Expediting Capabilities to the Soldier: Requirements to Fielding

LTG Michael A. Vane (Panel Chair)
MG Nickolas G. Justice
BG Peter N. Fuller
Mr. Kevin Fahey
Mr. Charles E. Dean

21 Apr 2010
Operational Adaptation through Affordable Modernization

LTG Michael A. Vane
Deputy Commanding General, Futures, and Director, Army Capabilities Integration Center
US Army Training and Doctrine Command

21 Apr 2010
What We Need Army Forces To Do

- Respond to a broad range of threats and challenges
- Operate under increasing uncertainty and complexity, most often in decentralized operations
- Defeat hybrid threats
- Conduct effective reconnaissance operations to develop the situation
- Perform wide area security operations
- Overcome sophisticated anti-access technologies
- Integrate combined arms, joint, interagency, & multi-national capabilities
- Build Partner Capacity and provide Security Force Assistance
- Consolidate gains and sustain efforts over time

...operationally adaptive...
Lessons Learned

- Stay linked to the “Edge”
- Modernization is across DOTMLPF
- Must adapt faster than the enemy
- Accelerated methods work
- Must stay grounded in current fight
- Deliberate process too slow
- Institutional Army lags
- Risk and value added important for decisions
Operational Adaptability through Affordable Force Modernization

Establish baselines

Innovate – when opportunities meet needs

Learn, adapt, learn, adapt...

Converge experimentation, exercises, and testing

Soldiers earlier

Establish constraints

Cost / Benefit

Risk

Speed matters

Buy fewer, more often
Concepts to Capabilities...

Rolling 2 Year cycle
Developments - Resourcing - Acquisition

• Experiment
• War game
• Analyze
• Evaluate
• Integrate
  by/with/thru
  Centers of Excellence

 versatile mix ...tailorable ...networked ...rotational cycle... sustained flow of ready forces for full spectrum opns ...hedge against unexpected ...sustain all-volunteer force

Capabilities to Joint Force Commanders
• organizations of
• well-trained soldiers
• possessing right skill sets
• with superior equipment
• employing sound doctrine
• led by competent and confident leaders who understand their organizations’ potential
• and are empowered in combat by superior information
• supported by state-of-art facilities
U.S. Army Research, Development and Engineering Command

National Defense Industrial Association

Executive Seminar

21 April 2010

MG Nick Justice
Commander, RDECOM

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Industrial Age Meets Information Age
Organizing to Support the Warfighter

- Enterprise process applied to all RDECOM efforts for all timeframes (rapid, near, mid, and far term)

- System of Systems Engineering approach aligned to ARFORGEN
  - Task organized execution

- Common Operating Picture (COP) for RDECOM mission space:
  - Primary Interface to: TRADOC, LCMCs, PEOs, COCOMs, Army Leadership
  - Capability Needs: System Integration Domains (SIDs)
  - Technology Needs: Technology Focus Teams (TFTs)

Research for the Future, Design for Change
Keeping the Army on the Cutting Edge of Technology
PEO Soldier Overview
For NDIA Panel

Requirements to Fielding

21 April 2010

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PEO Soldier Mission

Operating Environment

Survivability

Lethality
Impacts to the Soldier
PEO Soldier Portfolio

≈ 468 Products/Programs

Lethality

Survivability

Operating Environment
Challenges

- Integration of capability
- Future funding profile
- Modernization vs. sustainment
- Early assessments of capability
- Think out of the box
Overview of Program Executive Office Combat Support & Combat Service Support

MR. KEVIN M. FAHEY
Program Executive Officer
Combat Support & Combat Service Support
PEO CS&CSS Organization

Program Executive Officer
Mr. Kevin Fahey

Deputy PEO
Mr. Thomas Bagwell, Jr.

Deputy PEO ~ AL&T
COL Michael Receniello

Chief of Staff / Executive Officer
Ms. Linda Reichlmayr

500+ Programs

Force Projection
PM: Ms. Patricia Plotkowski
DPM: Mr. Steve Roberts

Product Manager
Bringing
Mr. David Marck

Product Manager
Combat Engineer/Material Handling Equipment
LTC Darrell Dennis

Product Manager
Force Sustainment Systems
LTC Daryl Harger

Product Manager
Petroleum & Water Systems
LTC Daniel Mayfield

Product Director
Army Watercraft Systems
Mr. Fred Williams

Joint Combat Support Systems
PM: COL John Myers
DPM: Mr. Dennis Mazeurek

Product Manager
Joint Light Tactical Vehicles
LTC Wolfgang Petermann

Product Manager (USMC)
Joint Light Tactical Vehicles
LtCol Ruben Garza

Product Manager
Sets, Kits, Outfits & Tools
LTC Brian Tachias

Product Director
Test, Measurement, & Diagnostic Equipment
Mr. George Mitchell

Mine Resistant Ambush Protected Vehicles
PM: COL Kevin Peterson
DPM: COL Jeffrey Carr

Product Manager
MRAP - All Terrain Vehicle
LTC Coll Haddon

Product Manager
Joint Logistics
LTC John Conway

Product Manager
MRAP Vehicle Systems
LTC Andrew Oderkirk

Product Manager
Assured Mobility Systems
LTC Charles Dease

Tactical Vehicles
PM: COL David Bassett
DPM: Mr. Tony Shaw

Product Manager
Light Tactical Vehicles
Mr. Dennis Haag

Product Manager
Medium Tactical Vehicles
LTC Shane Fullmer

Product Manager
Heavy Tactical Vehicles
LTC Allen Johnson

Product Director
Armored Security Vehicles
LTC Kent Moorhouse
Closing the Gap from Need to POR

At best, we procure technologies that are already 7-10 years old at the time of LRIP

Charlie Dean
Industry Observations

Today’s requirements and funding processes need to be relooked to recreate a more aggressive, more combat-focused approach to support this immediate fight.

- Within the existing JCIDS process, requirement approval speed is far too slow and a completion timeline is not mandated above TRADOC. This can be greatly improved without changing DoD5000.

- Validated ONSs are looked at individually and do not systematically feed into TRADOC recognizing these needs as enduring Capability Gaps.

- TRADOC centers of excellence and industry are not habitually/systematically consulted in Army level ONS validation.

- Generally, no funding is systematically set aside to handle rapid test and fielding of Disruptive Technologies.

- “Supplementals are going away,” so how will quick wins be addressed in the future?

- Experimentation is not an accelerated path to fielding yet it is encouraged though expensive to Industry.

- PMs and Combat Developers often say: “The field is not asking for your demonstrated capability…” Result: little to no technology push to the field.
Forward Velocity of Competing Acquisition Systems

Likely equipped with new technologies in < 6 months from time of recognized need if funding is available.

Can be ONS equipped with limited quantities of new technologies within 1-2 years, at best, from time of recognized need if funding is available. Most of the force is not impacted by these new technologies until many years later when the technology might become a program of record.
Intel co-founder Gordon Moore was visionary. In 1965, his prediction, popularly known as Moore’s Law, states that the number of transistors on a chip will double about every two years.

How Can We Dramatically Close the Gap?

4 years!

Earliest Possible POM $$

Earliest POR Production

Moore's Pace of Technology Advancements

Testing Complete Production Starts

Unit ONS Approved w/ OCO $$

CBA and CPD Complete

Unit ONS Written

Earliest Possible POM $$

Earliest POR Production

Technology Need Recognized

Legend

JCIDS
ONS
How Can We Dramatically Close the Gap?

Requirements:
- In the interest of rapid acquisition and supporting the current fight, the Army could create a Rapid Requirement Process and mandate the total CBA to approved CPD timeline < 6 months total.
- Create windows along the CPD review and approval path for allowed updates for advances in technology so these CPD updates don’t require restarting the process from scratch.
- Consider assistance from Industry as partners/technical advisors to TRADOC centers of excellence so that draft requirements reflect near-term technical capabilities.
- Tie ONSs and groupings of ONSs to Capability Based Assessments to learn of and recognize current capability gaps. Review ONSs monthly within TRADOC for new or evolving capability gaps. ONSs are a current voice of the field Army.

Funding:
- Establish an aggressive program to fund getting current technologies into the fight in the absence of supplementals.
- Consider Wedges in all PM budgets for rapid acquisition of game-changing capabilities.

Technology Advances:
- All PMs should be leaders in their craft, not managers of a project, and should seek knowledge on advances, pushing this information to the field for input and possible fielding.
- All PMs should FIGHT to get improvement funding, shorten test timelines (same standards), and constantly improve the capability of their customers wherever and whenever they can.

Industry Can:
- Push to reduce developmental timelines by taking reasonable risks.
- Provide open feedback to PMs, RDECOM, and TRADOC on lessons learned and evolving capabilities.
- Better provide technical advice to TRADOC centers of excellence in order to educate on what is possible today as well as tomorrow.
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