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IDENTIFY EVENTS

Identify undesirable events in the facility using human and digital data.

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ROOT CAUSE ANALYSIS PROCESS STEPS

A systematic approach to uncover the true causes and drive lasting improvement.

 01	 02	 03	 04	 05	 06
IDENTIFY EVENTS Identify undesirable events in the facility using human and digital data.	PRIORITIZE EVENTS Identify the chronic events that account for 80% of the losses within the facility.	BUILD TEAM Establish a cross functional team and appoint an unbiased RCA Facilitator.	COLLECT DATA Gather data within the facility to validate the hypotheses put forth by the team.	ANALYZE Leverage a logic tree approach that will guide the team in assessing root cause hypotheses and utilize data to validate each hypothesis.	COMMUNICATE ACTIONS Convey RCA findings and corrective actions to stakeholders to ensure root causes are addressed.

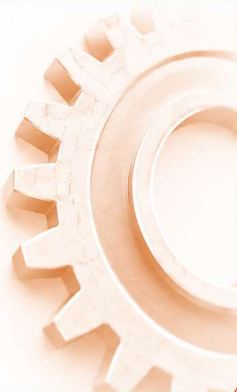

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Better Analysis. Stronger Reliability.

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TYPES OF EVENTS

SPORADIC	CHRONIC
 • Urgent • Infrequent • Time Consuming • Costly • Often Used as RCA Triggers 	 • Routine • Frequent Occurrence • Quick Fix • Not Individually Costly • Rarely Used as an RCA Trigger 

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What is a Trigger?



A defined set of criteria that determines when a **Root Cause Analysis** must be performed



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PROS AND CONS OF RCA TRIGGERS

PROS	CONS
 Ensures consistency in problem-solving on significant issues	 Can generate excessive workload
 Supports data-driven decisions	 Risk of "checkbox RCA"
 Strengthens compliance and audit readiness	 May be seen by the workforce as punitive
 Aligns resources with significant issues	 Risk of focusing only on triggered events and ignoring chronic events

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EXAMPLE TRIGGERS FOR A PAPER MILL

-  SAFETY RECORDABLE INJURIES
-  ENVIRONMENTAL EXCURSIONS
-  8 HOURS UNSCHEDULED DOWNTIME on any major process area (C1, C2, C8, Power, Recovery, Fiberline)
-  UNSCHEDULED MECHANICAL OR ELECTRICAL REPAIR where costs exceed \$100,000 in maintenance expense
-  REJECTS GREATER THAN 250 TONS for a single event
-  BOILER TRIP FOR RECOVERY BOILERS (1 OR 2) or POWER BOILERS (1 OR 9)
-  MANAGER INVOKED



These triggers help identify significant events that require deeper root cause analysis.

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SPORADIC EVENTS



16 Hours of downtime in a major process area



Unplanned failure of a critical gearbox that exceeds costs of \$125,000



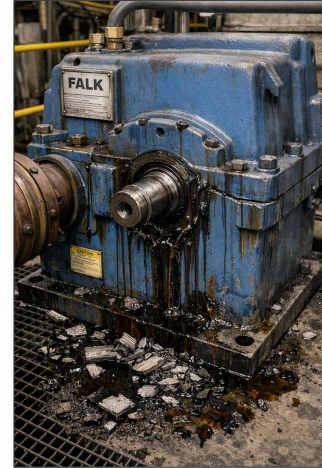
Plantwide power outage



Serious employee injury



Environmental Event



AI Image

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CHRONIC EVENT EXAMPLES



Pump 101 fails multiple times a year



Numerous soot blower failures in recovery boiler



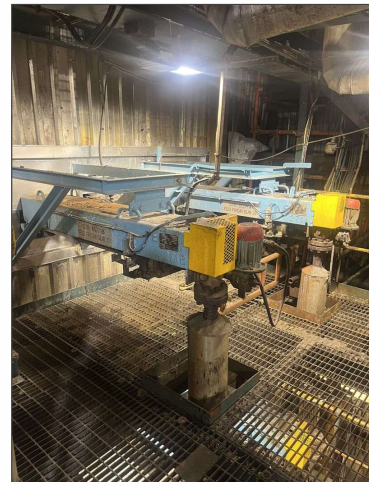
Heat exchanger tube leaks



Outage overruns



Parts repeatedly not available in the storeroom



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EXERCISE

As a group, let's develop a list of Sporadic and Chronic failures from your facility



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