

Asset Criticality Assessment

Overview and Action Steps of Asset Criticality Assessment



What Is It?

A tool used to evaluate how equipment failures impact organizational performance in order to systematically rank plant assets for the purpose of work prioritization, material classification, PM/PdM development, and reliability improvement initiatives.

Why Use It?

Formal criticality analysis, something other than a simple one through five (1 – 5) ranking, allows reliability leaders to determine the leading characteristic that makes each asset critical—production throughput, maintenance cost, utilization rate, or safety impact—to ensure that reliability improvements are made based on risk rather than perception.

Critical Factors for Success

- Get cross-functional input from Operations, Maintenance, Engineering, Materials Management, and Employee Health & Safety (EH&S) representatives
- Build buy-in and overcome perceived criticality by utilizing cross-functional analysis
- Maintain and re-evaluate the criticality analysis process throughout the asset life cycle period to determine when risk has been mitigated and the significance of each asset has been changed

Action Steps

- Step 1:** Obtain the standard Criticality Tool
- Step 2:** Populate the Criticality Tool
- Step 3:** Obtain standard criticality “cut scores”
- Step 4:** Analyze parent asset level locations using Criticality Tool
- Step 5:** Is criticality “High” (A)?
- Step 6:** Analyze all child locations and assets
- Step 7:** Is criticality “Medium” (B)?
- Step 8:** Analyze next level locations
- Step 9:** Classify all sub-locations and assets as “Low” criticality