

## Asset Optimization with DataV Optimize

Successful industrial organizations rely on massive numbers of high-performing devices. Underperforming assets cost money from maintenance expenses and revenue loss to capital-intensive replacement of aging equipment. By identifying the characteristics of machines operating at peak efficiency and applying those traits to entire populations of subpar equipment, industrial companies can dramatically improve business-critical asset performance for lower total cost of ownership (TCO) and better return on assets (ROA).

DataV Optimize automatically keeps an entire population of millions of industrial devices operating at peak efficiency. By using assets' digital twins, it analyzes real-time operating conditions, historical data, and behaviors of equivalent assets operating at optimal performance. As the system identifies underperforming

assets, it can automatically apply real-time remediation such as software updates or configurations directly on equipment or groups of equipment, or notify personnel so they can investigate whether repair or replacement is required. The system reports on the state of individual assets as well as the entire asset population.

### Key Features



- **Rules and automation** – Supports data-driven and goal-based reasoning using a complex business rules engine built on a hybrid reasoning system (HRS). Data-driven reasoning evaluates information such as asset telemetry against rules (configurable constraints) to determine what action to take. In a goal-based approach, the rules engine strives to sustain a desirable result (goal) against a constraint by taking actions that contribute to the goal.
- **Operating baseline configuration** – Allows users to specify key performance indicators (KPIs) to monitor and measure against target performance goals. When assets deviate from target goals, the rules and automation feature automatically adjusts asset operating parameters in real-time to return assets to optimal conditions.
- **Performance tracker** – Provides a dashboard view of all relevant asset telemetry and contextual data and how it is tracking against specified KPIs; alerts operators via email, SMS, or other external notification extensions when any asset exhibits suboptimal performance behavior.
- **Performance simulator** – Enables new asset design or configuration testing via an asset's digital twin without changing the physical asset. The behavioral model of an asset's digital twin mimics the actual behavior of the physical device providing flexibility to experiment and rapidly innovate.
- **Asset report/audit** – Generates asset compliance reports showing which assets are underperforming and recommended remediation actions, date of last remediation, and number of times that remediation has been performed.
- **Contextual data integration** – Configures data channels to external data sources such as enterprise asset management systems, operational DRMS databases, weather, and geospatial data repositories. Integrates and enhances data from these external sources and asset telemetry before applying predictive analysis.

### Benefits

- Reduces the overhead required to keep very large populations of equipment running smoothly and efficiently, and extends the useful life of capital equipment
- Reduces TCO (Total cost of ownership) and improves ROA (return on asset)
- Improves reliability, productivity, and overall equipment effectiveness (OEE), while reducing the risks associated with underperforming or failing equipment
- Enables smarter decision-making by identifying which assets have a recurring pattern of underperformance, identifying candidates for replacement, and determining additional troubleshooting needs

## DataV Apps



### Predict

Modeling of equipment behavior and monitoring of the real-time environment to identify a future failure event



### Repair

Automated evaluation of fault codes and operating parameters resulting in an optimized repair plan that adapts to current conditions



### Manage

Lifecycle management of IoT devices, including provisioning, inventory, software updates, and configuration



### Maintain

Determination of tailored maintenance schedules for managed equipment based on actual usage and external factors



### Optimize

Performance improvement based on data models that can be used in offline mode for simulation or online mode for comparative analysis



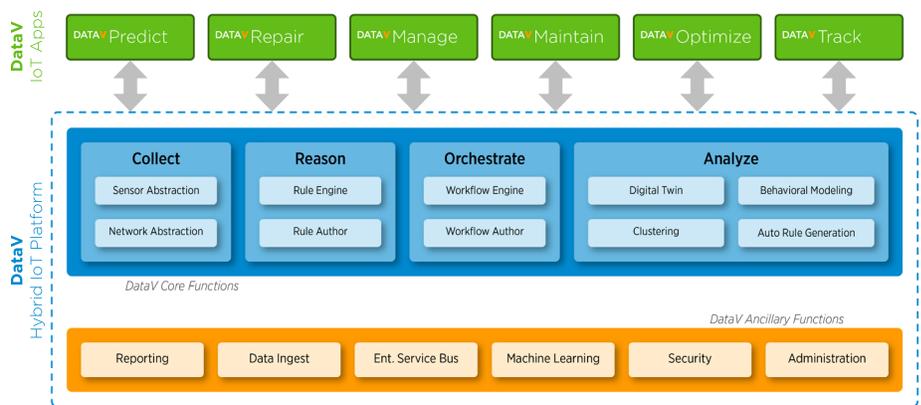
### Track

Real-time usage information from managed assets that can inform product design or maintain compliance in regulated environments

## The DataV Hybrid IoT Platform

The DataV Hybrid IoT Platform helps industrial companies get maximum business value from their critical assets by collecting, analyzing, and acting on data collected from connected equipment. It supports DataV applications by automating data analytics, rules generation, and algorithms. By creating a digital twin of each connected device, the platform enables powerful adaptive analytics across millions of assets for unparalleled scalability, insight, and management capabilities.

The user-friendly platform allows DataV applications to run concurrently, share data and insights across the entire system, and integrate with other operational and enterprise applications. This accelerates analytics processing and allows the system to become more intelligent over time through machine learning. The platform runs on-premise, in the cloud, or a combination, and can work independently or in conjunction with Amazon Web Services and Microsoft Azure for flexibility and scalability.



### ABOUT BSQUARE

For over two decades, Bsquare has helped its customers extract business value from a broad array of assets by making them intelligent, connecting them, and using data collected from them to improve business outcomes. Bsquare software solutions have been deployed by a wide variety of enterprises to create business-focused Internet of Things (IoT) systems that can more effectively monitor assets, analyze data, predict events, automate processes and, in general, optimize business outcomes. Bsquare couples innovative software with advanced professional services that can help organizations of all types make IoT a business reality.

### CONTACT US TO LEARN MORE

[www.bsquare.com](http://www.bsquare.com)

888.820.4500

[sales@bsquare.com](mailto:sales@bsquare.com)

[in /company/bsquare](https://www.linkedin.com/company/bsquare)

[@bsquarecorp](https://twitter.com/bsquarecorp)