RtDUET

OWN YOUR OPERATIONS.

- Downtime Tracking
- Root Cause Analysis
- Equipment Monitoring
- Delay Accounting

RtTECH SOFTWARE

Killer apps for industrial analytics.

RtDUET

Downtime at your mine is like a shot to the heart. Your operation can't afford any loss in availability. Let's keep your machines running and your commodities flowing.

RtTech Software provides mining operations with the tools required to help reduce operational waste; be it waste in production or energy.

When equipped with the power of real-time data, you are able to be proactive in decreasing downtime events by targeting and eliminating the root-causes of equipment failure.

Decrease downtime and increase output. We all know that more output equals more profit.

OWN YOUR OPERATIONS.

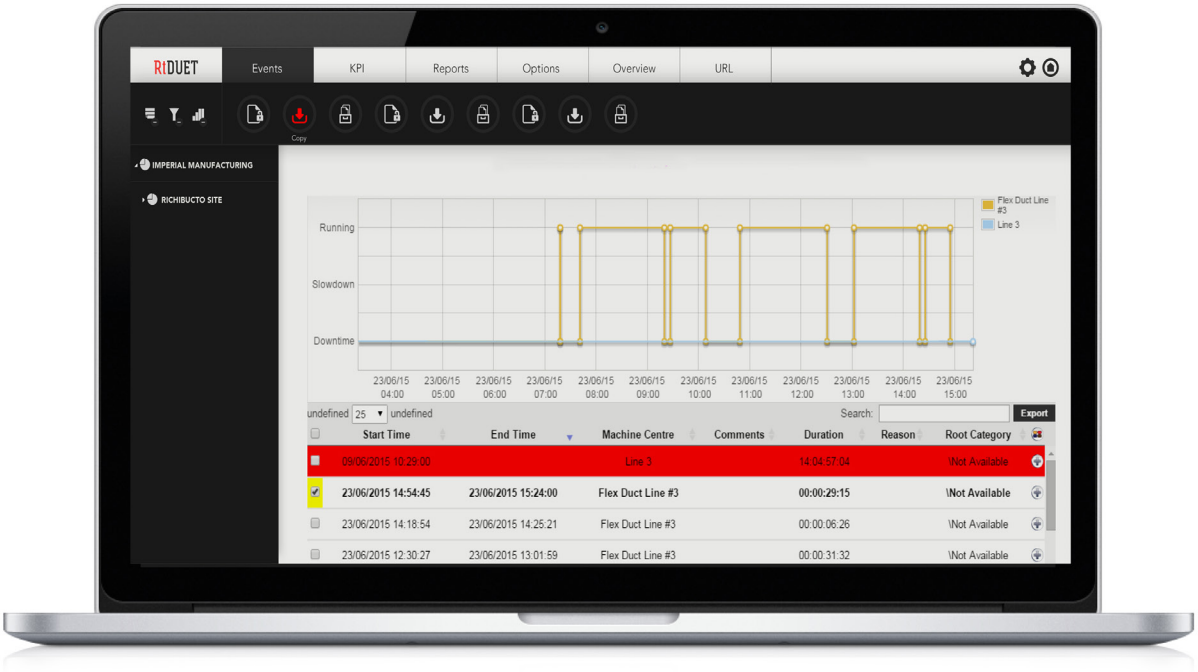
Extended functionality for users of the OSIsoft® PI System®.

With commodities at
an all-time low,
it's time to decrease downtime
and increase output
with operational analytics.

DOWNTIME TRACKING
ROOT-CAUSE ANALYSIS
EQUIPMENT MONITORING
DELAY ACCOUNTING

10% +

Average reported increase in Asset Availability



MULTIPLE SOURCE MONITORING

Integrates with PLC, DCS, or data historian aggregating environment, production, and operation data.

ROOT-CAUSE ANALYSIS

Contextualized data is formatted to easily prioritize high-cost pain points and detect root cause.

KPI CALCULATION ENGINE

Calculates 16 standard KPI including OEE, Utilization, MTBF using simple as well as complex triggers.

RtDUET

From control-room to board-room.

DOWNTIME TRACKING

Stop guessing. Start tracking.

Clients tell us that prior to RtDUET they had short downtime events that were completely missed. Even insignificant events add up to significant productivity loss. Downtime is usually tied to equipment failures or breakdowns, but it includes any unplanned event that stops or slows down a line.

Track downtime and slowdowns using RtDUET's operator-friendly event dashboard. After an event is captured - classify, split, or have a supervisor verify. Concerned about certain type or length of downtime? Set an automatic alert.

ROOT-CAUSE ANALYSIS

Find the underlying cause.

The line goes down. One operator classifies the downtime cause as 'hot fan' while another writes 'fan stopped'. Even if both reasons are recorded, it's impossible to aggregate the data to pinpoint the cause.

The first step to finding the root cause is standardized reason codes which are set-up easily within RtDUET's configuration toolkit. Root cause analysis and Maintenance and Reliability KPI pinpoint top reasons for downtime, potential equipment failures and a maintenance plan to extend equipment life and delay costly capital expenditures.

EQUIPMENT MONITORING

Relying on unreliable data?

Did the line go down at 3:10 or 3:20? Is the downtime costing $10,000 or $100,000 in lost production? Without accurate duration and classification, how can you know?

Equipment monitoring has replaced manual downtime recording. Reduce the time required for your operators to record downtime events, and increase data accuracy with automatic fault codes and standardized classification of your downtime. With RtDUET, be proactive to improve your operator's productivity and operate more efficiently with more accurate data, faster, to determine the best course of action.

DELAY ACCOUNTING

Trash the spreadsheet.

Monthly, weekly, even daily performance updates can't accurately account for the implications or causes of downtime or slowdown events.

RtDUET for Delay Accounting analyzes data in mining, mineral and metal processing industries in real-time, with root cause analysis and Pareto visualizations to inform decisions that maximize asset availability when it counts. Proven effectiveness in the world's elite mines, RtDUET can identify operational efficiencies to reduce cost per tonne and improve asset availability by 5-10%.

CASE STUDY
Barrick Gold

Despite twelve straight years of rising costs through to 2012, Barrick was well-positioned as number one in the industry for reserves and production; however, Barrick's leadership wisely started a major strategic transition to become a more sustainable company in any gold-price environment. The company redirected all efforts towards 'Disciplined, profitable production'. At the Pueblo Viejo mine in Dominican Republic, one such focus was production loss accounting. One of Barrick's higher performing mines, the site processes over one million ounces of gold per year. That level of production translates to 1000 tons per hour, generating revenue of over $200,000 each hour meaning every minute of production counts.

Headquartered in Toronto, Canada, Barrick is the world's leading gold mining company, with mines and projects on five continents. Barrick's vision is the generation of wealth through responsible mining; developing and operating high quality assets through disciplined allocation of human and financial capital and operational excellence.

Downtime system requirements

Automatic downtime event detection and logging

Manually add downtime events

Detect production slowdowns as well as complete stoppages

Split a downtime event into multiple sub-events

Supervisor approval of downtime events

Automatic calculation and reporting of standard maintenance metrics such as availability, utilization & MTBF

CHALLENGE

Eroding margins push need for operational efficiency

Unknown areas of production loss and inaccurate data

RtDUET

Automatic downtime detection

Calculation of standard metrics

Integration with existing data historian

SOLUTION

Reduced operating delays

Increased data accuracy

Project ROI + justification

Fact:
RtDUET offers tight integration with Barrick's data historian, OSIsoft's PI system and offered easy-to-use configuration tools and a web-based interface, all key features.

The premise of the RtDUET system set-up at Barrick is straight forward but includes checks and balances to ensure accurate data capture.

After a shutdown or slowdown is triggered, operators use the RtDUET interface to classify the event. The reason codes accessible to the control room operator are relevant to the asset and aligned with the Enterprise Asset Management system to streamline the process. At the end of each shift, automatic emails are sent to supervisors which prevents coding errors, yet another check to ensure data quality.

"In a large-scale distributed processing plant, a centralized tool for capturing and reporting on operational delays is essential."

PAUL YAROSHAK, P. ENG
Senior Process Control Engineer
Pueblo Viejo Mine, Barrick Gold

Features for the way you work.

CONNECT

Multiple source monitoring
Integrates with PLC, DCS, or data historian, aggregating environment, production, and operation data.

Real-time machine data capture
Connectivity to over 400 protocol types for automatic data capture.

Flexible licensing options
Licensing flexibility via asset, site, or Enterprise licenses.

MONITOR

Asset monitoring
Monitors equipment 24/7 for any stoppages and/or production delays.

Configurable user permissions
Set security preferences, permissions, and visibility access by user profile.

Configurable time usage model
Configure your own timeline definition or time usage model to drive the KPI calculations.

GET DOWNTIME VISIBILITY.

RID THE BOTTLENECKS.

MONITOR EQUIPMENT HEALTH.

SHARE PERFORMANCE KPI.

MAX PROFIT WITH MORE OUTPUT.

IMPROVE DATA ACCURACY.

LOWER MAINTENANCE COSTS.

ANALYZE

Auto-classified downtime
Downtime events can be automatically classified when event meets predetermined criteria

VISUALIZE

KPI dashboard
Real-time visualization of production performance.

Information timeline
Events displayed chronologically to analyze asset performance and repairs

Web-based interface
Reports and dashboard are accessible anytime via secure web application.

INFORM

Root-cause analysis
Contextualized data is formatted to easily prioritize high-cost pain points and detect root cause.

Out-of-the-box configurable reports
Configure reports to reflect 16 KPI calculations in a clear, concise manner.

Automated KPI calculation engine
Calculates 16 standard KPI including OEE, Utilization, MTBF using simple as well as complex triggers.

Microsoft Excel module
Access and manipulate exported data using specialized Microsoft Excel module.

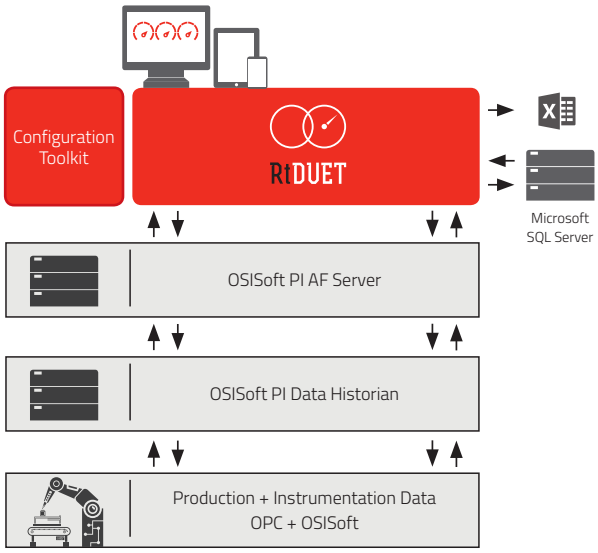
Designed for use with the OSIsoft® PI System®.

SYSTEM ARCHITECTURE:

RtDUET provides extended functionality for users of the OSIsoft® PI System®.

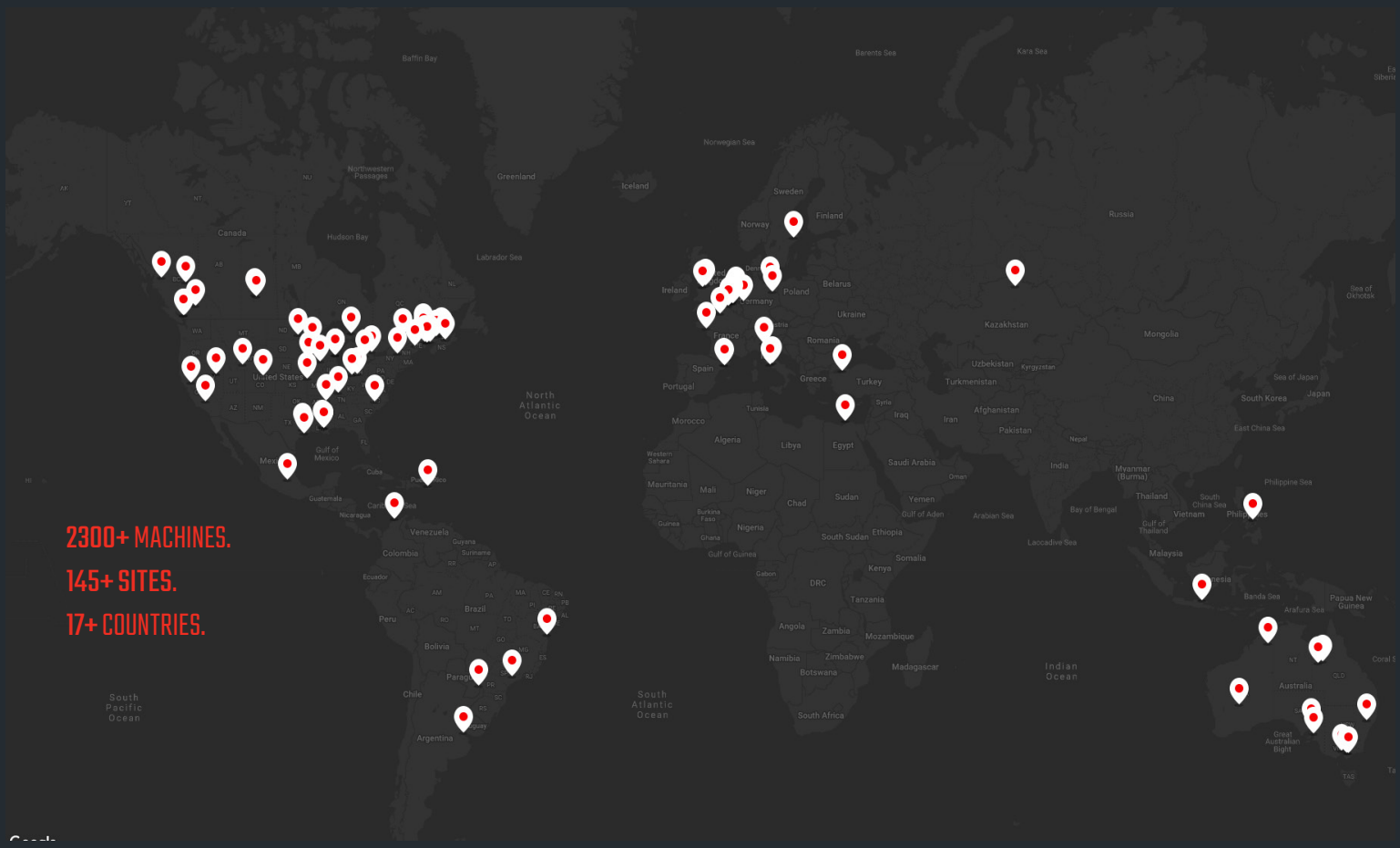
RtDUET also provides easy access to the underlying data records for downtime events and KPI through advanced analytics. With simple out-of-the-box reporting and integration into on-site systems, accessing data can also be achieved through standard acceptable reporting tools such as Microsoft Excel and Microsoft SQL Server reporting services. RtDUET comes complete with a standard add-in application for the Microsoft Excel 2007, 2010, and 2013 versions.

RtDUET utilizes OSIsoft® PI system® data from tags as trigger inputs to assets. The OSIsoft® PI AF SDK® is utilized for configuration and storage of downtime and KPI records in the event frame subsystem as well as a database for reason tree, time usage configuration and asset hierarchy.



"RtTech stood out because they had good experience in industrial environments, (the solution) worked off the OSIsoft® PI System® nicely and they were able to meet our timelines."

ANDREW COOPER, P. ENG
Energy Specialist, New Afton Mine
New Gold



Kickin' it up a gear, around the globe.

Our footprint spans across the globe, helping companies in 17 countries get the most out of their mining operations by maximizing productivity and reducing energy costs.
We'd love to hear about what commodities you're mining and how we can help!

Own your operations with killer apps for industrial analytics.

OSIsoft. APPLICATION PARTNER

RtTECH SOFTWARE

Corporate Headquarters
1180 St. George Blvd. Suite 20
Moncton NB E1E 4K7
www.rttechsoftware.com

P. 506.383.8534