Welcome to the
Chattahoochee Valley / Ft Benning AUSA & MCoE
Industry Day 2017
Welcome
Administrative Remarks

• Badges & Tickets (see back of name badge)
• Administrative Announcements
  • Exits
  • Restrooms
• Please Turn Cell Phones to Silent!!
• Microphones – Throughout the Main Room
<table>
<thead>
<tr>
<th>Time</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0730-0900</td>
<td>Badge Pick Up / On Site Registration</td>
</tr>
<tr>
<td>0900-0910</td>
<td>Mr. Kmiecik CV / FB President Opening Remarks</td>
</tr>
<tr>
<td>0910-0920</td>
<td>GEN (R) Ham AUSA National Perspective and Comments</td>
</tr>
<tr>
<td>0920-1020</td>
<td>Mr. Kmiecik / MG Wesley CG, MCoE</td>
</tr>
<tr>
<td>1020-1030</td>
<td>Mr. Kmiecik / Mr. Stone MCoE/Industry Partnership</td>
</tr>
<tr>
<td>1030-1045</td>
<td>Break</td>
</tr>
<tr>
<td>1045-1145</td>
<td>Mr. Kmiecik / Panel Discussion MRD, SD, DOTD, BCT MC</td>
</tr>
<tr>
<td>1145-1200</td>
<td>Mr. Kmiecik / Mr. Davis Maneuver Battle Lab</td>
</tr>
<tr>
<td>1200-1300</td>
<td>Lunch</td>
</tr>
<tr>
<td>1300-1445</td>
<td>Mr. Kmiecik / COL Urquhart Breakout Session 1</td>
</tr>
<tr>
<td></td>
<td>Room 205: Mounted – Mobility, Protection and Lethality</td>
</tr>
<tr>
<td></td>
<td>Room 211: Mission Command</td>
</tr>
<tr>
<td>1445-1515</td>
<td>Break</td>
</tr>
<tr>
<td>1515-1700</td>
<td>Mr. Kmiecik / COL Urquhart Breakout Session 2 (repeat schedule of Breakout Session 1)</td>
</tr>
<tr>
<td>1700-UTC</td>
<td>AUSA Post Conference Reception Mr. Rocky Kmiecik</td>
</tr>
</tbody>
</table>

UNCLASSIFIED
AUSA CV/FB
Board of Directors

Rocky Kmiecik
Chapter President

Steve Hesler
VP Industry Relations

Ricky Young
VP Soldier Programs

Vacant
First Vice President

Lynda Morgan
VP Family Programs

George Desario
VP Soldier Programs

Dan Barnett
Treasurer

Perry Roberts
VP Membership

Ed House
VP at Large

Melissa House
Secretary

Bob Mahar
VP Operations/Industry Day
AUSA CV/FB
Chapter Activities & Soldier Support

18% - AWARDS PROGRAMS
Unit Programs
JROTC & ROTC Awards

31% - SOLDIER & FAMILY ACTIVITIES
Santa’s Castle & Elf Run
Club Beyond / Military Young Life
Multiple Scholarships

51% - UNIT ACTIVITIES
Army 10k Sponsorship
Armor & Infantry Schools
Local School & PTO Support
NIM & NACHF
Industry – MCoE Partnership Activities
AUSA CV/FB
Chapter Corporate Members

• 4K Solutions, LLC
• AM General
• American Rheinmetall Systems, LLC
• ARCCO, Inc.
• BAE Systems, Land & Armaments
• Booz Allen Hamilton
• CMI USA
• Columbus Bank & Trust Co.
• Columbus Hospice, Inc.
• Columbus Water Works
• EBCO Battery Company
• Garryowen, LLC
• General Dynamics – OTS
• Greater Columbus Chamber of Commerce
• Hutchinson Industries
• Lockheed Martin
• Military Systems Group
• National Armor and Cavalry Heritage Foundation
• Orbital ATK
• Rafael USA, LLC
• Raytheon
• Robinson, Grimes and Company P.C.
• Rocky Kmiecik, LLC
• SAIC
• SOAR-C Inc.
• Textron Systems
• US Cavalry and Armor Association
AUSA CV/FB
2016 Benning Night Sponsors

Platinum Level
Textron – CMI – Raytheon

Gold Level
BAE

Silver Level
General Dynamics OTS – Orbital ATK – Lockheed Martin

Bronze Level
Greater Columbus Georgia Chamber of Commerce

2017 Benning Night Sponsor Letter – Coming Soon
GEN Carter F. Ham, USA Ret.
President & Chief Executive Officer, AUSA
MG Eric J. Wesley

Commanding General
U.S. Army Maneuver Center of Excellence
Maneuver Force Modernization Strategy

Informed by the Campaign of Learning

Operational and Organizational Concepts
CVMS Execution Plan
Soldier and Squad Modernization Strategy
Training and Leader Development (POIs, TDAs)
Critical Science and Technology
Doctrine Development

Maneuver Force Modernization Strategy
Integrates concepts, Science and Technology to drive DOTMLPF-Solutions

Training and Leader Development

Doctrine Development

Critical Science and Technology

Operational and Organizational Concepts

CVMS Execution Plan

Soldier and Squad Modernization Strategy

Training and Leader Development (POIs, TDAs)

Critical Science and Technology

Doctrine Development

THINK ➔ LEARN/ANALYZE ➔ IMPLEMENT

Modernization Methodology

Army Operating Concept

Movement and Maneuver Concept

Maneuver Force Modernization Strategy

Informed by the Campaign of Learning

Operational and Organizational Concepts
CVMS Execution Plan
Soldier and Squad Modernization Strategy
Training and Leader Development (POIs, TDAs)
Critical Science and Technology
Doctrine Development

Cross-PEG POM Decisions
Strategic Portfolio Analysis Review

Near (now - 2025)
Mid (2026 - 2035)
Far (2036 - 2050)

Divest
Sustain (Enduring)
Delay/Reduce (Trade-off)
Invest/Accelerate (New)

Future Force

Current Force

UNCLASSIFIED
Maneuver Force Modernization Strategy

1973 Starry Study

1978 Battlefield Development Plan

Arab-Israeli War 1973

D: 1976 FM 100-5 Active defense
D: 1982 FM 100-5 (AirLand Battle)
D: 1986 FM 100-5 (AirLand Battle)
O: 1986 Division 86
TL: 1981 "Army Training 1990"
TL: 1979 (National Training Center Opens)
M: 1975/76 "Big 5" Prototypes (Abrams, Patriot, Blackhawk, Apache, Bradley (MLRS))

D: 1976 FM 100-5 Active defense
D: 1982 FM 100-5 (AirLand Battle)
D: 1986 FM 100-5 (AirLand Battle)
O: 1986 Division 86
TL: 1981 "Army Training 1990"
TL: 1979 (National Training Center Opens)
M: 1975/76 "Big 5" Prototypes (Abrams, Patriot, Blackhawk, Apache, Bradley (MLRS))

UNCLASSIFIED

Maneuver Center of Excellence - Team of Soldiers, Families, and Civilians from the Best Army in the World!
Maneuver Force Modernization Strategy

Ensuring Readiness and Building the Future Maneuver Force

D: 1976 FM 100-5 Active defense
D: 1982 FM 100-5 (AirLand Battle)
D: 1986 FM 100-5 (AirLand Battle)
O: 1986 Division 80
TL: 1979 (National Training Center Opens)
M: 1975/76 “Big 5” Prototypes (Abrams, Patriot, Blackhawk, Apache, Bradley (MLRS))

1973 Starry Study
1978 Battlefield Development Plan

Arab-Israeli War 1973

Modernization Methodology

Movement and Maneuver Concept

Maneuver Force Modernization Strategy

Integrates concepts, Science and Technology to drive DOTMLPF-P Solutions

THINK -- LEARN/ANALYZE -- IMPLEMENT

Informed by the Campaign of Learning

Operational and Organizational Concepts

CVMS Execution Plan

Soldier and Squad Modernization Strategy

Training and Leader Development (POIs, TDAs)

Critical Science and Technology

Doctrine Development

Cross-PEG POM Decisions

Strategic Portfolio Analysis Review

Sustain (Sustaining)
Call off/Reduce (Tradesoff)
Invest/Accelerate (New)
Divest

Future Force

Unmanned (Near)

Next War (Far)

Modernization Methodology

2017 Multi-Domain White Paper

2017 RNGW Study

Ukraine 2014-Present

Maneuver Center of Excellence - Team of Soldiers, Families, and Civilians from the Best Army in the World!
Thoughts for Industry

Planning Considerations:

- Abrams, Bradley or Stryker and current formations remain relevant in the near-mid terms. Next Generation Combat Vehicle (NGCV) FUE between 2030-2035
- ECPs on current platforms scoped as necessary to leverage resources until NGCV fielding (single platform/family)
- ECPs and new starts must meet the desired capabilities outlined in the AFC-MM and inform the NGCV – lighter, deployable, less power, carry infantrymen/robots
- Critical Enabling Technology Focus Areas (4+1):
  - Directed Energy and Energetics
  - Power Generation and Management
  - Advanced Armor Material Solutions
  - Vehicle Protection Solutions
  - Maneuver Robotics and Autonomy

Collaboration Efforts:

- Bring new ideas, industry sees things we at MCOE/Army don’t
- Team with us for Technology Demonstrations
- Help with writing requirements that lend to flexibility and needed specificity (MPF)
- NGCV

UNCLASSIFIED
Mr. Jim Stone

Industry Day and Quad Chart ROE
Implications of the OE

What Will Happen...

OE 2030-2040: Challenged Deterrence, Contested Domains, Lethal Battlefield, Degraded Operations, Complex Terrain

- Transregional “hybrid” threats in varying OEs (Air-Maritime; Land; Land-Air; all within cyber and space)
- Actions occur in all domains quickly and often times simultaneously
- The range of actors and availability of mass communications on the battlefield increase complexity
- Hyperactivity challenges ability of EAB commanders to manage pace and tempo of actions in the OE
- Communications becomes degraded for periods of time
- Battlefield becomes more lethal, fluid, and dispersed challenging sustainment, mission command, and Intelligence development
- Battlefield frameworks and operations assume more nonlinear constructs
- Decision making is either decentralized to allow for rapid adaptation to changes in the OE or opportunities are lost
Movement and Maneuver Functional Concept

BLUF: As part of the Joint Force, Army forces deploy and transition rapidly from expeditionary movement to cross-domain maneuver with combined arms formations that operate semi-independently, enabled by mission command, to conduct joint combined arms operations and seize, retain, and exploit the initiative; defeat enemy forces; and achieve operational objectives consistent with national objectives.

4 Components of the Solution:

- Conduct Cross-Domain Maneuver
- Operate Semi-independently
- Conduct Continuous Integrated Reconnaissance and Security Operations across domains and echelons
- Realize Mission Command

EAB HQs:
- Manage campaigns and transitions;
- Integrate reconnaissance and security operations;
- Create shared understanding;
- Synchronize operations and shape OE for BCTs;
- Organize sustainment operations;
- Organize theater level consolidation of gains activities to create sustainable outcomes consistent with national objectives.
Help Us to Help You

- Use the Quad Chart Format
- Use Adobe PDF file for submission of QUAD
- Limit 1 recommended solution per PDF file, do not group multiple recommendations within the same PDF file
- Include recommendation title in the subject line of the e-mail
- Business Development Consultants: Specify which companies you represent on which programs
Quad Chart Format

Capability Name:

Description: provide a brief description of the Capability. Include Technology Readiness Level (TRL).

Operational Description: Identify how and where the proposed solution will be employed and who will employ it (i.e. echelon, individual operators, staffs, etc.) to address what capability. Include battlefield system interrelationships and dependencies.

Contact Information: Provide the full name and address of the organization submitting the proposed solution. Identify the Business Development POC and Subject Matter Expert POC as required. Provide the name, e-mail address, and phone number of each for follow up.
Quad Chart Timeline

- CV/FB AUSA Industry Day 12 April 17
- Quad Charts due to MCoE NLT 12 May 17

  Email: usarmy.benning.mcoe.mbx.industry-day@mail.mil

- Quad Chart Tier Ranking complete 11 August 17
- Industry notified of Quad Tier Ranking 25 August 17
- AUSA Annual Meeting and Exposition 9-11 October 17
Quad Chart Tiers

- Tier I: Outbrief to the MCoE CG at AUSA National Conference
- Tier II: Outbrief to the Division Director
- Tier III: Outbrief to the Requirement Branch Chief
- Tier IV: This is our requirement area, but does not meet our required capability set
- Tier V: This is not our requirement area; POC to alternate Center of Excellence provided

Tier Definition: The briefing path selected to best facilitate communication with the MCOE
10 Minute Break
<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>0730-0900</td>
<td>Badge Pick Up / On Site Registration</td>
</tr>
<tr>
<td>0900-0910</td>
<td>Mr. Kmiecik CV / FB President Opening Remarks</td>
</tr>
<tr>
<td>0910-0920</td>
<td>GEN (R) Ham AUSA National Perspective and Comments</td>
</tr>
<tr>
<td>0920-1020</td>
<td>Mr. Kmiecik / MG Wesley CG, MCoE</td>
</tr>
<tr>
<td>1020-1030</td>
<td>Mr. Kmiecik / Mr. Stone MCoE/Industry Partnership</td>
</tr>
<tr>
<td>1030-1045</td>
<td>Break</td>
</tr>
<tr>
<td>1045-1145</td>
<td>Mr. Kmiecik / Panel Discussion MRD, SD, DOTD, BCT MC</td>
</tr>
<tr>
<td>1145-1200</td>
<td>Mr. Kmiecik / Mr. Davis Maneuver Battle Lab</td>
</tr>
<tr>
<td>1200-1300</td>
<td>Lunch</td>
</tr>
<tr>
<td>1300-1445</td>
<td>Mr. Kmiecik / COL Urquhart Breakout Session 1</td>
</tr>
<tr>
<td></td>
<td>Room 205: Mounted – Mobility, Protection and Lethality</td>
</tr>
<tr>
<td></td>
<td>Room 211: Mission Command</td>
</tr>
<tr>
<td>1445-1515</td>
<td>Break</td>
</tr>
<tr>
<td>1515-1700</td>
<td>Mr. Kmiecik / COL Urquhart Breakout Session 2</td>
</tr>
<tr>
<td></td>
<td>(repeat schedule of Breakout Session 1)</td>
</tr>
<tr>
<td>1700-UTC</td>
<td>AUSA Post Conference Reception Mr. Rocky Kmiecik</td>
</tr>
</tbody>
</table>

UNCLASSIFIED
BG Peter L. Jones

Infantry School Commandant
U.S. Army Maneuver Center of Excellence
Panel Discussion

Text Your Questions To:

762-215-2606
Mounted Requirements

COL William Nuckols, Director
Ted Maciuba, Deputy Director
Mounted Requirements


Heavy Systems

Chief: MAJ Lance Leonard
Phone: 706-545-5625

Deputy Chief, Abrams/NGCV
Marty Plummer
Phone: 706-545-7844

Stryker/MMS:
Don Brophy
Phone: 706-545-8588

Light Systems

Chief: MAJ Matt Johnson
706-626-2897

Deputy Chief, MRAP/JLTV:
Tom Stafford
706-545-4701

MPF/LRV/GMV:
Al Howard
706-545-1915

Enabling Systems

Chief, MRAS/VPS:
MAJ Alan Stephens
706-545-4542

AMPV/IFV/VPS:
Mark Andrews
Phone: 706-545-1715

Ammo/FLIR:
Kent Evans
Phone: 706-545-0126
Mounted Requirements Portfolio

- Combat Vehicles
  - Next Generation Combat Vehicle (NGCV)
  - Armored Multipurpose Vehicle (AMPV)
  - Abrams
  - Bradley
  - Stryker
  - Mobile Protected Firepower (MPF)
  - Light Reconnaissance Vehicle (LRV)
  - Ground Mobility Vehicle (GMV)
- Vehicle Protection Suite
- Cross Domain Dominance
  - Artificial Intelligence and Autonomy
  - Sensor Fusion
- Large and Medium Caliber Lethality
- Maneuver Robotics and Autonomous Systems (MRAS)
- Tactical Vehicles
  - Mine Resistant Ambush Protected (MRAP)
  - MRAP All Terrain Vehicle (MATV)
Cross Domain Dominance

- Combat actions occur in all domains quickly and often times simultaneously
- Communications become degraded for extended periods of time
- Battlefield frameworks and operations assume more nonlinear constructs
- Decision making is either decentralized to allow for rapid adaptation to changes in the OE or opportunities are lost

Big 4 + 1

- Directed Energy and Energetics
- Power Generation and Management
- Advanced Armor Material Solutions
- Vehicle Protection Solutions
- Maneuver Robotics and Autonomy

“Collectors and Effectors”

- Beyond Traditional CV Considerations
  - Mobility
  - Lethality
  - Protection
- Cyber
- Space ↔ Ground
- Electromagnetic Spectrum
Soldier Division and TCM-Soldier represent every Soldier in the Army. We are the user representative to the TRADOC Commander. We develop and manage capabilities for everything a Soldier wears, carries or consumes.
SD and TCM-Soldier represent every Soldier in the Army. We are the user representative to the TRADOC CDR. We develop and manage capabilities for everything a Soldier wears, carries or consumes.
Soldier Division Portfolio Programs

Lethality

**Individual Weapons**
- M9/M11 & XM17
- M4/M4A1
- Lt/Med MGs
- SDM Wpn

**Crew-Served Weapons**
- Heavy MGs
- Fire Control, CSW (M240L, Grenade Launcher?)
- Fire Control, Sniper
- Precision Sniper Rifle (PSR)
- Fire Control, Spotting Scope
- M2010 (.300 Win Mag)
- M107

**Mortars**
- 81mm Automated Direct/Indirect Fire Mortar (ADM)
- HE Guided Mortar (HEGM)
- Mortar Fire Control (MFC)
- Javelin
- AT4 Family, Individual Assault Munition (IAM)

**Rockets, Missiles, Bursting Weapons**
- Javelin
- Multi-Purpose, Anti-Personnel, Anti-Armor Weapon System (MAAWS)

**Sensors, Night Vision, & Lasers**

**Situational Awareness**
- Leader Smart Sight
- Future Gen Smart SA Devices

**Weapon Sights**
- FWS-Individual, Crew Served, Sniper
- Future Gen Smart SA Devices

**Limited Visibility Devices**
- AN/PVS-7
- ENVG
- AN/PVS-14

**Soldier Protection**
- ESAPI/ESBI Dir Rqt/ Vital Torso (SPS)
- Jungle Ensemble
- Modular Cold/Extreme Cold Glove System
- E-PH TACTICAL HELMETS
- MCEP RFI / IHPS (SPS)
- Jungle Combat Boots
- Cold/Extreme Cold Weather System
- MFF Parachutist Environmental Kit

**Body Armor**
- ACH/LW ACH/ Head Protection System (SPS)
- MCEP RFI / IHPS (SPS)
- Jungle Combat Boots
- Cold/Extreme Cold Weather System
- MFF Parachutist Environmental Kit

**OCIE**
- Advanced Clothing / Equipment Systems
- MFF Parachutist Environmental Kit
- Cold/Extreme Cold Weather System
- MFF Parachutist Environmental Kit

**Parachutes**
- Advanced Emergency Ballistic Parachute
- Maneuverable Canopy = 6
- Parachute Auxiliary Items
- T-11 Parachute
- Rapid Equipping Force (REFP)
- Soldier Enhancement Program (SEP)

**Hearing Protection**
- TCAPS

**Rapid Acquisition**
- drones
- unmanned vehicles
- advanced weapons systems
- advanced communication systems
- advanced sensor systems

**Robotics & Autonomous Systems**

**Small Unit Power**
- Squad Power Manager (SPM)
- Conformal Wearable Battery
- E-MUBC

**Integrated Soldier Power/Data System (ISPDS)**

**MANEUVER CENTER OF EXCELLENCE - Team of Soldiers, Families, and Civilians from the Best Army in the World!**
# Soldier Requirements and TCM – Soldier Division

## Initiatives & Investments

### Increasing Soldier and Squad Lethality
- Networked Lethality
- Soldier and Squad Weapon Systems
  - Increased Chamber Pressure & Velocity
  - Achieve greater effective range
  - Enhanced Families of Ammunition
- Application of lethal effects on NLOS targets
- Counter Defilade Capability
- Reduction of Soldier Load- Physical & Cognitive
- Fire Control Solutions

### Maximize Soldier Protection
- Reduction of Soldier Load- Physical
- Reduction of Soldier Signature
- Scalable Protective Solutions
- Lighter & Harder Material Solutions

### Maximize Soldier Mobility
- Force Projection and Rapid Deployment
- Reduction of Soldier Load- Physical & Cognitive
- Robotic and Autonomous System Solutions
- Network Enabled Soldiers
  - Mobile Handheld Computing Environment
  - Information Systems (and Applications)
  - Enhanced SA/SU
  - Soldier Borne Sensors
- Operating in Denied Environments
- Small Unit Power Generation
- Power Source Streamline

---

**Evolutionary -vs- Revolutionary**
MCoE Industry Day

Directorate of Training and Doctrine
Industry Day 2017

Panel Session

Dr. Jay A. Brimstin
Deputy Director, DOTD
(706) 545-8437
jay.a.brimstin.civ@mail.mil

Chris K. Jaques
Chief, Individual and Systems Training Division, DOTD
(706) 545-5209
christian.k.jaques.civ@mail.mil

UNCLASSIFIED
### Directorate of Training and Doctrine

#### MISSION STATEMENT

Develop doctrine and training products, programs and services to enhance the combat effectiveness of the current and future Maneuver Force

#### Future Capabilities & Requirements

<table>
<thead>
<tr>
<th>Focus Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trainability</td>
</tr>
<tr>
<td>• Learnability</td>
</tr>
<tr>
<td>• Usability</td>
</tr>
<tr>
<td>• Retainability</td>
</tr>
<tr>
<td>• Reduced NET footprint (Measure of Effectiveness for Trainability)</td>
</tr>
<tr>
<td>• Evolvement from Integrated Training Environment (ITE) to Synthetic Training Environment (STE)</td>
</tr>
</tbody>
</table>

### FUNCTIONS

| • Doctrine & Collective Training Division: |
| - FMs and ATPs |
| - Collective Tasks and Combined-Arms Training Strategies (CATs) |
| - Manages development and conversion of publications & GTAs to eBooks for mobile devices |
| - All Army direct fire weapon system training strategies |

| • Leader Development Division: |
| - Programs of Instruction and Lesson Plans |
| - Army Learning Model implementation |
| - Digital apps & Interactive Multi-media Instruction (IMI) |

| • Individual & Systems Training Division |
| - Individual Tasks for 11 and 19 series MOS |
| - System Training Plans (STRAPs) |
| - Integrated Training Environment |
| - CIED MTTs and Training |
| - Program Evaluation Office |
DOTD Focus Areas 2017

Focus Area #1: The future force requires a mature artificial intelligence (AI) training capability that allows for inexpensive but robust simulations, OE and culturally realistic avatar (enemy, non-combatant, friendly, etc) interactions with “virtual humans,” and tactically sound reaction of AI forces.

Focus Area #2: The future force requires an Augmented Reality (AR) capability in live and virtual future training environments.

Focus Area #3: The future force requires adaptive learning capability to meet the learning demands of the individual and leader.

Focus Area #4: The Army will pursue advances in human sciences for cognitive, social, and physical development and emphasize engineering psychology and human factors engineering in the design of weapons and equipment.
Mission Command Overview
COL Carl Bergmann
TCM BCT Mission Command
Mission Command Capabilities

• TCM Brigade Combat Team (BCT) Mission Command works with:
  – Mission Command CoE
  – Cyber CoE
  – Materiel developers from ASA(ALT)

• Our focus is capability development and integration of mission command systems/functions and network transport from the BCT perspective
  – Command Post
  – Mounted Mission Command
  – Dismounted Mission Command

• Formation Centric
  – Armored BCT
  – Infantry BCT
  – Stryker BCT
• Command Posts (CP)
  – Battalion and BCT
  – Mobile, scalable, and survivable
  – Capable of supporting expeditionary operations
• Common Operating Environment (COE)
  – Standards for development
  – CP Computing Environment (CE)
  – Mounted CE
  – Mobile Handheld CE
• Coalition Interoperability with Tactical Radios

Interoperability across CEs enables mission command
Panel Discussion

Text Your Questions To:

762-215-2606
Overall Classification of this brief is: **UNCLASSIFIED**

**Agenda**
- Experimentation Campaign
- AEWE 2017 Outcomes
- AEWE 2018 Objectives
- 2025 Maneuver Force Context
Centerpiece of the Army Prototype Experimentation Effort
AEWE 2017 Outcomes

- EXSUM Covers 23 Capabilities and Concepts Impacting the Force
- 23 Requirements Documents Informed
  - 2 Capability Based Assessments
  - 1 Initial Capability Document
  - 11 Capability Development Documents
  - 9 Capability Production Documents
- 1 Capability Recommended for Immediate Availability
  - NSN Recommendation (Shoulder Fired Laser System)
- 2 Technologies Transitioned to Joint Warfighting Assessment
- 2 Capabilities Inform Joint Research Efforts
  - Joint Service Small Arms Program (Stabilized Weapons)
  - HQMC – Networked Squad Weapons
F2025 Maneuvers, FY17-22 Themes

MDB Dev
Inform 2017
JWG
MDB 2036 & Vision of Future Conflict
UQ
Joint Combined Arms 2036 & ACC
AWC
End to End Force Projection

Refine 2019
JWG
Alternative Futures 2040 +
UQ
Alternative Forces 2040 + VoFC
AWC

Implement 2020
JWG
Alternative Strategies 2040 + ACC
UQ

Timeframe

2022

O&O Dev
MDB
AOC Ph 0-5 2036
AFC / WIF 2036+
O&Os 2036 Explore
O&Os 2036 Confirm

ARCIC Themes
O&O Dev
MDB

UC

COE Themes
Freedom of Maneuver
Deny Enemy Freedom of Action
Cross Domain Fires O&Os
Cross Domain Maneuver
Urban Areas O&Os
MDB Capstone Event

UC

2036 & ACC

2036

2036+

2050

2030

2017

2018

2019

2020

2021

2022

TCM Concept

AFC-MM

BCT SWG

VPS

Mounted and Soldier Capabilities SIMEX Series

Next Generation Combat Vehicle Campaign

Science and Technology
Iterative Development Small Unit Modernization Concepts & Technology

JWA

Lethality 3rd Dimension Fight Demand Reduction

18.1

19.1

20.1

21.1

22.1

2017

2018

2019

2020

2021

2022

JWA

Robot Breach [Crawl] ICW JWA 18.1 + ALPA FA

Robot Breach [Walk] Reduce Risk to JWA 20.1 Cross Domain AEWE

Robot Breach [Run] @ JWA 20.1 Cross Domain JWA

Extend Tacnet Operational Energy Small Unit Expeditionary

(TBD)

2018

UNCLASSIFIED
AEWE / JWA LINKAGE

**THEMES**
- 2017: Freedom of Maneuver
- 2018: Deny Enemy Freedom of Action
- 2019: Cross Domain Fires
- 2020: Cross Domain Maneuver
- 2021: Urban Areas O&Os
- 2022: MDB Capstone Event

**JWA**
- 2017: AWA
- 2018: 18.1
- 2019: 19.1
- 2020: 20.1
- 2021: 21.1
- 2022: 22.1

**AEWE**
- 2017
- 2018
- 2019
- 2020
- 2021
- 2022

**Directed Technical Objectives**
- Crawl: Robot Breach ICW JWA 18.1 and ALPA Focused Assessment
- Walk: Robot Breach Risk Reduction Effort in support of JWA 20.1
- Run: Robot Breach execution @ JWA 20.1

**Focus Areas**
- 2017: Improved 40mm
- 2018: Breaching Munitions
- 2019: Demand Reduction
- 2020: 3rd Dimension Fight
- 2021: Tactical Decon
- 2022: Small Unit CUAS/Detection
- 2018: UAS Load Bearing/Sensors
- 2019: Precision Fire Enhancement
- 2020: Vehicle Protection/Warning
- 2021: Energy and Sustainment
- 2022: Extend Tactical Net
- Operational Energy
- Small Unit Expeditionary Capability
AEWE 2018 Capabilities Selected

**Combined Arms Maneuver**

**Lethality Enablers**
- Shoulder Launched Munition Improvements
- Telescopied Weapons and Ammunition
- Advanced 40mm Optics
- Small Unit Counter-UAS capabilities

**Maneuver Support Enablers**
- Solid State Active Denial Capability
- Caseless Telescoping Non-Lethal Technology
- Mine Detection with Tethered Drone
- Robotic Breaching Technology
- 40mm Door Breach Munition

---

**Sustainment**

**Small Unit Water Purification**
- Expedient Purification and Testing Capability
- Air-to-Water Technology
- Reusable Water Treatment Bag

**Unmanned Load Bearing Capabilities**
- UGV
- UAS

**Operational Energy**
- Solar Energy Collection and Storage

---

**Mission Command**

**Situational Understanding/Situational Awareness**
- Improved Soldier Borne Sensors
- Heads Up Visual Interface Technology
- Nett Warrior Futures and Leader Tools
- Laser Warning for Combat Vehicles
- Man Portable Hostile Detection Technology
- Threat UAS Detection
- Foreign Language Translation Applications

---

**Tactical Network**

**Precision Fires Chain**
- MAFIA/LRAS/UAS Integration

**Extend the Network**
- Tactical Radio COMSAT interface
- PLI over Iridium Relay Technology
- Tethered Aerial RETRANS/ISR capability
- Multi-Channel Analog Voice Bridge