



Program Executive Office Soldier

PRECISION
is the Standard

Every Ounce Matters, Every Bullet Counts

PEO Soldier

Joint Advanced Planning Brief to Industry

November 6, 2019

Mr. Ross Guckert
Deputy Program Executive Officer Soldier



PEO Soldier

Mission, Vision & Priorities

Mission

Rapidly deliver agile/adaptive, leading edge Soldier capabilities in order to provide combat overmatch today and be more lethal tomorrow.

Vision

Be the world's premier capability provider for the Integrated Soldier and Squad weapons platform.

Priorities

- 1. Deliver Capability**
- 2. Take Care of Our People**
- 3. Develop a Culture of Innovation**





PEO Soldier Major Activities

As of: 1 October 2019

PM Soldier Lethality

Individual Weapons



Crew-Served Weapons



Next Generation Weapons

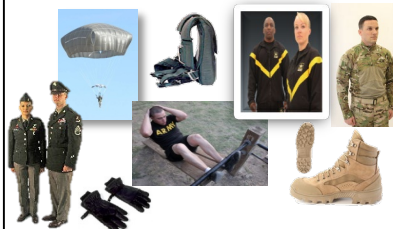


PM Soldier Survivability

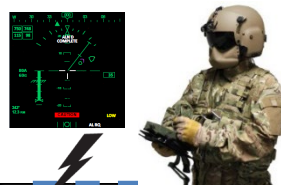
Soldier Protective Equipment



Soldier Clothing & Individual Equipment



Air Warrior



PM Soldier Maneuver & Precision Targeting

Soldier Maneuver Sensors



Soldier Precision Targeting Devices



PM Close Combat Squad

Ground Soldier Systems



Soldier Integration Facility (SIF)



PD Rapid Equipping Force

C-UAS



Tactical ISR



Electronic Warfare



COP/FOB Force Protection



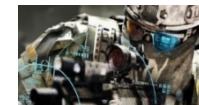
PM Integrated Visual Augmentation System



Synthetic Training Environment



Heads-Up Display (HUD) 3.0

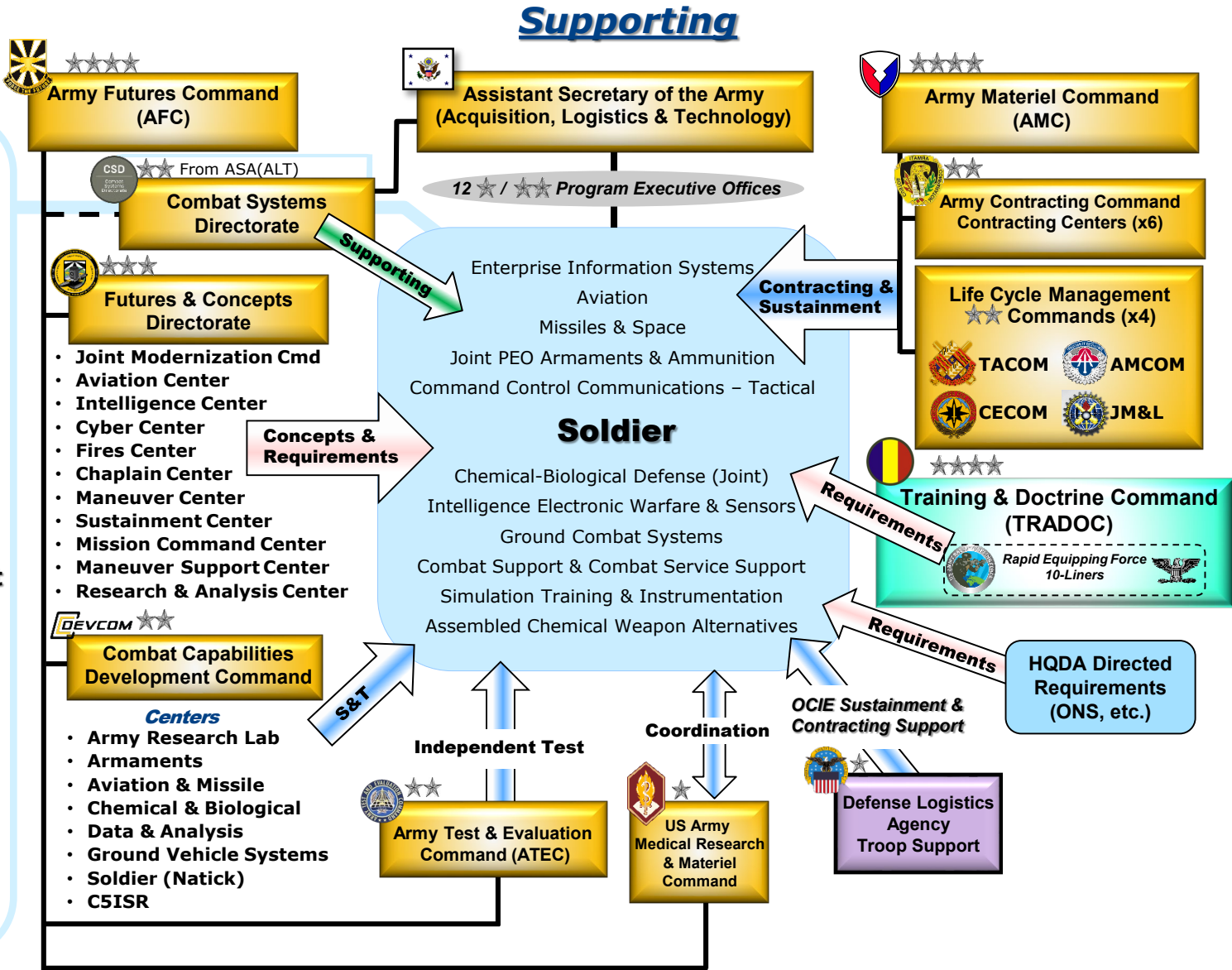




Army Materiel Enterprise (AME)

Supported CFTs

- Soldier Lethality**
- Network**
- Long Range Precision Fires**
- Next Generation Combat Vehicle**
- Future Vertical Lift**
- Air & Missile Defense**
- Synthetic Training Environment**
- Assured PNT**





Adaptive Squad Architecture

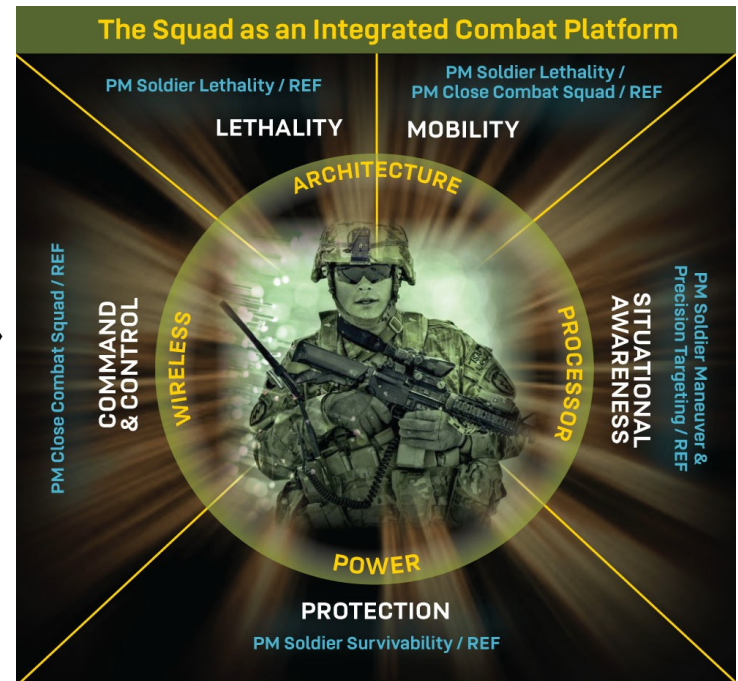
Need to go from this...



- 85+ items/components
- 122 lbs. of kit
- Redundant power sources
- Connected with cables

Adaptive Squad Architecture is government-owned, collaboratively developed architecture that documents all existing and future Soldier/Squad variations, including all interface controls between Soldier/Squad systems and external systems.

...to this!



ASA enables systematic modernization and quantitative assessment of new capabilities on the overall effectiveness of Soldiers/Squads



Treating the Squad as a Major Weapons Platform

Value of Adaptive Squad Architecture (ASA)

- Applies a systems engineering approach to the Soldier & Squad
- Centralizes Power & Processing
- Defines common standards & interfaces
- Drives down SWaP, creates efficiencies
- Fosters innovation within Industry
- Essential to Integration & Interoperability



Capability Set Example



ISW	Intra-Soldier Wireless
IVAS	Integrated Visual Augmentation System
IHPS	Integrated Helmet Protection System
ITN	Integrated Tactical Network
NGSW	Next Generation Squad Weapons
FC	Fire Control
FWS-I	Family of Weapon Sights-Individual
EUD	End User Device (Nett Warrior)
SBS	Soldier Borne Sensor
UHMA	Universal Helmet Mount Assembly

Value of Integrated Capability Sets

- Rapid Target Acquisition (RTA) ("Offset" Shooting)
- Rapid Distribution of Digital SA & Targeting Data
- Fight, Rehearse and Train with one "system"
- Fielded as a system with Integrated Training
- Targeting & SA (wide & small FOV) simultaneously
- Common Operating Picture across Squad
- Increased Lethality thru shared, enhanced Artificial Intelligence/Augmented Reality
- Wireless Movement of Data around Soldier & across Squads
- Shared Squad Level ISR
- Opportunities to Combine Capabilities & Reduce Form Factors (USG provides infrastructure & architecture; industry provides compliant capability at reduced cost)



Optimizing the Close Combat Squad

Soldier Integration Facility (SIF)
(Fort Belvoir, VA)

WALK



Integrate Technical Systems
Adaptive Squad Architecture (ASA)
Squad Performance Model (SPM)

CRAWL

**Soldier/Squad Performance
Research Institute (S2PRINT)**
(Natick, MA)



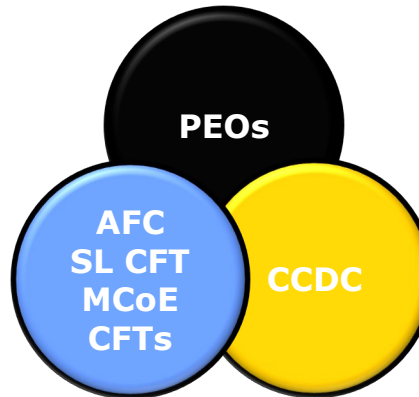
Validating Performance & Training Approaches
Monitoring and Assessing Soldier and Tactical
Readiness and Effectiveness (MASTR-E)

RUN

BattleLab
Enabled by EXFOR unit
(Fort Benning, GA)



Operational Validation
DOTMLPF Analysis
Test & Experiment, M&S
Evaluate





How Can Industry Help?

■ **LETHALITY**

- Weapons: Extending the life of the weapon (lubricants, surface treatments, barrel linings)
- Intelligent Rail Technology: Integrated power and data
- Fire Control: Range, resolution, accuracy, environmental ballistic solution, delayed trigger); improved plastics and manufacturing techniques of plastics to replace glass lenses for weight reduction (molded aspheres)

■ **SITUATIONAL AWARENESS (*Goggles and HUD*)**

- Power: Advanced battery chemistries (anode, cathode, electrolytes, etc.); S/W management, E-textiles; conductive charging
- Resolution, FOV, Augmented Target Recognition, accuracy
- Reduced latency
- 3D modeling and rendering
- Innovative materials to drive down weight
- Low power sensors (IR, low light)
- GPS-denied solutions



How Can Industry Help?

- ***TRAINING/HUMAN PERFORMANCE***

- Sensors for biomarkers to monitor cognitive and physical state
- Neuro-stimulation tools and nutrition

- ***MOBILITY***

- Exoskeleton

- ***SURVIVABILITY***

- Ballistic and Blast Protection: Maintain/Increase protection while reducing weight and considering mobility
- Organization Clothing and Individual Equipment (OCIE): Reduced signature (IR, VIS, etc.); protection from the elements; better integration



PEO Soldier Online



PEO Soldier Website

peosoldier.army.mil

PEO Soldier Blog

peosoldier.armylive.dodlive.mil



Flickr

flickr.com/peosoldier



Facebook

facebook.com/peosoldier



Vimeo

vimeo.com/peosoldier



Twitter

twitter.com/peosoldier