



Data and Interoperability and Asset Management Case Study

CASE STUDY: BRIDGING GAPS BETWEEN CRITICAL SYSTEMS IN MINING



SITUATION AND SOLUTION (ANALYTICS, APPS, AND AUTOMATION FOR HEAVY-ASSET INDUSTRIES)

Jump Analytics, which provides advanced analytics solutions for heavy-asset industries like mining, worked with New Gold and encountered a common industry challenge where the company's operations-specific software left critical gaps between systems, making analytics and business insights difficult. With separate systems for exploration, machine or material movement, fleet tracking, and milling—plus an inability for those applications to share data—the company was forced to pull information together manually, mainly using Excel spreadsheets.

When New Gold first engaged with Jump Analytics, they discussed their needs and where they wanted to go with reporting. They discussed that they didn't want the reporting to be only an annual occurrence and that their goal was to build a dashboard and platform where their sites could input data that could be tracked, validated, and easily accessible. Additionally, they wanted the ability to pull cross-sections of data so that they could analyze different things from different perspectives.

After testing and trialing several different technologies and vendors, Jump Analytics and New Gold chose the Microsoft Power Platform, which comprises of Power Apps, Power Automate, and Power BI, because it was the only one that had the complete capabilities needed in terms of app development, automation, and data visualization.

Development of applications that inserted themselves between these independent systems to collect and store business-critical data was used to help bring the data together.

Data was collected and shared in a single, trusted data source using apps and automation that were quickly and easily created using their selected technology. Additionally, solutions to make data more actionable were developed to embed business logic and flows into dashboard technology, allowing users to interact with forecasts and budgets to improve decision making.

BENEFITS

Key benefits and outcomes that were obtained through the application of the technology and processes included:

- Enabled data centralization for better insights (cycle times, high/low grade trends, equipment efficiencies, resource availability, etc.) into mine site operations
- Reduced time to collect and organize reporting for 1000+ metrics
- Streamlined shift-change procedures to improve safety and efficiency



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APPLICATION (POWER PLATFORM ENABLING FASTER AND MORE ECONOMICAL DIGITAL TRANSFORMATION)

After working with New Gold on several SAP-focused projects for its corporate office, the Director of Information Systems at New Gold asked Jump Analytics if they could help address challenges the company was experiencing around accessing information on mine site operations. They helped architect a data and artificial intelligence (AI) strategy using its mine analytics playbook, creating a foundation for collecting, storing, and making data available to business users at each mine site. From there, they began fielding requests to enable specific scenarios, such as tracking safety indicators or providing analytics for maintenance tasks, in some cases automating processes that would otherwise require the company to license additional software.

A series of three apps were developed in seven weeks to provide a dashboard of data collected underground across production, development, and rehabilitation to help their client streamline its paper-based shift change process at mine sites. Even in areas underground without a Wi-Fi connection, staff working on specific safety clearances, can use tablets in offline mode to input data on gas readings, equipment locations, and blast times. Once reaching a Wi-Fi enabled zone or returning to surface a short time later, the devices sync with supervisor systems for approvals and handoffs, not only reducing time and manual effort, but it also helps improve overall safety.

REDUCING THE WORKLOAD FOR ANNUAL ENVIRONMENTAL, SOCIAL, AND GOVERNANCE (ESG) REPORTING USING APP CREATING PLATFORM

To help reduce the workload required for annual Environment, Social, and Governance (ESG) reporting, an application to replace manual processes for reconciling data across multiple excel spreadsheets was recommended and developed. This new app creates one central location to collect, edit, and store data on thousands of metrics collected at each mining site to indicate sustainability, interactions with indigenous people, and other key regulatory information. Now in production, the solution has helped accelerate and simplify reporting, saving dozens of hours of manual effort and giving executives and auditors quick visibility to metrics throughout the year.



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About Data and Interoperability Working Group

This group aims to address challenges that the industry faces related to data management, interoperability, and integration through work that supports and enables common language, data quality, data exchange, data sharing, and data access.

About Asset Management Working Group

The GMG Asset Management Working Group is an inclusive and global operator-driven community of interest whose primary purpose is to identify and share leading practices in asset management, reliability, and maintenance. The group is dedicated to developing asset management guidelines that result in improved safety, ESG, and operating performance for the benefit of the mining industry.

About GMG

The Global Mining Guidelines Group (GMG) is a network of representatives from mining companies, original equipment manufacturers (OEMs), original technology manufacturers (OTMs), research organizations, academia, regulatory agencies, consultancies, and industry associations who collaborate to tackle the challenges facing our industry. GMG aims to accelerate the improvement of mining performance, safety, and sustainability by creating guidelines and white papers that address common industry challenges, facilitating collaboration and expanding the industry's knowledge base. GMG also hosts and supports events that bring mining stakeholders together along with external industries to address the industry's challenges, successes, and innovations. Learn more about GMG at <https://gmgroup.org/>

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