

Keeping the Plant Running: A Controls-Level Playbook for Uptime

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Most mornings, the trucks are already lined up before the plant makes its first ton. The paving crew is on-site and waiting, and the mix must be ready the moment the first truck pulls under the silo. If a PLC fault, a failed sensor, a communication issue, or a drive failure keeps the plant from producing for even an hour, the impact reaches well beyond the plant gate. Truck drivers sit idle, paving crews wait, contracts fall behind, and in a short paving season, that lost production may never be recovered.



While major equipment naturally gets most of the attention when discussing plant uptime, many production interruptions begin with small control-system issues that could have been identified and corrected before they ever stopped production. That also means many of these interruptions are preventable. The plant's own data, combined with knowledgeable operators and the right support, can help identify developing issues before they become production-stopping failures.

A modern asphalt plant at the start of a production shift — every ton depends on the systems running behind the scenes

It Starts with the Data

Most asphalt plants already generate an enormous amount of operational data. Motor amperage, conveyor runtimes, baghouse differential pressure, burner fuel consumption, bearing temperatures, production rates, and hundreds of other process values are continuously collected by the control system. The challenge isn't a lack of data; it's turning that data into actionable information.

In many plants, this information is used reactively. If baghouse pressure begins to climb, the operator adjusts dampers or exhaust fan speeds to keep production moving. A motor that consistently draws higher-than-normal current during startup becomes an alarm that is acknowledged and forgotten because "it's always done that." A sticky valve that occasionally requires a manual override during a batch becomes part of the operator's routine. These workarounds keep the plant producing, but they also allow small issues to become accepted operating conditions rather than maintenance opportunities.

Experienced operators are remarkably good at adapting to these situations, but relying on learned behaviors isn't the same as improving reliability. Over time, these minor inefficiencies can develop into unexpected equipment failures and costly downtime.

This is where advanced analytics and AI begin to provide real value. Rather than replacing operators, AI helps identify patterns that are difficult for people to recognize across weeks or months of operating data. A gradual increase in motor current, longer valve response times, or subtle changes in cycle times may not be obvious during day-to-day production, but they can indicate equipment that requires attention before a failure occurs.

WEM's approach is to transform raw plant data into exactly this kind of actionable information. Instead of simply displaying a generic motor fault, the system provides meaningful diagnostics, historical trends, and troubleshooting guidance that help operators and maintenance personnel identify root causes and restore production more quickly.

Talent: Empowering the Next Generation of Operators

Modern asphalt plants generate more operational data than ever before, but technology alone doesn't improve reliability. The greatest differentiator remains the people operating and maintaining the plant. The role of the operator, however, is evolving.

Today's workforce has grown up with technology. They are comfortable navigating dashboards, interpreting trends, and using digital tools to make informed decisions. While previous generations often relied on years of mechanical experience to recognize subtle changes in equipment performance, the next generation has an opportunity to use technology to develop that same intuition more quickly.

The future of plant operations isn't about replacing experienced operators — it's about capturing their knowledge and making it available to everyone. An experienced operator might recognize that a motor drawing slightly higher current than normal is an early indication of a failing bearing. A newer operator may not have seen that failure before, but a modern control system can provide the context needed to recognize the pattern, recommend inspections, and help prevent an unexpected shutdown.

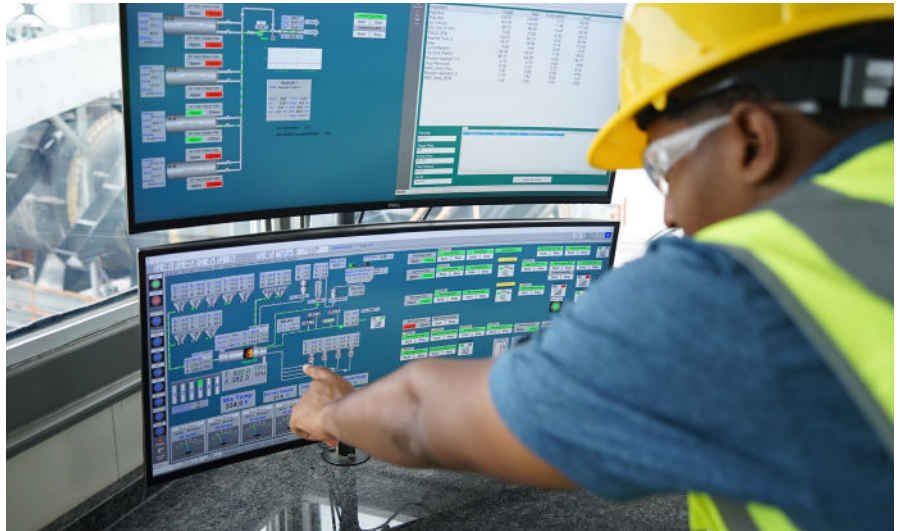
The most successful plants will combine experienced personnel with intelligent systems that turn data into actionable information. Rather than presenting a generic fault message, advanced controls can provide historical trends, identify recurring issues, and guide operators through the most likely causes of a problem. Every troubleshooting event becomes an opportunity to build knowledge rather than simply restore production.

This shift also creates an opportunity to rethink how success is measured. Operators have traditionally been recognized for responding quickly to equipment failures and getting production back online. Tomorrow's best operators will be those who prevent failures from happening in the first place. Identifying a bearing that is beginning to fail, recognizing a gradual increase in conveyor motor load, or scheduling maintenance before an outage occurs all contribute far more to plant uptime than reacting after equipment has already stopped.

Why Uptime Is Worth Fighting For

It is worth pausing on what downtime actually costs, because the number on the repair invoice is rarely the real number. When an asphalt plant stops unexpectedly, the visible costs arrive first: lost production during the outage, the repair itself, and any expedited parts or emergency service needed to get running again. Those costs are real, but they are usually the smallest part of the total.

The larger costs sit outside the plant. Idle haul trucks and paving crews continue to cost money whether mix is flowing. Paving windows are dictated by weather, traffic control, and agency schedules, so a missed window often leads to a missed opportunity. Repeated reliability problems carry a quieter cost as well: general contractors and agencies remember which plants deliver on schedule, and that reputation follows a producer into the next bid.



The best controls system in the world still depends on the person reading it — skilled operators remain the difference between a good plant and a great one.

The critical point for a plant owner is that a large share of this is preventable. In our experience, many unplanned stops trace back to conditions that were visible in the control system well before the failure; the rising motor current, the drifting temperature, the valve that responds a little slower each week. The economics follow directly from that fact. The cost of monitoring, maintaining, and acting on control-system data is small and predictable, while the cost of an unplanned outage is large and tends to arrive at the worst possible time. Reliability is one of the few investments in a plant where the strongest part of the return is the failures that never happen.

Bringing It Together: Service and Reliability

Data, AI, and skilled people give a plant the visibility and the judgment to protect its own uptime. The final piece is the relationship behind the control system, because no plant manages reliability entirely alone.

Controls technology is evolving quickly, and support is evolving with it. Responding when a plant goes down will always be part of the job, but the best support helps prevent those calls altogether. WEM has been restructuring its service and support around the same principle that runs through this article: the best downtime event is the one that never happens. Remote diagnostics allow a support engineer to see what the operator sees — live process data, alarm history, and trends — which turns a troubleshooting call from a guessing game into a focused diagnosis and shortens the path back to production. Proactive system reviews catch aging hardware, accumulating alarm workarounds, and configuration drift before they turn into failures. Structured training support helps plants build the operator skills described above, so the investment in controls technology is matched by the people using it. And tiered annual support plans let each plant choose the level of partnership that fits how it operates, from responsive support to fully proactive monitoring.

A strong service relationship extends the plant's own team rather than replacing it. The plant's electricians and operators know their equipment better than anyone, and a controls partner adds the pattern recognition that comes from supporting plants across the country. Every plant eventually faces a problem its team has never seen before; very few plants face a problem their controls partner has never seen before. Making that experience available quickly, and in a form the plant's own people can act on, is what service looks like at its best.

The Morning the Trucks Line Up

Which brings the story back to that morning lineup of trucks. At the plants that run best, the scene looks unremarkable — the plant is up, the mix is ready, and the first truck pulls under the silo on time. What makes it unremarkable is everything underneath it: control-system data that is watched rather than archived, operators equipped to act on what the system is telling them, and a support relationship working to prevent failures rather than merely respond to them. Downtime will never be eliminated entirely, but far more of it is preventable than most plants assume. The producers who treat uptime as something to be managed — with data, with people, and with the right partners — are the ones the trucks keep lining up for.



Responsive support keeps the systems — and the people who run them — performing when it matters most.

Put the Uptime Playbook to work at your plant.

Contact WEM to see how the WEM 6000 turns complex operational data into actionable insights before minor issues become costly shutdowns. Visit <https://wemautomation.com/contact>.