DIGITALIZING WATER & WASTEWATER INFRASTRUCTURE MANAGEMENT

With GENESIS by Mitsubishi Electric Iconics Digital Solutions

- **Gain complete visibility and control of all assets in real time, from anywhere**

- **Automate alerts and workflows to improve response times and operational efficiency**

- **Reduce energy, chemical, and maintenance costs through smarter monitoring**

- **Simplify compliance with built-in tools that access, unify, and aggregate data from disparate systems**

- **Adapt to workforce challenges with consistent and intuitive user interfaces**

GAIN CLEAR INSIGHTS WITH DIGITAL WATER OPERATIONS

GENESIS is an advanced automation and digitalization platform that is secure by design and goes beyond traditional SCADA. GENESIS helps water and wastewater facilities improve performance, reduce operational costs, and meet regulatory standards with ease. Whether you are managing a single treatment plant or an entire utility network, GENESIS gives you 24/7 visibility, control, and insights to keep operations running smoothly.

INDUSTRY CHALLENGES

If you manage water or wastewater infrastructure, you're balancing a wide range of operational challenges such as:

- **Aging Infrastructure & Manual Processes:** Outdated equipment and manual workflows hinder facility management, reduce efficiency, and increase downtime.

- **Fragmented Data & Incompatible Systems:** Disconnected systems and assets make data access and reporting slow and hinder decision-making, increasing the risk of error.

- **Rising Operational Costs:** Energy, chemical, and maintenance costs continue to rise, making optimization harder to achieve.

- **Regulatory Compliance:** Limited access to data trapped in legacy systems makes it difficult to meet evolving regulatory standards that require consistent, accurate data and timely reporting.

- **Emergency Response & Visibility:** Limited remote access and real-time visibility delay response time and reduce service quality and reliability.

- **Workforce Gaps:** Retirements, skill shortages, and training demands make it difficult to sustain efficient operations without intuitive tools that capture and enforce standard operating procedures.

THE GENESIS SCADA SOLUTION

GENESIS is a modular, scalable platform that unifies your operations—no scripting required. It delivers real-time data acquisition, monitoring, and control through secure, web-based interfaces. Whether deployed on-premises, in the cloud, or in a hybrid environment, GENESIS empowers your teams to act faster, operate smarter, and stay confidently in control.

CORE FEATURES & BENEFITS

- **Universal Connectivity** provides data accessibility and enables centralized supervisory control of modern equipment and legacy systems.

- **Alarm Management & Escalation** ensures the right person is notified at the right time—prioritizing focus, reducing downtime and minimizing disruption.

- **Real-Time Monitoring & Control** delivers immediate operational visibility, enabling faster, more informed responses through a consistent, intuitive user interface.

- **Digital Twin & Data Modeling** organizes and standardizes assets, preparing data for predictive analytics tools.

- **Mobile Access** enables secure monitoring and control from any location, with Geographic Information Systems (GIS) integration for improved operational agility.

- **Data Historian** provides data management to support operational objectives such as energy management, optimized chemical usage, and sustainability reporting.

- **Reporting Tools** simplify regulatory compliance by reducing manual effort through automated data capture, documentation, and built-in audit ability.

- **Workflow Engine** enables enforcement of standard operating procedures (SOP) and accelerates workforce onboarding and upskilling with intuitive user interfaces.
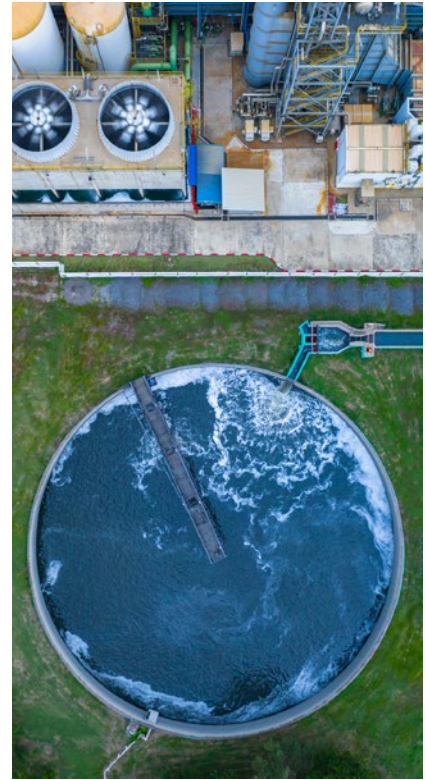
USE CASES IN WATER & WASTEWATER OPERATIONS

• Automate filter backwash cycles to improve efficiency

• Monitor chlorine levels, turbidity, and chemical usage

• Manage pump schedules and reservoir levels in real time

• Detect and respond to leaks, overflows, and asset failures

• Maintain digital logs for EPA/TCEQ compliance and audits

BUILT-IN SECURITY & RELIABILITY

• Secure by design, IEC 62443 Part 4-1 certification for product development

• Secure by default installation option

• Encrypted communications using industry protocols

• Support for IT authentication standards (SAML 2.0 and OIDC)

• Role-based user authentication and access control

• Audit logging for traceability

• Redundant and highly available architecture options

DEPLOYMENT & SUPPORT OPTIONS

• Deploy on-premises, in the cloud, or in a hybrid setup

• Comprehensive onboarding, documentation, and user training

• 24/7 global technical support with access to product specialists

CUSTOMER SUCCESS STORY: SCOTTISH WATER

TRANSFORMING WATER OPERATIONS THROUGH SITUATIONAL AWARENESS

Scottish Water, serving over 2.5 million households and 156,000 businesses across Scotland, delivers 1.35 billion liters of clean water and treats 945 million liters of wastewater each day. To improve service reliability and responsiveness, they established an Intelligent Control Centre (ICC) with GENESIS to transform situational and operational awareness.

THE CHALLENGES

• Manual data consolidation from disparate systems

• Delayed responses to events affecting service

• Lack of integration across telemetry, customer contact, weather, and work data

THE SOLUTION

Scottish Water used GENESIS to implement a data-driven situational awareness application that:

• Combines real-time telemetry, weather forecasts, and customer interactions

• Displays a single, integrated view with actionable insights

• Provides geospatial context and predictive response capabilities

THE RESULTS

• Achieved £3.8 million in operational efficiency savings

• Prevented service interruptions by enabling proactive interventions

• Streamlined event detection and resolution during high-profile events

• Improved performance across key regulatory metrics (OPA, CEM)

> **While we continue to develop our Situational Awareness system, we have already seen significant benefits through the early identification of business events and thus the protection of our service to our customers. As we move forward, the functionality developed to date will not only continue to improve our reactive response but fully support the delivery of a more proactive service from our ICC to both our internal and external customers.**
>
> Bernie Rodden, ICC Manager, Scottish Water

Live Weather Data with Business Alarms

The Situational Awareness Application

TAKE CONTROL OF YOUR WATER OPERATIONS

Don't let outdated tools, disconnected systems, or distance slow you down. Whether you operate a small-town plant or a regional utility, GENESIS helps you:

• Visualize, monitor, and manage operations—from anywhere

• Access all your data from disparate assets through one intuitive, centralized dashboard

• Make faster, smarter decisions with real-time and historical insights

• Stay accurate and compliant with automated billing and reporting tools

LET'S GET STARTED

    • Visit our website to explore GENESIS | iconics.com

    • Contact us to speak with an expert | water@iconics.com

    • Request a live demo | iconics.com/water-demo-request

ABOUT US

Mitsubishi Electric Iconics Digital Solutions, headquartered in Foxborough, Massachusetts, is a global leader in industrial automation, smart and sustainable buildings, and digitalization software. Our advanced HMI, SCADA, and Smart Building solutions enable businesses to visualize, monitor, and optimize their most critical assets and spaces. With installations in over 100 countries and adoption by more than 70% of Global 500 companies, we drive operational efficiency and continuous improvement across industrial manufacturing, infrastructure, and built environment sectors. Backed by cutting-edge technology and deep industry expertise, we deliver flexible, scalable, and high-performance software solutions. As a testament to our excellence, Mitsubishi Electric Iconics Digital Solutions has been recognized as a seven-time winner of the Microsoft Partner of the Year award.

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