AVEVAWORLD

AVEVA WORLD

APRIL 2025

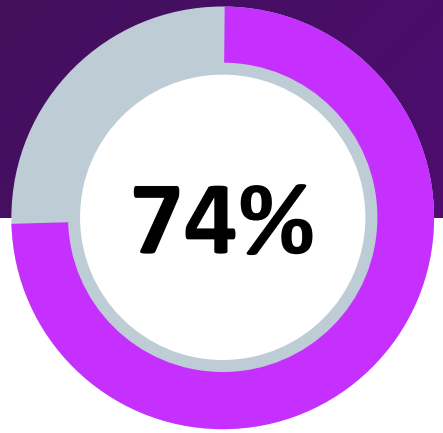
HMI/SCADA vision and strategy

AVEVA Operations Control

John Krajewski – VP Product Management

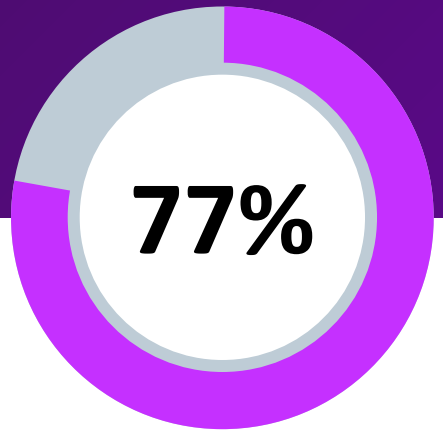
AVEVA

Digital transformation



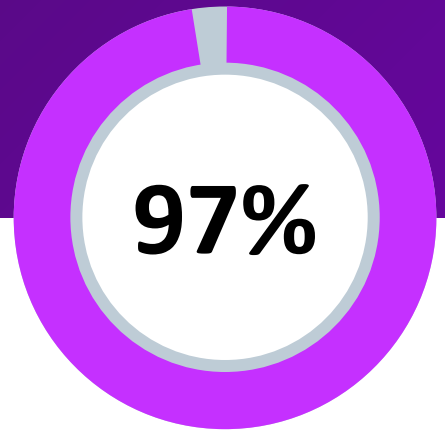
Digital transformation is a top priority for **74%** of organizations.

Source: Flexera



77% of companies have already started their digital transformation.

Source: McKinsey & Company



97% of companies say the COVID-19 pandemic sped up their digital transformation initiatives.

Source: Twilio

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Digital transformation

What is it?

Digital transformation is a business strategy initiative that incorporates digital technology across all areas of an organization.

• *IBM*

Digital transformation is the process of integrating digital technologies into all parts of an organization, such as products, services, or operations, to deliver value to customers.

• *Coursera*

Digital transformation is the rewiring of an organization, with the goal of creating value by continuously deploying tech at scale.

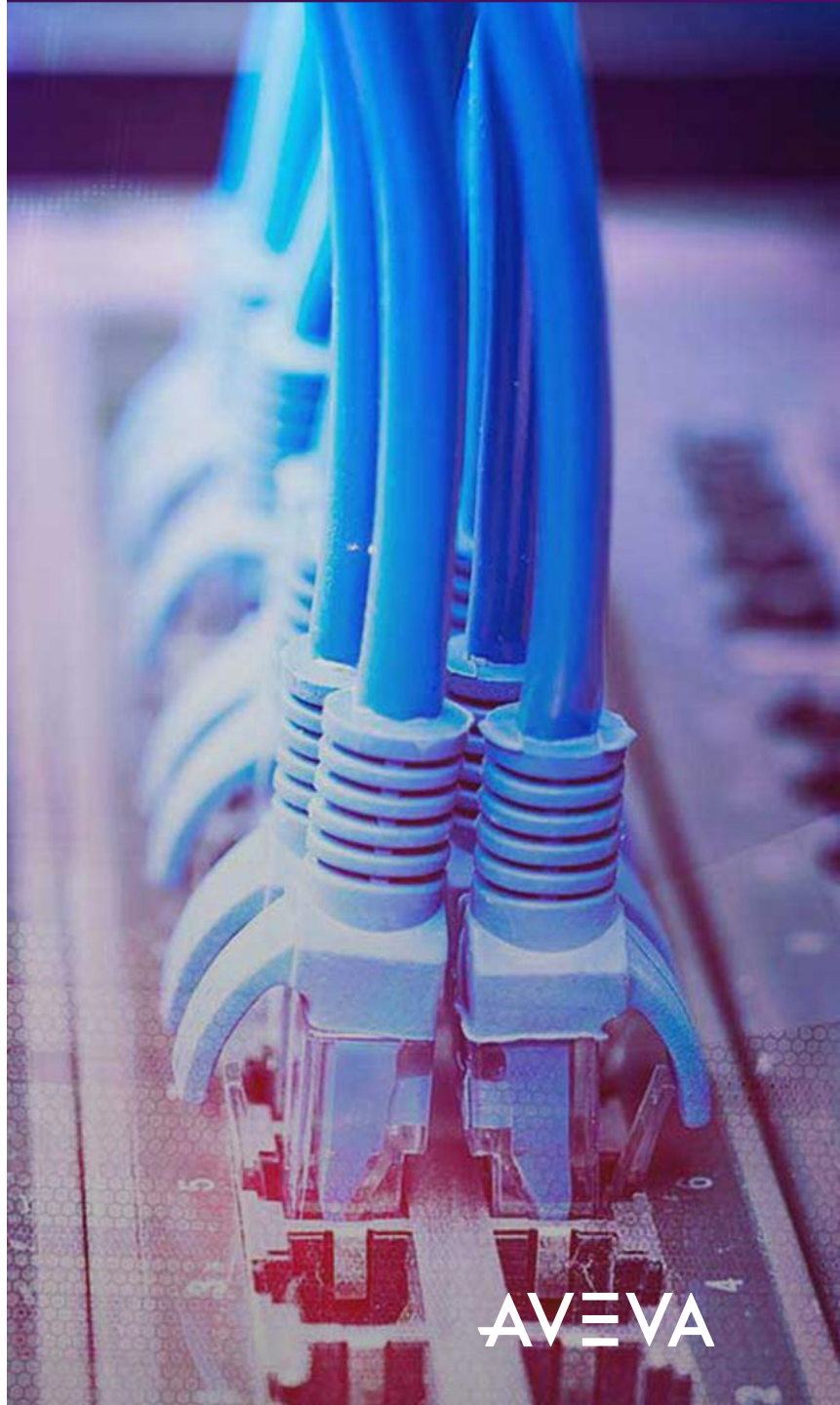
• *McKinsey & Company*

Digital transformation is the process by which companies embed technologies across their businesses to drive fundamental change.

• *Accenture*

Digital transformation is a strategy for making data the primary commodity in your business.

• *Industry 4.0 Solutions*



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What activities benefit from access to operational data?

Leveraging operational data beyond monitoring and control

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Enabling digital transformation

AVEVA Operations Control

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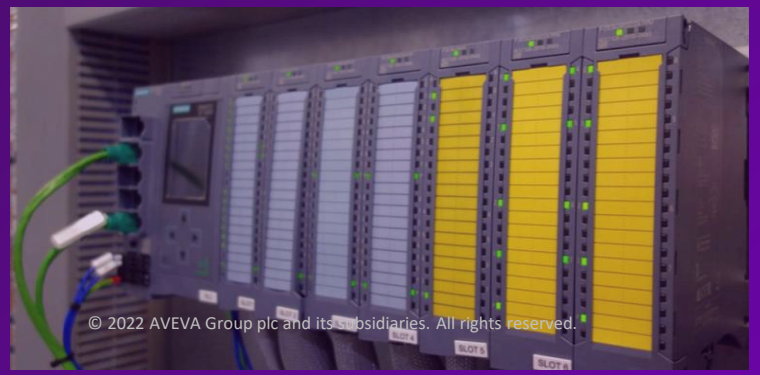

AVEVA Communication Drivers

PLC/RTU/DCS/IIOT/RDB/API

- **Comprehensive:** Connect to virtually any hardware data source through a collection of open standards (OPC/IEC/MQTT/Modbus) as well as proprietary protocols for all major vendors.
- **Edge driven:** Reduce PLC connectivity configuration efforts by almost 50 percent with the ability to automatically read and structure a PLC program based on current schema.
- **Scalability:** Consolidate scattered architectures by running multiple, completely independent instances of the same driver in a single node.
- **Performance**: Improve your overall throughput and performance per driver and per node.

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AVEVA Communication Drivers

Strategic direction

- OS agnostic/portable
- Improved diagnostics
- Open standards focus (OPCUA, MQTT, SQL, & web services)

- **Learn more:**
  - HMI SCADA track
  - AVEVA roadmap: Edge software driving efficiency for plant floor monitoring and control
  - Heroes HQ Community: Operations Control technical symposium
  - AVEVA: Fueling your data infrastructure with AVEVA connectivity
  - AVEVA: Easily deploy AVEVA™ Adapters to remotely collect operations data at scale

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Enabling digital transformation

AVEVA Operations Control

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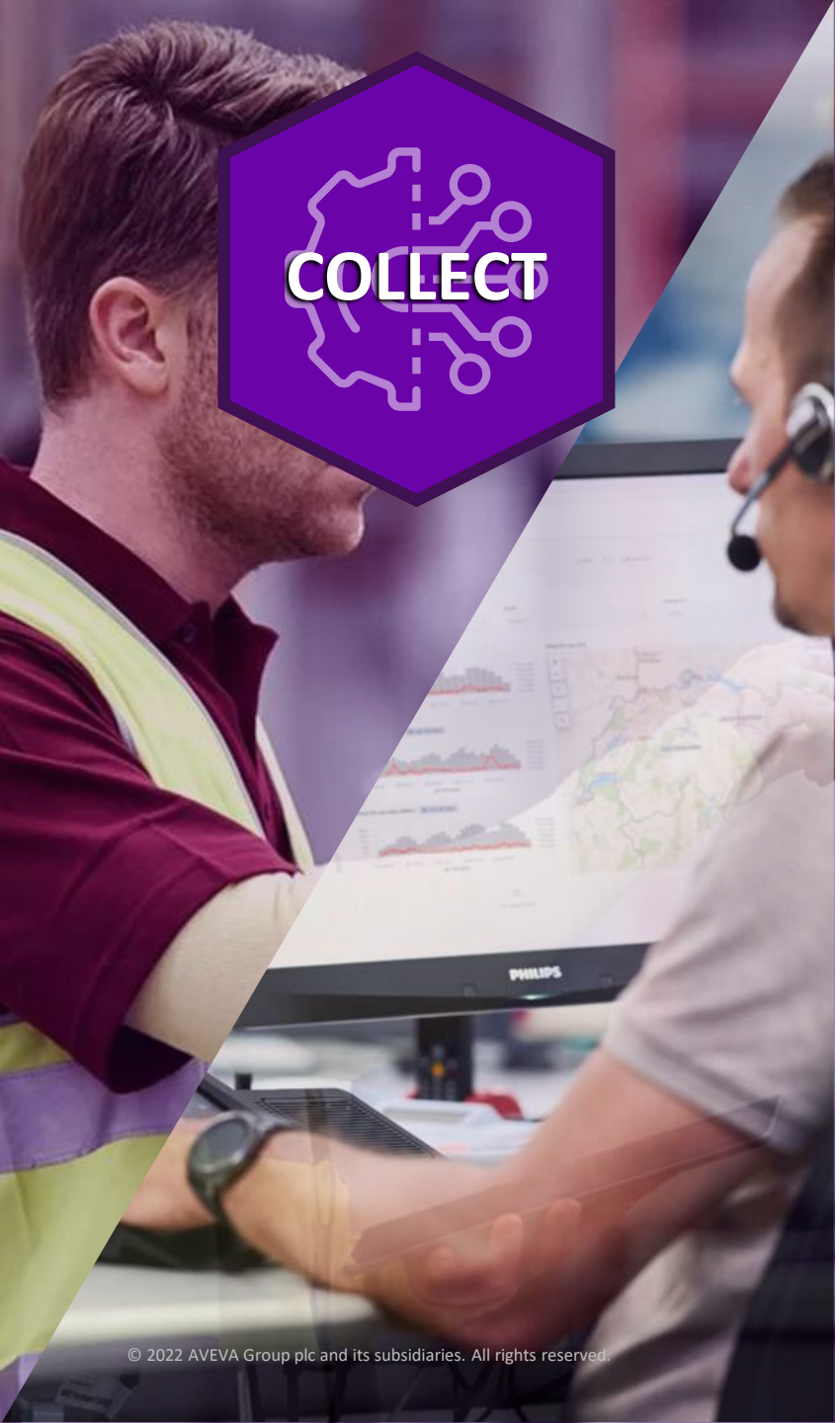

HMI VS SCADA

Where are they similar?

OPC UA Client | Web Clients | Mobile Clients | Historian | MQTT Broker

HMI/SCADA

Visualization & Client Services

- Desktop Client
- Web Server
- Data Server
- Alarm Server
- Self Service Content
- Languages
- Industrial Graphics
- Extensibility

Business Logic/Scripts/Security

- Front End
- Back End
- Extensibility
- Users/Roles

Data Modelling & Connectivity

- Model
- Structures
- Alarming
- History

Open Standards (IT & OT) | Proprietary Protocols (OT)

Standards: Styles | Sstructures | Symbols | Functions

OPC UA | MQTT | SQL | API | PLC | RTU | DCS | IIOT | ...

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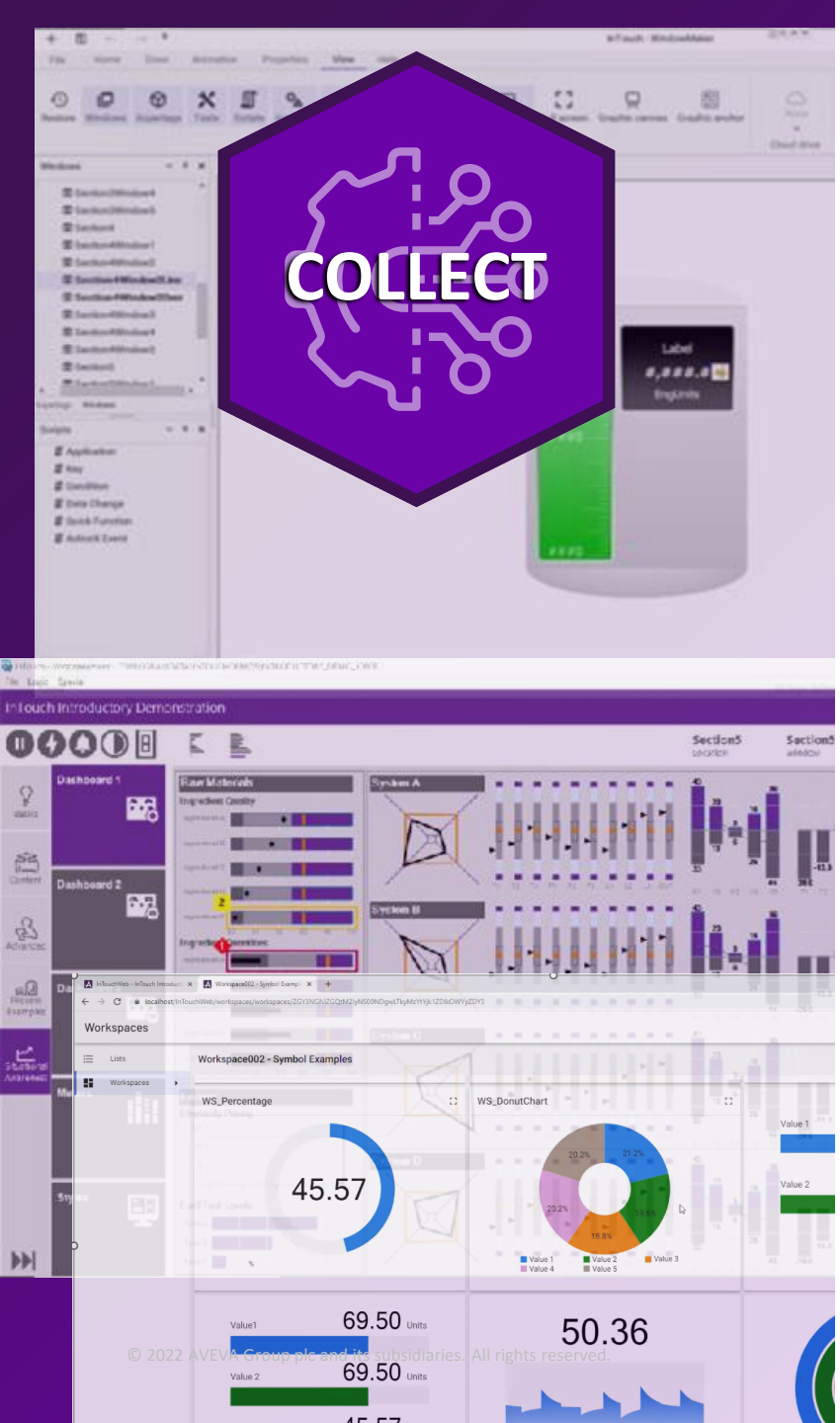

AVEVA InTouch HMI/AVEVA Edge

Human Machine Interface

- **Easy to get started** – Quickly create applications from small to medium sized.
- **Create consistent views of processes** – Gain meaning from your data to achieve less downtime and improve performance, safety and costs.
- **React in real time** – Visualize and control vital plant processes in real time to react strategically.
- **Simple commercial terms** – Free development license, unlimited tags, unlimited clients, and most comprehensive set of capabilities in the market.

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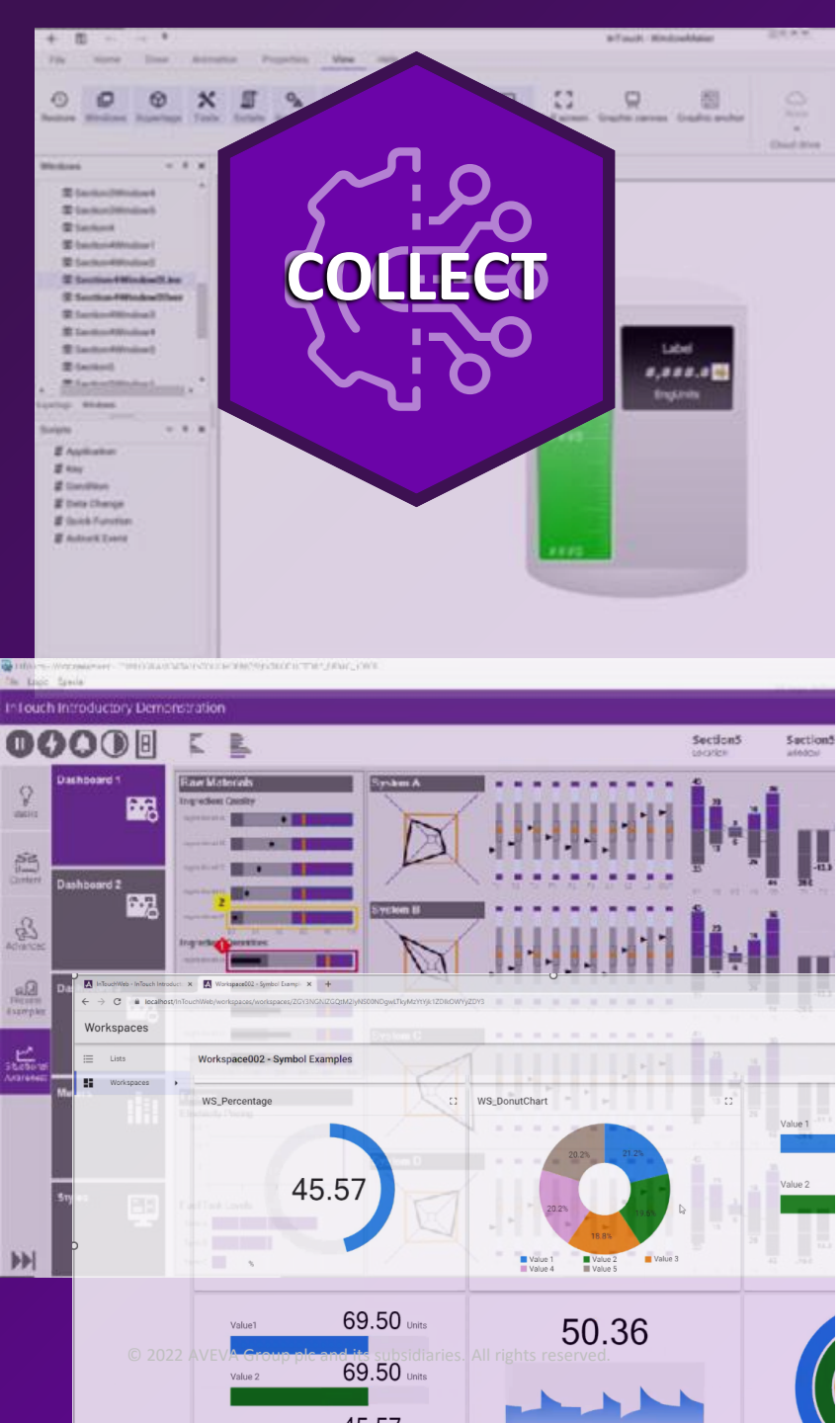

AVEVA InTouch HMI/AVEVA Edge

Strategic direction

- Edge driven
- OS agnostic/portable
- Server/service based
- Clean path to SCADA/consolidated experience
- Cloud connected/managed
- InTouch/Edge unification

- **Learn more:**
  - HMI SCADA track
  - AVEVA roadmap: Edge software driving efficiency for plant floor monitoring and control
  - AVEVA InTouch HMI: Deep dive into latest enhancements
  - AVEVA: Integrating HMI/SCADA into a UNS (unified namespace) architecture

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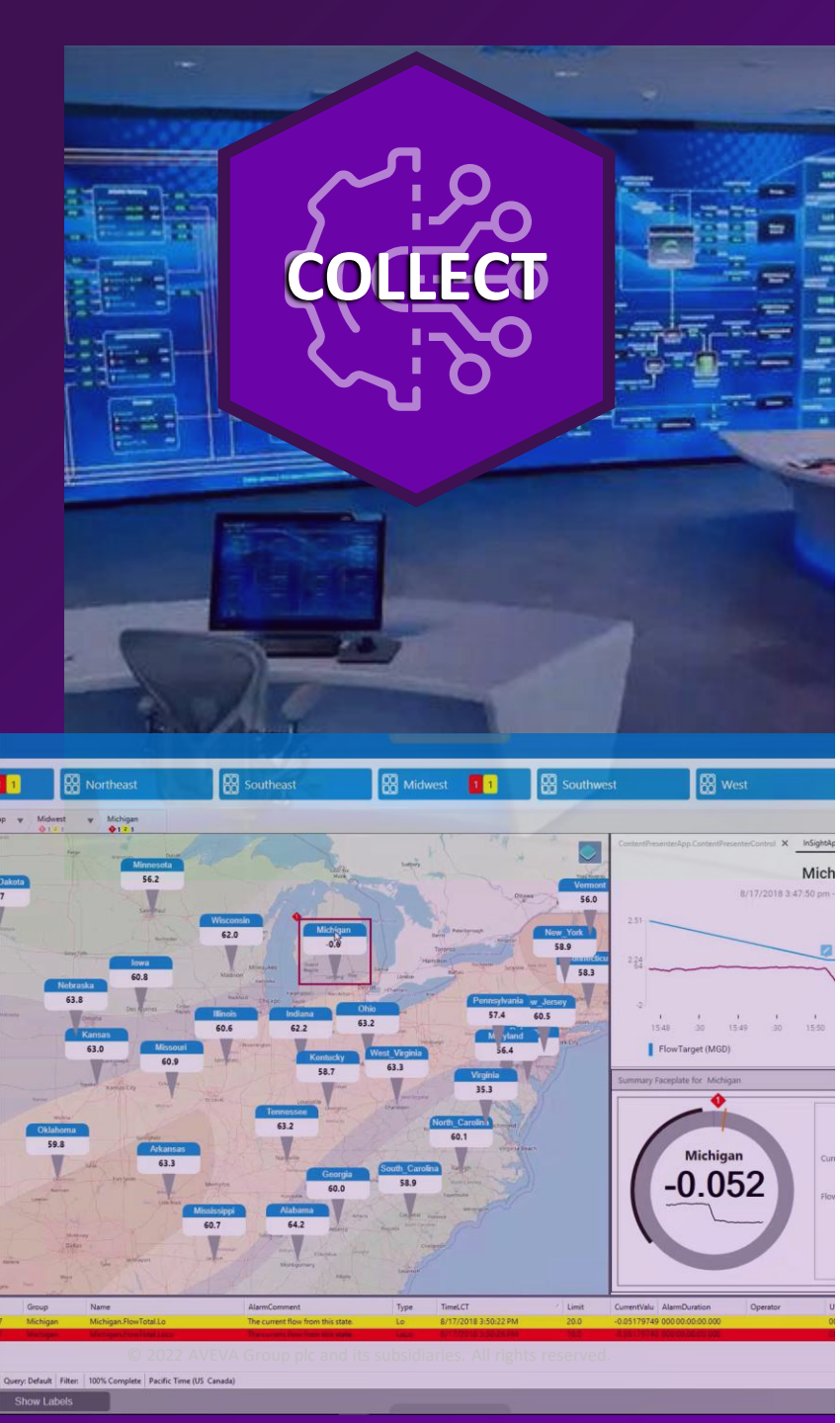

AVEVA System Platform/AVEVA Plant SCADA

Supervisory control and data acquisition

- **Unlimited scalability –** Scale up from departmental solutions to enterprise-wide deployments.
- **Save time and development costs –** With comprehensive user definable standards, you can dramatically reduce time to value and reduce errors.
- **Enterprise-wide consistency –** Standards based approach to design and deployment ensures consistency across projects and partners.
- **Geographically distributed –** Centrally Manage widely distributed SCADA solutions as a single application with ease.
- **Data driven UI design** – Easily converge all of your organizations IT and OT applications into a single pane of glass.

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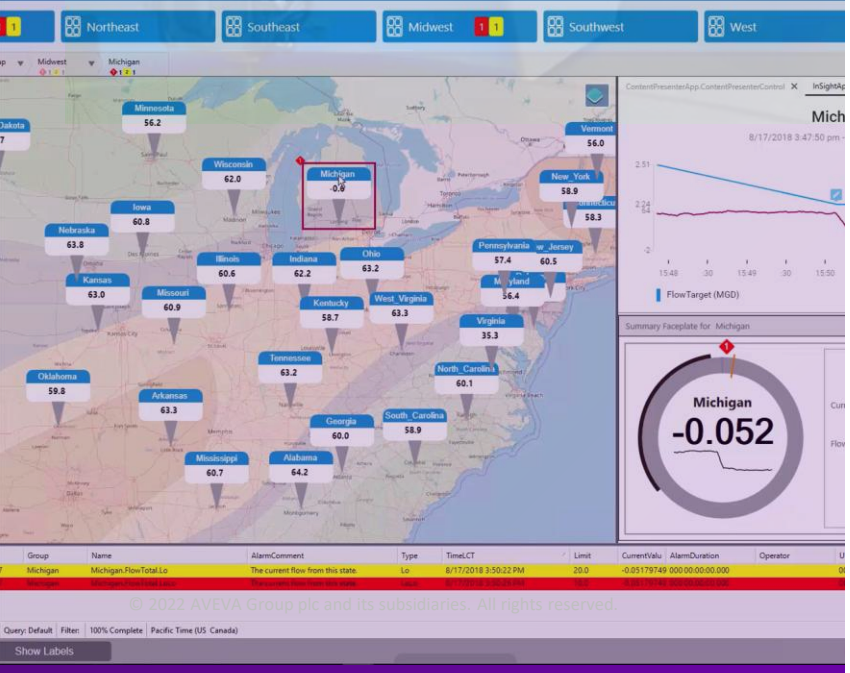

AVEVA System Platform/AVEVA Plant SCADA

Strategic direction

- Productivity/diagnostics
- Ease of use /edge driven
- OS agnostic/portable
- Simplified MQTT publishing/data ops
- Cloud connected/hosted/managed
- Plant SCADA portfolio interoperability and connectivity

- **Learn more:**
  - HMI SCADA track
  - AVEVA System Platform: Deep dive into latest enhancements
  - AVEVA roadmap: SCADA and supervisory level operations control
  - AVEVA: Integrating HMI/SCADA into a UNS (unified namespace) architecture

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Enabling digital transformation

AVEVA Operations Control

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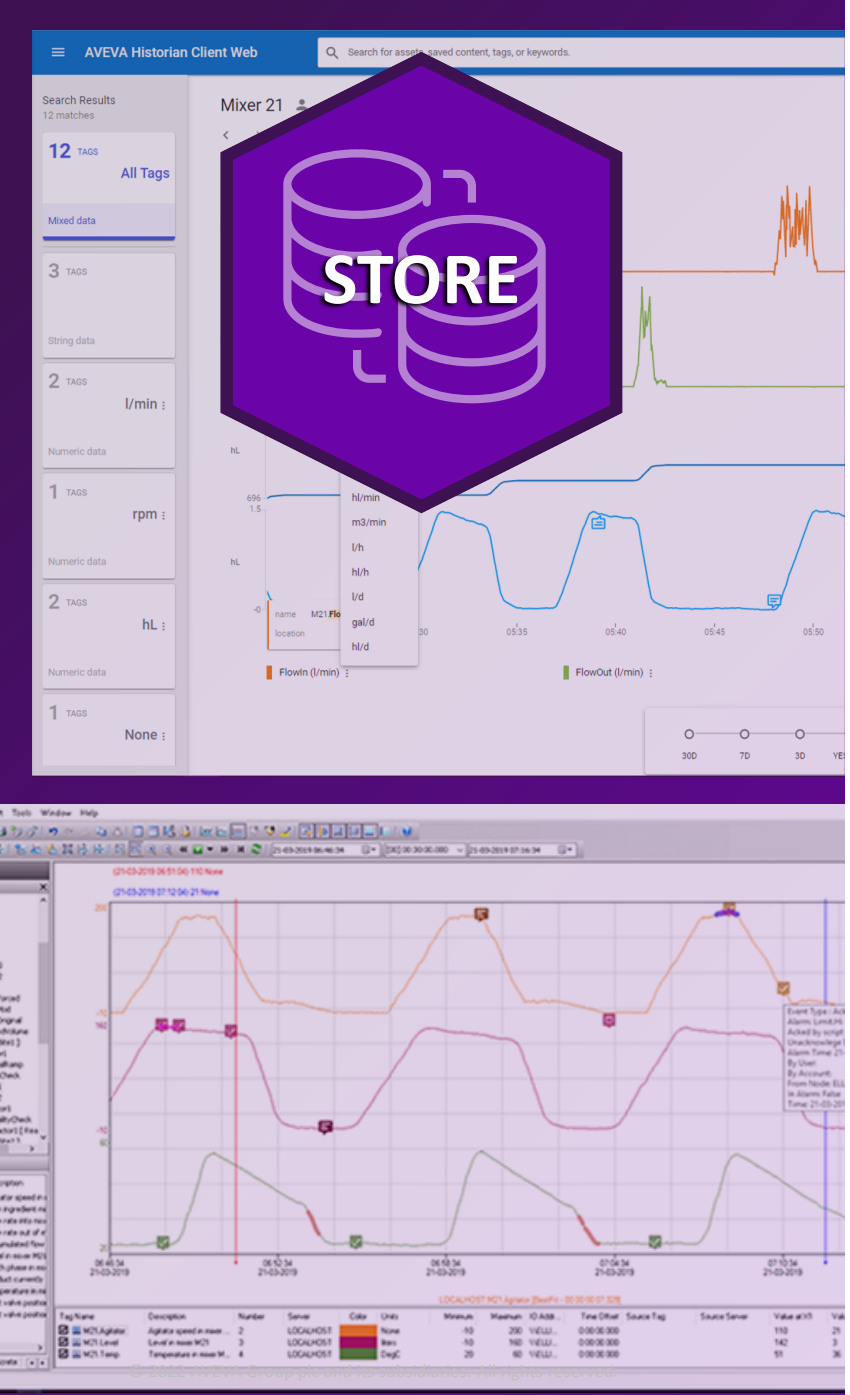

AVEVA Historian

Process database integrated with operations control

- **Process database for operations control –** tailored to the demanding needs of industrial processes across all industries, AVEVA historian is the perfect companion to aveva's world-leading operations control solutions for HMI and SCADA.
- **Scalability and performance –** AVEVA historian simplifies the most demanding data reporting and analysis requirements.
- **Complete record of operational data –** AVEVA historian handles time-series data, as well as alarm and event data.
- **Uncompromising data integrity –** AVEVA historian manages low bandwidth data communications, late-coming information, and even data from systems with mismatched system clocks.

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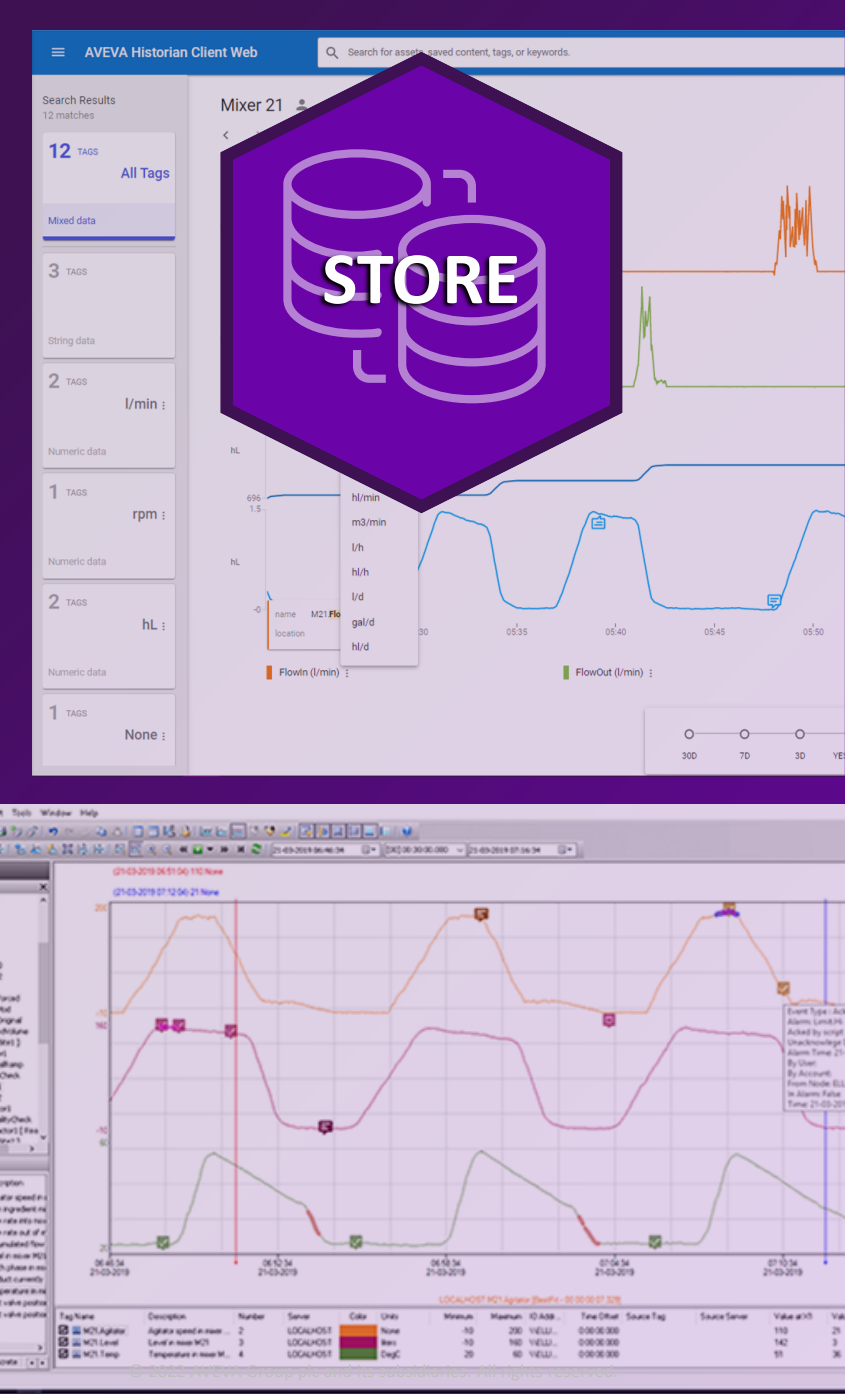

AVEVA Historian

Strategic direction

- Improved CONNECT & AVEVA PI System integration
- Improved MQTT integration
- OS agnostic/portable
- Deriving increased value from alarm/event history.

- **Learn more:**
  - HMI SCADA track
  - AVEVA roadmap: Common HMI/SCADA portfolio components

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Enabling digital transformation

AVEVA Operations Control

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AVEVA Historian clients & reports for operations

Complete set of tools for rich visualization of operational data

- **Complete coverage –** trend analysis, query builder, real time dashboarding, excel add-in and detailed reports are all included capabilities.
- **Contextual operational insights –** better insights into your business – know what's happening, what's happened and what is likely to happen. Get immediate access to relevant data for more informed decisions. Expose hidden opportunities for reducing operational costs and improving asset performance.
- **Report with ease –** significantly reduce report development time, simplify report modification, and empower transformation of raw data into attractive, information-filled reports.

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AVEVA Historian client & reports for operations

Strategic direction

- Consolidated experience
- Improved CONNECT integration – content sharing/self service access
- OS agnostic/portable/hosted

- **Learn more:**
  - HMI SCADA track
  - AVEVA roadmap: common HMI/SCADA portfolio components

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AVEVA Operations Control

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Operations Management Interface

Common process visualization technology across AVEVA

AVEVA

Operations Management Interface

Strategic direction

- Common visualization container from HMI > SCADA > CONNECT
- Cloud based configuration and management
- Improved extensibility through Blazor/Angular support
- Community content library

- **Learn more:**
  - AVEVA System Platform: Deep dive into latest enhancements
  - AVEVA roadmap: SCADA and supervisory level Operations Control

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AVEVA Operations Control

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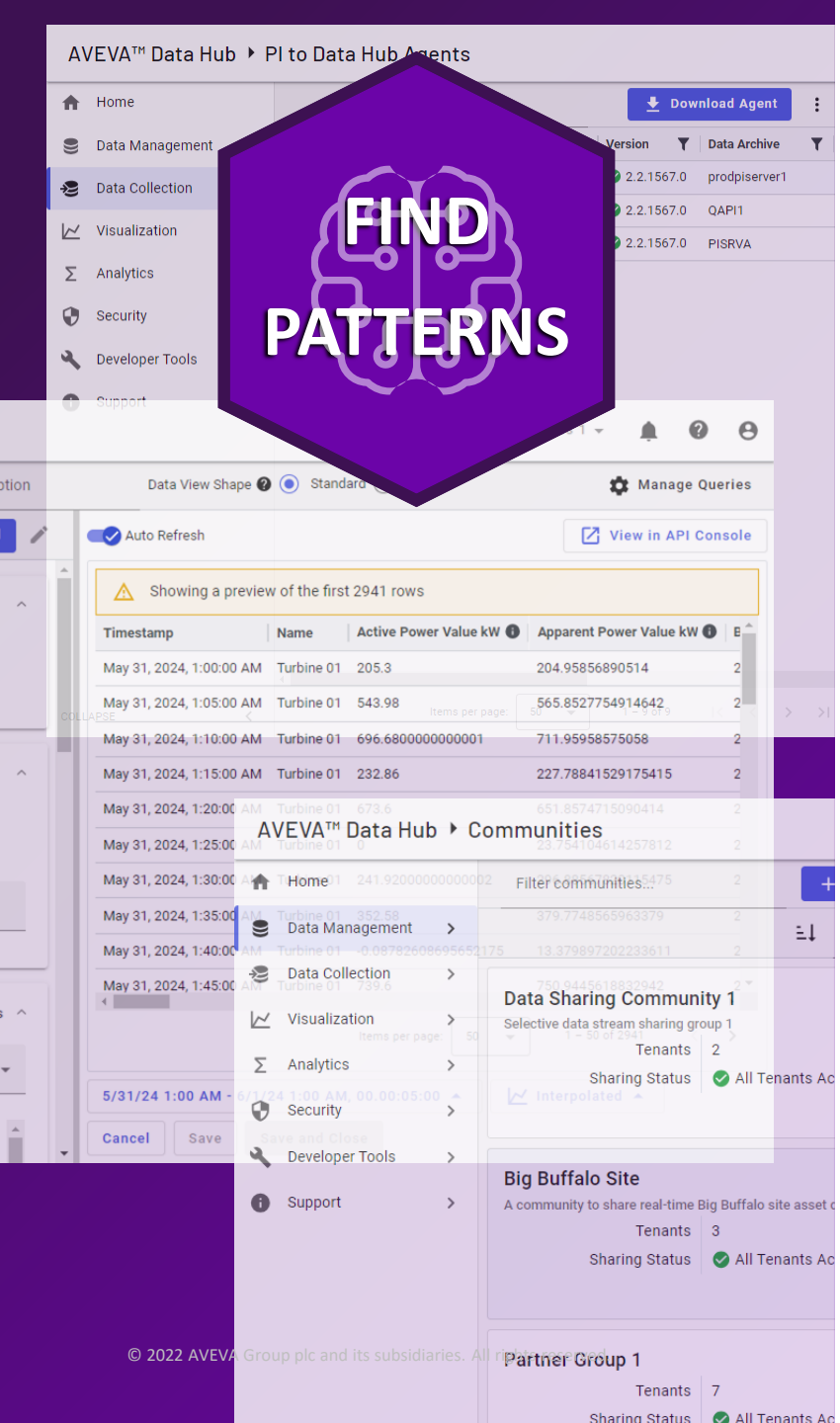

CONNECT Data Services/AVEVA Insight

Streamlined, real-time data aggregation and sharing in the cloud

- **Open, agnostic data ingress –** Ingest data from any source with ease, including native integrations with AVEVA™ PI System™, AVEVA™ Historian, and AVEVA Edge Data Store.
- **Storage of sequential data and context –** Securely store real-time industrial data and add relevant context. Ingress sequential data, including time-series, in a database independent and separate from control systems.
- **Customizable data views –** Customize views of your data and enable visualizations to reflect directly into applications like Power BI, Grafana, and AI/ML tools.
- **Connected community –** Share data securely to external sources and across multiple tenants, and maintain granular control over the data shared with each business partner.

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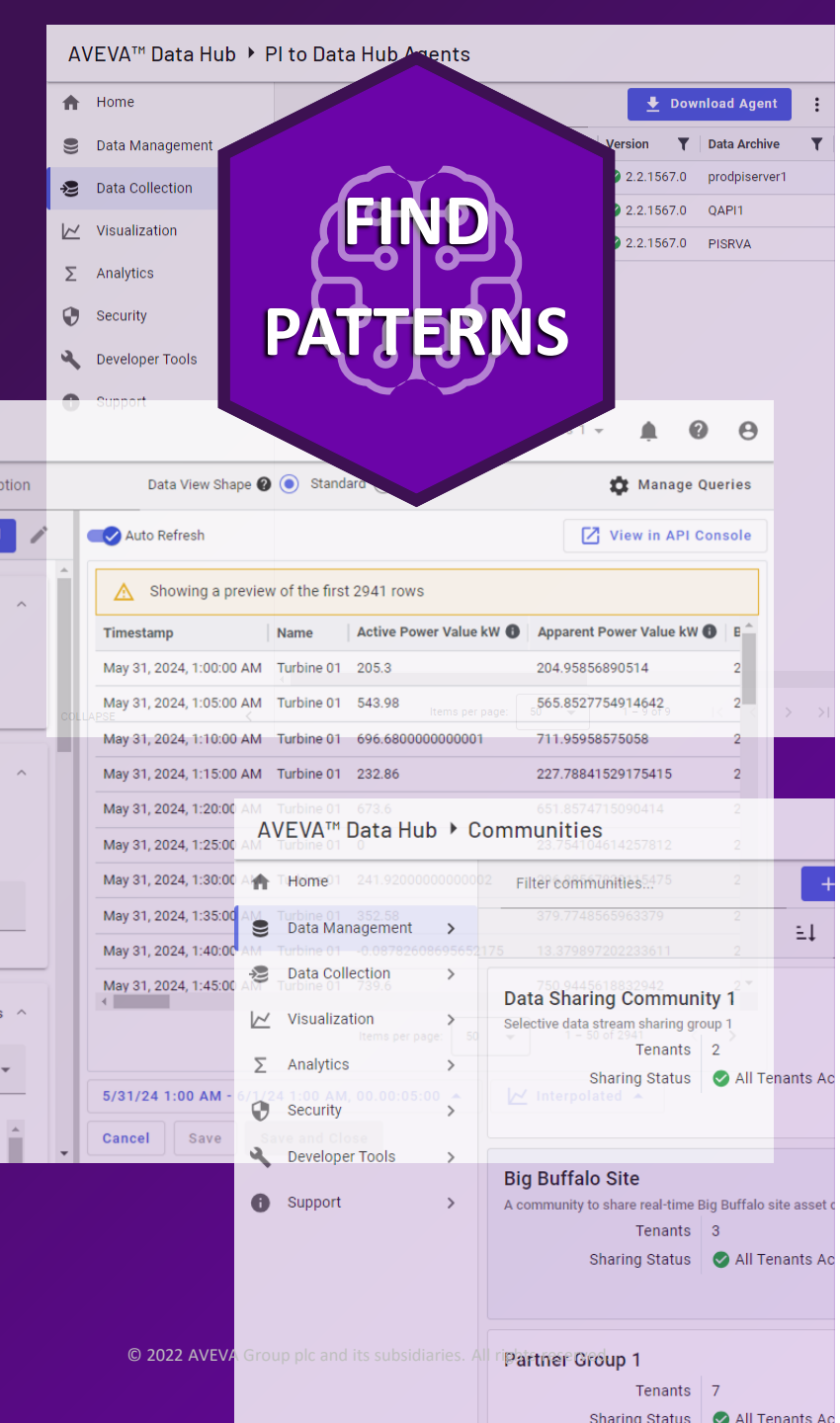

CONNECT Data Services/AVEVA Insight

Strategic direction

- Insight & CONNECT Unification
- NEW – included with AVEVA Operations Control

- **Learn more:**
  - AVEVA roadmap: Common HMI/SCADA portfolio components
  - CONNECT Communities: Data sharing is data caring
  - Hybrid system platform: Industrial data in CONNECT
  - Reynolds: Improving production efficiency and maintenance with AVEVA MES & Insight
  - Brewing innovation: Inside New Belgium's use of AVEVA Operations Control
  - Imerys: Transform to perform with AVEVA Operations Control

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Enabling digital transformation

AVEVA Operations Control

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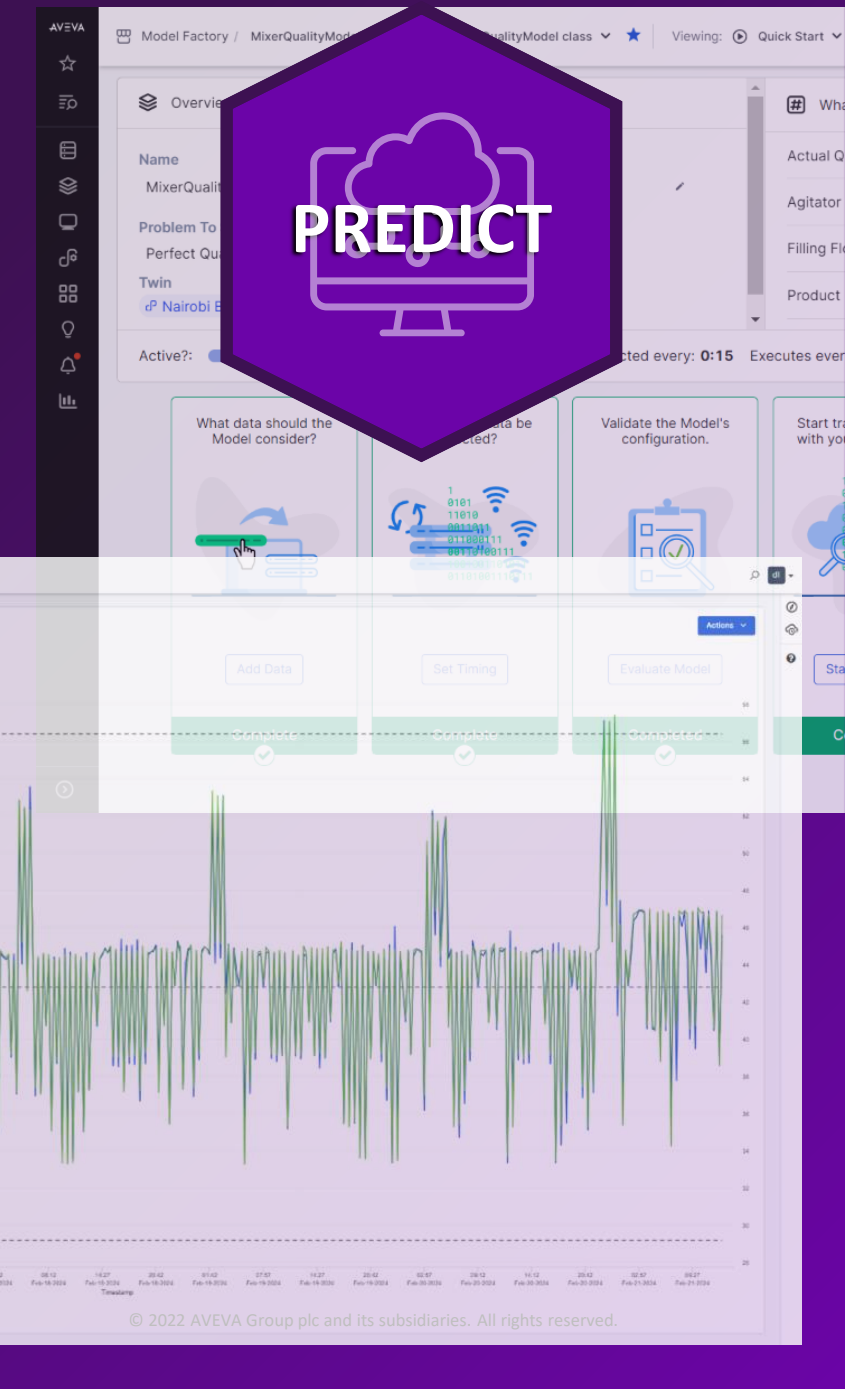

AVEVA Advanced Analytics

Transform your data into actionable insights

- **Predict –** Predict process outcomes and asset behavior using cloud-based AI and machine learning (ML) at scale.
- **Analyze –** Create AI-driven models, run analytics, and visualize results, all in a no-code environment.
- **Prescribe –** Get system-generated prescriptive recommendations to make the right decisions to improve sustainability, throughput, and quality. Receive real-time alerts in the event of process or quality deviations to course-correct during production processes.

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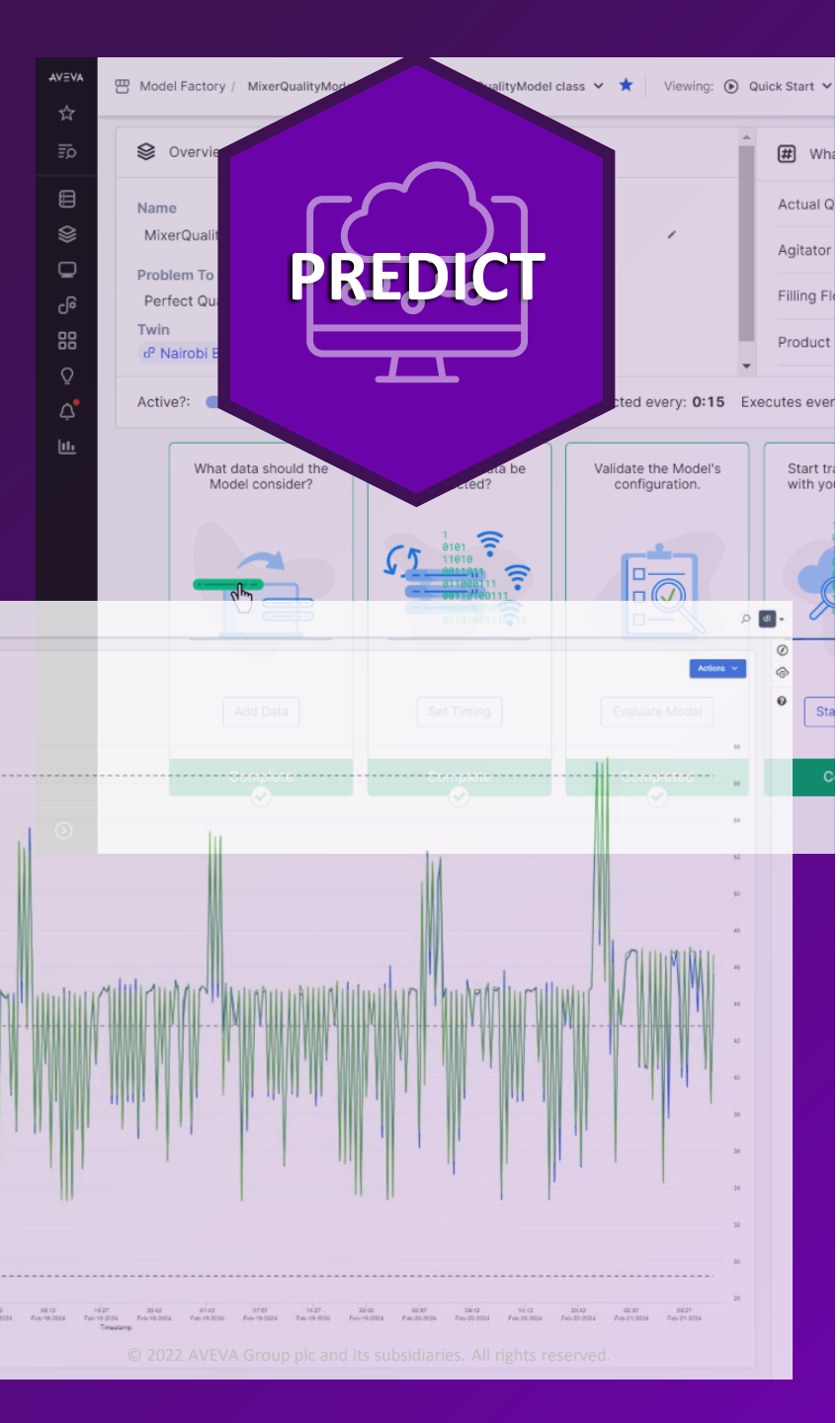

AVEVA Advanced Analytics

Transform your data into actionable insights

- NEW – Included with AVEVA Operations Control
- **Learn more:**
  - Machine learning made easy with AVEVA Advanced Analytics in CONNECT
  - Harnessing events in CONNECT for insights and action
  - Nestlé: Harnessing Advanced Analytics and real-time data in the cloud to enhance product quality and minimize waste

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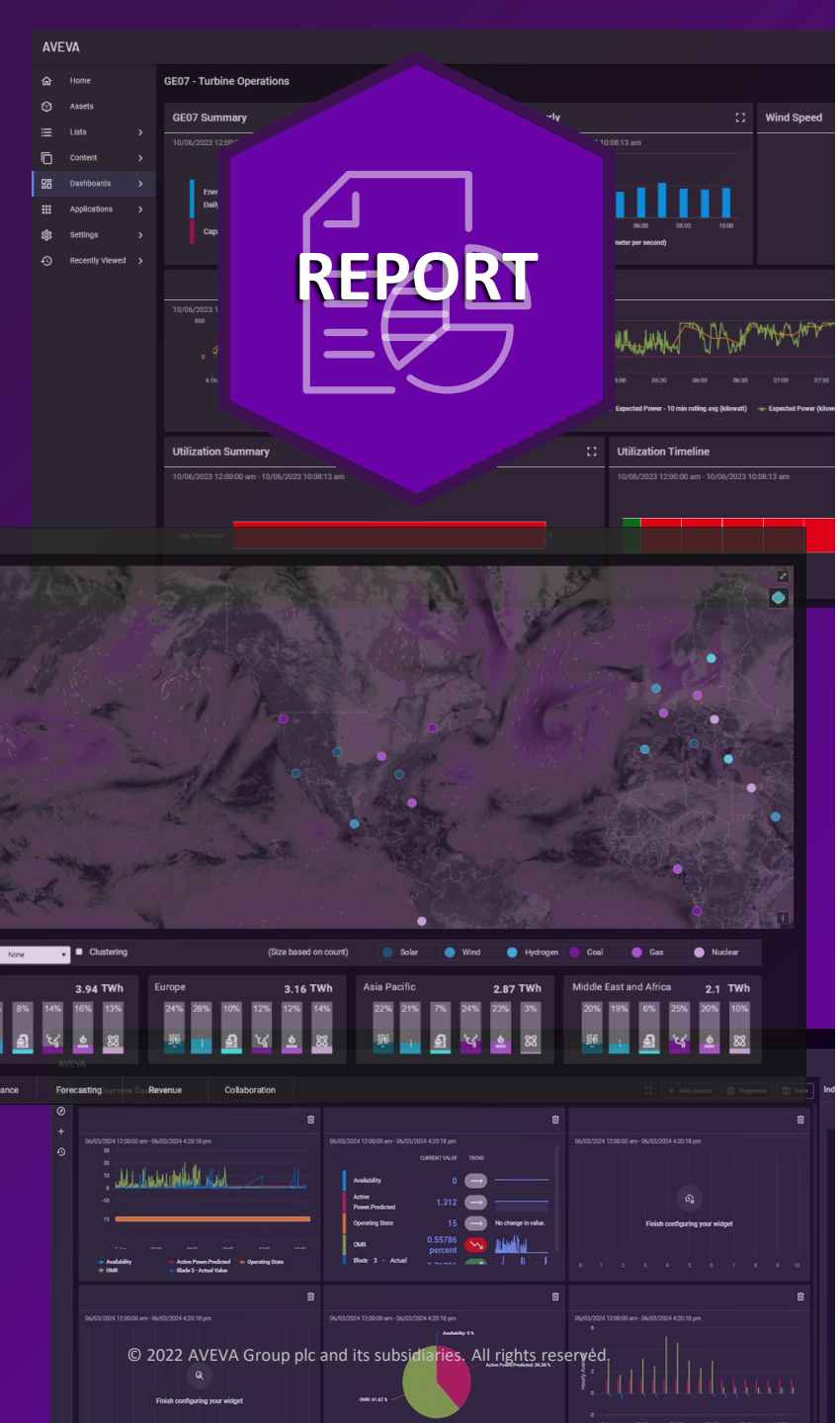

CONNECT visualization services

Cloud based visualization using self-service and pre-defined content

- **Self-service dashboards –** User-created dashboarding experience built from an included content library allowing for flexibility to address unique data visualization needs and root cause investigation.
- **Pre-defined dashboards –** Engineered views providing a more structured and interactive visualization experience focused on tracking an understood perspective with a consistent visualization.
- **Organize and share –** Build and organize lists of assets and previously associated content for easy sharing with other users.
- **Industrial AI Assistant –** Question-and-answer tool to quickly find and summarize information by asking natural language queries through a chat interface.

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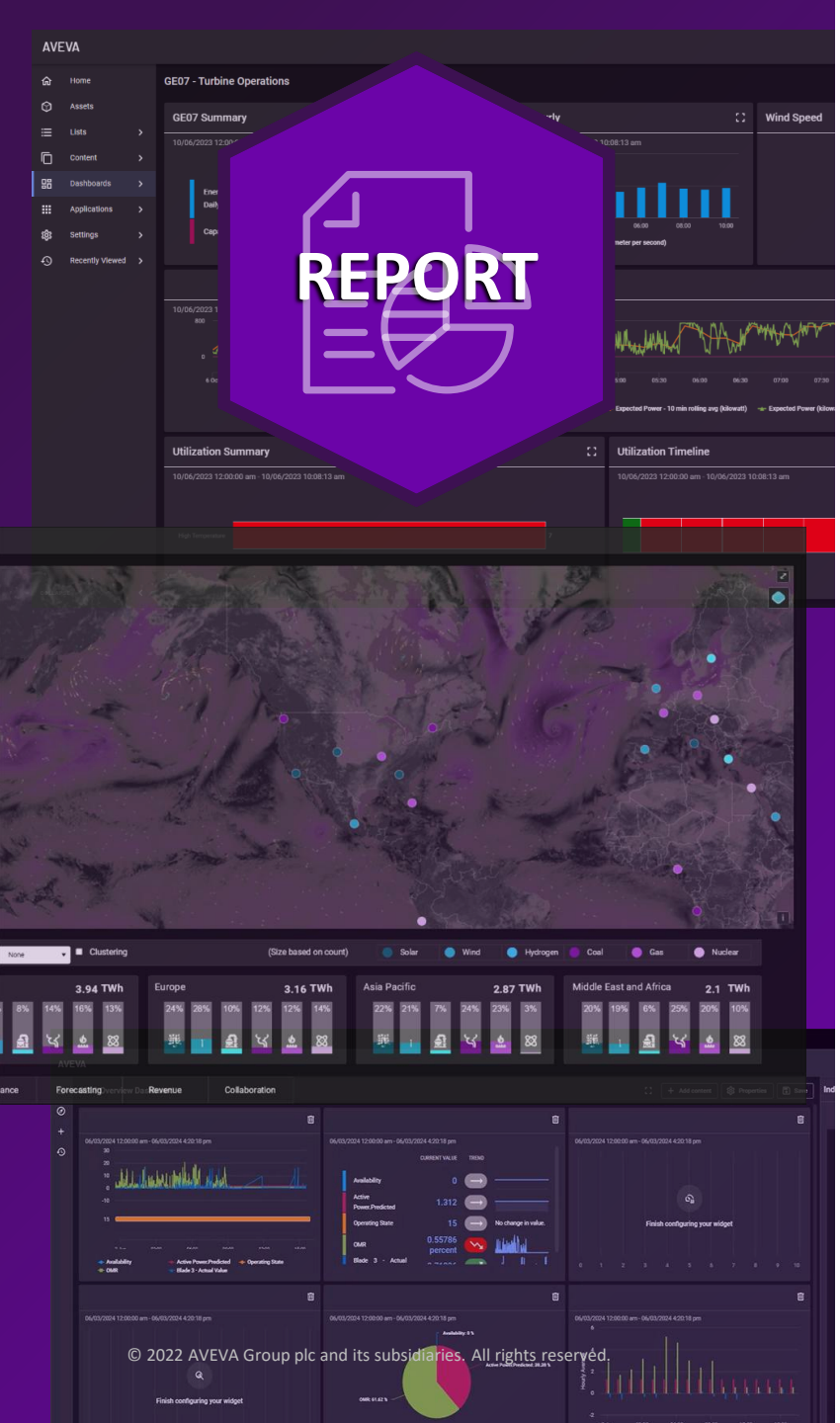

CONNECT visualization services

Cloud based visualization using self-service and pre-defined content

- NEW – Included with AVEVA Operations Control
- **Learn more:**
  - AVEVA Roadmap: Common HMI/SCADA portfolio components
  - Visualize your data together in CONNECT (featuring the Industrial AI Assistant)
  - User created dashboards and displays in CONNECT with the visualization designer
  - Define interactive visualizations in CONNECT with the experience designer
  - From data to decisions: using the Industrial AI Assistant to get there quicker
  - Visualize your data together in CONNECT (featuring the Industrial AI Assistant)

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Enabling digital transformation

AVEVA Operations Control

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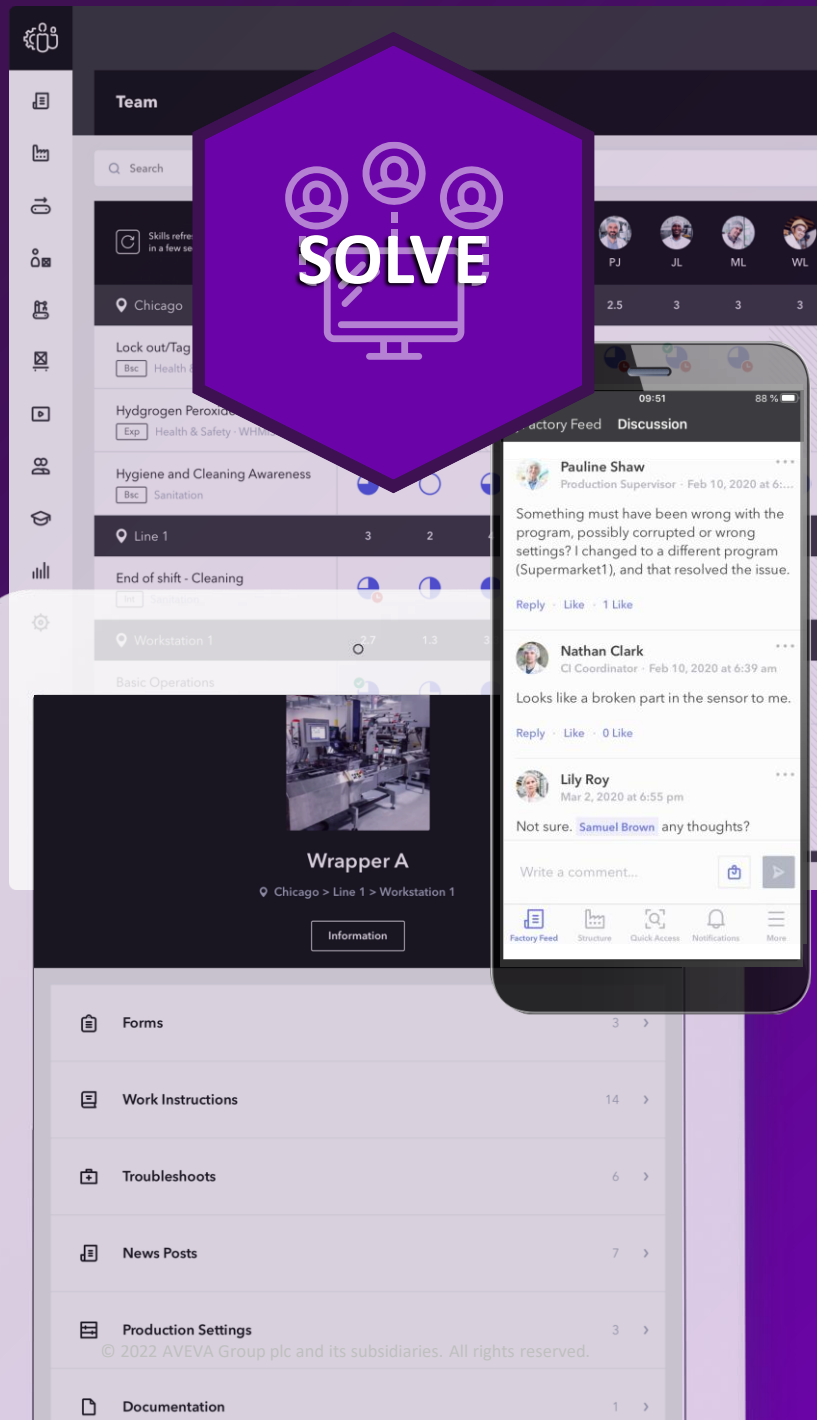

AVEVA Teamwork

Collaborative industrial operations

- **Digital knowledge** - Scan QR codes to quickly access a standardized library of instructions, videos and troubleshooting content.
- **Skills management** - Deliver and track training for new hires, upskilling and certifications with a review pane to view pending and completed training.
- **Collaboration** - Connect with workers across shifts and facilities to solve problems. Share insights in a logbook and continuously grow the archive of knowledge.
- **Issues management** - Capture, track and resolve problems through call for help escalation and collaboration with subject matter experts.

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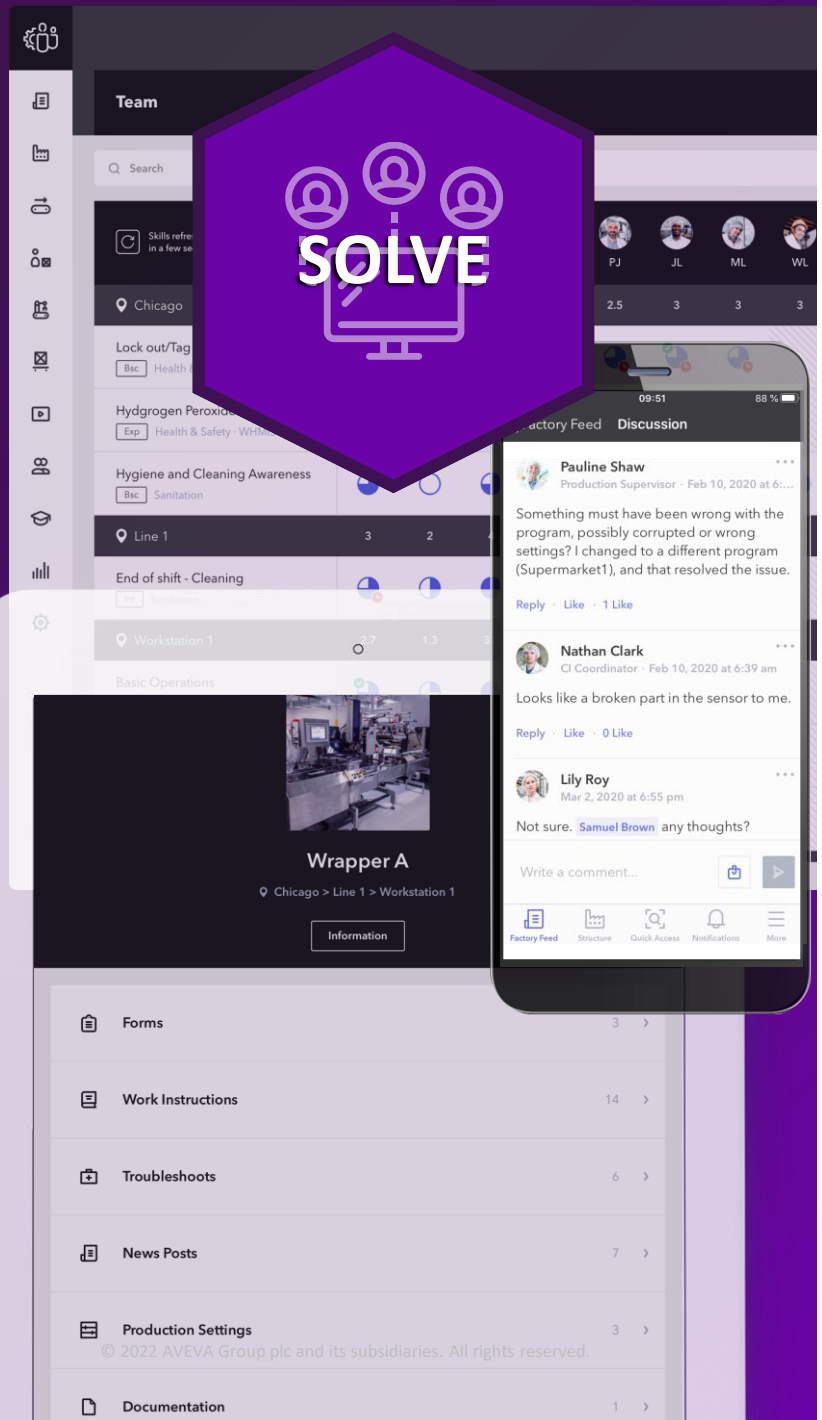

AVEVA Teamwork

Collaborative industrial operations

- Learn more:
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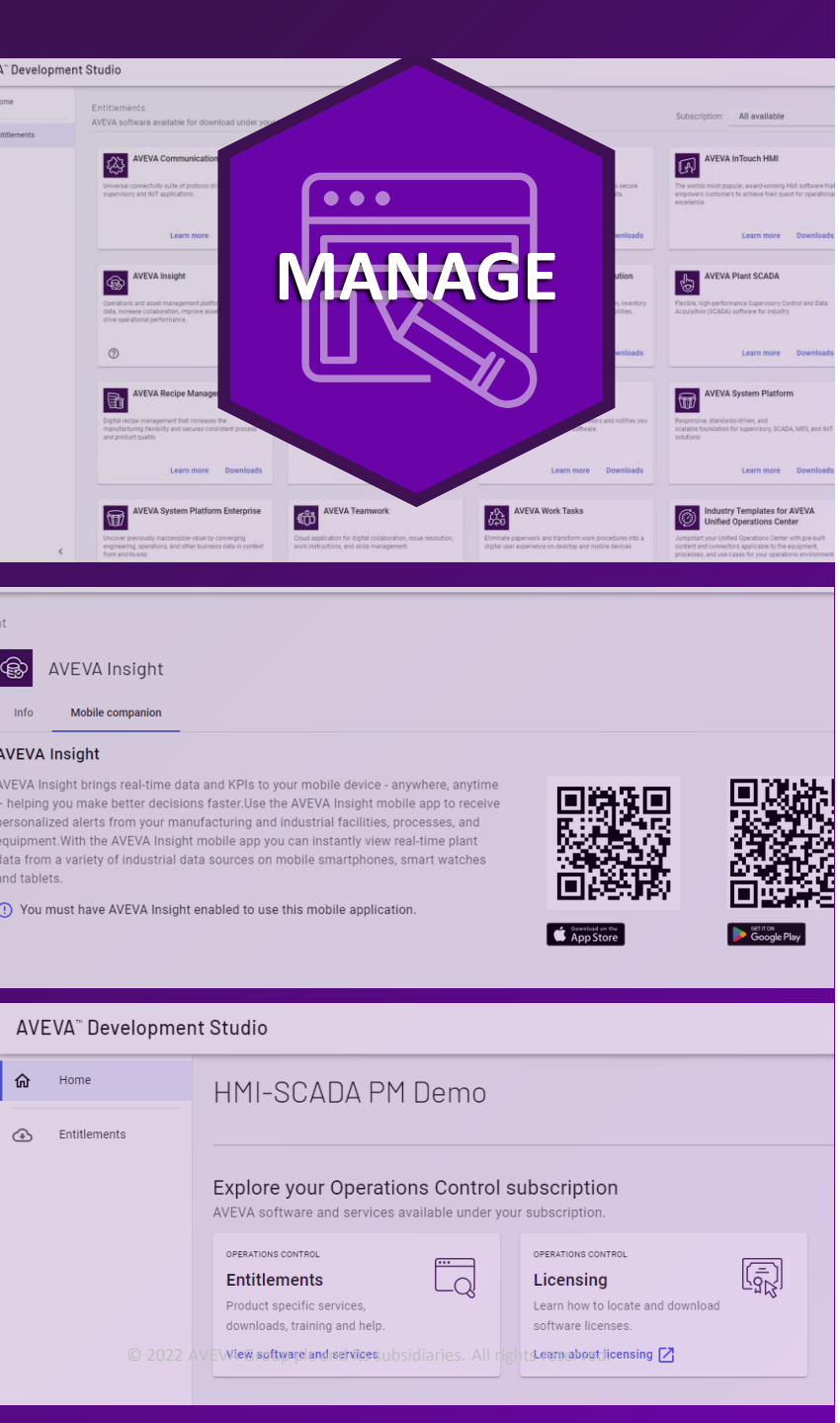

AVEVA Development Studio

Centralized lifecycle management

- **Reduce HMI Engineering cost and effort** - The template-based approach to HMI/SCADA engineering enables reuse of data across multiple applications while encouraging adoption of company standards.
- **Normalization and contextualization** - AVEVA Development Studio uses a single unified plant model that logically represents your processes, physical equipment, and industrial systems to make the design and maintenance of your HMI SCADA systems more consistent and efficient.
- **Improve system maintainability** - AVEVA Development Studio extends system lifecycle and maintainability through centralized application management and deployment in networked environments.

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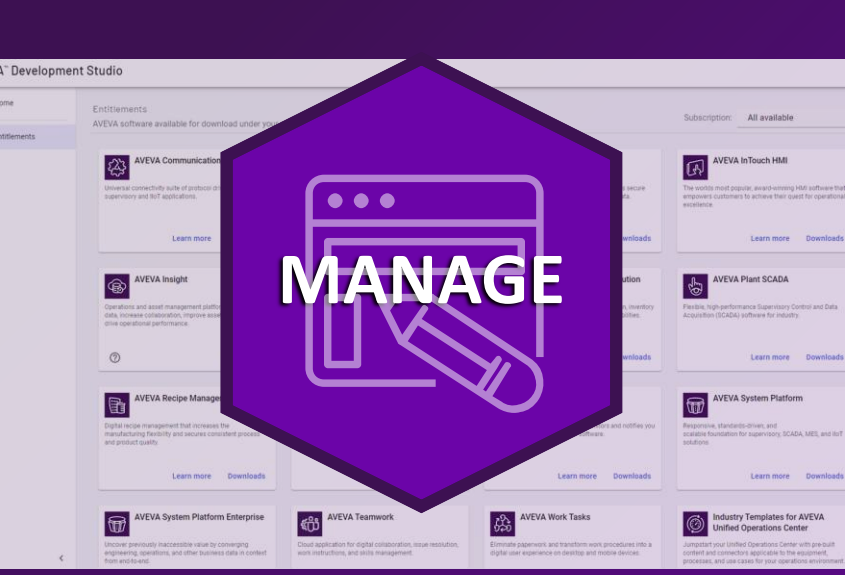

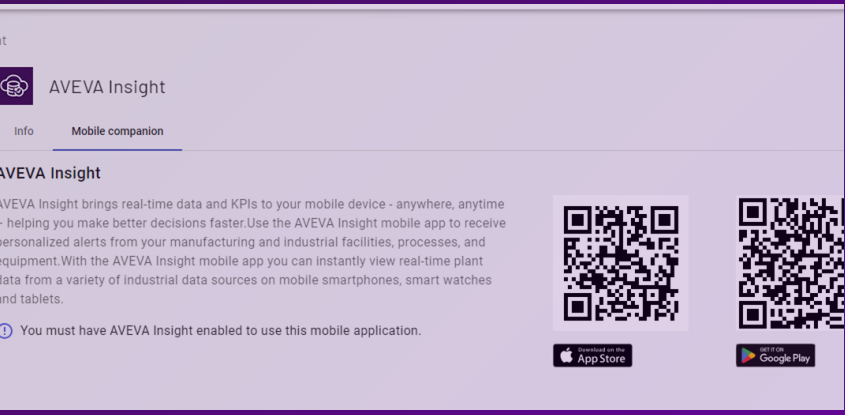

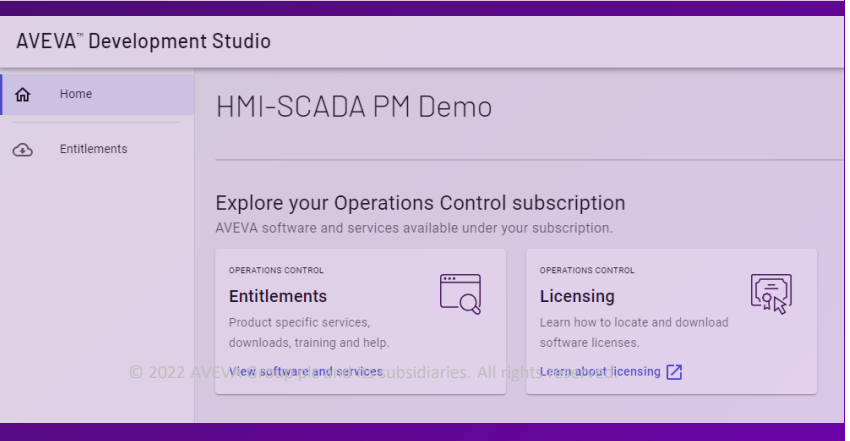

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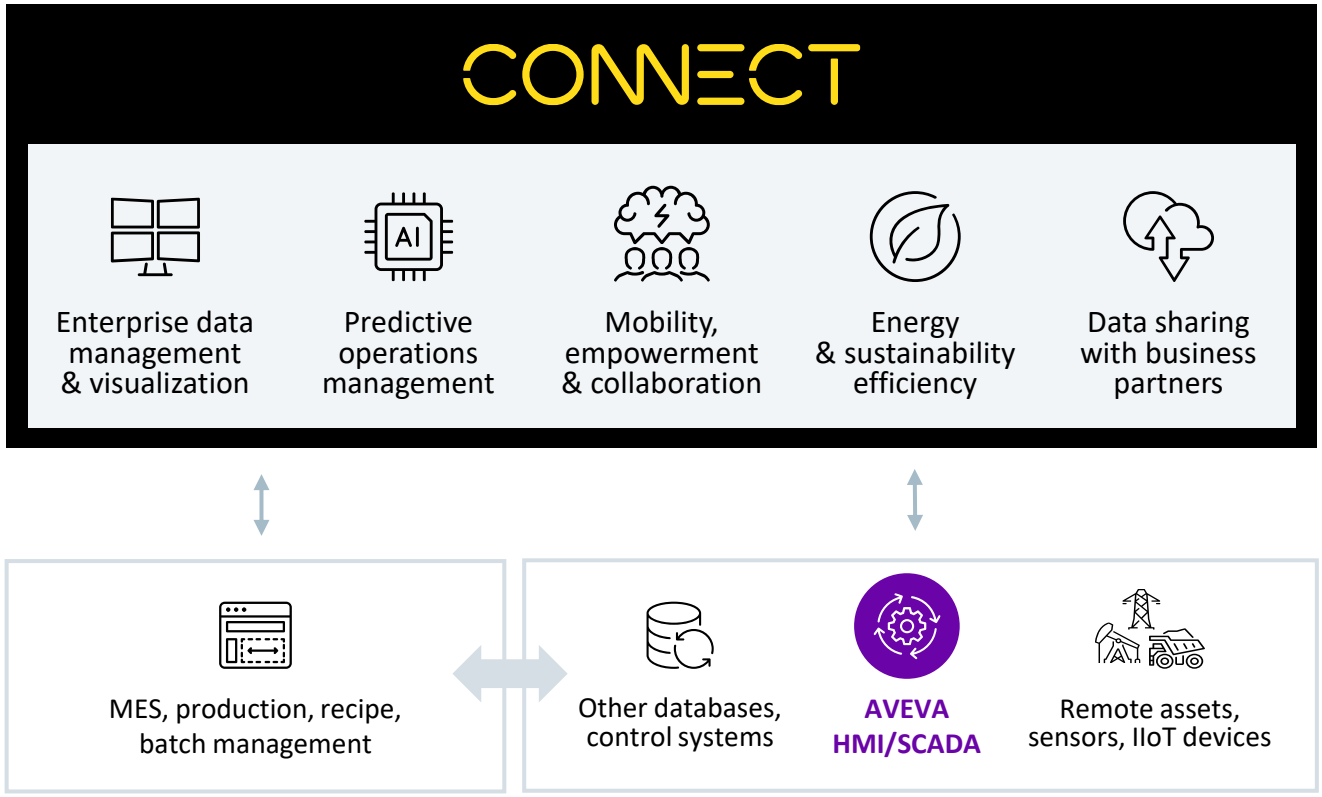
AVEVA Development Studio

Strategic direction

- Common development environment for all AVEVA Operations Control products
- Centralized standards management in CONNECT
- End to end lifecycle management
- Enterprise level coordination and execution

- **Learn more:**
  - AVEVA Roadmap: Common HMI/SCADA portfolio components

CONNECT extends value for our **HMI/SCADA customers**



Make industrial data available beyond the OT network

Visibility across sites with edge to cloud and data sharing communities

Rich persona-based visualization experiences

Analytics capabilities to handle complex calculations and AI models

Connectivity, with automated data ingress (no coding) and native integration (APIs)

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AVEVA Operations Control

Empowering digital transformation with the power to choose the configuration, architecture and deployment options that best meet your objectives

AVEVA

Customer testimonials

Learn more…

- **Amcor** : Enterprise analytics and visualization of MES/process data
- Brewing innovation: Inside **New Belgium**’s use of AVEVA Operations Control
- **Reynolds**: improving production efficiency and maintenance with AVEVA MES & Insight
- **Imerys**: Transform to perform with AVEVA Operations Control
- **Agropur**'s digital journey, leveraging MES capabilities with CONNECT

Operations Control Technical Symposium

Day 3, Thurs
April 10th

Unlocking Digital Transformation with Operations Control & UNS Architecture: 10:00 – 12:15

Dive into a real-world, real-time UNS implementation, exploring key takeaways and use cases from ProveIt! 2025

Feedback session: 1:15 – 2:15

Share your thoughts, explore new ideas, and help shape the future of our solutions in a dynamic, engaging setting.

Networking & social hour: 2:15 – 3:00

Visit the Heroes HQ booth and celebrate with our raffle prize giveaways along with free drinks and merch!

AVEVA

Thank you!

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ABOUT AVEVA

AVEVA is a world leader in industrial software, providing engineering and operational solutions across multiple industries, including oil and gas, chemical, pharmaceutical, power and utilities, marine, renewables, and food and beverage. Our agnostic and open architecture helps organizations design, build, operate, maintain and optimize the complete lifecycle of complex industrial assets, from production plants and offshore platforms to manufactured consumer goods.

Over 20,000 enterprises in over 100 countries rely on AVEVA to help them deliver life's essentials: safe and reliable energy, food, medicines, infrastructure and more. By connecting people with trusted information and AI-enriched insights, AVEVA enables teams to engineer efficiently and optimize operations, driving growth and sustainability.

Named as one of the world's most innovative companies, AVEVA supports customers with open solutions and the expertise of more than 6,400 employees, 5,000 partners and 5,700 certified developers. The company is headquartered in Cambridge, UK.

Learn more at www.aveva.com

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