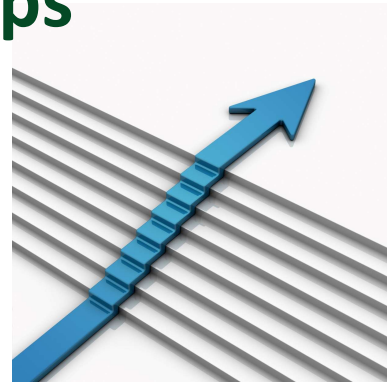


Tips & Next Steps



**What interests
my boss,
fascinates me!**

How to Support Mill RCA Initiatives

#	Support Activity
1	Increase Leadership Visibility
2	Review Open RCFA Corrective Actions
3	Maintain a Bad Actor List
4	Assess Logic Tree Quality
5	Engage Hourly Workforce
6	Highlight Exemplary RCFAs
7	Emphasize and Encourage Failure Data Collection

3




- Plant Manager, Operation Manager and Maintenance Manager
- Visit RCA meetings (Pop-In)
- Create and Attend Reliability Steering Team Meetings

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2. Review Open RCFA Corrective Actions




- Schedule a review on a regular basis (e.g., weekly)
- Call out people with late actions items




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3. Maintain a Bad Actor List



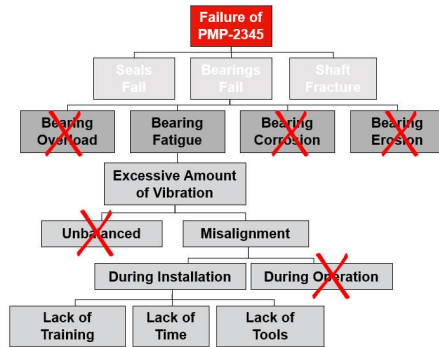
- Focus teams on mitigating repetitive failures
- Maintain bad actor lists by area (e.g., pulp mill, woodyard, paper mill, power & recovery)
- Set expectation for reliability improvement projects



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4. Assess Logic Tree Quality



- Ensure Failure Modes are Facts
- Ensure the Team Verified Hypotheses
- Ensure logic is correct (Physical, Human then Latent causes)

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5. Engage Hourly Workforce



Ensure that hourly workers are involved with RCAs

- Attend RCA Meetings as Team Members
- Help with Data Collection
- Verifying Hypotheses

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6. Highlight Exemplary RCFA's




- Present RCA at Periodic Production Meetings
- Add RCA Section to the Site Newsletter
- Allow RCA Team to Present During Senior Leadership Visits




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7. Emphasize and Encourage Failure Data Collection

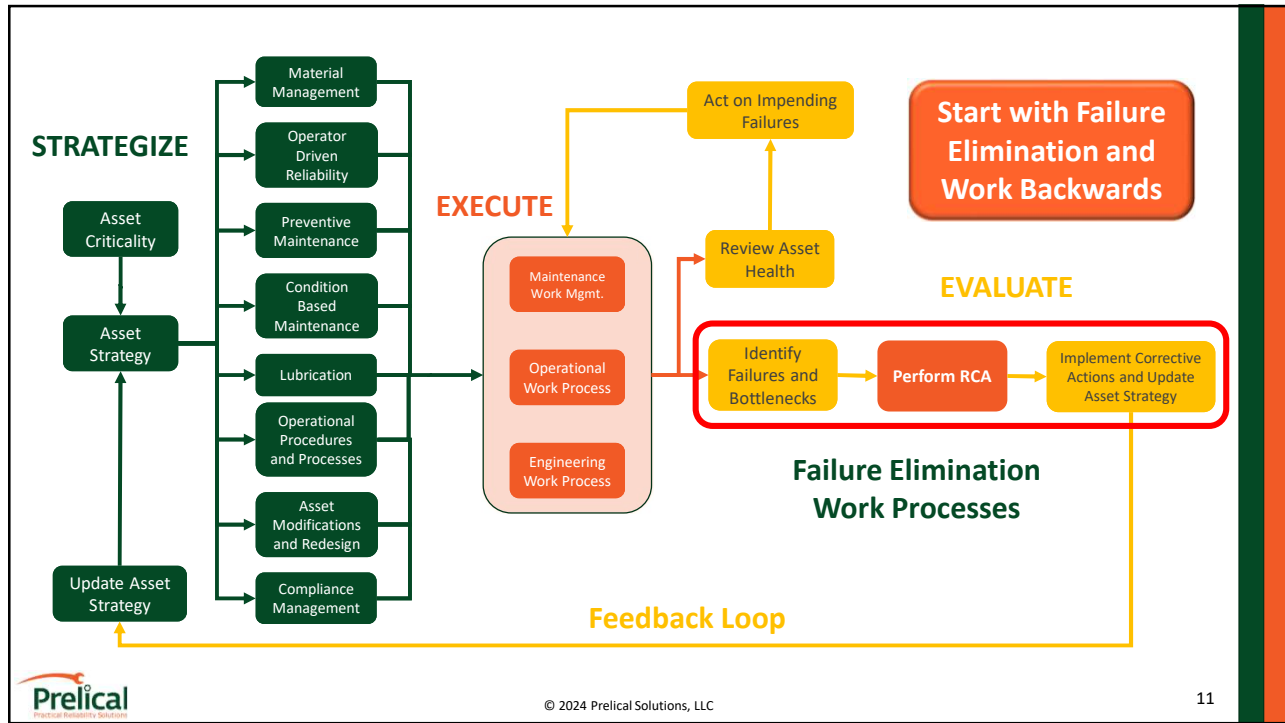


- Encourage Operations and Maintenance to Preserve Data
- Parts, Position, People and Paper data

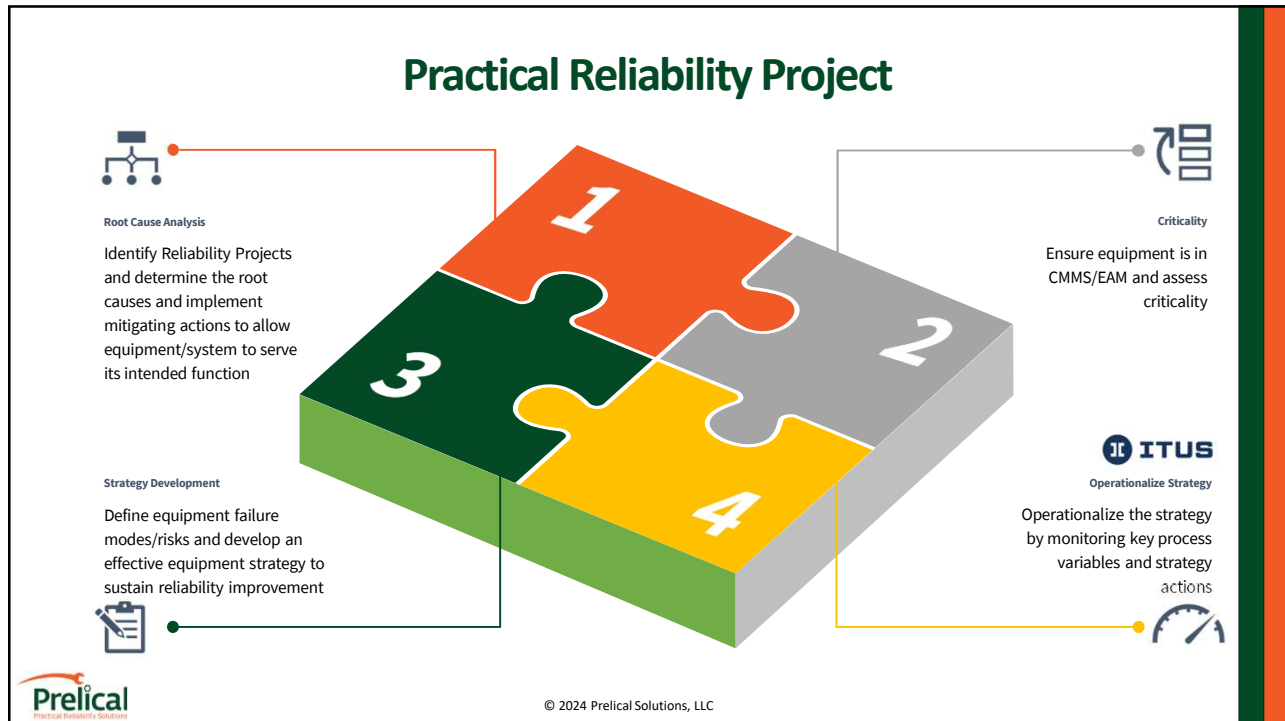


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Role of Reliability Engineer






-  Developing Reliability Project Lists and Performing Root Cause Analysis
-  Determining Equipment Criticality and Developing Equipment Strategies
-  Implementing/Operationalizing Equipment Strategies



-  Troubleshooting the "Failure of the Day"
-  Extra technical person to work outages
-  Part Time Planner, Database Administrator, Supervisor, Etc...

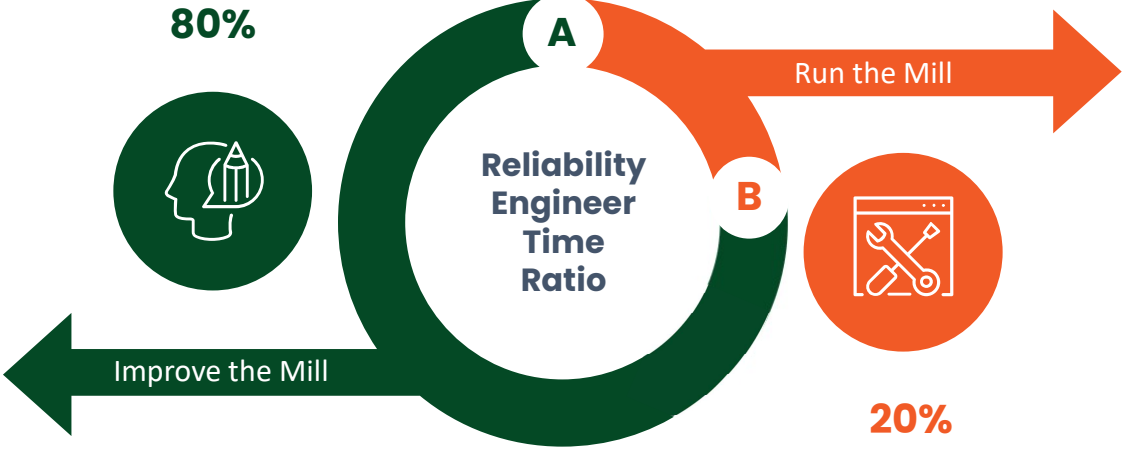


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Reliability Engineer Time Ratio

How Should a Reliability Engineer Spend Their Time?



The diagram features a central white circle with the text "Reliability Engineer Time Ratio". To its left is a green circle containing a head and pencil icon, with "80%" above it. A large green arrow points from this circle to the left, labeled "Improve the Mill". To the right is an orange circle containing a wrench and screwdriver icon, with "20%" below it. A large orange arrow points from this circle to the right, labeled "Run the Mill". A green arrow labeled "A" points from the top of the central circle to the "Run the Mill" arrow, and an orange arrow labeled "B" points from the "Run the Mill" arrow back to the central circle.



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Area Reliability Improvement Teams



Include frontline workers whenever possible!

Reliability Engineer

Reliability Engineer should facilitate the team and provide the meeting schedule and agenda

Maintenance

Maintenance Superintendent of the Area, Planners/Supervisors

Operations

Operations Maintenance Coordinators, Superintendent and Process Engineers should be involved

Productivity Lead

Productivity Lead should be involved to the extent they support the team with tools and techniques to assist with the improvement efforts



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We Are Here to Support You!



Bob Latino
blatino@prelical.com



Ken Latino
Kenneth.latin@prelical.com



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