



STUDIES AND ANALYSIS DIVISION (S&A)



Design and execute operational and cost benefit analyses that enable experimentation, exercises, tabletop wargames, and studies required to support major decisions concerning acquisition

The Studies and Analysis Division is part of the U.S. Army Space and Missile Defense Command's Space and Missile Defense Center of Excellence Decision Support Directorate. S&A focuses on determining the military utility of space, missile defense and high altitude, as well as the associated concepts of operation for the current and future ground warfighter. S&A evaluates systems and operations through tabletop wargames and experiments; analysis of alternatives in support of materiel development activities and capabilities requirements determination; assessments of advanced concepts; and analyses that define space, missile defense, high altitude and cyberspace operations for the ground warfighter. S&A conducts major studies that support decisions made at the Army and Department of Defense – both in determining the best way ahead in support of the Army Joint Capabilities Integration and Development System process and in influencing joint development efforts of the other services and homeland defense that impact the current and future ground warfighter.

- Technical personnel with operational knowledge
- Analysis experience with constructive force-on-force simulations
- Proficiency in experimental and analytic design
- In-depth statistical data analysis skills
- Proficiency in executing cost-benefit analyses



The Space and Missile Defense Center of Excellence Decision Support Directorate's Studies and Analysis Division develops and sustains the core competencies required to execute these functions: operational experience, force-on-force simulation expertise, statistical analysis skills, cost-benefit analysis proficiency and design of experiments expertise.

These competencies, combined with an extensive in-house suite of models and simulations, enable S&A to conduct studies and analyses that impact major decisions made at the U.S. Army Space and Missile Defense Command, Department of the Army, Department of the Air Force, joint staff, U.S. Strategic Command, and Office of the Secretary of Defense levels.

Operational Analysis – S&A analytically enables USASMDC, the Army and the Department of Defense in all operational aspects of space, missile defense and high altitude support to the ground warfighter. S&A conducts analyses for the full warfighting spectrum utilizing a staff of professional operations research analysts who have extensive experience in the areas of space, missile defense, high altitude, high energy laser, cyber and military combat operations. S&A modifies and creates scenarios, develops measures of performance and effectiveness, and other critical metrics. S&A also collaborates with the U.S. Army Futures Command and the Cross Functional Teams to collaborate and develop scenarios and maintain force-on-force simulations.

Experimental and Analytic Design – S&A designs experiments and analyses from planning and execution to synthesis and reporting. S&A has broad experience in the design of experiments to ensure that the collection of data supports all essential elements of analysis. S&A has developed the methodology for experiments and analyses for numerous efforts and has assisted other DoD organizations in designing their experiments and analyses.

Statistical Data Analysis – S&A has the internal capability to perform a complete range of statistical data analyses. S&A consists of analysts who have an extensive background in mathematical and simulation modeling – both operational and cost based – and utilize the latest methodologies and tools.

Force-on-Force Simulation – S&A maintains an in-house suite of force-on-force simulations that include engineering, tactical, theater and operational simulations. S&A maintains a staff dedicated to maintenance, sustainment and operation of these tools, which enables the execution of quick turnaround analyses as well as long-term studies.

Cost-Benefit Analysis – S&A conducts cost-benefit analyses to identify solutions that address Army and organizational

objectives by quantifying potential financial impacts and performance improvements. S&A consists of analysts with experience and training in the execution of cost-benefit analyses and related assessments.

PAST AND ONGOING STUDIES

- Joint Regional Integrated Air and Missile Defense Capabilities Mix Study
- Effects High Energy Laser Study
- Adversary Centric Plans Assessment for Ballistic Missile Defense
- Multi-domain Operations for Integrated Air and Missile Defense
- High End Asymmetric and Cyber Threat Assessment and Vulnerabilities Mitigation for U.S. Global Ballistic Missile Defense and Space Capabilities
- Space Superiority Army Requirements Analysis
- Assured Position, Navigation and Timing in a Denied Environment
- Army Intelligence Support to Space Company Study for Intelligence, Information, Cyber, Electronic Warfare and Space Multi-Domain Operations
- Cruise Missile Defense for Homeland Study
- Joint All-Domain Command and Control – Army Integrated Air and Missile Defense
- Cumulative Effects of Integrated Air and Missile Defense
- Space Demand Analysis
- High Altitude Cost-Benefit Analysis

IN-HOUSE SIMULATION TOOLS

- Extended Air Defense Simulation
- Joint Conflict and Tactical Simulation
- Systems Effectiveness Analysis Simulation
- GPS Interference and Navigation Tool
- Command and Control Battle Management and Communications Planner
- Improved Many on Many
- Systems Tool Kit
- Satellite Orbit Analysis Program
- Extend Process Model



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Distribution A 0223-03