

Commercial Customer Leverages SRC Expertise to Win \$458M USAF Contract

Problem: A commercial company was looking to expand their business into the defense community in response to the United States Air Force's need for support equipment that could provide both military and commercial capabilities. The commercial company realized it needed an advantage to win this competitive selection process and identified readiness as a potential discriminator since readiness levels for previous ground support equipment were historically poor. The company determined that additional expertise was required to ensure reliability and maintainability were "built-in" to the system.

Approach: SRC was contracted and quickly identified several RMS analysis tasks that needed to be completed on the prototype. RMS assessments are necessary to support trade-offs and other design decisions. A failure modes, effects, and criticality analysis (FMECA) is required on the system to identify potential failure modes, effects, and their criticality. The results of the FMECA and RMS assessments were used to develop a simulation model of the prototype system to assess the expected failure events, failure frequency, and repair times. The simulation model was run using a mission profile based on the expected operating conditions of the ground support equipment over 10 years. The results produced the system mean-time-between failure, mean-time-between-critical-failure, operational availability, and other mission related metrics.

Solution: The commercial company prevailed in the selection process and is scheduled to build more than 500 units. The primary reason the ground support equipment was selected was that the design met or exceeded all readiness needs and gave the USAF an opportunity to embrace commercial technology. The USAF specifically noted that the design was selected for its ability to minimize aircraft ground times during wartime and contingency surges.

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