PEO CS&CSS
Organization and Geography

PM Tactical Vehicles (TV)
Warren, MI
- PM HTV
- PM MTV
- PM LTV
- PM Trailers

PM Force Projection (FP)
Warren, MI
- PM BRIDGING
- PM RECOVERY
- PM CE/MHE

PM MEO
Fort Belvoir, VA
- PM AWS
- PM PAWS
- PM FSS
- PM SKOT

PM PSR
Fort Belvoir, VA
PM MEP
- PM Tape- Measuring Equipment
- PM PSE
- PM TMDE

PM Measurement, Electric Power, & Protection (MEP²)
Fort Belvoir, VA

PM FSS
Fort Belvoir, VA
PM SKOT

PEO/PM Liaison
(DA Systems Coordinators)

MA
Natick, MA

Huntsville, AL

Warren, MI

Rock Island, IL

Fort Belvoir, VA

Washington, DC
Technology Challenges
Force Projection

- **Army Watercraft**
  - Sea State 3 capability for Modular Causeway Systems (MCS)

- **Bridging**
  - Composite bridging material for induction into Rapidly Emplaced Bridging System (REBS) and Dry Support Bridge (DSB)

- **Commercial Off-The-Shelf Construction and Materials Handling Equip.**
  - Improved C130 Transportability
  - Electromagnetic Environmental Effects (E3) and High Altitude Electromagnetic Pulse (HEMP) requirements
  - Tier 3 EPA non-road emissions standards (a commercial requirement)

- **Force Sustainment**
  - Smart airdrop systems using GPS, autonomous control, software integration with USAF Precision Airdrop System (PADS)
  - Alternative construction technologies and materials for parachutes that will broaden the industrial base and provide systems that are less costly and easier to maintain
Technology Challenges

Force Projection (Cont.)

Petroleum and Water Systems

- Lightweight liquid containers (500-3000 gal) – Dept. of Transportation approved
- Packaged water concepts to replace bottled water
- Innovative water generation technologies (from air, exhaust, etc.)
- New liquid transfer technologies for movement of liquids over long distances (100-600 miles)
- Next generation water purification technologies
- New liquid storage concepts to replace large fabric tanks (200,000 gal and larger)

Sets, Kits, Outfits, and Tools

- Affordable technology to automate the inventory and accountability of tool kits and shop sets in the field
Tactical Vehicle
Product Managers

Light Tactical Vehicles

Heavy Tactical Vehicles

Medium Tactical Vehicles

Trailers

FTTS
Technology Challenges
Tactical Vehicles

**Wheeled Vehicles**
- Integrated Cargo Handling
- Improved Mobility
- Improved Fuel Efficiency
- Armor/Mine Protection
- Weight Reduction
- Embedded Prognostics/Diagnostics
- Survivability Improvements
- C4ISR

**Tactical Trailers**
- Improved Mobility
- Improved Sustainability
- Improved Transportability
- C4ISR
Measurement, Electric Power, & Protection
Product Managers

Mobile Electric Power
- Small USMC
- Medium ARMY
- Large USAF

Physical Security

Test, Measurement, & Diagnostics
Technology Challenges
Measurement, Electric Power & Protection

Mobile Electric Power
- Fuel Cell Reformation (Diesel/JP-8)
- Cogeneration Systems (Electric Power & Environmental Control)
- Hybrid Systems to enable Silent Watch
  - Solar Cell/High Energy Density Storage
  - Thermoelectrics to recharge batteries
- Advanced Power Electronic Systems
  - Matrix Converters
  - Alternative Topologies
  - Protective circuit designs against reactive load applications
  - Vehicle-based recharging using wind & solar
- Advanced Distribution technologies
  - Intelligent Power management devices
  - Software development
  - Simpler, Soldier-Portable Power Grid (components, cables, switching, etc.)
  - Military applications of DC distribution – Study
Technology Challenges
Measurement, Electric Power & Protection

Mobile Electric Power (Continued)

- Advanced Combustion technologies for 500-2000W applications
  - Catalytic Ignition of diesel fuel in low compression engines
  - Wetstacking reduction
  - JP-8 burner technology to support direct energy conversion technologies (Thermophotovoltaics, Thermoelectrics, Thermionics, etc.)

- Materials advancements to reduce system signature (noise, IR, EMI) and Size & Weight, and to improve Performance

- Advanced Energy Storage technologies
  - Rotary UPS technology
  - Flywheel storage systems
  - Studies to optimize energy storage systems

- Displays and Control Panels for Extreme Environments (-65F to 140F)
Technology Challenges
Measurement, Electric Power & Protection

Physical Security Equipment
- Low Cost Ground Sensors (Seismic Acoustic, Omni-directional PIR, Imaging)
- Low Cost Non-Intrusive Biometric Identification
- Low Cost Explosive Detection
- Low Cost Monostatic Laser Break Beam
- Low Cost Trailer-Based Sensor Platforms
  - Imager/Radar Pairing
  - Integrated with Unmanned Ground Sensors

Test, Measurement, and Diagnostic Equipment
- Evolve automated maintenance and diagnostics capabilities to predictive maintenance
- Internal Combustion Engine (ICE) kit weight reduction
  - A single pressure transducer with acceptable error to cover the current three ranges –30 inches Mercury (Hg) to +25 PSI, 0-1 KPSI, 0-10 KPSI.
  - Wireless communication for both analog and digital data bus.
The PEO CS&CS establishes its Homeland Security Cell to be the Department of Homeland Security’s single point of entry into the U.S. Army’s acquisition structure, essentially to be the Materiel Developer of choice.
Summary

- The PEO is open to innovative ideas and concepts
- The PEO remains relevant in Army Transformation

http://peocscss.tacom.army.mil/