



RtDUET

OWN YOUR OPERATIONS.

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Downtime Tracking

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Asset Management

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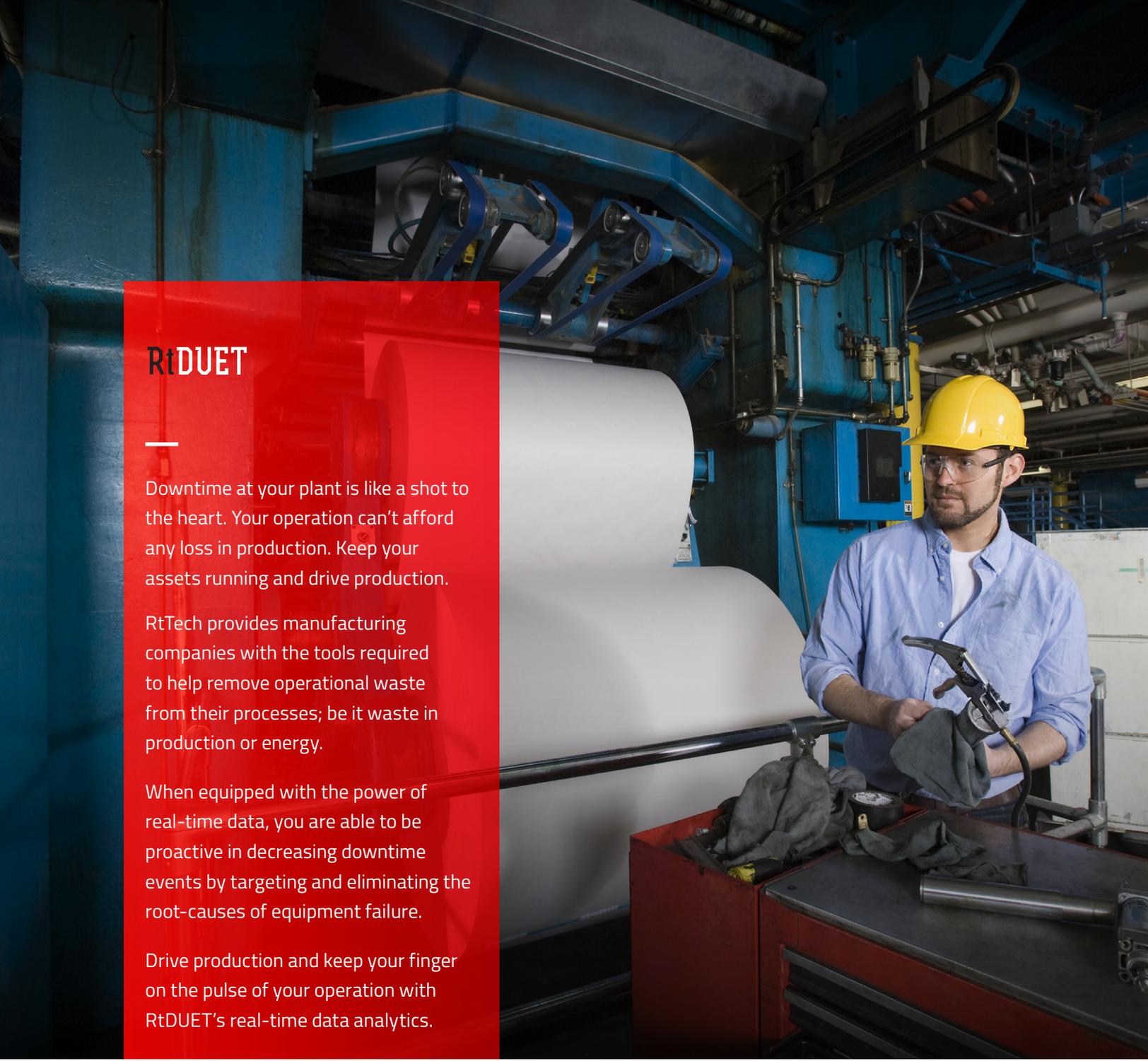
Root-Cause Analysis

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OEE

 RiTECH  
SOFTWARE

Killer apps for industrial analytics.



## RtDUET

Downtime at your plant is like a shot to the heart. Your operation can't afford any loss in production. Keep your assets running and drive production.

RtTech provides manufacturing companies with the tools required to help remove operational waste from their processes; 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.

Drive production and keep your finger on the pulse of your operation with RtDUET's real-time data analytics.

## OWN YOUR OPERATIONS.

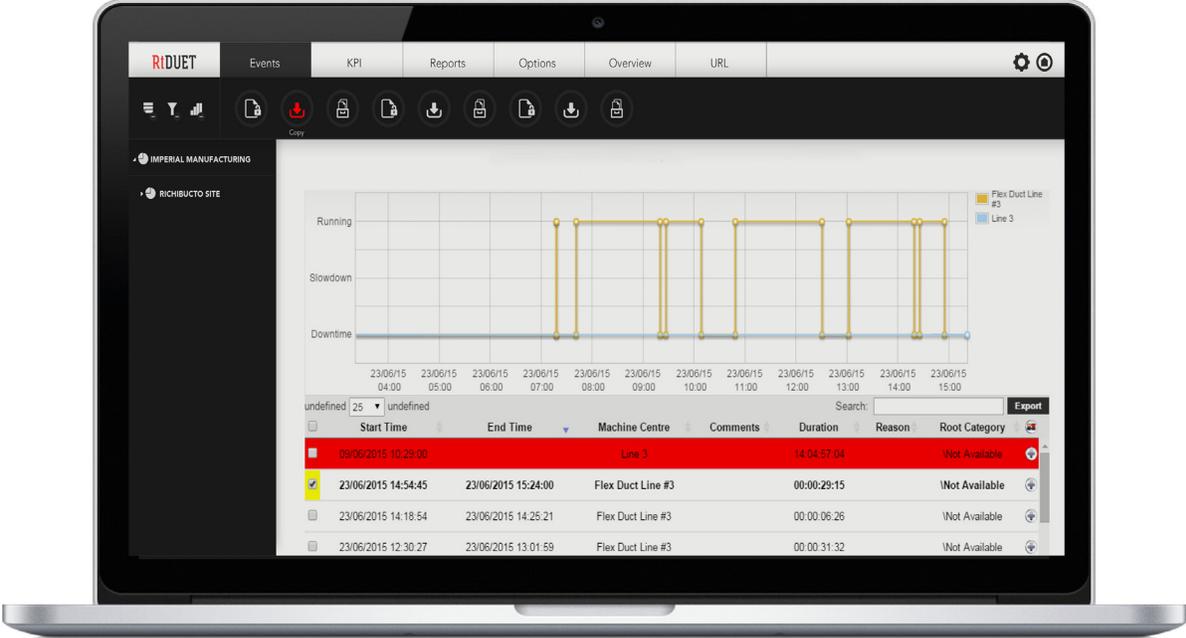
Extended functionality for users of the OSIsoft® PI System®.

With pressure to find savings and increase profitability; it's time to decrease downtime and maximize output with operational analytics.

- DOWNTIME TRACKING
- ASSET PERFORMANCE MANAGEMENT
- ROOT-CAUSE ANALYSIS
- OVERALL EQUIPMENT EFFECTIVENESS

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.

# Analytics at every level of operations.

## 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.

## ASSET PERFORMANCE MANAGEMENT

Maximize asset performance.

Using operational data to better predict maintenance and reduce unplanned downtime isn't new. What's new is the technology behind RtDUET, an app for asset management.

Manual data collection by operators that aren't always interested and spreadsheets calculated at month-end is not enough anymore. Connect directly to PLCs with automatic fault codes or sensors for connectivity on older lines. Automated analytics with a calculation engine that generates KPIs in real-time puts information in your hands to maximize asset utilization.



## 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 CapEx.

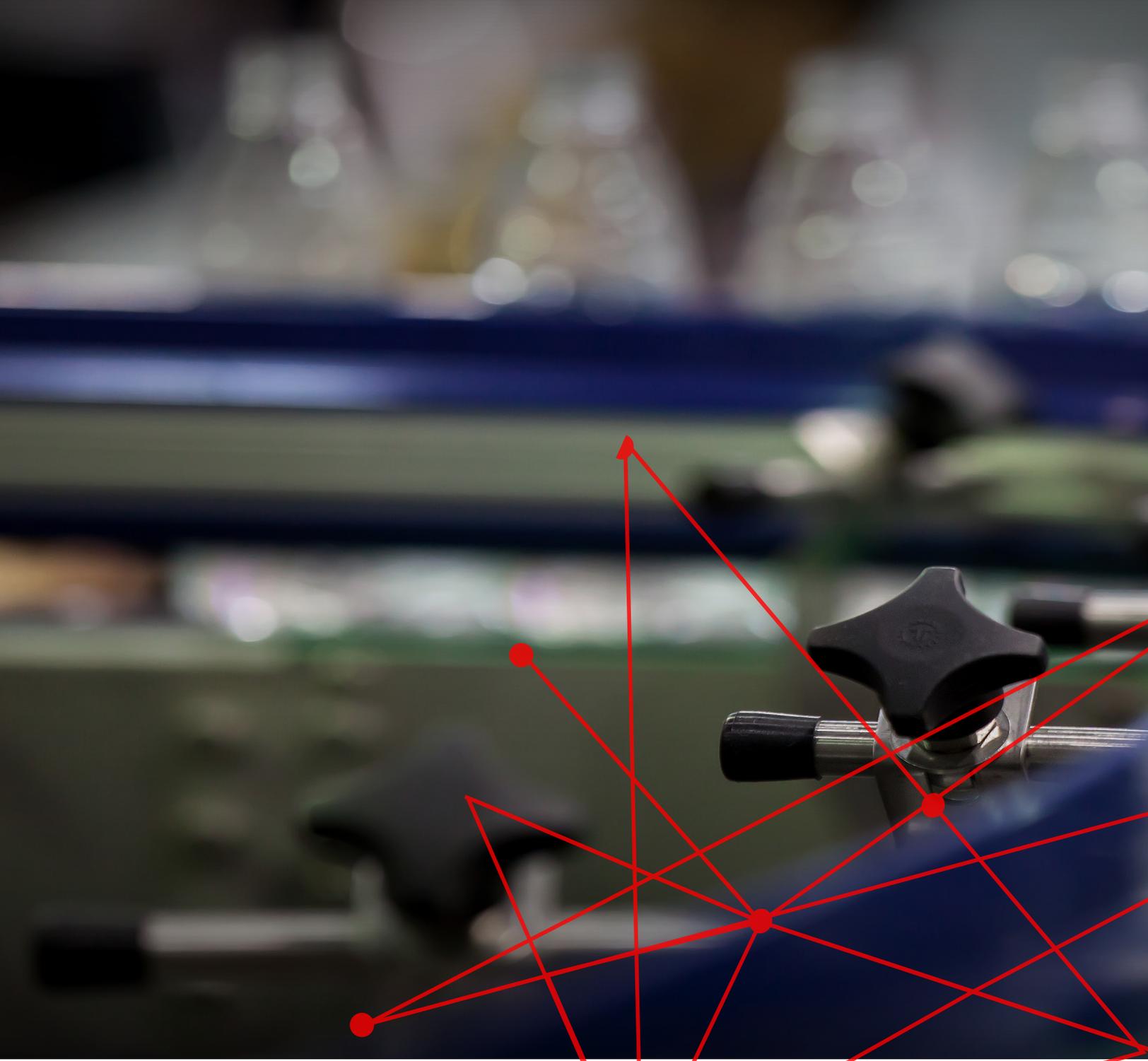
## OVERALL EQUIPMENT EFFECTIVENESS

Push OEE to the limit.

**Don't worry. It's not uncommon to see 40-50% as an Overall Equipment Effectiveness (OEE) baseline when starting an asset management project.**

The upside is that gains can easily be obtained once RtDUET detects root causes for downtime and bottlenecks are spotted. React with the right corrective actions like planning production to group products with less set-up time or eliminating poor quality material causing mis-feeds. Ask yourself this: if you knew the problems in your process, could you tackle 2 or 3 issues per week to increase OEE and Availability by 20%?





# 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 license.

## 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.



## OVERALL EQUIPMENT EFFECTIVENESS

Why you need a real-time OEE system:

Without a real-time OEE solution, production managers must rely on manual downtime tracking and spreadsheets calculated at month-end.

With stale information and up to 5% hidden losses from undetected or poorly-estimated downtime events, informed decisions are near impossible.



The true value of OEE is in helping you and your operators make systematic improvements. Therefore everything you do with OEE, including the visual display of OEE data, should be designed with operators in mind and stated in whatever terms they most easily understand.

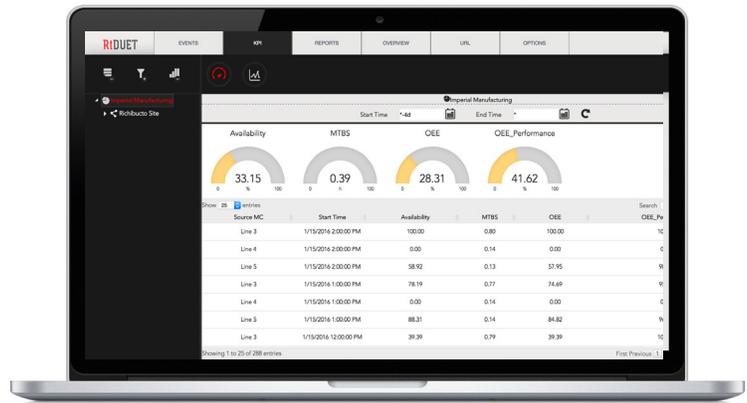
### MORE ON OEE:

How do you minimize spreadsheets and reports to make OEE easier to track and improve?

Defining how your operation's time usage codes standardizes how each downtime event type affects the OEE calculation while reason codes standardize operator input of the cause or reason for downtime events.

OEE software can be configured so that each machine or asset displays only applicable reason codes making it easier for operators to select the correct code. With standard reason codes and root cause analysis, the root causes of low OEE scores are easier to identify and prioritize.

Want more on how to implement OEE at your plant?  
Let us share what we know. Ask us for a copy of our OEE guide:



Data isn't very useful if you don't see it until tomorrow, or at next week's production meeting. A printout in the manager's office isn't nearly as helpful as having real-time data, with visual cues that are useful to you and your operators.





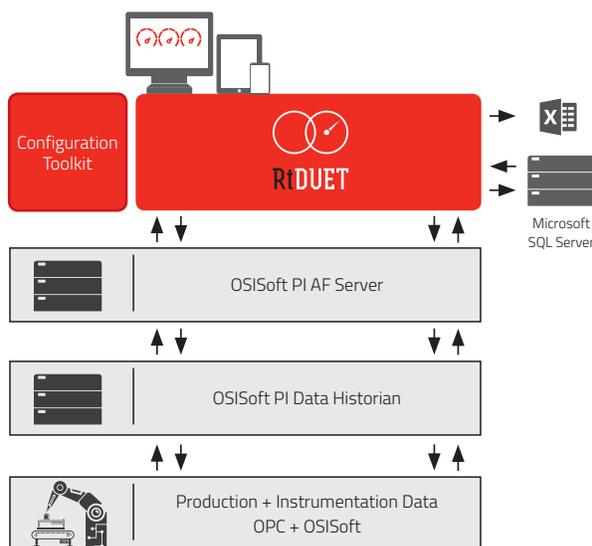
## Designed for use with the OSIssoft® PI System®.

### SYSTEM ARCHITECTURE:

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

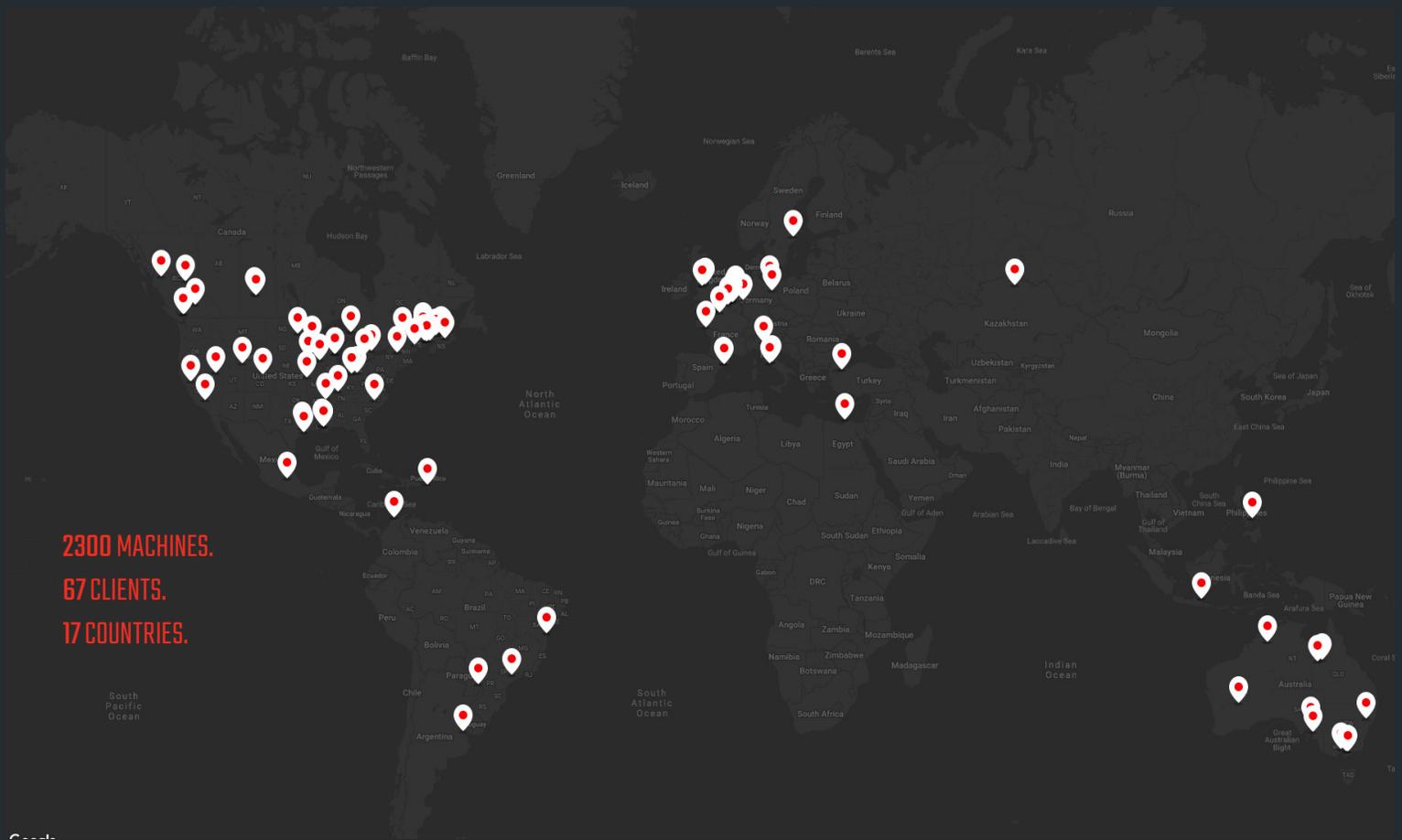
RtDUET also provides easy access to the underlying data records for downtime events and KPI through advanced analytics. With simple out-of-the-box reporting and integration into on-site systems, accessing data can also be achieved through standard acceptable reporting tools such as Microsoft Excel and 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 OSIssoft® PI system® data from tags as trigger inputs to assets. The OSIssoft® 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 OSIssoft® PI System® nicely and they were able to meet our timelines.”

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



**2300 MACHINES.**  
**67 CLIENTS.**  
**17 COUNTRIES.**

## 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 manufacturing operations by maximizing productivity and reducing energy costs. We'd love to hear about what you manufacture and how we can help.

Own your operations with killer apps for industrial analytics.



Corporate Headquarters  
 1180 St. George Blvd., Suite 20  
 Moncton NB E1E 4K7  
[www.rttechsoftware.com](http://www.rttechsoftware.com)

P. 506.383.8534



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