White Paper

Pavement Management as a Service (PMaaS)

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Your Roads Are Telling You Something. Are You Listening?

Here's a scenario that plays out in counties and municipalities every year: an agency invests in a solid pavement management plan. A consultant runs the analysis, the report looks great, and the council signs off. Everyone exhales.

Then real life happens.

A water main repair tears up the road you were going to mill and overlay next spring. A grant comes through, but only for chip seal, not the reconstruction that was actually planned. A new subdivision adds traffic load to a collector that wasn't even on the radar. Two years later, the plan is still sitting in the same folder, with the same numbers, describing a network that no longer quite exists.

This is not a failure of planning. It's the nature of managing public infrastructure in the real world. But operating on an outdated plan does carry costs, and not just the financial kind.

The Problem with "Set It and Forget It" Pavement Plans

Public works directors and city engineers know this truth well: pavement management plans are only as good as the data behind them. When that data goes stale, and it will, the recommendations that follow get increasingly unreliable.

Consider what changes in a typical 12-to-24-month window:

- **Treatment costs shift.** Inflation, supply chain disruptions, and regional market dynamics mean that the unit costs baked into your plan from two years ago may be off by 10–20% or more.
- **Work gets done, just not as planned.** Roads get patched, repaved, or reconstructed outside the original sequence. If those treatments aren't recorded in the system, the model keeps projecting deterioration that's already been addressed.
- **Funding changes.** Grants come through late or fall through entirely. Local budgets shift, tighten or occasionally improve. The plan needs to reflect what you can actually spend.
- **The network grows.** New streets come online. Annexations happen. Developers dedicate infrastructure. A network that isn't updated doesn't manage roads that don't "exist" in the system yet.

None of this is surprising to anyone who manages public infrastructure. The challenge isn't understanding why the plan drifts; it's finding a practical way to keep it current without adding headcount or drowning in a data reconciliation project every time something changes.

What Pavement Management as a Service Looks Like

IMS developed our PMaaS (Pavement Management as a Service) program to address this exact problem. Rather than treating a pavement management plan as a one-time deliverable, PMaaS converts it into an ongoing, living resource, one that stays synchronized with what's actually happening on your network.

As a multiyear program with plan updates, PMaaS gives your agency access to pavement engineers who function as an extension of your team — available when you need them, aligned with your data collection cycle, and built to grow with your program over time.

Here's what gets updated under the program:

1. **Work history gets linked.** When treatments are applied, those records get tied to the right segments in your pavement management system. Condition scores reset to reflect post-treatment values, and deterioration modeling picks up from there.
2. **The plan gets rerun.** With updated work history, current costs, revised budgets, and any changes to treatment types or prioritization criteria, IMS reruns the optimization. You get a pavement management plan that reflects where your network is, not where it was when the original assessment was conducted.
3. **Policy and priority changes get applied.** New council priorities, district-based modifications, changes to treatment selection — all of it can be incorporated into the updated plan without starting from scratch.
4. **Deterioration curves get reviewed.** If pavement is declining faster or slower than the model predicted, IMS can investigate and adjust the curves to improve forecast accuracy going forward.
5. **Network changes get captured.** New sections added, roads removed from inventory, annexations — the network in the PMS reflects reality.

One important clarification: in its core form, PMaaS is a data and analysis service. It does not include new pavement assessments or field data collection. What it does is ensure that the data already in your system and the plan built on top of it stays accurate and useful year over year. For agencies that want to incorporate field data collection as their program matures, that can be scoped as an optional addition.

Why This Matters to People in the Room

If you're a public works director or city engineer, you're probably nodding along. But you're also thinking about the other people in the room: council members, city managers, finance directors who are going to ask why they're paying for an annual subscription to maintain something that was already paid for.

Here's how to answer that question.

For the finance director:
Annual cost updates in the plan mean budget requests reflect what treatments actually cost this year, not what they cost when the plan was written. That gap matters when you're defending a capital request or explaining why a project came in over estimate.

For the city manager:
When funding changes mid-cycle (and it will!) a live plan adapts. That means your team isn't scrambling to redo an analysis every time a grant changes scope or the state revises its allocation. You stay in front of it.

For council:
When a resident asks why one road is being repaved while another that "looks just as bad" isn't, a current, data-driven plan gives you a documented answer. That's not a small thing when you're managing public expectations and limited resources simultaneously.

For you:
Roads that are deteriorating faster than projected get flagged before they tip into emergency repair territory. A single unplanned emergency repair on a collector road can run $50,000–$150,000 or more before you factor in the disruption, the traffic management, and the budget scramble that follows. PMaaS is, among other things, an early warning system.

Built for How Government Actually Works

PMaaS is designed to work the way government agencies actually operate. Rather than adding internal capacity to manage an ever-changing pavement plan, your team gains access to pavement engineers who function as a seamless extension of your staff, stepping in with the right expertise at the right time, and enabling your team to do more with the resources they already have.

There's a tendency in asset management to equate "more frequent" with "better." Real-time dashboards and continuous monitoring tools have their place, but data moving fast doesn't mean decisions get made well. What actually moves the needle is someone sitting down with your network, your budget, your work history, and your priorities and thinking it all the way through. PMaaS builds that into the calendar. At least once a year, your plan gets a structured, intentional review by engineers who know your system and understand the real-world constraints your team is working with. Not an automated refresh. Not a dashboard update. A genuine reckoning with what changed, what it means, and what to do about it.

The devil is in those details: the grant that came in late, the treatment that didn't get applied, the road that's deteriorating faster than projected. PMaaS is how those details get caught, reconciled, and reflected in a plan you can stand behind.

The Cost of Not Doing This

It's worth saying plainly: there is a cost to leaving a pavement management plan on the shelf.

It shows up in budget requests that don't hold up under scrutiny. It shows up in treatment selections that were optimal two years ago but aren't now. It shows up when a road that should have been caught at a 60 PCI hits 40 and suddenly requires a much more expensive intervention — Federal Highway Administration research has found that pavement allowed to deteriorate from good to fair condition can cost up to eight times more to treat than if it had been addressed while conditions were still good. And it shows up when you're trying to prioritize projects for a grant application and your data is too old to be credible.

None of those outcomes are the result of bad planning. They're the result of a plan that wasn't maintained. That's a solvable problem.

Ready to Keep Your Plan Working?

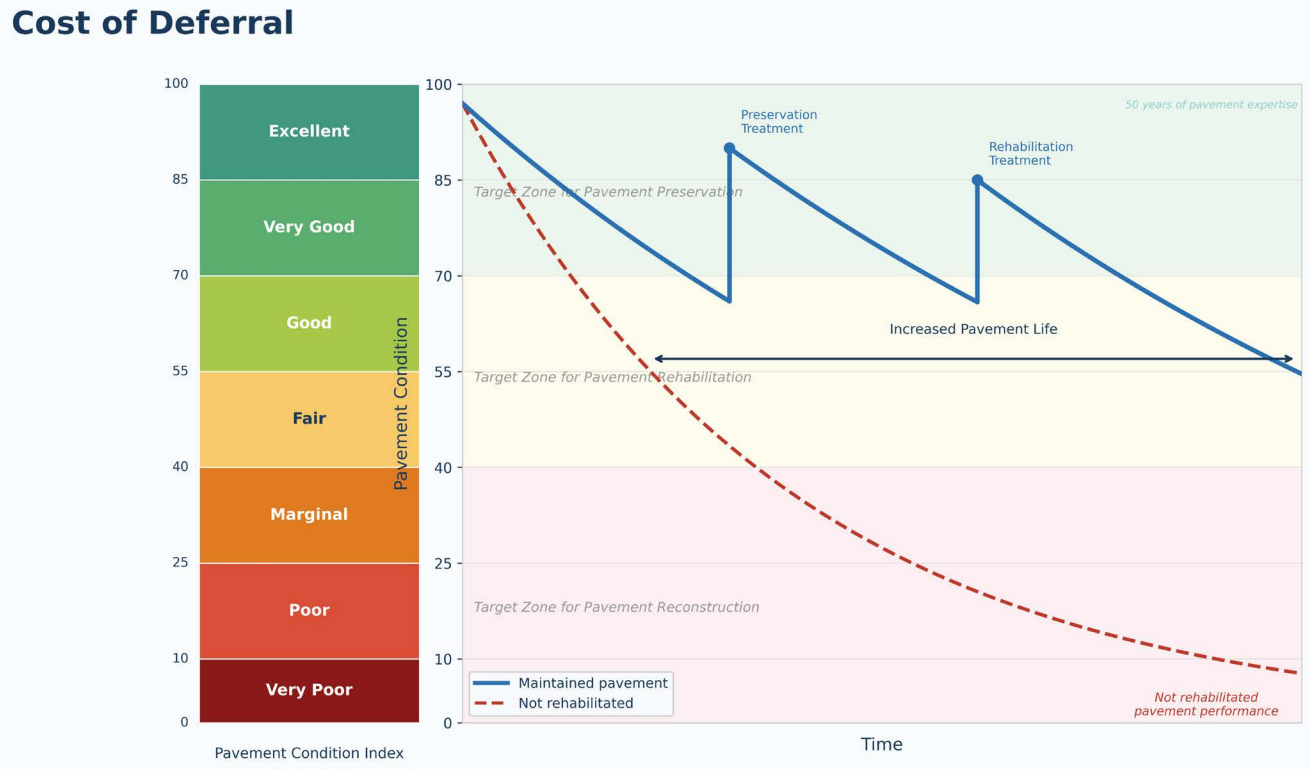
Somewhere in your community right now, a road is deteriorating faster than your plan thinks it is. A budget request is being built on cost data that's two years old. A council question is coming that your current plan can't cleanly answer.

None of that is inevitable.

IMS has helped counties and municipalities manage their pavement networks for 50 years. PMaaS is how we make sure that work stays current — and that the investment you've already made in data collection and planning keeps paying off.

If it's been more than 12 months since your plan was updated, it's time to talk. Contact IMS to learn how PMaaS fits your agency.

Visit **icc-ims.com** or **email us** to talk about your plan.



Example Cost of Deferral