



**AVEVAWORLD**  
PARIS



OCTOBER 2024

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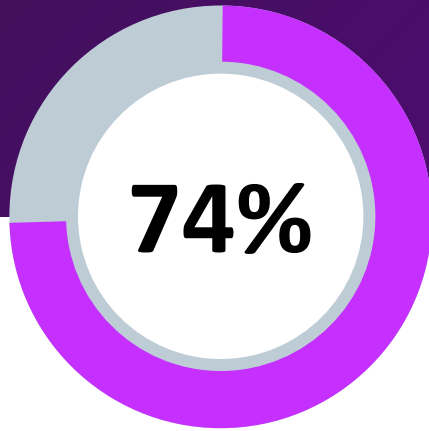
# HMI/SCADA Vision and Strategy

AVEVA™ Operations Control

John Krajewski – VP Product Management

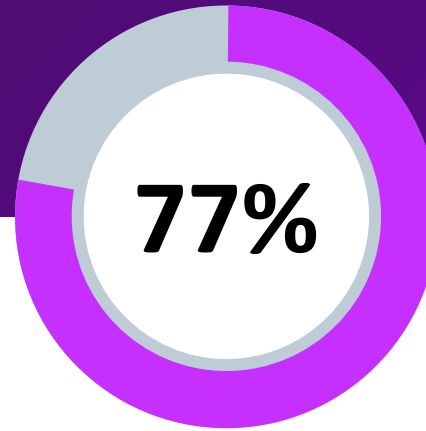
AVEVA

# Digital Transformation



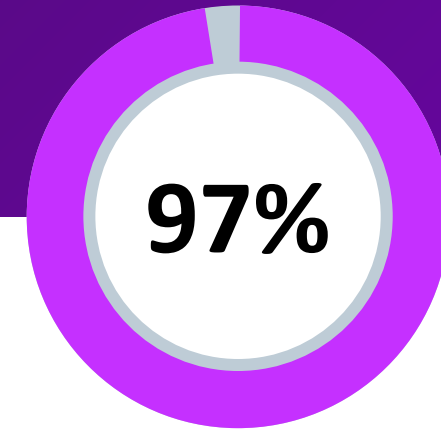
Digital transformation is a top priority for **74%** of organizations.

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

# 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*

# What activities benefit from access to operational data?

Leveraging operational data beyond monitoring and control





# Enabling Digital Transformation

AVEVA™ Operations Control





CONNECT

# 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.





**CONNECT**

# 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
    - Your Voice, Your Vision: Suggest the Future of HMI SCADA
    - **AVEVA: Fueling your Data Infrastructure with AVEVA connectivity**
    - **AVEVA: Easily deploy AVEVA™ Adapters to remotely collect operations data at scale**







# Enabling Digital Transformation

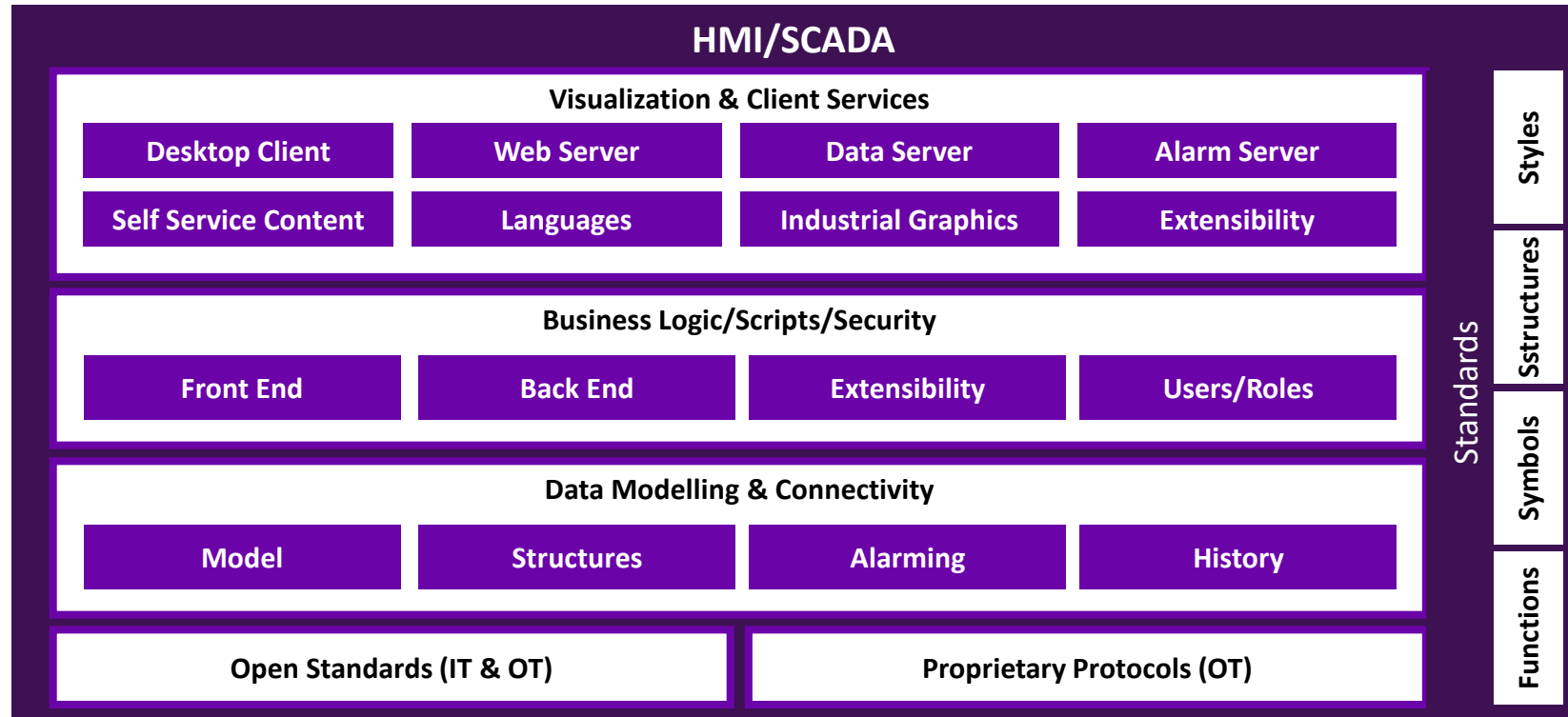
AVEVA™ Operations Control

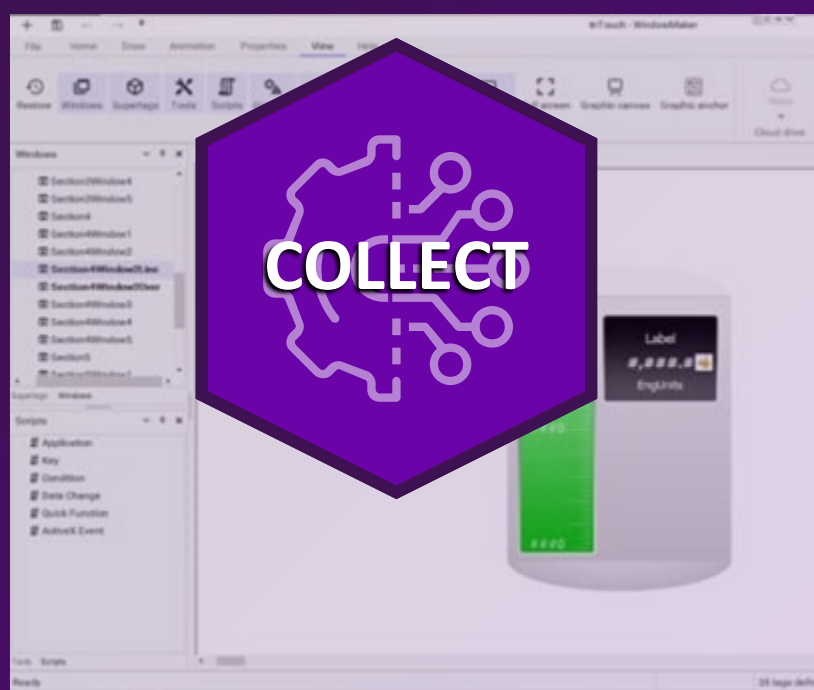




# HMI VS SCADA

Where are they similar?

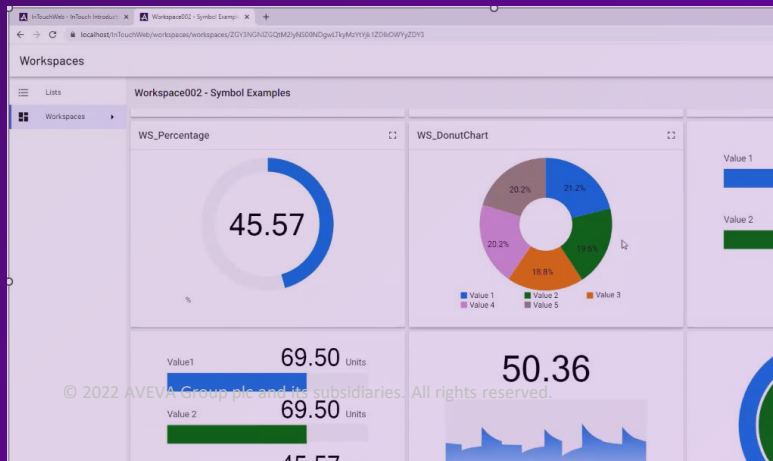


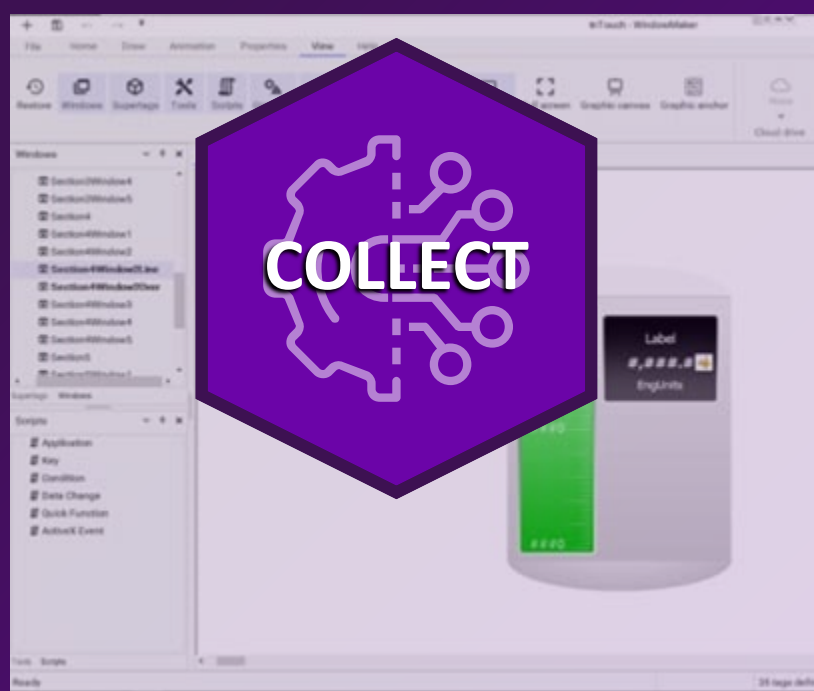


# AVEVA™ InTouch HMI/AVEVA Edge

## 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.

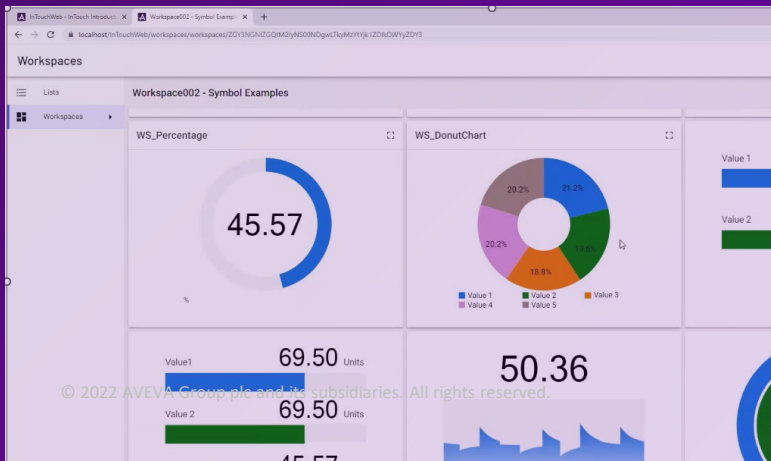




# AVEVA™ InTouch HMI/AVEVA™ Edge

## 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

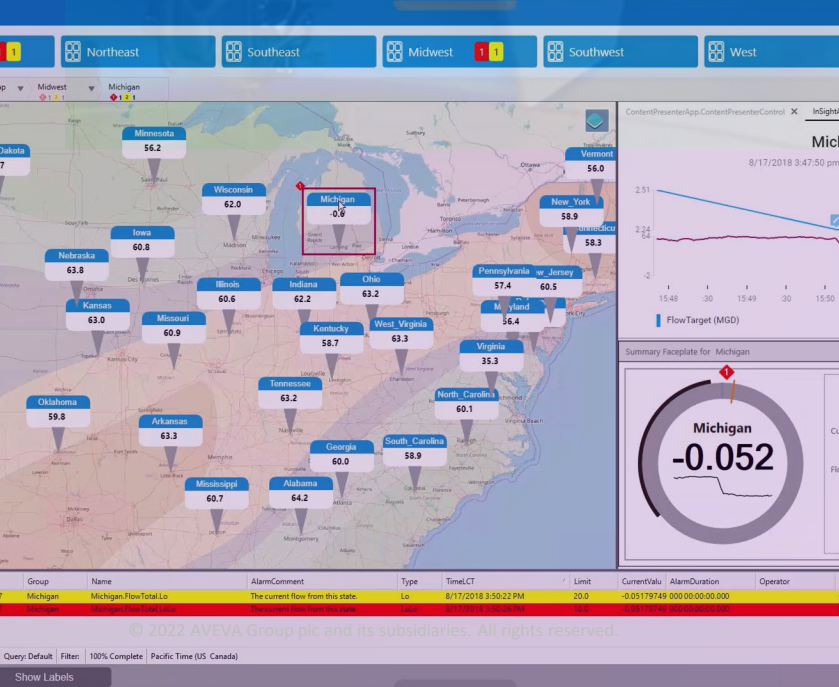




# AVEVA™ System Platform/AVEVA™ Plant SCADA

## 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.

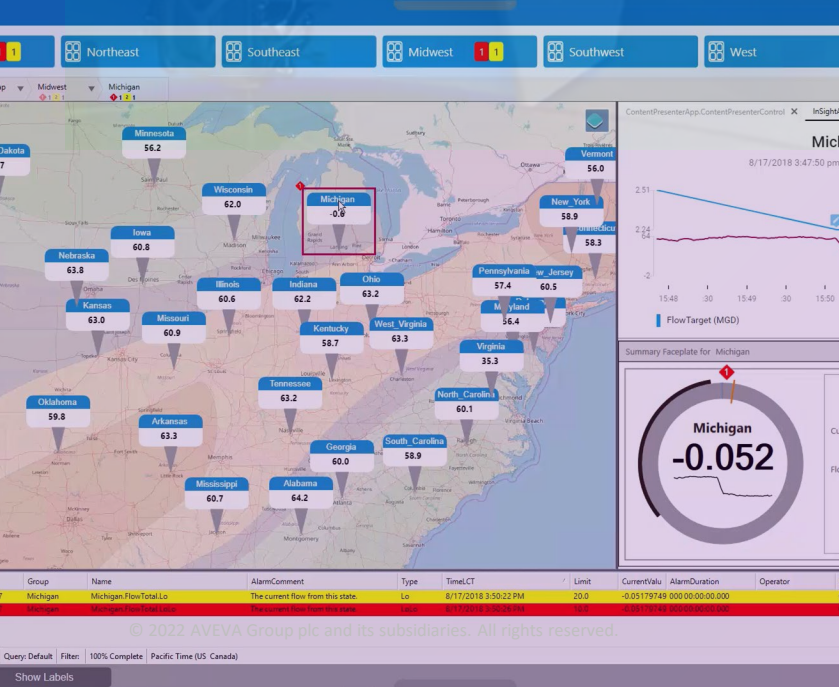




# AVEVA™ System Platform/AVEVA™ Plant SCADA

## Strategic Direction

- **Productivity/Diagnostics**
- **Ease of Use /Edge Driven**
- **OS Agnostic/Portable**
- **Simplified MQTT Publishing/Data Ops**
- **Cloud Connected/Hosted/Managed**
- **Plant SCADA integration into System Platform**



## LEARN MORE:

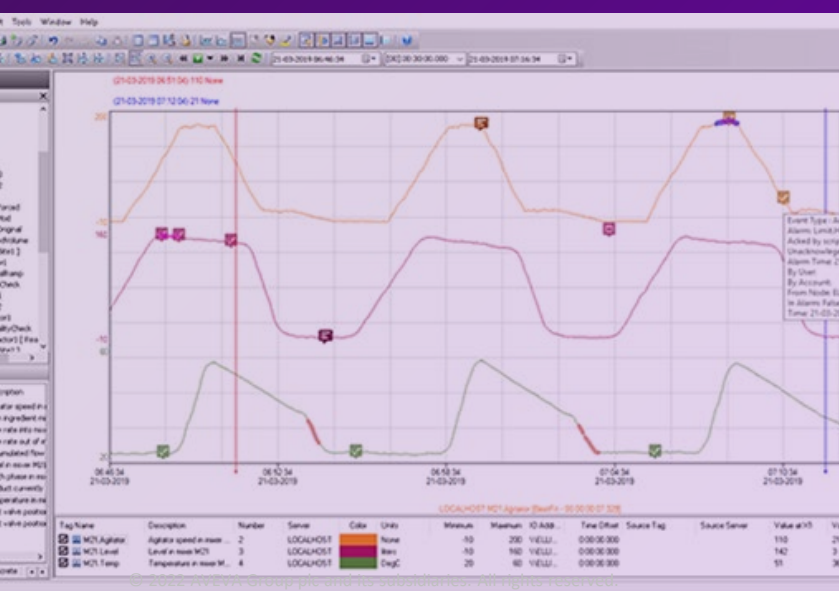
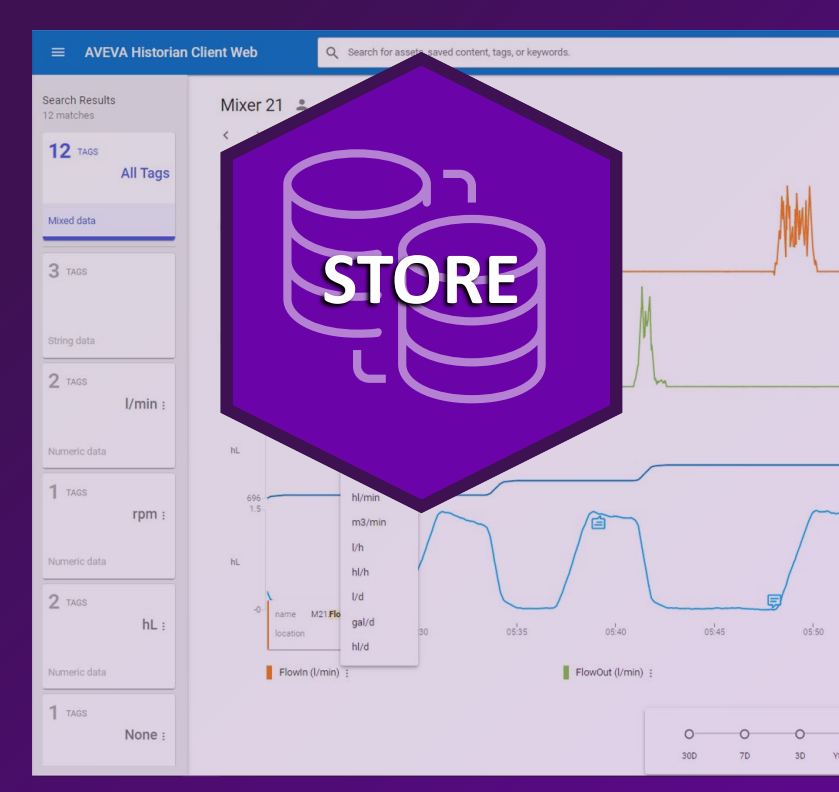
- **HMI SCADA TRACK**
- **AVEVA System Platform: Deep dive into latest enhancements**
- **AVEVA Roadmap: SCADA and Supervisory Level Operations Control**
- **AVEVA: Integrating HMI/SCADA into a UNS (Unified Namespace) architecture**



# Enabling Digital Transformation

AVEVA™ Operations Control



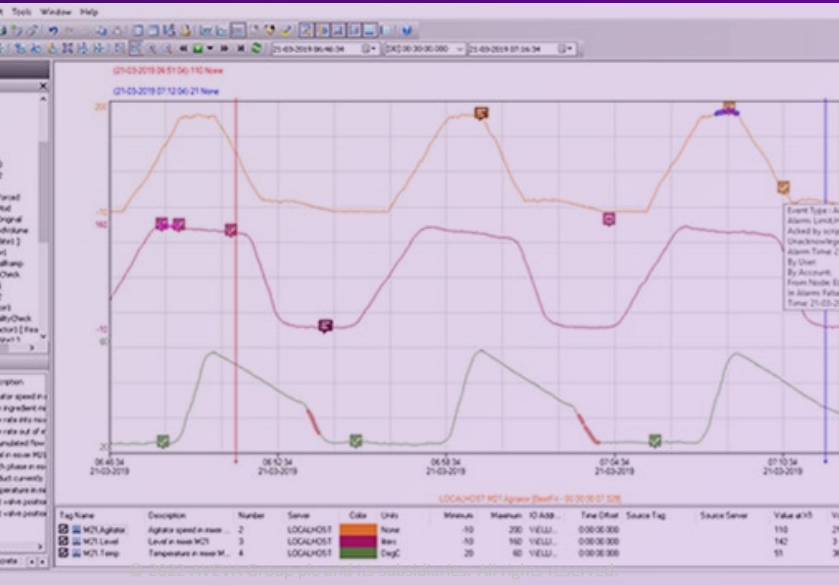
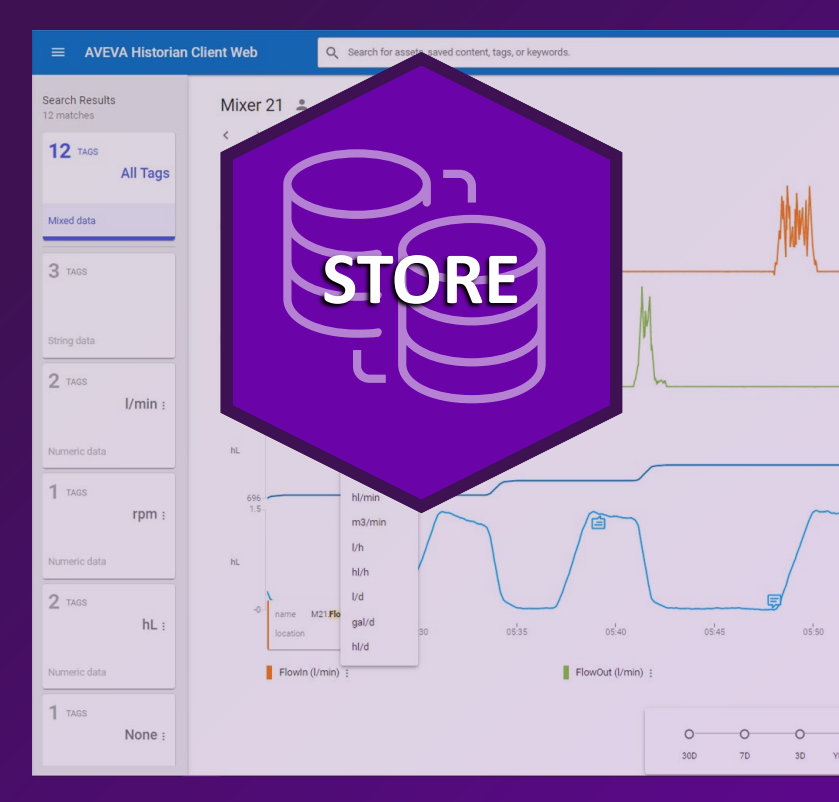


# AVEVA Historian

## 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.





# AVEVA Historian

## Strategic Direction

- Improved CONNECT & 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



# Enabling Digital Transformation

AVEVA™ Operations Control

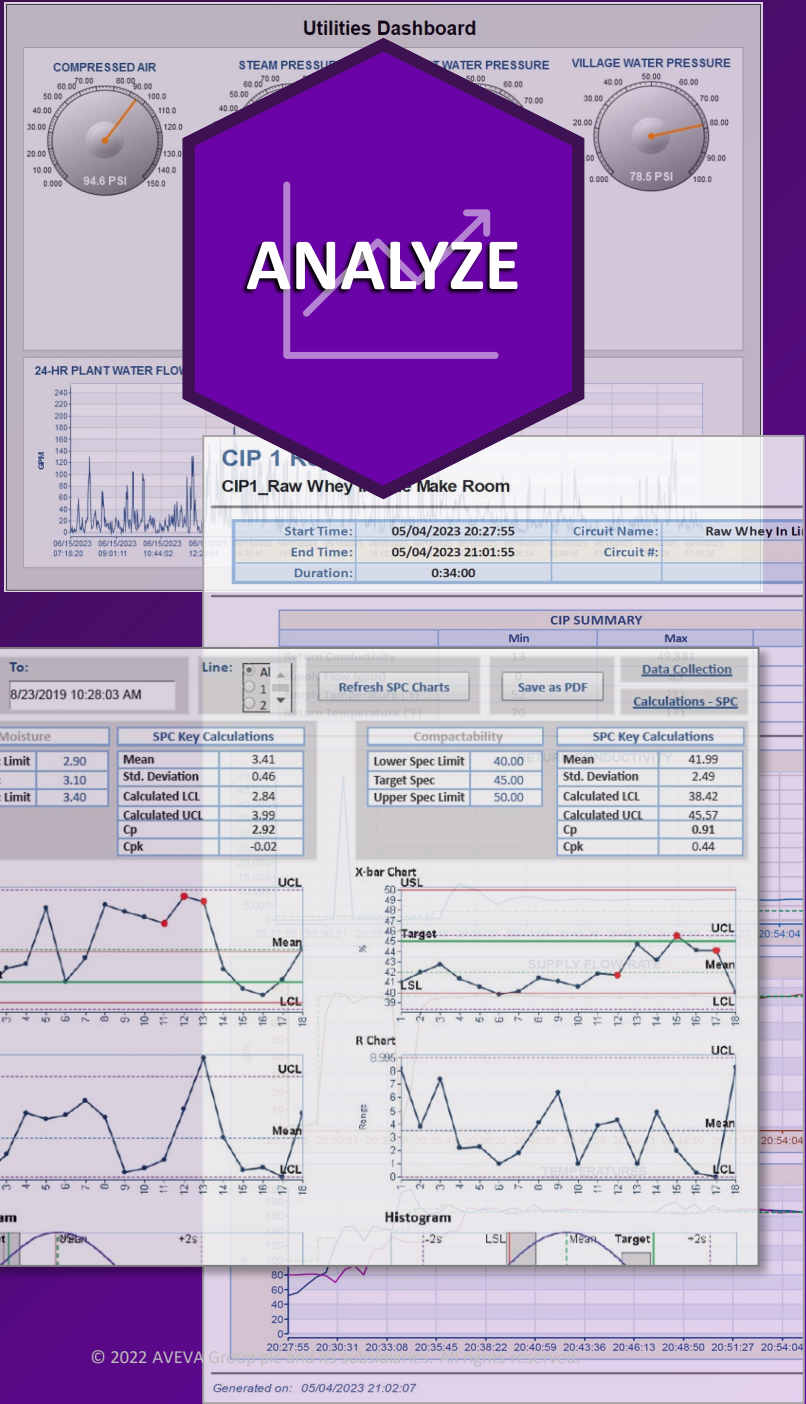




# AVEVA Historian Clients & Reports for Operations

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.



# 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



# Enabling Digital Transformation

AVEVA™ Operations Control





**VISUALIZE**

# Operations Management Interface

Common process visualization technology across 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**

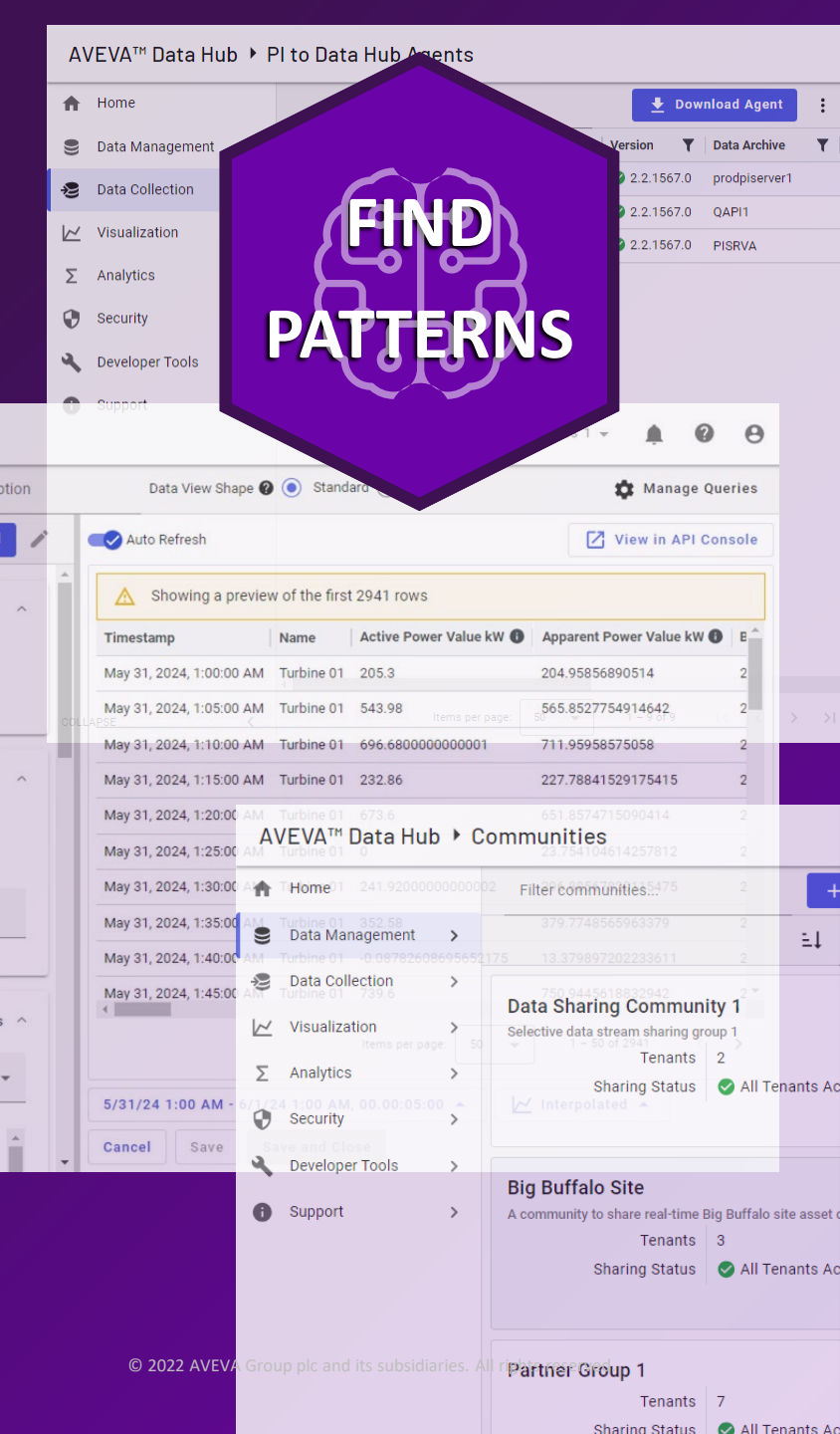


# Enabling Digital Transformation

AVEVA™ Operations Control



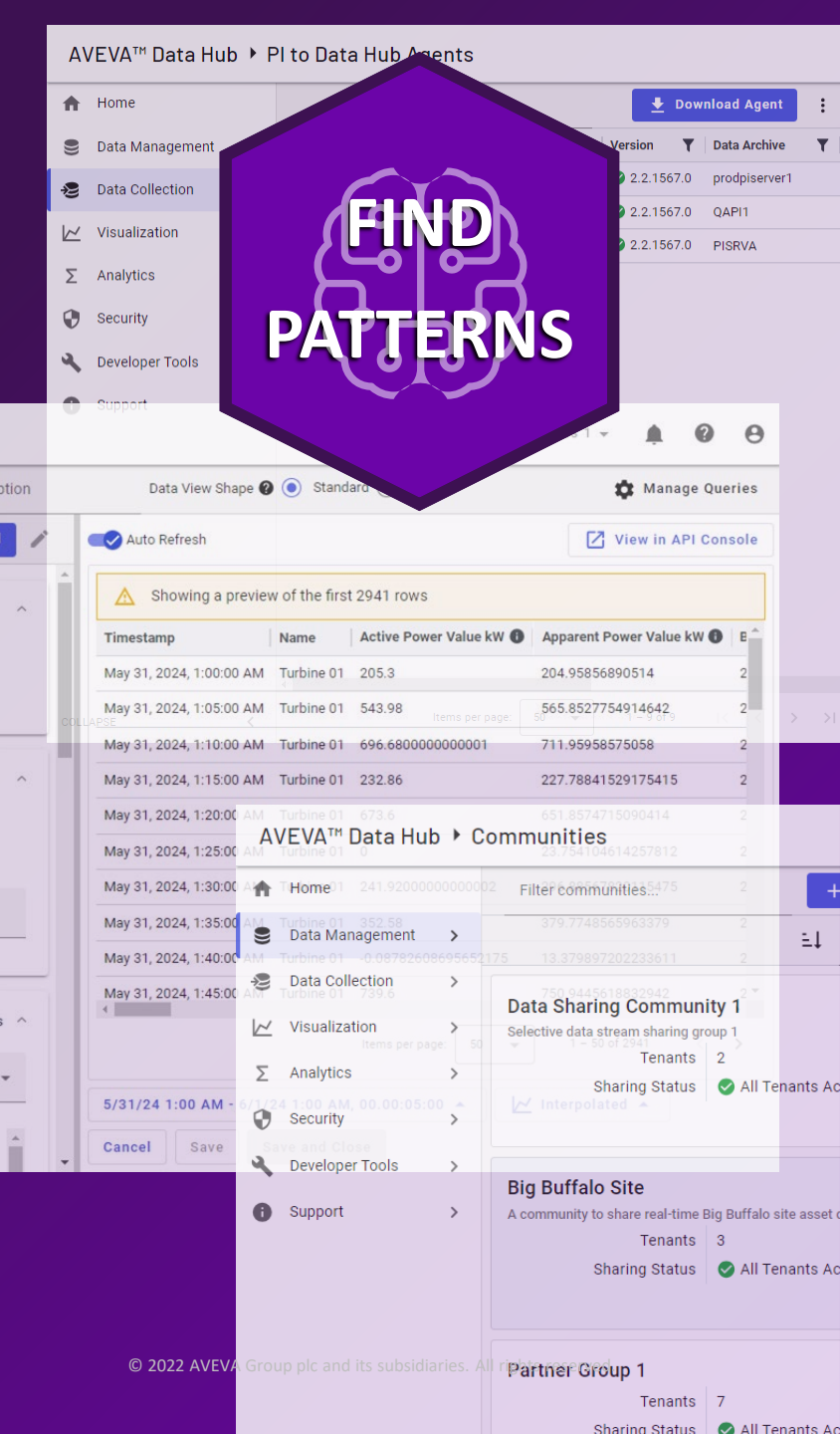




# CONNECT Data Services/AVEVA™ Insight

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 PowerBI, 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.



# CONNECT Data Services/AVEVA™ Insight

## Strategic Direction

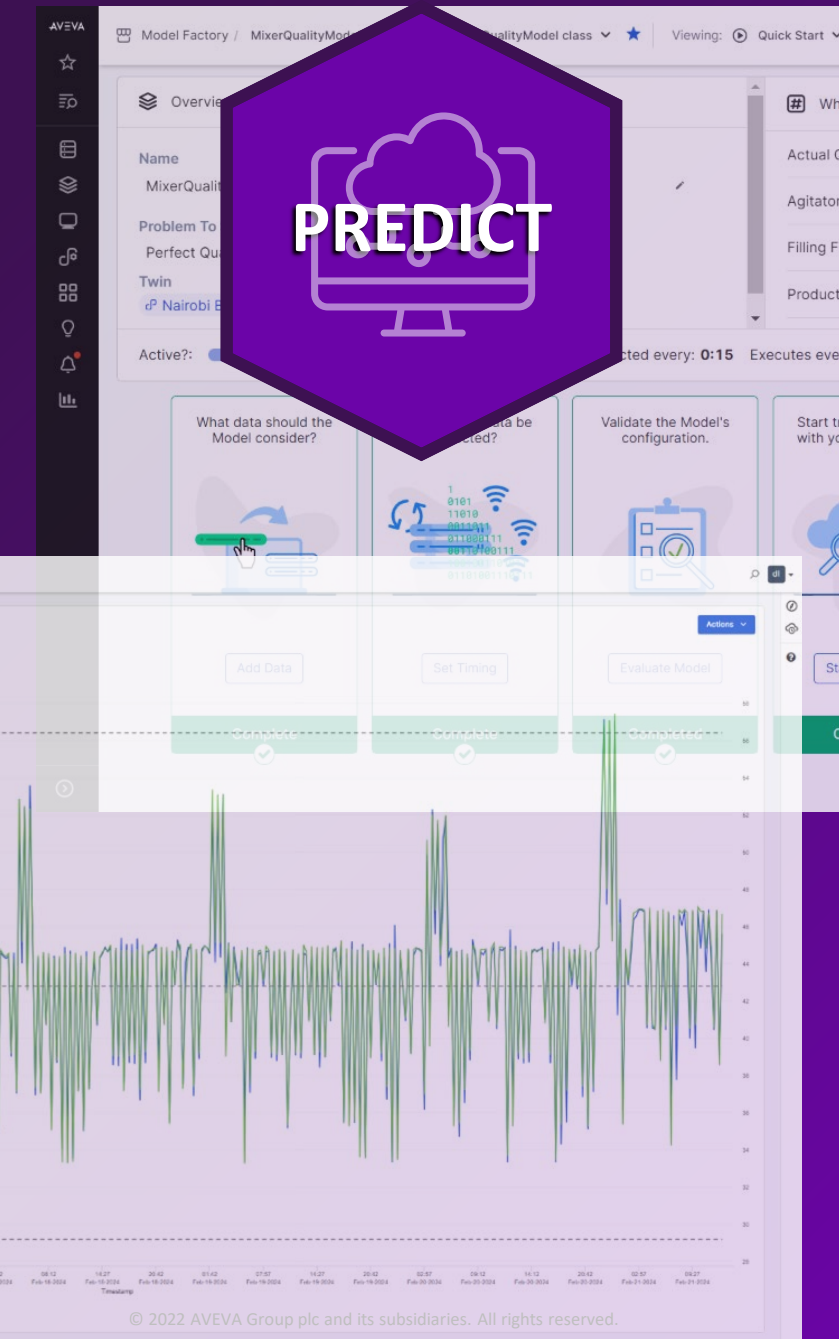
- **Insight & CONNECT Unification**
- **NEW – Included with AVEVA™ Operations Control**
  
- **LEARN MORE:**
  - **AVEVA Roadmap: Common HMI/SCADA Portfolio Components**
  - **AVEVA: Leveraging industrial events in CONNECT to maximize visibility across the enterprise**
  - **CONNECT data services for a data analytics platform at F. Hoffmann-La Roche**
  - **Communities for AVEVA™ Unified Engineering: Unparalleled collaboration in Engineering and Design enabled with CONNECT**



# Enabling Digital Transformation

AVEVA™ Operations Control

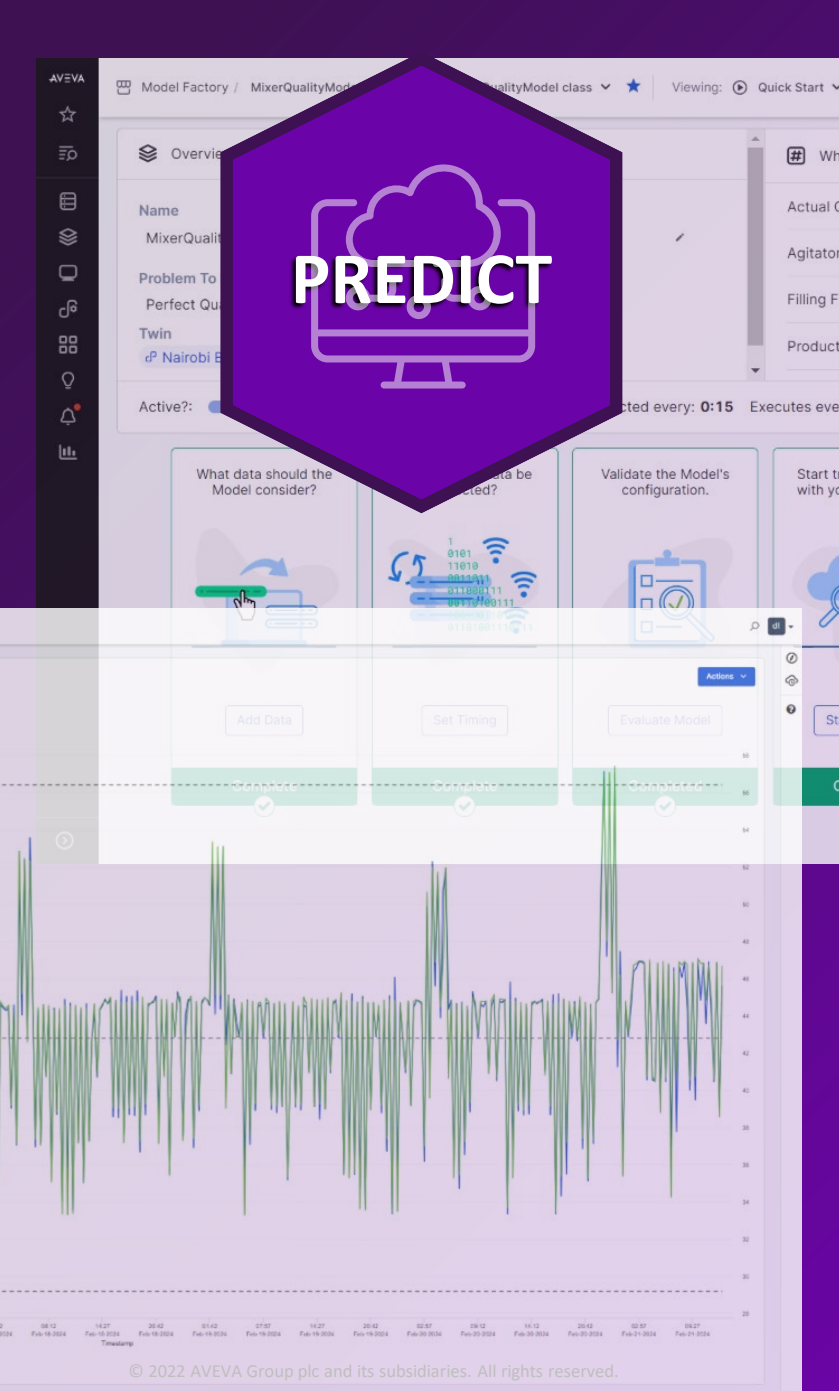




# AVEVA™ Advanced Analytics

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.



# AVEVA™ Advanced Analytics

Transform your data into actionable insights

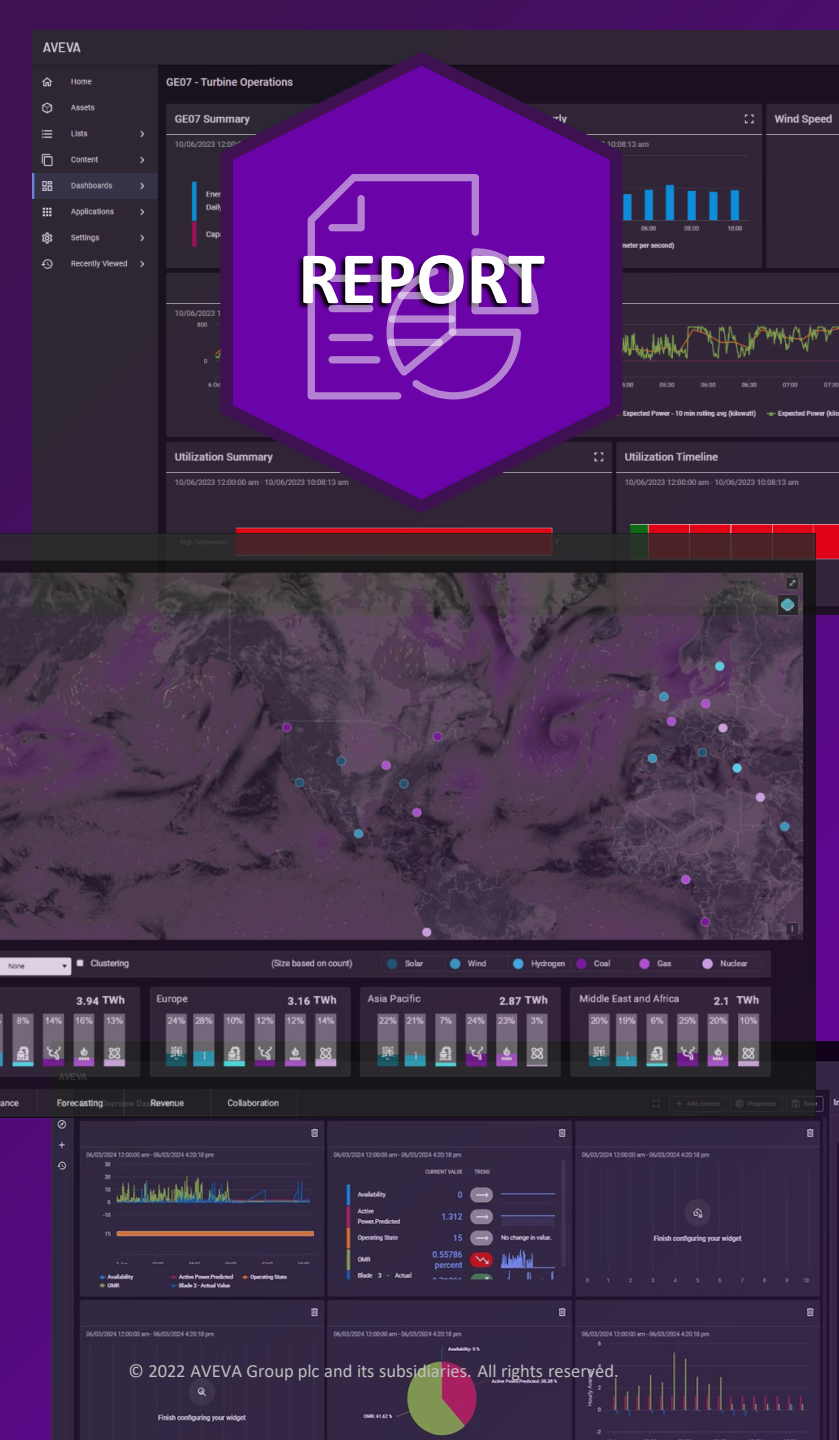
- **NEW – Included with AVEVA Operations Control**
- **LEARN MORE:**
  - **Nestlé: Harnessing advanced analytics and real-time data in the cloud to enhance product quality and minimize waste**
  - **AVEVA: AI use cases for HMI/SCADA**
  - **Calpine: Modernizing Enterprise Data Infrastructure with the AVEVA PI System and AVEVA Predictive Analytics**
  - **AVEVA's Industrial AI: Generate impact to achieve greater goals**
  - **AVEVA & NVIDIA: AI-Driven Autonomous Operations**
  - **Harnessing AVEVA Advanced Analytics for Enhanced Quality Control powered by CONNECT at Coromandel International Limited**



# Enabling Digital Transformation

AVEVA™ Operations Control

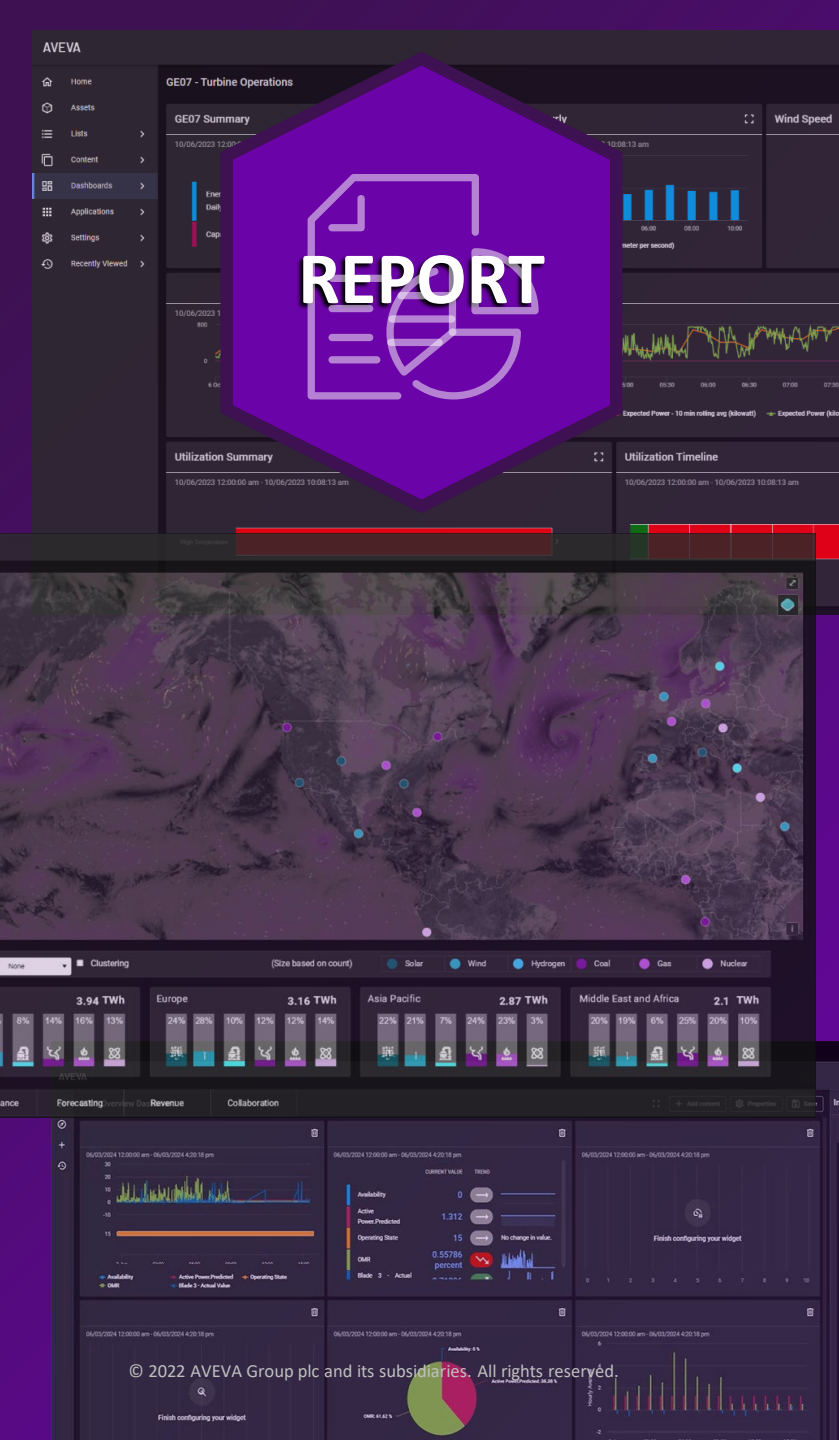




# CONNECT Visualization Services

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.



# CONNECT Visualization Services

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

- **NEW – Included with AVEVA Operations Control**
- **LEARN MORE:**
  - **AVEVA's Industrial AI: Generate impact to achieve greater goals**
  - **AVEVA: Leveraging industrial events in CONNECT to maximize visibility across the enterprise**
  - **AVEVA: Increasing industrial information effectiveness, through enterprise visualization**
  - **AVEVA: Unlocking your Industrial Digital Twin**
  - **AVEVA hybrid MES and CONNECT data and visualization services**
  - **AVEVA: CONNECT Industrial Intelligence Platform Vision and Roadmap**

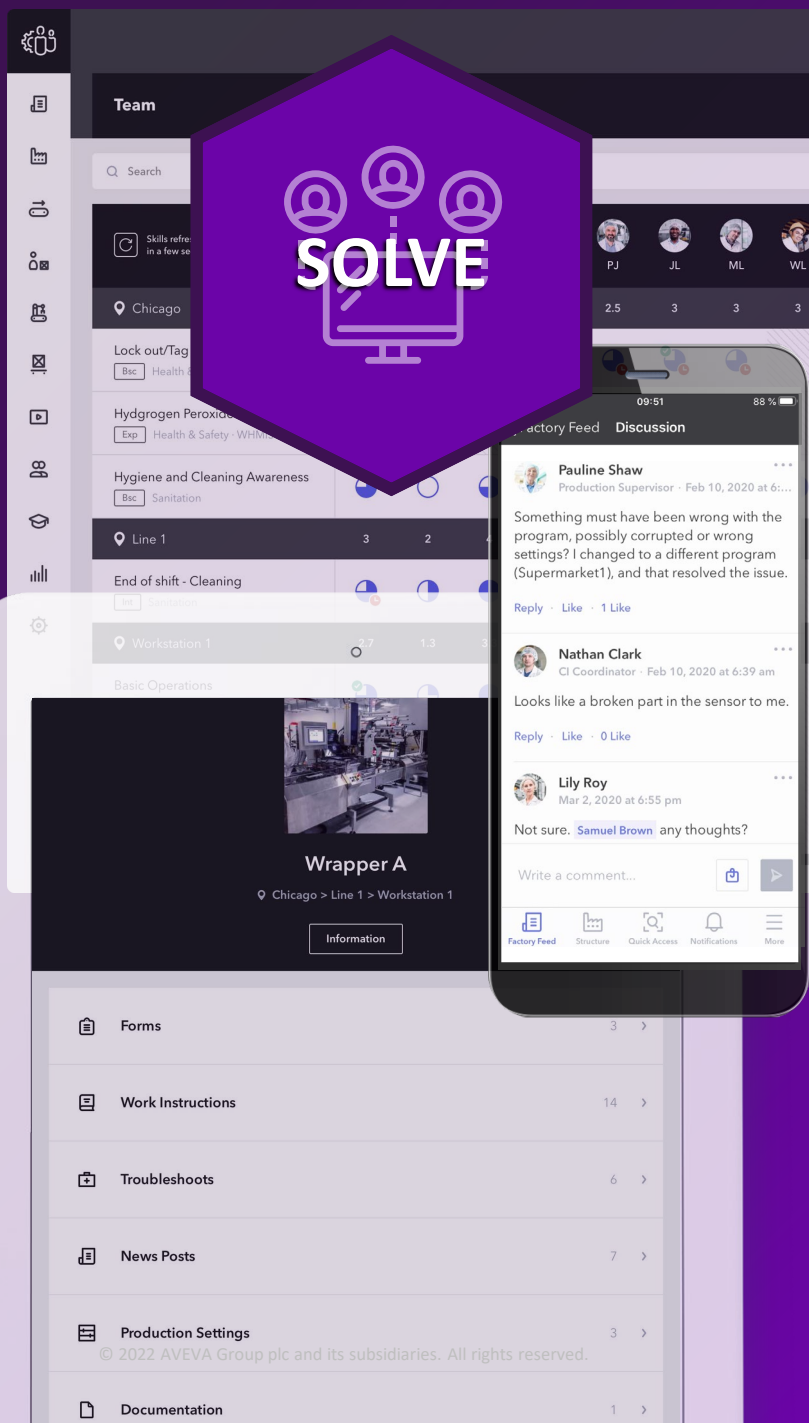




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AVEVA™ Operations Control

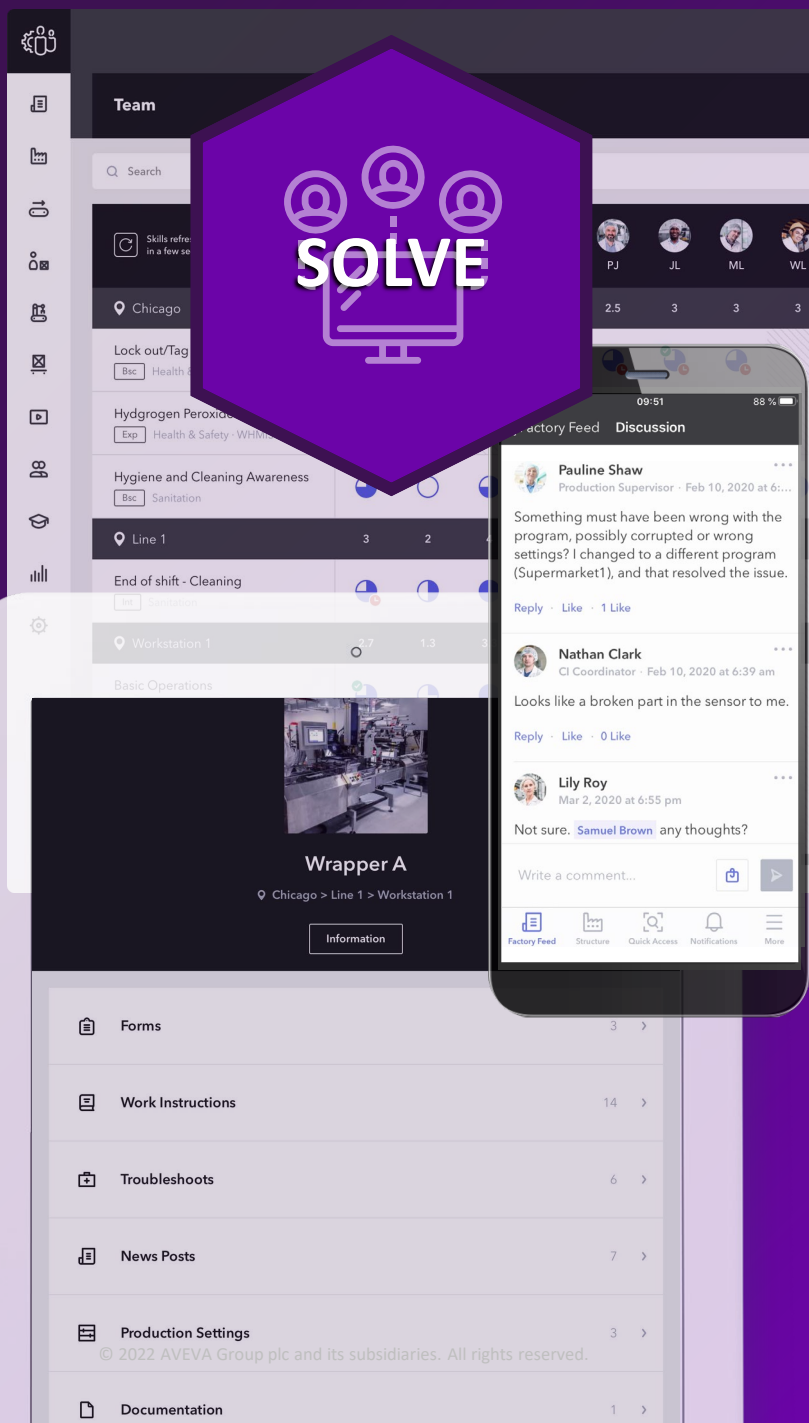




# AVEVA Teamwork

## 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.



# AVEVA Teamwork

## Collaborative Industrial Operations

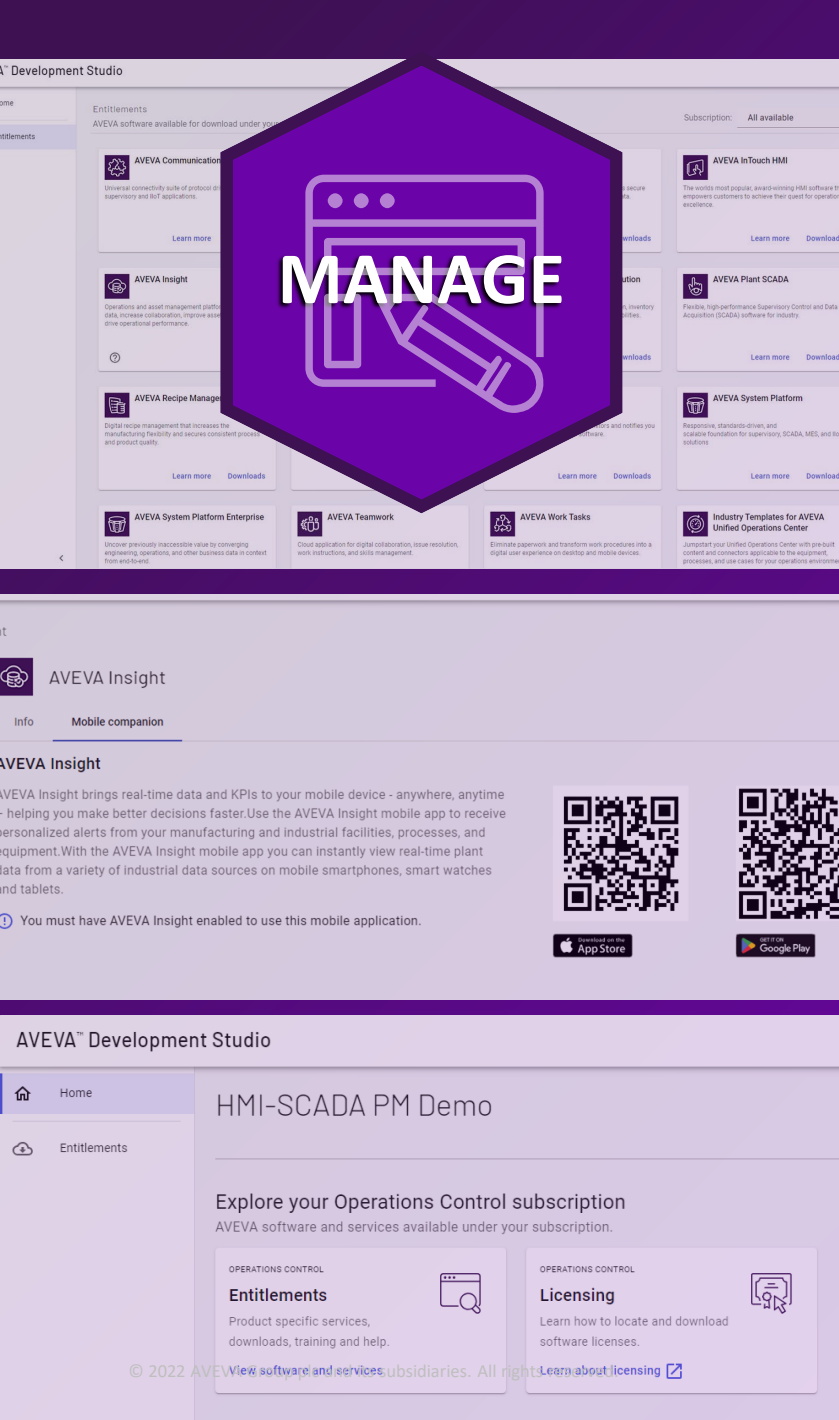
- **LEARN MORE:**
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  - **AVEVA: AI use cases for HMI/SCADA**



# Enabling Digital Transformation

AVEVA™ Operations Control

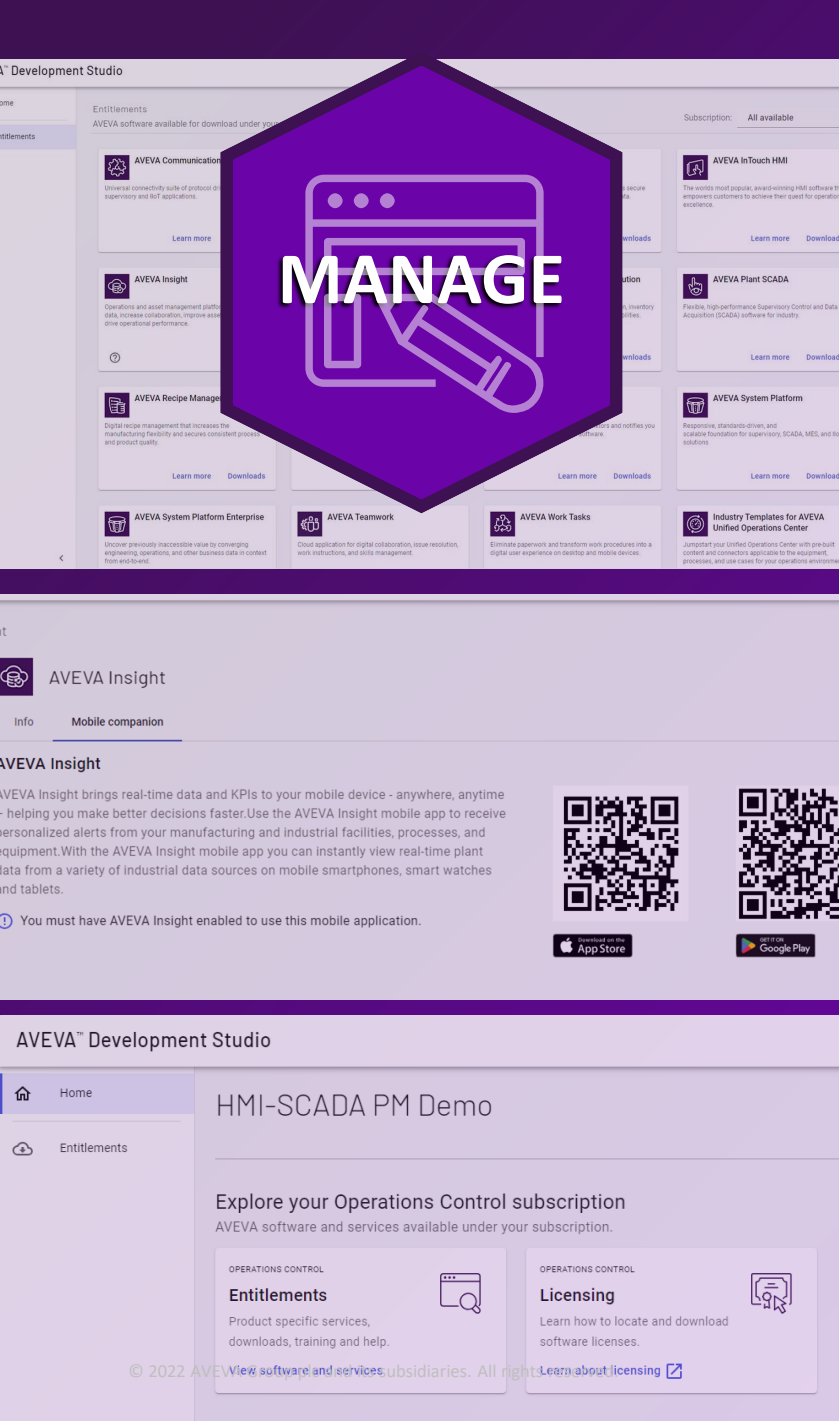




# AVEVA Development Studio

## 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.

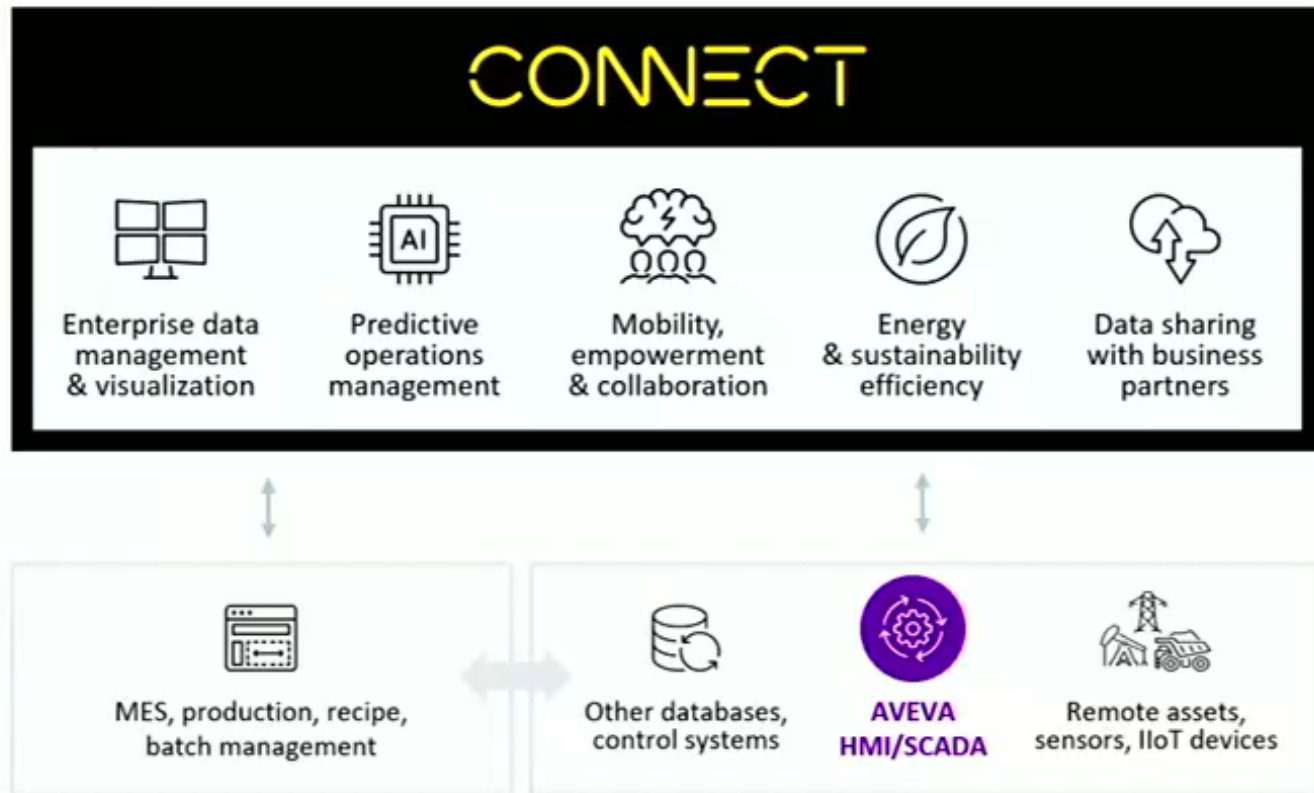


# AVEVA Development Studio

## 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

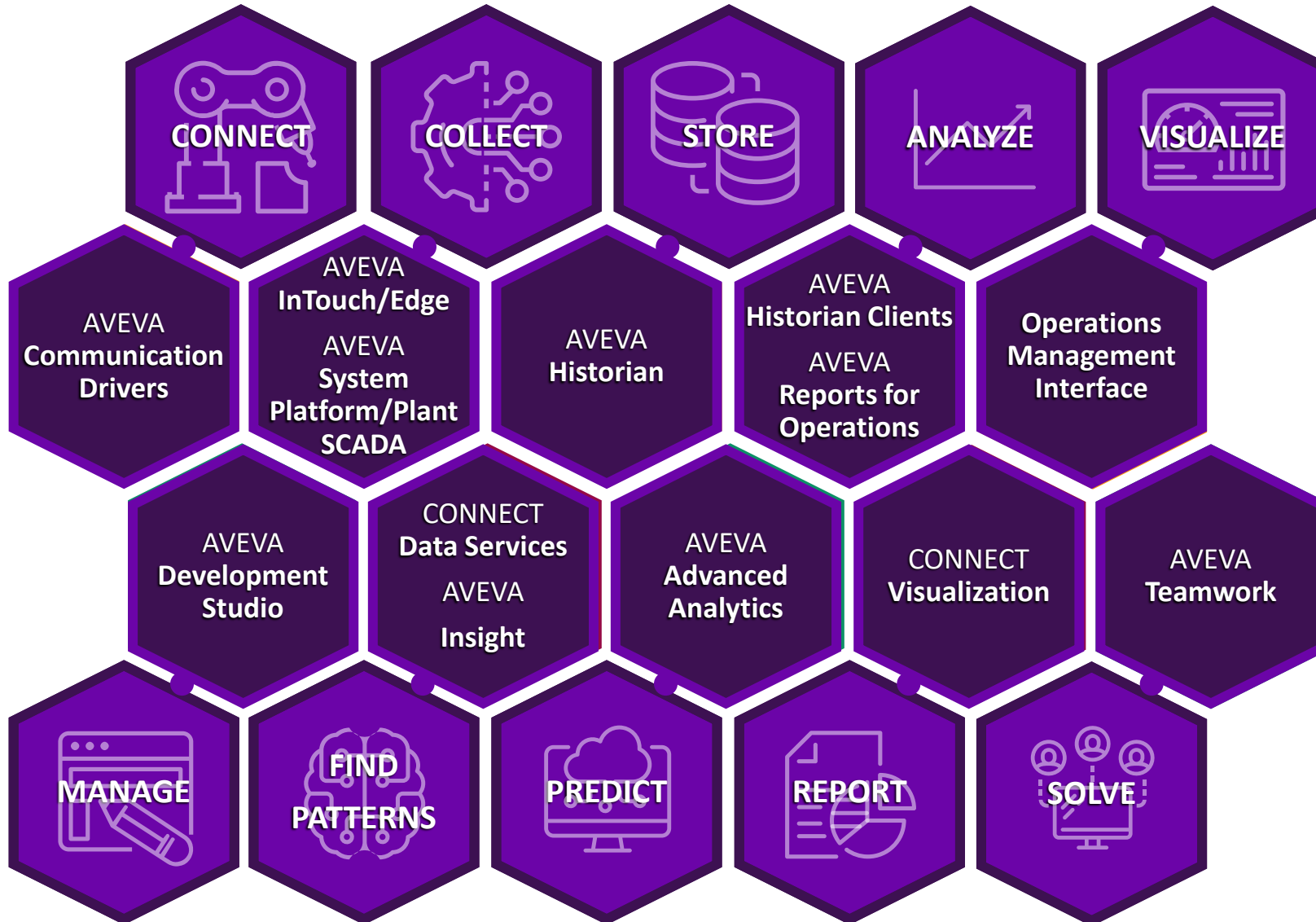
Visibility across sites with edge to cloud and data sharing communities

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)

# AVEVA Operations Control



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





# Customer Testimonials

[Learn More...](#)

- Amcor : Enterprise analytics and visualization of MES/process data
- Brewing Innovation: Inside New Belgium's Use of AVEVA Operations Control

THANK YOU!

This presentation may include predictions, estimates, intentions, beliefs and other statements that are or may be construed as being forward-looking. While these forward-looking statements represent our current judgment on what the future holds, they are subject to risks and uncertainties that could result in actual outcomes differing materially from those projected in these statements. No statement contained herein constitutes a commitment by AVEVA to perform any particular action or to deliver any particular product or product features. Readers are cautioned not to place undue reliance on these forward-looking statements, which reflect our opinions only as of the date of this presentation.

The Company shall not be obliged to disclose any revision to these forward-looking statements to reflect events or circumstances occurring after the date on which they are made or to reflect the occurrence of future events.

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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](https://www.aveva.com)