



# Region of Waterloo

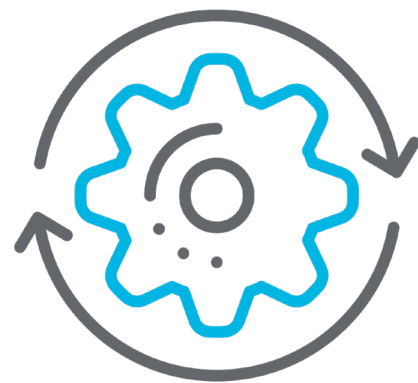
Streamlines Water System to Ensure Highest Quality





The Region of Waterloo is a regional municipality in Southern Ontario, Canada with a population of 535,154.

The Region's water supply system has more than 80 facilities and supplies water to seven communities: the City's of Cambridge, Kitchener and Waterloo; and the Township's of North Dumfries, Wellesley, Wilmot, and Woolwich.



## The Problem

The Regional Municipality of Waterloo's Water Services department is working with GrayMatter, a GE Digital partner, to develop and implement an iFIX SCADA upgrade program designed to modernize the Region's infrastructure and operating methods. In some cases, equipment manufacturers have phased out hardware or software. Other systems lacked industry-standard features or the ability to leverage best practices from industry standards bodies such as ISA. The Region pursued the project to maintain or improve regulatory compliance and provide water that meets the highest quality standards for its service area.

## The Solution

The Region project team broke down all of the systems in the water division's SCADA environment, qualifying and prioritizing the most challenging tasks such as removing and replacing discontinued hardware components. Leigh McDermott, senior project manager at the Region, said the most significant enhancement has been the improved clarity and precision of the iFIX high-performance graphics HMI/SCADA screens.

## Big Wins

- Standardized high-performance graphics
- Empowered operators to quickly act on data
- Anticipate significant reduction in training time for new operators

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*“It is truly the interface to everything we do. We’re really trying to streamline the way that all of our staff interact with our systems. GrayMatter has been involved in the screen development process from the start.”*

— **Leigh McDermott,**  
**Senior Project Manager,**  
**Region of Waterloo**

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## Wins

According to McDermott, the new high-performance graphic interfaces, which are in the process of being implemented, allow operators to quickly spot adverse or non-standard conditions in the water system.

Operators can intuitively navigate the SCADA system, understand the system’s status, and most importantly see what is going on quickly. The HMI-SCADA screens are following the ANSI/ISA-101.01-2015, Human Machine Interfaces for Process Automation Systems Standard. Colors indicate an alarm and unique shapes can pinpoint a developing issue.

Examples of adverse conditions include: overflowing tank, high pressure in the distribution system, chlorine pump failure and high turbidity. Unique gauge styles are used to help create a familiarity with instrument types. Operators can recognize a parameter without needing colors or titles to identify them.

Over time, these efficiencies will produce significant savings for the system.

There are further savings to be achieved through the reduced time required to identify an upset condition in progress before damage or downtime ensues, not to mention reducing risks faced by the water supply system.

The new iFIX system configuration will also allow the Region to eliminate the redundant programming of local operator interfaces at their remote stations by using a single graphic repository and scalable thin clients.

All of the changes are intended to optimize and streamline the water system.

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*“We’re standardizing the way we display data. It’s working. We had an operator comment that they better understood what was going on compared to our original screens.”*

— **Leigh McDermott,**  
**Senior Project Manager,**  
**Region of Waterloo**

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## About GE

GE (NYSE: GE) is the world's Digital Industrial Company, transforming industry with software-defined machines and solutions that are connected, responsive and predictive. GE is organized around a global exchange of knowledge, the "GE Store," through which each business shares and accesses the same technology, markets, structure and intellect. Each invention further fuels innovation and application across our industrial sectors. With people, services, technology and scale, GE delivers better outcomes for customers by speaking the language of industry.

## Contact Information

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