

Proceedings of the 7th Annual World Conference  
of the Society for Industrial and Systems Engineering,  
Binghamton, NY, USA  
October 11-12, 2018

## **Testing and Evaluation Phase for the CH-47F Block II**

**H. Gibson, T. Davis, S. Quillen, S. Washle, and M. Bernardino**

Department of Systems Engineering  
United States Military Academy  
West Point, NY 10996, USA

Corresponding author's Email: [Hise.gibson@usma.edu](mailto:Hise.gibson@usma.edu)

**Abstract:** The Chinook (CH-47) helicopter has been the primary heavy lift helicopter for the United States (US) Army since the Vietnam War. The current model is the CH-47F Block II. PM Cargo, the Army Acquisitions group responsible with fielding the Army's cargo helicopters, is responsible for ensuring that its aircraft reaches each milestone decision in a timely and cost efficient manner. PM Cargo has identified a need for a detailed understanding of how weather conditions during the test and evaluation phase impacts the overall program lifecycle. We developed a model that can provide insights on how weather impacts the program life cycle. This model can analyze weather parameters, allowing PM Cargo to consider the feasibility of accomplishing different tests on a day-to-day basis. Due to the time constraints during the testing and evaluation phase of the acquisitions lifecycle, being able to analyze the most volatile aspect, weather.

*Keywords:* Systems Engineering, Testing and Evaluation, CH-47F Block II, Scheduling, Project Management