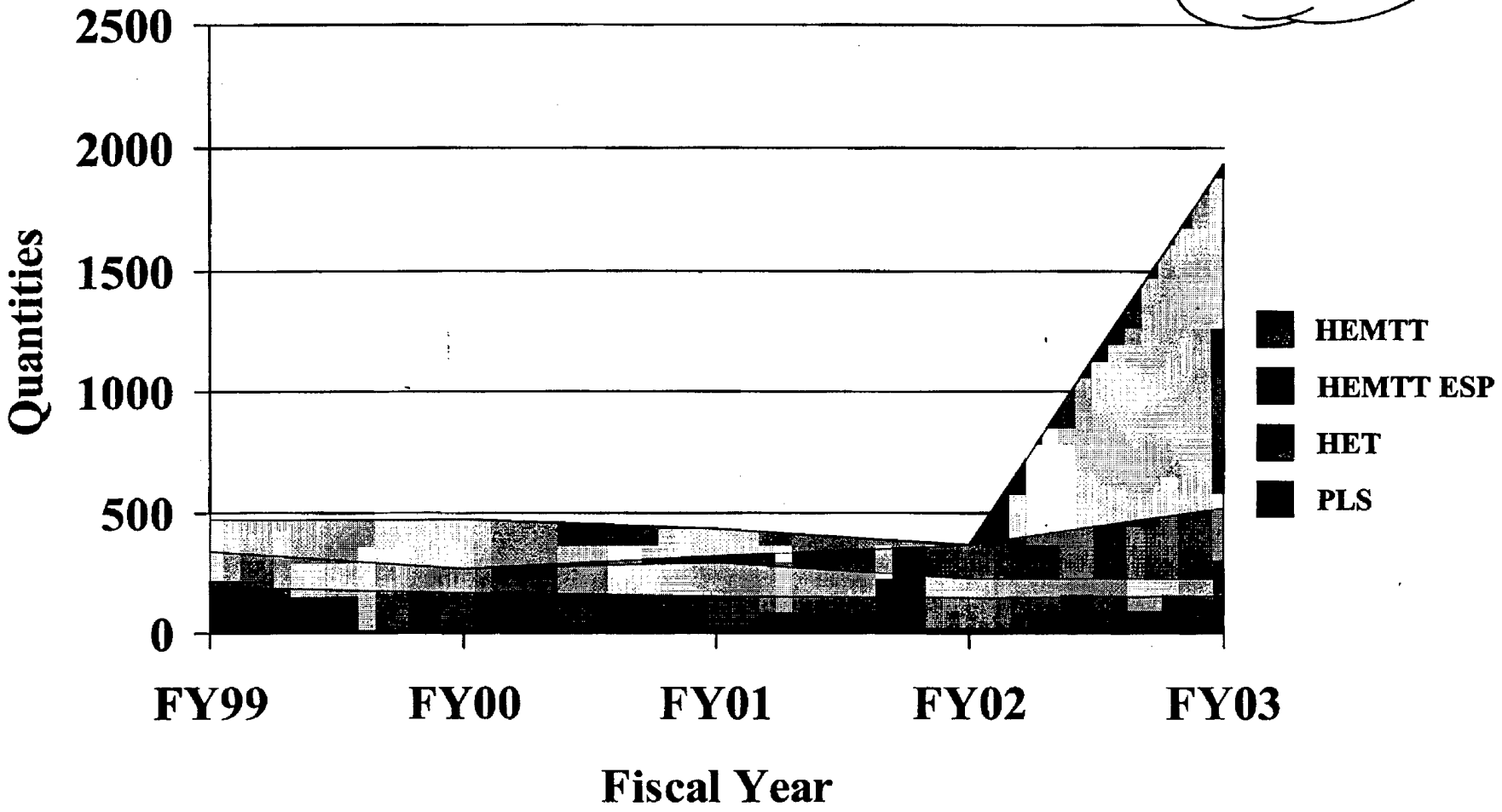


Tactical Wheeled Vehicle Projected Fleet Procurements

Heavy Tactical Wheeled Vehicles
Production/ESP

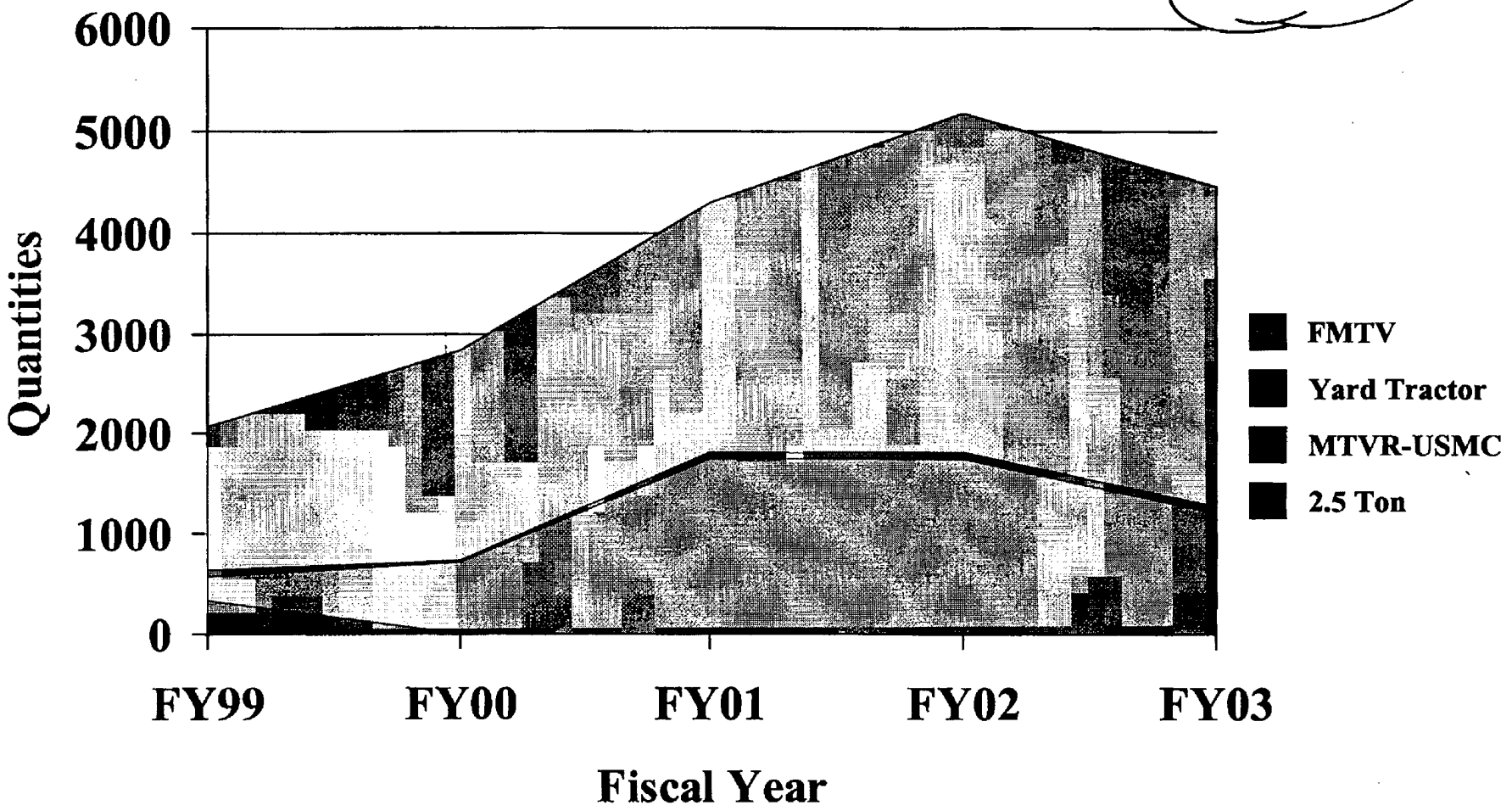


$1.04B



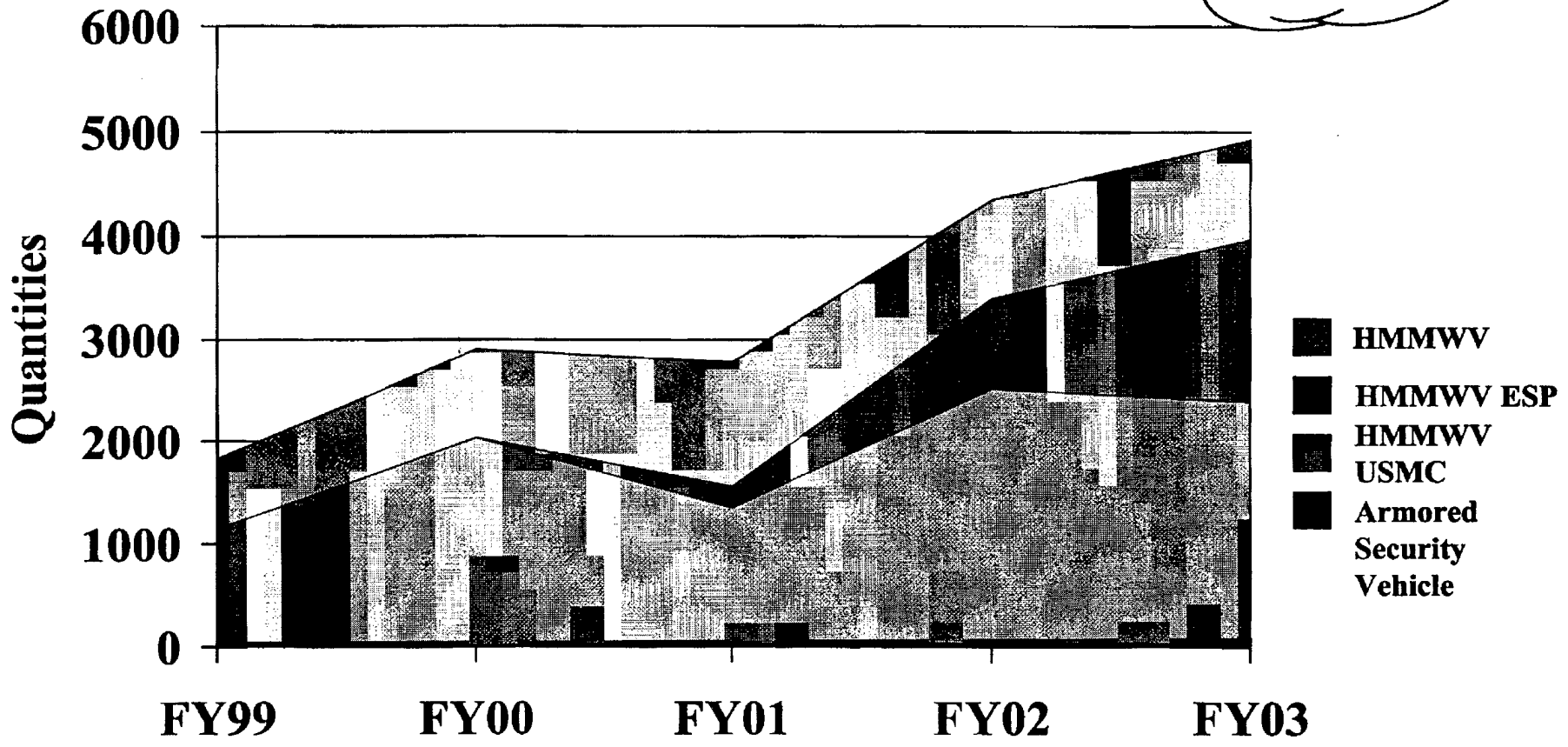
Medium Tactical Wheeled Vehicles
Production/ESP

$3.7B



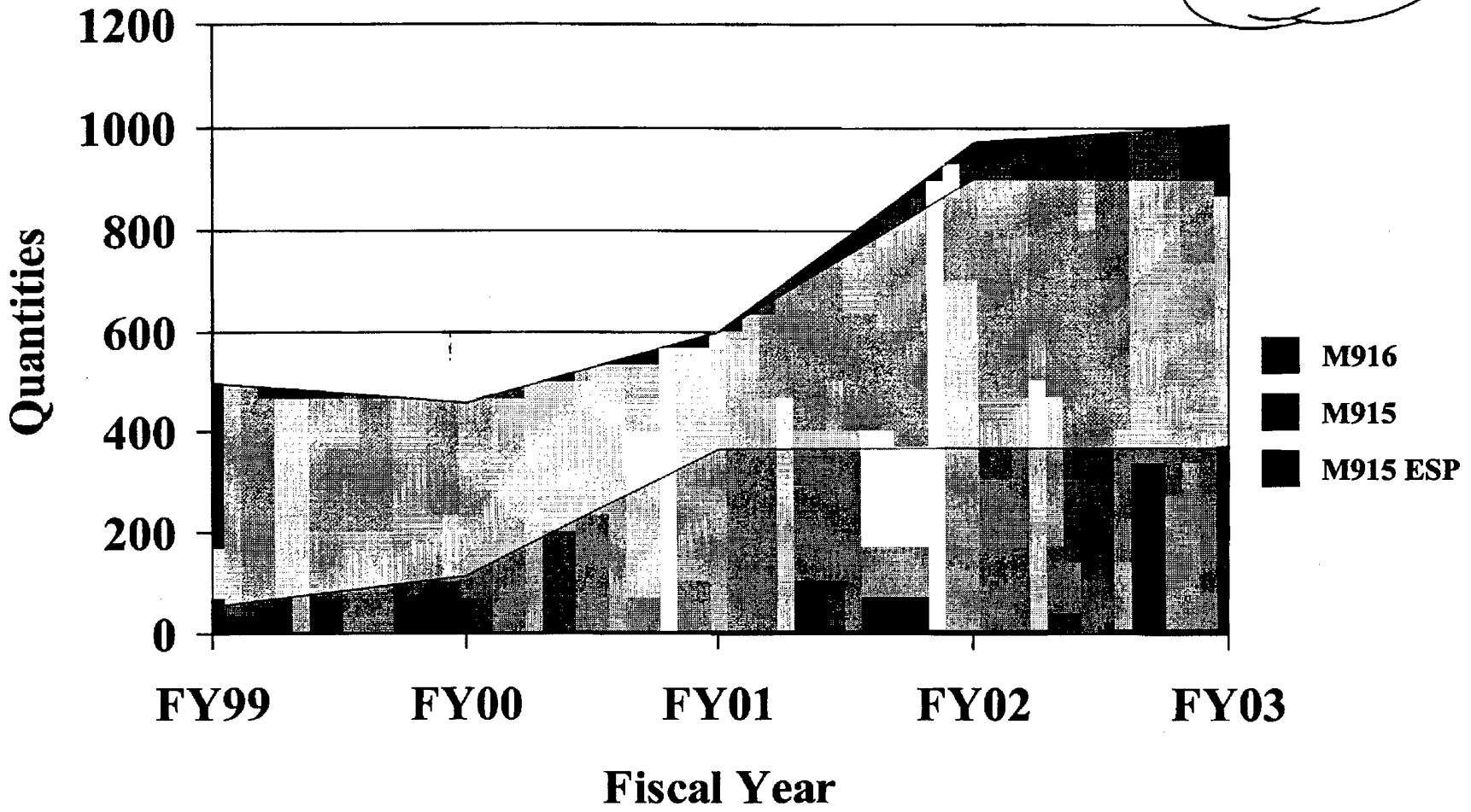
Light Tactical Wheeled Vehicles
Production/ESP

$722M



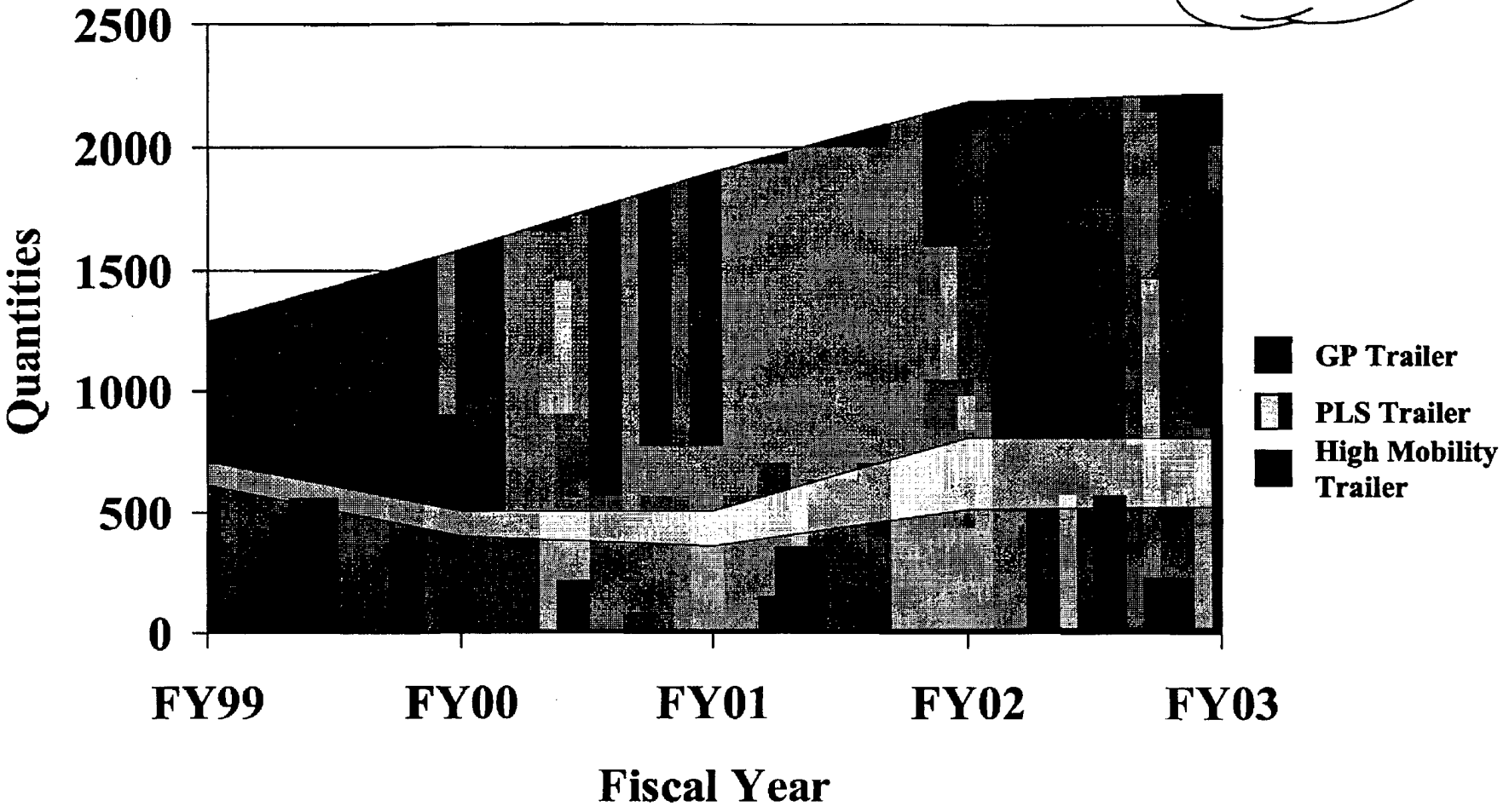
Line Haul Trucks
Production/ESP

$403M

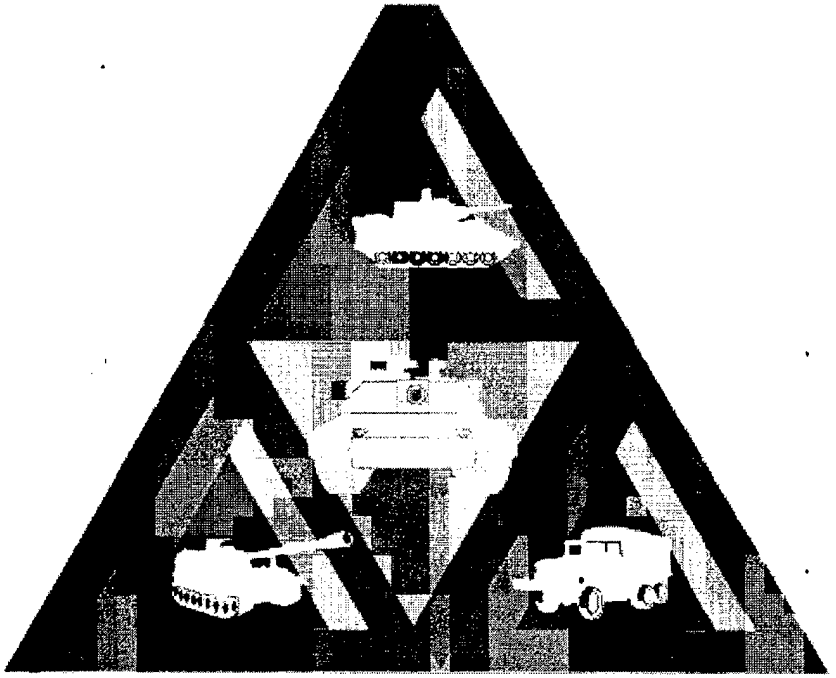


Trailers
Production/ESP

$4.86M



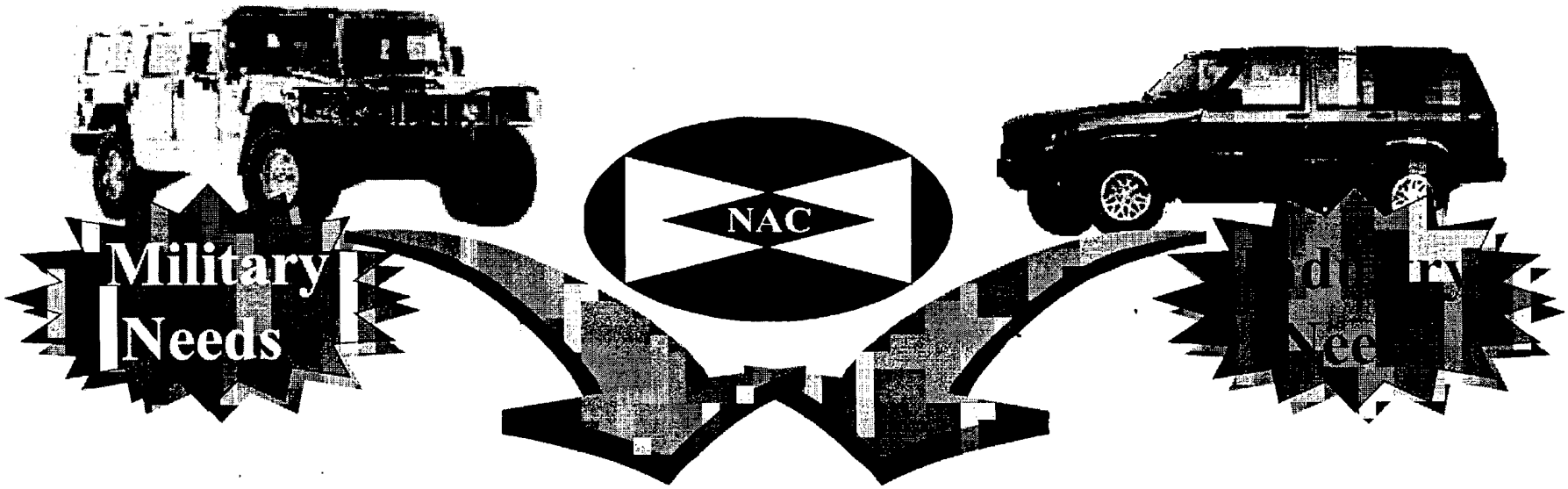
TACOM &
Tactical Wheeled Vehicles

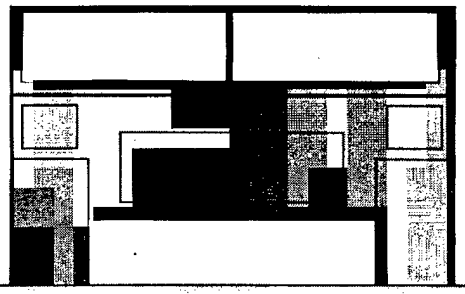


TARDEC

Research, Development & Engineering

Commercially Based Tactical Truck (COMBATT)





Next Generation Light Tactical Truck

What COMBATT is

- A DEMONSTRATION of the ability to merge commercial automotive technologies and military NEEDS for the NextGen LTV and HMMWV technology insertion.

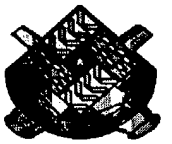
- Dual Use Application Program Resulting from Broad Agency Announcement.

- Participation by OSD, TACOM and:

Company	Platform	
Chrysler	2000	Ram
Ford	1998	F350
AMG	1998	HMMWV

- Managed jointly by NAC and ERIM International.

Propulsion System Requirements
21st Century Truck



Needs/Requisites

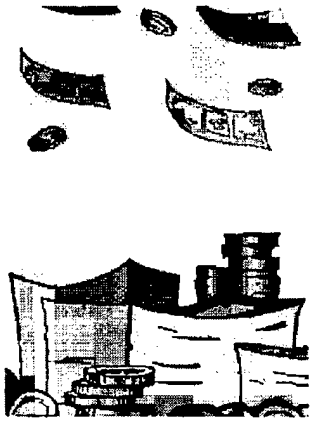
- Increased Power Density
- Improved Durability
- Improved Fuel Efficiency
- Legislative Compliance
- Commercially Based

Technological Solutions

- Advanced Materials
- Smart Sensors
- Digital Controls/ Architecture
- Functional Integration
- Hybrid Approach
- Fuel Cells
- Alternative Fuels

OSCR Program





Operation and Support Cost Reduction is....

Anything and everything that lowers the recurring cost of owning, maintaining, or sustaining the system

HTI | **SAVE** | **Major Mods** | **Value Engr** | **PIPs** | **RM&S** | **SMA-OSCR** | **Tech Base** | **MTS**

TACOM's SMA OSCR PROJECT SUMMARY

- **Successful Projects:**

M915A4 Engine & Suspension Assy	M109/M992 Fuel Cells
Redesign HMMWV Soft Top Doors	Gunfire Simulator Circuit Card
Calcium Maintenance Free Battery	M119A1 Spare Parts Redesign
Galvanization of M939 Series Hood	Alternate Power Sys for SUSV
Replace Tritium Lamps w/LEDs	ROWPU Improvements
Ceramic Material Plasma Spray	AH64A Improved CRT Cable Strain Relief
M295 Equip Decontamination Kit	AH64A CRT Wire Splice
Recoil Exerciser 155m Howitzer	Improved Track Lock BCS
AGT 1500 Eng Blade Repair	M10 Charger Simplification
Smart Battery and Charger	One-Piece Periscope (M17)
Fiber Optic Gyro, M2	AH-64A Helmet Cable Improvement
Drain Plug Kit Replacement BFV	M203A1 Grenade Launcher Handguard
Improved Moldboard Ext BCS	Alt. Source for Variable Speed Fan, M113

- **26 Initiatives Funded with $6.6M Investment (FY96-99)**
- **Projected Field Savings for POM (FY98-03) $34.5M**

Blueprint For Change:
Standardization Reform Effort

Active	*Yesterday*	*Today*
Specifications and Standards	5,147	1,075
Performance Specifications	--	157
Commercial Item Descriptions	--	127

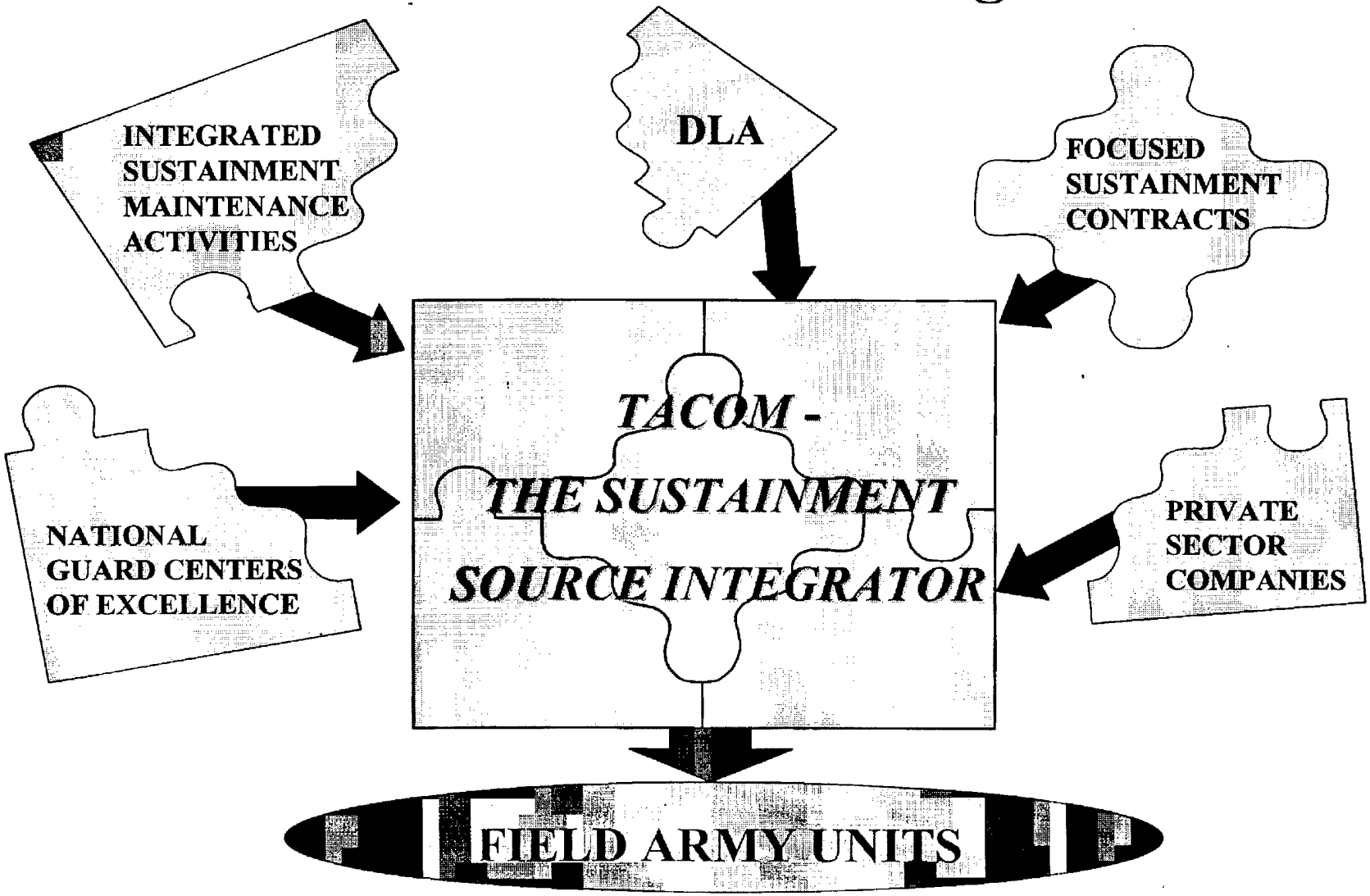
Highlights: New Non-Government Standards -- 24

Cancelled 1,057 documents Inactivated 1,832 documents



TACOM
and
Tactical Wheeled Vehicle
Sustainment

Tactical Wheeled Vehicle Sustainment Challenges



Tactical Wheeled Vehicle Sustainment Challenges

WHAT WE'RE DOING:

INTEGRATED, MULTI-FUNCTIONAL COMMODITY BUSINESS UNITS (CBU)

SUSTAINMENT SOURCE INTEGRATOR - FOCUSED SUSTAINMENT

MANAGE FROM THE CUSTOMER'S PERSPECTIVE - READINESS CELL

INCREASE LONG TERM CONTRACTS WITH OUR VENDORS

BUY "RESPONSE" NOT INVENTORY

REDUCE COSTS/REDUCE SURCHARGE

REDUCE ADMINISTRATIVE AND PRODUCTION LEAD TIMES

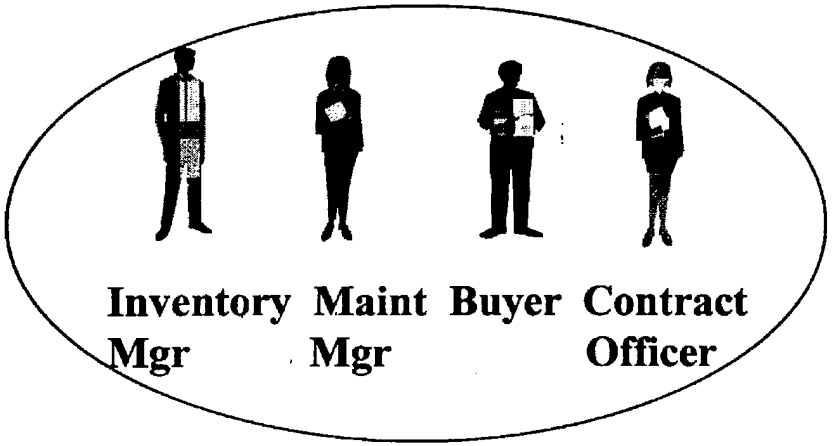
REDUCE INVENTORY

REDUCE BACK ORDER AGE

Commodity Business Unit (CBU)
Multi-Functional Team Development

BEFORE

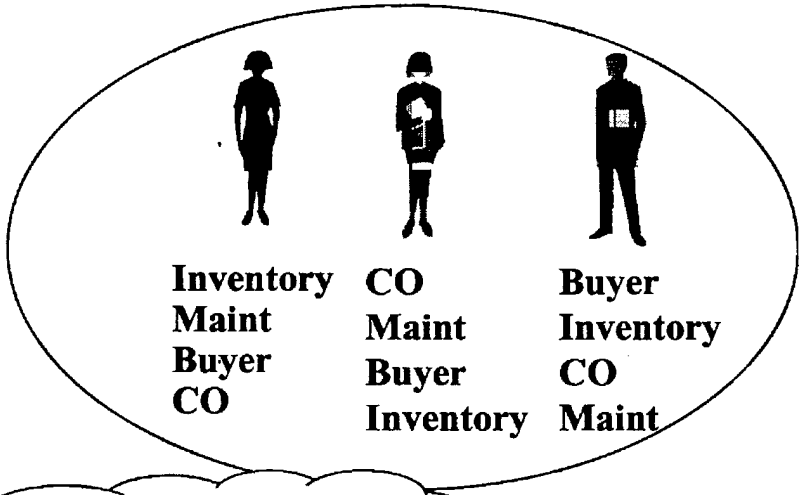
Multi-Functional Teams made up of Specialized Associates



Reinforces Stovepipes

AFTER

Multi-Functional Teams made up of Multi-Functional Associates



Encourages Process Re-Engineering

Development to Multi-Functionalism: Osmosis is not good enough.

NATIONAL MAINTENANCE FOCUS

CURRENT SITUATION IS ...

An Army Sustainment Stampede...

- O PEO INITIATIVES...
- O AMC MAJOR SUBORDINATE COMMAND ACTIONS AND INITIATIVES...
- O FIELD ARMY INITIATIVES...

e.g.,
PALADIN BUSINESS CASE STUDY;
M1A2 CLS;

e.g.,
Traditional five-level maintenance operations
Legacy system support and sustainment
Integrated Logistics Support planning and execution

e.g.,
ISM and SRA proliferation; independent repair programs; post, camp, station individual contracts for support

"CURRENT NEED IS FOR A SUSTAINMENT SOURCE INTEGRATOR ..."

NATIONAL MAINTENANCE FOCUS

WHAT IS FOCUSED SUSTAINMENT?

LEVERAGE TACOM CONTRACTING EXPERTISE BY SELECTING "BEST OF BREED" FROM OVER 40 STOVEPIPES

Multiple awards; multiple contractors

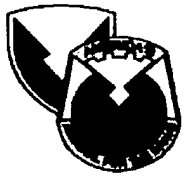
Work assignment protocols to select "best" source for each deliverable

IDIQ CONTRACT INSTRUMENT

- EQUIPMENT EVALUATION
- DIAGNOSTICS
- TECHNICAL ASSISTANCE
- WRENCH TURNING
- TRAINING
- PARTS SOURCING
- MATERIEL FIELDING
- LOGISTICS DATABASE UPDATES:
  - PROVISIONING DATA
  - TECHNICAL MANUALS
- RECOMMENDED CHANGES TO EQUIPMENT (EIR/ECP)

Priced by hour...TO Buy only hours needed.

"TACOM - SUSTAINMENT SOURCE INTEGRATOR"



DCG for CORPORATE MGMT



DIRECTORATE for READINESS OPERATIONS

WORLDWIDE FIELD SERVICES

- Technical Advice Assist.
- Field Problem Reporting
- Wholesale to Retail Interface

Rock Island, IL
Warren, MI
SCR CONUS
SCR Far East
SCR USAREUR

F[illegible]ET AND UNIT MATE[illegible]EL READINESS

Fleet Readin[illegible] Management

- Current Plans
- Future Concepts
- Fleet Planning
- Data Management

[illegible]Materiel Readine Management

- Unit Readiness (Regional Teams)
- Analysis- Marketing
- Field Problem Resolution

CONUS CENTRAL
CONUS WEST
CONUS EAST
FAR EAST
EUROPE

[illegible]ERATIONS CENTER

[illegible]

- Customer Support
- 1-800-TACOM
- Off Line Requisitions

[illegible]OC[illegible]

- OPLANS
- LOGPLANS
- LSE Planning

Warren, MI.
Rock Island, IL.

UNIT MATERIEL READINESS TEAMS

REGIONAL ALIGNMENT

FAR EAST 8th USA

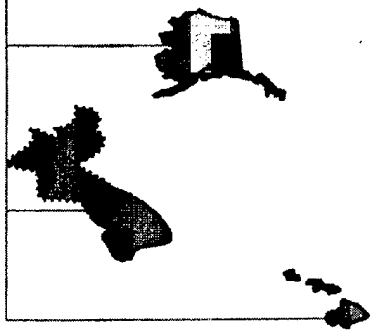
MCUs

2	Inf Div
172	Separate Inf Bde
25	Inf Div

Non-Divisional Units

19	SUPCOM
17	Aviation

USAR/NG



CONUS WEST

MCUs

3	Arm Cav Rgmt
1	Bde / 25 Inf Div
3	Bde / 2 Inf Div
1	Special Forces Grp

Non-Divisional Units

11	Armored Cav Rgmt
	National Tng Center

USAR/NG

CONUS CENTRAL 5th USA

MCUs

1	Cavalry Div
3	Bde / 1 Arm Div
4	Inf Div
10	Special Forces Grp
1	Bde / 1 Inf Div

Non-Divisional Units

11/31/35/108	ADA
3	Corp Arty
FA	Tng Ctr
13	COSCOM
Ft.	Clayton PANAMA

USAR/NG

CONUS EAST 1st & 3rd USA

MCUs

2	Arm Cav Rgmt
3	Inf Div
10	Inf Div
101	Air Assault Div
82	Airborne Div
3/5/7	Special Forces Grp
75	Ranger Rgmt
160	Spec Ops Avia Rgmt

Non-Divisional Units

20	Engineering Bde
1	COSCOM
159	Aviation Bde

USAR/NG

EUROPE 7th USA

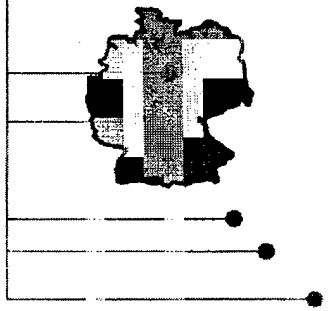
MCUs

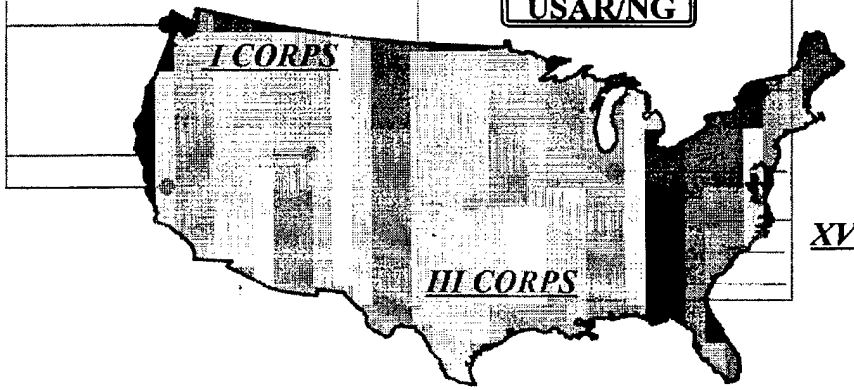
1	Inf Div
1	Arm Div

Non-Divisional Units

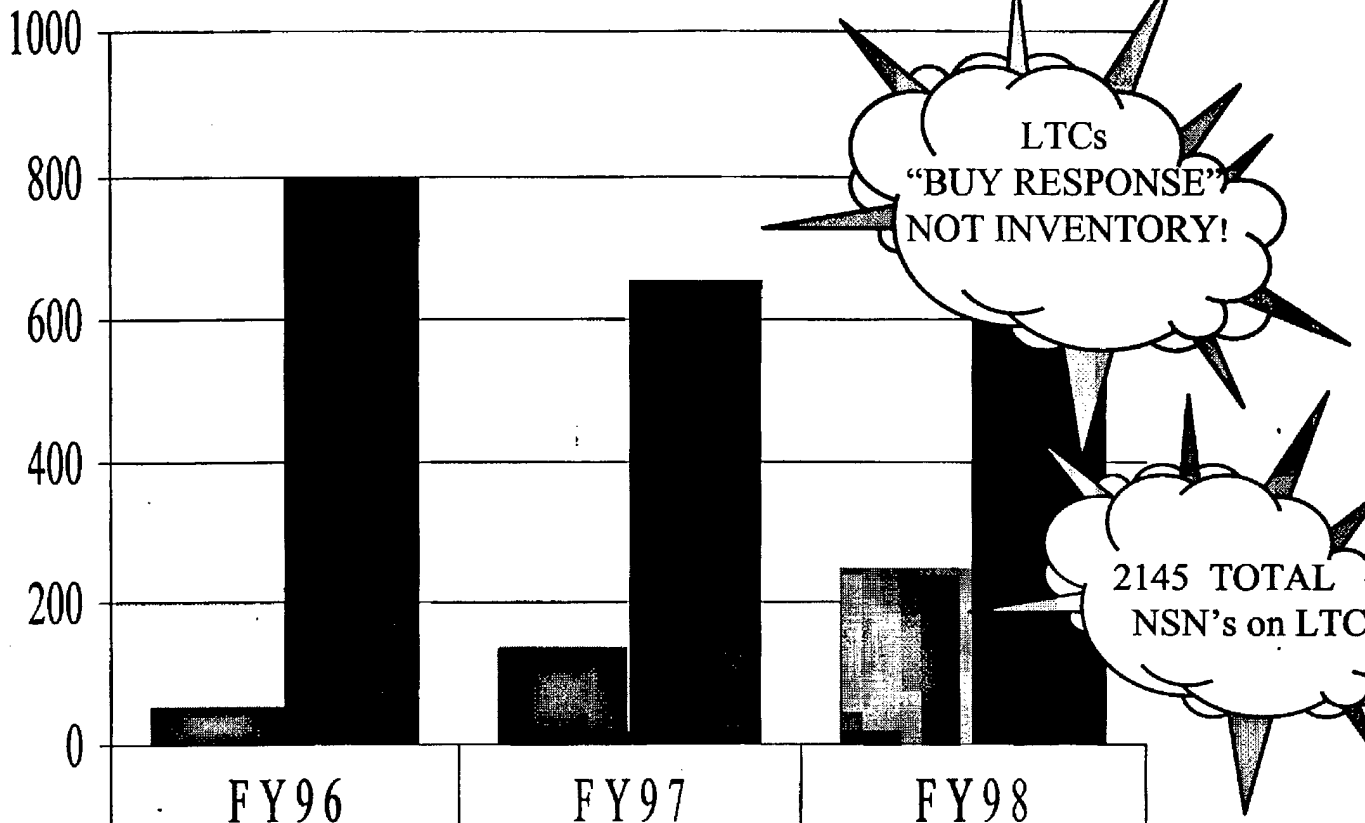
69 Air Defense Arty
21 TAACOM
SETAF
Task Force 4-64
Joint Forge

V CORPS

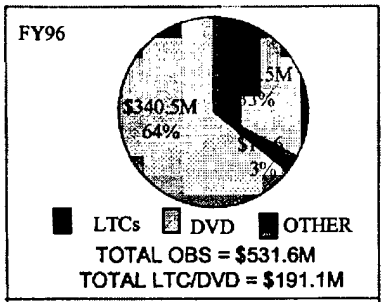


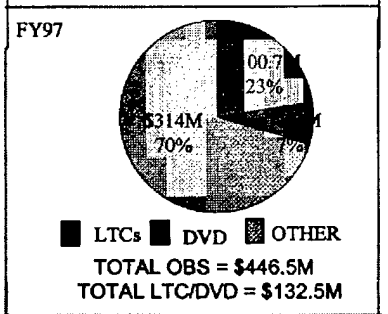


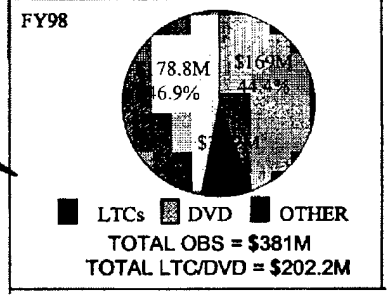
TACOM ALT/PLT REDUCTION PROGRAM
LONG TERM CONTRACT PERFORMANCE

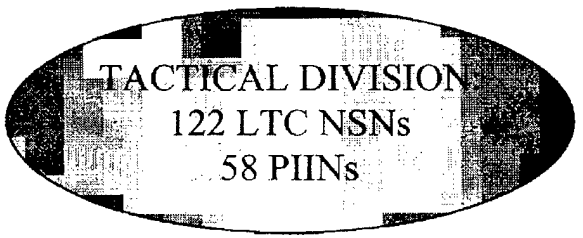


	FY96	FY97	FY98
PIINs	52	135	249
NSNs	795	655	655

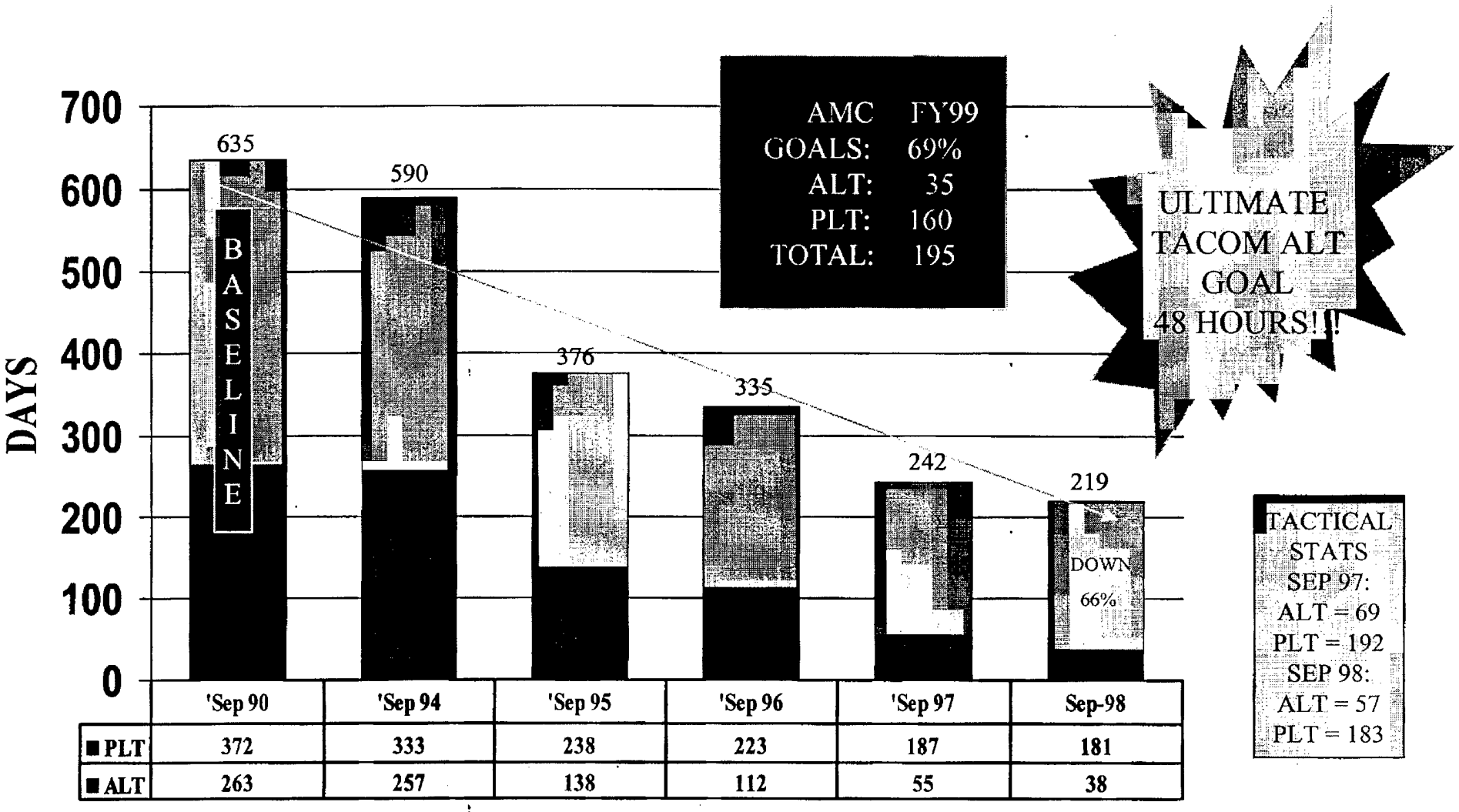








ALT/PLT REDUCTION PROGRAM
TACOM MILESTONES

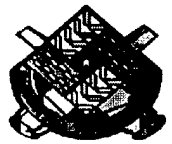


	'Sep 90	'Sep 94	'Sep 95	'Sep 96	'Sep 97	Sep-98
■ PLT	372	333	238	223	187	181
■ ALT	263	257	138	112	55	38

SOURCE DOCUMENT - Sep 98 STRAT



We Need Your Help!



Future Truck Technology Needs

- Propulsion
  - Fuel Efficient
  - "Clean"
  - More Power
- Suspension and Running Gear
  - Independent
  - Active/Semi-Active
  - Anti-Lock Brakes
  - Automatic Traction Control
- Wheels/Tires
  - Improved Run Flat
  - Central Tire Inflation System
  - Band Track
- Electronics
  - Situation Awareness
  - Movement Tracking System
- Improved Deployability
  - Reduced Weight
  - Reduced "Footprint"
- Extended Fleet Life
  - Diagnostics/Prognostics
  - Increased Corrosion Protection
- Safety
  - Collision Warning System
  - Crew Safety Protection
  - Improved Ergonomics

Conclusions:

- Total cost of ownership is critical
  - Aging fleet
  - Operation and Support cost consideration
- TACOM is source integrator for TWV sustainment
- Must renew the fleet
  - Rebuild
  - Remanufacture
  - Buy new

What is a soldier without TACOM?



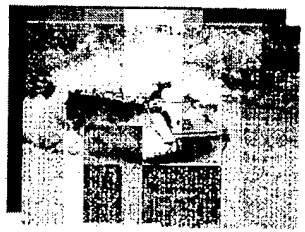
MAKING TECHNOLOGY WORK FOR SOLDIERS

A Tourist!

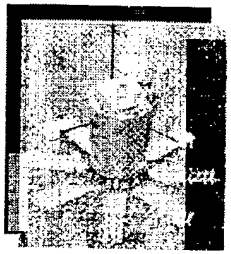


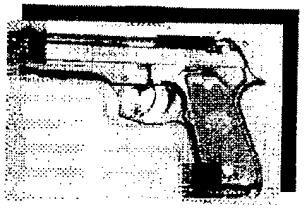
TACOM

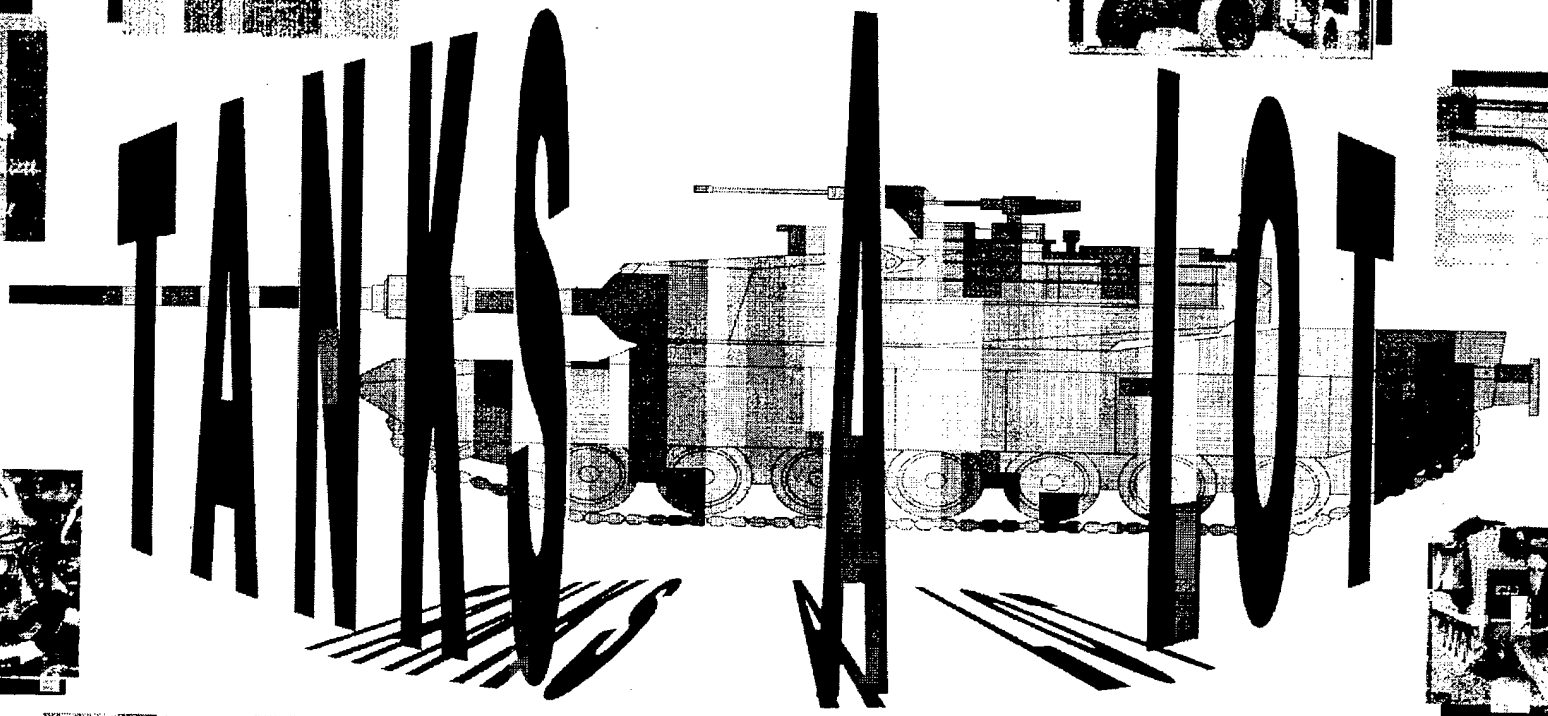
Mobility and Firepower for America's Army





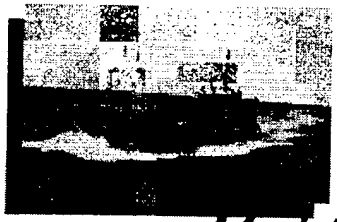






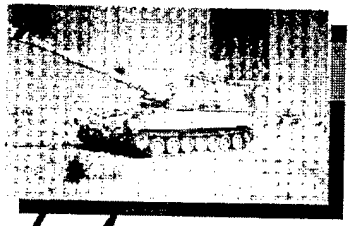








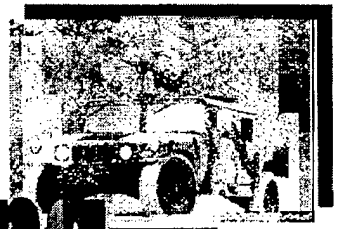


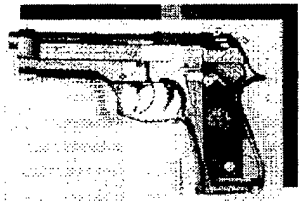


Mobility and Fire Power for America's Army

TACOM

Mobility and Firepower for America's Army

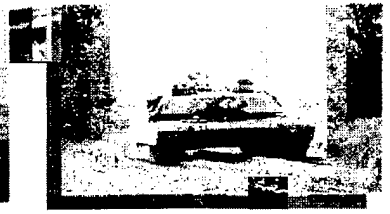



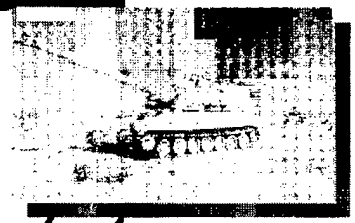


Keep On Trucking







Mobility and Fire Power for America's Army

Backup Charts

ON HAND INVENTORY

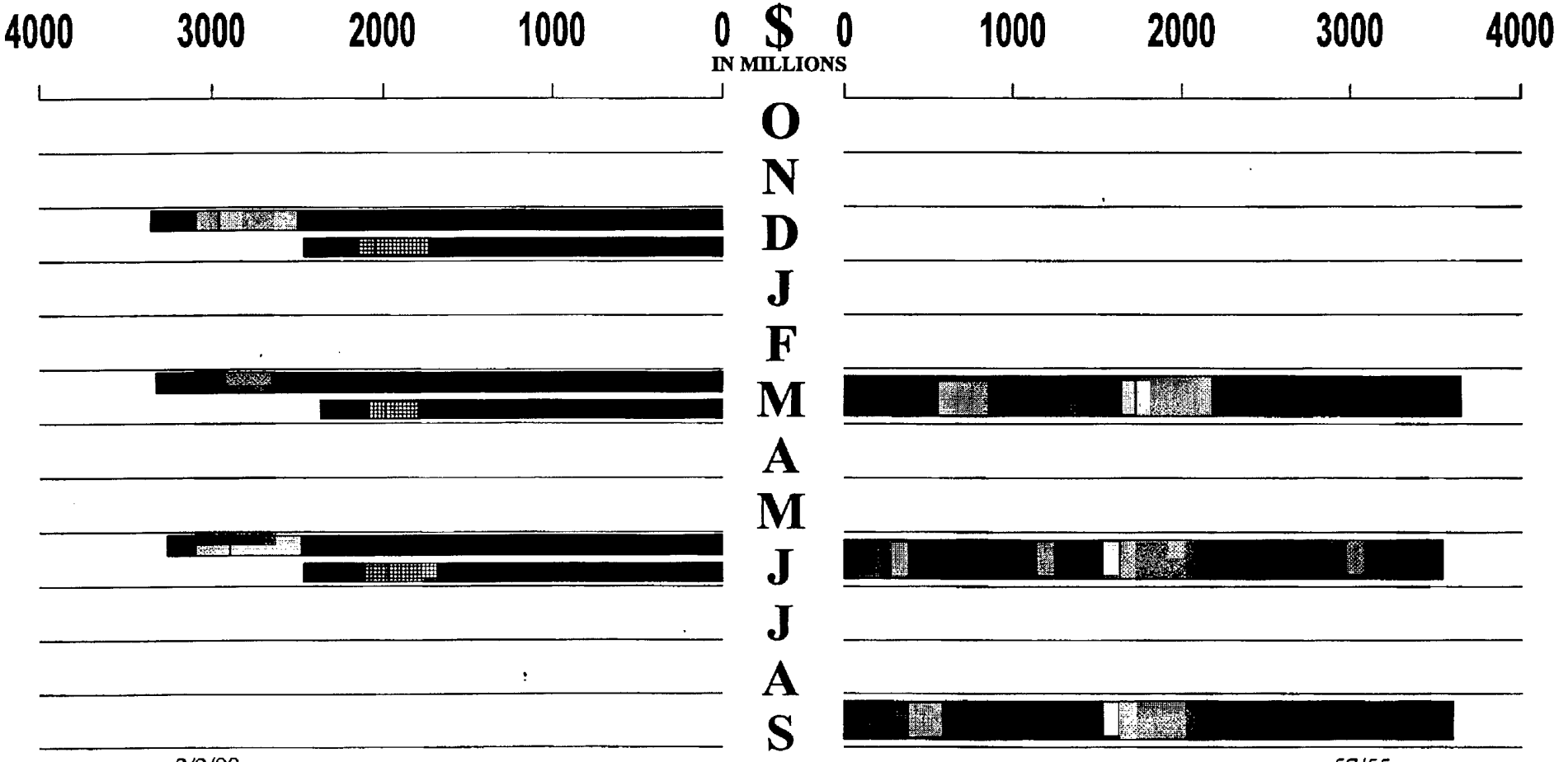
AWCF CLASS 2,4,9
BY CATEGORY

INVENTORY DOLLAR VALUE

STRAT
- ACTIVE
- ECONOMIC RET
- CONTINGENCY RET
- POTENTIAL DOD EXCESS

SSIR
- ACTIVE
- ECONOMIC RETENTION
- CONTINGENCY RETENTION
- POTENTIAL DOD EXCESS
- IN-TRANSIT

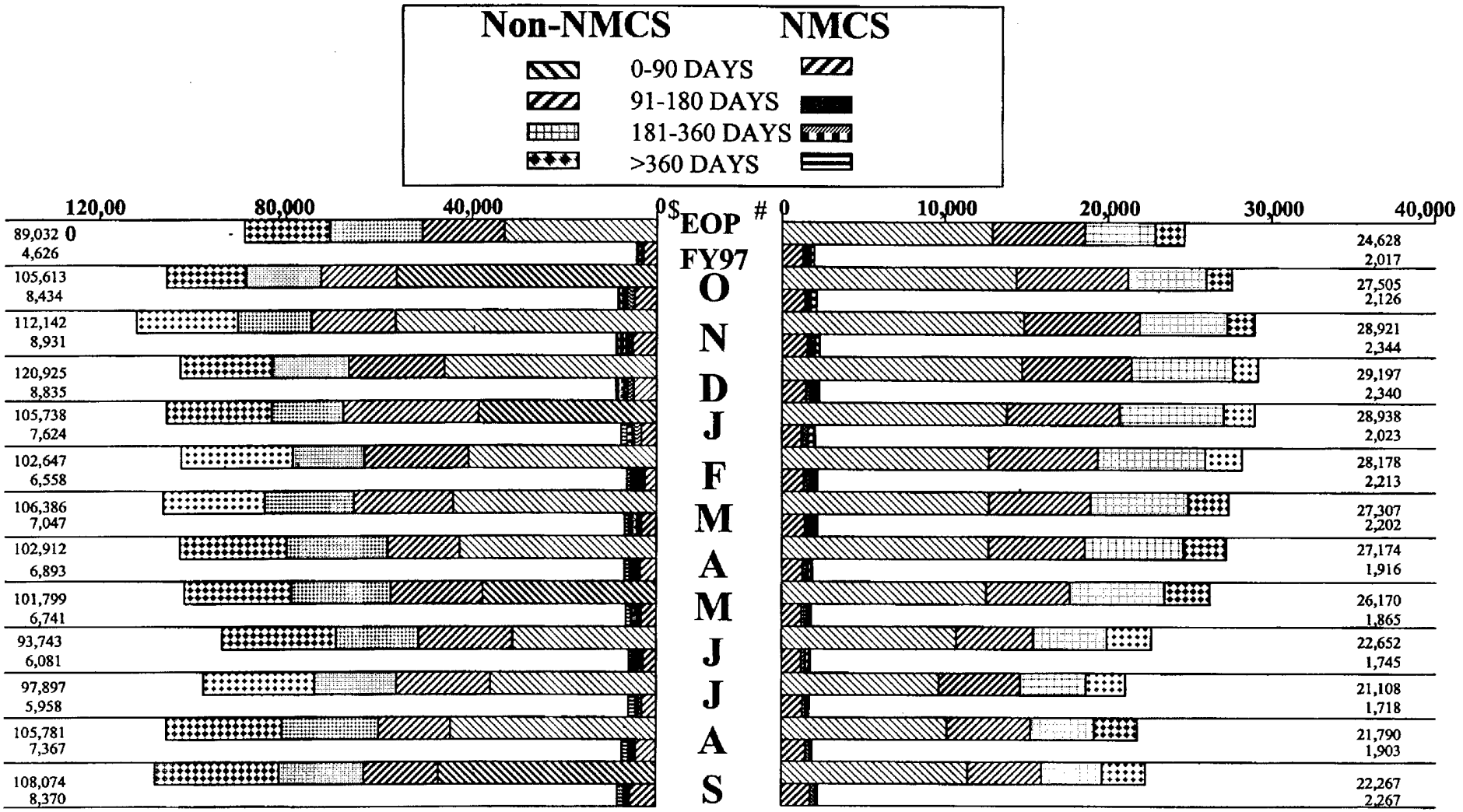
INVENTORY BY LOCATION
- ANNISTON
- SAN JOAQUIN
- ROCK ISLAND
- NEW CUMBERLAND/SUSQUEHANNA
- RED RIVER
- LETTERKENNY
- OTHERS



DOLLAR VALUE of STOCKED BACKORDERS
vs.
STOCKED BACKORDER LINES

Dollar Value of backorders (thousands)

Backorder Lines

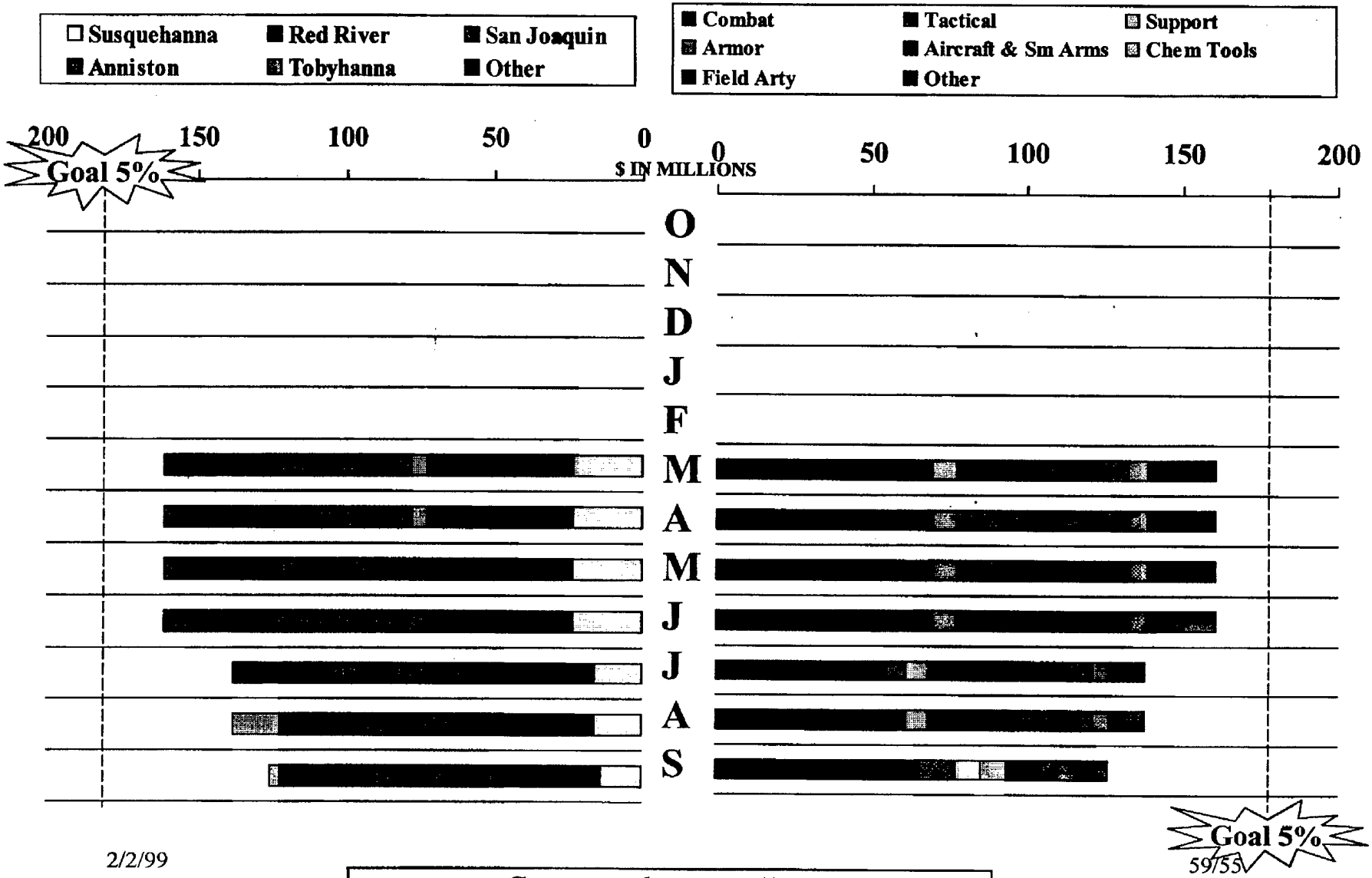


EOP = End of Period

Source: MILSTEP

DORMANT STOCK

Supply Class 2, 4, 9

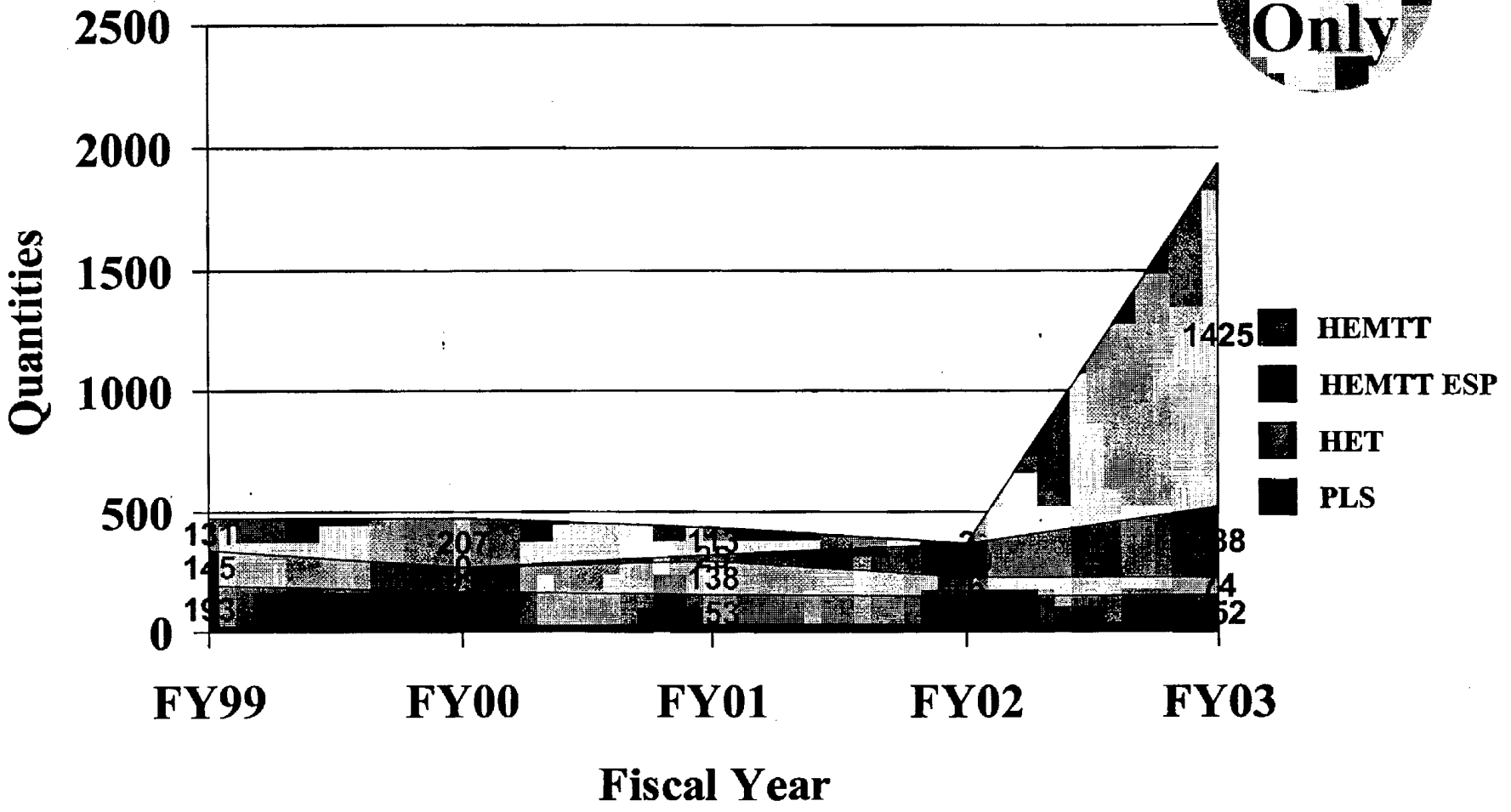


2/2/99

Committed to Excellence

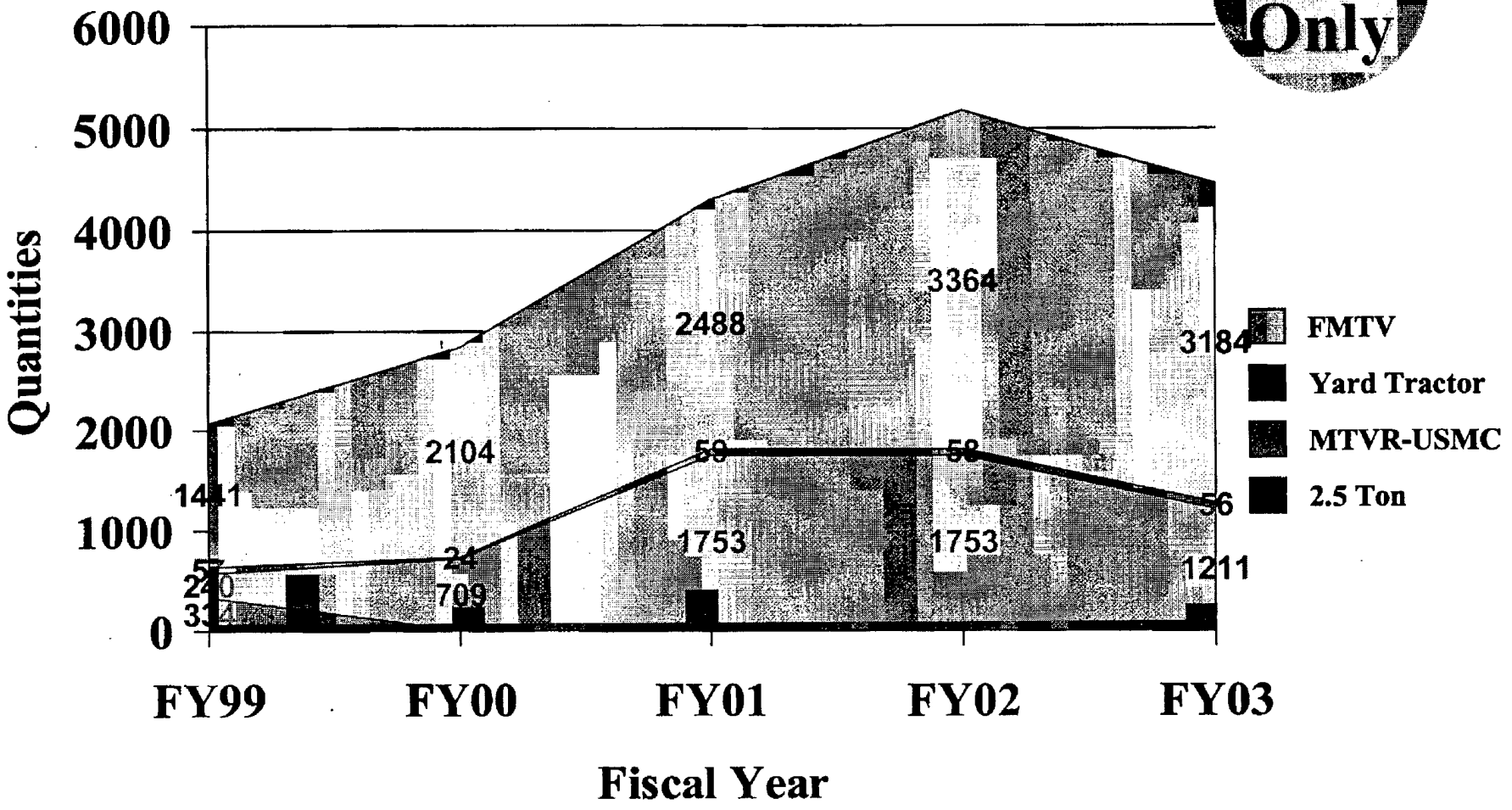
Heavy Tactical Wheeled Vehicles
Production/ESP

Info Only



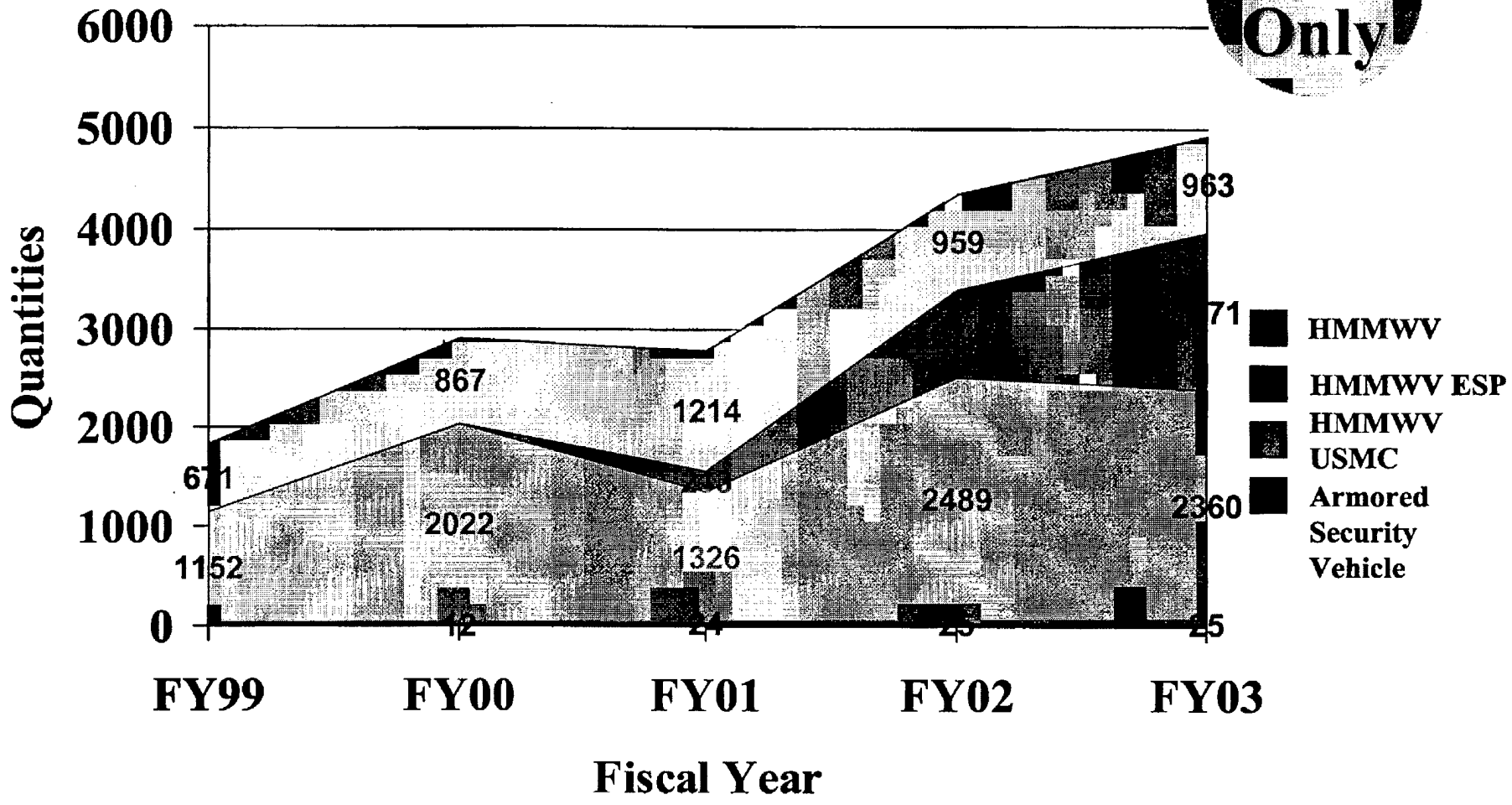
Medium Tactical Wheeled Vehicles
Production/ESP

Info Only



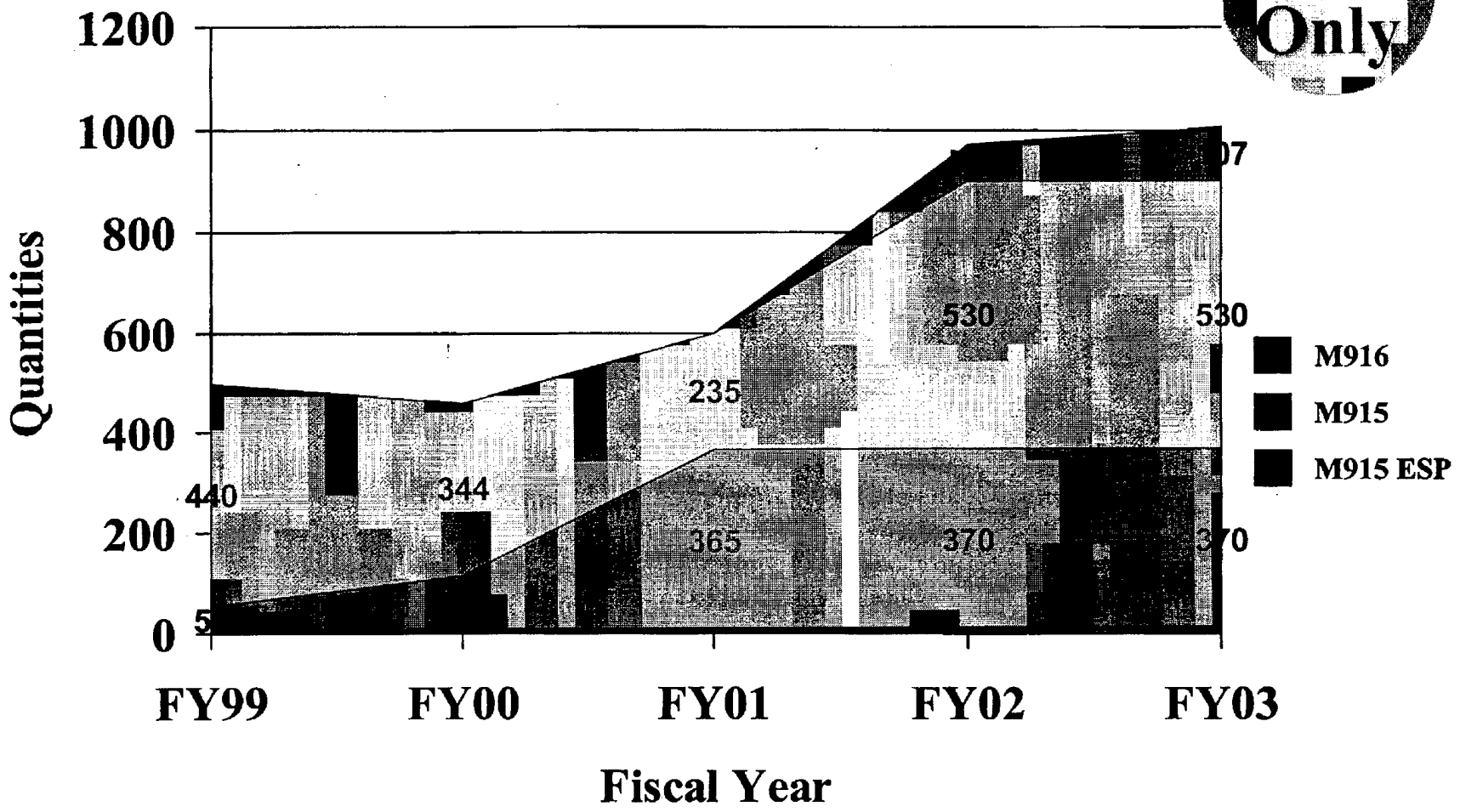
Light Tactical Wheeled Vehicles
Production/ESP

Info Only



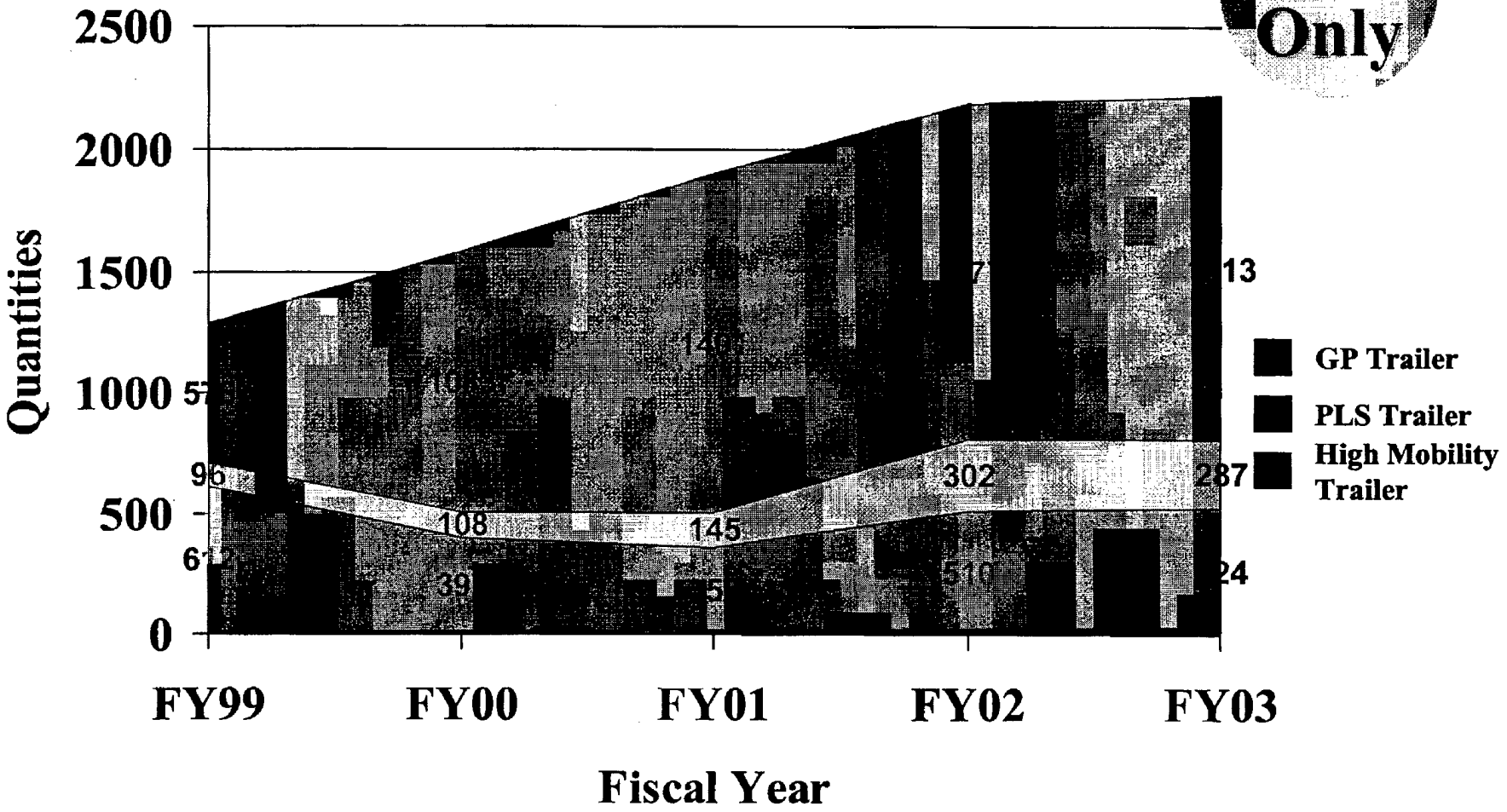
Line Haul Trucks
Production/ESP

Info Only

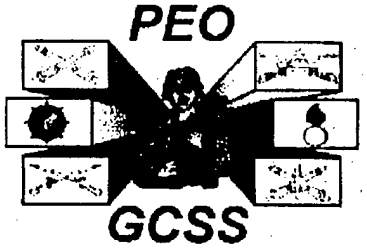


Trailers
Production/ESP

Info Only







TACOM / PEO-GCSS TWV PROGRAMS / ACTIVITY

NDIA TWV Conference

Monterey, California

2 February 1999





TACOM / PEO-GCSS
Speakers

Mr. Jerry Chapin - Director, TARDEC

Mr. Dan Mehney - Director, TACOM Acquisition Center

Mr. Al Puzzuoli - Deputy, PEO-GCSS

COL(P) John Urias - Deputy, Systems Acquisition
(Deputy for Life Cycle Mgt.)

TACOM / PEO-GCSS
Topics

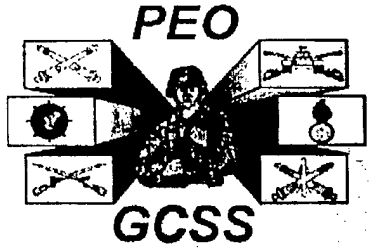
Organizations and Responsibilities

Procurement and Production

Sustainment

Emerging Systems and Technologies



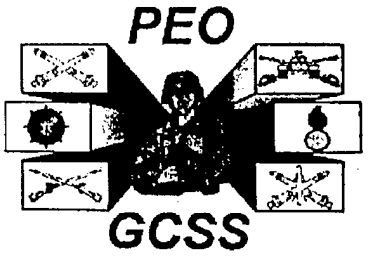


Organization & Responsibilities









Procurement & Production









Sustainment









Emerging Systems & Technologies





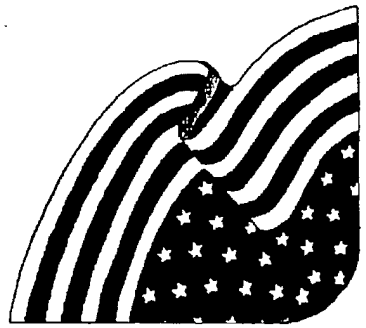
TACOM

Mobility and Firepower for America's Army



1999 Tactical Wheeled Vehicle Conference

1-2 February 1999



Jerry L. Chapin
Director
Tank Automotive Research,
Development and Engineering Center

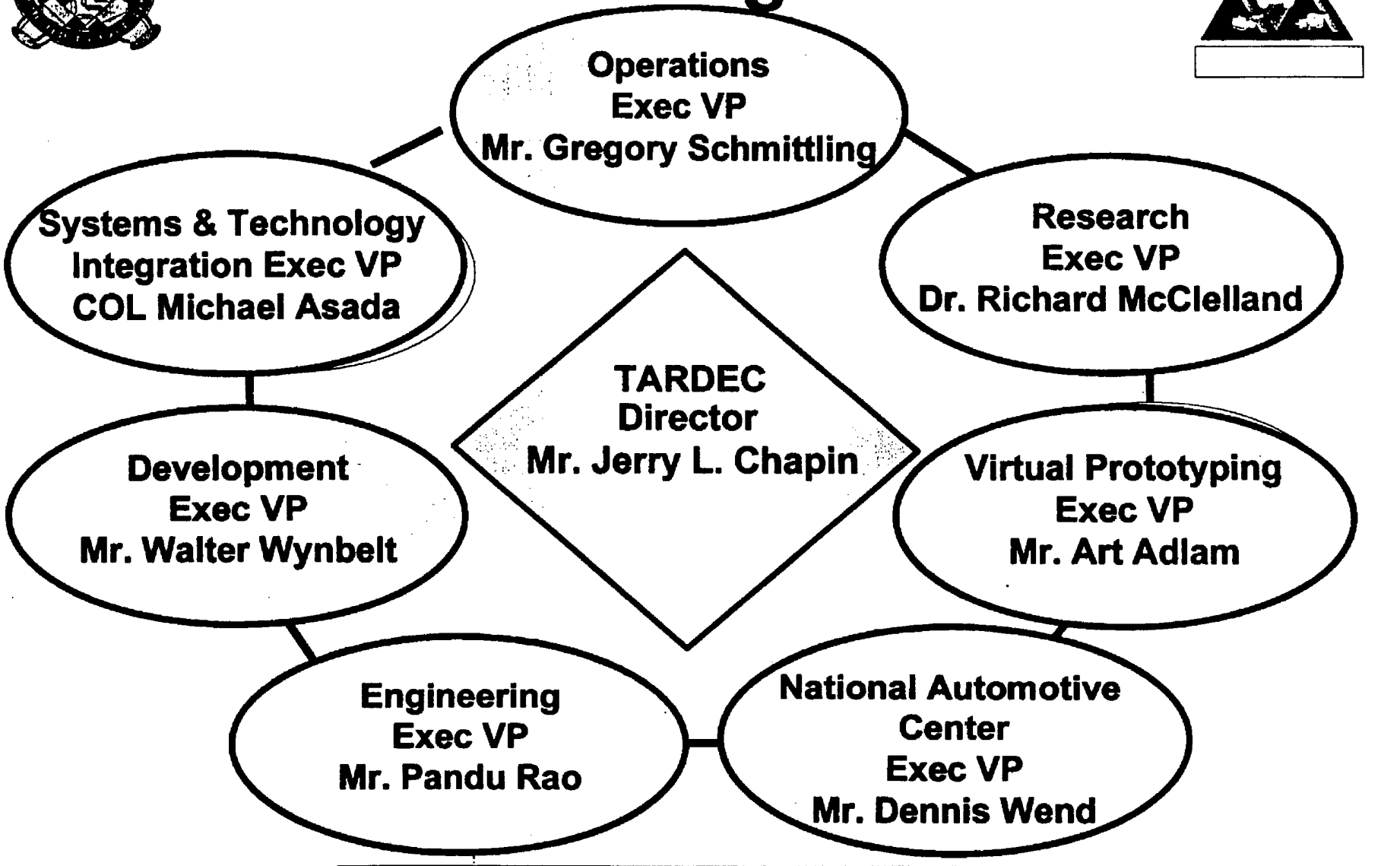
Tank-automotive & Armaments COMmand

B09

TARDEC's Organization





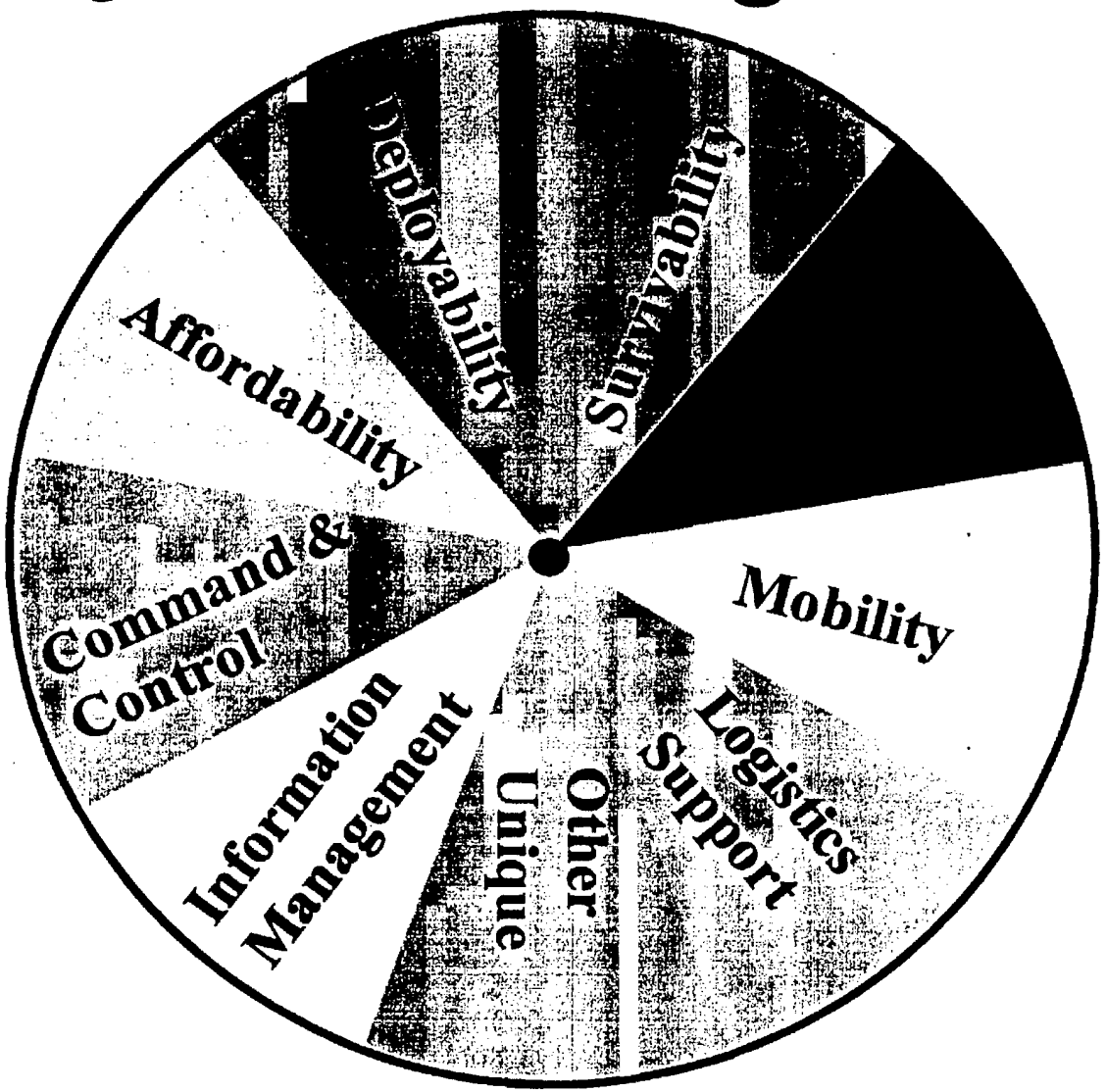


Committed to Excellence



Committed to Excellence

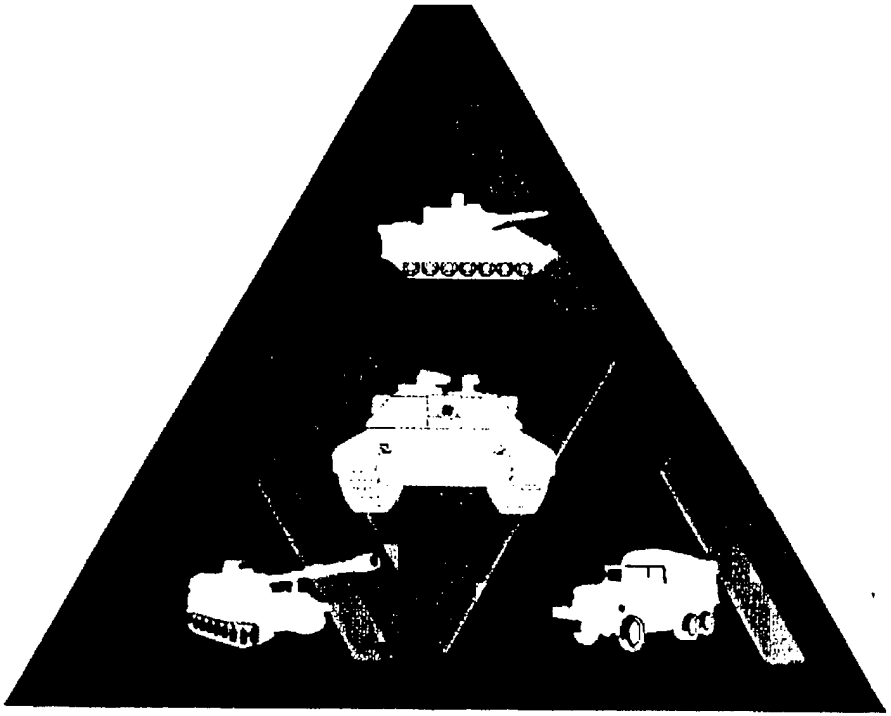
System's Integration



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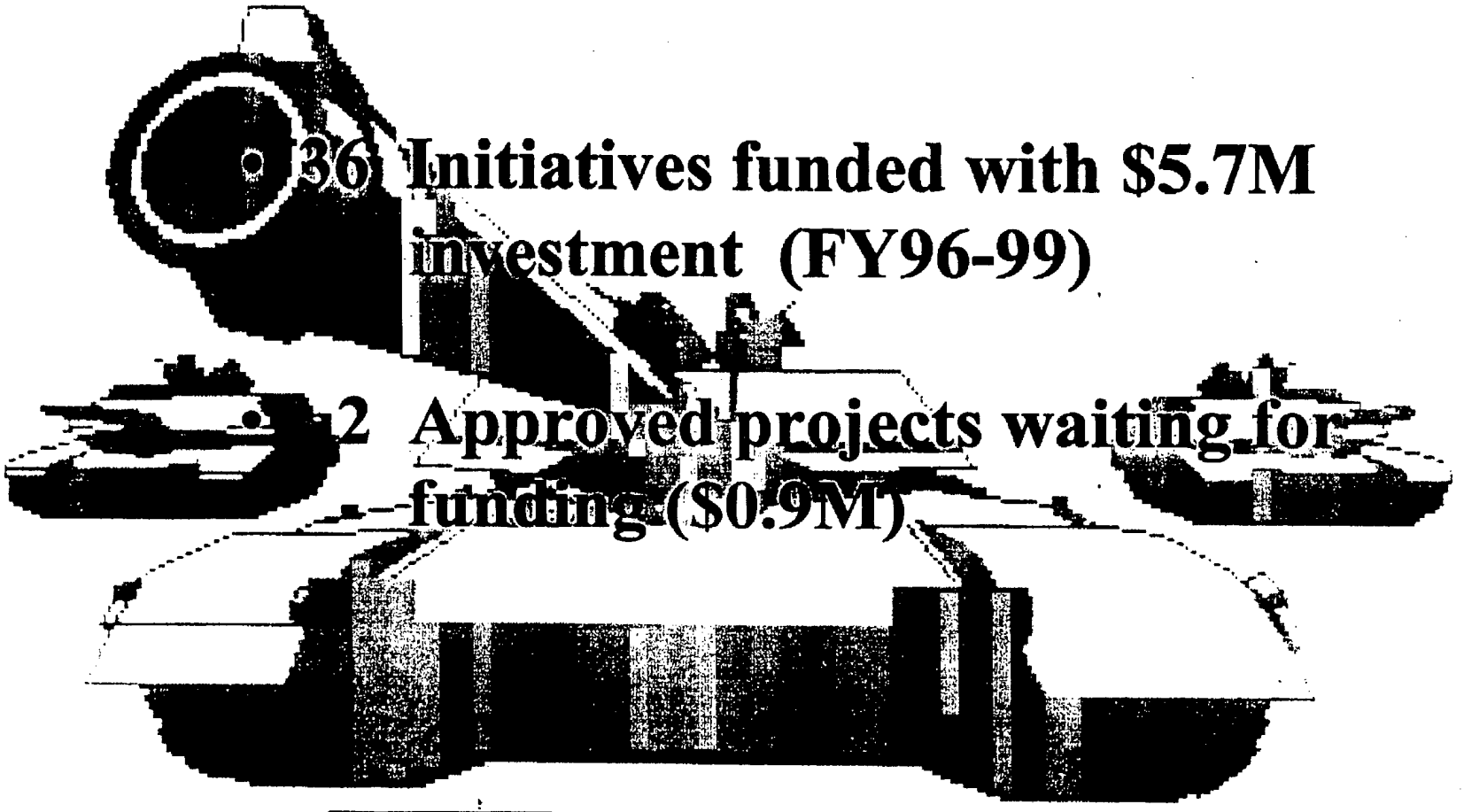


TARDEC

Operation and Support Cost Reduction (OSCR)

Committed to Excellence

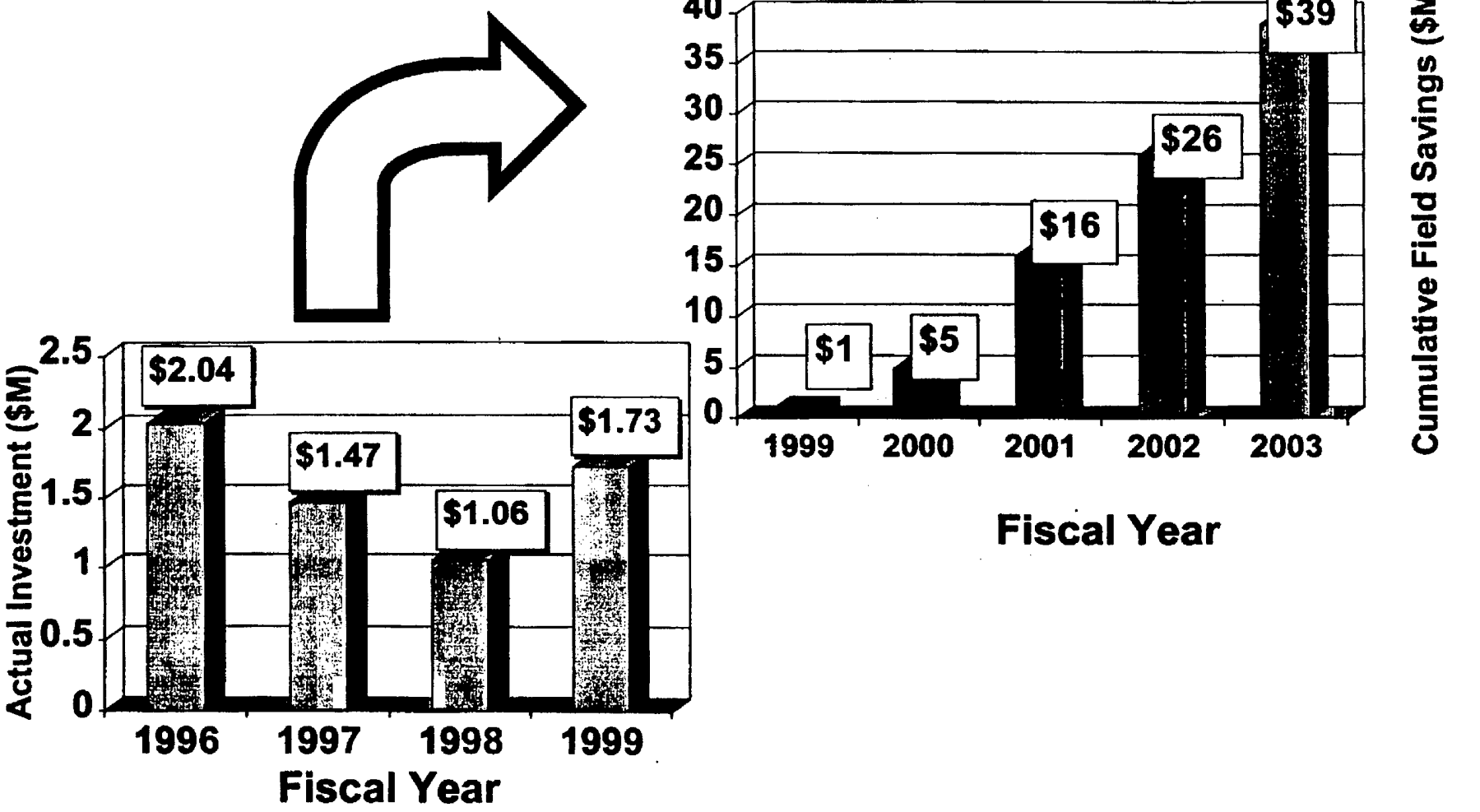
TACOM's SMA-OSCR Project/Funding Summary



- 36 Initiatives funded with $5.7M investment (FY96-99)
- 2 Approved projects waiting for funding ($0.9M)

TACOM OSCR PROGRAM

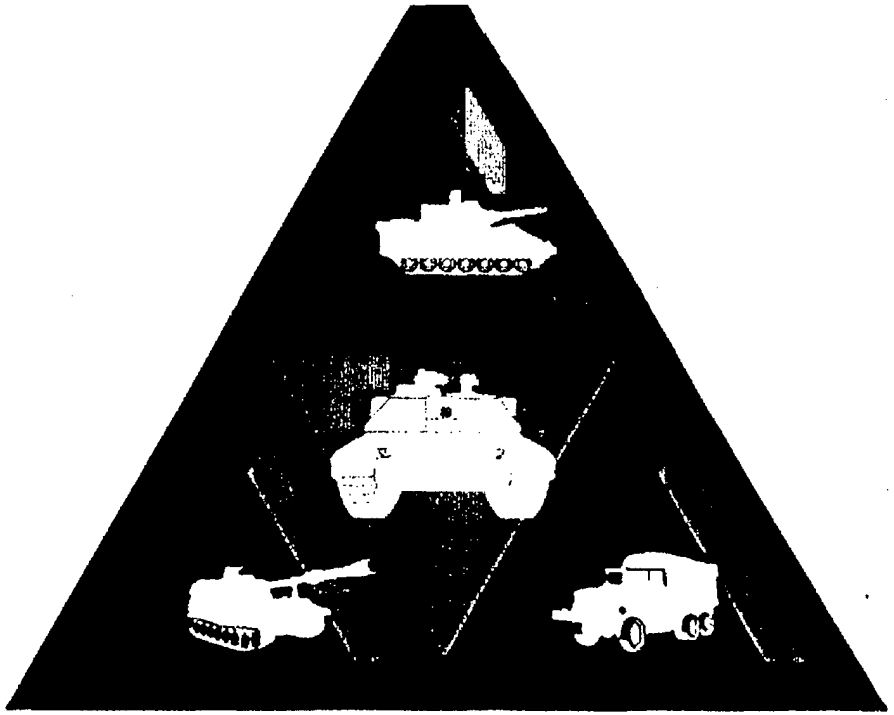
INVESTMENT vs. SAVINGS



Committed to Excellence







TARDEC

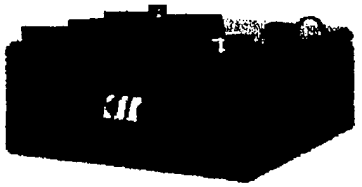
Batteries

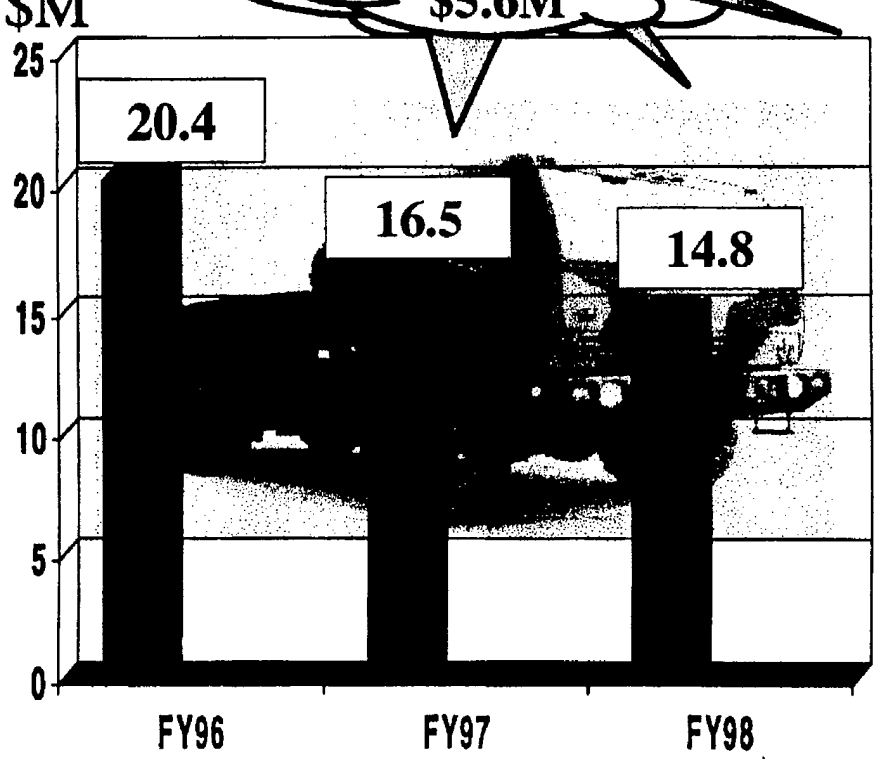
Committed to Excellence

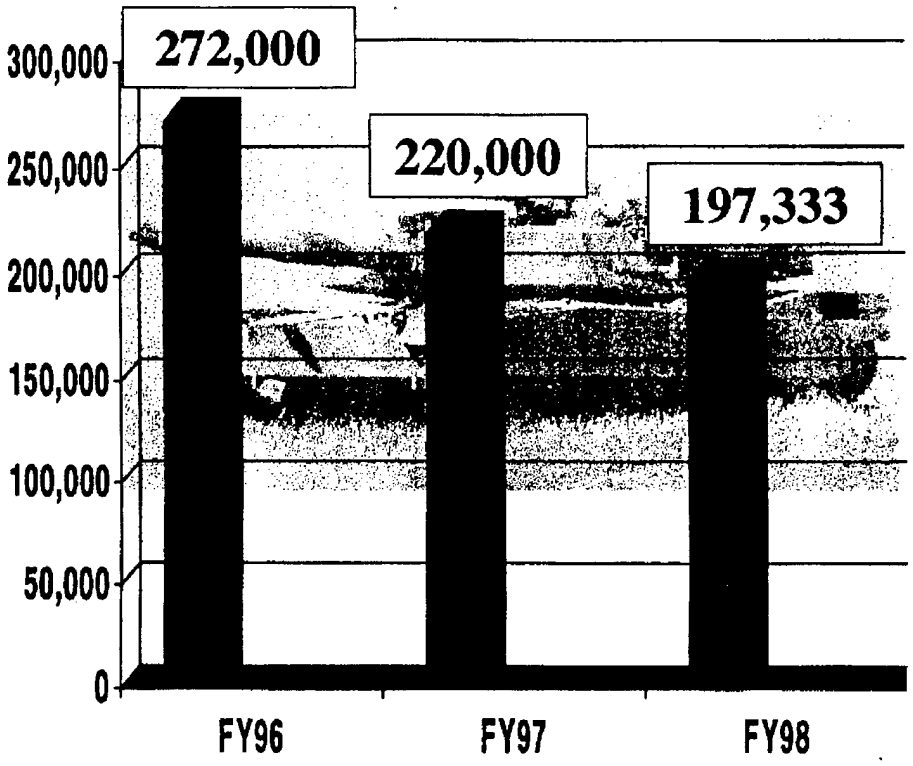
Vehicle Battery Consumption



FY 96-98
Cumulative Savings
$5.6M

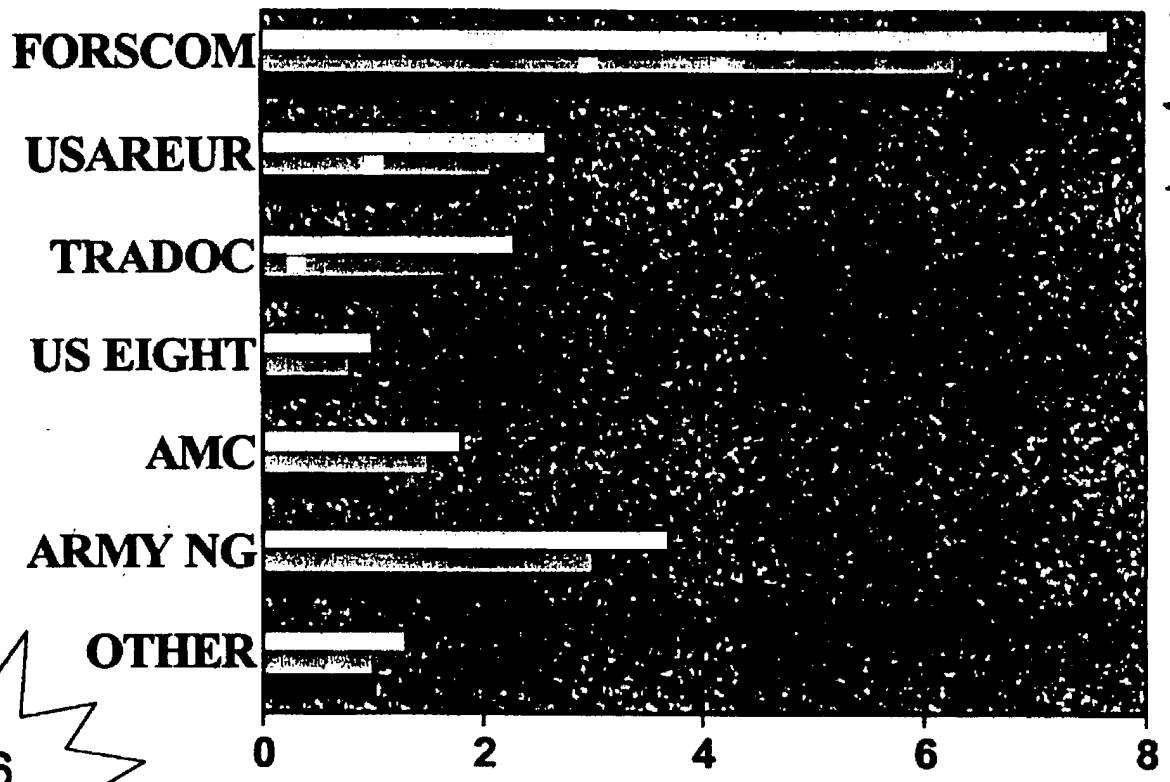






Vehicle Battery Consumption

($M)



FY 97 $16.5M

FY 96 $20.4M

FY 98 $14.8M

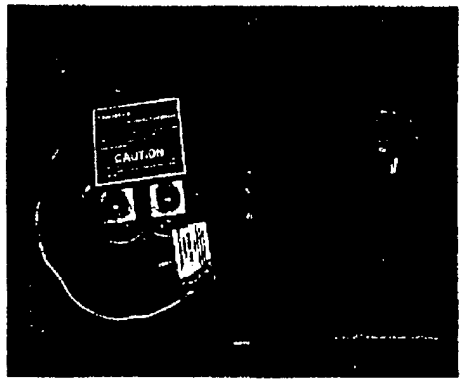
Cumulative Cost Avoidance $5.6M

Committed to Excellence

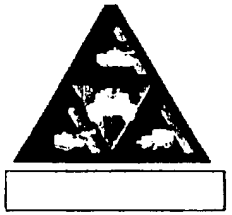
TACOM's Battery Management Program

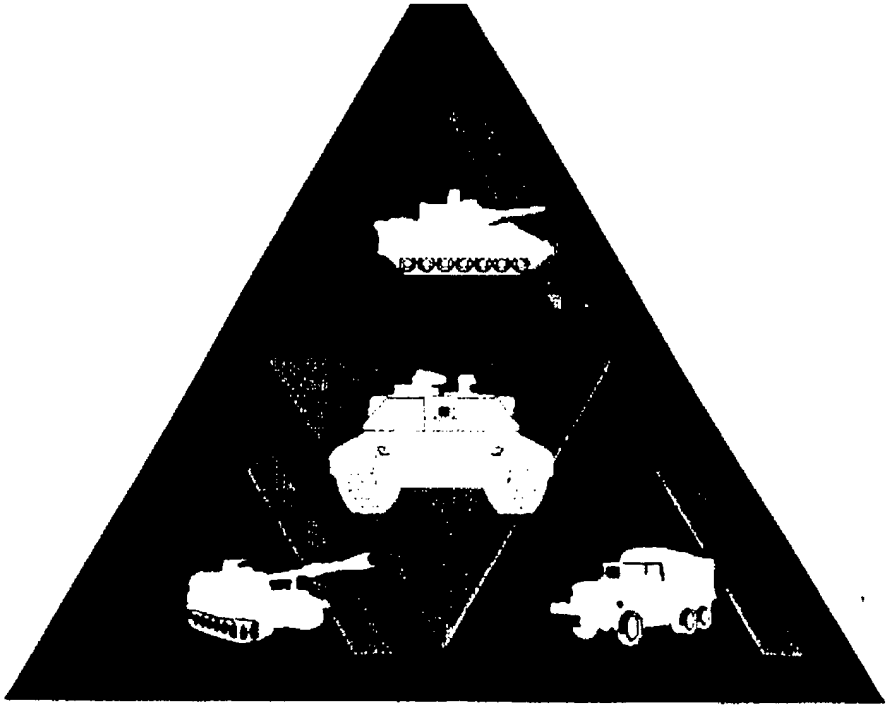
- Awareness
  - Maintenance
  - Equipment
  - Recovery
- Advanced Technology
  - Current
    - -- Solar Panels
    - -- Maintenance Free Batteries
    - -- Battery Maintainers/Chargers
  - Future
    - -- Smart Batteries
    - -- Ultra Capacitors
    - -- Advanced Battery Design
    - -- Fuel Cells











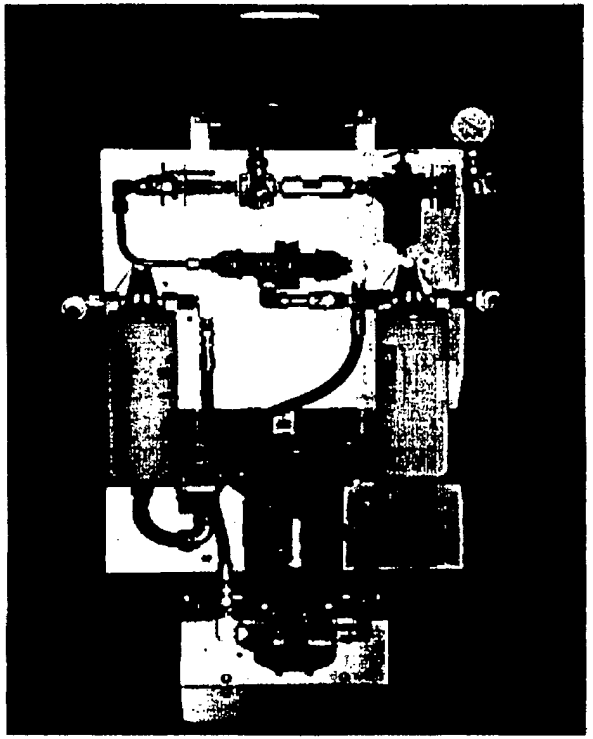
TARDEC

Waste Oil Reutilization

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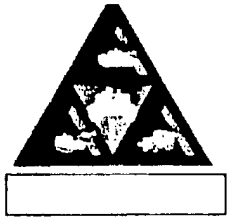
Waste Engine Oil Reutilization

- ***Need:*** Reduce military costs associated with used/waste oil.
- ***Objective:*** Develop environmentally friendly, low cost used engine oil disposal system that recovers used oil energy for vehicle use (with savings of one gallon of used oil recovered equals one gallon of JP-8 saved).
- ***Concept:*** Blend proportioned amounts of used vehicle crankcase oil and JP-8 fuel at regular oil change intervals, returning mixture to vehicle fuel tank.



- ***Technology:*** Filtration/blending system
- ***Key Points:***
  - Will meet EPA emission standards.
  - No degradation of vehicle components or performance.

Waste Engine Oil Reutilization



- **Test Results:**

  – Emissions test results at Southwest Research Institute fell below EPA ceilings on HMMWV and DD series 60 engines.

  – Durability test results at TARDEC Fuels and Lubricants Research Facility showed little or no performance degradation in 6.2L and 6V53T engines.

  – 6 month field demo at National Training Center, Ft Irwin, CA completed without any degradation of vehicle performance

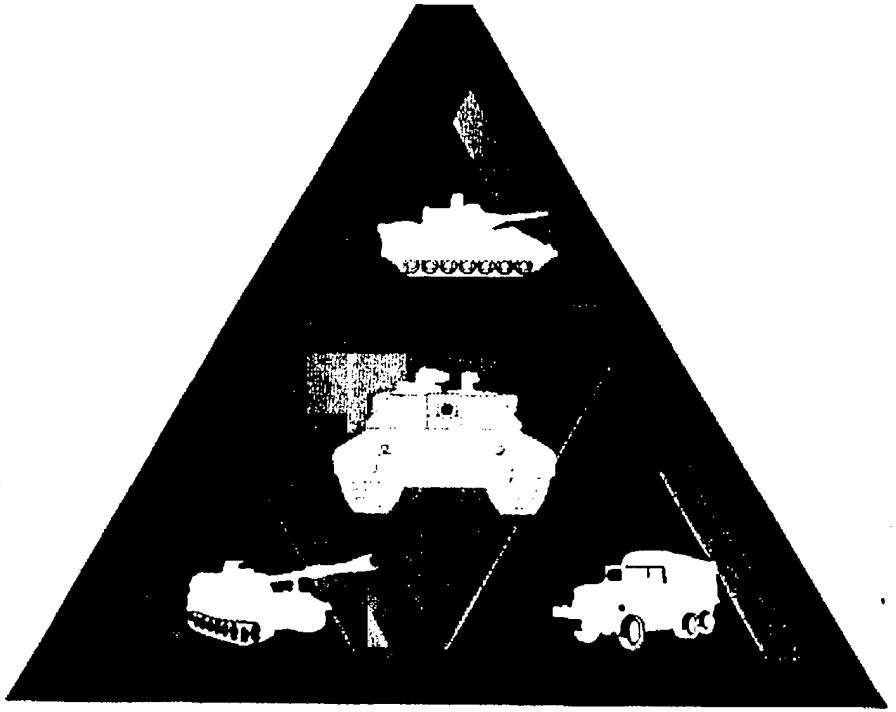
- **Current Status:**

  – Two (2) Blenders are being provided to each of the following: National Training Center (NTC) - Fort Irwin; CA, Fort Polk, LA and; Fort Lewis, WA.

  – Blenders are to be provided to the Soldiers/Users for evaluation and feedback.







TARDEC

21st Century Truck

Committed to Excellence

21st Century Truck Initiative

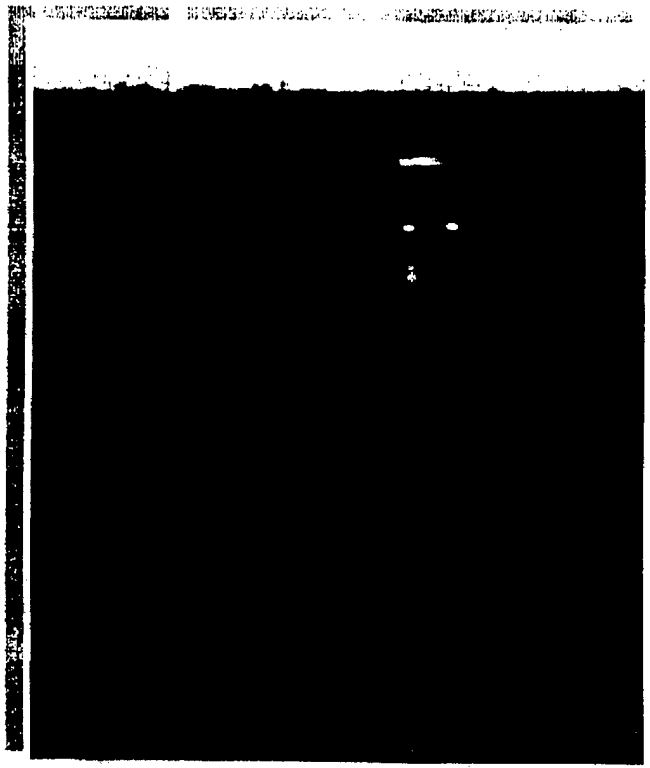
Government/Industry Partnership

DOD

DOE

DOT

EPA



Truck Mfrs

Powertrain Mfrs

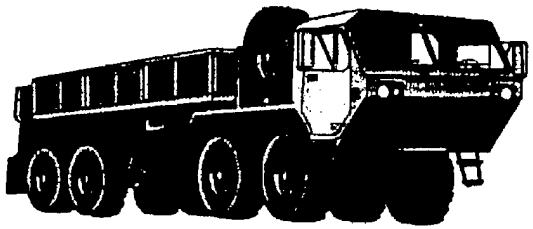
Academia

Committed to Excellence

21st Century Truck Initiative

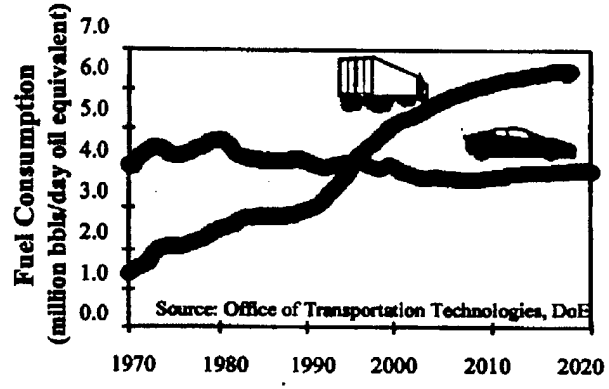
Trucks are Vital to the Army and to the Country

Trucks Provide the Logistical Backbone to the Army



Fuel constitutes 70% of bulk tonnage needed to sustain a military force on the battlefield. This equates to about 600,000 gallons per day. -Fuel Efficient AAN Task Force

Trucks Account for Over 75% of the Nation's Freight Business



Light, Medium, and Heavy Trucks burn more fuel than cars

Army After Next Goal:

"...75% Reduction in Fuel Requirements for a Deployed Force..."

21st Century Truck Initiative

Goals







- **Economic "leap-ahead" vehicle**
  - Increase fuel efficiency
  - Reduce cost of operation
  - Increase power generation performance
- **Environmentally friendly vehicle**
  - Reduce emissions
  - Reduce damage to infrastructure
- **"Smart" truck for safety and security**
  - Integrate new Vetronics and data bus technology
  - Develop user friendly information and navigation to increase driver awareness/alertness



21st Century Truck Initiative



NAC Programs

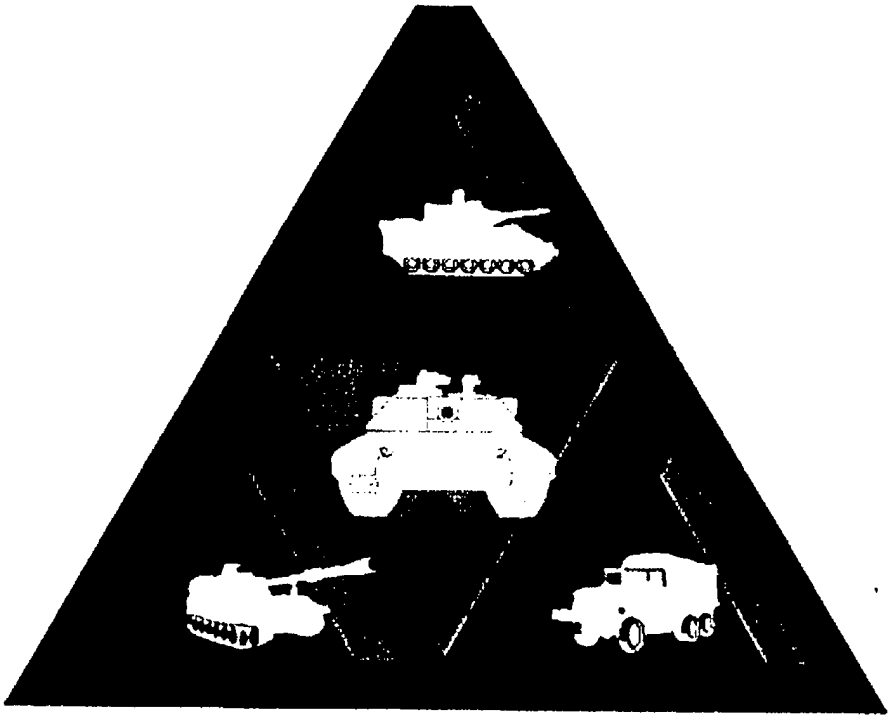
- **Optimized Motor and Motor Controller** ***(ISE Research)***
- **Soft - Switching Inverter** ***(General Motors)***
- **Parallel Hybrid Electric Class 8 Linehaul Tractor** ***(Radian)***
- **Series Hybrid Electric FMTV** ***(Lockheed Martin Control Systems)***
- **Diesel Reformer Fuel Cell Hybrid** ***(Sunline Services Group)***

Other Initiatives

- **Hybrid Electric HMMWV** ***(PEI)***
- **Hybrid Electric M113** ***(UDLP)***
- **Hybrid Electric BFVS** ***(UDLP)***





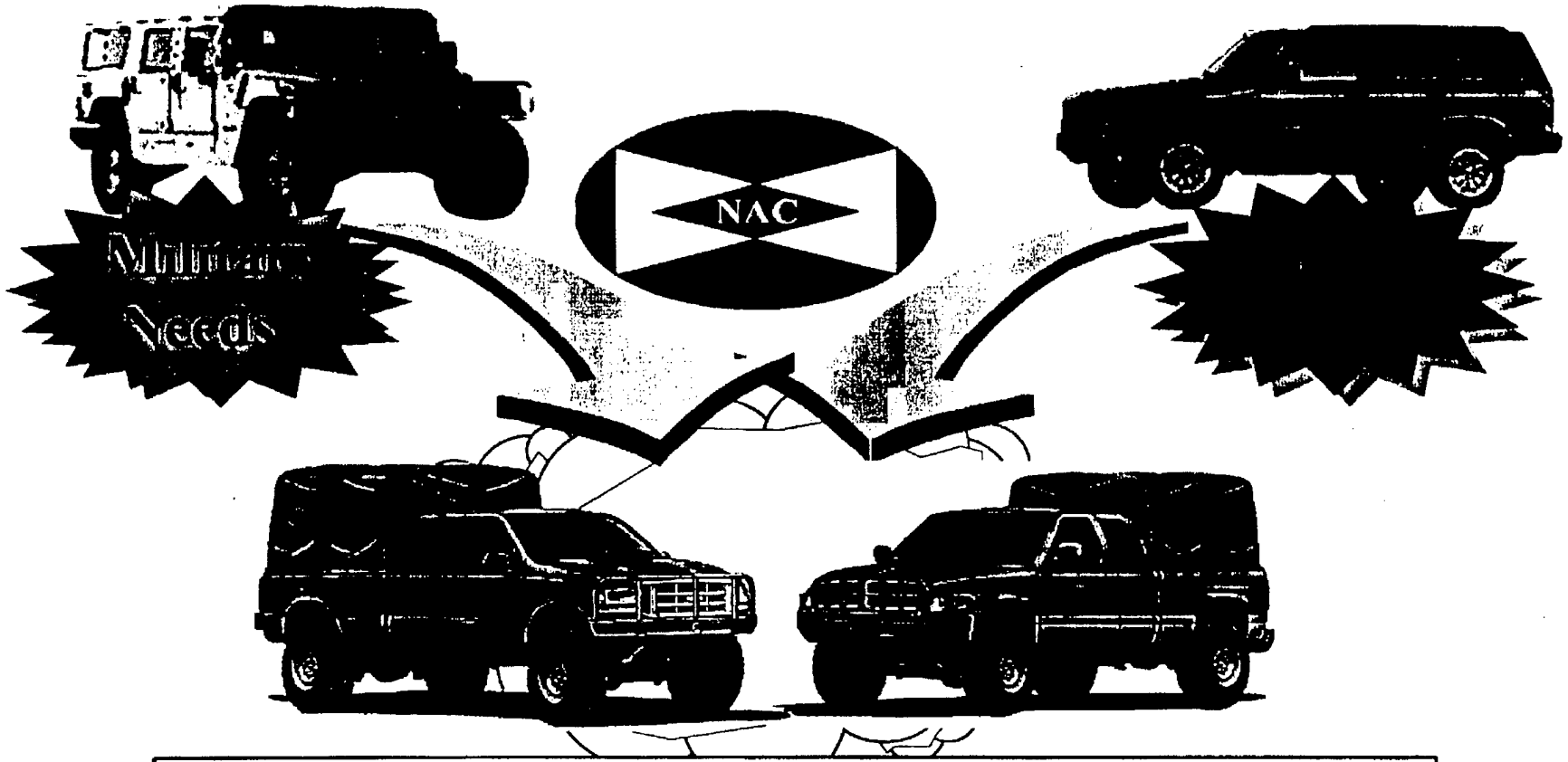


TARDEC

Commercially Based Tactical Truck (COMBATT)

Committed to Excellence

Commercially Based Tactical Truck
(COMBATT)



HMMWV Requirements for the 21st Century

Committed to Excellence

Two Part Program



1. **Modify Ford F350 and Dodge Ram Trucks**
   - **WHY- Enhance performance in military environment**
     - » **Increase off road mobility especially in soft soil conditions**
     - » **Increase to 4,550 lb payload**
     - » **Militarize (black out lights, camouflage paint, personal weapon mounts, tie downs/lifting eyes, antennae mounts)**
     - » **Take advantage of current electronics and enhance as needed**
2. **Modify HMMWV with New Technology**
   - **WHY - Insertion into HMMWV Remanufacture Program**
     - » **Enhance safety**
     - » **Increase reliability**
     - » **Reduce Operational and Support (O&S) costs**
     - » **Insert new electronics**

COMBATT Highlights

- **Four phase program over 2 years**
  - Requirements planning and analysis
  - Design to requirements
  - Build to design
  - Demonstration and evaluation
- **Demonstration**
  - Appropriately modified commercially based trucks can approach performance of HMMWV cargo troop carrier variant
- **Approach:**
  - Listen to the USER
  - Share engineering decisions with PM-LTV and original equipment manufacturers
  - Work with Army Testing Community (Actual and Simulated)
  - Waterways Experiment Station (Mobility)

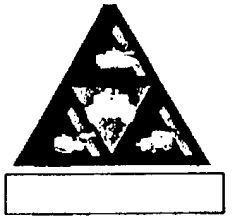






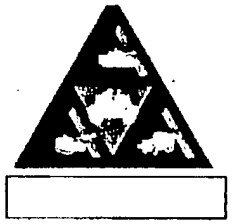
Committed to Excellence

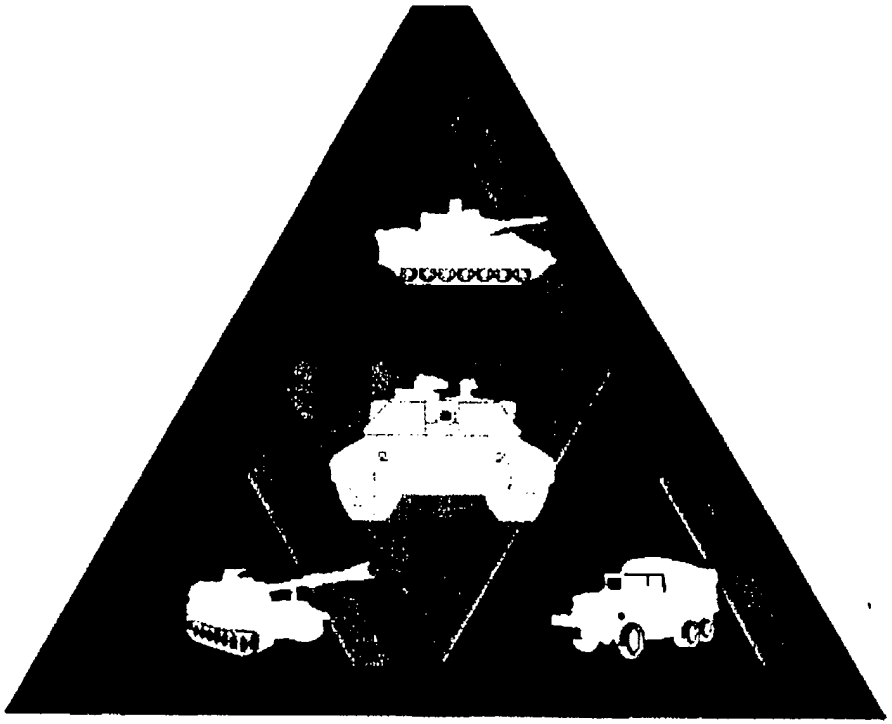
Other Customers



- **MTL Services:**
  - **Has identified potential customers from:**
    - **US Departments of Justice, Treasury, Interior, Transportation, State and Local Law Enforcement**
    - **Germany and Great Britain**
- **Could influence production numbers/costs**
- **Informal working group of Federal agencies**
  - **TACOM will chair**
  - **May develop shared performance goals**
  - **May share costs**







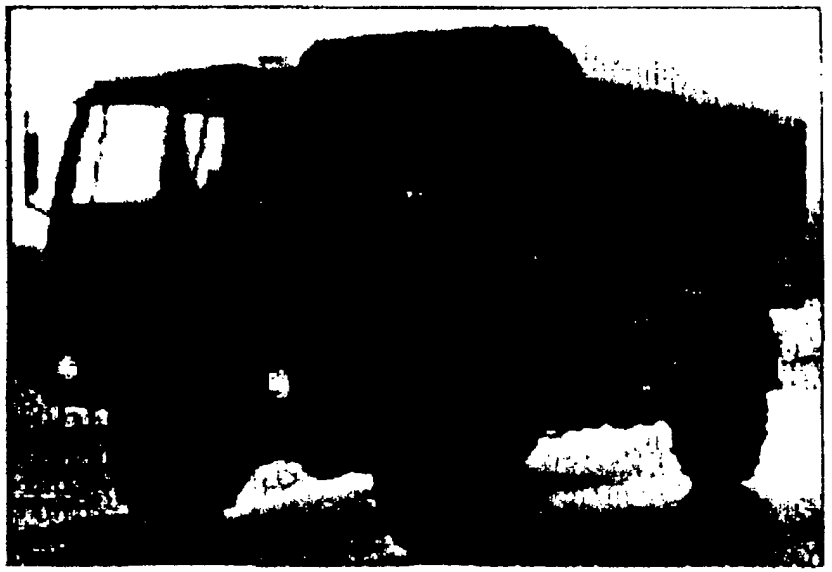
TARDEC

Hybrid Electric Vehicles

Committed to Excellence

Series Hybrid FMTV

- Need: FY99 AAN Technology short list includes hybrid power systems, fuel efficiency. AAN goal is to reduce fuel requirements 75% by 2025



- Objective: Demonstrate greatly improved FMTV fuel economy and performance using commercial hybrid electric drive system for medium vehicles.

Series Hybrid FMTV

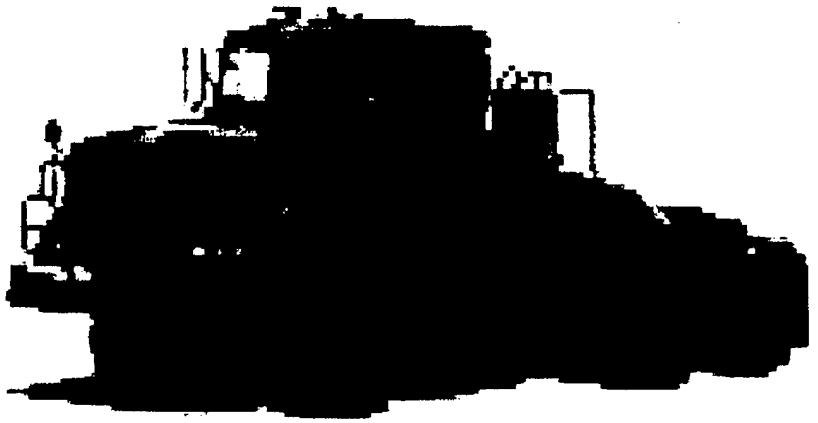


• Description: Lockheed-Martin (LMCS) and Stewart and Stevenson will apply LMCS' commercial hybrid drive system for medium trucks (HybriDrive) to an M1078 Light Tactical Vehicle

• Benefits
  - Faster Acceleration
  - Improved Traction
  - Can supply mobile power
  - Fuel efficiency improved 50%
  - Reduced brake, axle and differential wear

Parallel Hybrid Line Haul Truck

- Need: FY99 AAN Technology short list includes hybrid power systems, fuel efficiency. AAN goal is to reduce fuel requirements 75% by 2025



- Objective: Demonstrate greatly improved M915 fuel economy and performance using parallel hybrid electric drive system. Leverage off commercial Mack Truck application.

Parallel Hybrid Line Haul Truck

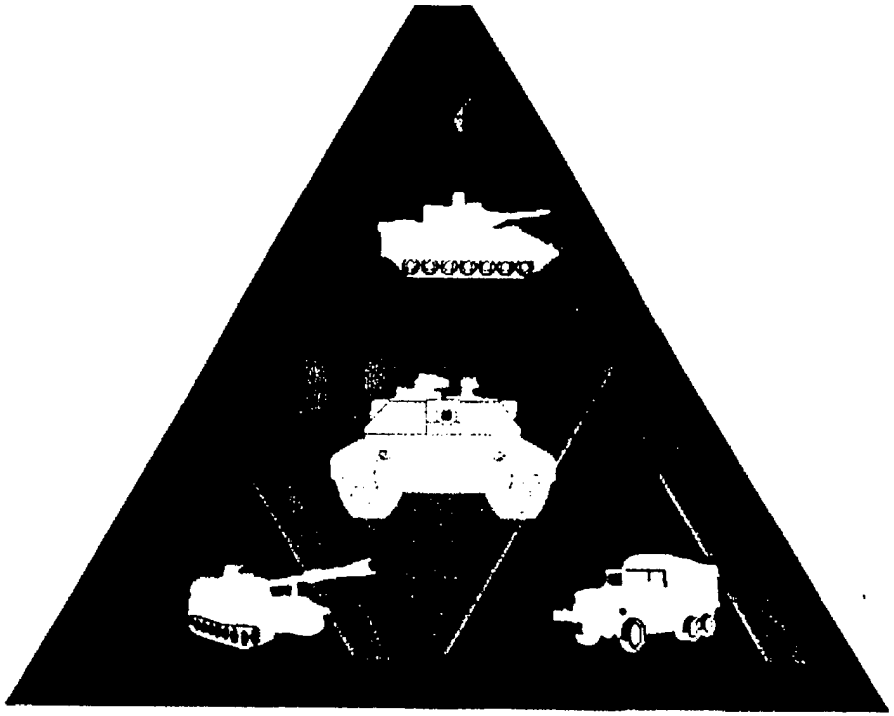


• Description: RADIAN, Inc., with Lockheed Martin (LMCS)and Mack Truck, will develop a parallel hybrid electric drive train for a Mack CL series line haul truck chassis. The CL chassis is similar to the M915 Truck Tractor.

• Benefits
  - Faster Acceleration
  - Can supply mobile power
  - Fuel efficiency improved 50%
  - Reduced brake, axle and differential wear
  - Gradeability improved to meet M915 requirements in all climates





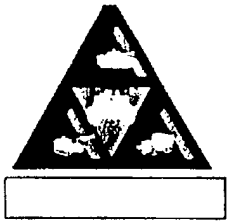


TARDEC

Crew Protection

Committed to Excellence

Crew Protection Kits for Operation Joint Endeavor



Challenge:

Provide an immediate response to the requirement to protect Tactical Wheeled Vehicles against over 6 million mines & small arms fire.

Requirement:

Protect the vehicle crews from:

1. Anti-Tank Blast Mines (12 lb. TNT)
2. Small Arms (infantry rifle) fire
3. Anti-personnel fragmenting mines

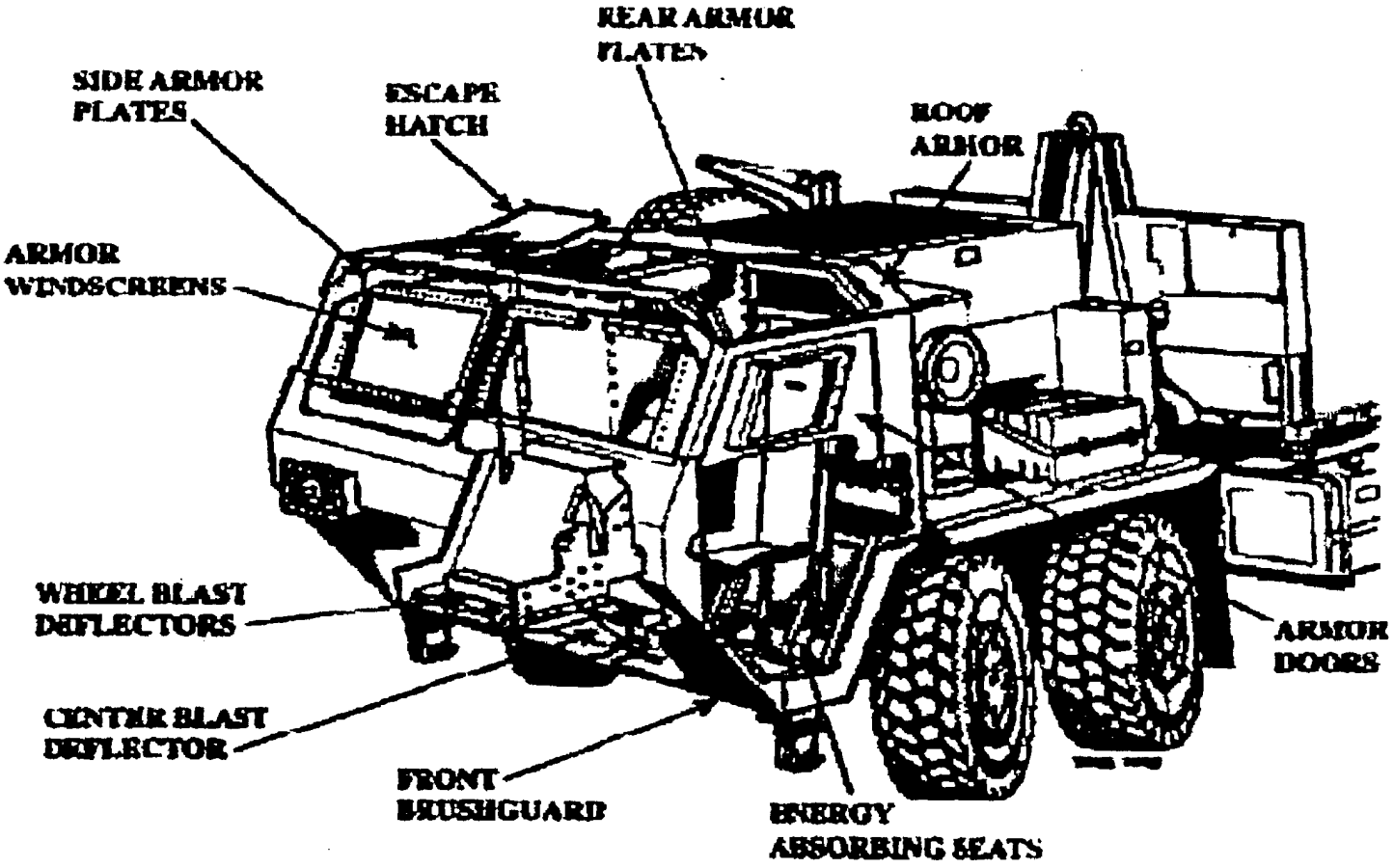
Response:

	5 Ton	PLS	HEMTT*
# of kits Produced	165	54	186
Kit Weight Added:	1,860 lbs	2,006 lbs	2,053 lbs
Per-unit Production Costs:	$34,500	$45,405	$36,000
Per-unit Installation Time:	65 manhours	35 manhours	40 manhours

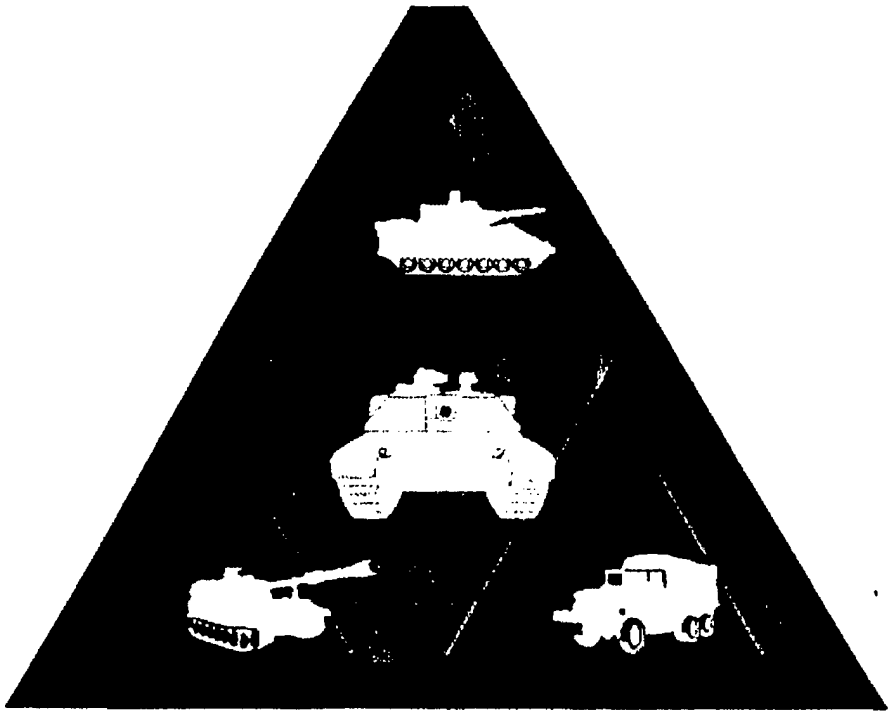
*Industry design and fabrication.

Committed to Excellence

PLS CREW PROTECTION KIT



Committed to Excellence



TARDEC

Corrosion

Committed to Excellence

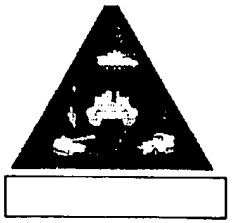
Current Status of the Fleet - an overview

- 800 Thousand Ground Vehicles in Army, NG and AR Units
- Positioned in a Variety of Locations and Various Environments, Long Term Storage (WRM), Active etc.
- Investment in 5 Ton Truck is ~ $80 to 120 K (new)
- Corrosion Maintenance Costs $800 to 1200/year/5T vehicle
- Cost to Replace One 5 Ton Cab is ~ $17 K
- Total Cost to the Army is ~ $2 B / Year !!!! (Battelle Study)

Accomplishments To Date

- Army's First ACT on an Entire Vehicle
  - HMMWV - at TRC in Ohio (80's)
  - FMTV - on going - at TRC and APG
- Cape Canaveral Marine Exposure Facility
  - JEEP Bodies and Door of 5 Ton Truck
    - Coatings and Repair Procedures
    - Construction, Design and Adv. Mfg. Techniques
- Field Evaluation of COTS:
  - Zinc Rich Primers and Thermal Spray
  - Corrosion Inhibiting Coatings: CarWell, Z-Tech etc.
  - Chip and Abrasion Resistant Coatings

Accomplishments To Date - continued



- Composites
  - Driveshafts
  - HMMWV Hood
- Non - Ferrous Metals
  - Hatch Covers for Bradley and M-1 parts
  - Base Plate for 80 mm Mortar
  - FreightLiner M-915 Tractor has an All Aluminum Model
  - 5 Ton Truck Stainless Steel Cab



U.S. Army Tank-automotive & Armaments Command



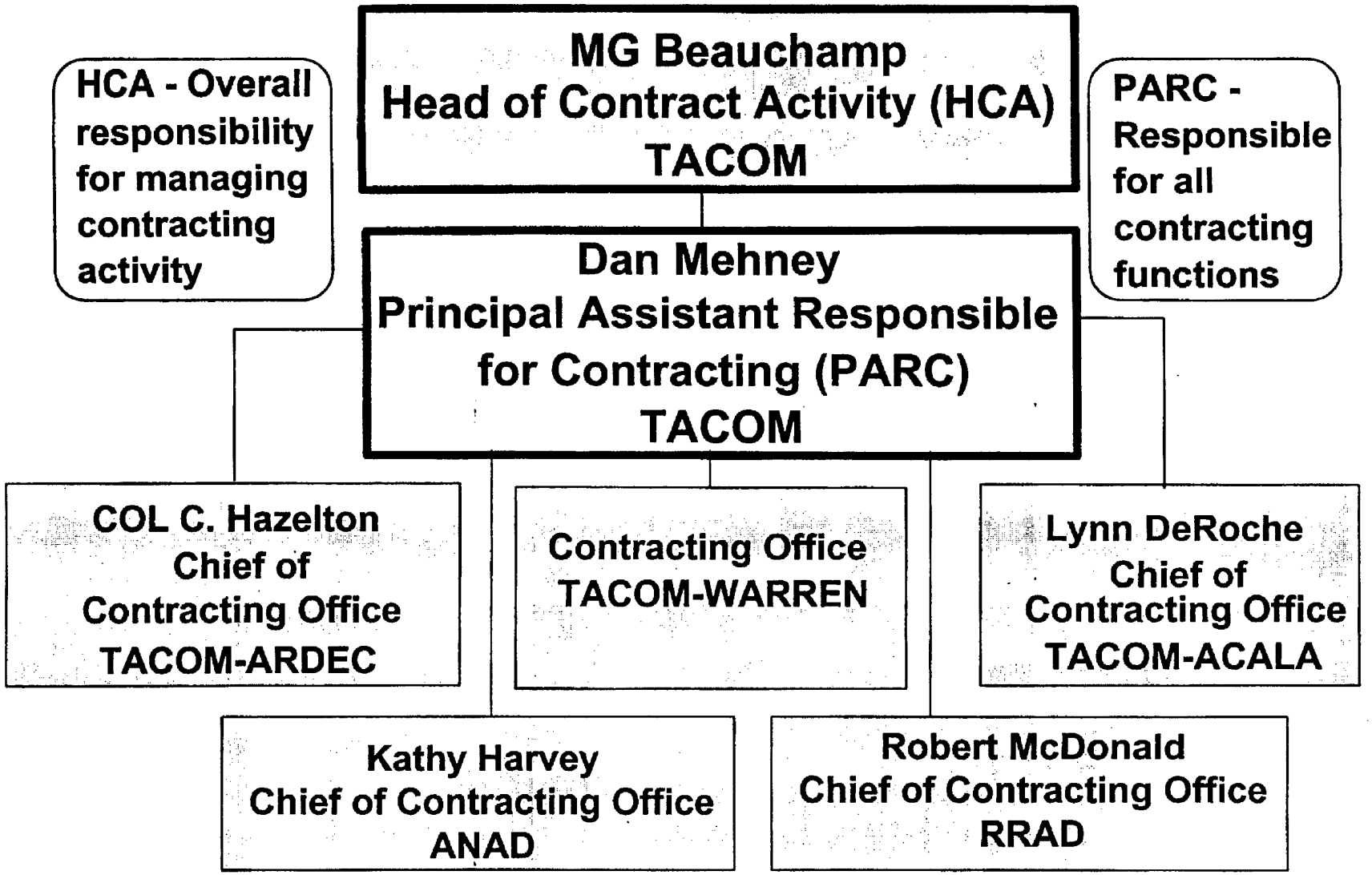
Acquisition Center Overview

NDIA Tactical Wheeled Vehicle Conference

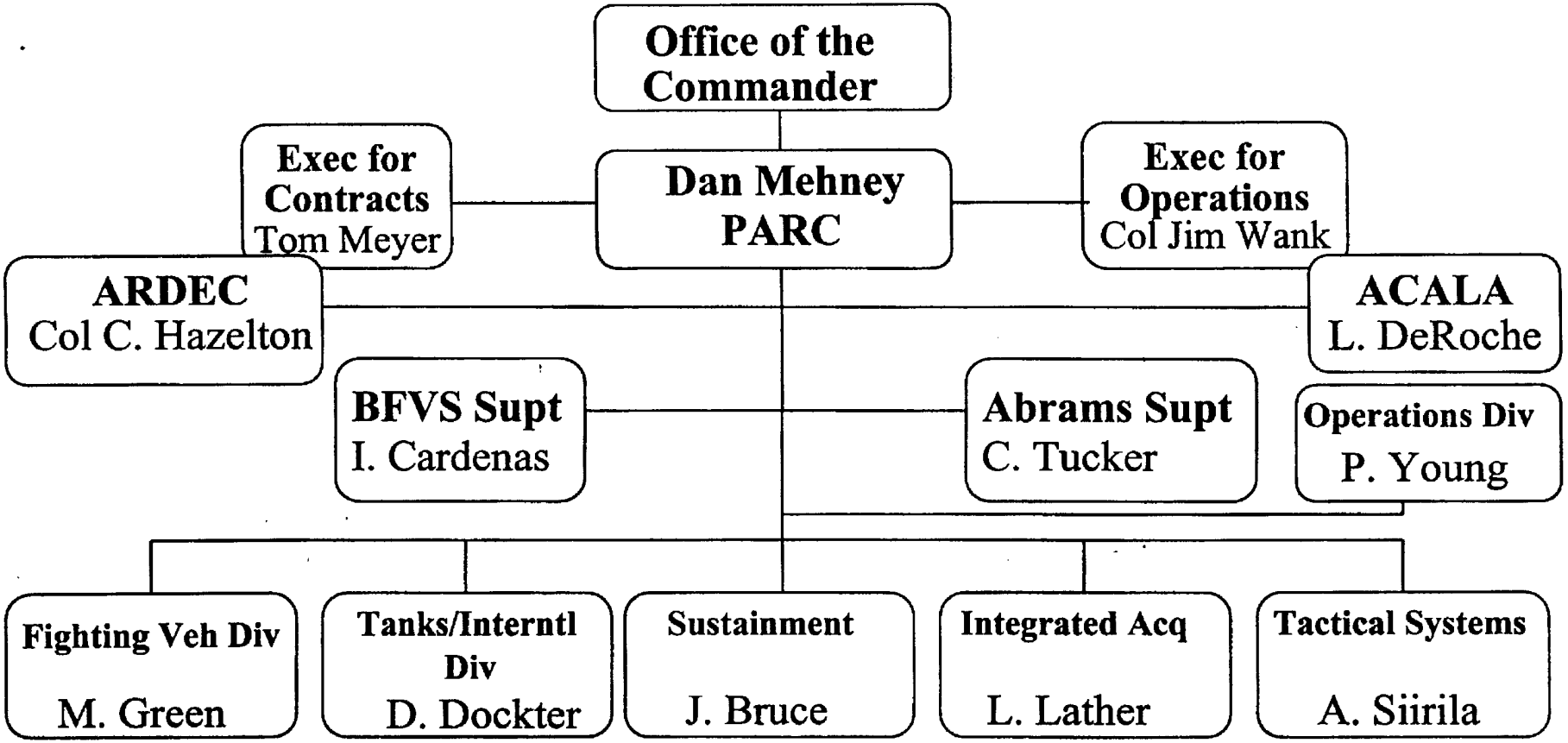
1-2 February 1999

Daniel G. Mehney
Director, Acquisition Center

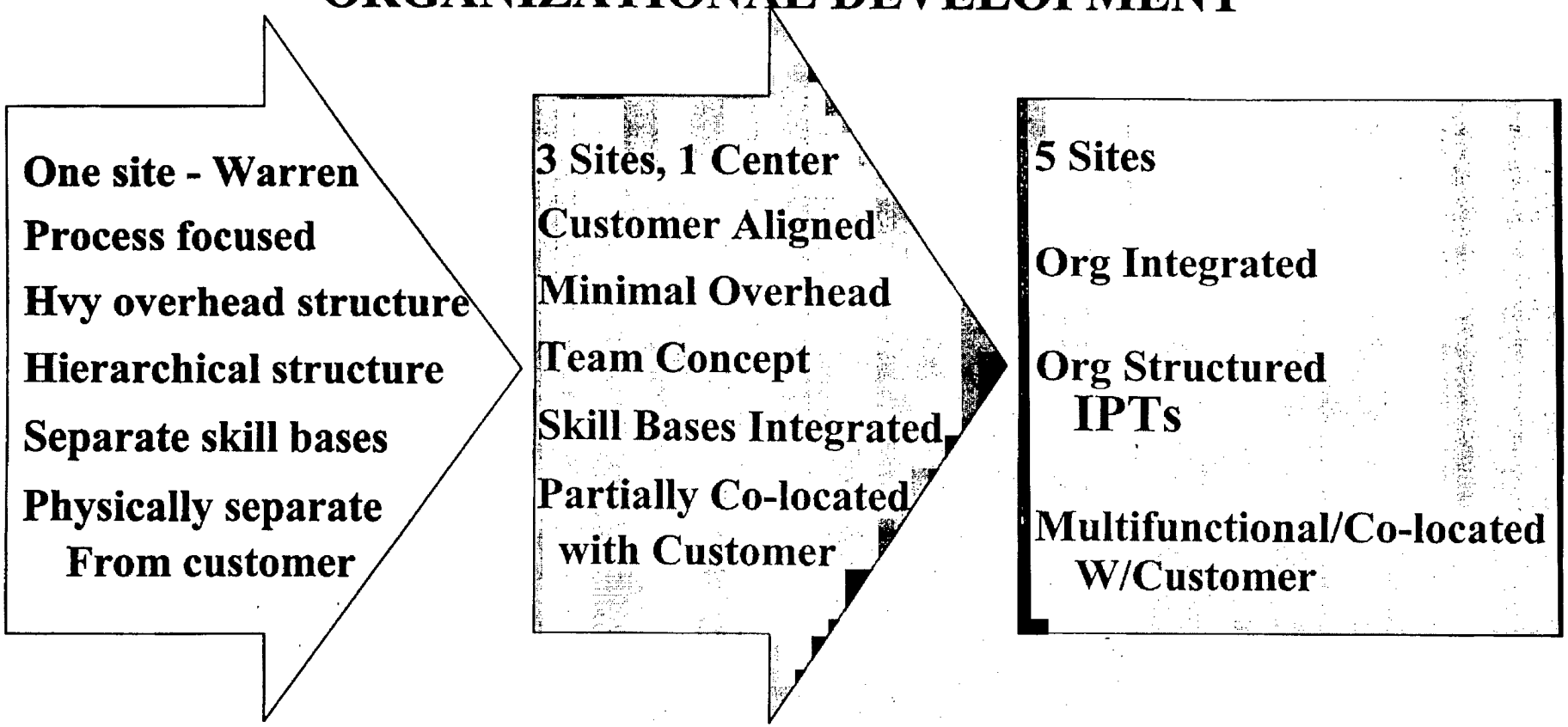
U.S. Army Tank-automotive & Armaments COMmand
TACOM

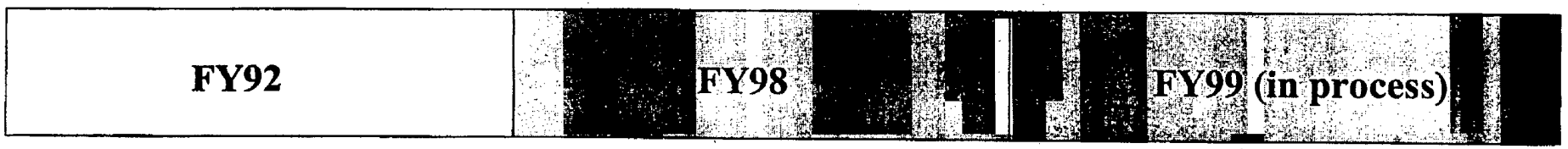


ACQUISITION CENTER ORGANIZATION



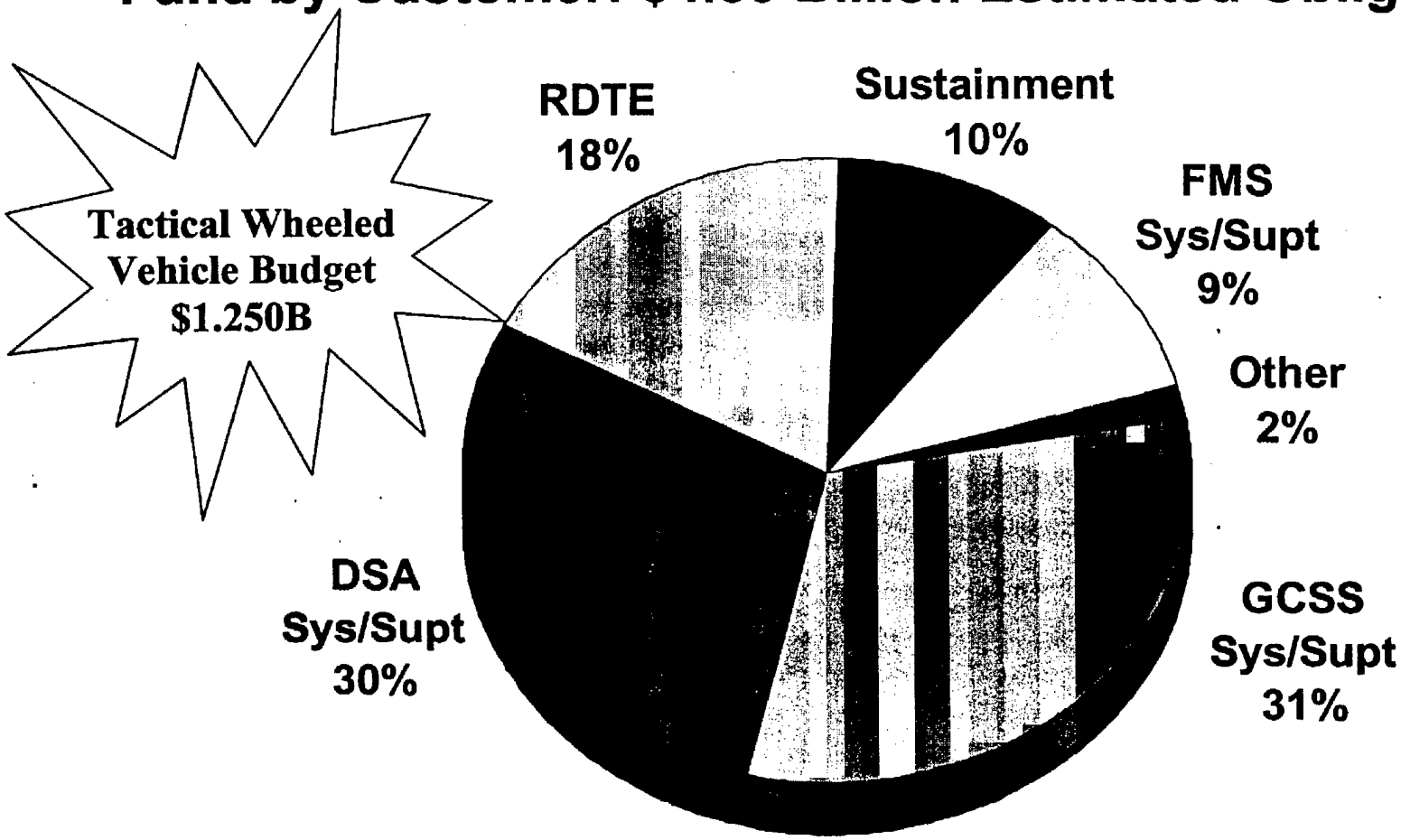
ACQUISITION CENTER ORGANIZATIONAL DEVELOPMENT





TACOM TOTAL FY99 OBLIGATION PROJECTIONS

Fund by Customer: $4.59 Billion Estimated Obligation





U.S. Army Tank-automotive & Armaments Command



Reform & Streamlining Perspective

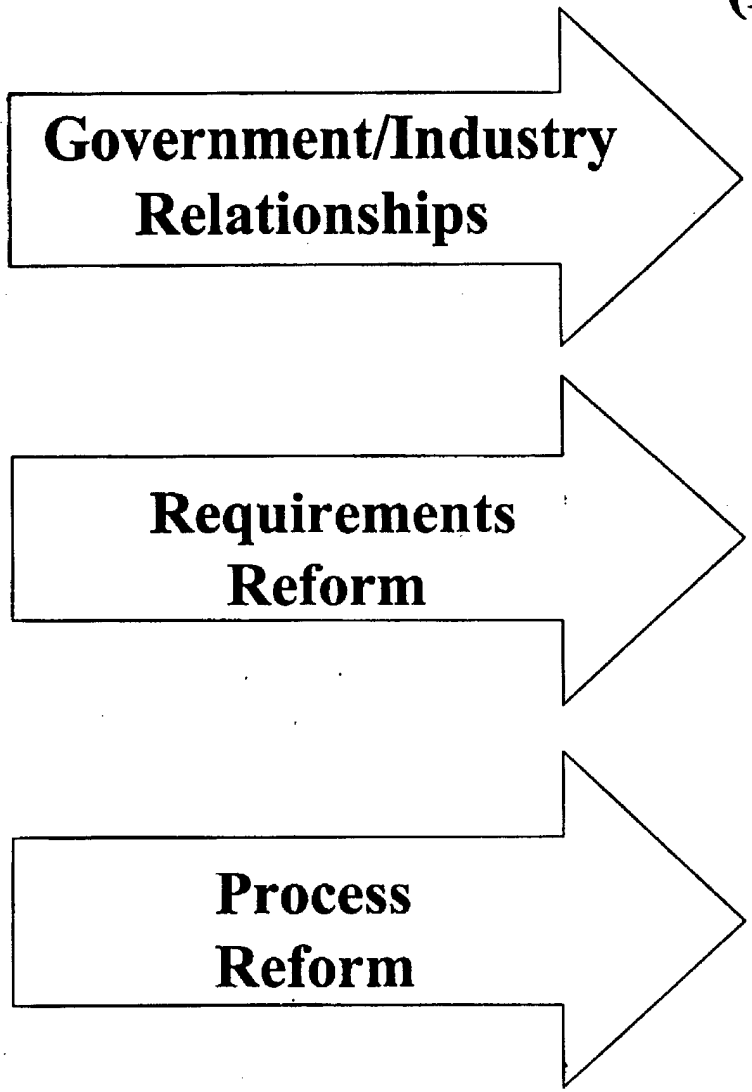
NDIA Tactical Wheeled Vehicle Conference

1-2 February 1999

Daniel G. Mehney
Director, Acquisition Center

Where We Were!

(FY92)

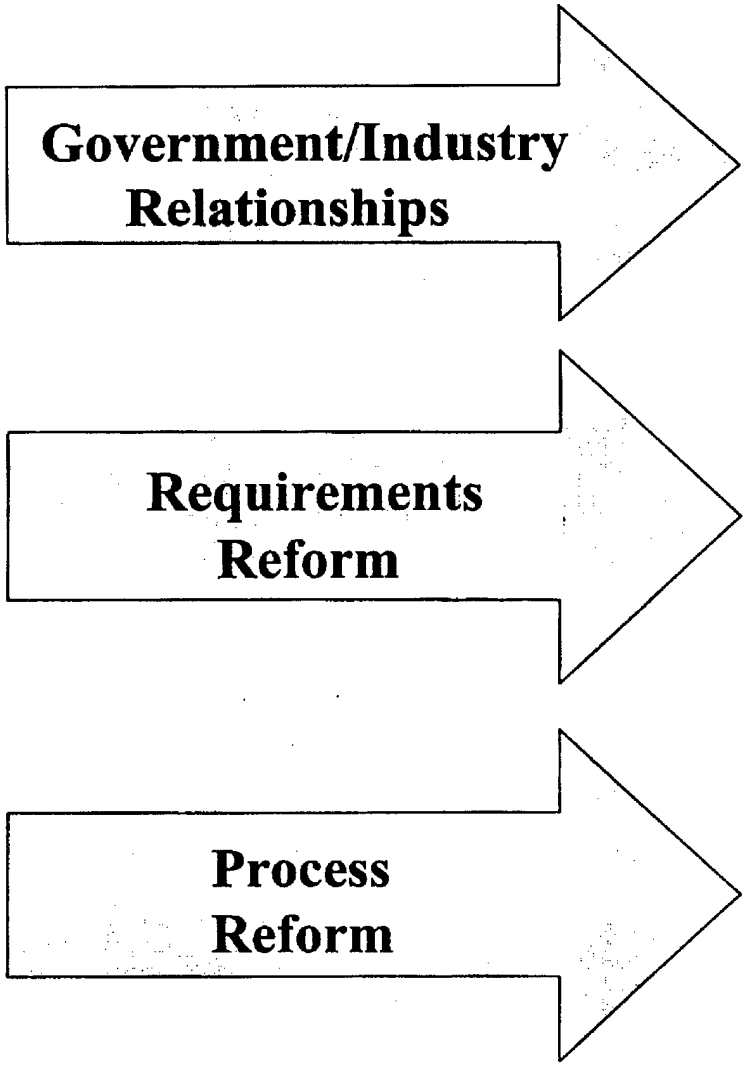


"Arms-length" Often Adversarial
Limited Industry Input
Functionally Segregated; Consecutive Processing

Design Specifications
Government Configuration Control
Extensive, Redundant Testing
Unique Processes and Products
Commercial Items The Exception

Rule Based Process
Paper Process, Drawings & Aperture Cards
Limited Imprest Fund Authority (<$50)
Low Bid Preferred Approach
Large Inventories

Where We Are!

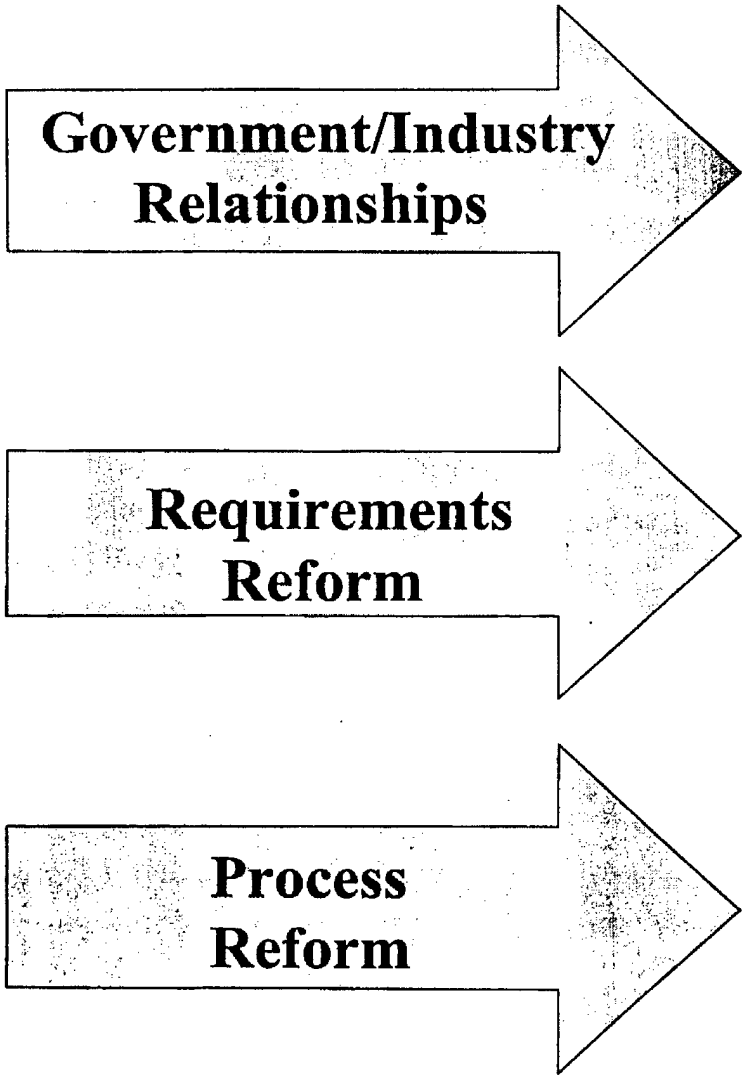


Partnering
Integrated Product Teams
Concurrency in Procurement (ALPHA Contracting)
Alternative Dispute Resolution

Performance Based Requirements
Contractor Configuration Control
Simulation in Lieu of Hard Testing
Single Process Initiative
Commercial Products & Processes

Business Based Process
Electronics/WWW/EDI
Credit Cards
Long Term Contracts
Past Performance Evaluation
Best Value
Direct Vendor Delivery

Where We're Going!



Qualified Supplier List
Leveraged Business with DCMC/ DLA & Industry
Prime Vendor
Longer Term, Fewer Contracts
Focus on Small Business Participation
Corporate Contracts

Shorter Cycle Times
Logistics Reform & Privatization
Modernization Thru Spares
Commercial Products
Focus On Reducing Cost of Ownership/Life Cycle Cost

Commercial Based Process
Electronic Contracting & Ordering
Electronic Shopping Malls/Virtual Contracting Web Site
Expand Credit Card Use
More Integrated Product Teams
Automated Best Value
Buy Response, Not Inventory

Current Acquisition Examples

Vibratory Roller

- Upfront communications
  - Draft spec released for industry comment
  - Pre-proposal conference held
  - RFP posted on the Web
- Streamlined evaluation criteria
- Used oral proposals for some areas
- Performance spec
- Negotiating manual supplementation after award using Alpha
- User to decide how much supplementation based on cost (CAIV)
- Testing only military unique requirements; relying on commercial market acceptability for most requirements

Current Acquisition Examples
MTVR

- Performance Spec - only 11 MIL-SPECS or MIL-STDS
- Shared design/perf simulation capabilities w/contractors
- Used modeling/simulation to eval tech areas not tested
- Both draft and final Phase II RFP posted to web site
- Oral presentations used for portions of Phase II proposal
- Electronic data deliverables
- Partnering agreement anticipated

Potential/Pending/Recent Regulatory/ Statutory Changes

- **Price based acquisition - DOD study group formed**
- **Price reasonableness - FY99 Authorization Act requires supporting data from industry**
- **Corporate Restructuring - Proposed rule published to capture savings**
- **Non-conforming mat'l/conditional acceptance - Proposed FAR rule requires PCO to withhold funds**
- **Depot maintenance competition - FY99 Appropriations Act requires comparable cost basis; excludes A-76 requirements**
- **FMS Procedure Reform - ongoing DOD process action team**



U.S. Army Tank-automotive & Armaments Command



Industrial Base

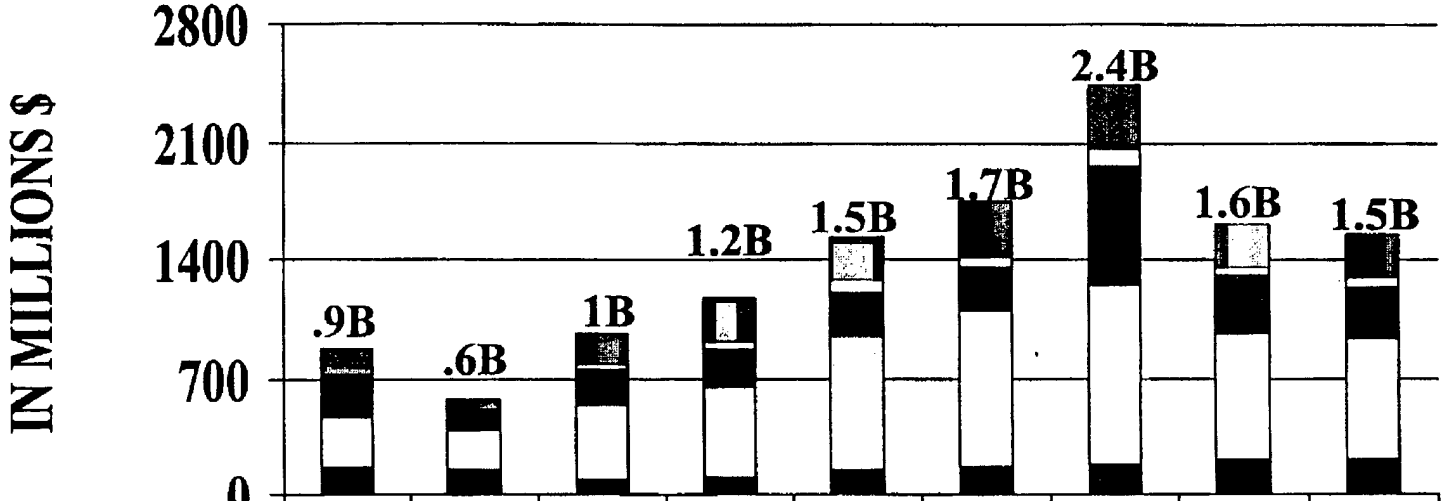
NDIA Tactical Wheeled Vehicle Conference

1-2 February 1999

Daniel G. Mehney
Director, Acquisition Center

TACTICAL WHEELED VEHICLES

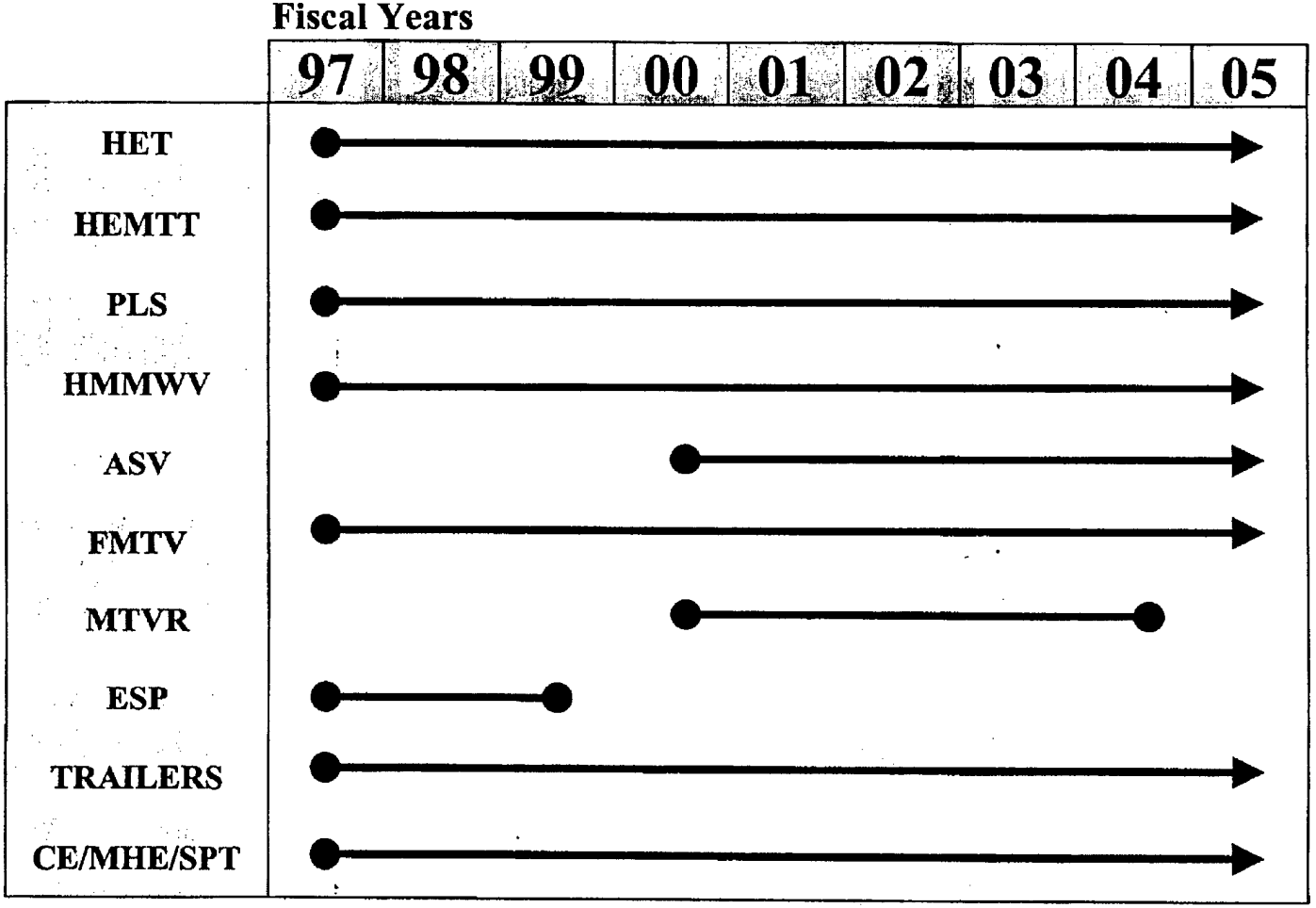
REQUIREMENTS $$$



	FY 97	FY 98	FY 99	FY 00	FY 01	FY 02	FY 03	FY 04	FY 05
■ CE/MHE/SPT	144	54	187	254	253	324	372	255	260
□ TRAILERS	10	10	25	45	75	69	111	50	53
■ HEAVY	256	119	203	219	252	246	699	341	302
□ MEDIUM	300	236	455	543	800	943	1072	752	726
■ LIGHT	164	151	93	106	148	162	183	212	212

TACTICAL WHEELED VEHICLES

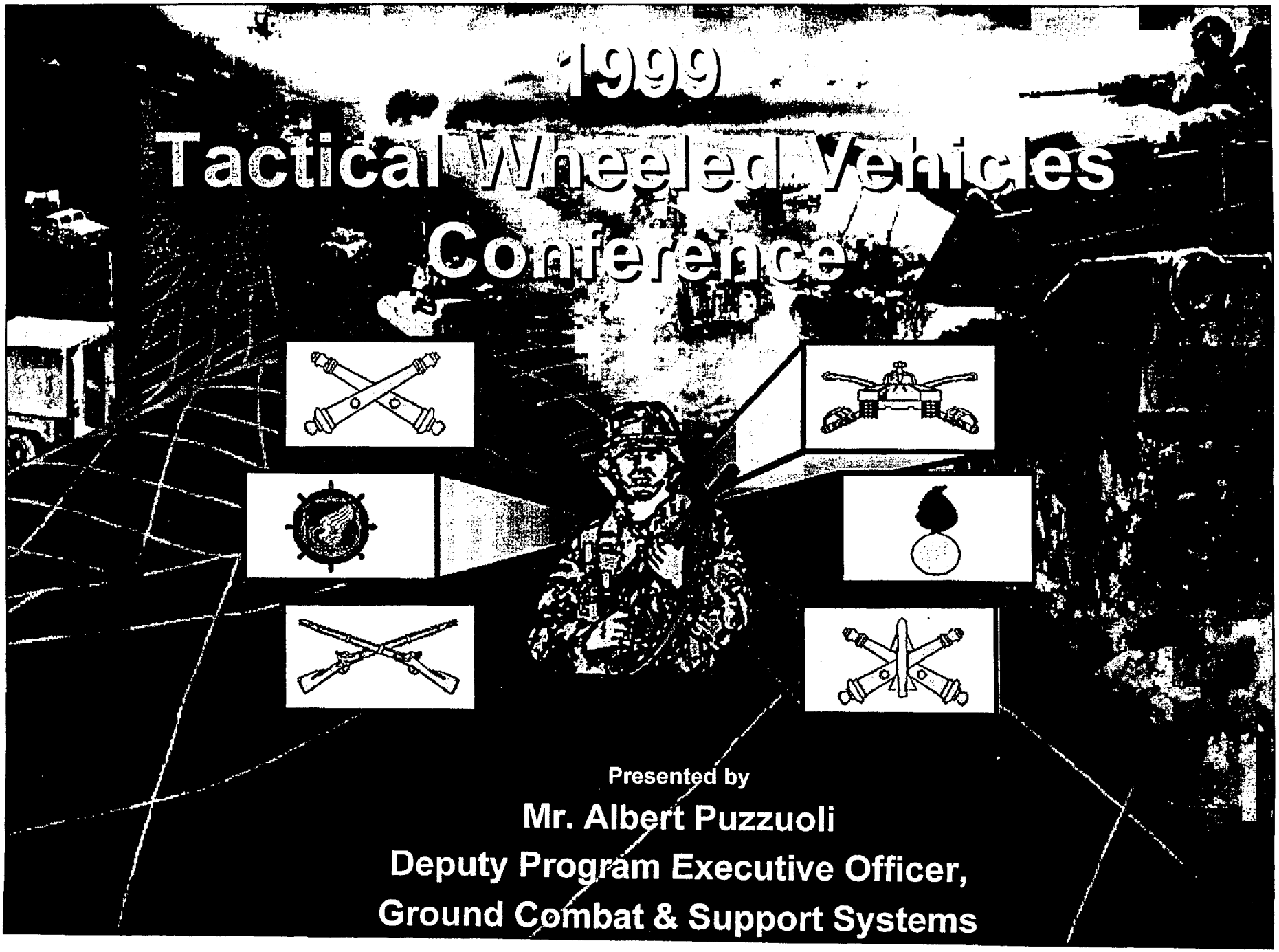
PRODUCTION PROFILE



TACTICAL WHEELED VEHICLES

FUTURE INDUSTRIAL BASE ASSESSMENT

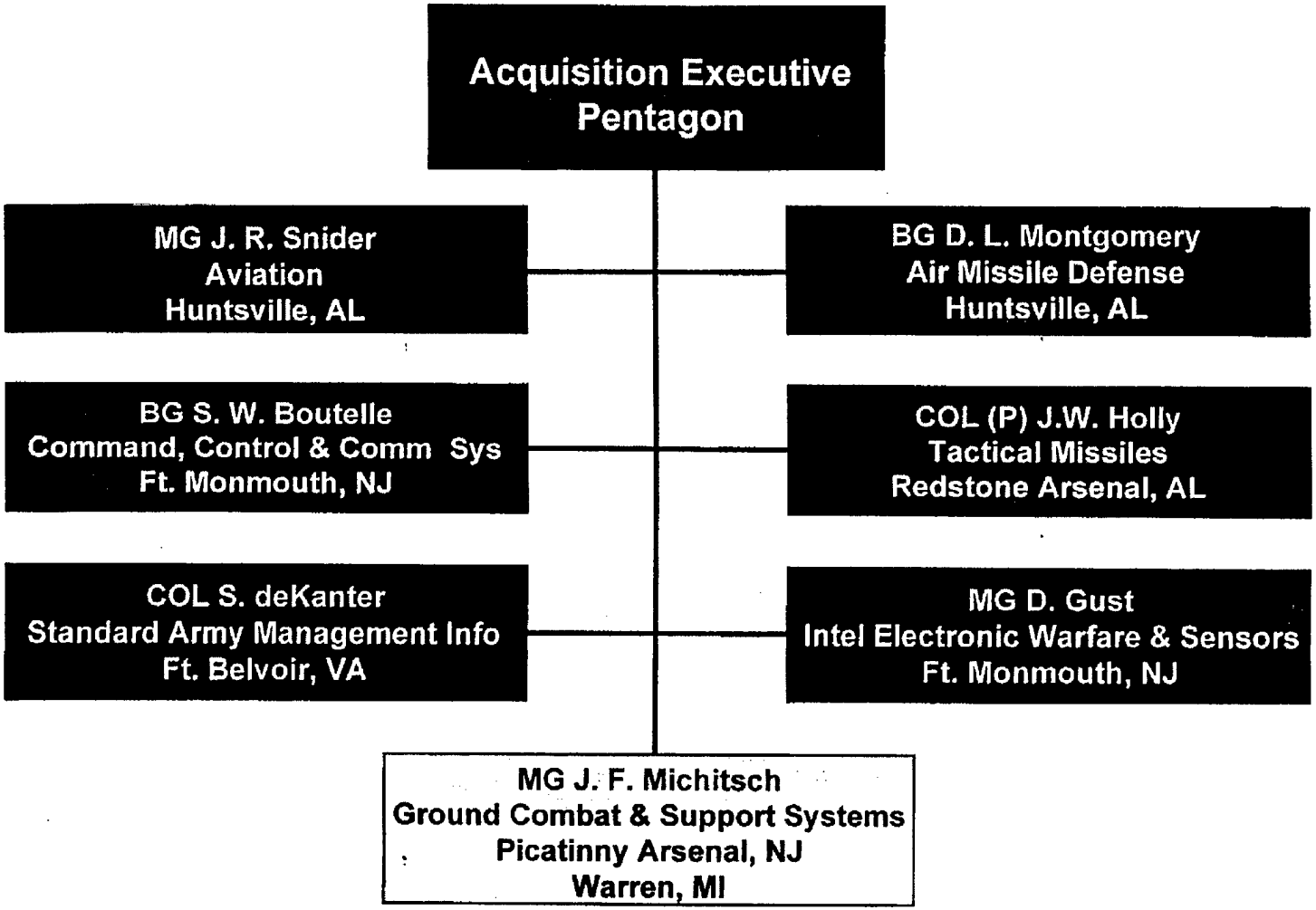
- **Tactical Wheeled Vehicle Industrial Base Assessment now in process - Target Completion 30 Sep 99**
  - **Essential that industry contributes to the assessment**
  - **Study limited to new vehicle production impacts on industry regarding engineering support and STS requirements**
  - **Identify parts that will no longer be manufactured so that appropriate resolution can be immediately initiated**
  - **Determine industry impacts on Force XXI and Army After Next requirements in order to maintain and sustain an effective Tactical Wheeled Vehicle industrial base**


1999
Tactical Wheeled Vehicles
Conference
Presented by
Mr. Albert Puzzuoli
Deputy Program Executive Officer,
Ground Combat & Support Systems

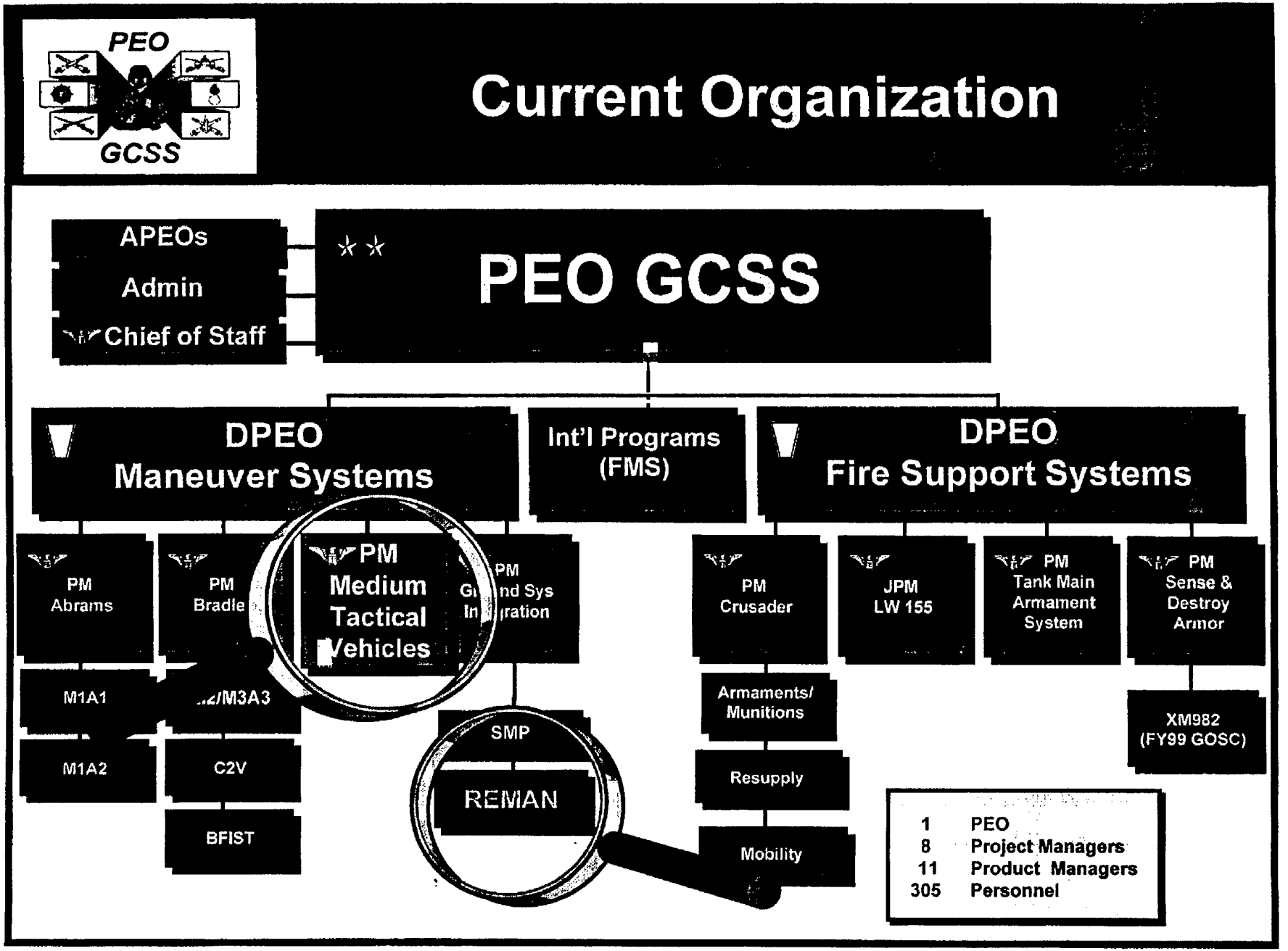
Mission Statement

To Maintain a Total Army Perspective in Managing the Development, Acquisition, Testing, Systems Integration, Product Improvement and Fielding That Places the Best Ground Combat and Support Systems in the Hands of our Soldiers

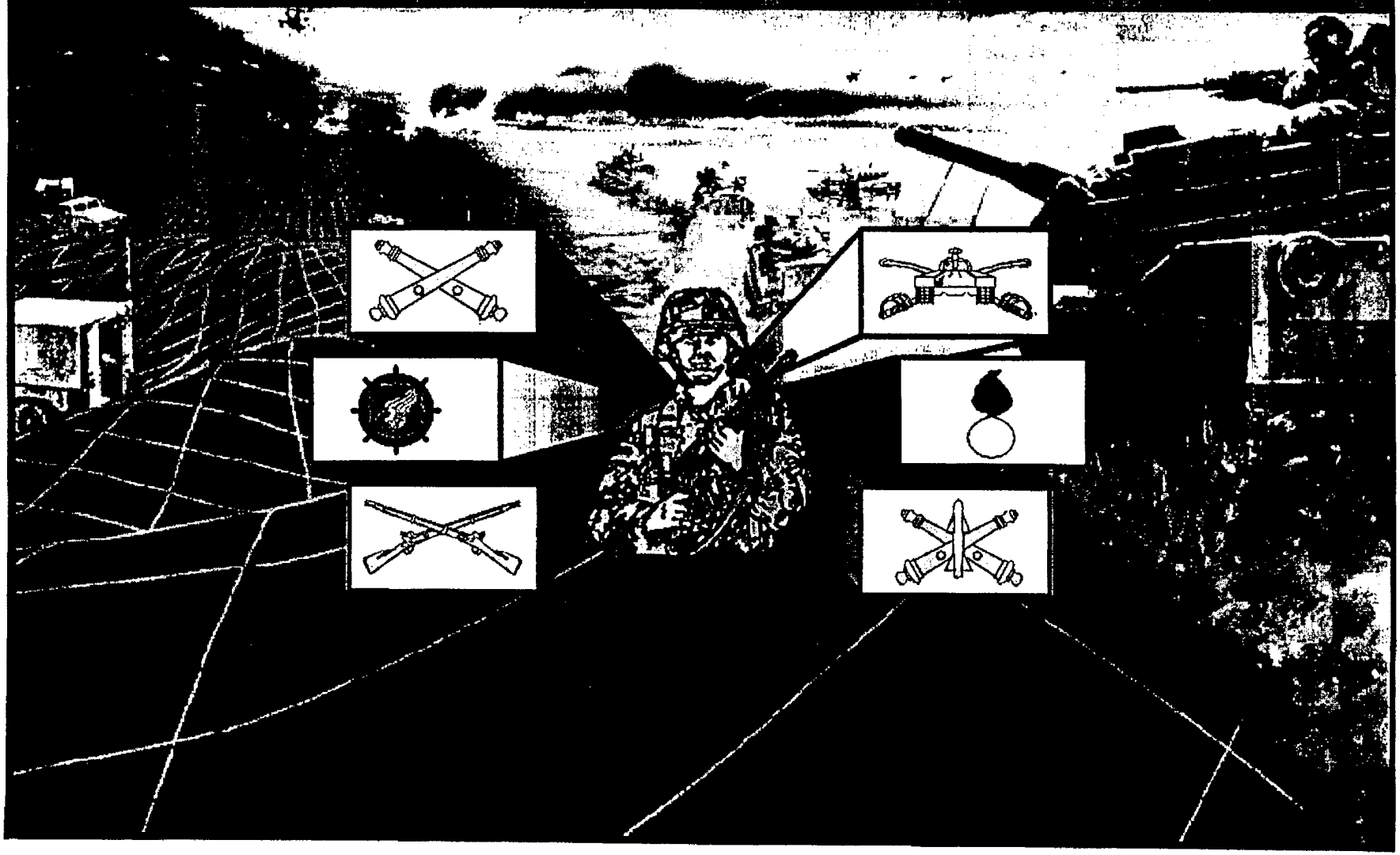
Army PEO Structure

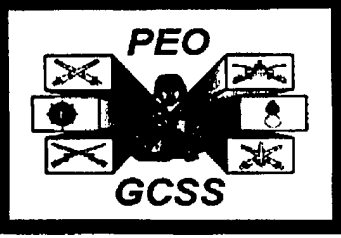


Current Organization



Procurement and Production





FMTV Program Background

- FMTV - 14 Truck Models in the 2 1/2 and 5 Ton Payload Class with over 80% Commonality and 2 Complementary Trailers
- 85,000 Vehicle AAO Required over 30 Years
- First Production Awarded in Oct 91 to Stewart & Stevenson (S&S) for 11,300 Trucks in 12 Models
- First Unit Equipped Date - Jan 96
- Second Production (A1) Awarded in Oct 98 to S&S for 8,668 Trucks in 11 Models and 1,560 Tactical Trailers
- Phase I FMTV Second Source Awarded in Oct 98 to AM General and Oshkosh for 3 Pre-Production Vehicles Each

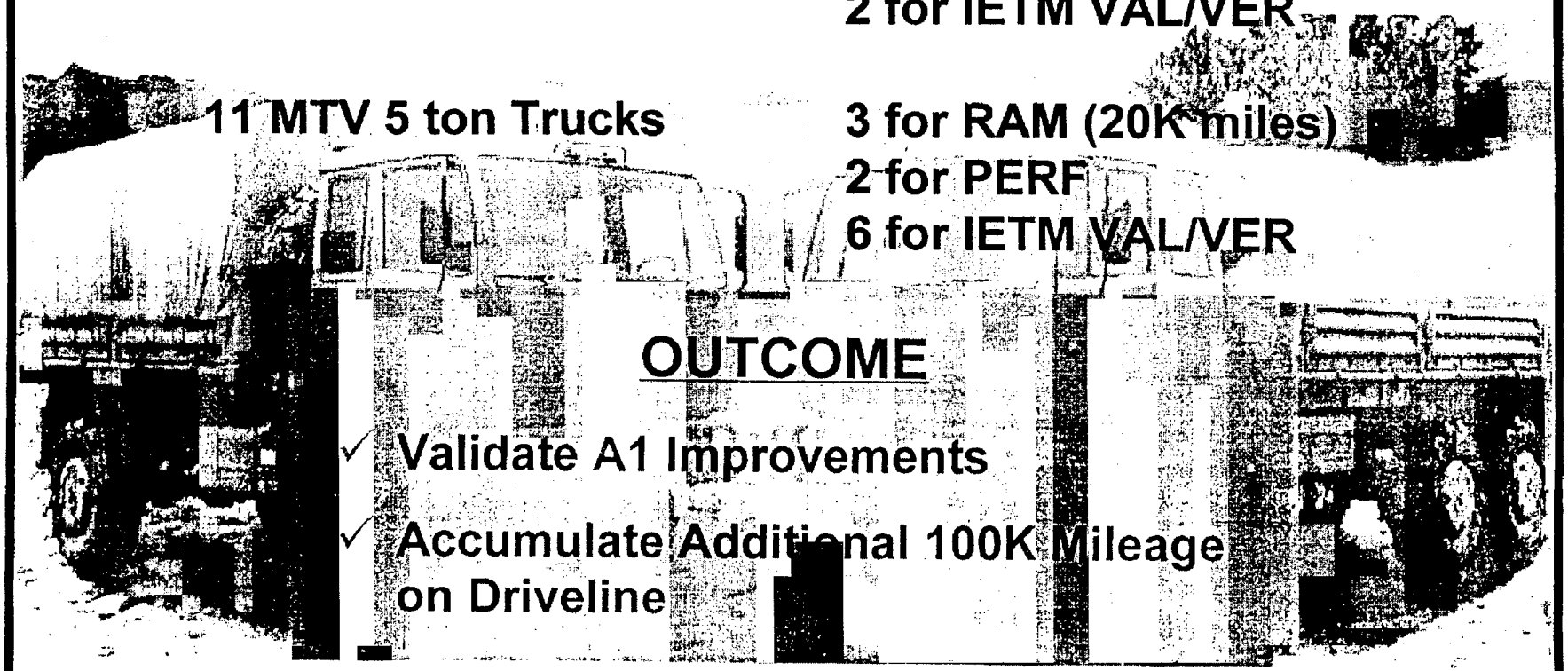
A1 Model Production Upgrades

- Chassis
  - CAT 3126 Engine w/Electronic Control (EPA 98 Compliant)
  - Allison World Transmission Electronic Controls (WTEC III)
  - Meritor Hub Reduction Axles w/Antilock Brake System (ABS) (DOT 98 Compliant)
  - SAE J 1708/1939 Compatible Data Bus
- Interactive Electronic Technical Manuals (IETMs)
- New M1082 Light Trailer with 2 1/2 Ton Payload
- New M1095 Medium Trailer with 5 Ton Payload

FMTV Production Verification Test

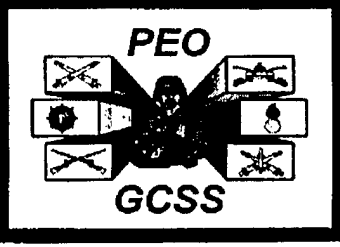
Consists Of:

4 LMTV 2 1/2 ton Trucks	2 for RAM (20K miles) 2 for IETM VAL/VER
11 MTV 5 ton Trucks	3 for RAM (20K miles) 2 for PERF 6 for IETM VAL/VER



OUTCOME

- ✓ Validate A1 Improvements
- ✓ Accumulate Additional 100K Mileage on Driveline



FMTV Driveline Improvements

ENGINE FLYWHEEL HOUSING

- Nodular vs. Grey Iron with Increased Wall Thickness → Increases Strength

DRIVESHAFT

- Larger Diameter Tube → Reduces Dynamic Deflection

YOKE

- Full Round vs. Strap Attachment → Increases Retention Force

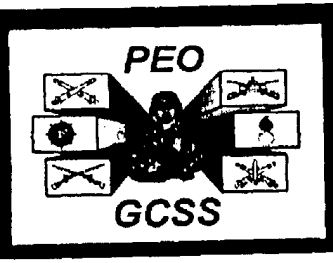
U-JOINT

- Nylon vs. Steel Thrust Washers → Increases Fatigue Life



ESP Current Programs

- Purchased with FY99 Funds 600 Vehicles
- Total Program Buy 5,488 Vehicles
- Production Line Scheduled to Close April 1999
- Fielding Completed by June 1999

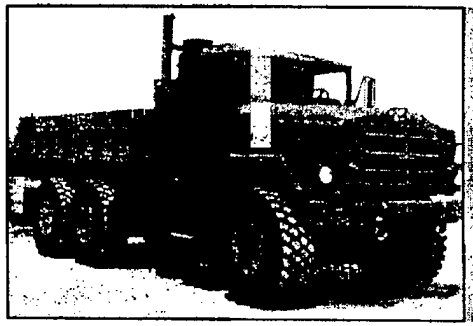


ESP Termination/Rational

- Insufficient Funds to Support Economic Production of Both ESP and FMTV
- ESP Funds Shifted to Purchase Additional LMTVs for the Reserves
- Medium Fleet Modernized by 2017 With a Mixture of LMTVs and ESPs
- 2 1/2 and 5 Ton Requirements Filled with FMTVs by 2022

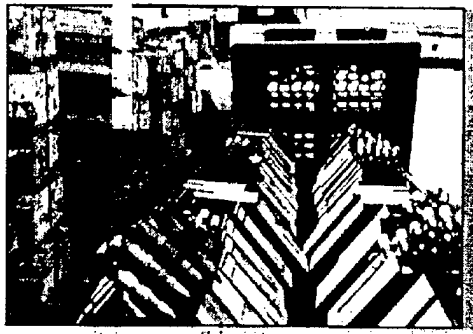
PEO GCSS

MTVR Requirements



MOBILITY

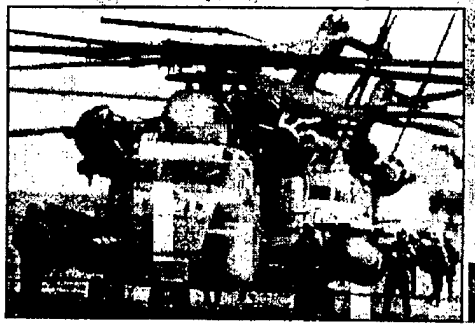
Tactical High Mission Profile
(30% Highway/Secondary Roads,
70% Trails and Cross-Country)



CARGO CAPABILITY

7.1 Tons Cross-Country,
15 Tons Highway

22 Year Corrosion Protection



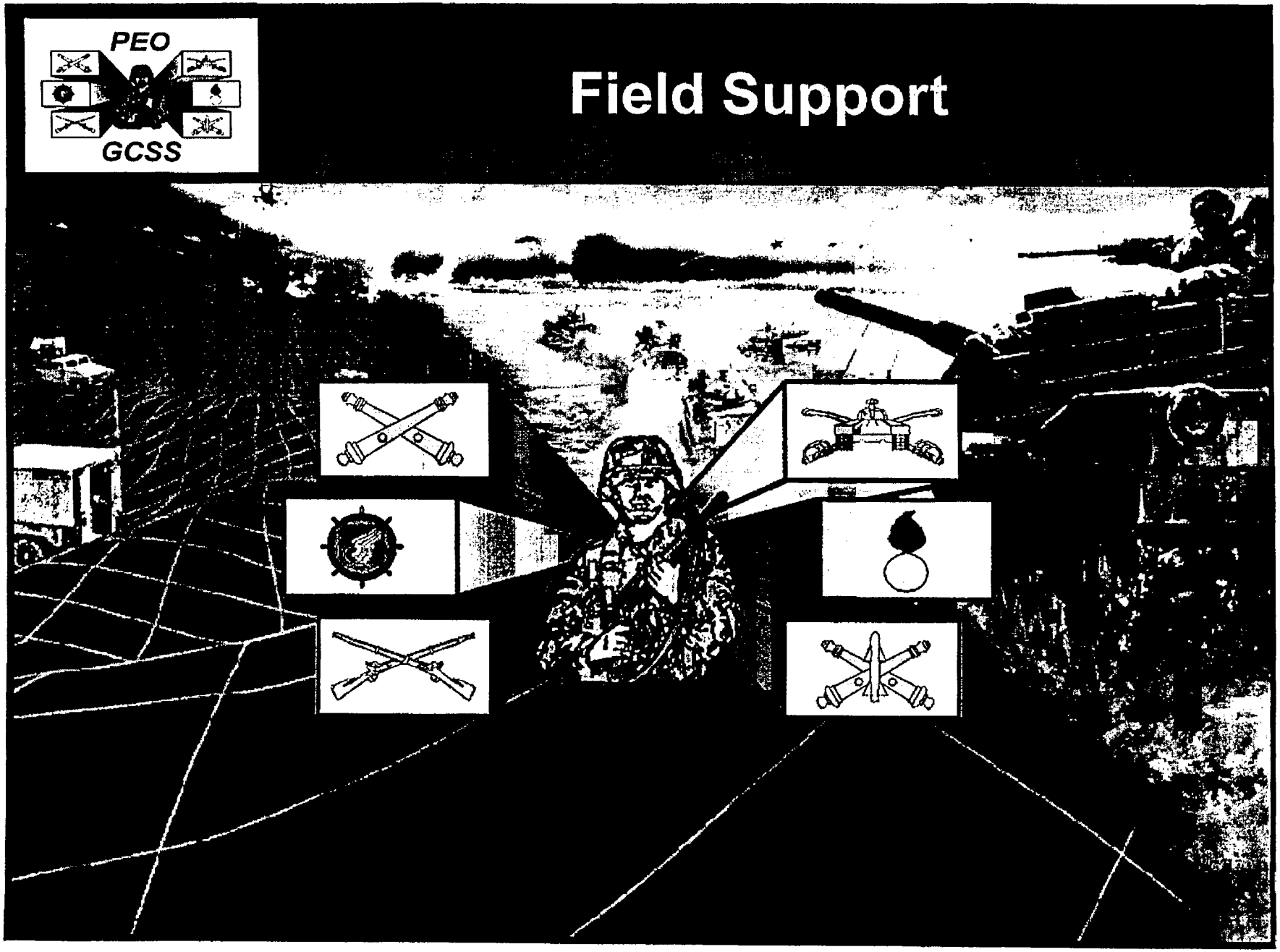
CH53 HELICOPTER LIFT

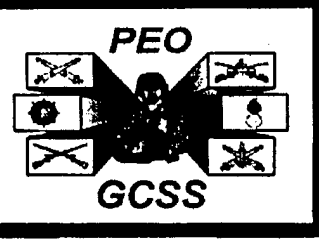
Vehicle Weight Less Than
28,000 Pounds



PEO GCSS

Field Support





FMTV Contractor Logistic Support

- Vehicle Manufacturer as Source of Supply
  - DLA Corporate Contract
- Field Focus
  - Onsite Technical Representatives
  - Warranty Program (18 Month/12,000 Miles)
  - Retraining Classes
  - PQDR Responsiveness
- Contractor Parts Support (After Market Sales)
  - 24 Hour Turn Around Time on Part Delivery
  - Full Parts Delivery Support
  - IMPAC Card Response to Field

MTVR Contractor Logistics Support

Customer Focus

- Onsite Tech Rep
- 24-Hour Hotline
- Improve Order & Ship Cycle Time
- Reduce Stockage

Contractor Focus

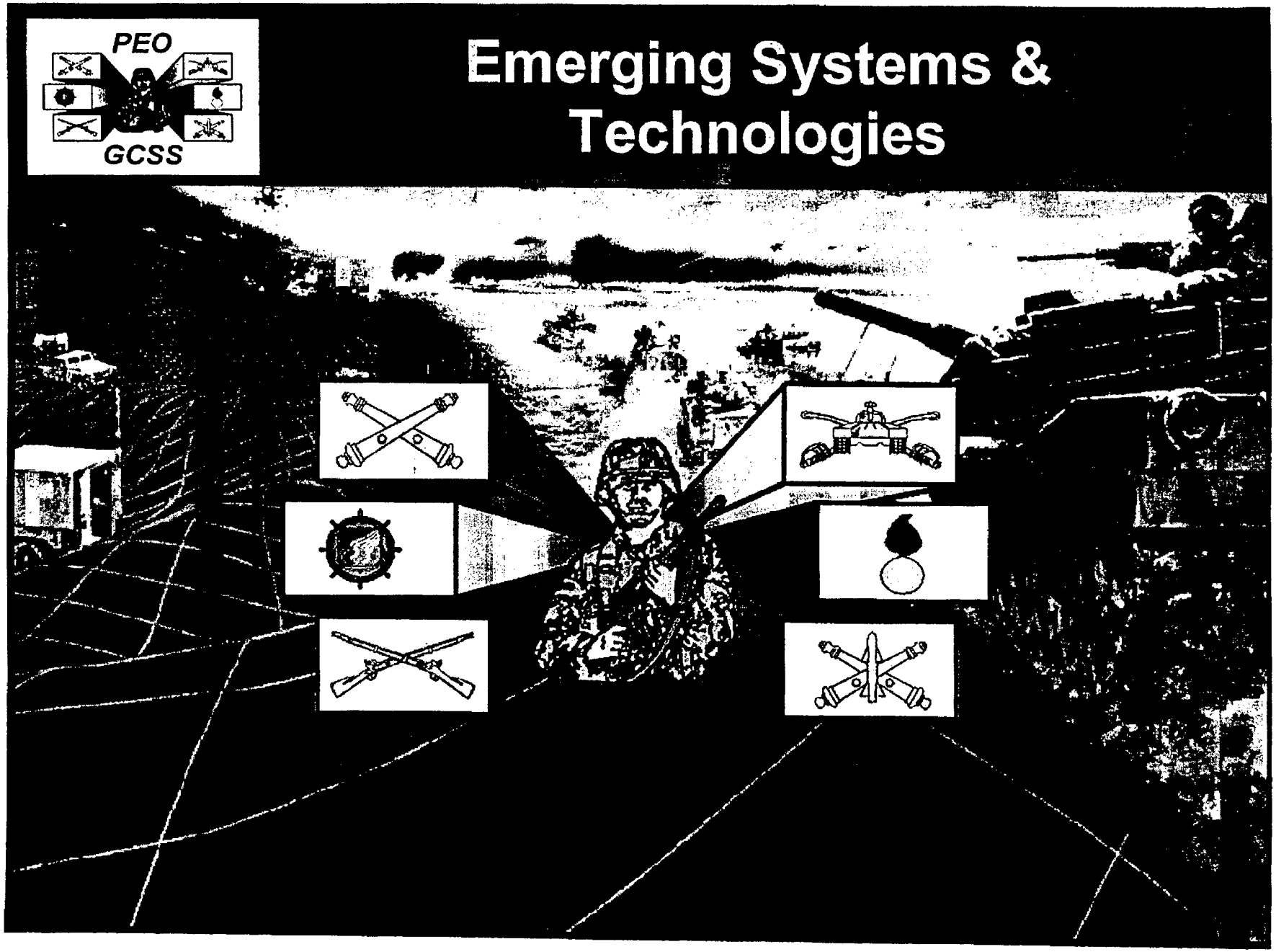
- Beyond Traditional Govt/Industry Supply Method
- Electronic Commerce with Direct Vendor Delivery
- Performance Metrics
- Supply Chain Management
- Encourage Innovation

Partnering

- Warranty Tracking by Contractor
- Life Cycle Cost Accounting
- Total Asset Intransit Visibility

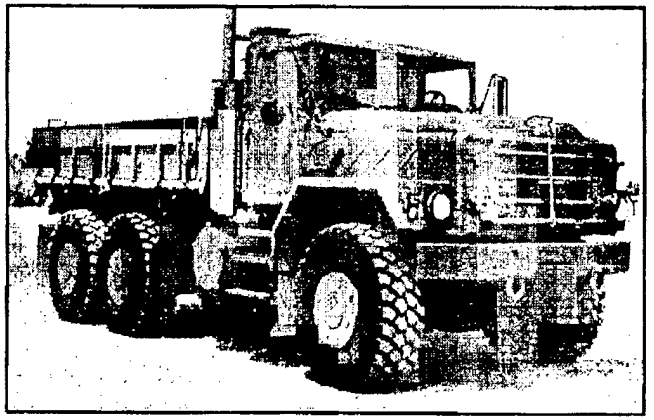
OEM as Complete Source of Supply

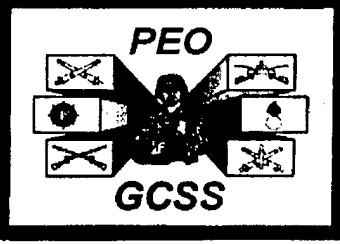
Emerging Systems & Technologies



MTVR Acquisition Strategy

- Two Phase Acquisition
  - Phase I - Prototypes and Testing; Completed April 98
  - Phase II - Downselect to one Production Supplier
- Production Contract Awarded to Oshkosh Truck Corporation
- 5 Year Multi-Year Contract to buy all of the USMC Medium Truck Requirements
- Initial Production Model Will be the Standard and Long Wheel Base Cargo
- Parallel Development Effort for Dump, Telephone Maintenance, Trailer and Wrecker Variants



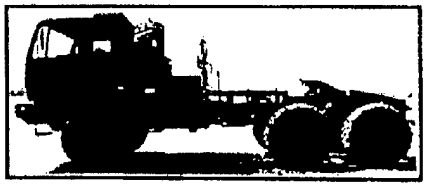


Second Source Plan/Approach

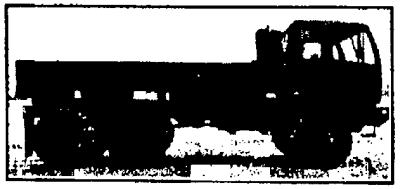
- **AAE Directive 11 Sep 97-** Introduce Competition at Earliest Junction Possible Within Current Funding Streams
- **Acquisition Plan Approved 27 Nov 97-** Two-Phase Approach to Prepare Second Source for Competition with the Current FMTV Manufacturer in FY03
  - **Phase I-** Multiple Competitive Pre-Production Awarded Oct 98 Each Contractor Builds 3 Vehicles to System Performance Specification w/ TDP Provided for Reference
  - **Phase II-** Competitive Second Source Production Award Downselect Planned in FY00 for 3-Year Multiyear
- **Beginning in FY03-** Stewart and Stevenson and Second Source Compete for Share of Follow-On 5-Year Competitive Multi-year Production Contracts

Second Source Current Status

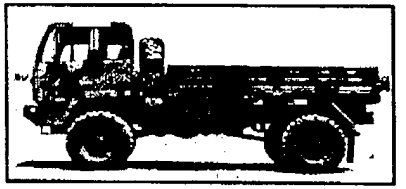
- Phase I Awarded 30 Oct 98 to AM General and Oshkosh Truck Corporations
- Fixed Firm Price (FFP) Contract to Build Three Pre-Production Vehicles:



MTV TRACTOR



MTV CARGO



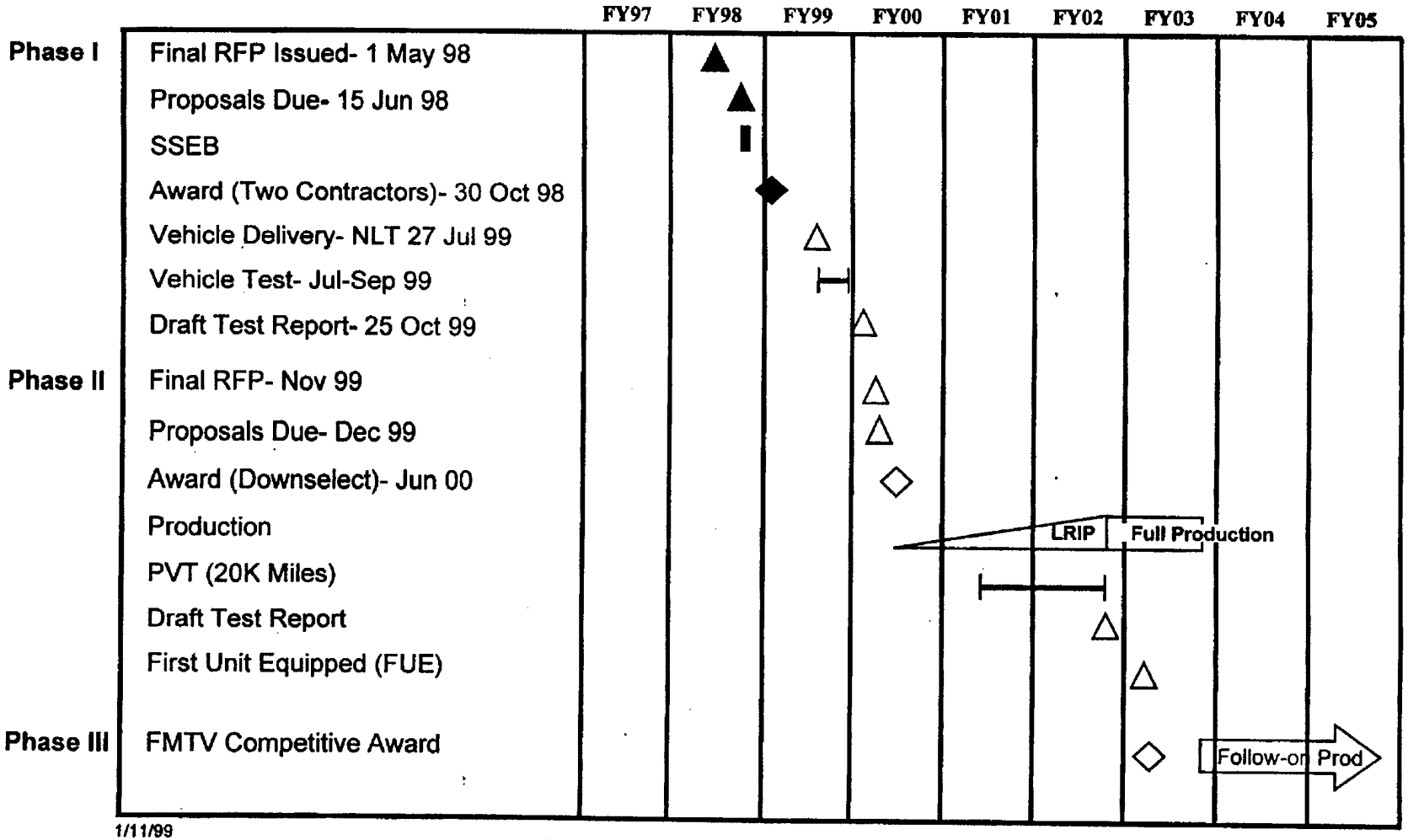
LMTV CARGO

- Goal-Achieve Maximum Operational Effectiveness at the Lowest Possible Cost by Maximizing Vehicle Commonality Among the FMTV A1 Fleet Emphasis is Placed on Minimizing Operating and Sustainment Costs
- Milestones:

PHASE I	
Acquisition Plan Approved	27 Nov 97
D&F Approved	27 Feb 98
J&A Approved	28 Feb 98
Phase I Awarded	30 Oct 98
Delivery	27 Jul 98
6,000 Mile Technical Test	Jul 99-Sep 99

PHASE II	
Release Final RFP	Nov 99
Proposals Due	Dec 99
Source Selection Evaluation	Dec 99-Feb 00
Certification of Compliance w/ Congressional Language	Feb 00-Jun 00
Award Phase II	Jun 00

Second Source Schedule



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NOTE: Gary Reese has been replaced by Kraig Siracuse to handle relevant Army programs.

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Randy (Duke) Cunningham (CA)	
Jay Dickey (AR)	
Rodney Frelinghuysen (NJ)	

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** The 106th Congress renamed the House National Security Subcommittee to the Defense Subcommittee.

1/28/99

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Bob Riley (AL)
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Joseph K. Pitts (PA)
Robert (Robin) Hayes (NC)
Steve Kuykendall (CA)
Donald L. Sherwood (PA)

NOTE: The 106th Congress renamed the House Committee on National Security to the House Armed Services Committee.

1/28/99

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Patrick Kennedy (RI)
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Vic Snyder (AR)
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Ciro Rodriquez (TX)
Cynthia McKinney (GA)
Ellen Tauscher (CA)
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Baron Hill (IN)
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