

Transforming Safety into a Competitive Advantage with OperationsMetrics



EXECUTIVE SUMMARY

A major oil and gas refinery achieved transformative results with BlueMarvel's OperationsMetrics, tackling critical safety challenges and fostering collaboration across the site. By integrating OperationsMetrics into daily workflows, the refinery reduced bypasses from over 35 to zero within weeks, democratized alarm and event data for broader stakeholder use, and strengthened its safety culture — ultimately turning safety into a competitive advantage. Building on this success, the system is now expanding to new applications, enhancing collaboration between site teams and corporate stakeholders.

About the Customer

The customer is a major refinery in the oil and gas industry, operating in a high-risk environment where safety is paramount. Following an explosion at one of its sister facilities, the company prioritized safety as a core business driver. With operations spanning multiple sites, the company sought tools to enhance safety practices, improve collaboration, and align site and corporate goals. After completing a comprehensive Alarm Rationalization, the refinery aimed to further leverage alarm and event data to enhance site personnel safety effectiveness.

The Challenge

The refinery faced several key challenges:

- **Safety Concerns:** A prior incident report highlighted the need for improved adoption of alarm and bypass monitoring technology and proactive safety measures.
- **Siloed Operations:** Limited communication between site teams and corporate stakeholders hindered knowledge sharing and alignment.
- **Operational Accountability:** Operators needed a way to communicate how their actions impacted the facility in a constructive manner.
- **Regulatory and Insurance Pressures:** Demonstrable proof of safe operations was essential for compliance and to maintain insurance coverage—an increasing trend in the industry.

The Solution

OperationsMetrics Live was implemented, providing an intuitive, data-driven platform that empowered both site and corporate stakeholders.

The screenshot displays the OperationsMetrics Live dashboard with the following callouts:

- Keep an eye on key stats for your current bypasses!** (Points to the Active Bypasses: 54, Past Bypass Events: 1811, Active Bypass Hours: 99.97K (hrs), and Past Bypass Event Hours: 250.6K (hrs) summary cards.)
- Track all active and inactive bypasses across the site** (Points to the Bypass Information table.)
- Drill down to discover details on every bypass** (Points to a detailed view of a bypass event.)
- See how each area of the plant is performing in bypasses** (Points to the Plant Hierarchy donut chart.)
- View bypasses by type** (Points to the Bypass Type donut chart.)
- Filter by individual users to track your work** (Points to the Site Users donut chart.)
- Quick glance at Health Status based on site best practices** (Points to the Health Status: WARNING indicator.)
- Track daily progress** (Points to the Timeline of Events list.)

Key features included:

- **Field-to-Cloud Data Integration:** BlueMarvel's partner set up data pipelines to move site data to the BlueMarvel cloud-hosted SaaS platform, enabling quick implementation and remote access for SMEs across locations.
- **Democratization of Alarm and Event Data:** The platform allowed stakeholders from different disciplines to explore data, uncover insights, and address discipline-specific challenges.
- **Bypass Tracking:** During daily toolbox meetings, site teams reviewed and challenged bypasses in real-time, ensuring timely action to restore normal operations.
- **Operator Actions:** The application enabled tracking of daily operational activities, identifying opportunities for automation, best practices, enhanced training, and new Operator Training Simulator scenarios.
- **Operational Effectiveness:** The refinery needed tools to empower operators and foster cross-functional collaboration without adding complexity.

Implementation & Experience

The integration of OperationsMetrics into the refinery's workflows was seamless:



▲ Breaking down communication siloes was identified as one of the key enablers to a safer site, according to the site incident report from the other facility



Daily Toolbox Meetings:

Plant management, process engineering, reliability, and operations teams leveraged the tool to collaboratively review and address bypasses.



Field-to-Corporate Adoption:

From site operators to corporate decision-makers, OperationsMetrics provided a unified platform for aligning best practices and sharing safety insights.



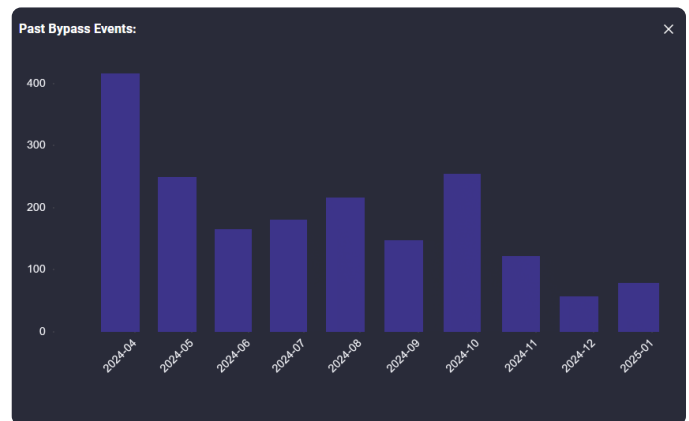
Support and Usability:

The refinery praised the tool's intuitive interface and BlueMarvel's responsive support, describing it as a "slick and attractive UI" with an "open-door policy" for collaboration.

The Outcome

OperationsMetrics delivered measurable improvements:

- **Zero Bypass Standard:** Within weeks of first adoption, the refinery reduced bypasses from over 35 to zero, underscoring the tool's impact on safety practices. The overall trend of bypass related events has also steadily decreased over the past year.
- **Enhanced Collaboration:** The platform bridged communication gaps between site teams and corporate offices, promoting alignment and knowledge sharing.
- **Actionable Insights:** Democratized access to alarm and event data enabled stakeholders to identify patterns and drive informed decision-making across the facility.
- **Cultural Shift:** Customer feedback emphasized the tool's role in fostering a more proactive safety culture.



▲ Adopting OperationsMetrics has allowed them to steadily decrease their number of bypass events since being implemented

Future Plans & Ongoing Success

The refinery continues to leverage OperationsMetrics to sustain its zero-bypass standard and expand its impact:

- **Expanding Collaboration:** BlueMarvel's ControlPerformance and OTSupport solutions have been integrated, further strengthening cross-silo communication and intelligence sharing.
- **Training Opportunities:** The refinery is exploring ways to use OperationsMetrics' Operator Actions feature to identify data-driven opportunities for improved automation and operator training.
- **Cross-Site Collaboration:** The tool has been showcased to other sites within the enterprise, allowing them to compare KPIs, share best practices, and drive multi-site improvements.

Key Takeaways & Lessons Learned

- ✓ Safety initiatives drive both cultural and operational improvements when supported by intuitive tools.
- ✓ Digital transformation and cultural transformation go hand-in-hand.
- ✓ Democratizing access to critical data fosters collaboration and empowers all stakeholders to contribute to success.
- ✓ Cross-site alignment and KPI benchmarking enhance overall organizational performance.

Achieve beyond just Bypasses with OperationsMetrics

1. Alarm Benchmarking:

Compare all your alarms against the ISA 18.2 Alarm Standard to assess their impact on operator effectiveness. Use this insight to refine your alarm strategy and plan a broader alarm rationalization effort.

2. Control Loop Interactions:

Effective facility control is key to profitability. Tracking manual operator interventions helps identify deviations from designed automation, revealing opportunities for process improvements or targeted training.

3. Behaviour Patterns:

By analyzing operator behaviour through pattern mining, OperationsMetrics uncovers repeated actions. These insights can help establish best practices, enhance automation, and identify training needs.

Ready to transform your operations and make safety a competitive advantage?

Learn how OperationsMetrics can deliver measurable results for your organization.

Visit bluemarvel.ai or [book a demo now.](#)



BlueMarvel is an industrial operations technology company backed by over 80 years of process industry expertise. Together, we can navigate the digital transformation space and explore the exciting new frontiers of AI and Machine Learning in industrial enterprises.

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