S&T Campaign: Assessment and Analysis
Science of Analysis and Assessment
Key Campaign Initiative

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Research Objective

• Research and develop a robust analysis framework that dynamically integrates models, simulations, and data
• Enable integration of kinetic and non-kinetic effects including cyber, human-agent interactions, and artificial intelligence behaviors
• Permit analyses at various levels of fidelity to support decision-making at all stages of system development and through the continuum of military operations
• Enable assessment of the performance, quality, and effectiveness of systems within complex, multi-domain, operationally-relevant environments

Challenges

• Developing an enduring standard interface that enables semantic interoperability between models, simulations, and data.
• Modeling autonomous and cognitive systems.
• Modeling emerging warfare concepts that have limited data and model representations.

ARL Facilities and Capabilities Available to Support Collaborative Research

• The Army Research Laboratory, Department of Defense Supercomputing Resource Center (ARL DSRC)
• Platform and personnel vulnerability modeling
• Munition lethality modeling
• Communications modeling
• Electronic warfare modeling

Challenges for Multi-Domain Analysis

Disparate Models and Simulations
Disparate Data
System Engineering Challenges

Select Framework Considerations

Win in a Complex World

TRADOC Multi-Domain Battle Concept

Analyzing Systems and Technologies in Mission Context

Complementary Expertise / Facilities / Capabilities Sought in Collaboration

• AI/Autonomous agent modeling
• Cyber effects modeling
• Human performance modeling
• Flexible simulation architectures