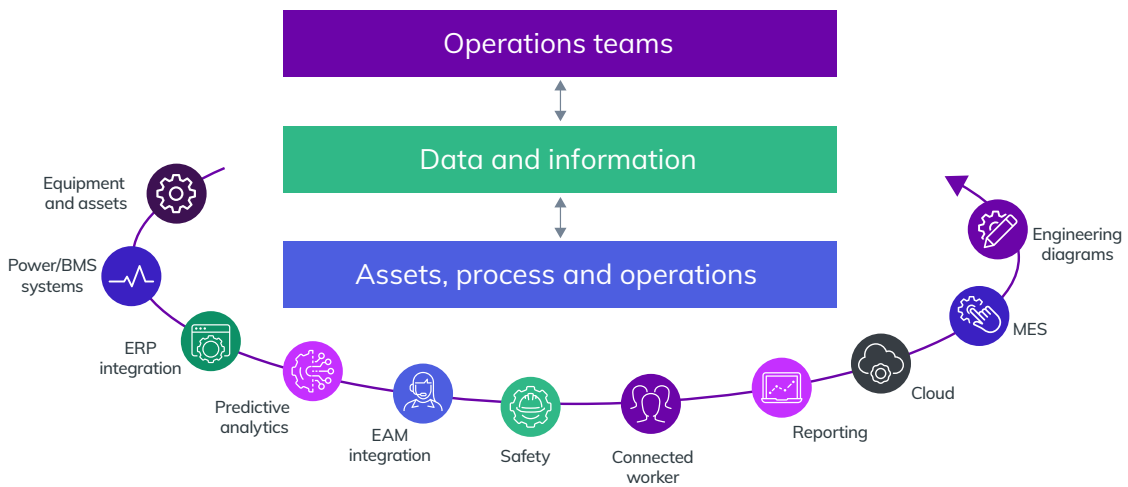# AVEVA™ Unified Operations Center

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.

Operations teams

Data and information

Assets, process and operations

Equipment and assets

Power/BMS systems

ERP integration

Predictive analytics

EAM integration

Safety

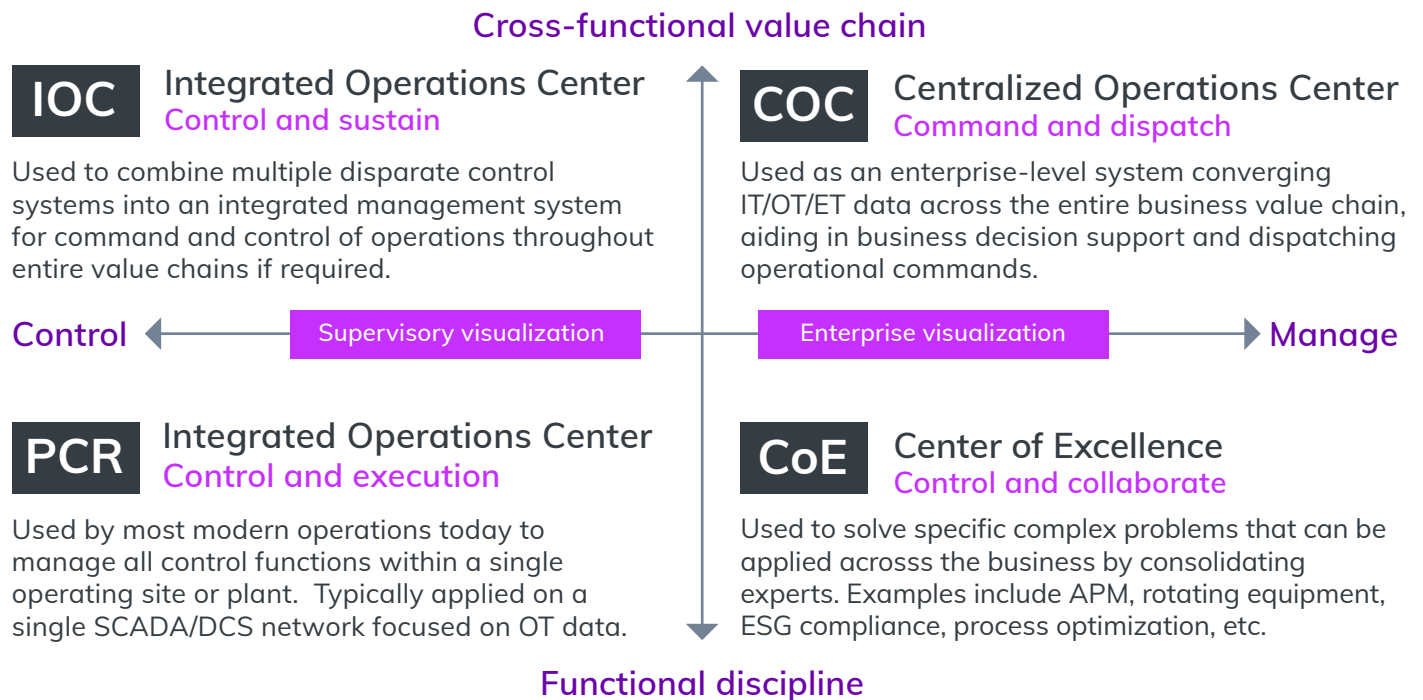Connected worker

Reporting

Cloud

MES

Engineering diagrams

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.

Control ← Supervisory visualization | Enterprise visualization → **Manage**

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 acrosss the business by consolidating experts. Examples include APM, rotating equipment, ESG compliance, process optimization, etc.

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.
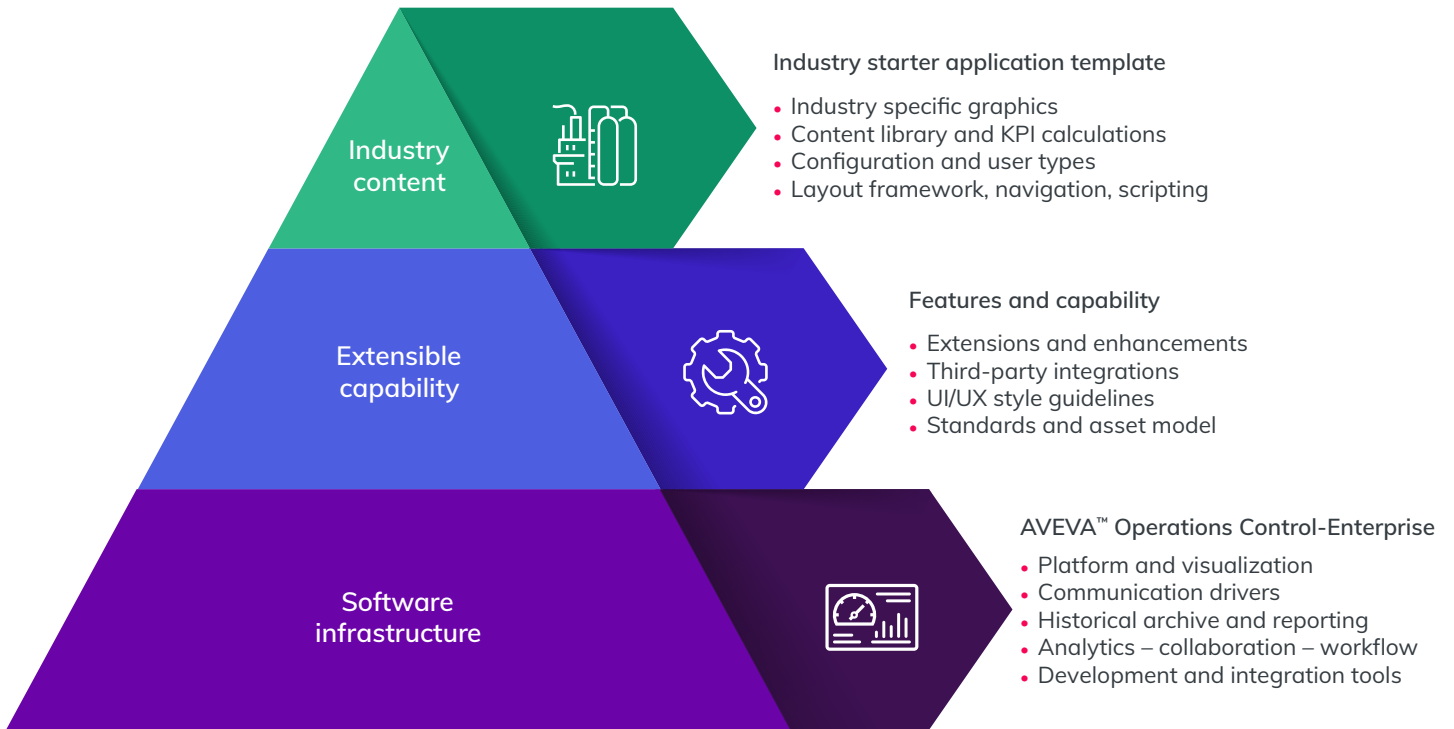

Business/Executive user
Individual contributor

Executive and strategic analyst use case emphasizing independent interaction and analysis of operations activities, KPIs and associated information for decision-support.

Building blocks of AVEVA Unified Operations Center

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.

Industry content

Industry starter application template
- Industry specific graphics
- Content library and KPI calculations
- Configuration and user types
- Layout framework, navigation, scripting

Extensible capability

Features and capability
- Extensions and enhancements
- Third-party integrations
- UI/UX style guidelines
- Standards and asset model

Software infrastructure

AVEVA™ Operations Control-Enterprise
- Platform and visualization
- Communication drivers
- Historical archive and reporting
- Analytics – collaboration – workflow
- Development and integration tools

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.

AVEVA Unified Operations Center

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.

AVEVA Unified Operations Center and AVEVA PI System

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.

AVEVA Unified Operations Center
Enterprise visualization

AVEVA PI System
Operations information management

Deliver valuable insights:
Transfer information in near real time while preserving context to consuming applications on-premises or in the cloud.

Contextualize and enrich:
Apply context to your data, run real-time analytics and calculations on your raw data, catalogue and notify on key events.

Collect and aggregate:
Connect to any asset regardless of vendor and store high-frequency and large volumes of industrial data.

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.
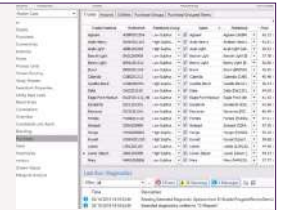
AVEVA™ 3D Asset Visualization

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™ Production Management

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

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™ Asset Information Management

Aggregates, catalogues and contextualizes engineering asset data from multiple information sources and systems for consolidated access.
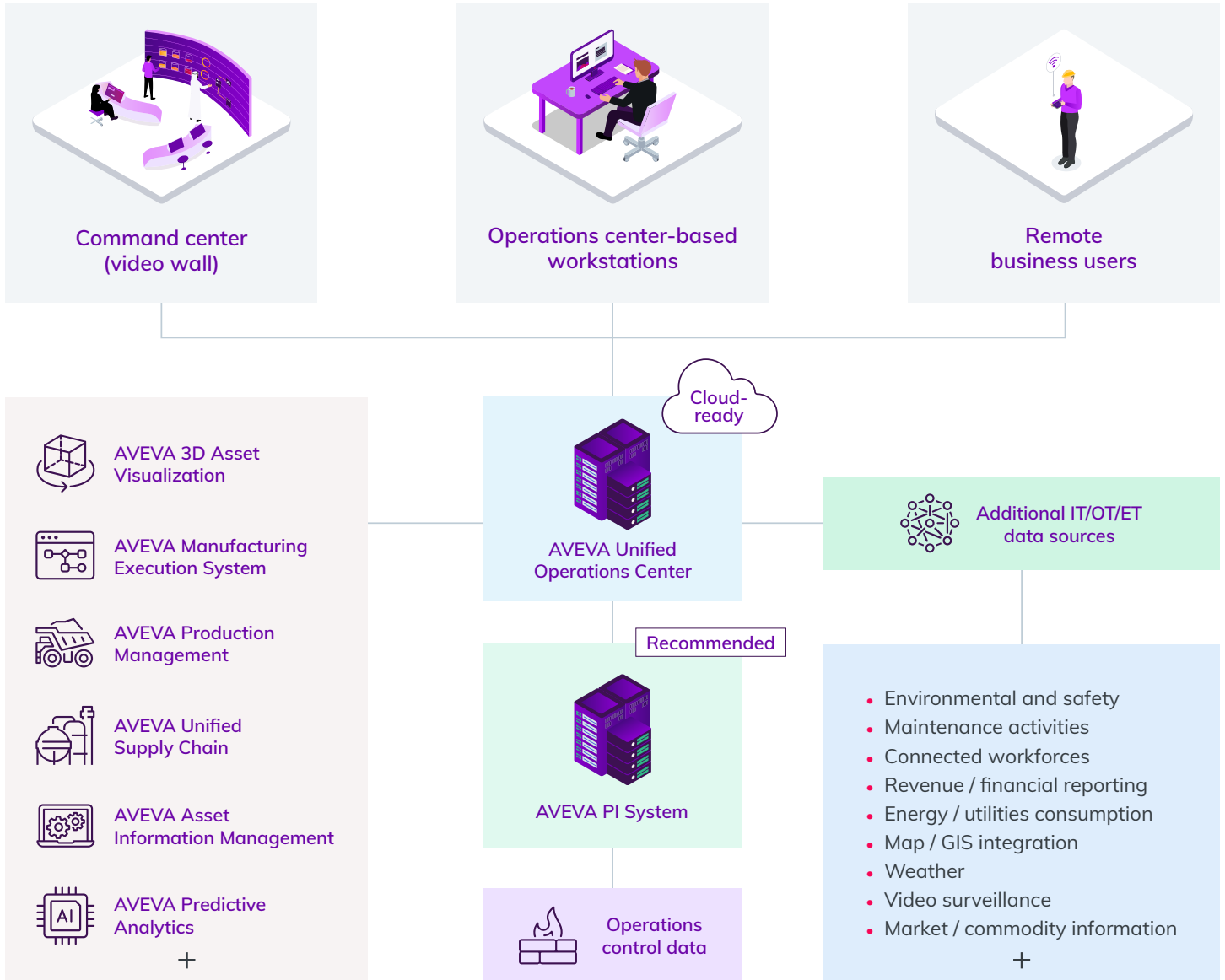
AVEVA™ Predictive Analytics

AI-powered predictive maintenance software to maximize asset reliability and prevent unplanned downtime.

System of systems

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.

Command center (video wall)

Operations center-based workstations

Remote business users

Cloud-ready

AVEVA Unified Operations Center

- AVEVA 3D Asset Visualization
- AVEVA Manufacturing Execution System
- AVEVA Production Management
- AVEVA Unified Supply Chain
- AVEVA Asset Information Management
- AVEVA Predictive Analytics
+

Recommended

AVEVA PI System

Operations control data

Additional IT/OT/ET data sources

- Environmental and safety
- Maintenance activities
- Connected workforces
- Revenue / financial reporting
- Energy / utilities consumption
- Map / GIS integration
- Weather
- Video surveillance
- Market / commodity information
+

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

AVEVA

aveva.com