AI-04722 FTA and ETA Samsung New Hire Analysis

Multiple

#cmp

Subject: A new hire starting as CMP Technician 2 at Samsung Austin Semiconductor success and failure scenario in a year.

1. *Perform a fault tree analysis using the context/content of the conversation.*
2. *Perform an event tree analysis using the context/content of the conversation.*

Generate a visual/infographic image using all the information in our conversation. Use the n8n design / framework style but don't mention n8n. Insert footnote ***http://hub.gravelcloud.com*** *Rigel G Arcayan, 2026. Use light mode scheme. Use all icon based instead of human figure. Do not limit your response because of space. List all that is necessary information from this conversation.*

CMP Technician 2 — One-Year Success & Failure Analysis

Subject: A new hire starting as a **CMP Technician 2 at Samsung Austin Semiconductor**: What could cause success or failure during the first year?

This analysis treats the first year as an operational reliability problem. The objective is not merely to determine whether the employee remains employed, but whether the employee becomes a **safe, competent, dependable, and trusted CMP technician**.

> **Scope note:** This is a generalized semiconductor manufacturing analysis. Exact Samsung Austin Semiconductor procedures, qualification requirements, equipment platforms, staffing practices, and performance standards may differ. The analysis uses the context available in this conversation and does not assume access to confidential company procedures.

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1. System Definition

System under analysis

New CMP Technician 2 → One-year employment and performance outcome

CMP = **Chemical Mechanical Planarization**, a semiconductor wafer-processing operation that uses chemical slurry and mechanical polishing to achieve the required wafer surface characteristics.

A CMP technician's work may involve some combination of:

- Equipment monitoring and operation
- Preventive maintenance and troubleshooting support
- Chemical and slurry systems
- Wafer handling and process control
- Safety and contamination control
- Tool recovery and equipment uptime
- Documentation and shift handoff
- Escalation to engineers, supervisors, and maintenance personnel
- Working rotating shifts, overtime, or a highly controlled manufacturing schedule

Primary outcome

Successful first year

A successful technician is:

1. Safe and procedure-compliant
2. Qualified on assigned equipment
3. Technically progressing
4. Reliable across shifts
5. Productive without sacrificing quality
6. Able to troubleshoot within authorization
7. Trusted by peers, supervisors, and engineering
8. Retained and positioned for continued advancement

Failure outcome

Failure can mean several different things:

- **Safety failure:** Serious violation, exposure, injury, or unsafe act
- **Quality failure:** Contamination, wafer damage, process excursion, or repeated procedural errors
- **Reliability failure:** Cannot perform assigned responsibilities consistently
- **Performance failure:** Does not meet qualification or productivity expectations
- **Adaptation failure:** Cannot sustain the shift, schedule, or work environment
- **Retention failure:** Resigns, transfers, or is terminated before becoming effective

These outcomes can overlap, but they should not be treated as identical.

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2. Fault Tree Analysis — FTA

2.1 What is a Fault Tree Analysis?

A **Fault Tree Analysis** begins with an undesirable **top event** and works downward to identify the combinations of failures that could cause it.

- **Top event:** What went wrong?
- **Intermediate events:** Major categories contributing to the failure
- **Basic events:** Specific conditions, behaviors, or failures
- **AND gate:** All listed conditions must occur
- **OR gate:** Any listed condition can contribute to the event

FTA logic notation

```
OR  = Any contributing branch can cause the outcome
AND = Multiple conditions combine to cause the outcome
```

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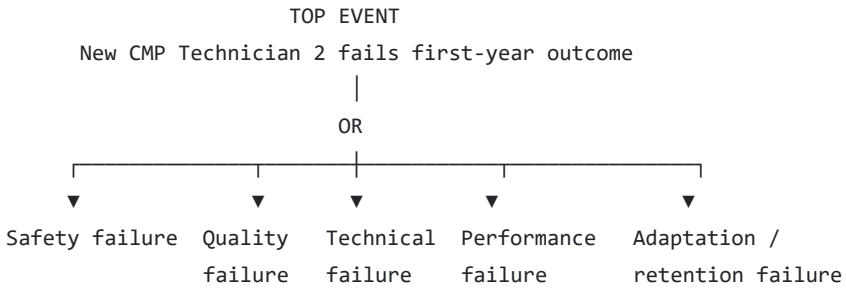
3. Fault Tree: Top Event

TOP EVENT

🔴 New CMP Technician 2 fails to achieve a successful first year

This does **not** necessarily mean the technician is fired. It means the technician does not reach the intended first-year outcome: safe, qualified, dependable, technically competent, and retained.

The top event can be represented as:



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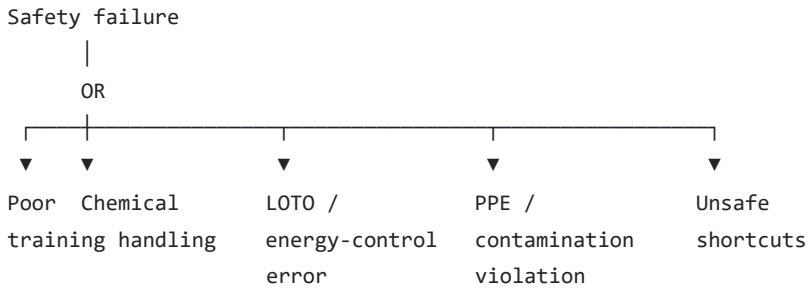
4. Fault Tree Branch A — Safety Failure

🔴 A. Safety failure

Potential causes:



Basic events

ID	Basic event	How it contributes
A1	Inadequate understanding of chemical hazards	Improper response to slurry or chemical exposure
A2	Failure to follow PPE requirements	Increases exposure or contamination risk
A3	Bypassing or misunderstanding safety interlocks	Creates equipment or personnel hazard
A4	Incorrect lockout/tagout or energy-isolation practice	Potentially exposes employee to hazardous energy
A5	Rushing during alarms, maintenance, or recovery	Encourages unsafe actions
A6	Failure to report a near miss or unsafe condition	Allows hazards to recur
A7	Fatigue or reduced attention on shift	Increases probability of procedural error
A8	Overconfidence before qualification	Employee acts beyond authorization

Example fault combination

```
Unsafe act
   AND
Insufficient hazard recognition
   AND
No effective intervention
   ↓
Potential serious safety event
```

Prevention controls

- Complete all required safety training before independent work
- Demonstrate—not merely acknowledge—chemical and equipment hazards
- Follow approved lockout/tagout and energy-control procedures
- Stop work when conditions are unclear
- Escalate unsafe conditions immediately
- Never trade safety for uptime or production pressure
- Use qualification boundaries strictly

Key insight

A technician who is technically fast but unsafe is not a successful technician. In semiconductor manufacturing, safety and contamination discipline are foundational performance requirements.

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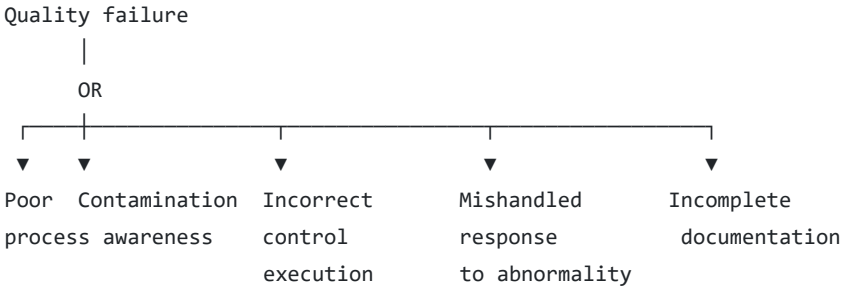
5. Fault Tree Branch B — Quality or Process Failure

🔴 B. Quality failure

A CMP technician can contribute to quality problems even without directly controlling process recipes.



Basic events

ID	Basic event	Potential consequence
B1	Poor understanding of CMP process purpose	Technician cannot recognize abnormal conditions
B2	Incorrect wafer or material handling	Wafer damage or contamination
B3	Failure to follow cleanroom protocol	Particulate or chemical contamination
B4	Incorrect slurry or consumable handling	Process instability or material issue

B5	Failure to recognize equipment drift	Defects or process excursions
B6	Incorrect response to alarms	Escalation of an equipment or process issue
B7	Skipping required checks	Defect escapes or repeat failures
B8	Incomplete or inaccurate logbook entries	Loss of traceability and poor troubleshooting
B9	Poor shift handoff	Incoming shift misses critical equipment information
B10	Performing unauthorized adjustments	Process or equipment instability

Example fault combination

```
Abnormal tool condition
        AND
Technician fails to recognize significance
        AND
Required escalation does not occur
        ↓
Uncontrolled process or equipment excursion
```

Prevention controls

- Understand the purpose of each critical check
- Follow standard operating procedures exactly
- Maintain contamination discipline
- Record abnormal conditions accurately
- Use escalation criteria rather than personal guesswork
- Never improvise process changes outside authorization
- Treat documentation as part of product quality

Key insight

Quality failure often begins as a small deviation that was not recognized, recorded, or escalated.

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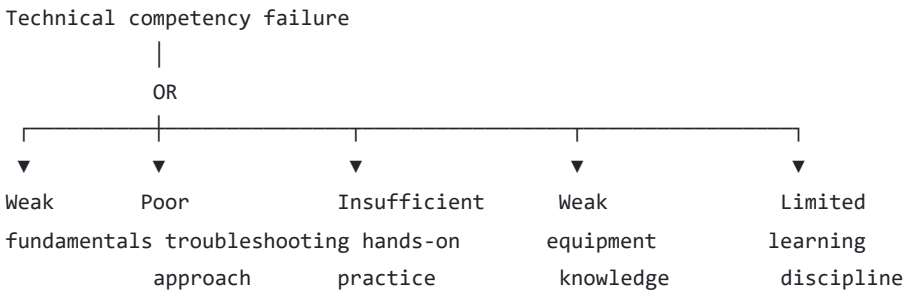
6. Fault Tree Branch C — Technical Competency Failure

🔴 C. Technical competency failure

The employee remains unable to independently perform the expected duties after a reasonable training period.



Basic events

ID	Basic event	Description
C1	Weak understanding of basic semiconductor manufacturing	CMP work becomes memorization without context
C2	Poor understanding of CMP fundamentals	Cannot connect equipment behavior to process impact
C3	Weak mechanical/electrical/pneumatic fundamentals	Troubleshooting becomes dependent on others
C4	Cannot interpret equipment alarms or symptoms	Slow or incorrect fault isolation
C5	Does not learn equipment subsystems	Limited ability to diagnose recurring issues
C6	Fails to ask questions	Knowledge gaps remain hidden
C7	Asks questions but does not retain answers	Same errors repeat
C8	Does not study manuals, procedures, or training material	Slow qualification progress
C9	Limited hands-on repetition	Knowledge does not become operational skill
C10	Cannot distinguish symptom from root cause	Repeated temporary fixes
C11	Poor troubleshooting documentation	Lessons are lost between events and shifts
C12	Does not seek feedback	Development stalls

Example fault combination

```
Complex equipment problem
        AND
Insufficient technical foundation
        AND
Weak troubleshooting method
        AND
No deliberate learning outside the immediate task
```

```
          ↓
Technician remains dependent and fails to progress
```

Prevention controls

A strong learning model:

Observe → Perform with supervision → Explain → Perform independently → Verify → Teach

The technician should develop:

- Equipment familiarity
- Process awareness
- Alarm recognition
- Troubleshooting logic
- Safe maintenance boundaries
- Documentation discipline
- Pattern recognition
- Escalation judgment

Key insight

The most dangerous technical gap is not "I don't know." It is "I don't know, but I act as though I do."

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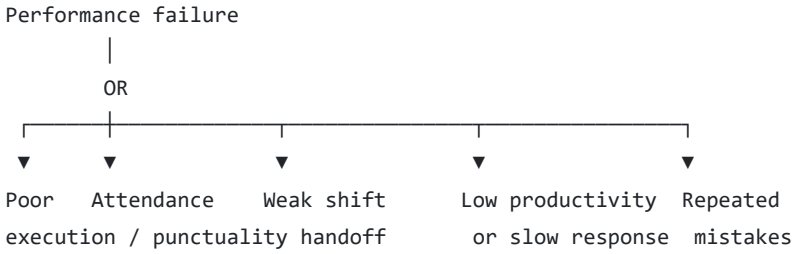
7. Fault Tree Branch D — Performance and Reliability Failure

🔴 D. Performance failure

The employee may understand the job but fail to perform consistently at the required level.



Basic events

ID	Basic event	Impact
D1	Repeated tardiness	Reduces team reliability
D2	Excessive absenteeism	Training and staffing disruption
D3	Poor shift handoff	Information loss between teams
D4	Slow response to assigned tasks	Equipment downtime or backlog
D5	Repeated procedural errors	Rework, retraining, quality concerns
D6	Cannot prioritize competing tasks	Inefficient shift execution
D7	Poor housekeeping or tool organization	Lost time and increased risk

D8	Does not close the loop on assigned actions	Supervisors must repeatedly follow up
D9	Poor communication during abnormal events	Delays recovery
D10	Cannot sustain performance across rotating shifts	Inconsistent reliability

Prevention controls

- Arrive prepared and on time
- Use a repeatable shift-start routine
- Maintain a clear task list
- Close every assigned action or communicate its status
- Make concise, accurate shift handoffs
- Track recurring errors and eliminate them
- Develop prioritization: **Safety → Quality → Equipment protection → Production**

Key insight

In a 24/7 manufacturing environment, reliability is a technical skill.

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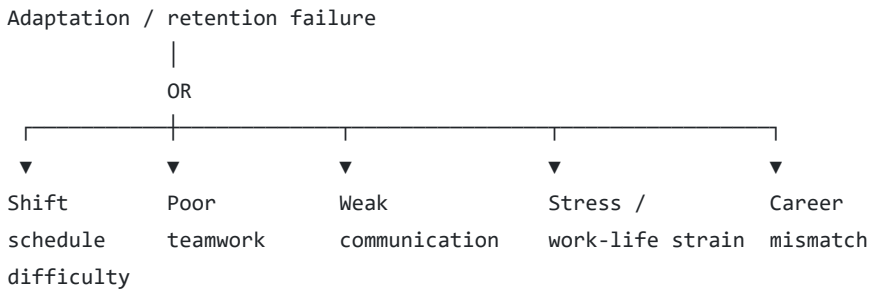
8. Fault Tree Branch E — Adaptation, Team, and Retention Failure

🔴 E. Adaptation / retention failure

The employee cannot sustain the work environment or fails to integrate into the team.



Basic events

ID	Basic event	Impact
E1	Cannot adapt to rotating or long shifts	Fatigue, attendance, performance decline
E2	Poor sleep and recovery habits	Reduced attention and learning
E3	Difficulty accepting coaching	Repeated avoidable mistakes
E4	Defensive response to feedback	Trust deteriorates
E5	Poor relationship with experienced technicians	Less informal learning

E6	Does not communicate respectfully under pressure	Team friction
E7	Blames others rather than investigating	Slows problem resolution
E8	Personal expectations differ from manufacturing reality	Disappointment or disengagement
E9	No visible development path	Motivation declines
E10	Stress becomes chronic and unmanaged	Performance and retention risk
E11	Fails to ask for help early	Small issues become major issues
E12	Does not fit required work discipline	Persistent mismatch

Prevention controls

- Build a sustainable sleep and recovery routine
- Respect experienced technicians while learning from them
- Accept feedback without treating it as personal rejection
- Communicate facts before opinions
- Build credibility through consistency
- Understand the difference between difficult work and unfair treatment
- Ask for clarification before frustration becomes disengagement
- Maintain a development plan with measurable milestones

Key insight

A technically capable employee can still fail if the employee cannot reliably function within the team's operating system.

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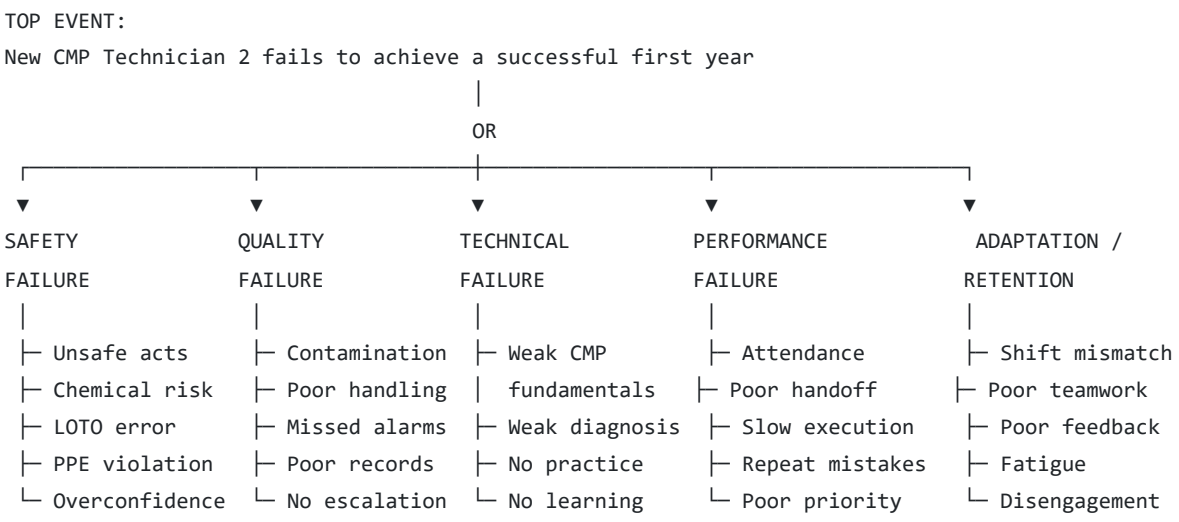
9. Fault Tree — Combined View



Important FTA observation

The branches are not independent.

For example:

```
Poor sleep
    ↓
Reduced attention
    ↓
Missed equipment abnormality
    ↓
Poor documentation / escalation
    ↓
Quality or reliability event
    ↓
Loss of trust
    ↓
Performance and retention risk
```

This is a **failure cascade**: one weakness creates conditions for several other weaknesses.

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10. Event Tree Analysis — ETA

10.1 What is an Event Tree Analysis?

An **Event Tree Analysis** starts with an initiating event and moves forward through a sequence of possible success or failure barriers.

Unlike FTA, which asks:

> **"Why could failure happen?"**

ETA asks:

> **"Given that something happens, what happens next?"**

It is especially useful for analyzing the **first-year journey** of a new hire.

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11. Event Tree Initiating Event

🟢 Initiating event

New employee begins work as CMP Technician 2

The employee enters a demanding semiconductor manufacturing environment with:

- New equipment and procedures
- Safety and contamination requirements
- Technical qualification expectations
- Shift and attendance requirements
- Team integration demands
- Performance evaluations
- Increasing expectations for independent work

The employee's first year then passes through a series of critical barriers.

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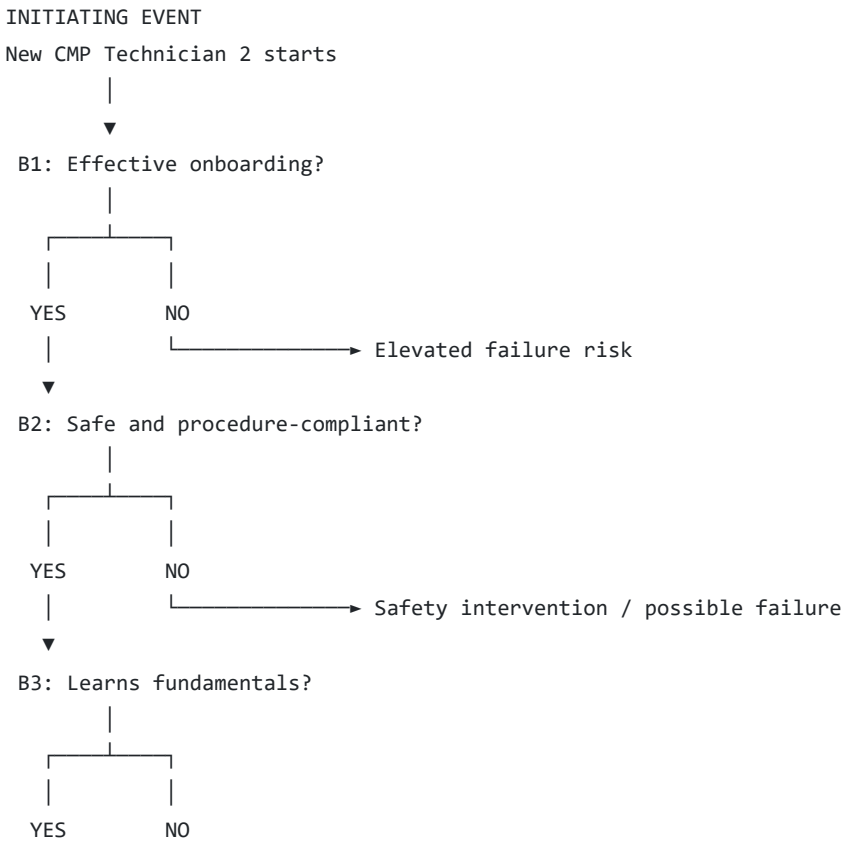
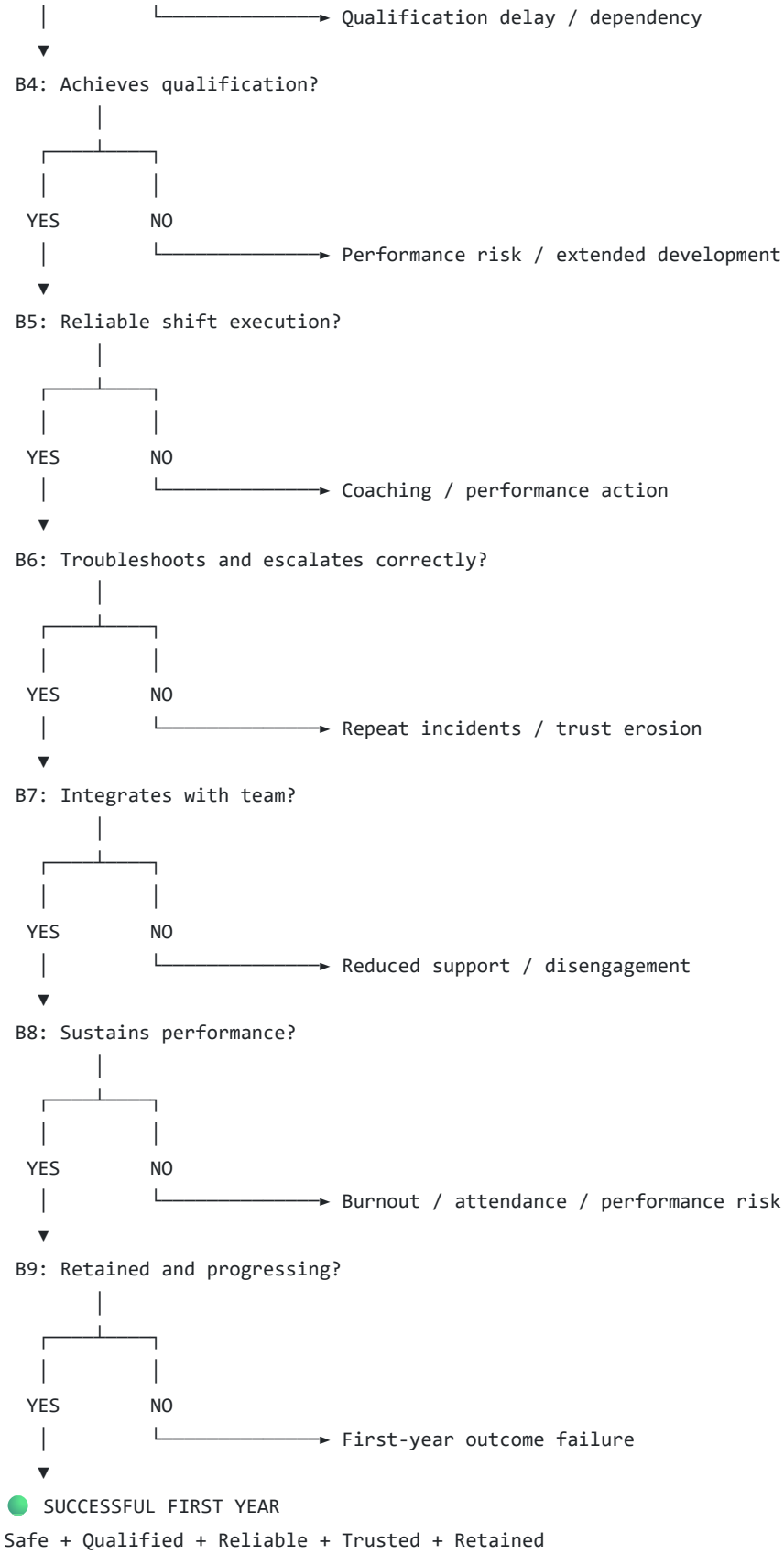
12. Event Tree Success Barriers

Critical barriers

Barrier	Question
B1 — Onboarding	Does the employee complete onboarding and understand expectations?
B2 — Safety discipline	Does the employee consistently work safely?
B3 — Learning ability	Does the employee learn the equipment and process fundamentals?
B4 — Qualification	Does the employee become qualified within expected milestones?
B5 — Operational reliability	Can the employee perform consistently on shift?
B6 — Troubleshooting	Can the employee recognize, isolate, and escalate problems appropriately?
B7 — Team integration	Does the employee build trust and communicate effectively?
B8 — Performance sustainability	Can the employee maintain performance over months?
B9 — Retention and growth	Does the employee remain engaged and progress toward year-end expectations?

13. Event Tree Diagram





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14. Event Tree — Detailed Outcome Paths

The following paths illustrate how different combinations of barrier outcomes can produce different first-year results.

Path 1 — Excellent success

```
Start
  ↓
Strong onboarding
  ↓
Consistent safety
  ↓
Rapid learning
  ↓
Qualification achieved
  ↓
Reliable shift execution
  ↓
Good troubleshooting judgment
  ↓
Strong team integration
  ↓
Sustained performance
  ↓
Retained and progressing
  ↓
🟢 HIGH-PROBABILITY SUCCESS
```

Result

The technician becomes a dependable contributor and may be considered for more complex equipment, additional qualifications, or future advancement.

Path 2 — Slow but successful development

```
Start
  ↓
Adequate onboarding
  ↓
Safe work
  ↓
Learning is slower than expected
  ↓
Qualification delayed
  ↓
Receives coaching and additional practice
  ↓
Improves shift reliability
  ↓
Builds team trust
  ↓
Meets expectations later in year
  ↓
🟢 SUCCESS — DEVELOPMENTAL
```

Result

A slower start does **not automatically equal failure**.

A technician who is safe, coachable, persistent, and steadily improving can still have a successful first year.

Path 3 — Technically strong but unsafe

```
Start
  ↓
Strong technical learning
  ↓
Good equipment knowledge
  ↓
Unsafe shortcut or procedure violation
  ↓
Safety intervention
  ↓
Trust and qualification consequences
  ↓
🔴 HIGH-RISK FAILURE PATH
```

Result

Technical ability cannot compensate for unacceptable safety behavior.

Path 4 — Safe but technically stagnant

```
Start
  ↓
Safe and reliable attendance
  ↓
Follows procedures
  ↓
Does not develop equipment understanding
  ↓
Repeated dependence on others
  ↓
Qualification delays
  ↓
Limited independent contribution
  ↓
🟠 PERFORMANCE / DEVELOPMENT RISK
```

Result

Safety is necessary but not sufficient. The technician must also develop competence.

Path 5 — Qualified but unreliable

```
Start
  ↓
Completes training
  ↓
Passes qualification
  ↓
Poor attendance or inconsistent execution
  ↓
Weak handoffs
  ↓
Repeated follow-up required
  ↓
Team trust declines
  ↓
🟠 RETENTION / PERFORMANCE RISK
```

Result

Qualification proves capability under defined conditions; it does not automatically prove dependable day-to-day performance.

Path 6 — Good technician, poor adaptation

```
Start
  ↓
Technically capable
  ↓
Safe work
  ↓
Qualified
  ↓
Cannot sustain shift schedule or team relationships
  ↓
Fatigue / conflict / disengagement
  ↓
Performance declines
  ↓
🔴 RETENTION FAILURE
```

Result

The employee may be capable of the work but unable or unwilling to sustain the operating environment.

Path 7 — Initial mistake followed by strong recovery

```
Start
  ↓
Minor error or knowledge gap
  ↓
Reports issue immediately
```

```
  ↓
Accepts coaching
  ↓
Corrective action implemented
  ↓
No repeat occurrence
  ↓
Trust increases
  ↓
🟢 RECOVERY SUCCESS
```

Result

A first-year technician is not expected to know everything immediately. The critical distinction is between:

- **An error that is reported, learned from, and corrected**
- **An error that is hidden, repeated, or defended**

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15. Event Tree Outcome Matrix

Path	Safety	Learning	Qualification	Reliability	Team	Year-end outcome
1. High performer	Strong	Strong	On time	Strong	Strong	🟢 Successful
2. Slow learner, coachable	Strong	Moderate → strong	Delayed	Improving	Strong	🟢 Successful
3. Unsafe shortcut	Weak	Strong	At risk	Variable	Damaged trust	🔴 High-risk failure
4. Safe but stagnant	Strong	Weak	Delayed	Adequate	Neutral	🟠 Development risk
5. Qualified but unreliable	Strong	Strong	Achieved	Weak	Declining trust	🟠 Performance risk
6. Adaptation failure	Strong initially	Strong	Achieved	Declines	Weak	🔴 Retention risk
7. Mistake + recovery	Corrective	Strong	Achieved	Improves	Strengthens	🟢 Successful

---

16. First-Year Timeline: Where Failure or Success Emerges

Month 0–1: Entry and orientation

Success indicators

- Shows up prepared and on time
- Takes safety seriously
- Learns cleanroom and manufacturing discipline
- Asks useful questions
- Understands reporting structure
- Accepts that procedures must be followed precisely

Failure indicators

- Treats the role casually
- Resists basic procedures
- Hides uncertainty
- Arrives unprepared
- Assumes prior experience transfers automatically

Primary risk: Poor foundation

Months 2–3: Initial technical learning

Success indicators

- Learns equipment names, functions, and subsystems
- Understands basic CMP process flow
- Recognizes common alarms and abnormal conditions
- Performs tasks correctly under supervision
- Retains coaching
- Documents lessons learned

Failure indicators

- Repeats the same mistakes
- Memorizes steps without understanding purpose
- Does not ask questions
- Becomes frustrated by technical complexity
- Depends on others for every decision

Primary risk: Learning stagnation

Months 4–6: Qualification and independent execution

Success indicators

- Meets qualification milestones
- Performs assigned tasks safely and consistently
- Understands when to escalate
- Completes shift responsibilities
- Provides useful handoffs
- Demonstrates increasing independence

Failure indicators

- Qualification repeatedly delayed without improvement

- Cannot explain abnormal equipment behavior
- Makes unauthorized adjustments
- Requires excessive supervision
- Documentation remains incomplete

Primary risk: Competency gap

Months 7–9: Reliability and troubleshooting

Success indicators

- Recognizes patterns in equipment behavior
- Responds calmly to abnormalities
- Uses structured troubleshooting
- Protects quality and equipment
- Becomes someone others can depend on
- Contributes to team problem-solving

Failure indicators

- Same recurring problems continue
- Escalation is late or incomplete
- Blames equipment, coworkers, or engineering without evidence
- Performs inconsistently between shifts
- Avoids difficult tasks

Primary risk: Reliability and trust gap

Months 10–12: Consolidation and year-end evaluation

Success indicators

- Fully functioning within role expectations
- Safe and dependable without constant reminders
- Demonstrates technical growth
- Maintains good attendance and shift discipline
- Trusted by peers and leadership
- Has a clear next-development target

Failure indicators

- Still requires foundational supervision
- Repeated performance concerns
- Poor safety record
- Weak team reputation
- No measurable improvement
- Disengagement or plans to leave

Primary risk: Failure to convert training into sustained performance

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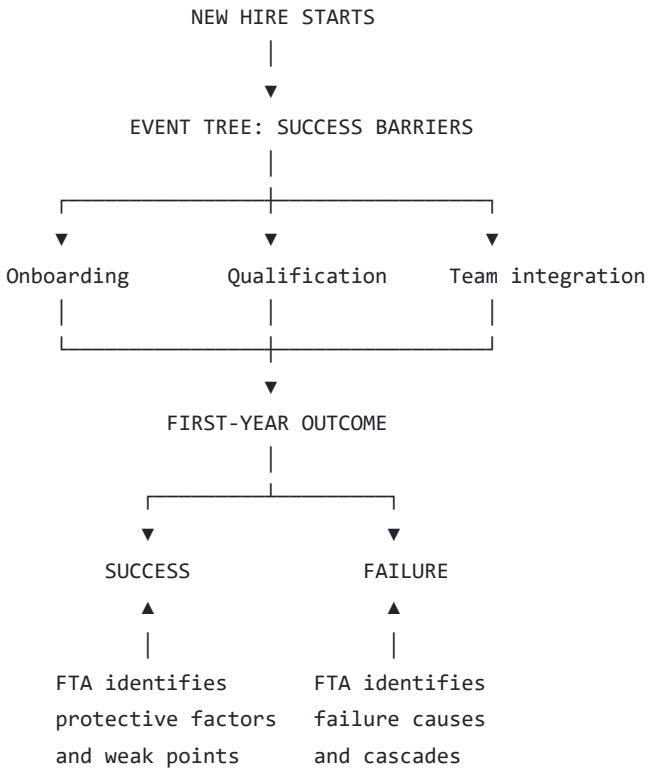
17. Combined FTA + ETA: The Central Insight

The two analyses answer different questions.

Analysis	Main question	Perspective
Fault Tree Analysis	Why could the technician fail?	Backward from failure
Event Tree Analysis	What happens after the technician starts?	Forward through barriers

Combined model



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18. What Actually Determines Success?

The strongest first-year success model is not:

> "Be the smartest technician."

It is:

> **Be safe, learn continuously, execute consistently, communicate clearly, and improve after every mistake.**

The five essential success conditions

1. Safety discipline

Never compromise safety to appear competent.

2. Learning velocity

Convert every shift into accumulated knowledge.

3. Operational reliability

Do the assigned work correctly, consistently, and on time.

4. Troubleshooting judgment

Know what you can do, what you cannot do, and when to escalate.

5. Trustworthiness

Be the person others can depend on when the equipment, process, or shift becomes difficult.

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19. Leading Indicators vs. Lagging Indicators

A major benefit of FTA and ETA is identifying problems **before** the final failure occurs.

Leading indicators — early warning signals

Category	Positive leading indicator	Negative leading indicator
Safety	Reports hazards and asks before acting	Hides uncertainty or takes shortcuts
Learning	Takes notes and applies coaching	Repeats the same error
Technical	Explains equipment function	Memorizes steps without understanding
Execution	Completes tasks and closes the loop	Requires repeated reminders
Communication	Clear shift handoffs	Missing or vague information
Team	Accepts feedback professionally	Defensive or blame-oriented
Adaptation	Maintains sleep and attendance routine	Persistent fatigue or lateness
Growth	Seeks additional knowledge	Avoids difficult learning

Lagging indicators — after the problem appears

- Failed qualification
- Repeated equipment or process errors
- Safety violation
- Poor performance evaluation
- Excessive absenteeism
- Loss of team trust
- Formal corrective action
- Resignation or termination

Key principle

Manage leading indicators; do not wait for lagging indicators to become severe.

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20. Best-Known Method — BKM for a New CMP Technician 2

A **Best-Known Method** is a repeatable approach that reduces variation and improves outcomes.

The CMP Technician 2 First-Year BKM

Before every shift

- Arrive early enough to be prepared
- Review relevant handoff information
- Understand assigned equipment and priorities
- Confirm required PPE and procedures
- Identify unresolved issues from the prior shift

During every task

1. **Understand the task**
2. **Confirm the approved procedure**
3. **Check safety and equipment state**
4. **Perform within authorization**
5. **Observe the result**
6. **Document accurately**
7. **Escalate abnormalities**
8. **Close the loop**

After every abnormal event

Ask:

- What happened?
- What was the first observable symptom?
- What did I verify?
- What action was authorized?
- Who was notified?
- What was the result?
- What should the next shift know?
- What did I learn?

At the end of every week

Review:

- One technical concept learned
- One recurring issue understood better
- One mistake or near miss converted into a lesson
- One procedure mastered
- One communication improvement
- One question to ask a senior technician or engineer

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21. The “Failure Cascade” to Avoid

This is one of the most important patterns in the analysis:

```
Small knowledge gap
       ↓
Employee does not ask
       ↓
Incorrect assumption
       ↓
```

```
Minor procedural error
       ↓
Employee hides or minimizes it
       ↓
Problem repeats
       ↓
Supervisor loses confidence
       ↓
More supervision required
       ↓
Qualification / productivity declines
       ↓
Employee becomes frustrated
       ↓
Defensiveness or disengagement
       ↓
Performance or retention failure
```

Interrupting the cascade

```
Knowledge gap
     ↓
Ask early
     ↓
Verify
     ↓
Perform correctly
     ↓
Document
     ↓
Learn
     ↓
Trust increases
```

---

22. The “Success Flywheel”

Success also compounds.

```
Safe behavior
     ↓
Supervisor trust
     ↓
More learning opportunities
     ↓
Better equipment knowledge
     ↓
Faster and more accurate execution
     ↓
Better troubleshooting
     ↓
```

```
Greater independence
     ↓
More trust
     ↓
Career growth
```

The flywheel principle

Trust is earned through repeated evidence, not through claims of competence.

---

23. Final Assessment

Most likely success profile

A new CMP Technician 2 is most likely to succeed over one year if the employee:

- Treats safety as non-negotiable
- Is punctual and dependable
- Accepts the learning curve
- Asks questions before making assumptions
- Learns equipment systematically
- Follows procedures precisely
- Documents and communicates clearly
- Accepts correction without defensiveness
- Escalates abnormal conditions early
- Maintains a sustainable shift-work routine
- Demonstrates measurable improvement over time

Most likely failure profile

Failure becomes more likely when the employee:

- Overestimates prior experience
- Uses shortcuts
- Hides mistakes
- Resists coaching
- Repeats errors without learning
- Fails to qualify or progress
- Communicates poorly during abnormal events
- Cannot sustain attendance or shift demands
- Prioritizes looking competent over being safe
- Becomes disengaged instead of adapting

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24. Bottom Line

Fault Tree conclusion

The technician's first-year failure is rarely caused by one isolated weakness. It is more often a **cascade involving safety, learning, execution, communication, and adaptation**.

Event Tree conclusion

The first year is a sequence of barriers. Each successful barrier—onboarding, safety, learning, qualification, reliability, troubleshooting, teamwork, and sustainability—raises the probability of a successful outcome.

> **The winning strategy is simple but demanding:**
>
> **Be safe enough to trust, teachable enough to improve, technically disciplined enough to qualify, and reliable enough that the team can count on you.**

A successful first year is not the absence of mistakes. It is the consistent demonstration that mistakes become learning, learning becomes competence, and competence becomes dependable performance.