Tim Adams - Bio

Tim Adams is a Senior Engineer in the Systems Engineering Division with the NASA John F. Kennedy Space Center's (KSC) Engineering and Technology Directorate. Tim serves as a technical resource in engineering assurance with an emphasis on determining and improving the reliability and availability of systems under design. In addition, Tim serves as the Technical Editor of the "KSC Reliability" web page and the Manager of KSC's Integrated Design and Assurance System (IDAS).

At NASA, Tim has 18 years of experience in Reliability Engineering and Technical Risk Analysis involving both flight systems and ground systems for the Space Shuttle, International Space Station, and Constellation Programs. At Johnson Space Center (JSC), he was a Flight Systems Safety Engineer, Reliability/Risk Analysis Team Lead, and ultimately the Lead of the Office of Safety, Reliability, and Quality Assurance's Analysis and Assessment Methodology Group that supported all Programs at JSC. Tim came to KSC after winning a nationally advertised position as the Senior Engineering Consultant and Advisor in Reliability.

Selected work products in Reliability Engineering and Technical Risk:

- Established, evaluated, and allocated reliability goals.
- Made a dashboard that summarized the count, trend, criticality, and relative risk of problems reported for complex systems (i.e., Space Shuttle Orbiter fleet and Ground-based Launch Systems).
- Developed a triage-type work process that proactively and systematically responded to problems reported on numerous elements of a complex system.
- Obtained and used operating- and failure-history data to determine and the reliability (or availability) measure for a variety of components and subsystems.
- Advocated the concept and subsequently led the team that developed, deployed, and supported a Center-wide resource for "learning and doing" engineering-assurance analyses (Ref. IDAS).

Selected special assignments and roles in Reliability Engineering and Technical Risk:

- Reliability and Maintainability Technical Discipline Team Lead for the Agency with the NASA Safety Center in Cleveland Ohio.
- Consulting Reliability Engineer for the Centers for Disease Control and Prevention (CDC).
- Team Lead and Principal Technical Risk Engineer for the multi-NASA Center effort that quantitatively described the risk and resolved the debate pertaining to a degraded crew health system.
- Reliability Analyst that developed the method to quantitatively describe the reliability of composite overwrapped pressure vessels (COPVs) using operating and failure data under different levels of stress.

Prior to NASA, Tim was a Product Manager/Market Analyst for an international manufacturer of oil tools and an Application/Industrial Engineer that specialized in the programming of Monarch computerized-numerical controlled (CNC) machine tools. In addition, Tim was a Director/Operations Manager for a municipality and utilities company. As Director, Tim's roles included serving as the Project Manager that led the flawless design and deployment of the community's first 911 public-emergency system and as one of the Emergency Response Officers.

Tim is a Certified Reliability Engineer (CRE) with continuous re-certifications since 1994 and a senior member with the American Society of Quality (ASQ). His formal education is in Mathematics, Education, and Management. Other interests include Human Performance Improvement, STEM, and competency-based learning.

In Reliability and Risk, Tim received NASA's Exceptional Engineering Achievement Medal, KSC's Office of the Chief Engineer Employee of the Year Award, JSC's Commendation Award, and the Silver Snoopy Award. In other areas, Tim received JSC's Superior Achievement Award in Management and distinguished alumni awards from his alma maters.