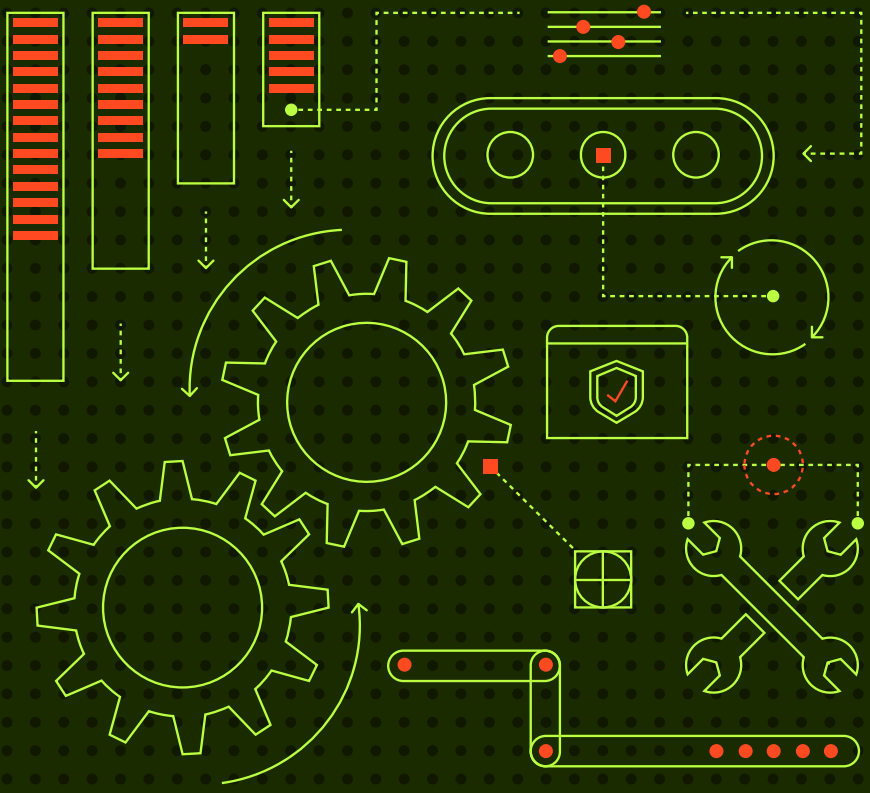
MAINTENANCE MATURITY GUIDE

Limble

From reactive to preventive

How to build a maintenance program that stops fighting fires



Reactive maintenance is expensive. Studies show that reactive repairs cost three to five times more than the same work done on a schedule. You pay more for emergency labor, expedited parts, and secondary damage from failures that ran too long.

Moving to preventive maintenance changes that. You schedule work before failures happen. Your team stops reacting and starts planning. Costs drop, asset life increases, and your team spends time on controlled work instead of emergencies.

This guide covers that specific transition. It explains what you need to put in place, what to expect, and how to know when you have made it.

Who this guide is for

Maintenance managers leading teams in manufacturing, facilities, food and beverage, or any asset-heavy operation. You may have a CMMS already, or you may be starting from spreadsheets. Either way, this path applies.

The real cost of reactive maintenance

Most teams underestimate how much reactive maintenance actually costs. The labor and parts invoice is only part of it.

What reactive maintenance actually costs you

When an asset fails without warning, you pay in four ways.

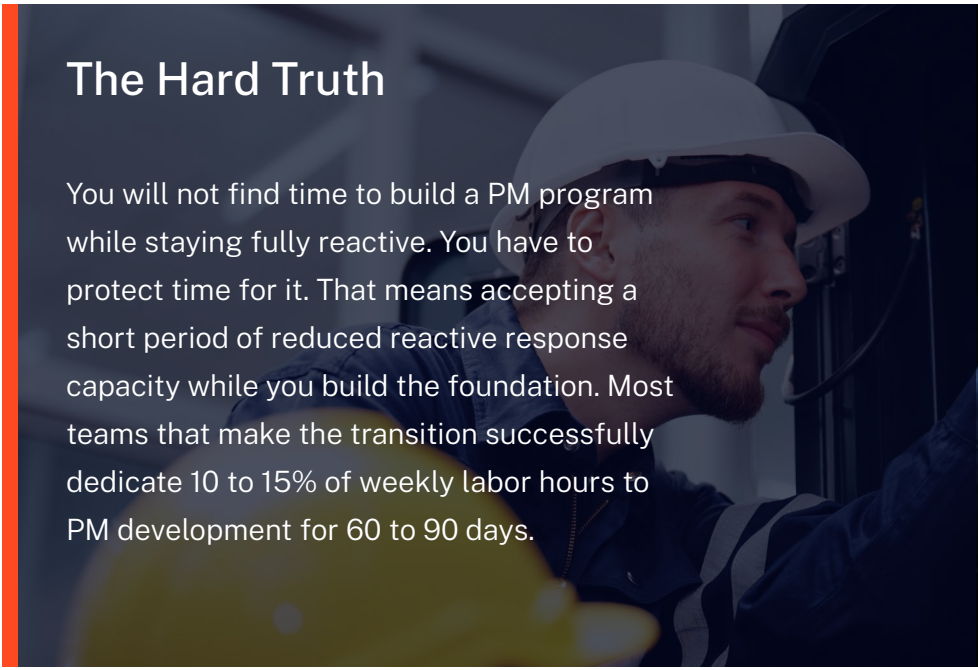
- **Emergency labor:** technicians pulled off scheduled work, often at overtime rates.
- **Rush parts:** expedited shipping on components you could have ordered at standard cost.
- **Secondary damage:** a failed bearing that runs too long damages the shaft, housing, and sometimes adjacent assets. One failure becomes three.
- **Lost production:** unplanned downtime stops the line. Planned maintenance rarely does.

A food processing plant running three production lines loses an average of $15,000 per hour of unplanned downtime. A single unexpected compressor failure can erase weeks of maintenance budget savings. The cost of a scheduled PM on that compressor is a fraction of the repair.

Why reactive teams stay reactive

Most managers know reactive maintenance is expensive. They stay in it anyway. Here is why.

- **No time to plan.** When the team spends 80% of the day responding to failures, there is no bandwidth to write PM procedures or build schedules.
- **No asset data.** Without a documented asset registry, you cannot build a PM program. You do not know what you own, where it is, or when it last received attention.
- **No trust in the system.** Teams burned by a CMMS rollout that failed once are reluctant to invest in another one.
- **Short-term pressure.** Leadership sees the maintenance budget and wants it lower now. PM requires upfront time before the savings appear.



The Hard Truth

You will not find time to build a PM program while staying fully reactive. You have to protect time for it. That means accepting a short period of reduced reactive response capacity while you build the foundation. Most teams that make the transition successfully dedicate 10 to 15% of weekly labor hours to PM development for 60 to 90 days.

Before you start

Preventive maintenance requires a foundation. Teams that skip these steps build PM programs on top of incomplete information and wonder why compliance stays low.

A documented asset registry

You cannot maintain what you cannot see. Before writing a single PM procedure, list every asset your team is responsible for.

- Record asset name, location, make, model, serial number, and install date.
- Assign a criticality rating to each asset: high, medium, or low. Base this on what happens to production, safety, or quality when the asset fails.
- Note the manufacturer-recommended maintenance intervals if the manual is available.

A high-criticality asset is one where failure causes immediate production stoppage, a safety risk, or significant quality loss. A low-criticality asset is one where failure is an inconvenience. Your PM program should start with high-criticality assets and expand from there.

PRACTICAL TIP

Walk the floor with your most experienced technician before building your asset list. They know every asset, including the ones not on any drawing or diagram. Budget two to three hours per production area for this walk. Take photos of asset nameplates so you have accurate make and model data.

A working work order process

Every repair your team completes needs a work order. This is not about paperwork. It is about building the failure history you will use to set PM intervals, identify problem assets, and justify budget requests.

- Create a work order for every repair, inspection, and task, including small ones.
- Record what failed, what caused it, and what was done to fix it. Plain language is fine.
- Log labor time on every work order. You need this to schedule PM work realistically.
- Track parts used per work order. This data drives future inventory decisions.

Teams without work order history make up PM intervals. They guess at how long procedures take, order the wrong parts, and wonder why the program does not hold. Sixty days of consistent work order data gives you enough to start building accurate PM schedules.

A CMMS your team actually uses

A CMMS sitting unused on a manager's laptop is not a CMMS. It is shelf software. For a PM program to work, your entire team needs to log work in the system every day.

- → Technicians create and close work orders in the system, not on paper.
- → Work order data is visible to the full team in real time.
- → Scheduled PMs appear in the system and get assigned automatically.

PRACTICAL TIP

CMMS adoption fails when the system is harder to use than the alternative. If your technicians carry phones, your CMMS needs a mobile app that works on the floor without a laptop. If closing a work order takes more than 60 seconds, it will not get done consistently. Audit your current process and remove friction before you build PM schedules on top of it.

Building your PM program

Once your foundation is in place, you build the program. Start narrow. Get it right on a small set of assets before expanding.

Start with your five most critical assets

Do not write PM procedures for every asset on day one. Start with the five assets where a failure costs the most, either in downtime, safety risk, or repair expense.

- Write one PM procedure per asset. List every task in order. Be specific.
- Include the tools required, the parts needed, and estimated completion time.
- Add photos or diagrams for inspection points that are hard to describe in words.
- Have a technician follow the procedure and give feedback before you finalize it.

A PM procedure that takes 45 minutes to complete will not get scheduled into a 30-minute window. Accurate time estimates are not optional. Get them from the technician who knows the asset best.

Set intervals based on manufacturer specs and failure history

Manufacturer maintenance intervals are a starting point. They are based on average operating conditions. Your conditions may be harder or easier than average.

- Start with manufacturer-recommended intervals for new assets with no failure history.
- For assets with work order history, look at how often failures occurred. If the manufacturer says quarterly but you had two failures in one quarter, shorten the interval.
- For assets running in harsh conditions, such as high heat, dust, or continuous operation, tighten intervals by 20 to 30% from the manufacturer baseline.

Example:

A conveyor gearbox manufacturer recommends oil changes every 2,000 hours. Your plant runs the conveyor 24 hours a day in a high-temperature environment. Your work order history shows gearbox failures at roughly 1,400 hours. Set your PM interval at 1,200 hours and monitor. Adjust after six months of data.

Schedule PMs with real labor capacity in mind

A PM schedule that ignores how many technicians you have and how much time they have available is not a schedule. It is a wishlist.

- Add up total PM hours for each week across all scheduled procedures.
- Compare that to available labor hours after accounting for reactive work. In a reactive-heavy team, plan for reactive work to consume 50 to 60% of available hours at first.
- Spread PMs across the week and month so no single day or shift carries the full load.
- Flag any week where scheduled PM hours exceed 40% of available labor. Adjust intervals or stagger procedures.

PRACTICAL TIP

Schedule your first round of PMs at 80% of available capacity, not 100%. The remaining 20% is a buffer for reactive work that runs long, parts delays, and procedures that take longer than estimated. Teams that schedule to full capacity miss PMs in the first week and lose confidence in the system before it has a chance to work.

Build parts availability into your PM plan

A PM that cannot be completed because the part is not in stock is a failed PM. Before you launch a schedule, confirm the parts for each procedure are on hand or on order.

- List every part required for each PM procedure, including consumables like filters, lubricants, and belts.
- Check current inventory against that list in your CMMS.
- Set a minimum stock level for high-use PM parts so reorder happens automatically.
- Order parts for your first 30 days of PMs before the schedule goes live.

Running the program: The first 90-days

The first ninety days are the hardest. You are building habits, adjusting procedures, and proving to your team that the program works. Here is what to focus on.

Track PM compliance weekly

Compliance is the percentage of PMs completed on time. It is your primary indicator of whether the program is working.

- Calculate compliance weekly: PMs completed on time divided by PMs scheduled, expressed as a percentage.
- A score below 70% in the first 30 days is a signal, not a failure. Investigate why PMs are being missed before adjusting the schedule.
- Common causes: procedures that take longer than estimated, parts not available, technicians unaware a PM was assigned, or intervals set too tight.

Target 85% compliance by the end of 90 days. That is a realistic number for a new PM program. Teams that demand 100% compliance immediately either skip PMs and lie about it or burn out their technicians.

Audit procedures after the first round

Your first PM procedures will have gaps. A technician will follow the procedure and find a step that does not apply, a torque spec that is wrong, or a task in the wrong order. Collect that feedback and fix it.

- Ask the technician who completed each PM to note anything that was unclear or incorrect.
- Update the procedure in your CMMS before the next occurrence.
- Remove tasks that produce no findings after three consecutive completions. They add time with no value.

Example:

A maintenance team at a bottling facility wrote a PM for a filling machine that included a full sensor calibration check. After three completions with no sensor issues found, they removed the calibration step and replaced it with a visual inspection. PM completion time dropped from 75 minutes to 50 minutes. Compliance on that asset went from 71% to 94%.

Watch for these early warning signs

A PM program that is not working will show specific patterns. Catch them early.

- PMs consistently completed late by the same technician: likely a scheduling or communication problem, not a performance problem.
- The same asset generating repeat reactive work orders between PMs: the PM interval is too long or the procedure is missing a key task.
- Parts shortages delaying PMs: your minimum stock levels are too low or reorder triggers are not set correctly.
- Technicians marking PMs complete without completing all tasks: the procedure is too long or too complex. Break it into smaller procedures.

Communicate wins to your team and leadership

Document what the PM program catches. When a technician finds a worn belt during a PM and replaces it before it snaps, record what that failure would have cost.

- Log the finding, the corrective action, and the estimated cost of the failure avoided.
- Share a monthly summary with your team. They need to see that the work matters.
- Share a quarterly summary with leadership. It builds support for the program and justifies the investment.

PRACTICAL TIP

Most CMMS platforms let you add a “finding” field to PM work orders. Use it. After six months, you will have a documented list of failures caught before they happened. That list is your strongest argument for budget, headcount, and continued investment in the program.

How to know when you've made the transition

Moving from reactive to preventive is not a single event. It is a shift in how your team operates day to day. Use these criteria to assess where you stand.

EXIT CRITERION	WHAT IT MEANS IN PRACTICE	TARGET
Asset registry complete	Every asset your team maintains is logged with criticality rating, location, and basic specs	Before PM launch
Work order process live	90% or more of repairs closed as work orders with failure descriptions and labor time	Month 1-2
PM procedures written	All high-criticality assets have written, technician-reviewed PM procedures	Month 2-3
PM compliance at 85%	Compliance holds at 85% or higher for two consecutive months	Month 3-5
Reactive rate below 40%	Reactive work orders make up less than 40% of total work orders	Month 4-6
Parts availability above 90%	PMs delayed by missing parts less than 10% of the time	Month 3-5
6 months of failure data	Work order history covers 6 or more months with documented failure modes	Month 6

What comes next

Once your PM program runs at 85% compliance and reactive work drops below 40%, you have the data and the habits needed to move toward proactive maintenance. That means running failure analyses, tracking MTBF and MTTR, and starting to eliminate recurring failures at the root.

That work requires the failure history you are building now. Every work order your team closes with a failure description and parts list is data for the next stage. Capture it correctly from the start.

A Final Word

Preventive maintenance is not a technology problem. It is an execution problem. The teams that make this transition successfully do not do it because they bought a better CMMS. They do it because a manager protected time for the work, held the team accountable to the process, and fixed problems in the program instead of abandoning it when compliance dipped. The tools matter. The discipline matters more.

Limble delivers software designed by maintenance professionals, for maintenance professionals. Founded in 2015, Limble provides the industry's leading modern CMMS and empowers maintenance professionals to implement preventive maintenance, easily manage assets, gain control of inventory, streamline workflows, report KPIs, organize work orders, and realize millions of dollars in cost savings from reduced downtime, enhanced parts and labor spend management, and improved productivity. Thousands of customers worldwide trust Limble including Nike, Pepsi, DHL Global Forwarding, and more.