

Unlocking Measurable Value

What Predictive Maintenance
Can Do For You



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The Need for Predictive Maintenance

Every plant manager has been there: a crucial piece of equipment breaks unexpectedly. The line comes grinding to a halt as a hurried – but thorough – evaluation takes place. What must we do to get things up and running again? Is that part available? How long will it take to procure? What’s our workaround in the meantime? How much will this cost – in lost productivity, parts and materials, and labor?

These questions are required to address the immediate problem at hand, but they don’t tackle the underlying issue: Why didn’t we know this was going to happen?

Predictive maintenance (PdM) provides the answer to that fundamental question by enabling plant managers to see into the future. Through a powerful mix of IoT sensors and artificial intelligence (AI), a PdM solution predicts the remaining useful life (RUL) of an asset so operators can repair or replace the item before it fails.

But how do you determine the real return on investment of predictive maintenance – beyond the ability to plan and the peace of mind that comes with knowing asset health at any point in time?

Predictive Maintenance: The Standard of Your Future

If you haven’t yet embraced predictive maintenance, you’re not alone but know this: in the near future, it will be the standard for most companies with plant and factory operations (and certainly all leading ones). Sensors are becoming better, smaller, and more cost effective. Advances are being made every day in AI and machine learning. It’s easier than ever to implement.

The research underlying this coming trendline – and the reasons for it – are clear:¹

- 83% of current PdM end users report “a positive return on investment”; 44.5% reported amortization in less than 12 months.
- Discrete manufacturing is currently the top market segment at 34% with process manufacturing earning second place at 20%.



- Unplanned standstills at factories cost their companies \$2.3M – further evidence of significant savings potential.
- Manufacturers report PdM as “one of the most successful IOT use cases”.

McKinsey also rated the benefits of PdM highly, noting as much as a 40% reduction in maintenance costs, a 50% reduction in downtime, and a 5% savings on capital investment.² As a result of manufacturing leaders’ demands for this technology, the PdM market will grow at a CAGR of 31% through 2026, for a projected total of \$28.2B.

¹ “Predictive Maintenance Market Report 2021-2026”, IOT Analytics, April 2021

² “The Internet of Things: Mapping the Value Beyond the Hype,” McKinsey, June 2015. https://www.mckinsey.com/~/media/McKinsey/Industries/Technology%20Media%20and%20Telecommunications/High%20Tech/Our%20Insights/The%20Internet%20of%20Things%20The%20value%20of%20digitizing%20the%20physical%20world/Unlocking_the_potential_of_the_Internet_of_Things_Executive_summary.pdf

Predictive Maintenance: The Return on Investment (ROI)

Every company is different. From the size of the company to the type of assets it has to the existing data and identified gaps to the industry itself, there are many factors that combine to influence the impact of a PdM solution.

Fortunately, with Novity's ROI calculator, companies can quickly get an accurate first glance at how a PdM solution can result in transformative value to their organization.

It's a collaborative effort. We work hand in glove with clients like you to take a comprehensive approach and gather the data that informs a reliable calculation. This encompasses factors such as:

- Historical data, including how much is typically lost annually (in productivity and dollars) because of unplanned downtime.
- The macro view, like how much time the staff spends responding to problems and making urgent interventions ("putting out fires") versus proactively maintaining assets.
- The micro approach, such as hours spent per piece of equipment. This granular approach – assessing if one piece of equipment has been responsible for a substantial portion of lost time and revenue – ensures we factor in everything that's relevant and vital, no matter how small.
- Assessing systemic opportunity – for example:
 - If you were able to increase throughput, could you increase revenue?
 - Are you production limited or sales limited?
 - What would happen if you could more effectively manage your spare parts inventory and reduce your carrying cost?
 - Would you benefit from extending equipment lifetimes?
 - How would your production volume improve if you reduced unplanned downtime events?
- Advising on workforce readiness – because it's not enough to just have the right technology in place. You have to train your people too – so that when the system provides insights and alerts, your teams can act instantaneously and take advantage of the information.

The Novity Difference

Novity takes a different approach to predictive maintenance, marrying physics-based equipment modeling with machine learning to achieve a more than 90% accuracy rate. Novity is powered by our TruPrognostics™ engine, which is designed to transform PdM and offers three key advantages:

- **Predict near-term threats to industrial production.**
What merits your immediate, most urgent attention?

- **Understand the health status of all your monitored assets – all the time.** From valves to compressors and electric motors, from pipelines to tankers, you'll know precisely how every asset, large and small, is functioning.
- **Operational maintenance that's planned on your timetable – not because of asset failure.** The path to eliminating unplanned downtime starts with accurate forecasting and subsequent intelligent maintenance schedule.

Next Steps

PdM can deliver short-term practical value – like fault identification and immediate alerting – as well as those long-term safety and efficiency impacts so important to a company's productivity, revenue, and reputation. With an individualized look at PdM, you can begin to see just how substantial an impact this innovation will have – in real terms – on your organization.

To start your journey to zero unplanned downtime, contact us at: info@novity.us

Novity has built a unique and exceptionally accurate predictive maintenance solution. Our mission is to put manufacturers on the path to zero unplanned downtime by enabling them to see the future health of their production assets with perfect clarity.



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