

It's time to

TRUST YOUR DATA

with APERIO DataWise®

APERIO DataWise is designed to automatically validate operational data at scale to improve data quality, visibility, intelligence, and value, allowing for smarter business decisions based on real-time, trusted data. APERIO DataWise will guarantee your data is accurate, consistent, complete, valid, and timely.

Our Promise: Trust Your Data

We deliver verified data for confident data-driven decision-making, driving business value from the control room to the boardroom. It's time to Trust Your Data.

It's garbage in garbage out.
If you have poor data, then the models, outcomes, and results are fundamentally flawed.



Connect to Any Data Source

We connect to millions of live data streams within any time series data source for all equipment and sensor types, without needing custom configuration.



Unsupervised Machine Learning

We deliver automated, unsupervised machine learning engines that assess, and alert on, data health and reliability, without manually defining rules or duplicating tags.



Smart Tools & Efficient Workflows

We continually measure, track, and improve data quality through smart workflows, rigorous root cause analyses, and efficient pattern recognition, without the possibility of false positives.



Data Quality Challenges Addressed by APERIO DataWise

01

Audit Historian Data

Business Challenge: Customers know their historians have missing data, stale or dead tags, data out of range, or issues related to connections dropping/buffering. These cause headaches for end users who waste time troubleshooting them.

APERIO Solution: APERIO DataWise can conduct a data audit of your OT data. With centralized visibility and live validation to assure the accuracy of your source data, alerts integrated into the historian will notify when quality is poor.

02

Validate Fleetwide Data

Business Challenge: Data validation is a laborious, manual process of manipulating source data. It employs numerous resources with limited anomaly detection. Scaling an automated, enterprise-wide solution presents problems not easily addressed.

APERIO Solution: APERIO DataWise can provide better visibility into your data via DQ metrics, trends, and tools. It can ensure data is accurate, consistent, complete, and valid; and alert when it is not. Tools make remediation efficient and effective.

03

Assess Sensor Health

Business Challenge: Abnormal process behavior can be the result of many factors making the measurement of asset or sensor health nearly impossible. Is it the source data, the asset, or the sensors? Not knowing contributes to lost productivity and asset downtime.

APERIO Solution: APERIO's comprehensive set of ML engines can delineate between sensor and raw data issues while promoting remediation steps through smart workflows and rigorous analysis tools. Reduce the time to resolution by promoting collaboration between the operations and field maintenance teams.

04

Augment Operator Decision Making

Business Challenge: Almost half of unscheduled downtime can be directly attributed to operator error. Operators often ignore control room alarms because they know from experience many are false.

APERIO Solution: APERIO DataWise can automatically detect anomalies in operational data so that operators can always trust the data. Smart alerts will tell them when sensors need to be investigated and can escalate to maintenance. This is augmented intelligence at scale.

05

Promote High-Value Model Building

Business Challenge: Bad data can create bad outcomes. Small errors in raw process data can propagate to become much larger problems when applied within models or analytics. Poor data quality means more time spent cleaning the data than extracting value from it.

APERIO Solution: Data analytics require accurate data for deriving valuable insights and building models. APERIO DataWise metrics can be pushed to the analytics tool with smart alerts for when data quality needs further investigation. Data scientists can know the models they build are based on trusted data.

06

Guarantee Accurate Reporting

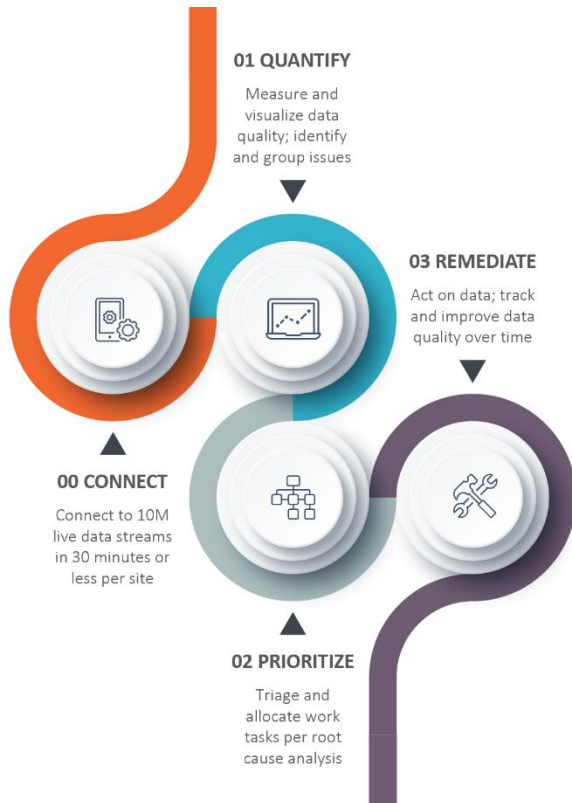
Business Challenge: Accurate data promotes transparency in reporting. While some data is insignificant, others can affect performance and profitability. Misrepresentation can cause distrust amongst stakeholders, and in the case of environmental reporting, fines or penalties.

APERIO Solution: APERIO DataWise allows you to report data quality by unit, line, site, etc. Measuring and tracking these metrics over time ensures data reported both internally and externally always meets the highest level of accuracy. Making DQI an enterprise KPI ensures everyone can trust the data.



Your Journey to Improved Data Quality

APERIO DataWise offers a comprehensive approach to identifying, prioritizing, and remediating a broad set of quality issues found in operational data. This workflow allows you to derive the greatest value on your journey to data quality improvement.

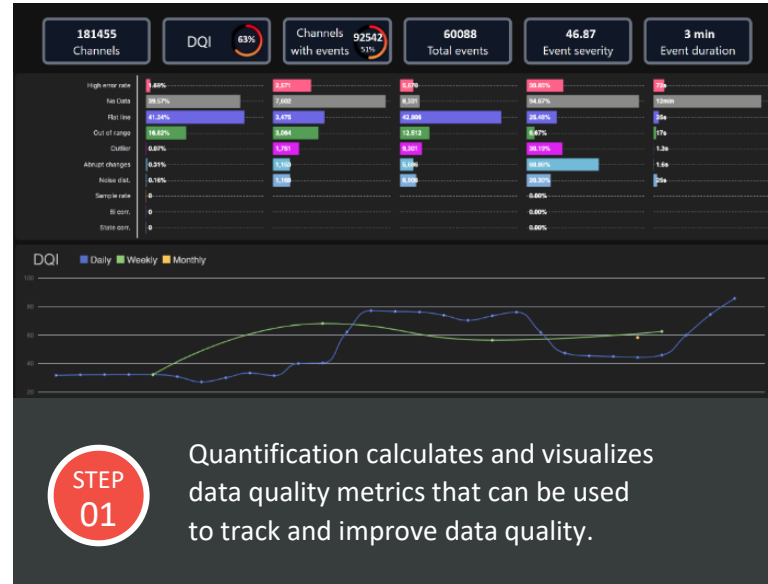


00 Connect

APERIO DataWise can connect to any data source: process historians—such as, PI Canary, Wonderware, PhD, etc., SCADA, data lakes, time series data, CSV files, etc. With no limits on sensor, source, or equipment type, you can easily connect to more than 10M live data streams. It fits into your data stack between existing data sources and end user applications.

01 Quantify

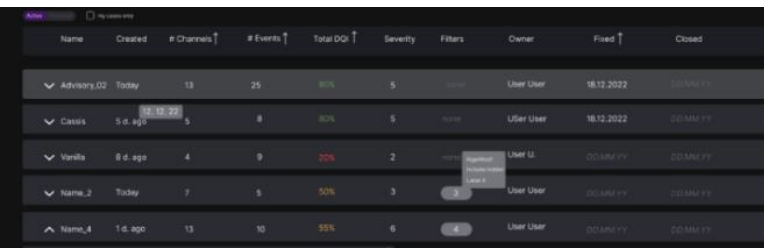
For a selected timeframe and data set, APERIO DataWise calculates numerous metrics that are



valuable in helping prioritize and prepare remediation steps:

- Scope: Number of time series data streams
- Status: Data quality index (DQI) of the current data set, as selected
- Frequency and volume of data quality issues
- Urgency: Statistical average event duration and severity
- Anomaly Breakdown: Granular analysis by anomaly type and each engine's contribution to reduced DQI
- DQI Trends: View DQI changes over time

Smart alerts will notify the end user when sensor behavior needs to be investigated, based on individual tag DQI metrics.



STEP 02

Prioritization uses root cause analysis and smart workflows to determine the pathway to the remediating critical tags.

02 Prioritize

To identify the most critical issues, APERIO DataWise's tools help you prioritize events by what is relevant for the specified analysis.

- **Root Cause Analysis:** APERIO DataWise offers both segment analysis (finding issues in the underlying data) and data lineage (understanding how data flows throughout the data stack) to promote easy resolution.
- **Smart Workflows:** APERIO DataWise allows you to focus on data clusters of interest. Workflows help you track the impact of implemented resolutions with efficient identification of recurring issues.

Key Differentiators

When comparing the features and functionality to its competition, APERIO DataWise combines the best technology with the finest usability and broadest applicability to deliver the optimum customer experience.

	APERIO DataWise®	Large Tech	Start ups*
Integration	Any data source and with any downstream application	Limited to their data stack	Niche integrations
Scope of data	Broader application of OT data	Limited to IT data only	IT data with expansion into OT data
Scalability	More than live 10M tags with unlimited sites or servers		Scale limited to vendor and customer integration tools
Root cause analysis	Rigorous root cause analysis + data lineage workflows	Data lineage only	Segment analysis only
Resolution capabilities	Proposes remediation steps; tracking enables improvement		Basic functionality; cannot tell <i>why</i> error occurred or workflow for remediation
Prevention tools	Early detection of data issues via pattern recognition		Must negotiate data contracts between owners and manually map workflows
Useability	Highly interactive automated tool with supervisory options	Hard-coding is required	Few workflow considerations; not a priority

*Includes evaluations of Alteryx, Cognite, Databand, Seeq, Sight Machine, Timeseer, Validio.



STEP 03

Remediation offers resolution steps via smart workflows and in combination with root cause analysis & pattern recognition.

03 Remediate

APERIO DataWise proposes remediation steps with visualization to deliver easy resolution and tracking of improvements. Combine finite root cause analysis with pattern recognition to perform a thorough analysis of potential data quality issues and immediately warn when issues arise.

Future-proof your data quality by using APERIO DataWise to continuously measure, improve, and track data quality across your operational footprint.

With APERIO, you can always Trust Your Data.