Intelligent Urban Water Supply Testbed **Insight**

Featured Resources: Industrial Internet Reference Architecture (IIRA)
Industrial Internet Connectivity Framework (IICF)
Industrial Internet Security Framework (IISF)

RESULTS

- Enhances efficiency of water supply operations and reduces water delivery energy consumption up to 30%
- Connected to 2,500 water pumps in 100 municipalities
- Monitor water quality and alert if the quality is degraded
- Increases public safety and quality & availability of water supply

Team

- Water and Process Group (WPG)
- Thingswise, LLC
- CAICT

The Challenge

- Dramatic population growth
- Substandard drinking water quality
- Lack of visibility into operations and assets
- Improve water delivery processes, decrease operational costs, protect the environment and enhance public safety

The Solution

Deploy an industrial internet system that integrates urban water supply assets, information systems and business processes to deliver safe, quality water to residents with high reliability and efficiency; benefiting society, businesses and the environment.

Key Insights

- The Industrial Internet Consortium's Industrial Internet Reference Architecture (IIRA) and Industrial Internet Connectivity Framework (IICF) provided good guidance in designing the testbed system.
- The testbed architecture was based on the IIRA and successfully enabled intelligent urban water supply operations.
- Security is complex and of the utmost importance when it comes to systems involving essential infrastructure such as water supply. The Industrial Internet Security Framework (IISF) provided essential guidance, in terms of analyzing security requirements, assessing threats and building security models to prevent the threats.