Research Objective
Develop a capability assessment and trade-off process to:
• Assess system-level impact of rotorcraft concepts with changes to mission requirements, design parameters, and technology insertion
• Recommend portfolios based on multiple objectives
• Understand the relationship between technology attributes and system capability gaps

Challenges
• Maintaining a flexible and extensible process that can accommodate changing concepts and technologies
• Modeling fleet operations and support with reliability, maintainability, and supportability related technologies
• Tracking and controlling uncertainty propagation through the design process

Related Publications and Presentations
• Bhattacharya et al. Modeling, Analysis, and Optimization of Rotorcraft and Fleet Availability. AHS 73rd Annual Forum; 9-11 May 2017; Fort Worth, TX. Best Paper Award, Systems Engineering Tools & Processes.
• Price et al. Integrated Discrete-Event Simulation Environment for Analysis of Rotorcraft Reliability, Availability, and Maintainability, AHS 73rd Annual Forum; 9-11 May 2017; Fort Worth, TX.
• Armstrong et al. Reconfigurable Discrete Event Simulation of Rotorcraft Maintenance and Operations, AHS 72nd Annual Forum; 17-19 May 2016; West Palm Beach, FL.