AVEVA

5 ways holistic operations control outperforms legacy HMI/SCADA

Overview

New operations control technology makes the HMI/SCADA solutions of the last decade obsolete.

The next generation of operations control software does more than just basic process execution.

It organizes data and shares it both on-premises and in the cloud, inside and outside the organization. So, businesses can coordinate operations with teams throughout the enterprise.

This e-book shows how businesses use state-of-the-art operations control technology to:

1. **Remove data silos**

2. **Increase situational awareness**

3. **Get faster, clearer data analysis**

4. **Share knowledge across the organization**

5. **Do more with their data**

1. Structure data so each user gets what they need, where and when they need it

The days of unwieldy data lakes and Excel spreadsheets are over. Modern operations control software structures data so each user gets the resolution that's most useful for them. It also makes data available both on-premises and in the cloud—so users get just the data they need, where and when they need it.

An operator uses high-resolution, real-time data in a historian to detect and troubleshoot process anomalies

A manager uses low-resolution, calculated data in near-real-time format for reports and decisions

Predictive analytics running offsite or in the cloud uses deep sets of both training and real-time data

Over 60% of surveyed customers are actively working to address inflation impacts by empowering workers to solve problems.[1]

2. Give operators the big picture

Legacy HMI/SCADA displays that use process and instrumentation diagrams (P&IDs) to mimic the actual process reduce productivity and even cause more human error. Unnecessary detail distracts users and makes them less likely to notice critical events.

Modern displays are simple and focus the user's attention on important details so they can respond quickly when something isn't right.

Light and dark modes and colorblind compatible displays

Alarm aggregation

Slide-in panes with asset documentation

Maps zoom in and out of levels of detail

91% of employees say that improving their digital dexterity improves their work effectiveness.[2]

Structure user data

**Give operators
the big picture**

Pre-built reports
and analytics

Close knowledge and
communication gaps

Operations data to
improve performance

Success
Stories

3. Reduce insight lag with pre-built reports and analytics

Data professionals spend too much time manually exporting, manipulating, and reporting data in Microsoft Excel. Modern operations control software includes out-of-the-box reporting and analytics designed just for industry that save time and effort.

Pre-defined templates and data models	Interactive charts & AI alerts	Automated reports
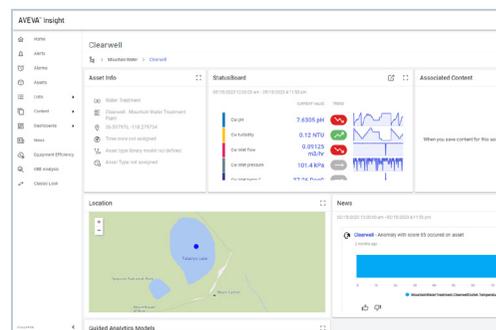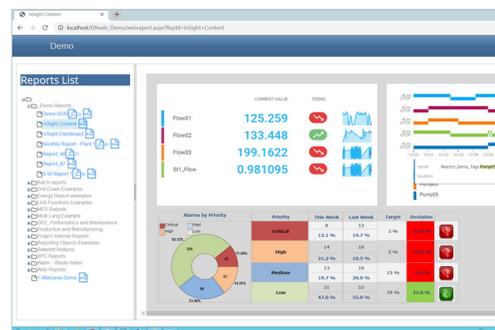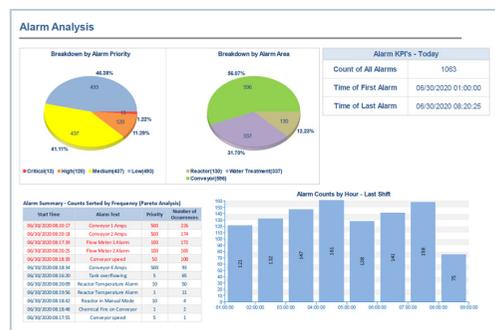
Personalized dashboards	API integration	Secure third-party data sharing

By 2025 how data is generated, processed, analyzed, and visualized for end users will be dramatically transformed by new and more ubiquitous technologies, leading to faster and more powerful insights.[3]
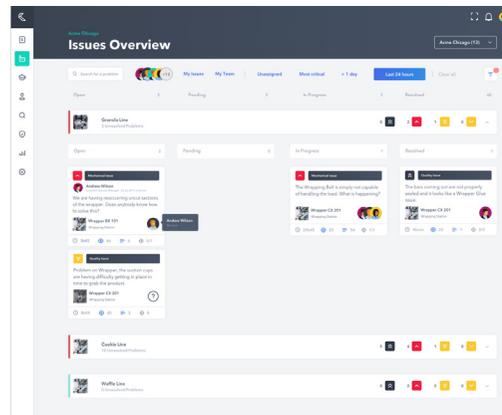
4. Close knowledge and communication gaps

Organizations are having to do more with fewer people, who often have less experience. Modern operations control technology helps retain and share the knowledge of veteran operators and lets team members learn from each other–even when they're physically distant. Operators can crowd-source solutions from remote experts and automatically share what they learn.

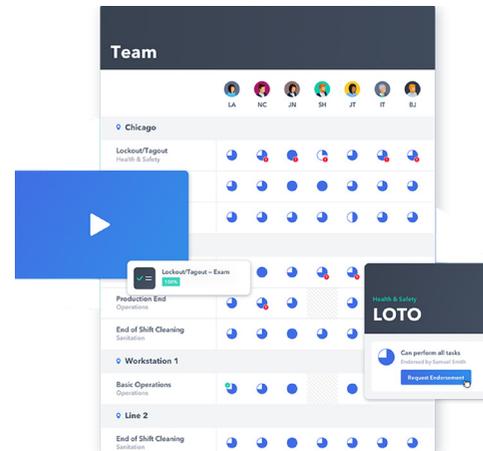Teams collaborate on solutions from across the plant floor or across the continent with:
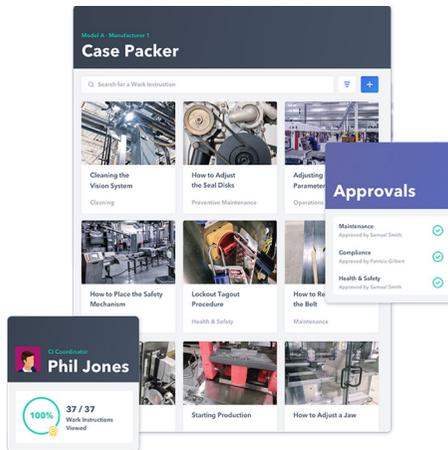
News feeds	Chats tied to process information	Digital knowledgebase

86% of respondents mentioned that the lack of availability of skilled workers was a 'significant' or 'very significant' factor driving digitization.[4]

5. Use operations data to improve performance across the organization

Operations control data doesn't have to dead-end in reports or base analytics. Modern operations control technology aggregates data and structures it hierarchically so that the whole organization can easily use it for valuable activities, like predictive analytics.

Easily feed structured data from operations control into:

- Advanced AI and model-derived analytics, which let you normalize best practices and warn you about potential issues.
- Enterprise visualization tools, which combine operations data with comprehensive supply chain, financial and other IT data to give executives and analysts at the corporate level full-factor OT/IT information in near real time.

In our age of big data becoming bigger and the analytical algorithms more complex, we will have to turn to advanced visualizations of the data more and more to be able to quickly comprehend the whole picture.[5]

New operations control software pays off for industry

Quebec Iron Ore (MFQ)

Quebec Iron Ore (MFQ) wanted to use its data to make better decisions. But its data was distributed across many different systems and isolated control rooms throughout the mine.

Its new hybrid SaaS solution provides a unified data architecture that makes structured operations data widely available for visualizations and analytics.

MFQ teams are using that data to design their own dashboards and to monitor assets and predict breakdowns. Now that the data is available, MFQ plans to continue doing more with it.

Its next project is to track and trace ore from the mine to the port and share automatic quality manifests and inventories with railway operators and port companies.

Read the success story

> **Having a solid data foundation improves the availability of our data and gives operators the power to visualize the analytics.**

Nicolas Toupin
Programmer
Business Intelligence, MFQ

CUSTOMER CASE STUDY

Innergex

Innergex manages 40 hydroelectric facilities, 35 wind farms and 8 solar farms, producing 3,484 MW. Since many of these are on remote sites, communication connections were not always 100% reliable—and Innergex lacked data redundancy. So if it lost data, it was gone for good. Further complicating its data access was its mixed set of software that had come from different vendors at different times. But now Innergex has a SaaS solution that unifies and standardizes its data—and that has improved operational efficiency, production and processes. The new solution is an integrated set of capabilities that meets the needs of operators, maintenance and management alike.

Operations staff and managers at every plant—as well as the corporate office—can troubleshoot processes in real time using its tiered data architecture. And they can now use data to predict equipment lifecycles. With the standardized data, the system is more reliable and simpler to upkeep.

" **AVEVA™ Operations Control comes with a great set of capabilities that meets the needs of everybody, from the turbine floor to the corporate office. Everybody uses it and it's really efficient.** "

François Riopel
Automation Specialist, Innergex

Operations control software from AVEVA helps teams at every level of an organization visualize, collaborate and execute. It gives users actionable information so they can make better decisions in real time that improve operational efficiency, reliability and agility.

Take a look at a day in the life of an AVEVA™ Operations Control user

Experience a day in the life of a user

Treating your operational technology stack as an evolving and persistent value-providing toolset will set you up for success beyond just controlling operations processes.

Access our evaluation guide for planning your operations control transition

Evaluate your industrial operations software

References

1. Approaching the age of performance. AVEVA. 2021.

2. Gartner®, Transform the digital employee experience with an evolving digital workplace. Gartner. ID G00764725. 2022.

   GARTNER is a registered trademark and service mark of Gartner, Inc. and/or its affiliates in the U.S. and internationally and is used herein with permission. All rights reserved.

3. The data-driven enterprise of 2025. McKinsey & Co. January 2022.

4. Global corporate survey 2022: Operational excellence budgets, priorities & tech preferences. Verdantix. 2022.

5. Embrace the power of data visualization. Deloitte.

Structure user data   Give operators
the big picture   Pre-built reports
and analytics   Close knowledge and
communication gaps   Operations data to
improve performance   Success
Stories   〈 ⌂ 〉

AVEVA

We'll take you there™

For more information, please visit:
aveva.com

in linkedin.com/company/aveva

🐦 @avevagroup

About AVEVA

AVEVA is a global leader in industrial software, driving digital transformation and sustainability. By connecting the power of information and artificial intelligence with human insight, AVEVA enables teams to use their data to unlock new value. We call this Performance Intelligence. AVEVA's comprehensive portfolio enables more than 20,000 industrial enterprises to engineer smarter, operate better and drive sustainable efficiency. AVEVA supports customers through a trusted ecosystem that includes 5,500 partners and 5,700 certified developers around the world. The company is headquartered in Cambridge, UK, with over 6,500 employees and 90 offices in over 40 countries.

Learn more at www.aveva.com