

Economic comparison of support concepts based on engineering analysis and metrics

Key benefits

- ▶ Compare operational support requirements
- ▶ Assess supplier source / cost inputs
- ▶ Technical validation of budget forecasts
- ▶ Risk identification and mitigation

Key features

- ▶ Simulation enabled trade studies
- ▶ Analysis generation
- ▶ Data quality assessment
- ▶ Model-based solution

The Problem: How can decision makers validate, assess or differentiate the proposed product support strategies of competing bids during the acquisition process? The product support strategy for a complex system aligns the acquisition, operational and sustainment functions for an organization based on the expected system reliability, availability and supportability across the projected lifecycle. How can you be a Smarter Customer?

How do you ensure that you compare 'apples with apples' to select the optimal bid?

The Solution: Decision support framework for direct comparison of the sustainment approach of a bid based on its maintenance approach, including reliability estimates and assumptions. The solution (process and tools) should have the analysis capabilities required to validate and assess the maintenance approach of the system in terms of required Readiness, Safety and Cost metrics. To ensure probity of the bid evaluation process, the solution should have standardized data structures, workflows and outputs that align with the relevant requirements for the organization (commercial /military standards), simulation / automation to support trade studies, and configuration management / traceability of the analysis.



Acquisition Appraisal Solution Requirements:

Analysis toolset to compare the maintenance & life cycle costs of each bid, to:

- ▶ Assess required in-service supplier support levels
- ▶ Compare projected supplier cost inputs / source requirements
- ▶ Analyze impact of alternate usage cycles / operating environments on sustainment estimates
- ▶ conduct economic trade studies based on engineering / safety requirements

How MADe supports Acquisition Appraisal

MADe enables your organization to:

- ▶ Use a common model & analysis framework to assess all solutions
- ▶ Ensure engineering validation of each supportability concept
- ▶ Identify the best value option based on requirements
- ▶ Negotiate flexible performance based contracts

How MADe provides validation

MADe uses a combined simulation model of the asset to record each sustainment operating concept. The model supports the following validation outcomes:

- ▶ Technical: reconcile reliability and monitoring capability with requirements
- ▶ Safety: evidence the safety case for each bid (FMECA / FTA / RBD / RCM)
- ▶ Budget: support estimates are based on technical analysis (engineering validation)