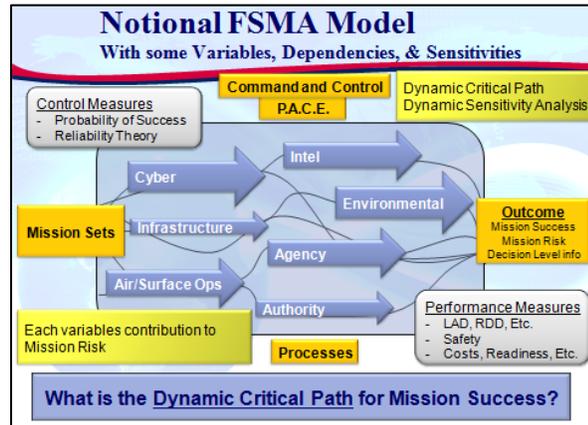## Full Spectrum Mission Assurance (FSMA)

Project Summary: This research will develop a Full Spectrum Mission Assurance model with visualization that will include the major factors and sub-factors that affect the probability of mission success. This will move the decision makers closer to having a "big picture" of mission risks factors and how they contribute to mission success or failure. For the risk factors that are known, decision makers do not get timely and situational dependent alerts in a decision making format. These factors include cyber, intelligence, environment (weather or natural phenomenon), mission constraints, news gathering, and infrastructure information. FSMA applies to the global USTRANSCOM mission set (e.g., Deployment, Redeployment, Sustainment, Retrograde, Aeromedical Evacuation, Aerial Refueling, and President of the United States (POTUS) Support). This research will be focused on a subset of the USTRANSCOM UCP missions as prioritized by the government sponsor. FSMA will help USTRANSCOM to better consider these variables, assess risk, and identify dynamic critical path from a probability of mission success perspective.

Notional FSMA Model
With some Variables, Dependencies, & Sensitivities

What is the Dynamic Critical Path for Mission Success?

Benefit: Objectives for this research include 1) investigate synchronization of stove-piped data, services, and applications; 2) research existing and new services to implement text analytics, develop knowledge graphs, link disparate data, which will result in automated and expedited planning, execution and decision support; and 3) develop a solution that includes User Notification Service and Geospatial Visualization. This project will align with Information Visualization, End-to-End Asset Visibility, Risk Assessment, and Knowledge Management Layer capability gaps noted in the FY18 USTRANSCOM RDT&E call for papers.

Duration of project: FY18-FY20

Participants: Air Force Research Laboratory, USSTRATCOM

Project advocacy (funding or otherwise): TCJ3/TCJ6