Army Requirements and Vehicle Modernization

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US Army Training and Doctrine Command
Agenda

• TRADOC & ARCIC Overview

• The Future Operational Environment

• The New Army CAPSTONE Concept and WHAT we need the Army to do

• Where Combat Vehicle Modernization Fits….
   From Concept to Capabilities
   Wheeled Vehicle Strategy
   Combat Vehicle Strategy
Emerging Trends in the Operational Environment

Uncertainty
Location, Adversaries, Context, Duration

Increased Competition
Rising powers, organized militias, technology as a leveler

Hybrid Threats
Dynamic combinations of conventional, irregular, terrorist and criminal capabilities

Pace of Change
Exponential, not Arithmetic

Decentralization
Networked Forces, Dispersed Among the People

Military Power in the 21st Century will be defined by our ability to adapt
In a dynamic environment…

**Concepts:**
- Organize ideas about how we fight;
- Identify
  - problems to solve,
  - solution components,
  - and how those components work together;
- Account for DOTMLPF-C implications;
- Nest and support Joint Operations.

**Outcomes:**

*Concepts provide a foundation of warfighting assessments. They provide future focus for developing required capabilities for an integrated and networked force.*
2009 Army Capstone Concept

• Operationalize the CSA’s vision of balancing the Army
• Clearly articulate how the Army *thinks about* future armed conflict under conditions of *uncertainty* and complexity in an Era of Persistent Conflict
• Describe how the Army conducts operations as part of a Joint, Interagency, Intergovernmental & Multi-national (JIIM) team
• Use *grounded projections* to describe the broad range of capabilities the Army will require in 2016-2028 to apply finite resources
• Place modernization decisions in a broader context of future armed conflict
• Provide a conceptual *foundation* to guide future force development

Ultimately, the ideas that emerge will guide changes across DOTMLPF
Adapting Concepts to Capabilities...

Rolling 2 Year cycle
Developments - Resourcing - Acquisition

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

Army Capstone Concept
Ideas
Lessons Learned

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

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

Performance

Weight
Mobility
Transportability
Cost / Benefit

Payload

Protection

The fully burdened cost of trucks and vehicles
TWV Modernization Strategy...

FY10
Pres Bud

FY11-15
The POM Years

FY16-24
The EPP Years

Beyond the EPP

Divest Unarmored HMMWV

UAH Production

STOP*

UAH Competitive RECAP**

STOP

STOP

JLTV (RDTE)

M-ATV

FMTV LTAS Production

(Modernize/RECAP)

STOP

M35 Divest / M800 Divest/ M900 Divest

HEMTT Production

(A2 Modernize/RECAP)

PLS LTAS Production

(Modernize/RECAP)

M915A0/1
DIVEST

STOP

M915A5 Production

(Modernize/RECAP)

HET A1 Production

(Modernize/RECAP)

STOP

STOP

STOP

STOP

* Milestone Decision

= Decision Point
Ground Combat Vehicle...

Versatility
- Configuration and employment options
- Employed across full range of military operations
- Employed in combination with other vehicles
- Potential to adapt as technologies mature

Force Protection
- Blast protection equivalent to MRAP
- Base level protection scalable to threat and mission
- Ability to observe 360 degrees (closed or open hatch)
- Integrate improved protection measures when they mature
- Fire protection equal to or better than current platforms

Lethality
- Lethal self-protection to defeat like systems
- Hosts non-lethal systems

Mobility
- Negotiates complex urban terrain
- Cross country mobility
- First GCV increment mobility equal to Bradley

Sustainability
- Reduces the BCT sustainment burden
- Initial increment availability rate equal to Stryker
- Consumes 10% less fuel than current vehicles
- Exportable electrical power and battery charging

Network Integration & Interoperability
- Hosts the Army’s battle command network systems
- Growth potential in electrical and computing power
- Retains functionality with degraded networks
- Facilitates Soldier integration
- Enable employment of robotic systems

Ground Combat Vehicle Development & Deployment

- 2010
- 2017
- 2025
- XXXX

Upgrades
Sustainment
Divestiture
Developing a Combat Vehicle Strategy...

- 11-12
- 13-14
- 15-16
- 17-18
- 19-20
- 21-22
- 23-24
- 25-26
- ~ 2034

**GCV IFV (New)**

Bradley RESET
Divest of IFV Only

Bradley Block II (Non-IFV Variants) RESET

M 113
Divest

**STRYKER RECAP/RESET**
Upgrade/Modernize/RECAP

M1117 ASV / M1200 Knight
Reset / Production

**Abrams RECAP**
Upgrade/Modernize

= Increment Point

STOP
“…robotics offer the potential to deploy appropriate combinations of manned and unmanned systems to perform an increasing range of tasks”

(Army Capstone Concept)

Guiding Principles …

• Robotics enable the humans

• Humans should not have to accommodate

• Early user and technology developer collaboration

• Use “system of system” to measure effectiveness

• Get more from force structure; Cost / Benefit
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
- Motivate to Warfighter Outcome
- Speed matters

Buy fewer, more often
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