U.S. Army Analysis &
Center for Army Analysis (CAA)
Overview

Dr. Wm. Forrest Crain
Director, CAA
What kind of “analysis” are we talking about?

- **Ends:** Analyses as part of the Army and Joint leaders’ decision-making processes to:
  - Organize, man, train, equip, sustain, station, and resource the Army
  - Inform policy decisions and conduct strategic, operational, and tactical operations

- **Ways:** Assist decision makers in solving complex problems by producing analysis and logical reasoning necessary to inform and underpin those critical decisions.
  - Assessments
  - Force structure and force generation
  - Force capability requirements
  - Wargaming and campaign analysis
  - Risk analysis
  - Resource analysis (stationing, acquisition portfolios, etc.)
  - Geospatial analysis

- **Means:** Operations Research Systems Analysis (ORSA)
  - Military: Functional Area 49 officers
  - Civilian: Career Program 36, Series 1515 analysts
  - “Contract”: Fully-Funded R&D Center, Academia, Commercial
The Army Analytic Community

Chart shows ORSA positions--Military Functional Area 49 and GS Series 1515. Many other Army civilians perform analysis in job series such as 301, 801, 1520, 1521, 1529, 1530, & 1531.

Army analysis community is very decentralized. Study houses provide specialized resources for the whole Army.
Major Army Analysis Organizations

- **TRAC** - Battlefield Operations - Organizational Design & Force Effectiveness. Small Units up to Corps.
- **ATEC** - Test and Evaluation

- **CAA**, **TRAC**, and **AMSAA** collaborate to provide the Army an effective, responsive, in-house analysis capability.
- **ATEC** provides essential information to acquisition decision-makers.
- The Army calls on RAND, USMA, DUSA-TE, DASA-CE, USAMAA, and others to answer a variety of questions.
- Study resources are managed by the Army G-8, Army Studies Program Management Office.
• CAA is a Field Operating Agency of the Deputy Chief of Staff, G-8.

• Vision: CAA is recognized authority on the independent analysis of land warfare interests in a joint and combined context.

• Mission: CAA conducts decision support analysis across the spectrum of conflict, in a Joint, Interagency, Intergovernmental, and Multinational (JIIM) context to inform critical senior level decisions for current and future national security issues.
The Center for Army Analysis

Director, CAA

Deputy Director for Modeling and Simulation
- Simulation Proponent & School
- M&S Strategy and Resources

Chief of Staff
- Chief Information Officer (CIO)
- Strategic Analysis Integration Division
- Deputy Chief of Staff
- G-Staff

Technical Director
- Campaign Wargaming
- Force Strategy
- Strategic Wargaming
- Operations Analysis
- Campaign Analysis
- Resource Analysis
- Strategic Studies
- Deployment & Enablers
- Forward Analytic Support Team (FAST)
- Strategic Partners

Education
- Doctorate 6%
- Masters 68%
- Bachelors 26%
CAA Forward Engagement

Enduring CAA Support: 147 Deployments, 22 Supported Commands, 62 man-years

Battle Rhythm
- Biweekly CAA Current Operations Meeting
- Biweekly CENTCOM led Afghan Assessments SVTC
- Reachback as required

Selected Subjects
- Assessments
- Force generation
- Force capability requirements
- Wargaming
- Risk analysis
- Data / Information / Knowledge Management
- Geospatial support

NATO RS AAG: NATO Resolute Support Afghan Assessment Group
SOCOM-OGP: Special Operations Command – Operation GALLANT PHOENIX
USAFRICOM: US Africa Command
USARAF: U.S. Army Africa
USAREUR: U.S. Army Europe
USEUCOM: U.S. European Command
USPACOM: U.S. Pacific Command
USARNORTH: U.S. Army North
USANCA: U.S. Army Nuclear and Countering Weapons of Mass Destruction Agency
Over the last 5 years:

- 52% of studies, primarily programmatic analyses, conducted in support of HQDA, particularly HQDA G3/5/7 & G8.
- 17% of studies, primarily OPLAN-related analyses, conducted in support of combatant commands.
- 16% of studies, primarily current operations related, conducted in support of deployed joint/combined headquarters.
- 6% of studies, a mix of OPLAN and current operations related, conducted in support of Army Service component commands.
- 9% of studies conducted in support of other Army, DoD, Joint organizations.

CAA’s study program focuses on the major issues facing Senior Army Leaders in both the operational and institutional Army.

Supporting both the Operational and Institutional Force
CAA’s Force Structure Analysis

Support for Strategic Analysis
- Current Operations
- Homeland Surge Events
- Other Events
- Foundational Activities

Demand
- Today
- +10yrs
- +20yrs

Confirmation Of Apportioned Forces’ Capability To Achieve Campaign Objectives
- Surge Scenarios’ Apportionment & CONOPS

Campaign Analysis
- Campaign Outcomes That Impact
- Quantification of Supporting Enablers

Deployment Analysis
- Apportioned Units’ Arrival Schedule

Force Generation Analysis
- Force Generation Analysis
- Demand For Units (Apportioned & Enabler SRCs) For Each Surge Scenario

Enabler Analysis
- TAA 15-19 – US Army
- 248,577
- 231,280
- 175,811
- 147,763
- 87,393

Deployment Analysis
- Surge Scenarios’ Force Flow

Rotational Depth: Supply of Forces Necessary to Meet All Scenarios’ Deployment Demands
- Rotational Utilization: Capacity of Fixed Supply to Meet All Scenario Deployment Demands
CAA has the current capability, expertise, and experience to provide analysis through wargaming, simulation, and Table Top Exercises (TTXs) to support GCCs, ASCCs, Operational Joint Commands, the Army, and others.
CAA’s Institutional Analysis

**Stationing Analysis**
- Maintain the tools, data, and expertise to conduct stationing analysis to support senior leader decisions.
- Includes both operational and institutional organizations.
- Analyzes installation’s ability to support DoD and Army strategic goals.

**Institutional Analysis**
- Maintain the tools, data, and expertise to conduct institutional analysis to support senior leader decisions for current and future national security issues.

**ASA-IEE**
- European Infrastructure Consolidation
- Base Realignment & Closure (BRAC)
- Reimbursable Tenants on Army Installations

**HQDA**
- ABCT Stationing (G-3/5/7)
- SFAB Stationing (G-3/5/7)
- Enduring Bases Policy & Doctrine (ACSIM)
- Fuel Distribution & Storage
- IMCOM Manpower Rqts
- Component Analysis for Rate of Entry
- Warrior Transition Unit – Forecast Model Update

**Arlington National Cemetery Projects**
Delivered Analyses: High Impact Studies

<table>
<thead>
<tr>
<th>Year</th>
<th>Recipient</th>
<th>Study</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>G-3/5/7 &amp; CSA</td>
<td>“Coach’s Cards”</td>
<td>CSA used at CJCS Nov ‘15 wargame; operational risk assessment</td>
</tr>
<tr>
<td>2015</td>
<td>G-3/5/7 &amp; CSA</td>
<td>Sustainable Readiness</td>
<td>CSA briefed it at Senior Leader Readiness Forum</td>
</tr>
<tr>
<td>2015</td>
<td>DCG, USARPAC</td>
<td>OPLAN Fratricide</td>
<td>Identified problems and solutions for force structure and sourcing of simultaneous plans</td>
</tr>
<tr>
<td>2016</td>
<td>DepSecDef</td>
<td>Scenario 7 “Start Conditions”</td>
<td>Force posture and budget implications</td>
</tr>
<tr>
<td>2016</td>
<td>DepSecDef</td>
<td>NATO Fires</td>
<td>NATO strategy and OSD program</td>
</tr>
<tr>
<td>2016</td>
<td>VCSA</td>
<td>AoA Process Improvement</td>
<td>Reduced time, improved senior leader decision opportunities</td>
</tr>
<tr>
<td>2016</td>
<td>G-3/5/7</td>
<td>TAA (Campaigns, Early Deployers, Enablers, Force Generation)</td>
<td>“Shape” of the Army, primarily enablers and COMPO mix for early deployers; changes based on emerging threats</td>
</tr>
<tr>
<td>2016</td>
<td>G-3/5/7 &amp; CSA</td>
<td>Scenario 7 Campaign</td>
<td>CSA’s assessment of risk</td>
</tr>
<tr>
<td>2016</td>
<td>G-3/5/7</td>
<td>Simultaneity TTX</td>
<td>G-3/5/7 used at CJCS Sep ‘16 wargame; operational risk assessment</td>
</tr>
<tr>
<td>2016</td>
<td>G-3/5/7 &amp; CSA</td>
<td>Operational Demand Analysis</td>
<td>Input to CSA’s Senior Leader Readiness Forum</td>
</tr>
<tr>
<td>2016</td>
<td>G-3/5/7 &amp; VCSA</td>
<td>LRRDPP-GC</td>
<td>VCSA briefed at DMAG</td>
</tr>
<tr>
<td>2016</td>
<td>G-3/5/7</td>
<td>Generating Force</td>
<td>NCFA recommended that Congress require it</td>
</tr>
<tr>
<td>2016</td>
<td>G-3/5/7</td>
<td>Military Value Analysis</td>
<td>Stationing priorities for gains/losses</td>
</tr>
<tr>
<td>2016</td>
<td>G-8</td>
<td>Nat’l Com. on the Future of the Army</td>
<td>Impacted many of NCFA’s 63 recommendations</td>
</tr>
<tr>
<td>2016</td>
<td>ASA(I&amp;E)</td>
<td>Non-Army Tenants</td>
<td>Identified $millions in potential gains for the Army budget</td>
</tr>
<tr>
<td>2016</td>
<td>ASA(I&amp;E)</td>
<td>Installation Readiness Analysis</td>
<td>Impact on II PEG priorities</td>
</tr>
<tr>
<td>2016</td>
<td>CIO/G-6</td>
<td>Operational Data</td>
<td>Improved JMDs and data systems for JTFs</td>
</tr>
<tr>
<td>2016</td>
<td>CoS, OCAR</td>
<td>Reserve PACs</td>
<td>Revision to RPAC structure</td>
</tr>
<tr>
<td>2016</td>
<td>DCOM, EUCOM</td>
<td>EUCOM Wargame I</td>
<td>Plan development</td>
</tr>
<tr>
<td>2016</td>
<td>JS, EUCOM</td>
<td>EUCOM Wargame II</td>
<td>Plan development</td>
</tr>
<tr>
<td>2016</td>
<td>DCOM, PACOM</td>
<td>PACOM Resiliency</td>
<td>Plan development</td>
</tr>
<tr>
<td>2016</td>
<td>DCOM, PACOM</td>
<td>PACOM Dynamic Basing</td>
<td>Plan development</td>
</tr>
<tr>
<td>2016</td>
<td>Cdr, USARPAC &amp; SC</td>
<td>USARPAC SCO TTX</td>
<td>$400M in budget; cross-domain fight</td>
</tr>
<tr>
<td>2016</td>
<td>Cdr, RESOLUTE SPT</td>
<td>RESOLUTE SPT Wargame</td>
<td>Commander employed for Afghan Program of Record, and strategic input for next administration</td>
</tr>
<tr>
<td>2016</td>
<td>CENTCOM J2</td>
<td>Data Science for Network Prosecution</td>
<td>Identified $10B in illicit funds</td>
</tr>
<tr>
<td>2017</td>
<td>CSA</td>
<td>Sustainable Readiness 2017</td>
<td>Informed CSA Comments to GOs at SLRF</td>
</tr>
<tr>
<td>2017</td>
<td>CDR, USAREUR</td>
<td>Landpower Fight in Europe Wargame 2017</td>
<td>Insights for continued OPLAN development</td>
</tr>
</tbody>
</table>

As of 21 Aug 17
Discussion
• The U.S. Army Modeling and Simulation Office (AMSO) is the Army’s Enterprise-level organization for modeling and simulation policy, coordination and workforce management.

• Vision: An Army that effectively and efficiently employs modeling and simulation capabilities and tools, within and across all Army organizations, in support of both the Operating and Generating Forces.

• Mission: The Army Modeling Simulation Office
  • Develops the strategy and policy for Army Modeling and Simulation Enterprise
  • Executes effective governance and resource management through leadership and synchronization
  • Leads coordination of the Army modeling and simulation enterprise and cross-community areas including Joint, Intergovernment, Interagency, and Multinational environments, Industry and Academia
  • Trains, Educates and Manages the Army Analysis, Modeling & Simulation M&S Workforce (Military and Civilian)

Coordinates and Synchronizes $11.9B over the 16-20 POM & executes lifecycle management for 550 FA57 officers and 2300 CP36 DACs
Synchronization of Army Analytic Community (SAAC)

- CAA led, monthly, forward-looking synchronization meeting with senior-level leaders from across Army analytic organizations to identify gaps, redundancies, and collaboration opportunities.

- Participating organizations include:

<table>
<thead>
<tr>
<th>Organization</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRAC</td>
<td>TRADOC Analysis Center</td>
</tr>
<tr>
<td>AMSAA</td>
<td>U.S. Army Materiel Systems Analysis Activity</td>
</tr>
<tr>
<td>USAWC</td>
<td>U.S. Army War College</td>
</tr>
<tr>
<td>ARL SLAD</td>
<td>U.S. Army Research Laboratory</td>
</tr>
<tr>
<td>ARL SLAD</td>
<td>Survivability/Lethality Analysis Directorate</td>
</tr>
<tr>
<td>AMC FSC</td>
<td>U.S. Army Materiel Command Forward Support Cell</td>
</tr>
<tr>
<td>ASPMO</td>
<td>Army Study Program Management Office</td>
</tr>
<tr>
<td>SMDC/ARSTRAT</td>
<td>U.S. Army Space and Missile Defense Command/</td>
</tr>
<tr>
<td>AMSAA Strat Partner</td>
<td>U.S. Army Forces Strategic Command</td>
</tr>
<tr>
<td>AMSAA Strat Partner</td>
<td>AMSAA Strategic Partner to Assistant Secretary of</td>
</tr>
<tr>
<td>G-1/PR</td>
<td>the Army for Acquisition, Logistics, and Technology</td>
</tr>
<tr>
<td>G-8/CIA</td>
<td>Deputy Chief of Staff, G-8, Capabilities Integration</td>
</tr>
<tr>
<td>G-8/FDA</td>
<td>Deputy Chief of Staff, G-8, Warfighting Analysis</td>
</tr>
<tr>
<td>G-8/PA&amp;E</td>
<td>Deputy Chief of Staff, G-8, Program Analysis</td>
</tr>
<tr>
<td>USMA</td>
<td>Deputy Chief of Staff, G-1, Plans &amp; Resources</td>
</tr>
<tr>
<td>ARCIC</td>
<td>U.S. Army Capabilities Integration Center</td>
</tr>
<tr>
<td>ARCYBER</td>
<td>U.S. Army Cyber Command</td>
</tr>
<tr>
<td>IDA</td>
<td>Institute for Defense Analyses</td>
</tr>
<tr>
<td>RAND</td>
<td>RAND Corporation (Research And Development)</td>
</tr>
<tr>
<td>MITRE</td>
<td>MITRE Corporation</td>
</tr>
<tr>
<td>CAA</td>
<td>Center for Army Analysis</td>
</tr>
<tr>
<td>Fort Leavenworth, KS</td>
<td>Aberdeen Proving Ground, MD</td>
</tr>
<tr>
<td>Carlisle Barracks, PA</td>
<td>Aberdeen Proving Ground, MD</td>
</tr>
<tr>
<td>Redstone Arsenal, AL</td>
<td>Pentagon, Arlington, VA</td>
</tr>
<tr>
<td>Huntsville, AL</td>
<td>Pentagon, Arlington, VA</td>
</tr>
<tr>
<td>Pentagon, Arlington, VA</td>
<td>Pentagon, Arlington, VA</td>
</tr>
<tr>
<td>West Point, NY</td>
<td>Joint Base Langley-Eustis, VA</td>
</tr>
<tr>
<td>Fort Belvoir, VA</td>
<td>Arlington, VA</td>
</tr>
<tr>
<td>Mark Center, Alexandria, VA</td>
<td>McLean, VA</td>
</tr>
<tr>
<td>Fort Belvoir, VA</td>
<td>Fort Belvoir, VA</td>
</tr>
</tbody>
</table>
Data Analytics:
- Advancing Analytics and Metrics to Support Defensive Cyberspace Operations
- Automation Enabling Analysis
- Media Narrative Propagation
- Support to USCENTCOM

Humanitarian Operations Support:
- Population Displacement Model
- Post-Conflict Return Migration

Wargames/Table-Top Exercises:
- USARPAC TTX
- EUCOM Foreign Humanitarian Assistance/Disaster Relief
- RS Force 1400 Wargame

Geospatial Analysis
- Reachback support to deployed commands

Assessment Support/Training for:
- Army Security Cooperation (DAMO-SSI)
- ARNORTH
- Horn of Africa
- Special Operations Forces in Afghanistan
- Asymmetric Warfare Group
- SOCCENT Country Assessments
- CAA Strategic Planning

Doctrine Development

Survey Analysis
- Southern Philippines Public Perception Survey (USAID)
  - USAFRICOM
  - ARSOUTH
  - SOCCENT

Select, Train, Deploy and Manage Analysts:
- DoD Operational Data Tiger Team Lead
- Current Operations Meetings
- Deploying Analyst Course
- Deployed Analysts at RS AAG and OGP
- Strategic Partners at USPACOM and USEUCOM/USAFRICOM

NATO System Analysis and Studies Panels:
110 – Irregular Warfare and Operations Assessment
111 – Collection and Management of Data for Analysis Support to Operations