Command Update

COL Thomas I. Saltysiak
Chief of Staff
Combat Capabilities Development Command
KEY POINTS

• Effective 3 FEB, RDECOM became the Combat Capabilities Development Command (CCDC) under Army Futures Command (AFC)

• CCDC is the Army’s premier organization for the cornerstones of modernization within AFC: science, technology and engineering

• Our scientists and engineers produce outputs that shape Army concepts, enable realization of modernization priorities and support readiness to meet requirements today and a more lethal future force tomorrow

• We are maintaining a stable balance of S&T investments across the near, mid and far time horizons to posture the future force, in support of Multi Domain Operations

• Within AFC, CCDC will deliver scientific knowledge for future concepts to define requirements; discover, develop and integrate overmatch capabilities soldiers need; and provide technology and engineering expertise for Combat Systems to deliver for warfighters

• Collaboration with industry, academia, DoD labs, and our international allies is essential
NEW ARMY STRUCTURE

FORCES COMMAND
- FORSCOM is the FORCE PROVIDER of the Army
- FORSCOM trains, prepares a combat ready, globally responsive Total Army Force of U.S. Army Soldiers to build and sustain Army readiness to meet combatant command (COCOM) requirements

TRAINING & DOCTRINE COMMAND
- TRADOC is the ARCHITECT of the Army
- TRADOC recruits and trains the Army of today and designs, acquires, and builds the Army of the future

ARMY MATERIEL COMMAND
- AMC SUSTAINS the Army
- AMC provides materiel readiness by equipping and sustaining the force

ARMY FUTURES COMMAND
- Army Futures Command MODERNIZES the Army for the future
- Futures Command integrates the future operational environment, threat, and technologies to develop and deliver future force requirements, designing future force organizations, and delivering materiel capabilities

- AFC was established July 2018 with full operational capability July 2019
- AFC will be the fourth Army Command and is tasked with driving the Army into the future to achieve clear overmatch in future conflicts
- RDECOM transitioned from the Army Materiel Command to the AFC on 3 February 2019, becoming the Combat Capabilities Development Command (CCDC)

- CCDC brings to AFC a robust enterprise presence of strategic partnerships
- International collaboration, forward elements and scientist exchanges enable the Army to perform technology search in order to understand the global state of the art, to find and develop the best capabilities in the world
Army Futures Command Task Organization

Mission: Effective immediately, AFC leads a continuous transformation of Army modernization in order to provide future warfighters with the concepts, capabilities, and organizational structures they need to dominate a future battlefield.

Establishing and maintaining unity of effort, purpose & prioritization across the Future Force Modernization Enterprise

FUTURES AND CONCEPTS

- DCG, Futures & Concepts
- Deputy/CoS
- Staff G3/5/7
- CDIDS (x9) Future OE
- Directorate of Concepts
- Directorate of Requirements Integration
- JMC
- TRAC

COMBAT CAPABILITIES DEVELOPMENT

- CG, Combat Capabilities Development Command
- HSI
- DtCG
- DCG
- CoS
- Staff

- Army Research Laboratory
- Aviation & Missile
- Armaments
- C5ISR

- Chemical Biological Data & Analysis
- Ground Vehicle Systems
- Soldier

COMBAT SYSTEMS

- Director, Combat Systems
- Staff
- Oversight
- PEOs (x10)

- Develop understanding of the FOE and threat
- Develop concepts and requirements through iterative experimentation and prototyping
- Mature technology
- Allocate resources
A VISION TO BUILD THE FUTURE TOGETHER

ON A FUTURE BATTLEFIELD

…a young company commander looks back to 2018 and thanks the Army’s Leadership for having the courage to reorganize the Army and stand up Army Futures Command because he/she was just part of the last battle of a short, sharp, successful joint campaign against a near-peer nation state.

And the thing that young company commander is most thankful for is that he/she had the tools necessary to dominate in the unforgiving crucible of ground combat and bring every last Soldier home to the families that trust us with the lives of their sons and daughters.
ORGANIZATION

U.S. ARMY FUTURES COMMAND

CSM Jon R. Stanley

MG Cedric T. Wins

BG Vincent F. Malone II

DIR HSI

Dr. Michelle R. Sams

DCG CCDC

BG Vincent F. Malone II

CCDC AMERICAS

Research Forward Element
Ft. Sam Houston, TX

CCDC ATLANTIC

Research Forward Element
Stuttgart, Germany

CCDC PACIFIC

Research Forward Element
Ft. Shafter, HI

-preeminent leaders in research, development and engineering-

Dr. Phil Perconti

CCDC – Army Research Lab
Director

Mr. John Hedderich

CCDC – Armaments Center
Director

Dr. Juanita Christensen

CCDC – Aviation & Missile Center
Director

Mr. Patrick O’Neill

CCDC – C5ISR Center
Director

Dr. Eric Moore

CCDC – Chemical Biological Center
Director

Mr. Douglas Tamilio

CCDC – Soldier Center
Director

Mr. Jeffery Langhout

CCDC – Ground Vehicle Systems Center
Director

Mr. James Amato

CCDC – Data & Analysis Center
Director
VISION AND MISSION

MISSION

To provide the research, engineering, and analytical expertise to deliver capabilities that enable the Army to deter and, when necessary, decisively defeat any adversary now and in the future.

VISION

To be the scientific and technological foundation of the Future Force Modernization Enterprise, through world-leading research, development, engineering, and analysis.
A more ready and modern Army resulting from collaborative research, development, engineering and transition of capabilities to the Warfighter that provide overmatch against current and future threats.
MISSION CAPABILITIES

AVIATION & MISSILE CENTER
- Airframe Structures
- Rotors & Rotor Systems
- Sensors and Seekers
- Guidance, Navigation, and Control
- Propulsion
- Counter-UAS
- Visualization
- Anti-Access/Area Denial
- Missile Defense

ARMY RESEARCH LABORATORY
- Extramural Basic Research
- Computational Sciences
- Materials Research
- Sciences-for-Maneuver
- Information Sciences
- Sciences for Lethality and Protection
- Human Sciences
- Assessment & Analysis
- Advanced Computing & Big Data
- Agile Manufacturing
- Synthetic Biology

ARMAMENTS CENTER
- Munitions Systems & Technologies
- Integrated Weapon Systems
- Energetics, Warheads & Manufacturing
- Guidance, Navigation & Control
- Fuze & Precision Armament Technology
- Cross Domain Fires

C5ISR CENTER
- Mission Command
- Tactical and Deployed Power
- Tactical Cyberspace Operations
- Electronic Warfare
- Intelligence, Surveillance, Reconnaissance and Targeting
- Network
- Prioritize Position Navigation and Timing (PNT)
MISSION CAPABILITIES

CHEMICAL BIOLOGICAL CENTER
- Chemistry and Biological Sciences
- CB Agent Handling and Surety
- CBRNE Materiel Acquisition
- CBRNE Analysis and Testing
- CBRNE Munitions and Field Operations

SOLDIER CENTER
- Advanced/ Multifunctional Materials
- Biomechanics
- Cognitive & Behavioral Sciences
- Food Science
- Geographic/ Precision Guided Systems
- Soldier Performance Optimization
- Biological Technology
- Neuro-cognition

DATA & ANALYSIS CENTER
- Certified Item Level Performance Data
- Models, Simulations, & Tools
- Life-Cycle Systems Analysis
- Vulnerability / Lethality Technical Analysis
- Soldier-Centered Performance Design Analysis

GROUND VEHICLES SYSTEMS CENTER
- Ground Vehicle Survivability
- Autonomy-Enabled Systems
- Vehicle Electronic Architecture
- Ground System Software
- Ground Vehicle Power & Mobility
- Robotics/Autonomous Systems
- Combat Vehicles
- Advanced Protection Systems
S&T WORKFORCE

14,279 CIV/MIL Workforce

General Engineering (27%)
Mechanical Engineering (15%)
Electronics Engineering (13%)
Computer Engineering (7%)
Aerospace Engineering (5%)
Computer Science (6%)
Chemical Engineering (2%)
Chemistry (3%)
Electrical Engineering (3%)
Physical Science (2%)
Physics (2%)
Materials Engineering (2%)
Biology (1%)
Psychology (1%)
Industrial Engineering (1%)

Military 1%
Scientists and Engineers ~37%
Contractors ~46%
Civilians ~53%

Over 26,000 Military, Civilians, and DoD contractors executing 75% of Army S&T to empower, unburden and protect the Warfighter.

**46% Contractor Workforce based on workforce total to include CIV/MIL/CTR not based on 14,113 CIV/MIL total**

As of 28 FEB 19

Approved for Public Release
**FY18 PROGRAM $6.820B**

*AS OF 20 SEPTEMBER 2018*

**CCDC FY18 Program:**

- **$6.820B**

**Reimbursable:**

- $3,354M (49%)

**Other Appropriations:**

- $460M (7%)

**RDT&E: $3,007M (44%)**

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
<th>Percentage</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.1</td>
<td>Basic Research</td>
<td>60% Industry</td>
<td>33% Universities/Industry</td>
</tr>
<tr>
<td>6.2</td>
<td>Applied Research</td>
<td>28% In-House</td>
<td>33% Industry</td>
</tr>
<tr>
<td>6.3</td>
<td>Adv. Technology Development</td>
<td>10% In-House</td>
<td>53% In-House</td>
</tr>
<tr>
<td>6.4</td>
<td>Adv. Component Development and Prototypes</td>
<td>10% In-House</td>
<td>14% OGA, Other</td>
</tr>
<tr>
<td>6.5</td>
<td>RDTE Management Support</td>
<td>10% In-House</td>
<td>90% Industry</td>
</tr>
<tr>
<td>6.6</td>
<td>Operational System Development</td>
<td>16% In-House</td>
<td>84% Industry</td>
</tr>
</tbody>
</table>

*Percentages based on Army portfolio - Data as of 31 Aug 2018*
National footprint of supporting locations enables development of materiel solutions.
Enabling Army Modernization Around the World with Our Service Components, Allies and Partners
ARMY MODERNIZATION PRIORITY INVESTMENTS

LONG RANGE PRECISION FIRES
- LC-Term
- Extended Range Cannon Artillery
- Precision and Cooperative Weapons (GPS Denied)
- UTAH
- LBASM

NEXT GEN COMBAT VEHICLES (NGCV)
- Autonomy Architecture
- Lethality Architecture
- Vehicle Protection Architecture
- Power Architecture
- Vehicle Electronic Architecture

FUTURE VERTICAL LIFT (FVL)
- Joint Multi-role Demonstrator
- Advanced Teaming for Tactical Aviation Operations
- Air Launched Effects
- Aviation Survivability

NETWORK/C3I
- Protected SATCOM
- Cyber Operations
- Electronic Warfare
- Non-Traditional Waveforms
- DOD PNT M&S Development
- Network Sensors
- NAVWAR

AIR & MISSILE DEFENSE
- Low Cost Extended Range Air-Defense (Lower AD)
- Ballistic Low Altitude Drone Engagement (BLADE)
- Accurate Rapid Controlled Hybrid Effects Round
- Next Generation Fires Radar Technologies

SOLDIER LETHALITY
- Next Generation Squad Weapon (NGSW)
- Integrated Visual Augmentation System (IVAS)
- Monitoring & Assessing Soldier Tactical Readiness and Effectiveness (MASTR-E)
- One World Terrain (OWT)
- Live training

S&T Investment Alignment with Army Modernization Priority
POM19 & POM20

89% of 6.2 funding aligned to Army Modernization Priorities
99% of 6.3 funding aligned to Army Modernization Priorities
Moved over $1B RMD in ‘19 – ’23; $800M in ‘20 – ’24
## MODERNIZATION PRIORITIES

### INTEGRATION

- Long Range Precision Fires
- Next Generation Combat Vehicle
- Future Vertical Lift
- Network C3I & A-PNT
- Air & Missile Defense
- Soldier Lethality

### Centers

- **ARMAMENTS CENTER**
- **C5ISR CENTER**
- **AVIATION & MISSILE CENTER**
- **SOLDIER CENTER**
- **CHEMICAL BIOLOGICAL CENTER**
- **ARMY RESEARCH LABORATORY**
- **GROUND VEHICLE SYSTEMS CENTER**
- **DATA & ANALYSIS CENTER**

**CCDC CFT Lead**

**CCDC Modernization Priority Investment**