



Stay Agile and Maximize Your Production in Pulp and Paper with APM

Q&A with Joni Lipkowitz, Manager, Asset Performance Management Solution
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What is the number one challenge that pulp and paper companies are trying to solve today?

Across the industry, mills face a common challenge: to increase production. Since the pandemic triggered increased demand for pulp and paper products such as toilet paper and paper towels, producers throughout the industry have been under increased pressure to be more agile.

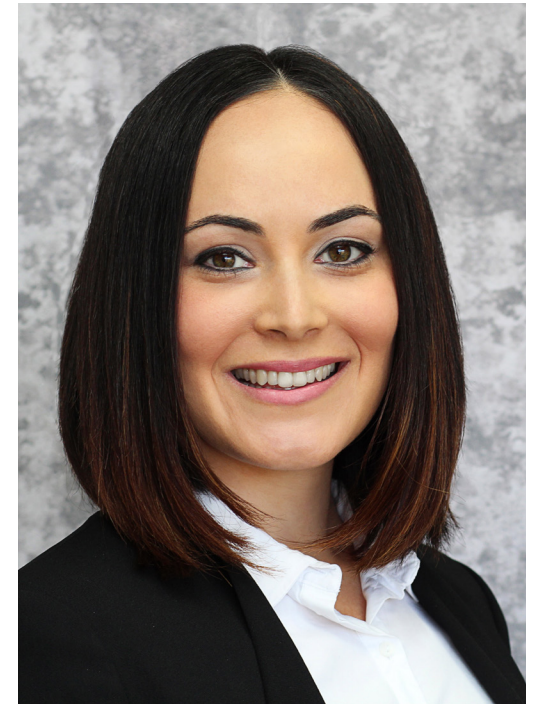
Improved reliability, safety, and sustainability are the other key strategic initiatives pulp and paper companies are pursuing to ensure they have the capacity to operate at maximum potential.

While pulp and paper manufacturers could potentially revamp their equipment to operate at a higher capacity, taking this approach would require a huge investment of time and money.

Instead, forward-looking companies are investing in technology and embarking on digitalization journeys to improve efficiencies of their people, processes and equipment. These technologies include *predictive and prescriptive analytics solutions* which include Aspen Mtell®. With these Asset Performance Management (APM) solutions, mills can mitigate failures before they occur, minimize unplanned downtime and safeguard production goals.

What changes can pulp and paper companies make to address the challenge of increased production?

Pulp and paper mill processes are considered capital-intensive and energy-rich. Since raw materials and maintenance activities can be costly, leveraging technology is key to predicting and preventing failures and anomalies, improving process quality, reducing variability and quantifying risk while identifying the optimal operating scenarios.



JONI LIPKOWITZ

Joni Lipkowitz is the Manager of Asset Performance Management Solution Consulting at Aspen Technology, Inc. She brings more than 13 years of worldwide experience with leaders in several industries, including oil and gas, chemicals, engineering and construction, metals and mining, pulp and paper, pharmaceuticals, and more. Joni is a Fluidized Catalytic Cracking expert and holds a BS in chemical engineering from Rose-Hulman Institute of Technology with minors in Spanish and German, and a certificate in consulting engineering.



Leveraging digital technologies, today's mills can focus primarily on these essential impact areas:

- **Raw Materials Control:** Plants must closely monitor the quality of incoming raw materials, such as the wood that will go into the digester. With different grades of wood (hard and soft) and varying specifications within each grade, this is a key area for managing costs.
- **Process and Quality Control:** Minimizing off-grade production and maximizing efficiency is essential to maintaining a competitive stance in this industry.
- **Pollution Control:** Facilities must effectively manage fiber losses, waste discharge and emissions. As other industries leverage alternative and/or renewable energy sources, pulp and paper mills are facing heightened pressure in this area.
- **Process Monitoring:** Mills must continually assess their performance, compare themselves against other facilities and measure progress toward their goals. In some cases, it's valuable to benchmark against competitors with a goal to boost competitive advantage.
- **Monetary Control:** Operators need to pinpoint high-cost areas, establish cost breakdowns, and identify the monetary basis for consideration of alternative proposals for production processes.

For many mills, unplanned downtime resulting from failing equipment and process variability contributes significantly to their missing production targets.

An APM solution improves the reliability and availability of physical assets while minimizing risks and managing costs. Predictive analytics can give back time to production, extend equipment life, and safeguard people, equipment, and the environment.



Simply put, an APM solution ensures a facility's capability to produce and could even provide opportunities for additional capacity. With an APM solution in place, a facility can:

- **Predict and prevent failures**, upsets, anomalies and operational issues
- **Monitor equipment 24/7** to gain peace of mind
- **Reduce costs**, including chemicals and energy, maintenance, repairs and labor
- **Increase production quantity and quality**

How does AspenTech's APM solution for pulp and paper differ from other solutions in the market? What makes it unique?

The AspenTech APM solution uses an organization's actual data to reflect the actual behavior of its processes and equipment. It is a precise, accurate technology that can be easily deployed and rapidly scaled across the site.

AspenTech's APM solution learns the pattern of failure on one piece of equipment and then through what is known as transfer learning, the technology is able to transfer the learned protection to other equipment in the same asset class.

In addition, AspenTech's award-winning AI technology leverages existing infrastructure to support a quick deployment and provide high ROI. AspenTech's AI can provide senior executives, engineers and operators more information to help them weigh costs and benefits, and understand risks from a business and systems perspective.



An effective holistic solution that delivers a rapid time to value should provide:

- Five to 10 percent reduction in maintenance costs
- One to three percent increase in production
- One to three percent increase in availability of online equipment
- Reduction/elimination of off-spec product

These efficiencies result in financial gains and increased customer satisfaction, with mills more likely to meet or exceed their production targets.

What does a predictive maintenance pilot for pulp and paper entail? How long does it take to see the value?

Our customers typically see value in their APM solution within a couple of months. In the pilot phase, which usually lasts one month, we demonstrate two key things:

- **Technology:** We demonstrate the capabilities of the software using your actual data to provide real results. This entails aligning together the scope of the project, collecting data and drawings, analyzing the data in the software, and presenting results.
- **Value:** We help customer champions build the business case and value proposition, as well as estimate the sitewide benefits of an APM solution.

Although the pilot phase is relatively short, the value of AspenTech's APM suite of solutions continues to be realized over time. Because conditions in a facility are constantly changing, the system keeps learning. As it evolves, the technology continues to add value.





About Aspen Technology

Aspen Technology (AspenTech) is a leading software supplier for optimizing asset performance. Our products thrive in complex, industrial environments where it is critical to optimize the asset design, operation and maintenance lifecycle. AspenTech uniquely combines decades of process modeling expertise with machine learning. Our purpose-built software platform automates knowledge work and builds sustainable competitive advantage by delivering high returns over the entire asset lifecycle. As a result, companies in capital-intensive industries can maximize uptime and push the limits of performance, running their assets faster, safer, longer and greener.

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