

The State of Maintenance Report

How Everyday Working Habits Decide Maintenance Maturity

A benchmark research report for
maintenance and operations teams



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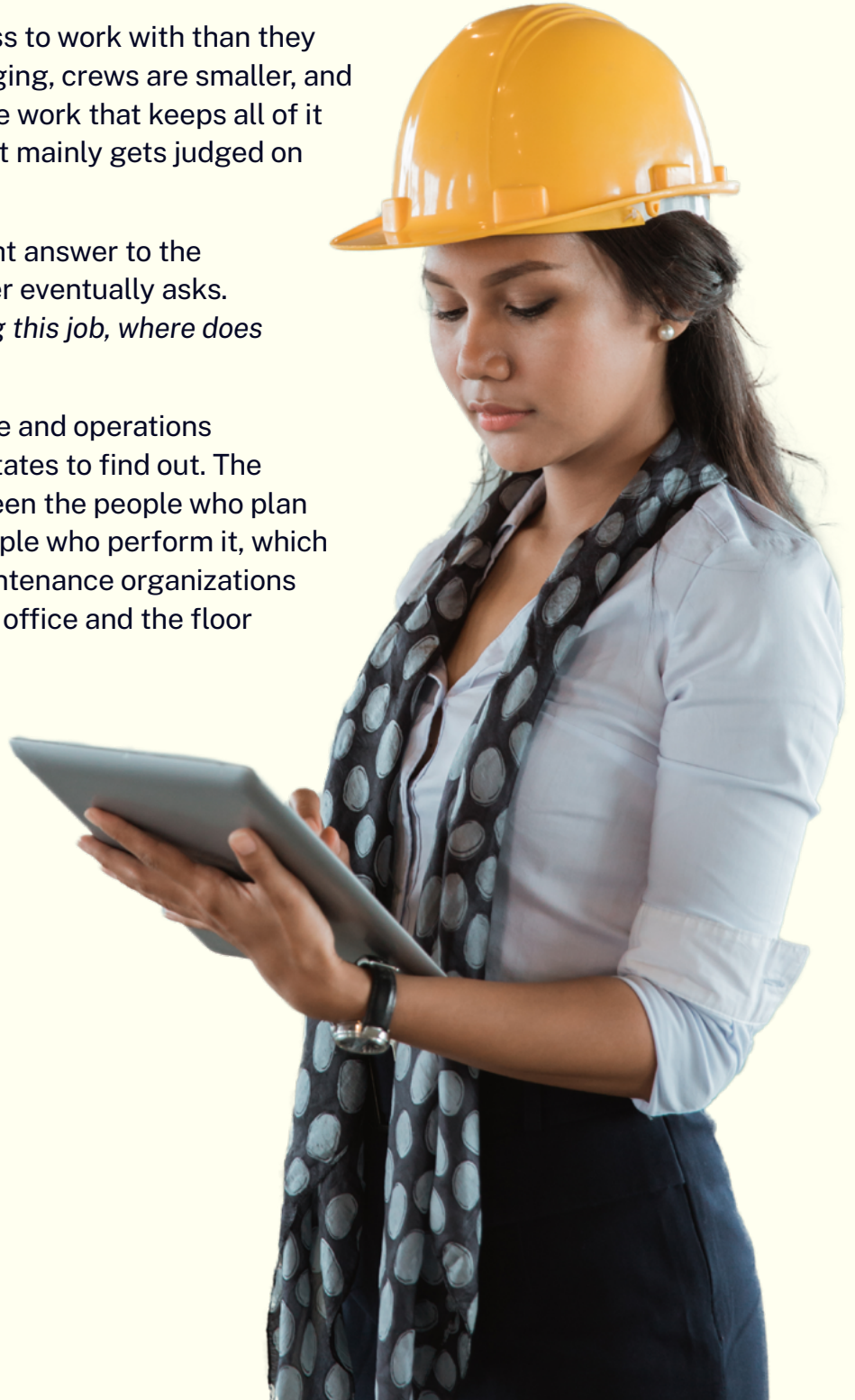
Executive Summary

Many maintenance teams have less to work with than they did five years ago. Equipment is aging, crews are smaller, and an unplanned stop costs more. The work that keeps all of it running happens out of view, and it mainly gets judged on whether or not anything broke.

What has been missing is a straight answer to the question every maintenance leader eventually asks. *Compared with everyone else doing this job, where does my team actually stand?*

Limble surveyed **686** maintenance and operations professionals across the United States to find out. The sample splits almost evenly between the people who plan and manage the work and the people who perform it, which makes it possible to see what maintenance organizations do and, just as usefully, where the office and the floor disagree about what's happening.

The answers are for anyone accountable for uptime: maintenance managers and directors, operations leaders, reliability engineers, the technicians doing the work, and the finance and executive teams who fund all of it.



What the research found



Barely half of planned upkeep gets done. Leaders put their own preventive maintenance compliance rate at **54%**, measured against a schedule their team wrote for itself.



Few teams believe their risk is under control. Nearly two-thirds (**61%**) say their current maintenance approach creates moderate to very high risk in terms of unplanned downtime, cost, and safety, leaving only about a third who rate their own exposure as low.



Critical knowledge sits outside of software and systems. **74%** say they rely on a critical facility asset that exactly one person on staff knows how to fix, and **47%** have already lost maintenance knowledge they could not recover after someone left.



The software is bought, then sits unused. **82%** own and operate a CMMS. Just **39%** have it in consistent use across the whole team.

How teams can reach the next level

Maintenance maturity turned out to have little to do with size, industry, or budget.

The strongest teams share a way of working, built out of ordinary daily habits that cost nothing to adopt and take a while to pay off. Every one of them is available to a crew of three or three hundred.

The findings trace how those habits show up across three key areas: how a technician's shift is actually spent, what happens to the data that work leaves behind, and whether the tools teams have are actually usable enough to deliver value.

Where Teams Think They Stand, and Where They Actually Do

Maintenance maturity is described in stages: reactive, preventive, and predictive. That framework turns up in courses, keynotes, and vendor presentations, and teams know the language well enough to place themselves on it without much hesitation.

What gets asked far less often is whether a team's self-placement matches up with how the work actually gets done.

Respondents placed themselves on a maintenance maturity ladder. They also answered three questions about how the work actually runs, and those answers produced a score of their own, independent of the label anyone had chosen.

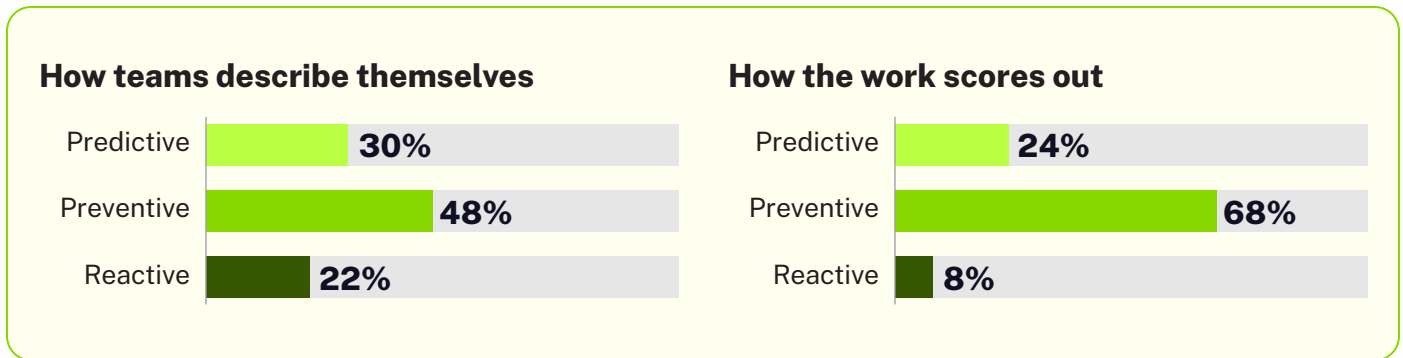
How the rungs of the maturity ladder were assigned.

Every respondent received a composite score from 0 to 9 across three behavioral measures:

- How maintenance hours are actually spent, from almost all reactive to substantially predictive (0–4 points).
- How the team tracks and records maintenance work, from all manual to all digital (0–3 points).
- How many maintenance metrics the team can estimate with confidence (0–2 points).

In total, a score of 0 to 2 places a team on the reactive rung, 3 to 6 on preventive, 7 to 9 on predictive. Industry, company size, and budget were not scoring inputs.





The reactive rung is emptier than teams think

Teams were harder on themselves than the scoring was. Only **8%** of maintenance organizations are truly running on unplanned repair with little tracking behind it, against the **22%** who described themselves that way. Roughly two-thirds of the teams calling themselves reactive have built more structure than they give themselves credit for.

The middle is where nearly everyone went. **68%** score at the preventive stage, twenty points above the **48%** who place themselves there.

And then, for most of them, the climb stops.

Why the preventive plateau holds

Getting from the bottom reactive stage to the middle preventive stage is a discipline issue. It takes a detailed schedule and the will to protect planned work from interruption.

However, getting from the preventive stage to the higher predictive stage is an infrastructure problem. It takes asset history complete enough to reveal patterns, condition data consistent enough to establish a baseline, and enough confidence in both to act before anything has visibly broken.

The first climb asks a team to change its habits. The second requires those habits to have been in place long enough to leave a pattern behind.

What the Plateau Costs

Before any of this reaches a budget, it shows up as a schedule that didn't get finished. Leaders track that as preventive maintenance compliance, and it's one of the few maintenance numbers measured against a plan the team wrote for itself.

Leaders estimate their team's preventive maintenance compliance rate — the share of scheduled upkeep that actually gets completed — at just **54%**.

That figure is measured against a target of the teams' own making, *which puts the benchmark at 100%*. So nearly half of the maintenance that teams deemed necessary does not happen at all.

Reactive work is urgent and visible: a line is down, production is waiting. Preventive work is important and invisible, and nothing appears to happen on the surface when it slips a week. When the two needs compete for the same technician, urgency wins.

The cost shows up in hours and dollars...

Skipped PMs come back as breakdowns, and the repair is rarely the expensive part. Bringing the line back up takes longer than the fix does, which is why counting downtime in hours is more useful than counting repairs.

Among leaders, **47%** log 10 hours or more of unplanned downtime in a typical month, and **24%** regularly exceed 20 hours.

Twenty hours a month is roughly 240 hours a year — close to six weeks of production time for a single-shift operation.

4 in 10 estimate their downtime costs at **\$100,000 a year** or more. That dollar figure is what those lost hours amount to once idled production, labor, and scrap are counted, which is why it is the number that travels furthest outside the maintenance department.

PM compliance gauge



Where downtime costs the most

Manufacturing respondents were **27% more likely than average to** put their annual downtime costs at **\$100,000 or more**. When a production line stops, the cost accrues by the hour across everything downstream of it.

...And on the floor, it shows up in risk

Not every cost of running reactive reaches a budget line. The people sent in after something breaks carry a risk that doesn't appear in a spreadsheet, and they judge their own working conditions more harshly than the people who plan the schedule do.

61% of all respondents say their current maintenance approach creates moderate to very high risk in terms of unplanned downtime, cost, and safety. **24%** of technicians call that risk "high" or "very high," as opposed to the **14%** of leaders who said the same.

That difference is physical. Planned work happens on a de-energized machine at a scheduled hour with the right parts staged. Unplanned work happens wherever the failure left things: under time pressure and sometimes even on equipment that has not cooled.

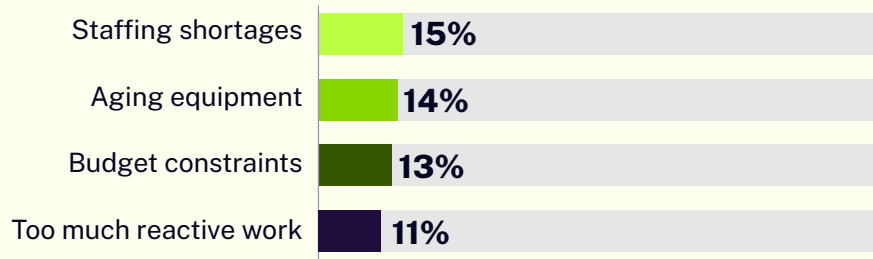
65% say reactive maintenance puts technicians in higher-risk situations at least monthly. **12%** say this occurs daily. Only **6%** say never, and predictive teams were **120% more likely** than average to be in that group.

Deferred maintenance is a scheduling matter, but it also converts into safety exposure on a cycle that runs faster further down the ladder.

What teams say holds them back

Teams have their own account of why the climb to the predictive rung stalls. Asked to name one thing above all others, they point almost entirely at what they don't have.

The single biggest obstacle to higher maintenance maturity



Maintenance technicians were **47%** more likely than average to name **aging equipment**, which tracks with who has to work on it.

The trouble is that staffing, equipment, and budget are all decided somewhere above maintenance, leaving teams largely describing a list of problems they can't solve.



Who is already on the top rung

Predictive teams aren't defined by scale: more than a third (**35%**) of teams scoring on the predictive rung are small and midsize businesses, and **18%** maintain a single site.

The patterns that do appear are occupational rather than financial. Predictive teams are **37% more likely** than average to be concentrated in manufacturing. They are more likely than average to be led by a Maintenance Manager (**101% more likely**), or by a Director of Maintenance or Manufacturing Operations (**66% more likely**).

Teams were scored on how they work rather than on what they can afford, so these habits are within reach at any size.

The People Doing the Work

A maintenance technician's day has a makeup that almost nobody outside the trade would guess: much of it happens away from the equipment. 60% of leaders and 62% of technicians say a technician gets three hours or less of hands-on maintenance in a typical shift.

That is just a few short hours a day spent diagnosing, repairing, inspecting, or performing scheduled work on an asset.

Hands-on time turns out to be one of the clearest markers of where a team sits on the maintenance maturity ladder. Leaders on predictive teams were 25% more likely than average to report technicians getting three to five hours of hands-on maintenance per shift. The teams furthest along are the ones whose technicians spend the most of the shift on the equipment.

Leaders and technicians split on the rest of the shift

They agree on the total and then describe different days. Leaders are working from the work order queue. Technicians are working from the shift itself, which contains a lot that never makes it into a work order.

A work order logs when a job started and when it closed. The minutes before it started sit outside the record entirely.

Technicians name five things that get in the way of maintenance time:

- 1 Waiting on approvals (**51%**)
- 2 Equipment records that are incomplete or out of date (**41%**)
- 3 Parts they cannot locate (**40%**)
- 4 Hard-to-use software (**35%**)
- 5 Work orders that arrive without enough detail (**28%**)

Four of those five describe information that exists somewhere and fails to reach the person who needs it. None of it is missing; it is just somewhere a technician can't reach without stopping work to go find it.

Unlocatable parts are the clearest example. Single-site teams were **22% more likely** than average to name them as an obstacle, which seems backwards until you consider that a team working out of one building often never sets up inventory tracking at all.



48%

of technicians say they lose an hour or more in a typical shift waiting on approvals or site access. Leaders put it at **37%**, understating the issue by roughly a third.

What technicians want, and what it costs to go without

Technicians were asked what would make the job easier or more attractive to stay in. Their answers were practical; none of them would surprise anyone who has run a crew.



The technician wishlist

Better pay (**63%**), more training (**57%**), and better tools and technology (**53%**) are the top three things technicians say would improve their experience on the job.

Pay topping the list is no surprise. Tools and technology landing within ten points of it is worth noting, and it ranks higher still among the people with the least to work with: teams without a CMMS were **47% more likely** than average to name it.

Training shows up twice on the wishlist: technicians want more of it, and among teams whose CMMS is not widely used, **47%** say the reason it isn't more utilized is that technicians were never properly trained on the system.

Training matters more when the bench is thin, and the bench has unfortunately been thinning: **46%** of leaders say open maintenance roles take upwards of three months to fill.

Maintenance teams tend to be small, so a single vacancy takes a meaningful share of available capacity with it. That capacity comes out of planned work first, because reactive work cannot be deferred.

The pressure behind those timelines is demographic. Skilled trades have been retiring faster than they are replaced for years, vocational pipelines contracted for a generation, and the knowledge that makes a technician valuable at a particular site cannot be hired from anywhere else. Posting the role is the straightforward part for leaders, while rebuilding the site-specific knowledge that walked out with the last team member takes far longer than filling the seat does.

Technology has entered the hiring conversation as well. **35%** of leaders say candidates now expect workplace technology to be as easy to use as the apps they use daily, and directors of maintenance and manufacturing operations were **34% more likely** than average to report this.

Rung check: the shift

Compared with average, predictive teams were more likely to:



Keep monthly unplanned downtime under five hours (**46% more likely**, leaders)



Say reactive work never puts technicians in higher-risk situations (**120% more likely**, all respondents)



Have technicians spend three to five hours on hands-on maintenance per shift (**25% more likely**, leaders)

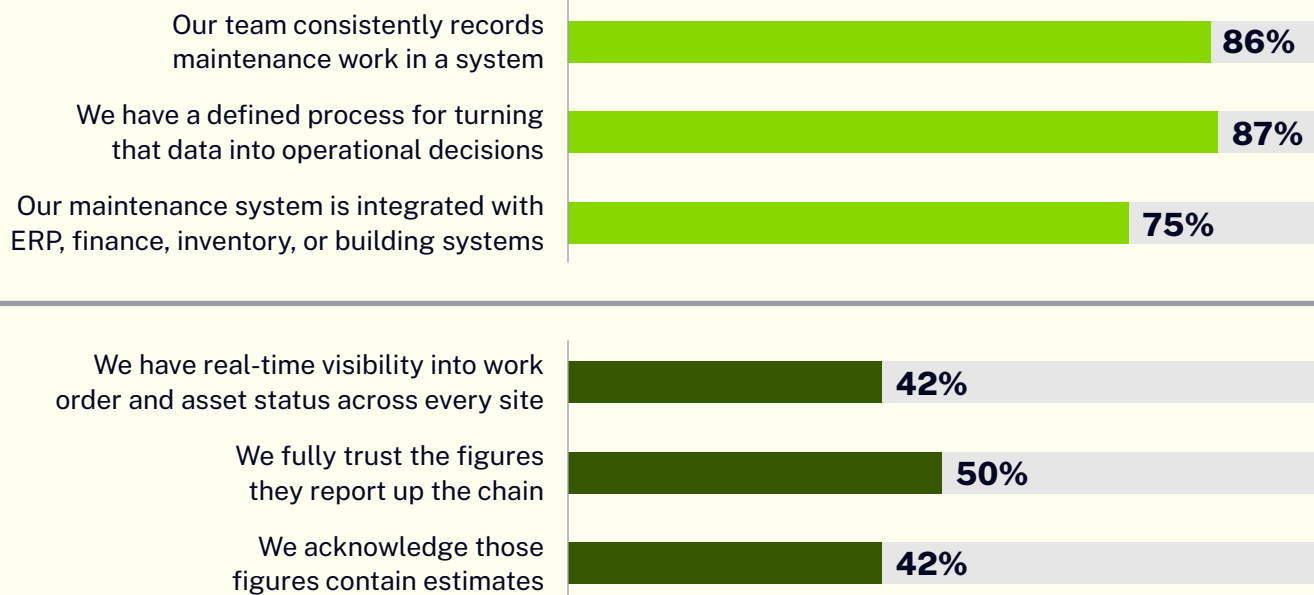


Say technicians spend under thirty minutes waiting on approvals or site access (**36% more likely**, leaders)

The Data the Work Leaves Behind

Every repair generates information: what failed, why, what fixed it, how long it took. Whether that information survives the end of the shift decides how much a team can plan and how much it has to guess.

What leaders say they do vs. what they can see



A team can log every work order at every site and still have no single view across them. Recording happens locally, while visibility has to be assembled.

What was never written down at all

Some of what a maintenance team knows never reaches a system because it never took a form a system could hold. It wasn't necessarily that anyone decided against writing it down; there was likely no field for it.



Among all respondents:

74%

say at least one critical asset has exactly one person on staff who knows how to fix it

67%

hold knowledge about an asset or process that lives nowhere in any system

This persists for reasons that have little to do with negligence. Maintenance knowledge is procedural. It's the valve that needs a quarter turn past where the manual says it stops, learned by hand and stored by repetition.

Even the knowledge that has been written down isn't always reachable. **71%** of respondents have asked a colleague for information their system already held. Most maintenance organizations run an informal network alongside the formal one, and when the system can't answer, someone walks over and asks the person who knows. That network is fast and usually right. *It is also unsearchable, unavailable at two in the morning, and impossible to hand to a new hire.*



The knowledge that walks out

47% of teams have lost maintenance knowledge they could not recover when someone left. Organizations with 51 to 100 maintenance staff were **50% more likely** than average to report it, so scale does not solve this on its own.

Set that against the **46%** of leaders reporting three months or longer to fill a role. The time window between a departure and a replacement is the same one in which undocumented knowledge stops being recoverable.

Knowledge gets preserved in closeout notes, entered at the asset, by the technician who just finished the job, while the detail is still fresh enough to be worth recording. Blocking off a week and writing everything down isn't how it realistically gets done.

The Technology Meant to Help

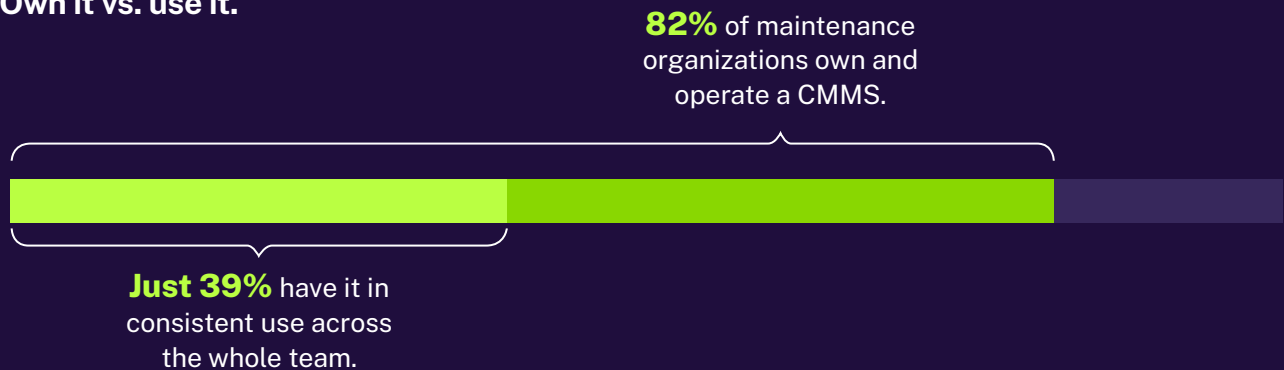
Most maintenance organizations have already bought the software meant to solve all of this. Whether they finished putting it to work is a different question, and the answer separates the rungs of the maturity ladder cleanly.

What a CMMS is

A computerized maintenance management system, or CMMS, is a digital system that centralizes maintenance operations, asset data, and workflows in one place. It holds work orders, asset histories, preventive maintenance schedules, and parts inventory.

It takes the place of the spreadsheets, paper work orders, and institutional memory most teams start with. Owning one and having a team that opens it are separate conditions.

Own it vs. use it.



Another **33%** have a system only part of the team uses, **10%** have a system that few or no people open, and **15%** don't own a CMMS at all.

The teams running on no system at all

The teams running without a system at all aren't the ones you would expect. They are rarely the least experienced.

In fact, skilled-trades staff were **48% more likely** than average to be in that last group, not owning one at all. Teams of one to five people were **111% more likely**. Respondents with more than twenty years in the industry were **68% more likely**.

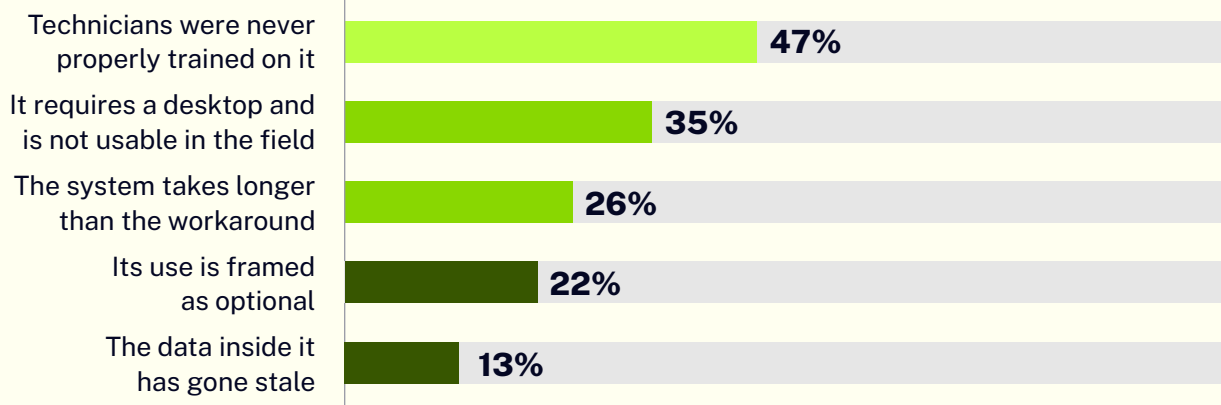
The maturity scoring picks up the same divide. Teams that actually scored on the reactive rung were **50% more likely** to own no CMMS at all, compared to the teams who simply self-described themselves as reactive.

Small crews, run by experienced people, are operating on spreadsheets and the memory of someone who has been there long enough to hold the schedule in their head. It works... until that person retires.

Why the software gets bought and not used

For teams that do own a system and can't get the whole crew onto it, none of the reasons really seem to be about the software.

Why adoption stalls



Every one of those is a decision made after the purchase. Training is the first line cut when an implementation runs long, and mobile access looks like an upsell right up until a technician needs to close a job standing at the asset.

Maintenance software gets evaluated and paid for by leaders, and used by technicians. The work of connecting those two groups tends to go unbudgeted.

“Limble has become the norm for the team and they really enjoy using it. It has helped them get more involved and take more detailed notes on a PM or project, include pictures, and create a standardized method for documenting work. We can share those documentation standards across locations and it then becomes the norm for everyone.”

— Brad Moore, Plant Manager, Rimex

Technicians were **116%** more likely than leaders to name stale data as a reason the system goes unused.

Technicians hit the data at the moment it matters most, standing at a machine and needing to know what was done to it the last time it failed. An entry from eight months ago reading “repaired” is not an answer, and after that happens once or twice, they stop checking.

What consistent use is worth

The teams that finished the adoption look noticeably different on every measure that matters. Compared with average, teams whose whole team uses a CMMS consistently were:

53%

more likely to have full real-time visibility across sites

74%

more likely to strongly agree they have a defined process for turning data into decisions

30%

more likely to fully trust the figures they report up the chain

51%

more likely to strongly agree their system is integrated with other business systems

Rung check: the systems

Compared with average, predictive teams were more likely to:



Own a CMMS the whole team uses consistently (**91% more likely**, all respondents)



Fully trust the figures they report up the chain (**47% more likely**, leaders)



Have real-time visibility across every site (**47% more likely**, leaders)



Have a defined process for turning data into decisions (**56% more likely**, leaders)

Where AI Actually Sits

Ask maintenance professionals what AI needs in order to be useful, and they answer with near unanimity.

A remarkable **92%** of maintenance professionals agree that AI needs good, complete maintenance data to work. Teams have to fix how maintenance work gets recorded before AI can do much with it.

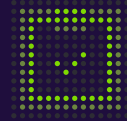
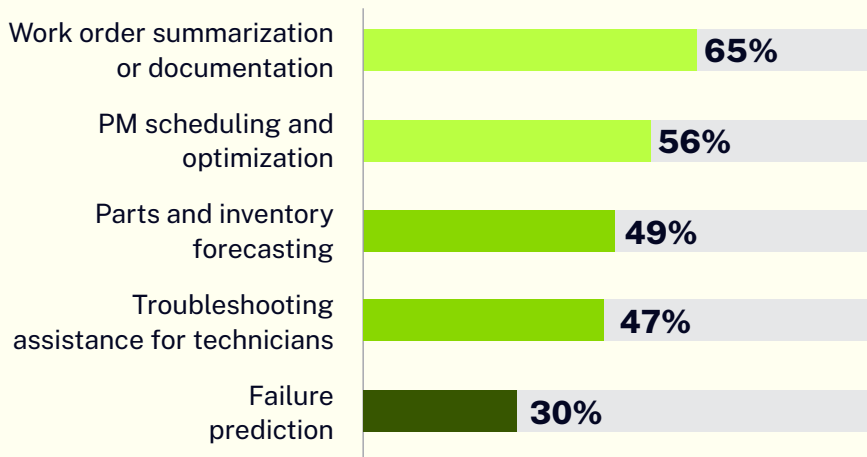
Agreement that broad is rare, and it points at where the work has to start. AI in maintenance runs on the records a team already keeps, making the quality of those records the thing that decides how far it gets.

Maintenance software has always shown people exactly what was entered, which meant a technician could judge how much to trust it. AI returns a conclusion instead of a record, so the judgement has to happen upstream, in what gets written down.

That helps explain where teams have put AI to work first.

Paperwork first, prediction last

Among teams using or piloting AI, common uses include:



AI adoption, by the numbers

55%

of maintenance teams use AI in some form:

- 24% use it widely across their operations.
- 31% are piloting it in a few areas.

29%

say they're interested in AI, but have yet to start.

16%

have no current plans to use it.

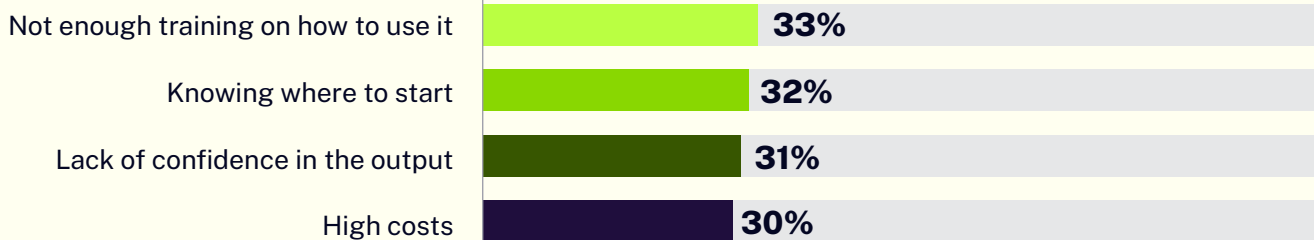
Documentation sits at the top because it asks nothing of the rest of the stack. Summarizing a work order only requires a work order itself.

Failure prediction sits at the bottom because its dependencies are everything else: asset history deep enough to contain prior failures, failure coding consistent enough that five versions of the same failure look like one, and condition data collected on a schedule.

A team where **74%** of facilities have a critical asset dependent on one person's memory does not have the substrate for it, whatever model gets pointed at the problem.

Taken in order, the list is closer to a sequence than a menu. A technician who dictates a closeout and gets back a complete work order record has just produced the asset history that parts forecasting needs and failure prediction eventually runs on.

Barriers have little to do with what the tech can do



Leaders were **53% more likely** than technicians to cite cost. Skilled-trades staff were **23% more likely** to cite training. It's the same division of labor that shaped CMMS adoption: the people who pay for the tool and the people who have to use it are worried about different things.

But with training topping that list, it's clear that the quality of what teams get specifically trained on matters as much as the quantity of the training occurring in the first place.



What to look for in AI training

The most useful AI training does a few specific things:

- It uses the team's own work orders and assets, rather than a generic demo environment.
- It shows technicians what the tool is reading when it answers a question.
- It teaches people to weigh an answer against the records behind it.
- It covers what to capture at closeout so the next answer comes back stronger.

The Next Step

Looking three years out, respondents name the improvement that would most change their business for the better: hiring and retaining technicians (**21%**), reducing unplanned downtime (**19%**), better maintenance planning (**15%**), AI and automation (**14%**).

The top two move as a team climbs. Reactive teams were **59% more likely** than average to name hiring, while predictive teams were **28% more likely** to name downtime.

Teams still firefighting want more hands. Teams that have stabilized want fewer fires.

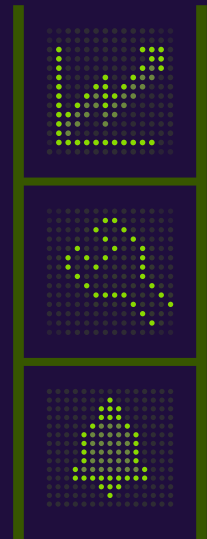
56% of leaders expect their maintenance technology budget to increase in 2027. Those with more than twenty years in the industry were **87% more likely** to expect that this increase will be “significant”.

The cost of standing still is priced too. If nothing meaningful improved over the same three years, leaders would be most concerned about higher maintenance costs (**46%**), more unplanned downtime (**44%**), and losing experienced technicians (**30%**).

Four habits, available at any size

Nothing separating the rungs requires a different budget or a different industry. What it requires is a short list of practices, each available to a crew of three and a crew of three hundred.

- 1 Capture the work as it happens.** A closeout note written at the asset by the person who did the job beats any documentation initiative scheduled for next quarter.
- 2 Measure enough to know what is true.** Teams that can confidently estimate five or six metrics make different decisions than teams that can estimate two, and they make them earlier.
- 3 Act on the numbers rather than filing them.** A defined process for turning maintenance data into a decision is what separates a record system from a reporting obligation.
- 4 Choose tools technicians will open.** Adoption is not a phase of the rollout. It is the return on the purchase.



Every team sits somewhere on the ladder. The rung above is closer than most of them think.

About Limble

Limble delivers Maintenance Intelligence by unifying asset data, work orders, and preventive scheduling to drive reliability. Limble combines the ease of use that makes simple CMMS tools popular, with the enterprise depth that legacy EAM systems promise, using AI to turn operational history, asset signals, and technician expertise into decisions that happen before failure does. This reduces downtime and drives smarter capital decisions.

[SCHEDULE DEMO](#)



Survey Methodology and Demographics

The State of Maintenance survey was conducted from July 29 to August 6, 2026. Limble surveyed 686 adults based in the United States who are employed full time and directly involved in maintenance or operations at their organization, whether planning, managing, or performing maintenance work.

Respondents work in manufacturing, wholesale and distribution, facilities-intensive services, infrastructure and the public sector, and related industries. The sample is split between maintenance and operations leaders (360) and technicians and frontline maintenance staff (326). The survey was conducted at a 95% confidence level with a margin of error of $\pm 3.7\%$.

Certain questions were asked only of leaders, including PM compliance, unplanned downtime hours and cost, real-time visibility, confidence in reported figures, hiring timelines, and technology budget expectations. Certain questions were asked only of technicians, including how a typical shift is spent, what gets in the way of maintenance time, and what would make the role easier. All other figures reflect the full sample.

Respondents were assigned a maturity stage based on a composite score from 0 to 9 across three behavioral measures:

- How maintenance hours are actually spent, from almost all reactive to substantially predictive (0–4 points)
- How the team tracks and records maintenance work, from all manual to all digital (0–3 points)
- How many maintenance metrics the team can estimate with confidence (0–2 points)

Scores of 0 to 2 place a team at the reactive stage (56 respondents), 3 to 6 at preventive (466), and 7 to 9 at predictive (164). Industry, company size, and budget were not scoring inputs.