Challenges in smart water

Water industry leaders face many challenges in today’s environment. From aging infrastructure, climate change, population growth, and shifting workforce demographics, to higher costs for maintaining and operating facilities, there is increasing pressure to address these challenges innovatively while simultaneously delivering safe and equitable access to water and protecting communities from water-related disasters.

As we seek to reduce water loss, manage storm and wastewater systems, assure quality of service, mitigate the damaging effects of climate change, and increase operational efficiencies, water utilities must embrace innovative technologies to modernize aging infrastructure and leverage insights gained from secure interoperable data. This will require a foundational network that allows for the secure integration of existing and future devices, systems, applications, and smart water services.

Industry imperatives

- Empower through secure collection of sensor and infrastructure data
- Improve efficiency and quality of service while proactively maintaining and safeguarding assets
- Simplify network designs through secure systems interoperability
- Build on open standards and remove silos to improve scalability and meet regulations
- Integrate cybersecurity for end-to-end protection across all devices, systems, and networks
Why Cisco

Cisco is leading the way in smart water, collaborating with utility organizations and industry leaders across the globe to implement innovative IoT technologies and intent-based networking with integrated security.

In a world with more data, more users, and more services, there is more to protect, particularly as it relates to a vital resource like water. As cyber threats become more sophisticated and continue to evolve, Cisco is aware that the traditional approach is no longer the answer. That is why we put cybersecurity above everything and why we, as a company, prioritize security in all that we do. Only with Cisco can you attain effective network security to face today’s challenges and manage tomorrow’s evolving threats.

Use cases for smart water

Advanced metering infrastructure
With Cisco® Connected Grid Resilient Mesh and LoRaWAN solutions, AMI technology can help water utilities to:
- Detect leaks and theft
- Protect vital revenue streams
- Maintain quality of service
- Offer better customer engagement

Flood monitoring
With Cisco’s secure LoRaWAN and edge analytics capabilities, agencies can:
- Minimize flood impacts on human lives and property
- Protect water ecosystem health
- Monitor water levels for early warning notifications and safety actions

Condition-based monitoring
With Cisco’s secure WAN and intent-based networking, water utilities can:
- Support predictive maintenance for better visibility and quality of service
- Apply AI/ML for advanced analytics
- Securely integrate data from disparate sources

Quality monitoring
With Cisco’s LoRaWAN and intent-based networking, utilities can:
- Ensure quality of water, wastewater, storm water, and combined sewer systems
- Measure thresholds for pH levels, dissolved oxygen, and other critical elements to protect public health and the environment

SCADA modernization
Cisco’s industry-leading networking, security, and IoT solutions allow for critical SCADA system modernization.

Learn more
Explore more of Cisco’s solutions for cities and communities: cisco.com/go/smartconnectedcommunities

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