

AVEVA

Build sustainable, resilient infrastructure solutions with AVEVA



Driven by rapid population growth and a universal rise in the expected standard of living, the need to invest in infrastructure has never been higher. However, chronic underinvestment in infrastructure – from essential utilities such as water and power to transportation and buildings – means a global shortfall of 11%, or \$350Bn, a year.¹

This means infrastructure operators must make smarter investments with their limited funds. AVEVA can help you modernize your operations with proven solutions for infrastructural innovation. Learn how your specific project can benefit from digital solutions that manage operations more efficiently and help you plan for a more sustainable future.

Renewing the electrical grid



Infrastructure plan ambition

- Modernize the electric grid to deliver clean electricity
- Build new, resilient transmission lines to facilitate the expansion of renewable energy

AVEVA solutions help you

- Improve power-supply reliability for customers and a safer working environment for employees. **Alectra** implemented an advanced reliability-centered maintenance strategy that proactively identified a transformer issue, avoiding a potential \$3M in replacement costs and service outages.
- Better manage energy production complexities with a unified view of industrial data across the organization. **Santa Rosa Junior College (SRJC)** implemented a resilient, renewable-energy-powered microgrid expected to save \$330K per year.
- Address market dynamics and use data to monitor capacity in real time. **Energy Queensland** took full advantage of unused network capacity and improved asset utilization more than 20%.
- Unlock valuable data for better decision-making from strategic planning to daily operations. With information at hand, **Helen Sähköverkko Oy** can ensure uninterrupted electricity despite extreme weather conditions, while saving time and expenses.
- Scale new energy alternatives while maintaining reliable power availability. **San Diego Gas & Electric (SDG&E)** is using digital technologies such as advanced analytics and intelligent visualization to improve system reliability and achieve carbon emission goals.

¹McKinsey Global Institute, “Bridging Global Infrastructure Gaps”

Delivering clean drinking water



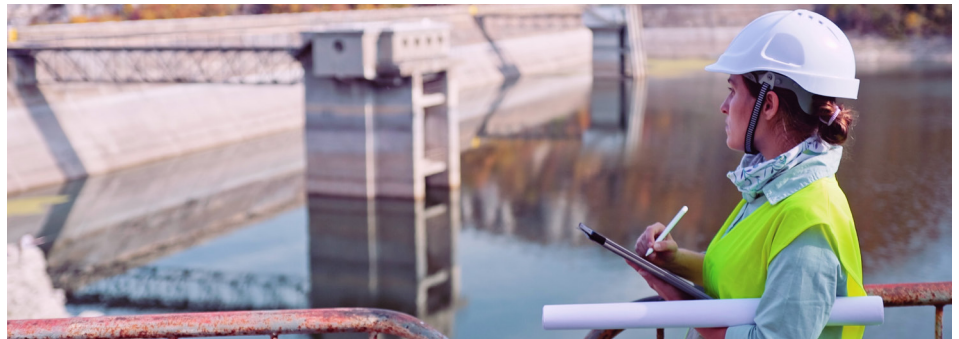
Infrastructure plan ambition

- Modernize drinking water, wastewater, and stormwater systems
- Tackle new contaminants
- Support clean water infrastructure across rural communities

AVEVA solutions help you

- Drive resiliency and sustainable management of water and sanitation for all. The **City of Boise's** groundbreaking phosphorus removal facility removes 8,000 tons of wet solids from the Boise River every year, and it all operates on AVEVA™ System Platform.
- Ensure water safety and reliability while meeting regulatory compliance. **Puerto Rico Water and Sewage Authority** has increased output twofold and estimates cost savings of \$15M over seven years, all while delivering clean, EPA-compliant water.
- Ensure water safety and availability while addressing exponential growth in water demand. **Qatar Power and Water** optimized operations and maintenance and improved worker safety while saving US \$1.4 million in fuel efficiency every year.

Creating resilient water infrastructure



Infrastructure plan ambition

- Make communities safer and water infrastructure more resilient to the impacts of climate change and cyber attacks
- Invest in weatherization

AVEVA solutions help you

- Optimize operations and reduce costs while keeping people healthy and safe. With improved automation and notification, **Spokane Water** reduced its lost water rate to 6%, one of the lowest in the United States.
- Triage incidents quickly and safely during extreme weather events. **Hampton Roads Sanitation District (HRSD)** can now monitor weather changes, flooding levels and wastewater system performance in real time, leading to greater system insights and faster response times.
- Improve water-use efficiency and maximize the performance of aging infrastructure. In a single plant, **Gori S.p.A.** reduced energy consumption by 45% with savings of 80,000 euros per month.

Improving airports, ports, and waterways



Infrastructure plan ambition

- Upgrade airport assets to ensure safe and efficient air travel
- Invest in inland waterways, coastal ports, land ports of entry and ferries

AVEVA solutions help you

- Modernize airport control systems for greater operational efficiency. **AENA** now has a single system allowing enterprise visualization of 1,500,000+ signals across building management, flight operations support, power plant management, and luggage handling.
- Build and operate the efficient infrastructure of the future. With more than 30M tons of cargo traveling through the port each year, **Port of Portland** chose AVEVA to coordinate operations and equipment maintenance – all while reducing inventory by at least 65%.
- Use advanced analytics to optimize local dredging situations. With improved data insights, **DEME** has mitigated project risk and realized savings of \$400K+ on one asset type alone.

Modernizing public transit



Infrastructure plan ambition

- Repair and upgrade aging infrastructure
- Modernize bus and rail fleets
- Make transit stations accessible to all users
- Train the transit workforce to maintain and operate new vehicles

AVEVA solutions help you

- Reduce development time and improve operational efficiency. **Norfolk Southern Railway** was able to cut development time by as much as 50% while increasing the work efficiency of both yardmasters and trainmasters.
- Enable remote management of all rail processes, including emergency management. **Ferrocarrils de la Generalitat de Catalunya** was able to overcome information silos with centralized monitoring of operations.
- Improve fixed asset reliability. Maintenance workers at **Société de Transport de Montréal (STM)**, now have access to real-time information to spot asset anomalies, reducing maintenance time.
- Increase railway traffic without building new tracks. Shifting to condition-based and predictive maintenance has allowed **ProRail** to create a single pane of glass to drive higher availability and reduce unplanned downtime.

Electrifying vehicles



Infrastructure plan ambition

- Build an integrated network of EV chargers
- Replace diesel transit vehicles
- Electrify vehicles and buses

AVEVA solutions help you

- Enable true vehicle-to-grid integration. By shifting when and how much electricity the **JuiceBox** network draws from the grid, the Smart[Grid] System tailors EV charging parameters according to grid conditions to maximize electric vehicle charging speed and efficiency while reducing costs.
- Develop new technologies to change the future of electric power. New battery technology is difficult, expensive, and time-consuming to develop, so **Blue Solutions** relies on AVEVA™ PI System™ to stay on top of production goals and accelerate development time.

Revitalizing manufacturers and small businesses



Infrastructure plan ambition

- Strengthen manufacturing supply chains for critical goods
- Protect people from future pandemics
- Jumpstart clean energy manufacturing

AVEVA solutions help you

- Accelerate the digital transformation of manufacturing operations, safeguarding quality and safety. **Genentech** accelerated medicine manufacturing 50%.
- Increase production capacity. **New Belgium Brewing Co.** increased overall equipment effectiveness (OEE) by 20% and reduced downtime by more than 50%, allowing the company to operate at full capacity and double case production.
- Improve visibility into plant operations and reduce unnecessary waste and costly delays. With improved insight into line performance, **Tyson Foods** prevented recalls and improved overall yield by 0.1% in the first six months – savings that paid for the improvement project.

Modernizing buildings and campuses



Infrastructure plan ambition

- Build, rehabilitate and retrofit affordable, accessible, energy-efficient and resilient schools, campuses and childcare facilities.
- Invest in the modernization, sustainability and resilience of public buildings
- Build, preserve and retrofit commercial buildings

AVEVA solutions help you

- Modernize heating systems and improve energy efficiency. By unifying more than 1,200 municipal properties under a single, open building management system (BMS), the **City of Bremen** reduced energy consumption by 3% and saved more than \$43K in costs per year.
- Deliver affordable, energy-efficient and resilient schools. By using operational data to achieve carbon neutrality, **UC Davis** reduced gas usage by 62% and is now on track to be carbon neutral by 2025. UC Davis expects to save an estimated \$197M over 60 years.
- Improve indoor air quality. **CosaTron** uses the cloud to analyze data over time and provide high-value, remote air quality monitoring services for building owners and facilities managers alike. Clients can even see air quality displays in real time on site.

Creating smarter and more sustainable cities



Infrastructure plan ambition

- Create more livable and sustainable cities
- Improve agility and resiliency of operations
- Digitalize systems to attract and retain the new generation of workers
- Extend asset capacity and lifespan

AVEVA solutions help you

- Better manage the supply and demand of crucial civic services, including water, sewer, street lighting and electrical. With real-time insight and management of critical systems, **Nava Raipur** has reduced response times by 60%.
- Increase city resilience and asset utilization. **Kohima Smart City** has improved operational efficiency by 40% and realized 20% energy savings.
- Become a more sustainable and livable city. The **City of Barcelona** has optimized water consumption and improved availability of city resources such as elevators, escalators, public fountains, parks and gardens.

AVEVA solutions

AVEVA offers industry-leading digital tools that are transforming operations across industries by centralizing and democratizing data. We design solutions that give organizations real-time visibility, help them collaborate across teams and sites, and allow them to work sustainably.

From single buildings to cities, and across critical services such as water, power and transportation, AVEVA has a proven record in supporting the digital transformation of the world's infrastructure. Our solutions improve efficiency, reduce operation costs and prepare businesses, institutions and municipalities for a sustainable future.



Modernizing infrastructure for resilience and sustainability

AVEVA helps infrastructure operators ensure the resiliency of their service networks by improving the functionality, comfort, safety and efficiency of the built environment. Our solutions digitally modernize aging infrastructure to integrate people, places, processes and technology.

The **AVEVA PI System** and **AVEVA™ Unified Operations Center** provide owners and operators real-time insight into operations. That insight lets you reduce costs, improve safety and reliability, and make data-based decisions for long-term strategic success.

These solutions are also available as part of our cost-effective AVEVA™ Flex subscription program, which removes traditional barriers to adoption and allows you to achieve faster return on investment.

Shaping a sustainable future for transmission and distribution

AVEVA helps organizations transition to green energy with digital tools for a resilient smart grid that can:

- Accommodate renewable energy sources and bi-directional energy flow
- Ensure power availability by reacting to changing environmental conditions and fluctuating demand
- Restore service faster through improved fault detection, data management and visualization

Shaping a sustainable future for water

AVEVA helps organizations manage water and sanitation sustainably and resiliently with technology that can:

- Optimize operations and reduce costs while keeping people healthy and safe
- Improve water-use efficiency and maximize the performance of aging infrastructure
- Ensure water safety and reliability while meeting regulatory compliance

Shaping a sustainable future for transportation

AVEVA specializes in optimizing delivery for the connected industrial economy. We help organizations update, meet and exceed their goals for transportation upgrades, including:

- Minimizing greenhouse emissions and complying with increasing ESG regulations through efficient delivery networks and optimized value chains
- Shifting to alternative fuels and transportation modes to minimize costs and carbon intensity
- Building and operating the efficient infrastructure of the future through digital engineering, operations and comprehensive data management

AVEVA is helping transform the world's infrastructure

We are helping customers everywhere to modernize and digitalize the world's infrastructure



Get in touch

No matter how new sustainability initiatives affect your operations, AVEVA can help you build and rebuild more sustainable systems with robust, intuitive industrial software solutions.

Contact us

Learn more

AVEVA

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