



DATASHEET

AVEVA™ BI Gateway

Consolidate and unify engineering and operations data into contextualized information

Every day, people, processes, and devices create large amounts of time-series and plant-floor transactional data. However, without operational and business context, the value of this data is limited. To remain competitive, organizations must unlock this industrial data and quickly transform it into business-relevant information that is available across the organization. AVEVA BI Gateway provides self-service access to actionable intelligence, helping to drive sustained performance improvements across your organization.

AVEVA

Summary

AVEVA BI Gateway is an enterprise manufacturing intelligence (EMI) solution that consolidates and aggregates data from different sources, making it manageable and accessible enterprise-wide. Added layers of contextualization give users in different roles an enterprise-wide view of information, allowing them to use and structure it for their specific needs.

User-friendly analytics and dashboard-based metrics monitoring enable workers and decision-makers across the organization to make informed assessments quickly and confidently.

Business value

Empower operational stakeholders to improve plant performance by visualizing and analyzing critical metrics information in near real time.

- Streamline extraction from different data sources
- Transform static and dynamic data sources (design drawings and operations data) into a uniform data format
- Visualize in fit-for-purpose dashboards to:
 - Monitor operational KPIs
 - Benchmark and compare the performance of assets and processes.
 - Compare performance across several events simultaneously (shifts, product changes, equipment state, energy rates, etc.) for a comprehensive understanding of operations

Maximize the ROI on your industrial investment by establishing a unified, reliable representation of your information across your plant floor and enterprise systems. Gain vital context for more transparency into operations.

AVEVA BI Gateway improves operational efficiency, asset utilization, and sustainability through increased transparency and decision-making support.

It adds the information and insight you need to understand the true cost and profit contributions from your operations. By providing a single version of truth across the organization, stakeholders can better align with business targets and make faster, more informed decisions.

Powerful visualization and analysis tools make it easy for users to explore, select, and use only the data they need. This helps users to identify areas for improvement by allowing them to compare metrics against multiple parameters simultaneously.

Use your data to maintain competitiveness

Time-series data has limited context: time, tag name, and sometimes asset model. Events are often hidden in that data but must be extracted manually, which is time-consuming. Other data sources such as MES, lab data, and energy usage are not related to time series. Without a solution that can aggregate, organize, and transform information from these data sources, users will struggle to gain a user-friendly, holistic view of operations that is ripe for analysis.

Industrial operations leverage multiple software systems and spreadsheets to manage day-to-day operations effectively and securely. These systems each generate large data sets due to process speed and product flow. Common examples include process data, alarm data, material, production, consumption, execution and asset utilization logs, quality information, energy usage, and operational costs.

As a result, companies have large amounts of data in multiple silos and are unable to create timely and relevant reports. This means they cannot accurately reflect, or understand, operational performance in relation to their strategic objectives.

Using spreadsheets to calculate and analyze metrics is not effective. Frequently generated after the fact, spreadsheets quickly become too hard to sustain and too complex for collaborative use across an operation.



Overcoming the industrial data challenge

AVEVA BI Gateway addresses the challenge of handling industrial big data using a standard, off-the-shelf software approach.

Users can explore, consolidate, and conduct comparisons of numerous metrics (OEE, energy efficiency, mass balance, etc.) across multiple sites, products, assets, and more. Users can effectively contribute to, elaborate, and sustain a continuous operational improvement plan.

Extract, transform, and store a history of operational performance metrics from both time-stamp and relational structured data sources. Continual metric calculations ensure you always have an up-to-date, accurate picture of your operational performance.

Increase the ROI of your industrial IT investment

Instead of replacing your existing plant floor and enterprise solutions, AVEVA BI Gateway complements these systems by adding the information, context, and insight necessary to drive operational and financial improvements across your entire business.

AVEVA BI Gateway offers a cost-effective way to replace the various worksheets and custom reporting applications a plant or enterprise may use to measure operational metrics. By utilizing a sustainable, common-use information model, AVEVA BI Gateway provides an up-to-date “single version of the truth” and enables self-service access to information.

Suitable for any industry, AVEVA BI Gateway continuously computes the critical metrics to determine current plant, multi-plant, or infrastructure performance. Unlike traditional business intelligence tools which typically refresh daily – at best – the system provides near real-time visibility of progress against your chosen metrics.

Whether your data comes from your AVEVA system, a process historian, MES, ERP, LIMS, or other enterprise or custom legacy application, AVEVA BI Gateway effectively bridges the IT/OT gap. By providing an information model that data warehouses and enterprise business intelligence tools need, the system can continually assess your data and automatically calculate the KPIs needed to effectively run your business.

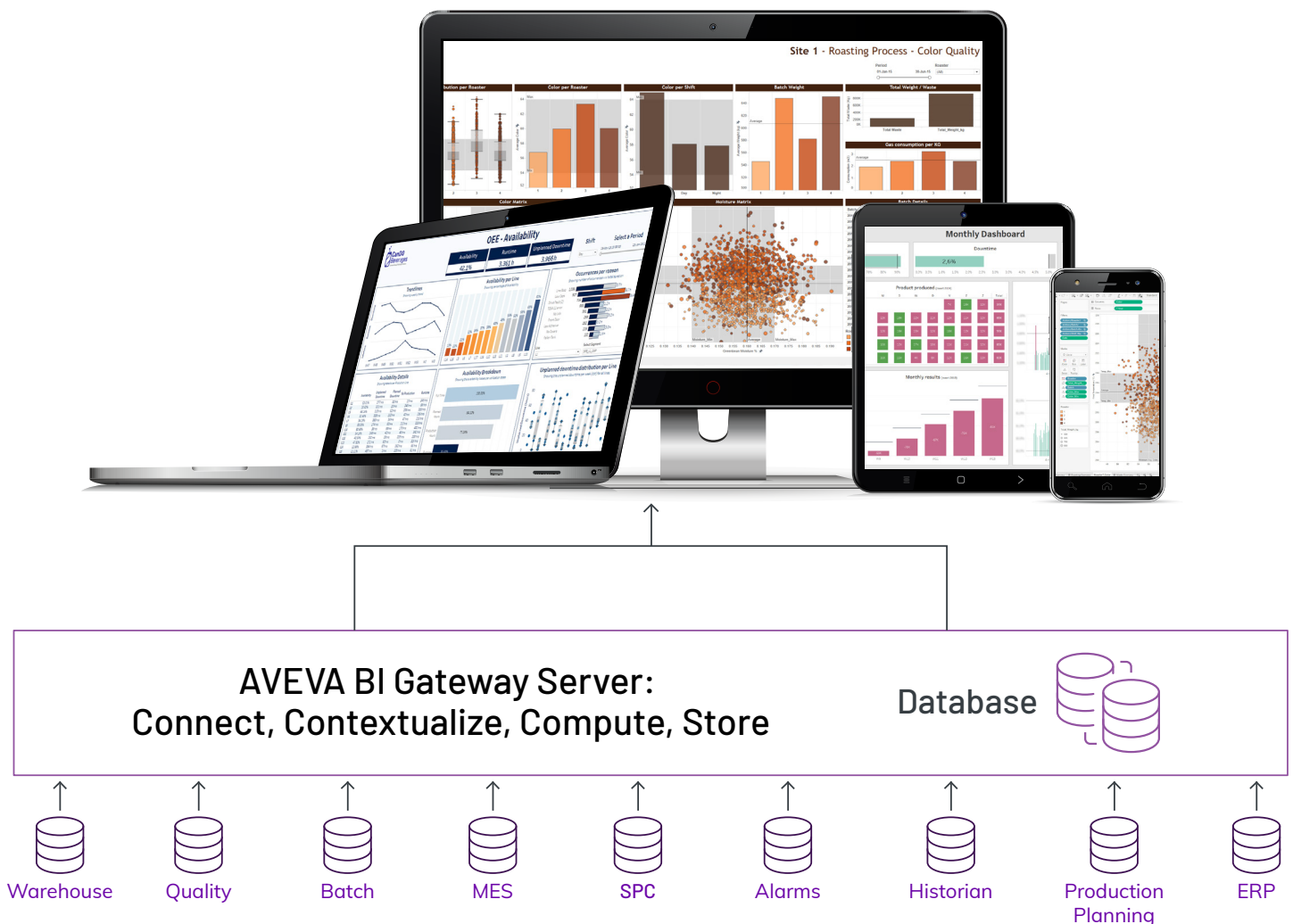
Drive effective collaboration

Information visibility at the right time empowers workers and decision-makers to change the way they plan, schedule, or act. AVEVA BI Gateway relates data for a holistic view across different core functions, domains, and operations, regardless of where the data resides. This automated data contextualization process helps users to:

- Identify, standardize, and refine best practices
- Rationalize operational behavior with business targets

- Eliminate ineffective and expensive data extraction and transformation tasks
- Reduce time to action

The ability to analyze metrics in context creates insights to optimize margins (e.g. for business unit operations), to minimize costs with optimized use of energy and raw materials, or to improve operational efficiencies with improved throughput, quality, and asset utilization. This helps foster a performance- and improvement-oriented culture across the enterprise.



Cost-effective scalability in the cloud

Drive operational continuity and improve performance with the AVEVA BI Gateway software-as-a-service (SaaS) solution in the cloud. It is simple to set up, manage, and use – without additional IT infrastructure or staffing. It enables you to quickly turn the data from new and already operational industrial assets and processes into a live information feed for decision support.

Besides robust SaaS solutions, AVEVA BI Gateway is also available as an on-premise solution.

Translate time-series data into intuitive charts and dashboards. Enable faster, more informed decision-making for all users, with up-to-date newsfeeds, BI, and alerts. With seamless, automated updates you can easily scale across the organization.

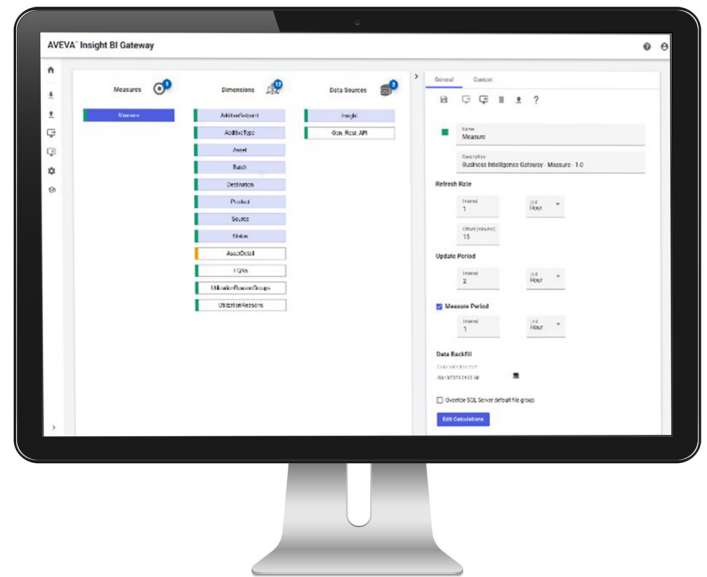
Adding AVEVA BI Gateway to cloud historians enables companies to:

- Bring information in context: fit-for-purpose information throughout the organization.
- Better understand your business: know what's happening, what has happened, and what is likely to happen with immediate access to relevant data.
- Unlock your operational data from the control room and make it accessible when and where your people need it.
- Empower people to become active participants in real-time work streams and enhance collaboration between teams.
- Bridge the IT/OT gap and share critical process information with business and finance teams.
- Expose hidden opportunities for reducing operational costs, increasing asset performance, and driving better production results.

AVEVA BI Gateway model builder: Configurable information modeling

AVEVA BI Gateway's information model is configured and structured using three components:

- **Data sources** – defining the access to the source system, including type, location, and authentication
- **Measures** – defining the metric calculations to be performed
- **Dimensions** – defining the context added to measures, such as lot IDs, shifts, reason codes, etc.



After you deploy the AVEVA BI Gateway model, the software fills a data store by extracting historical data from connected data sources and keeps it current by refreshing information periodically or based on external event triggers. Historical data is loaded in reverse chronological order so users can start analyzing the most recent history instantly, while the system builds the full history for the specified timeframe and resolution.

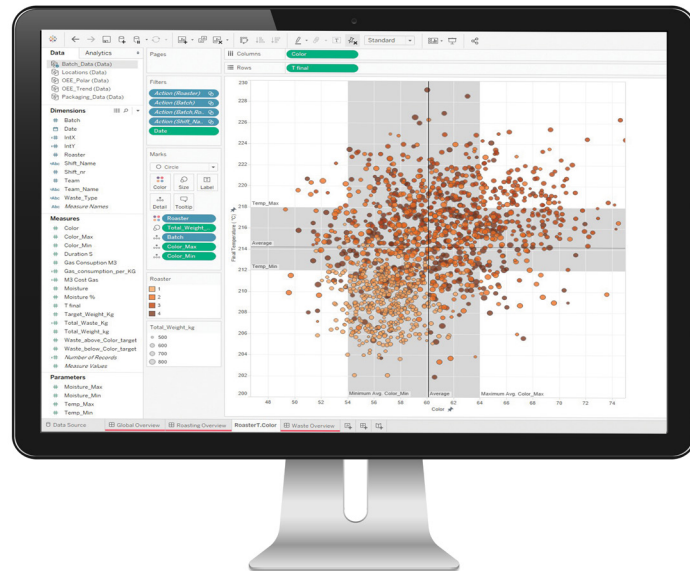
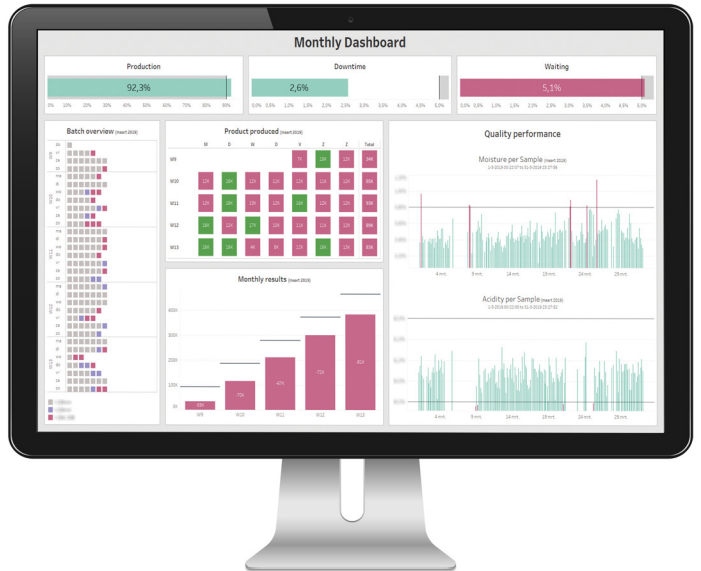
AVEVA BI Gateway is highly scalable and can be established in a hierarchical data structure for aggregating multiple databases into one data store.

Data Store

All metrics and context information are maintained and persisted in an open information model such as:

- **AVEVA BI Gateway (on-premises):** Microsoft SQL Server Database
- **AVEVA BI Gateway (SaaS):** Microsoft SQL Azure Database

AVEVA BI Gateway provides an enterprise-wide view with a single version of the truth that people, data warehouses, and enterprise AVEVA BI Gateway tools need to make strategic sense out of industrial or production data.



The database is optimized for retrieval and provides open, flexible access to any of your preferred analytics, business BI Gateway (BI), reporting, or client tools, such as Tableau, Microsoft Power BI, code192 Alpana, Qlik, or SAP Business Objects, among others.

Customer support and services

The Customer FIRST Services Program makes it easy to receive the latest AVEVA software and associated applications. To learn more about this valuable program, which maintains and often increases the value of your industrial software applications, please contact your local AVEVA sales representative.

For more information on BI Gateway software and other Industrial Information Management solutions, please visit:

aveva.com/operations-control-hmi

