Session III:
Aligning the TWV Fleet for the Future

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Chief of Transportation

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PEO Responsibilities/Mission & Vision

As the responsible management official, the PEO will provide overall direction and guidance for the *development, acquisition, testing, product improvement* and *fielding* while ensuring total ownership cost reduction. The PEO will establish processes that facilitate communication, cooperation, information exchange, and collective decision-making between and among organizations.

MISSION

Conducts Life Cycle Management for the Army's Combat Support and Combat Service Support (CS&CSS) Portfolio; Supporting the Joint Warfighter Throughout the ARFORGEN Cycle by Developing, Producing, Fielding, Sustaining, Resetting and Integrating New Technologies Using a System of Systems Approach

VISION

Equip Our Joint Warfighters with the World's Best Capability…
Today and Tomorrow… Using the DoD's Best Acquisition Workforce

First to the Field… Last to Leave

ARFORGEN: ARmy FORce GENeration

PEO CS&CSS Organization

350+ Systems

Deputy PEO
Mr. Thomas Bagwell, Jr.

Program Executive Officer
Mr. Kevin Fahey

Deputy PEO AL&T
COL Robert Schumitz

Force Projection

131 Systems

PM: COL Eric Fletcher
DPM: Mr. Steve Roberts

- PdM Bridging
  LTC Benny Shepard
- PdM Combat Engineer/Material Handling Equipment
  LTC Nelson Glenn Kerley, Jr.
- PdM Force Sustainment Systems
  LTC James Tuten
- PdM Petroleum & Water Systems
  LTC Dariel Mayfield
- PdD Army Watercraft Systems
  Ms. Shannon Tighe

Joint Combat Support Systems

102 Systems

PM: COL William Boruff
DPM: Mr. Dennis Mazurek

- PdM Armored Security Vehicles
  LTC Steve Wall
- PdM Sets, Kits, Outfits & Tools
  LTC Eric Rannow
- PdD Test, Measurement, & Diagnostic Equipment
  Mr. George Mitchell
- PdD Horizontal Technology Integration
  Mr. Fred Williams
- PdD Non Standard Vehicles
  LTC Graham Compton

Mine Resistant Ambush Protected Vehicles

47 Systems

PM: Mr. Carl Owens
DPM: COL Jeffrey Carr

- PdM MRAP-ATV
  LTC Kevin Geisbert
- PdM Joint Logistics
  LTC John O'Neill
- PdM MRAP Vehicle Systems
  LTC Andrew Oderkirk
- PdM Assured Mobility Systems
  Mr. Kenneth Wojcik

Tactical Vehicles

92 Systems

PM: COL David Bassett
DPM: Mr. Tony Shaw

- PdM (s) Joint Light Tactical Vehicles
  Mr. Mark McCoy (USA)
  LtCol Michael Burks (USMC)
- PdM Light Tactical Vehicles
  Mr. Dennis Haag
- PdM Medium Tactical Vehicles
  LTC Shane Fullmer
- PdM Heavy Tactical Vehicles
  LTC Paul Shuler

Introduction

TC CORPS VISION: http://www.transchool.lee.army.mil/
http://www.facebook.com/pages/Fort-Lee-VA/Chief-of-Transportation/

To be a bastion of transportation innovation, adaptive training, and expertise producing people and materiel that permeates all facets of military logistics and operations with relevant vigor and spearheads logistics into the future…

INTEGRATOR OF DEPLOYMENT AND DISTRIBUTION

MISSION: **Train** and produce ***Transportation (Logistics) professionals***, **Develop** viable ***Doctrine***, and **Integrate** transportation ***Concepts*** and ***Capabilities*** to **deploy** and **distribute** expeditionary forces, equipment, and materiel to Army and Joint Forces operating across the Full Range of Military Operations in a Joint, Interagency, Intergovernmental, and Multi-National (JIIM) environment. **Partners in Sustainment Excellence…**

- **Responsible for TWV fleet management and ensuring proper execution of the Army TWV Strategy.**
- **Co-chair TWV Board of Directors with Program Executive Office for Combat Support and Combat Service Support**
- **Purpose of BOD is to serve as a collaborative forum of key leaders that collectively provide a common perspective and knowledge of the issues and key decisions affecting TWV Programs**

COT Lines of Effort - 2020

2012 | 2013 | 2014+

Strategy		Effects
People	Train, Educate, and Develop Functional TC Professionals Develop Sustainment Leaders	Deliver trained, innovative, and adaptive Transporters that understand Logistics.
Materiel/EQUIP Systems, and Force Structure	Rail Initiatives & Training Facilities Upgrades Watercraft & TWV Modernization Influence CNA, CBA, & TAA Processes Develop Deployment, Distribution, and In-Transit Visibility Automation Systems	Develop modern solutions that meet Soldier, Combatant Commander, and Army Requirements.
Training & Doctrine	Protect the Force Monitor, Assess, Resource & Ensure Relevant Doctrine Assess & Enhance Collective Training Events	Enable sustainment operations through the application of functional expertise (deployment and distribution) in order to meet Combatant Commander and Army requirements.
Collaboration	Social Networking and Digital Technology Engage Networks of Influence Sustain Identity, Reputation, Marketing, Branding	A Transportation Corps that enhances Joint Deployment and Distribution Enterprise integration.

Partners in Sustainment Excellence!!

Spearheading Logistics!!

DOTMLPF

Strategic Environment

- **Operational**
  - Support the Warfighter in harm's way
  - Persistent conflict-been at war for the past decade-Iraq mission complete
  - Proven our self in difficult conditions
  - Hybrid threats requiring hybrid solutions
  - Advanced/improvised technologies targeted against tactical vehicles
  - Homeland Security
  - Responsive to Natural Disaster, Regional Conflict
  - Time = Seconds/Minutes/Hours NOT Days/Months/Years
- **Budget**
  - Pressure to cut defense & other spending
  - Top-line base budget expected to have modest, but steady growth
  - "Do more without more", or "Do less with less"
- **Army Modernization**
  - JLTV and GCV are priorities
  - Buy fewer, more often
  - Incremental fielding of capability thru ARFORGEN
  - Fleet/portfolio management
  - Ability to Keep Step with Technology Advances
  - Designing for future growth
    - Capability, Survivability, Network Communication, etc.
- **Acquisition Reform**
  - Increased competition throughout acquisition process
  - Reduced tolerance for cost/schedule risk
  - Revised Milestone certification requirements
  - Dr. Carter's efficiency initiatives
  - We have to be successful to build credibility

TWV BOD Role & Purpose

- Serves as a collaborative forum that provides knowledge of issues and key decisions affecting TWVs.
- The BOD is Co-Chaired by the Chief of Transportation and the Program Executive Officer, CS&CSS and will meet at the direction of the Co-Chairs but not less than every six months.
- Major Participants: PM TV, HQ DAG4, HQ DAG3/5/7, HQ DAG8, TCM-T, TRADOC, ARCIC, ATEC, TACOM LCMC.
- The purpose of the Tactical Wheeled Vehicle (TWV) Board of Directors (BOD) is to:
  - Serve as a collaborative forum to provide a common perspective and knowledge of the issues and key decisions affecting TWVs. Provide feedback to the TWV Community based on lessons learned in combat/current operations, modular/future force requirements, Army Force Generation (ARFORGEN) based equipping and impacts based on the Army's strategic priorities forward.
  - Provide Army leadership with a common clear objective and integrated assessment of the TWV truck and trailer fleet's health and capabilities.
  - Provide a common perspective on the Army TWV Investment Strategy as policy guidance upon which Materiel Enterprise fleet planning decisions are being developed.
  - Integrate individual member decisions into common recommendations to Army Leadership resource and program decisions regarding fleet procurement, modernization and sustainment.

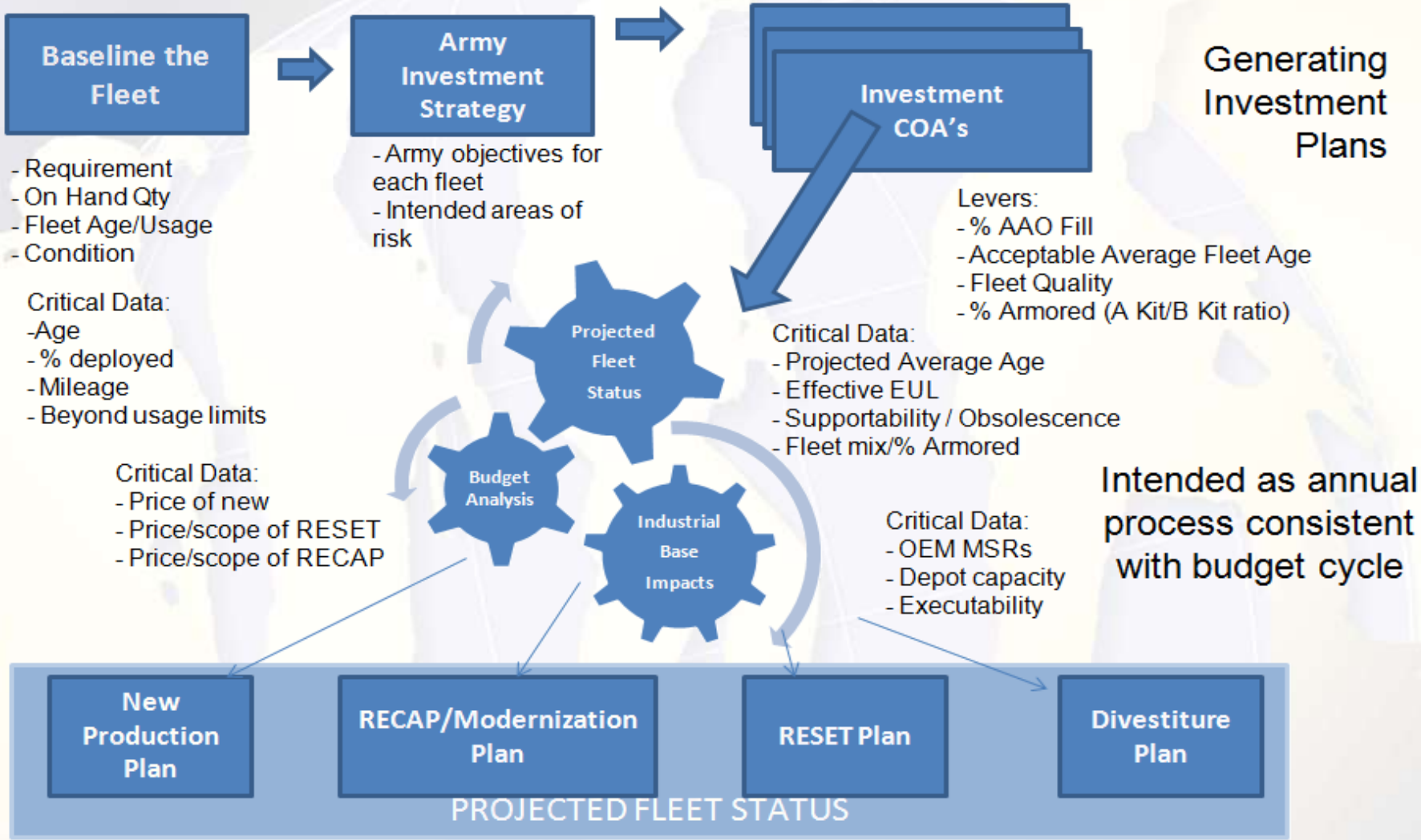
CSA - "Marching Orders."

- **Depth and Versatility**: Provides depth to the Nation by a trained and ready force that includes a viable operational reserve. Reversibility and expansibility of the force also contribute to strategic depth. The Army's diverse mix of rapidly deployable capabilities, formations and equipment ensures versatility for the Joint Force.
- **Adaptive and Innovative:** There are no predetermined solutions to problems. Army leaders adapt their thinking, formations, and employment techniques to the specific situation. This requires an adaptable and innovative mind, a willingness to accept prudent risk in unfamiliar or rapidly changing situations, and an ability to adjust based on continuous assessment.
- **Flexible and Agile:** To achieve strategic, operational, and tactical success, we must be flexible in the face of adversity and agile in our responsiveness, able to dominate any operational environment against conventional and hybrid threats. Flexibility is achieved by preserving responsiveness to a broad range of missions including regular and irregular warfare; humanitarian assistance; security cooperation; and support to civil authorities. Effective mission command, collaborative planning, and decentralized execution foster agility.
- **Integrated and Synchronized:** Army forces operate independently as a part of a larger joint, interagency, and frequently multinational effort. The arrangement of military actions in time, space, and purpose produces maximum relative combat power at a decisive place and time.
- **Lethal and Discriminate:** The capacity for physical destruction is fundamental to all other military capabilities and is the most basic building block for military operations. The capability for the lawful, discriminate, and expert application of lethal force builds the foundation for effective operations.

Chief's Look Ahead Priorities

- The network will help the way we manage information, which is integral for our ability to adapt at all levels
- Replacement for our Infantry fighting Vehicle
- Modernization priority is the Joint Light Tactical Vehicle (JLTV)
- The squad is the foundation of the decisive force
- Must reinforce our to improve our energy posture
- Modernizing the Army in the current environment of constrained resources requires improvement and streamlining the acquisition process

Fleet Management Process



TWV Fleet Evolution

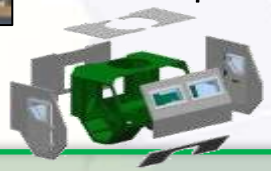
HTV

A0 Series

A2 Series

A4 Series

LTAS Concept



MTV

FMTV A0P1/A1P1

LSAC

FMTV A1P2

MRAP

LTV

A0/A1/A2

M1114

M1151/52/65

JLTV

Reality Check

- This year and next we will be in transition, we will have to work together to figure exactly what that means
- The TWV portfolio is in very good shape with the exception of the capability gap being addressed by JLTV
- Budget pressures will minimize Tactical Vehicle procurements
- Force structure reductions will result in quantity requirements reductions and spare part demand reductions
- What are the real core competencies/Intellectual know-how required for the TWV industrial base
- A large number of systems will be transitioning to sustainment - Fleet sustainment will be a main focus

How do we maintain a ready and relevant TWV fleet with limited resources

Industrial Base (IB) Challenges

- Properly aligning IB facilities, workforce and infrastructure to support requirements
- Maintaining a sufficient amount of RDT&E/modernization investment with limited production
- Properly identifying and prioritizing critical competencies and capabilities to ensure they are sustained and controlled as we ramp down-what are they
- Maintaining the supply chain/value chain to sustain large fleets
- Managing quality, reliability, single point failures and obsolescence
- Balancing the organic and commercial interests
- How do we improve transparency and collaboration on requirements and maintaining critical core competencies
- How do we develop a common operating picture of the risks and issues

We Really Need Your Help

- Knowing what we need to maintain and how with limited resources
  - What is critical
  - How do we maintain it, we can not maintain a minimum sustaining rate on everything
- We must maintain a strong government and Industry relationship during production ramp down-this is going to be hard
  - Communication
  - Collaboration
  - Trust
  - Transparency
- How do we continue to innovate to increase capabilities with limited procurement
  - Buy fewer more often?
  - Network Integration Experiments?
  - Only a procurement away from the latest and state of the art capability?
  - Continue to develop, test, evaluate and field small sets of capability?
- Best way to deal with the uncertainty of the future is to create it!!!

TACOM Industry Participation

- TACOM Industrial Base Visibility and Communication (VisCom) tool – Provides Industry the capability to share information through the Diminishing Manufacturing Sources and Material Shortages (DMSMS) program
- Through a contracted effort, TARDEC has the capability to establish commercial industrial base visibility and communicate TACOM LCMC requirements with companies across the United States
- Information on VisCom is only visible to TACOM users
  - Confidential database
- Contractors can enter their industrial base capability data into DMSMS at www.dmsms-tardec-army.com

Current Thrusts/Focus

- **Support our soldiers in harms way**
  - Support Afghanistan Forces/FMS
    - The Mobile Strike Force Vehicles and Non-Standard Vehicles are providing the Afghan National Army with critical security and maneuver capabilities
- **MRAP Transition**
- **Fleet/Portfolio Management**
  - Investment/Modernization and Sustainment Strategy
  - Balance long-term goals and objectives and near-term challenges
- **Industrial Base Issues**
  - Assess the health of the industrial base
    - Majority of programs have met production requirements and heading into sustainment. Especially challenging for companies with defense-centric portfolios and lower tier suppliers
- **Better Buying Power Initiatives**
  - Maintain competition to the maximum extent possible
  - Over $706M worth of efficiency ideas submitted through FY11
    - over $512M reflect actual savings
- **JLTV**
  - Getting through milestone and on contract
- **Network Integration Exercise (NIE) 12.1and NIE 12.2**
  - Network integration into M-ATVs

Logistics Paradigmatic Change!

FM 100-5

Active Defense

MTMC

Air-Land Battle

Cold War Era

Bosnia

Somalia

Kosovo

Desert Shield/Storm

SDDC

NetCentric Warfare

OEF-OIF

FM 3.0

Full Spectrum Operations

Security &Stability OPS

NDN

War on Terror

Unified Land Opns

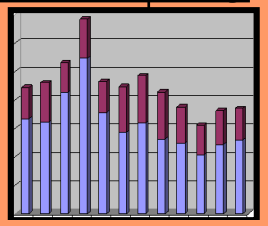
--PERSISTENT CONFLICT--

Push – Pull

Linear – Non Linear

FREIGHT / VOLUME / MASS

PIPELINE/ Lack of Visibility



- BEYOND PORTS - NETWORK/Distribution-Based
- SUPPLY CHAINs and Supply Chain Management
- GLOBALIZATION, Security, Lack of Predictability
- ITV , Technology, Collaboration, Enterprise Approach
- AGILITY - FLEXIBILITY - ADAPTIVE - RESILIENT
- Precision, Velocity, Visibility, Reliability

Inflection Point

Industrial Age Large Force/Footprint

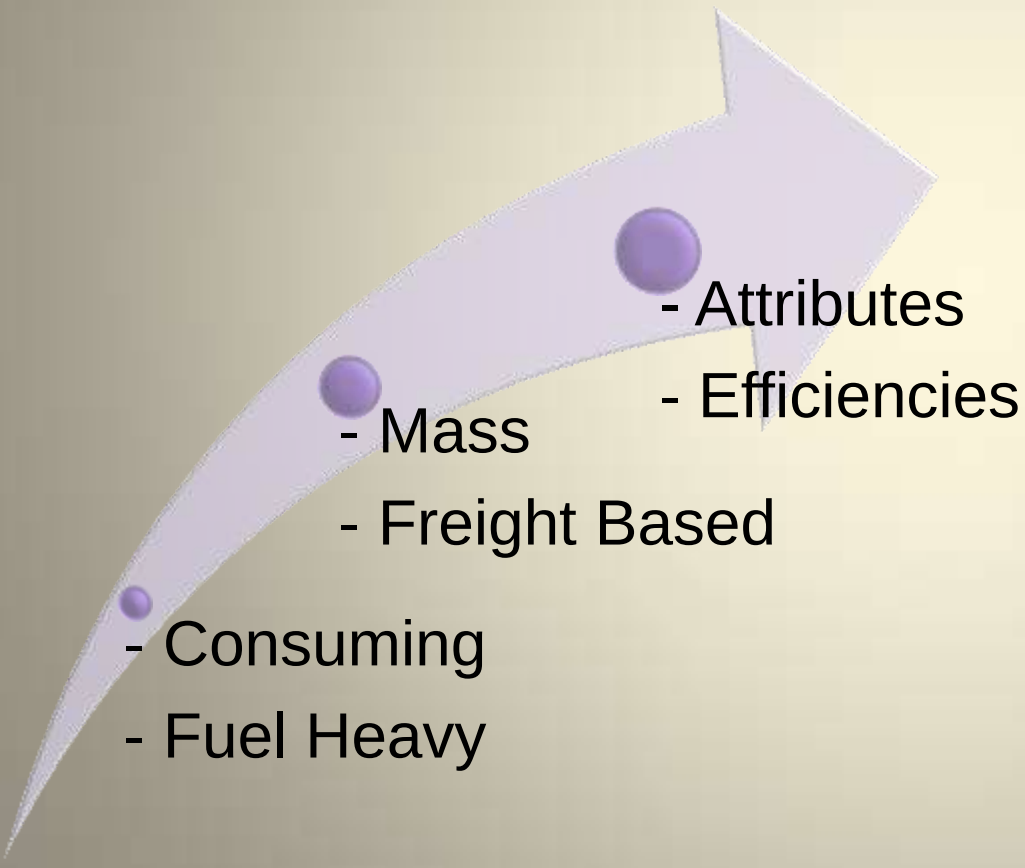
Information Age Modular Force/ Reduced Footprint

'70 '80 90 2000 '05 '09 2012 – 2020+

Balance

Paradigmatic Change

Now – progressing to - 2017

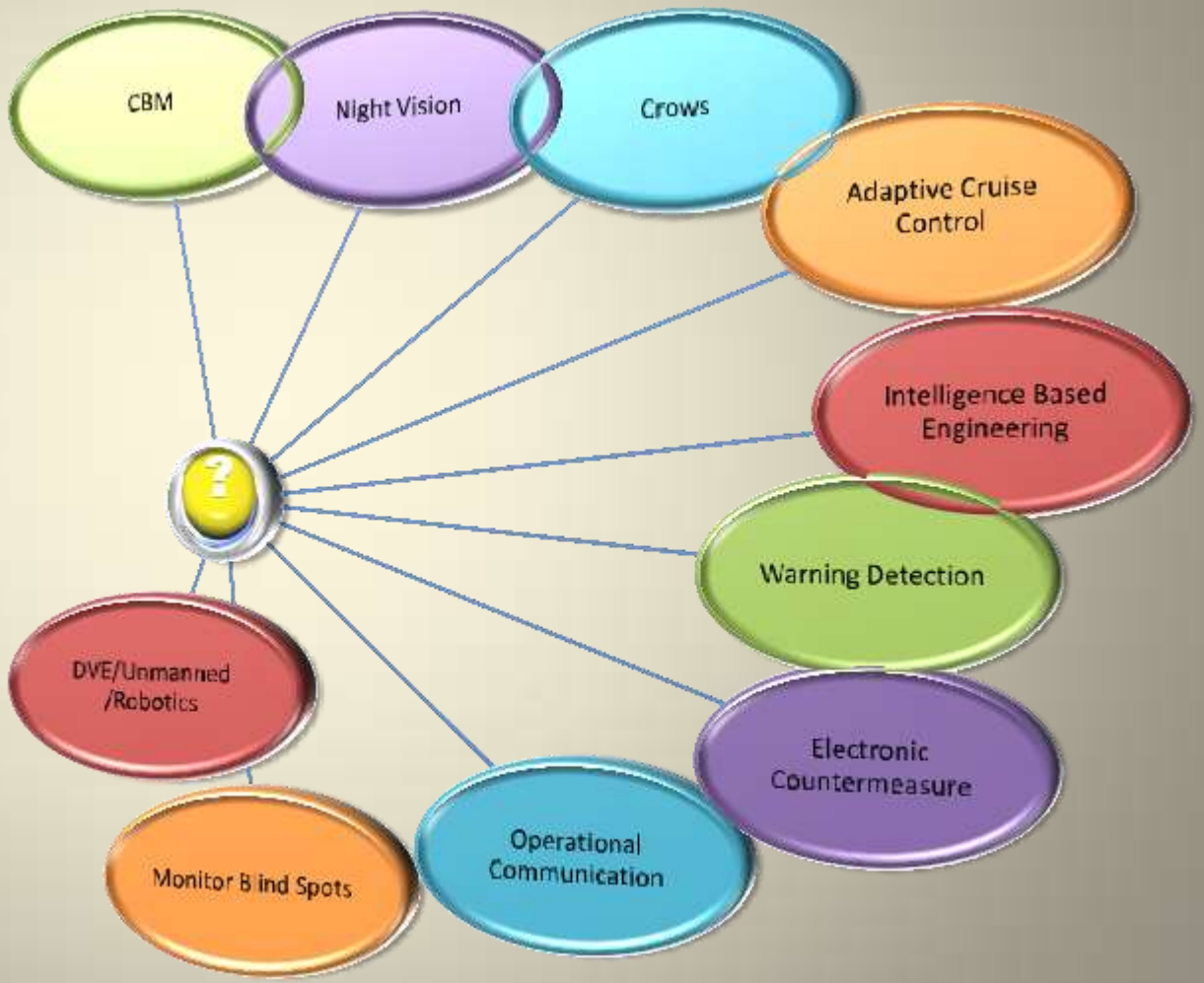


- Today's Fleet has the lowest age in history – Maintain
- Fuel Efficiency
- Conditioned Based Maintenance
- Incremental procurements
- Do not want to "Over Kit"

88Ms – Not *Just* Truck Drivers

THE FIRST STEP IN RE-THINKING HOW WE DEVELOP EQUIPMENT IS UNDERSTANDING THE 88M OF THE FUTURE

VERSATILE AND ADAPTIVE CRITICAL THINKERS PREPARED TO OPERATE IN MULTIPLE CAPACITIES ON THE BATTLEFIELD WITH LETHAL AND NON-LETHAL CAPABILITIES



OUR 88MS VIEW THEMSELVES AS:

- **INTELLIGENCE GATHERERS**
- **SENSORS**
- **DIPLOMATS**
- **COMBAT LIFESAVERS**
- **FORCE MULTIPLIERS**
- **SOLDIERS AND WARRIORS**

ON THE BATTLEFIELD

THE (88M) IS THE FACE OF THE TRANSPORTATION CORPS — SO THE RESULTS OF YOUR HARD WORK ARE OUR CREDENTIALS

Next-Generation TWVs

Intelligence Based Platforms

iTWV…

How many Decisions / second will our vehicles make in 2018+?

Will it beat the A8 Audi?

>3,000 per second

Truth in Engineering

- **The power of an i-phone in a wheeled platform (iTWV)**
- **Less instrumentation; more embedded integration**
- **We want to be connected the way they connect….**

Vignette:
The Art of the Possible
A Logistics Mission in 2028…

TWVs Future Capabilities

Protection
- Improved Armor Kits
- Active Protection
- NBC Protection
- Weapons Mounts
- Non-Lethal Protection

Deployability
- Weight Reduction
- Internal/External Air Transport

Safety
- Lateral Stability
- Emergency Braking
- Restraint System
- Crash Protection
- Fire Suppression
- Driver Assist

Intelligence
- Autonomous Movement
- Remote Opn and Diagnostics
- Robotics / Manned/Unmanned

Future TWV System

Network Centric
- Movement Tracking /Situational Awareness
- Driver's Vision Enhancer
- C4ISR Integration

Force Sustainment
- Power Generation
- Water Generation

Operational Energy/Range
- Increased power train efficiency
- EPA emission compliant
- Fuel Efficiency
- Low Energy Signature/Batteries

Maintainability/RAM
- Improved Maintenance Ratio
- Faster Mean Repair Times
- Diagnostics/Prognostics

Training
- Built in Training Capability

Mobility
- Improved Ride Quality
- Improved Ride Limiting Speeds
- All Wheel Steer

Distribution
- Multifunctional Intelligent Load Handling System (ILHS)
- Capable of one-person operation

iTWV Training…

Current Effort

- ODS to CDT

CDT MRAP Variant (CDT/MV)

Interchangeable Vehicle Cabs

CDT 6-DOF Motion Base STS

Future Effort

- Platform embedded
- Built-in
- Integrated
- Interactive

Summary

- We Are Living In Demanding Times; After Years Of Ramping Up Production To Unprecedented Rates, We Have Entered The Perfect Storm... Budget Decline, Recovering Economy, Persistent Conflict . . .
- Ensure Efficient Use of Limited Resources
- We Need to Use Facts/Data and Discipline in Making Decisions
- Continue to Pursue Industry/Organic Base Partnerships that Leverage Core Competencies
- Leverage Innovation and Good Business Practices in Government, Industry, and Academia
- Continue to RESET/RECAP the Current Fleet while Developing Future Vehicles
- Maintain Competitive Environment

- **Optimize** the Present – **Imagine** the Future – **Invent/Innovate** our way forward

Questions

SPEARHEAD OF LOGISTICS

PROGRAM EXECUTIVE OFFICE
CSCS
First to the Field... Last to Leave
COMBAT SUPPORT & COMBAT SERVICE SUPPORT

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