



Asset Criticality Analysis Feature

Asset Criticality Analysis is the initial, fundamental step in an organization's journey towards improved **Asset Performance Management (APM)**. By performing an Asset Criticality Analysis in the Operational Sustainability, LLC® (OS) OESuite™, companies can focus the right resources on the right assets. Because the **OESuite Asset Analysis Module**, which contains the **Asset Criticality Analysis Feature**, is integrated with our **OESuite Work Management Module**, necessary tasks can be pushed out through the system.

Users can quickly and easily assess and apply criticality ratings to assets. As criticality changes over time, our **Management of Change (MOC) Module** will flag changes to ensure all personnel have the most current criticality information.

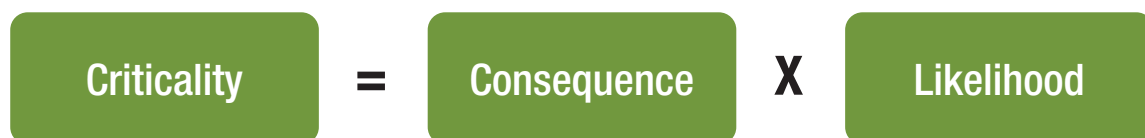
Why is Criticality Analysis Important?

Criticality Analysis is 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. 29 CFR 1910.119 requires that a list of Process Safety Critical Equipment (PSCE) be developed that focuses on fixed assets and contains the consequences of failure of those assets. The greater the consequence of failure, the more critical the asset. When looking at criticality, we need to understand:

- Replacement cost
- Impact on production, operation, environment, and safety
- Availability of the replacement

Likelihood of failure is another factor we need to consider. So, criticality is a combination of likelihood / probability and consequence of failure.

Formal criticality analysis 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.



Criticality Assessment

Asset Criticality Analysis can be performed in two ways:

- A risk matrix-based approach of likelihood and consequence with industry-specific perspectives (e.g., safety, environmental, operational, etc.)
- A configurable series of Q&A criteria with weights and scores leading to an overall criticality; the risk matrix can be configured to match your corporate standard if desired

To accelerate the process, a Criticality Analysis can be performed top down by unit, then system, then asset, with downward inheritance, and the ability to adjust individual items as appropriate. Both methods can be performed within the **Asset Criticality Feature** of the **Asset Analysis Module**.



Asset Criticality Analysis Feature

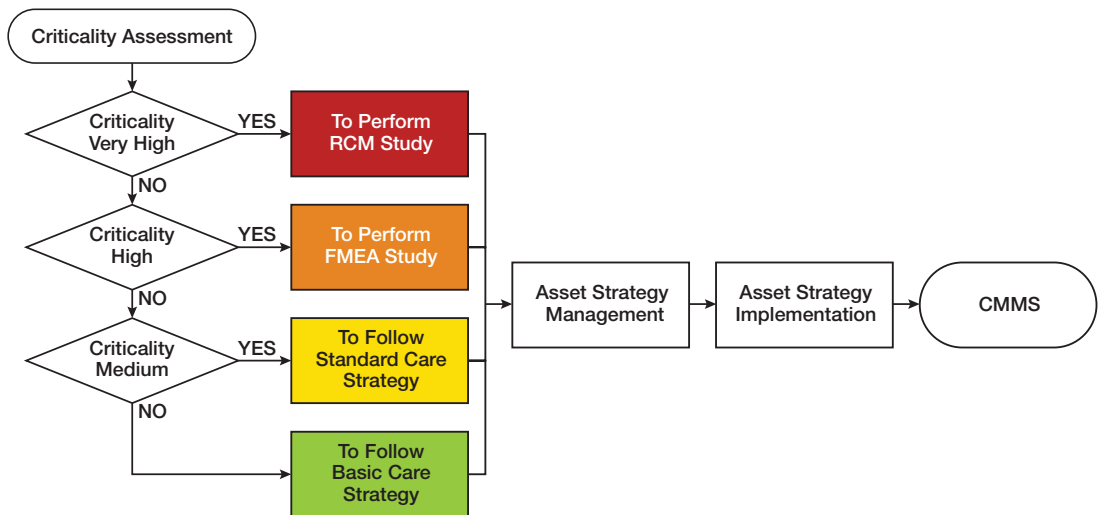
Asset Criticality can be used as key input for:

- Reliability-Centered Maintenance (RCM), Failure Modes and Effects (FMEA), Preventive Maintenance (PM), and strategy template optimization for rotating, electrical, and other mechanical equipment
- RBI studies for fixed or static equipment
- Layers of Protection Analysis (LOPA) for instrumentation, safety, and control loops
- Spares optimization to drive stocking levels
- Setting work management and maintenance backlog priorities

Criticality Assessment Analysis Results

Once the analysis is completed, you will have a distribution of results including High, Medium, and Low. Each of these can be coupled with the **OESuite™ Asset Strategy Module** to drive different outcomes as shown in Figure 1. For those assets with high criticality rankings, analyze all assets as well as sub-system level assets using the criticality assessment tool. Criticality Analyses should be maintained and re-evaluated throughout the asset lifecycle because risks change and the significance of each asset may change, as well.

Figure 1 – OS Asset Criticality



Once the criticality rankings are established, you can leverage our connectors to integrate seamlessly with Enterprise Asset Management (EAM) software such as SAP Plant Maintenance and IBM Maximo.

Extended OESuite™ Modules



For more information email us at info@DrivingOE.com or call (713) 355-2900.