Managing Risk and Uncertainty: Traditional Methods & the Lean Enterprise

Reviewing Recent MIT Research by Dr. Hugh McManus/Prof Daniel Hastings, Josef Oehmen, and Steven Bresnahan

Uncertainty and Risk come in several forms with an equally large range of responses. How we choose to respond will dictate the outcome.

Three Important Information Loops: information passes from one method to another and between loops
Active Risk Management (Inner circle)
- Monitoring and Metrics (Outer circle)
- Organizational/Higher Management Coordination (Integration circle)

Literature Review done in context of the framework
- Only 1 method for Higher Management Coordination, “Aggregation”, was found
- The organizational loop seems to be underrepresented in literature

Risk Management Process Framework

The requirements and timing of the methods used in each information loop are different and place different demands upon practitioners.

Case Study on Risk & Uncertainty

Scenario: Aerospace Commercial Aircraft System
All teams experienced problems – most not technical

Risk & Uncertainty Management can still be improved
- Young Commission
- Blue-Ribbon panel
- DAPA panel report
- Other portfolio problems

“Risk-based Decision-making”
- USAF says its important

Integral to new PD Enterprise Framework:
- Dynamic nature of RM & Proposed metrics suggest RM importance at the Enterprise level
- Personal Experience
  - Risk – every program does it differently
  - Difficult to predict problems a priori

My Areas of Interest

Enterprise Uncertainty
What does it mean?
How is it currently understood?

Additional Focus Areas
- Decision Analysis
- Portfolio Management
- Traditional Risk Management
- Organizational structure

Potential Case Studies
- Space programs/portfolio
- Other programs/portfolios
- Commercial programs/portfolios

"The views expressed on this poster are those of the author and do not reflect the official policy or position of the United States Air Force, Department of Defense, or the U.S. Government."