

Event Tree Analysis

New Hire → 1 Year Journey

From First Day to a Thriving CMP Equipment Technician 2

Multiple paths. Real challenges. Recovery is possible. A stronger, safer, and brighter future.



Purpose
Model the key events and conditions that help a new hire survive and thrive for 1 year as a CMP Equipment Technician 2.

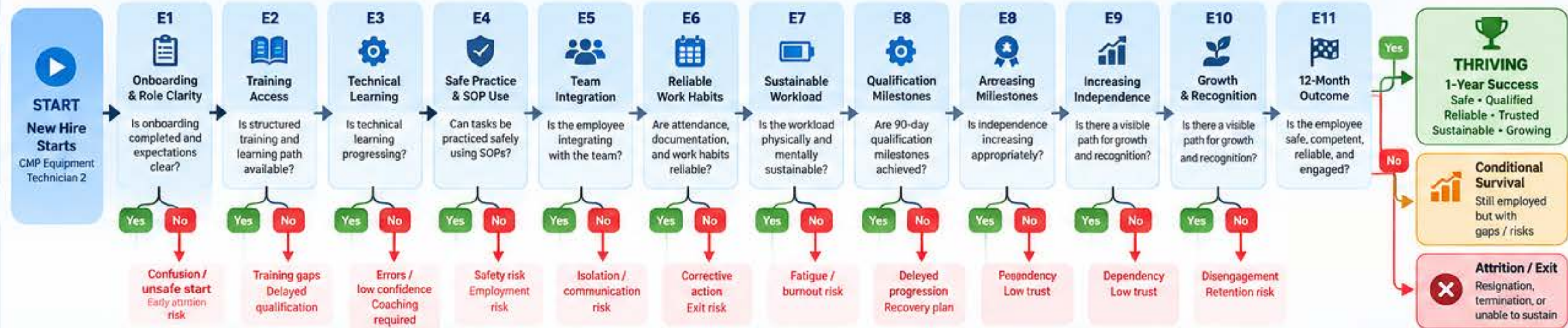
Scope

- Employee + training system + equipment + team + work environment + personal sustainability
- Time horizon: First 12 months
- Type: Qualitative Event Tree Analysis
- Not a prediction of actual retention statistics

Success Definition
Performs assigned CMP technician duties safely and independently within qualification limits, contributes to equipment availability, maintains professional reliability, and has a sustainable path to growth.

Failure Definition

- Resignation or termination
- Extended inability to qualify
- Chronic unsafe behavior
- Severe disengagement
- Inability to sustain the role



Representative Event Tree Paths (Examples)

Path	Key Conditions (E1 → E11)	Outcome
P1	All succeed	Thriving technician
P2	Strong performance, no visible growth	Competent survivor (retention risk)
P3	Training gap, recovers	Thrives after delayed start
P4	Technical struggle, coached	Recovers and progresses
P5	Team integration failure	Competent but stressed / isolated
P6	Reliability failure	Corrective action / exit risk
P7	Fatigue-driven decline	Sustainability / retention risk
P8	Safety failure	Serious safety / employment risk
P9	Early onboarding breakdown	Early attrition risk
P10	No structured qualification	Stagnation or departure
P11	High performer, unsustainable workload	Appears successful, burnout risk
P12	Self-directed learner	Thrives through proactive learning

Leading Indicators (Are We on Track?)

Indicator	Healthy	Warning	Critical
Training completion	On schedule	Delays	No progress
Qualification progress	Meets gates	Slipping	Persistent failure
Safety behavior	Consistent	Coaching	Deliberate shortcuts
Question-asking	Asks early	Hesitates	Avoids escalation
Documentation quality	Accurate	Minor errors	Missing / unreliable
Attendance	Dependable	Occasional issues	Chronic unreliability
Team integration	Participates	Withdrawn	Conflict / isolation
Technical independence	Increasing	Flat	Declining
Feedback response	Applies coaching	Slow	Defensive
Fatigue / sustainability	Healthy	Persistent tiredness	Safety impact
Career engagement	Identifies next skills	Uncertain	Disengaged
Supervisor confidence	Increasing	Monitored	Cannot assign safely

- High-Leverage Retention Controls**
- 1 Make expectations explicit.
 - 2 Provide a real training roadmap.
 - 2 Assign accessible technical support.
 - 3 Allow safe questions and early escalation.
 - 5 Give frequent, specific feedback.
 - 6 Measure qualification progress.
 - 7 Avoid confusing "independence" with abandonment.
 - 9 Recognize improvement and dependable execution.
 - 9 Manage fatigue and workload realistically.
 - 10 Show the employee what the next 1-3 years could look like.

Technical Success Domains (Year 1)

EHS / LOTO	Wafer handling / mechanical
Cleanroom discipline	Sensors / actuators
CMP fundamentals	Utilities / facilities interfaces
Equipment architecture	Documentation / CMMS
Preventive maintenance	Troubleshooting logic
Corrective maintenance	Communication
Slurry / chemical systems	Continuous improvement