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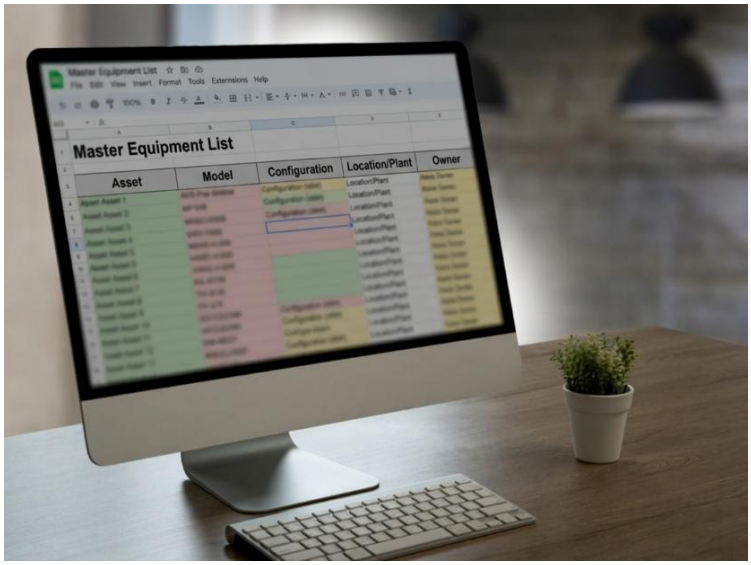
Master Equipment List (MEL) and Criticality Ranking Data Sheet



AT A GLANCE

- **One trusted equipment list:** A hierarchical Master Equipment List (MEL), verified in the field and ready to load into your computerized maintenance management system (CMMS)
- **Defensible priorities:** System and asset criticality rankings with documented rationale for each
- **Faster rankings:** Low-criticality assets pre-populated from our ranking database for your experts to review
- **Sustainable:** Optional training so your people can maintain the list and run future ranking sessions
- **Led by Cutsforth reliability experts:** 600+ combined years of reliability experience

The road to a managed reliability program

Strategy | Assessment | Planning | Implementation | Improvement

MEL and Criticality Ranking Ranks every asset by its consequence of failure

An accurate MEL and a defensible criticality ranking are the foundation of every downstream reliability decision: preventive maintenance (PM) strategy, sensor coverage, Monitoring and Diagnostics (M&D) model scope, and capital prioritization. We build the list, facilitate the ranking with your experts, and leave you with data ready to load into your CMMS.

When do you need a MEL and criticality ranking?

They fit when priorities, PM strategy, or monitoring decisions depend on knowing what you have and what matters most.

- Is your equipment list out of date, incomplete, or inconsistent across sites?
- Do your drawings, work orders, and field tags describe the same equipment the same way?
- Are maintenance priorities set by experience and habit rather than documented risk?
- Are you planning a PM strategy, sensor gap analysis, or monitoring investment and need a ranked asset base?
- Do you need a consistent way to prioritize work and capital across units?
- Do your people need to run future ranking sessions without outside help?

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Two services, one foundation

You can start with the equipment list, the criticality ranking, or both. The ranking needs a list complete enough to rank, so we check for that first.

Service	What we do	What you receive
Master Equipment List (MEL)	We build an intelligent equipment hierarchy, verify the equipment in the field, and add equipment IDs to your drawings.	A verified MEL, ready for automated upload to your CMMS
Asset Criticality Analysis (ACA)	We facilitate ranking sessions with your operations, maintenance, engineering, and controls experts, and document the rationale for every ranking.	System and asset rankings with rationale, formatted for your CMMS

How the equipment list is built

We pilot a few systems first, so you see the result before committing the full effort.

STEP 1
Kickoff and standards
We agree on the hierarchy, naming convention, and format, and collect your drawings and existing lists.
REMOTE OR ON-SITE

STEP 2
Pilot systems
We build the MEL for a few systems, review it with plant leadership, and re-estimate the rest.
REMOTE

STEP 3
Walkdowns and build-out
We verify equipment, collect nameplate data, complete the remaining systems, and update drawings.
ON-SITE

STEP 4
CMMS upload
We deliver an Excel file formatted for automated upload to your CMMS.
REMOTE

How we rank criticality

We score each system and asset against criteria such as safety, environmental and regulatory impact, cost of failure, commercial availability, and thermal efficiency. We confirm the criteria set with you at kickoff. These terms describe the results:

- **System Criticality Ranking (SCR):** the value of a production sub-system relative to other sub-systems
- **Operational Criticality Ranking (OCR):** the value of an asset relative to others in the same sub-system
- **Asset Criticality Ranking (ACR):** the value of an asset relative to all plant assets (SCR × OCR)
- **No-Backup ACR:** the ACR assuming redundancy is not available
- **Asset Failure Probability Factor (AFPF):** how likely the asset is to need maintenance, from industry data, your history, or craft experience
- **Maintenance Priority Index (MPI):** the ACR adjusted by AFPF to reflect reliability history

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What you receive

- **Master Equipment List:** hierarchical, verified in the field with nameplate data, and ready for automated CMMS upload
- **Updated drawings** with equipment IDs
- **System and asset criticality rankings:** workbooks with documented rationale, a No-Backup ACR, and the credible catastrophic failure for each asset
- **AFPF and MPI values,** if in scope
- **Facilitator guide and training,** so your people can maintain the list and run future ranking sessions, if in scope
- **Implementation and change-management plan** for using criticality in work prioritization, if in scope

What we need from you

- Provide your drawings and existing lists: piping and instrumentation diagrams, single-line diagrams, equipment lists, and your lockout/tagout database.
- Make operations, maintenance, engineering, and controls experts available for the ranking sessions.
- Confirm the ranking criteria and scales with us at kickoff. We start from an industry-typical set.

The Cutsforth Reliability Services Team

Consulting Services	System Implementation	Monitoring & Diagnostic Services

Cutsforth is one of the few companies that combines deep reliability consulting experience with multi-physics condition monitoring system expertise. Our reliability services team has decades of hands-on, plant-floor experience in equipment reliability and asset performance management.

We help industrial organizations define, plan, and implement ER and AM programs, establish M&D Centers, and apply continuous online monitoring. Our approach is consistent with ISO 55000 and with the good-practice ER process in INPO AP-913 and EPRI guidance.

CONSULTING AND PROGRAM SERVICES

- ER and AM program definition, planning, and implementation
- Asset criticality analysis (ACA), sensor gap analysis, and master equipment list foundational data services
- M&D Center assessment, set-up, and deployment

TECHNOLOGY AND MONITORING

- InsightCM condition monitoring software
- Multi-physics monitoring systems, including vibration, electrical signature analysis, electromagnetic interference monitoring, thermography, and more
- Monitoring and Diagnostic services with industry-veteran subject-matter experts in condition monitoring

Start with a scoping conversation

We start with your goals, then scope the equipment list, criticality ranking, or both.

Request a MEL and Criticality Ranking scoping conversation

Contact your Cutsforth representative or visit cutsforth.com.