dataPARC

INTUITIVE.
POWERFUL.
CONNECTED.

Product Overview

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A Voith company

Overview

Data Integration

dataPARC is optimized for high-speed real-time data performance at the Plant and Enterprise level. Quickly view optimized data at corporate & remote sites, while maintaining instant access to lossless, high-res production data for troubleshooting.

- **Combine** IT & Operations data, including MES, ERP, etc.
- **Collect** automation and sensor-data via standard protocols.
- **Connect** to standard relational databases for lab, quality & other data.
- **Access** raw data from connected IT/OT systems. No double-storing data!
- **Futureproof** your analytics program. Connect to any new platform you bring online.

Data Visualization & Analysis

Connect, collect, and combine data from any source at the plant. Use dataPARC's industry-leading data visualization tools to quickly analyze large sets of data and identify opportunities to improve process efficiency.

- **Connect & integrate** IT & OT data from across the plant
- **Identify** the root cause of downtime events or quality issues.
- **Investigate** process issues with real-time trending tools.
- **Visualize** historical data using scatter plots, histograms, & more.
- **Manipulate** large data sets and quickly analyze long-term process data.
- **Compare** current process variables against operating targets.
- **Filter & analyze** data for specific product runs, grades or user-defined criteria.
- **Report** consistency of new processes.

Operational Management

Give operators, engineers, & management insight into current operating conditions & provide decision support when processes deviate from targets. Build real-time dashboards, notifications & displays to monitor equipment status, site-level process flows, or enterprise-wide production KPIs.

- **Create** displays that represent your process.
- **Combine** data from any source (or site) into common dashboards or displays.
- **Interact** with dashboards & displays to drill-down into data for troubleshooting.
- **Effective** communication with instant notifications.
- **Detect** compliance events, including data loss.

Data Integration

All Your Plant's Data In A Single View - PARCview Architecture

Combine data from multiple sites and multiple data sources in a single view without double configuration of tags or double storing of data. "Data Series" connections include drivers to real-time historians built on vendor provided API/SDK's and industry standard templates (SQL, Web Services, etc.) to connect other key sources of data".
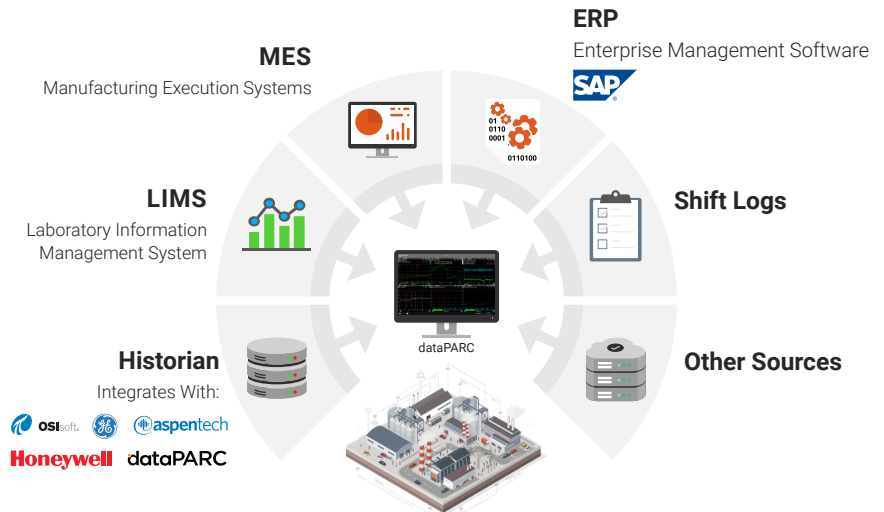
Leverage What You Have
Connect to existing data historians, Convert ProcessBook/IP21 data and graphics.

Future-Proof
As new data comes available on prem or in the cloud add those data sources.

API/SDK
"Data Series" connections include drivers to real-time historians built on vendor provided API/SDK's.

MES
Manufacturing Execution Systems

ERP
Enterprise Management Software
SAP

LIMS
Laboratory Information Management System

Shift Logs

Historian
Integrates With:
OSIsoft. GE aspentech
Honeywell dataPARC

dataPARC

Other Sources

Your Modern Operations PIMS (Plant Information Management System)

dataPARC's modernized historian offers everything you expect from a mission-critical operational historian product including essential accessibility, performance, reliability, and security. Fast, scalable, and flexible, it enables users from every level of the plant and corporation to rely on the data by ensuring the highest levels of system uptime and data integrity.

Performance
The next-generation architecture delivers optimized storage and the fastest historian on the market. dataPARC's data portal optimizes data sent from the server to the client, minimizing network load – a bottleneck in many scenarios.

3rd Party Integration
dataPARC takes advantage of open protocols to provide easy access for data collection and external connectivity. Collect data from a broad range of automation, IT, and other data sources. A flexible data pathing SDK allows external applications to query data for a variety of use cases. It's your data, use it!

Enterprise Ready
Enable centralized management and access with different levels of data available to different users based on their location and needs. Aggregates and plot reduced data at corporate allow for optimal performance on enterprise-level systems. Timezone awareness makes for easy data comparison and analysis.

Reliability
Data collectors utilize "store and forward" technology to buffer and store data for the last 7 days, ensuring maximum integrity by preventing data loss during a network failure. Options for historian redundancy and fail-over tolerance provide consistent access to data.

Scalability
Suitable for systems with 100 tags or 1,000,000 tags, the dataPARC Historian's architecture can accommodate small operations as well as multi-location corporations. Easy access and inclusion of all plant data at a low cost. Additional data sources and storage capacity can be incorporated seamlessly.

Security
Delivers advanced security and identity access management to the historian configuration interface. dataPARC's security bubble controls access to who can configure or access the data, and encrypts communication between historians, collectors, and clients.
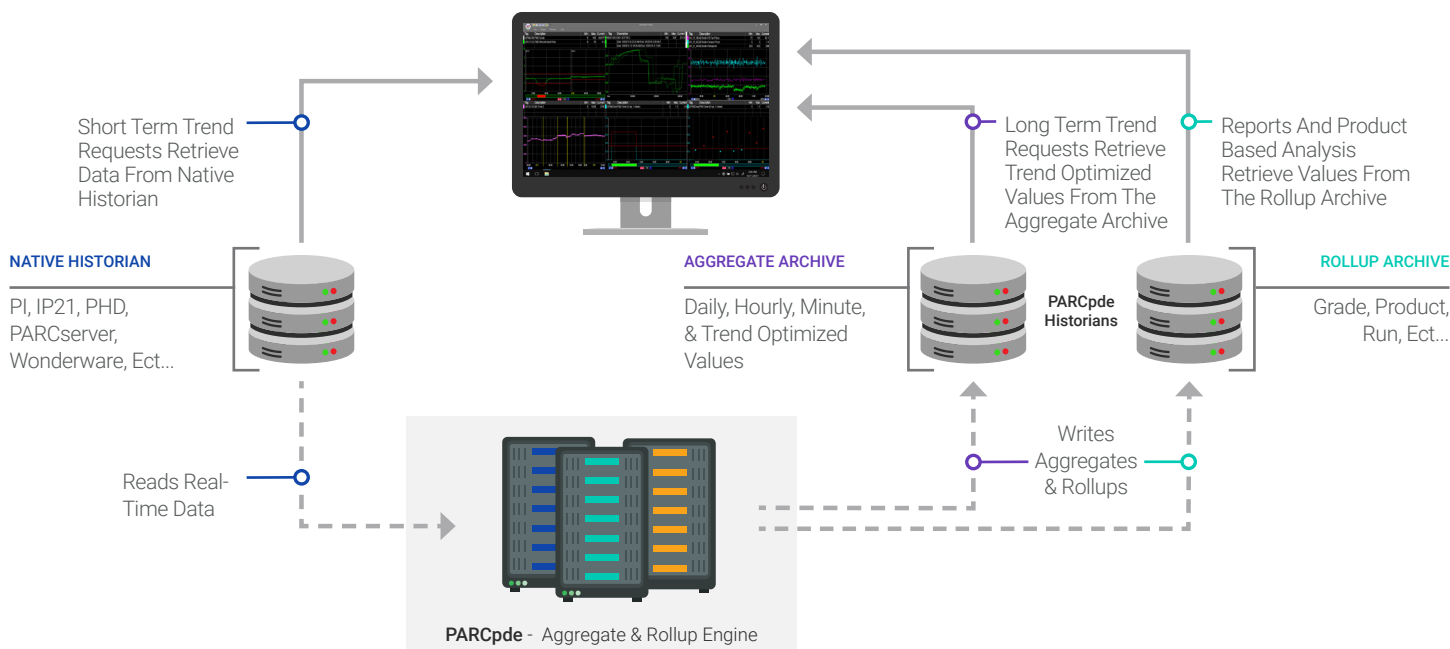
Faster Is Better

Plants often face a performance vs. resolution dilemma with data. Infrastructure improvements have allowed plants to more easily capture and store high resolution data (1 second or lower sample rate). From a troubleshooting standpoint this is great, but there is a penalty paid when trying to access the data. Running reports or long-term trends of high resolution data is slow, hindering the problem solving process.

Aggregate Archive

PARCpde solves this problem by creating two Archives alongside your real-time archive. The Aggregate Archive works seamlessly with the PARCview trend, providing unmatched performance and accessibility to real-time data. Two-year trends can be recalled in seconds not hours and users can easily switch between real-time data and hourly/daily averages.

Rollup Archive

The Rollup Archive makes reporting on production based time periods easy. It creates statistics (Min, Max, Avg & Std Dev) for any user defined period, like Product Runs, Batches, Shifts and more.

Short Term Trend Requests Retrieve Data From Native Historian

Long Term Trend Requests Retrieve Trend Optimized Values From The Aggregate Archive

Reports And Product Based Analysis Retrieve Values From The Rollup Archive

NATIVE HISTORIAN

PI, IP21, PHD, PARCserver, Wonderware, Ect...

AGGREGATE ARCHIVE

Daily, Hourly, Minute, & Trend Optimized Values

PARCpde Historians

ROLLUP ARCHIVE

Grade, Product, Run, Ect...

Reads Real-Time Data

Writes Aggregates & Rollups

PARCpde - Aggregate & Rollup Engine

Data Visualization & Analysis

Industry-Leading Trending Tools

Widely considered the best trending application available, PARCview provides a combination of powerful features and ease of use. Features such as drag & drop, right-click menu, dragging time-axis, multi-trend templates, time syncing of Multi-Trends, and unlimited traces on each trend provide a potent tool for troubleshooting and analysis.

> Standard Trends

> Batch Runs

> Grade Runs

> Alarm Trends

> Grade Limits
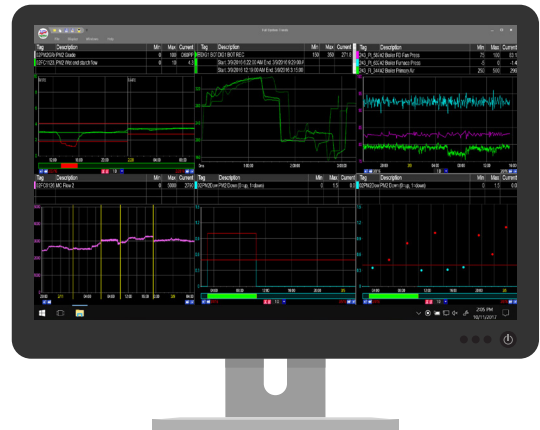
Data How You Want to See It

There are a variety of display options available each with access to PARCview's run broswer. Run browser allows users to view data over relevant time periords or "runs". View data by day, hour, shift or even grade or product.

Tabular
Display data in a table format including integrated statistics.
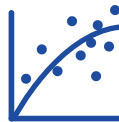
XY Charts
Find relationships between tags and generate a trendable best fit line.
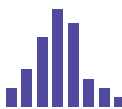
Histogram
Chart the frequency of values in tags by count or percent.

Pareto
View alarm events by reasons to assist in root cause analysis.

Custom Excel Plug-In

PARCxla is an add-in for Microsoft Excel designed by engineers to empower decision making and understanding of data. Designed to automate common or tedious Excel tasks and make it easy to build reusable reports, PARCxla enables users to spend more time making important decisions and less time wrestling with data.
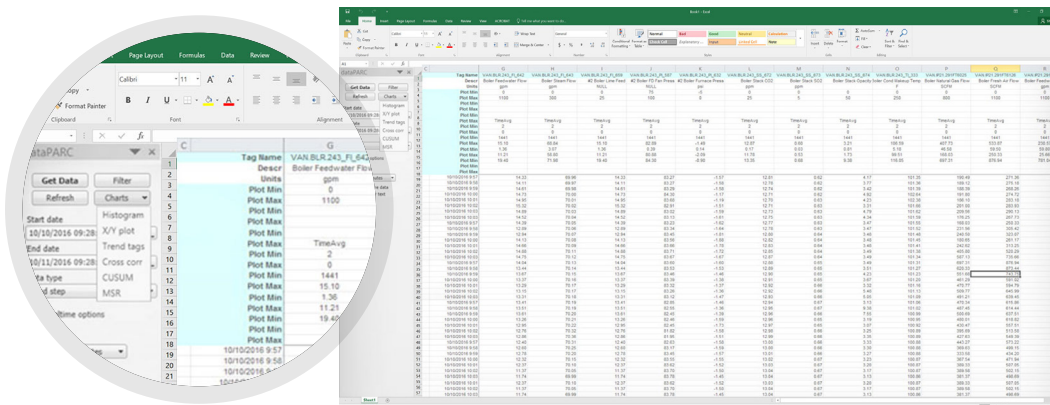
Create Sophisticated Process Graphics

Produce a graphical representation of your process, complete with real-time values, calculated variables, dynamic animations, blinking alarms, links to other PARCview displays, and a playback mode for historical analysis. Drag and drop tags from process graphics onto trends to hone in on key variables. Even import existing graphics from PI, IP.21, and more.
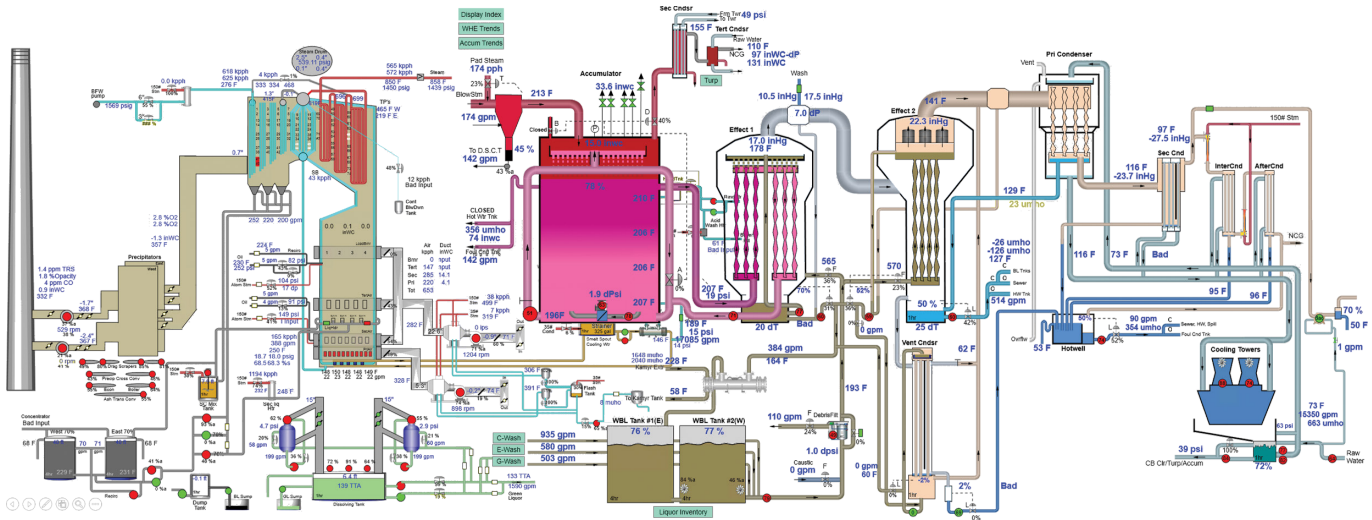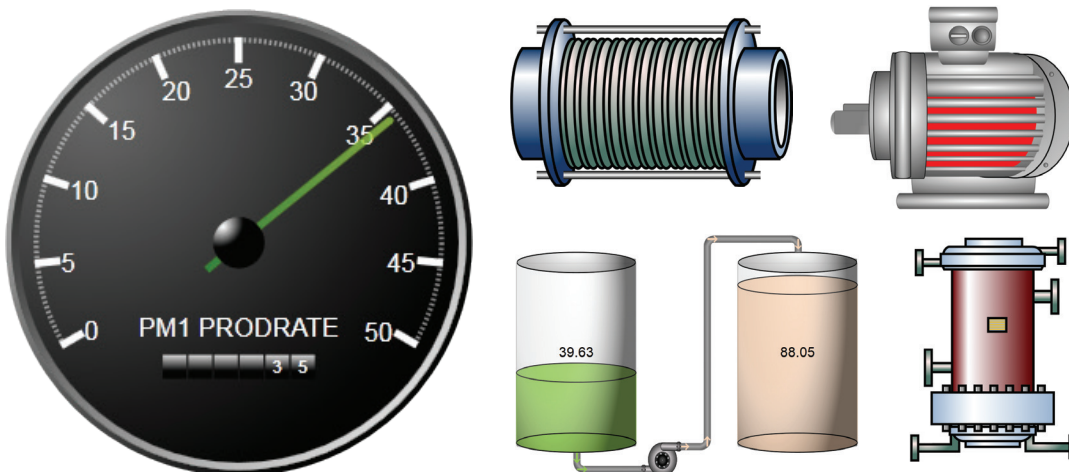

Easy To Use Design Tools

PARCgraphics is dataPARC's feature-rich design tool for creating sophisticated, animated and dynamic dashboards.

Industry Standard Graphics Library

PARCgraphics Designer offers a graphics library based on Microsoft® WPF and XAML, with over 5000 graphic objects and controls. Import existing dashboard graphics from PI, IP.21, and more.

Operational Management

Dashboards & KPI Displays

You don't always need large amounts of detailed, in-depth data. Many users just want the "big picture". dataPARC's built-in graphic designer can be used to create dynamic, highly-informative dashboards that give you an at-a-glance overview of the condition of major process flows and KPIs at your plant.

Web Browser To Live Plant Data

The dataPARC web browser allows remote access to critical plant data. We bring PARCview's powerful data visualization and analysis tools to mobile devices and tablets with a client-side rendered modern web application.

> Navigate PARCview Directory

> Create ad-hoc trends

> No additional training, same functionality

> Supports Trend, Graphics, XY Plot and Profile displays with more to come!
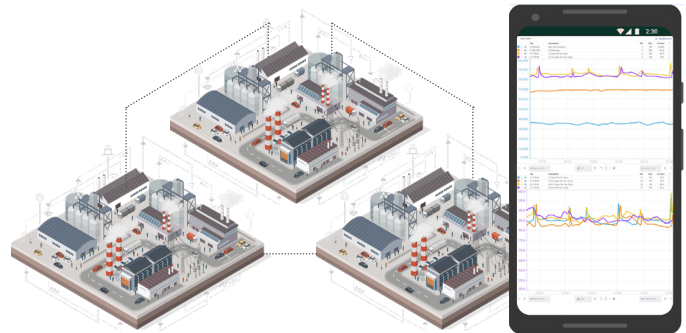
Centerline

Centerline displays present an information-rich, easy-to-read tabular report of key process information. Statistics are calculated for the last several instances of a specific period of time or "run", like an hour, grade run, or production day. These statistics are displayed alongside current values and control and/or spec limits. Tag limit integration causes values to change color when limit violations occur. Enable additional features like run aggregates or color gradients for enhanced visualization.
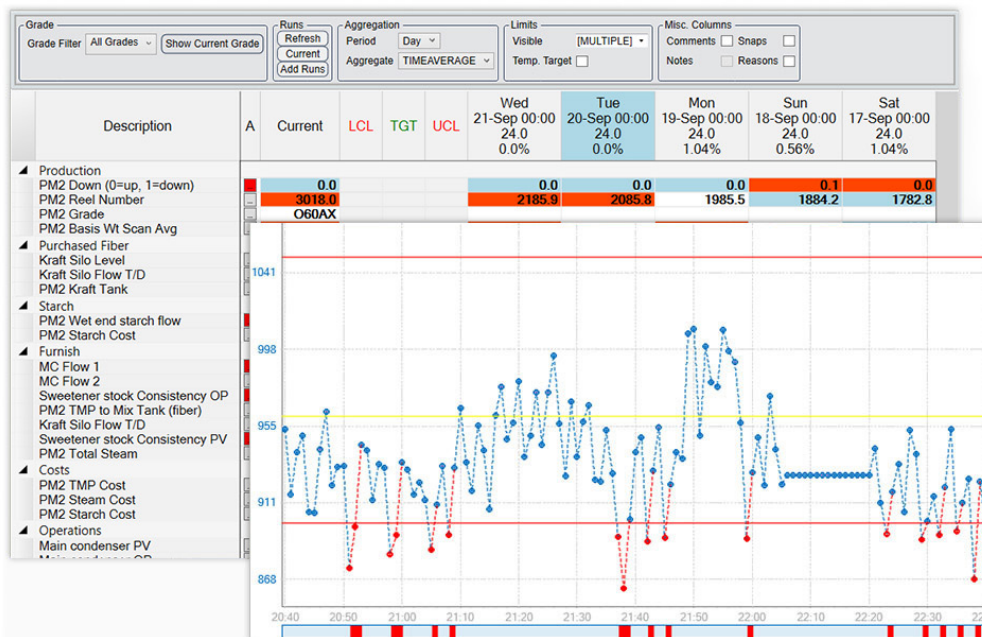
LIMS

dataPARC provides an integrated and cost effective solution to your laboratory information management system (LIMS) needs. dataPARC's Data Entry allows operators to efficiently log data points whether they online or offline. Ensuring accurate and timely data capture for comprehensive process analysis and reporting.

Data Entry

Seamlessly digitize and integrat manually collected data with the rest of your operational data to provide a complete picture of quality, process and equipment performance.

Grades

Create control and specification limits for each product category. Automatically disply limits based on defined criteria.

SPC/SQC

Easily implement online SPC/SQC utilizing dataPARC's integrated limit management tools and alarm/event engine.

Data From Any Source

Log data from lab instruments and automated testing equipment and store it alongside process data in the historian.

Robust Reporting Tools

PARCview's highly configurable scripting and scheduling application can schedule and deliver recurring reports or other key data to management and other decision-makers.
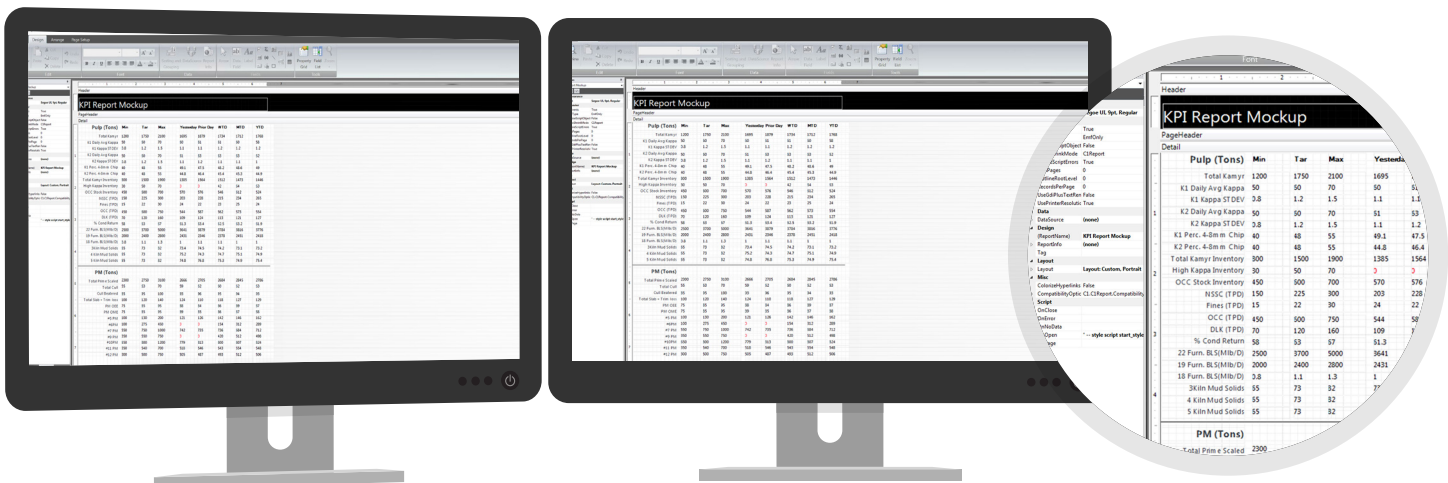
Dashboards Via Email

Automatically capture screenshots of trends or process displays and attach to reports for engineers & managers to have delivered while on-call or during key plant trials.
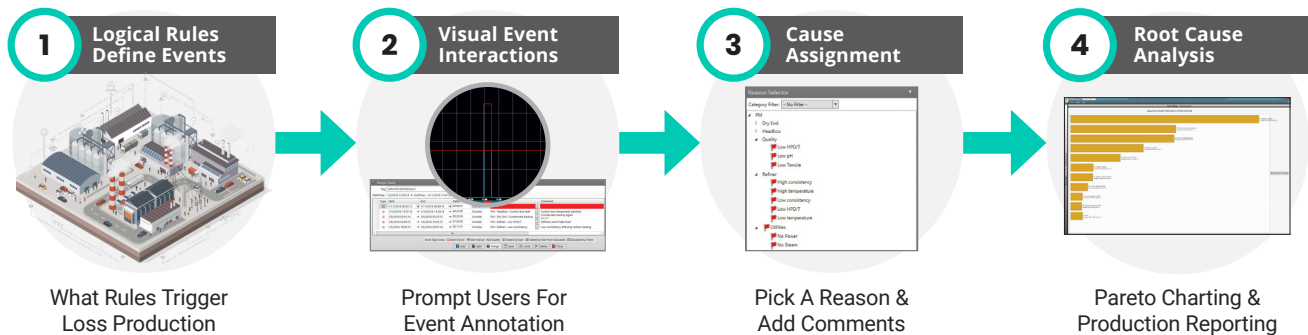
Event-Triggered Reports

Reports can be configured to run in response to any number of triggers, including process-based events such as process values that are too high or too low

Scheduled Reports

Build workflows that populate and send preconfigured reports. For instance, report hourly production averages and average quality parameters for the last 24 hours.

Real-Time Process Monitoring & Notification

Capture key process variable excursions and send automatic notifications via email or SMS when events occur.

1 Logical Rules Define Events	**2** Visual Event Interactions	**3** Cause Assignment	**4** Root Cause Analysis
What Rules Trigger Loss Production	Prompt Users For Event Annotation	Pick A Reason & Add Comments	Pareto Charting & Production Reporting

Easy To Configure

Create alarms from many pre-defined templates, including alarms based on Western Electric rules (SQC/QPC), conditional rules, noise filtering, and more. Assign a priority and categories to alarms, or take advantage of sophisticated deadbanding.

Timely Notifications

Configure email and SMS notifications to alert individuals when an alarm is triggered. Define message templates to include tag values, the assigned cause, custom instructions, and links to trends, enabling engineers and managers to respond without needing to be at the plant.

Incident Tracking

Store event information in a centralized database that can be accessed by other dataPARC applications. Alarm events can be viewed from Trends, Graphics, Centerlines, Logbook, Pareto Charts, Excel, and SQL reports.

Security

dataparc's security framework allows for easy permission management. Users, computers, and groups are assigned to roles that determine what actions users are allowed to perform. Multiple authentication types include standard username and password as well as windows integrated.

System Security

Control who has access to PARCview configuration, display management, alarm creation, etc. Permissions can be given on a group or individual basis.

Tag Based Security

Limit who can see your data, restrict an entire source down to a single tag. If the tag is saved in a display or trend it will still prevent the user from viewing the data.

High-Performance Plant Management

Our plant visualization tools will give you the insights needed to quickly optimize your manufacturing processes.

Log Book
Record information about a process, area of operations or general category such as plant safety.

Task Creation
Create automated work flows to run reports, parse data and more.

Production Loss Tracking & OEE
Calculating, reporting and analyzing production loss from down time.

Soft Sensors
Predict plant quality variables in real-time allowing property estimations.

Production Cost Monitoring
Draw correlations between process operations and financial performance.

Environmental Monitoring
Understand environmental expectations and process compliance states.

Waterfall
Display profile or array-type data in a concise, viewable format using color gradients.

Operating Envelopes
Instant visualization of the plant's operating state.

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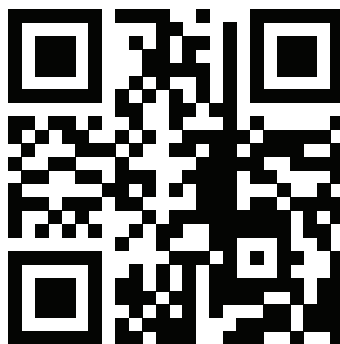
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