FLUKE.

# **Asset Criticality Workshop**

How to use an asset criticality analysis to optimize maintenance management and reduce costs

Prioritizing an organization's most critical assets accurately is crucial to making effective equipment management decisions and risk management determinations. Sometimes, the value of a piece of equipment is based purely on its cost to repair or replace, not on the company's overall financial impact.

An asset criticality analysis leverages data to help organizations identify their highest-value assets—based on the likelihood of failure, overall consequences, and business risk (criticalness).

# 5 BENEFITS OF AN ASSET CRITICALITY ANALYSIS

- 1. GET ACTIONABLE INSIGHTS Use the analysis results to improve reliability, availability, and use of equipment.
- 2. ALLOCATE RESOURCES EFFICIENTLY Distribute limited resources more efficiently based on asset criticality data, including labor and materials.
- **3. MAKE INFORMED DECISIONS** Optimize business decisions involving inventory, procurement, and maintenance budgeting.
- 4. ADJUST MAINTENANCE ACTIVITIES TO FIT ASSET VALUE Adapt a Preventive Action maintenance program and strategies to match the needs of critical assets controlling costs.
- 5. OPEN THE DOOR TO OTHER COST-SAVING STRATEGIES Track the savings and use them to justify investments in other asset reliability strategies such as condition-based maintenance.

No matter how much it costs or how big or small it is, some equipment has the potential to shut down production should it fail. The cascading impact can be catastrophic, from expensive downtime to safety, quality, and environmental issues.

An asset criticality analysis removes flawed assumptions, emotions, and guesswork when determining an asset's real value. Instead, quantitative asset data is used to determine equipment value. One organization's asset-ranking factors, and the insights extracted from a criticality analysis, will not be the same as other companies. Numerous operational, business, and industry considerations all figure into how a machine is considered top tier—and why it is ranked as a "star athlete" or a critical, semi-critical, or non-critical asset.

With the help of Fluke Reliability consultants, a cross-functional team of a customer's company leaders, key maintenance personnel, and other experts and stakeholders will learn why and how to conduct an asset criticality analysis.

The customer will also find out how to create a flexible quantitative measuring process for acquiring data used to rank its critical equipment.

A critical asset ranking is based on several categories, such as:

- Operational severity
- · Safety severity
- Environmental severity
- Single point of failure (essential inclusion)
- Maintainability
- Reliability
- Spares lead time

List important assots Raz						Rank the as	ank the assets						Relative ranking system				I .				
No.	Asse	Asset name Asset type			Safety critical	P	Production critical		Repair cost		Environment Impact		Overall criticality	Cri	Criticality group						
1	#1 Tr	#1 Turbine generator 1		r Tu	irbine-gen	e-gen 5		5		5		5		20	Sta	Star		I 1			
2	#la E	#1a Boiler feed pump		M	otor-pump	pump 3		5		4		3		15	Critical			I 1			
3	#1b Boiler fee		eed pump	mp Motor-p		3		5		4		3		15	Cri	Critical		I 1			
4	#1c Boiler feed pump Motor-pump 3				5	5 4		4		3		15	Critical			I 1					
5	#la	ondon	cato pum	n M	otor nump	2	4		_	2	_	2		10	See	ai critic	.1				
6	#1b No. #		Assot	ot namo		Asset type Sa		lety		Production		Repair cost		vironmont	Overall		Criticality				
7	#lc						critt	ICAL	•	nncai				праст	em	icality	gre	-up	_		
8	#la	1	#1 Turt	bine ge	nerator	Turbine-gen	5		5		5		5		20		Sta	r			
9	#lb	2	#la Boi	iler feed	i pump	Motor-pump	3		5		4		3		15		Crit	tical			
10	#lc	3	#1b Boi	iler fee	1 pump	Motor-pump	3		5		4		3		15		Crit	tical			
11	#la	4	#1c Boi	ler feed	pump	Motor-pump	3		5		4		3		15		Crit	tical			
12	#lb	#lb S #la C		ndensa	te pump	Motor-pump	2		4		2	2			10		Ser	Semi-critica			
13	#1 A	#1 A 6 #1b Cc #1 S 7 #1c Co		No.	Asset	name		Screen			Diagnoze			Сотг	orrect/check			Crit	icality		
14	#1 S																		gro	up	
15	#1 E	8	#la Ci	1	#1 Tur	bine generator		Electric/thermal		Т	Vibration weekly		dy	Aligr	Alignment monthly		ly	Star		-	
16	#1 B	#1 B 9 #1b Ci # 1 1 10 #1c Ci						daily						-							
17	#11			2	#1a Boiler feed pump			Electric/thermal			Т	Vibration quarterly or		terly or	Alignment yearly or as			Crit	ical	-	
18	#la	11	#la Hy	3	#1b Bo	iler feed pun	ıp	monthly				as needed			need	bed			Crit	ical	
19	#1b	12	#1b Hy	4	#1c Bo	iler feed pum	ıp.												Crit	ical	
20	#la	13	#1 Air	5	#1a Co	ndensate pu	mp	Electric/thermal monthly			T	Vibration as needed		eded	Alignment as needed			Sen	u-critica	1	
21	#1b	14	#1 Sup	6	#1b Co	ndensate pu	mp												Semi-critical		a
		15	#1 Ext	7	#1c Co	ndensate pu	mp												Sen	u-critica	a
		16	#1 Blo	8	#la Cir	c water pum	p												Sen	i-critica	1
		17	# 1 Re	9	#1b Cit	rc water pum	p												Sen	i-critica	a.
		18	#1a Co	10	#1c Cir	c water pum	p												Sen	i-critica	a
		20	#10 Cc	11	#1a Hy	draulic pump	>												Sen	i-critica	d
		21	#1h Co	12	#1b Hy	draulic pump	p												Sen	i-critica	1
		10	1410.00	13	#1 Air	compressor											Semi-critica		d.		
				14	#1 Sup	ply fan	_	Electric/t	Electric/thermal			Vibration as needed		eded	Alignment as ne		s nee	ded	ded Nor		-
				15	#1 Exh	aust fan		quarterly											Non		
				16	#1 Blot	wer													Non	-critical	
				17	# 1 Re	circ fan												Non	-critical		
				18	#1a Co	oling tower f	an												Non	on-critical	
				19	#1b Co	oling tower fan				1							Non	-critical			
				20	#1a Co	oling pump												Non	a-critical		
				21	#1b Co	oling pump													Non	-critical	



# Reasons to attend an Asset Criticality Workshop from Fluke Reliability

- Receive guidance on how to conduct an analysis if a company has never done one before
- Ensure the customer has ranked critical machines correctly during a recent in-house analysis
- Refresh their memory about how to access asset criticality and perform an analysis
- Update a company's current asset criticality analysis to reflect aging equipment and/or the addition of new equipment

# What's included in the Asset Criticality Workshop

This workshop will help a customer understand how to establish the basis for determining the value and impact a piece of equipment has on its production and overall operations using data.

Here's what to expect during the two-day training event:

Understand equipment hierarchy and why it's an important place to start (before beginning an asset criticality analysis)	Day 1				
Receive an overview of an asset criticality assessment (classification) and analysis (ranking)	Day 1				
Clarify the difference between a priority asset and asset criticality	Day 1				
Learn how to conduct an asset criticality assessment and analysis	Day 1				
Understand how M&R best practices relate to equipment management, risk management, and asset criticality	Day 2				
Learn more about the RIME Code Index (Relative Importance of Maintenance Expenditure) and how it's used	Day 2				
Touch on how asset criticality is a primer for maintenance and reliability tools such as FMEA, FMECA, RCA, RCFA, and related activities.	Day 2				





FMEA - Failure Modes and Effects Analysis
FMECA - Failure Modes, Effects, and Criticality Analysis
RCA - Root Cause Analysis
RCFA - Root Cause & Failure Analysis



**Reliability** 

#### What do I need to do in advance of the workshop?

Understanding the current status helps our Fluke experts develop instruction and sessions exclusive to the organization and its goals. To do that, we will need access to various sources of information, including:

- Current asset criticality ranking data, if available
- Database or other listings of current assets

### **Pre-Visit Information and Agenda**

The customer will be asked to provide pre-work documents through a questionnaire and to dedicate a reliability team to be a part of the assessment process. Fluke Reliability will send an agenda of planned onsite activities once that is received, based on the pre-visit information provided by the customer.

#### Following the Workshop

After the workshop, we will provide the customer with the Criteria Worksheet, Scorecard, and related materials to complete the asset criticality analysis on their own.

Once the customer has performed the analysis, the goal will be to leverage the data to deliver the ideal amount of maintenance to every asset. Show company leadership how this workshop enabled the improvement of asset maintenance management decisions, thereby increasing its business performance and profitability.



Contact your Fluke Reliability sales representative or Customer Service Manager to discuss how the CMMS Asset Criticality Workshop can help you with your asset criticality analysis.

To learn more, visit eMaint.com: https://www.emaint.com/cmms-services/implementation/

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