AVEVA™ Unified Operations Center

AVEVA Unified Operations Center is an enterprise visualization solution for creating intelligent operations centers. Based on a system of systems approach, AVEVA Unified Operations Center brings together operations technology (OT), information technology (IT), and engineering technology (ET). A single-pane-of-glass software environment provides actionable information in context to industrial operations.
What is enterprise visualization?

While supervisory visualization, or HMI/SCADA, focuses on close-to-process operations, enterprise visualization like AVEVA Unified Operations Center is for teams and users with organization-wide strategic responsibilities above the plant or process level. It makes content available through a visual presentation environment, in which diverse information sources converge to provide actionable information in context for operations and performance management.

Frequently deployed as different forms of intelligent operations centers, these systems promote greater operational awareness, improved crisis response, and better integration and collaboration across functional departments, allowing users to share information and coordinate strategic activities and workflows.

**Cross-functional value chain**

**IOC** Integrated Operations Center
Control and sustain
Used to combine multiple disparate control systems into an integrated management system for command and control of operations throughout entire value chains if required.

**COC** Centralized Operations Center
Command and dispatch
Used as an enterprise-level system converging IT/OT/ET data across the entire business value chain, aiding in business decision support and dispatching operational commands.

**PCR** Integrated Operations Center
Control and execution
Used by most modern operations today to manage all control functions within a single operating site or plant. Typically applied on a single SCADA/DCS network focused on OT data.

**CoE** Center of Excellence
Control and collaborate
Used to solve specific complex problems that can be applied across the business by consolidating experts. Examples include APM, rotating equipment, ESG compliance, process optimization, etc.

**Supervisory visualization**
Control

**Enterprise visualization**
Manage

**Cross-functional value chain**

**Functional discipline**
Converging OT, IT, and ET for collaborative value

From data streams to video feeds, from OT to IT to ET, convergence is key to making sense of a growing amount of diverse information assembled from across the business. Equipping your enterprise teams with near real-time visibility provides a holistic, data-driven perspective—whether that means correlating weather impacts on power generation, driving asset optimization between facilities, or load-balancing production in the face of variable supply chains.

With AVEVA Unified Operations Center, you can converge and visualize a combination of process metrics, maintenance analytics, engineering documentation, financial performance, or anything in between. These data sources and more from across the organization are brought together for a complete 360-degree view. This replaces siloed data from disparate systems with contextually aligned information about the business for greater operational awareness at the enterprise level.

- Process information
- Environmental and safety
- Alarms, alerts, KPI modeling
- Maintenance activities
- Connected workforces
- Predictive analytics
- Engineering schematics
- Revenue and financial reporting
- Energy use and utilities consumption
- 3D modeling
- Map and GIS integration
- Weather
- Video surveillance
- Market and commodity information

Using AVEVA Unified Operations Center to connect people through data empowers your strategic teams. Rich insight offers a high-level perspective in a consolidated software environment that brings new value across complex and multi-site operations, increases agility in responding to performance opportunities, and optimizes operations because teams can make decisions in parallel to one another.

This data-derived intelligence links questions and answers with action, so teams can collaborate to solve enterprise-impacting problems quickly. Whether you need to dispatch instructions digitally from a central group or create alignment between different functional groups, AVEVA Unified Operations Center delivers collaborative value built from converged information.
A centralized view for your digital transformation

AVEVA Unified Operations Center delivers a consolidated environment to help you make informed decisions. Your teams can access an enhanced layer of intelligence where data works in service of organizational goals, guiding your strategic operational activities from end to end.

- Customize a 360-degree view by bringing together data sources and data types from across your operations to identify new relationships and extract new value.
- Drill down by site to individual assets using customizable navigation tools and create an intuitive hierarchy of physical and digital systems while leveraging your existing infrastructure.
- Move from reactive mitigation to proactive assessment. With global knowledge enabled by data visualization, you can prevent critical asset failure, drive sustainability and ESG initiatives, minimize waste, and ensure production quality and compliance across all facilities.
- Dispatch actions to optimize your operations for safety and resiliency through improved workforce responsiveness and increased visibility of key metrics.
- Correlate KPIs and improve real-time agility by delivering enriched data in context to operations and maintenance.
- Digitally connect operations teams to improve knowledge-sharing and information access and benefit from the power of collective intelligence.
- Fully scalable hybrid architecture enables small systems to grow over time while providing the capability to leverage both on-premises and cloud applications.
- Deploy to a video wall, multi-user workstation, or single desktop, depending on the distinct needs of your users.

Command center
Structured optimization team
Integrated cross-functional facility or control tower with a comprehensive view of the supply chain from end-to-end that optimizes operational activities on a macro-level regionally or globally.

Remote operations center
Focused subject matter experts
Experienced groups tasked with driving performance, coordinating operations, or responding to issues that are escalated by site-based personnel or automated notification systems.

Business/Executive user
Individual contributor
Executive and strategic analyst use case emphasizing independent interaction and analysis of operations activities, KPIs and associated information for decision-support.
AVEVA Unified Operations Center comprises several AVEVA software components combined into a comprehensive enterprise visualization solution. These are supplemented by industry-centric starter templates that provide a jumpstart on development for customers focused on that industry.

What is AVEVA™ Operations Control – Enterprise?

AVEVA Operations Control is a user-centric AVEVA™ Flex software subscription that aligns your organization with a single operations control vision from the field to the enterprise.

The enterprise package contains all the software necessary to deploy an AVEVA Unified Operations Center solution. Additional offers like AVEVA™ PI System™ can be integrated for greater data contextualization and specific industry-functionality.

Learn more about AVEVA Operations Control

What is an industry starter template?

Industry templates for AVEVA Unified Operations Center are pre-assembled jumpstart applications that include out-of-the-box design templates, objects, scripting, graphics, and connectors applicable to the designated industry.

The templates provide initial pre-built content for common functionality that can accelerate the creation of an AVEVA Unified Operations Center project. This content can be customized per project specifications and expanded to cover many needs.
Industry templates

AVEVA Unified Operations Center industry templates address several use cases and provide specific examples across industries such as oil and gas, infrastructure and smart cities, data centers, marine, power, and mining.

**Smart cities**
Unify city services in support of daily situational awareness.

**Renewable power**
Oversee fleets of solar and wind assets in context to visualize their generation contribution.

**Water**
Manage geographically dispersed and vital water operations.

**Data centers**
Achieve a multi-layered view of global data center health.
Mining
Enable agile decisions across the entire mining value chain.

Midstream oil and gas
Proactively resolve pipeline events and promote safety.

Marine – ships and shipyards
Track vessel performance and manage shipyard production.

Consumer products
Load balance facilities, increasing production responsiveness.
Where AVEVA Unified Operations Center excels at presenting diverse data in visual and contextual ways, AVEVA PI System aggregates and enriches real-time operational data. Together, they represent a uniquely powerful combination that meets the intelligence needs of the distributed operations enterprise.

AVEVA PI System collects and aggregates asset data regardless of source and vendor, storing high-frequency and large volumes of industrial data. It structures that data to look like your processes and assets, can run real-time analytics and calculations, and notify personnel of key events. These valuable insights can be elevated to a nearly real-time context within AVEVA Unified Operations Center for higher-level relevance. Having a highly structured and reliable real-time infrastructure ensures that any AVEVA Unified Operations Center solution communicates trustworthy, actionable, and ultimately valuable decision-ready information.
Leveraging the AVEVA software portfolio for enterprise visualization

A wide variety of information can be consolidated through AVEVA Unified Operations Center, including third-party data sources and other purpose-built AVEVA software products.

**AVEVA™ 3D Asset Visualization**
Graphics engine that explores physical assets using 3D to get inside a process digitally, without losing the context to associated engineering and operations information.

**AVEVA™ Manufacturing Execution System**
Leading MES software for CPG manufacturing with integrated production, inventory and quality operations management capabilities.

**AVEVA™ Asset Information Management**
Aggregates, catalogues and contextualizes engineering asset data from multiple information sources and systems for consolidated access.

**AVEVA™ Production Management**
Drive informed response to mining production and sustainability events, enabling root cause analysis and visibility for identifying improvement opportunities.

**AVEVA™ Predictive Analytics**
AI-powered predictive maintenance software to maximize asset reliability and prevent unplanned downtime.

**AVEVA™ Unified Supply Chain**
Single application that manages crude assays, planning, scheduling, distribution optimization and process models in the refining and petrochemical value chain.
AVEVA Unified Operations Center doesn’t replicate existing data sources. Those applications have a purpose and value in ongoing processes and to other operations teams. Instead, the solution connects to them and pulls the information together into a single environment for visualizing everything together.

To learn more about AVEVA Unified Operations Center, visit: aveva.com/UOC