Predictive Maintenance

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Efforts and discussions for obsolescence management have traditionally centered on limiting the risk of obsolescence through design practices or procurement. This talk will address reducing the demand on limited stocks of components by introducing the concept of prediction assisted maintenance as a means to greatly reduce the attrition rate of obsolete parts in the field.

Solder fatigue accounts for 70% of electronics failures. Predicting remaining useful life at the solder joint level based on use profiles and material behavior allows maintainers to take proactive steps to repair accumulated damage. This avoids failures and reactive maintenance actions that result in component replacement, while reducing unplanned downtime, obsolescence pressures and counterfeit risk.

Items covered in this presentation include
-Methods of prediction
-Using prediction outputs for maintenance scheduling
-Ideal and realistic impacts on obsolescence
-Collateral benefits (availability, mission assurance, sustainment costs, etc.)
-Demonstration case with results