Military Operations Research Society
Work Shop
Working Group 7 Summary

Presented to the
NDIA Modeling & Simulation Committee

April 20, 2010
Motivation/Background

• WSARA 2009 directed the AT&L to address the necessary early technical analysis and planning performed by the Military Departments to improve acquisition program performance

• This Congressionally-mandated effort offers an opportunity to establish the technical leadership, authority, and engagement in the very early conceptual stages of the acquisition lifecycle to provide the upfront technical preparation needed for the successful selection and development of a materiel solution

• Used the MORS workshop to engage with the Analytic Agenda community to identify areas for renewed activity and explore alternative perspectives and approaches to analysis and engineering necessary during these early phases to improve materiel capability development
Mission

• Identify the appropriate character of the technical and engineering engagement, as well as the planning and analysis necessary at each of the early stages in the acquisition lifecycle

• Explore the alternative perspectives, approaches, implications and solutions to determine the types of analysis/engineering that should be done at each stage, the current practice, and recommendations to close any gaps

Early Front End
Analysis of future user needs and engineering of new system concepts in a System of Systems (SoS) operational environment

Pre-MDD
Multiple sufficiently robust, material options to address gap

AoA
Defined costs and benefits of the options including technical risk

Post-AoA
Preferred solution with clear evidence & understanding of risk

Sufficiently robust, material solution and a risk-based TD Plan

Development Planning is the upfront technical preparation to ensure successful selection and development of a materiel solution
Results/Findings

• **Development Planning:**
  – Reinforces the materiel community as a stakeholder in the Analytic Agenda
  – Integrates technical and operational contexts to bridge capability needs with potential alternatives
  – Assists in providing the necessary evidence at the Material Development Decision to enable risk-informed decisions for materiel solution analysis and development
  – Provides the engineering and technical basis for strong Analysis-of-Alternatives results (e.g., making trades)
  – Ensures adequate planning for the Technology Development Phase

• As a result of this workshop and these findings, AT&L plans to **continue its engagement with the analytic community to utilize and help improve the Analytic Agenda and its derivative analysis products** to support the development of materiel capability