CASE STUDY

Driving asset reliability and cost efficiency with Asset Risk Analyzer

Key facts:

Company: Pipeline Operator

Industry: Midstream oil and gas

Region: North America

Products used: Asset Risk Analyzer

Key benefits:

- Improved visibility into risk and asset performance across the enterprise
- Identified an opportunity for 10% maintenance cost reduction through data-driven decisions
- Uncovered previously unknown reliability issues

Setting the stage

Operating one of the largest and most complex pipeline systems in North America, a leading pipeline operator faced the realities of managing aging infrastructure while navigating new pressures from the global energy transition. With assets spread across challenging geographies and a commitment to lowering its carbon footprint, the organization knew that traditional approaches to maintenance would no longer be enough. Having invested in reliability-centered maintenance (RCM) studies more than a decade ago, the company recognized the opportunity to build on that foundation with modern asset performance management (APM) technology.

Business pressures

The pipeline operator needed to modernize how it assessed and managed asset risk. Key challenges included:

- **Aging infrastructure:** Assets installed decades ago required updated strategies as risk profiles have shifted over time.
- **Balancing cost and performance:** The organization needed to optimize operations and maintenance (O&M) spending while ensuring reliable throughput.
- **Sustainability commitments:** Reducing carbon emissions required better decision-making around asset lifecycle investments.
- **Disconnected systems:** Information was siloed across reliability, maintenance and operations, limiting the ability to detect and act quickly on emerging threats.

Priorities

To address these pressures and target changes that would yield the greatest benefit, they used Asset Risk Analyzer and identified three key areas for improvement. They:

1. Identified 179 underperforming assets which had the highest cost and risk.
2. Quantified the opportunity of implementing improvements to those assets valued at over $one million USD.
3. Discovered previously unknown failures in an asset class, which resulted in high extended costs associated with provisioning workforce and equipment to address the issues.

Solution chosen

After evaluating various options, the operator utilized Asset Risk Analyzer, giving the reliability team the tools to:

- Benchmark equipment failure rates and costs against industry norms.
- Establish operational risk scores and prioritize initiatives with clear business impact.
- Reveal underperforming equipment, including a fleet of cooling fans that had been causing recurring failures.

This evidence-based approach enabled the team to justify targeted interventions, implement proactive strategies that impact downtime and shift resources from reactive to planned maintenance.

Moving forward

The pipeline operator's long-standing commitment to reliability was strengthened using Asset Risk Analyzer. What began with static RCM studies has now evolved into living, data-driven asset strategies that adapt as conditions and risks change. By operationalizing strategies and connecting data across the enterprise, the operator has positioned itself to achieve sustainable cost savings, maximize safe production and remain agile.

About Octave

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