WSTIAC Success Story:
OPEN SYSTEMS STUDY

Problem: The Open Systems Study was commissioned by the Capabilities Planning Division of the Aeronautical Systems Center (ASC/XRS) in April 2007 to explore and identify the unique challenges and issues ASC and program managers should consider for the successful implementation of an Open System Approach (OSA) in air vehicle weapon system acquisition programs.

Approach: Through the course of this study 150-plus documents and websites were reviewed and prime contractors and Tier 1 suppliers were surveyed and interviewed to gain insight into their awareness and implementation of OSA in their business models and practices. Additionally, a number of interviews were conducted with key leaders (past and present) in the aerospace industry to help understand previous OSA initiatives.

Solution: During the study, WSTIAC developed a decision model tool called ADAMS. This tool allows a program's key stakeholders and subject matter experts (program manager, Milestone Decision Authority, MAJCOM user, engineers, logisticians, etc.) to pick key criteria, weighting factors, and standards of "goodness" with which various approaches (open, federated, hybrid between open and federated) can be assessed. Evaluating different approaches with this model results in a composite score for each approach; then, a "bang for the buck" score is achieved when the composite score of each approach is divided by the cost of each approach.

The findings in this study are divided among three general areas: Business Culture and Considerations, Guidance, and Business Processes. Several key findings include:

- An open systems approach may not be applicable to all programs
  - An open systems approach is just one of several viable options
  - The rigors of a business case analysis and life cycle cost estimate are instrumental in establishing a final open system strategy
- A well-trained, organic workforce is required to develop, implement, and assess an OSA
- A cultural bias appears to exist against "open" initiatives
- There may be several other obstacles that arise with implementing an OSA (e.g. vague definitions, expectation differences, data rights/copyrights, etc.)