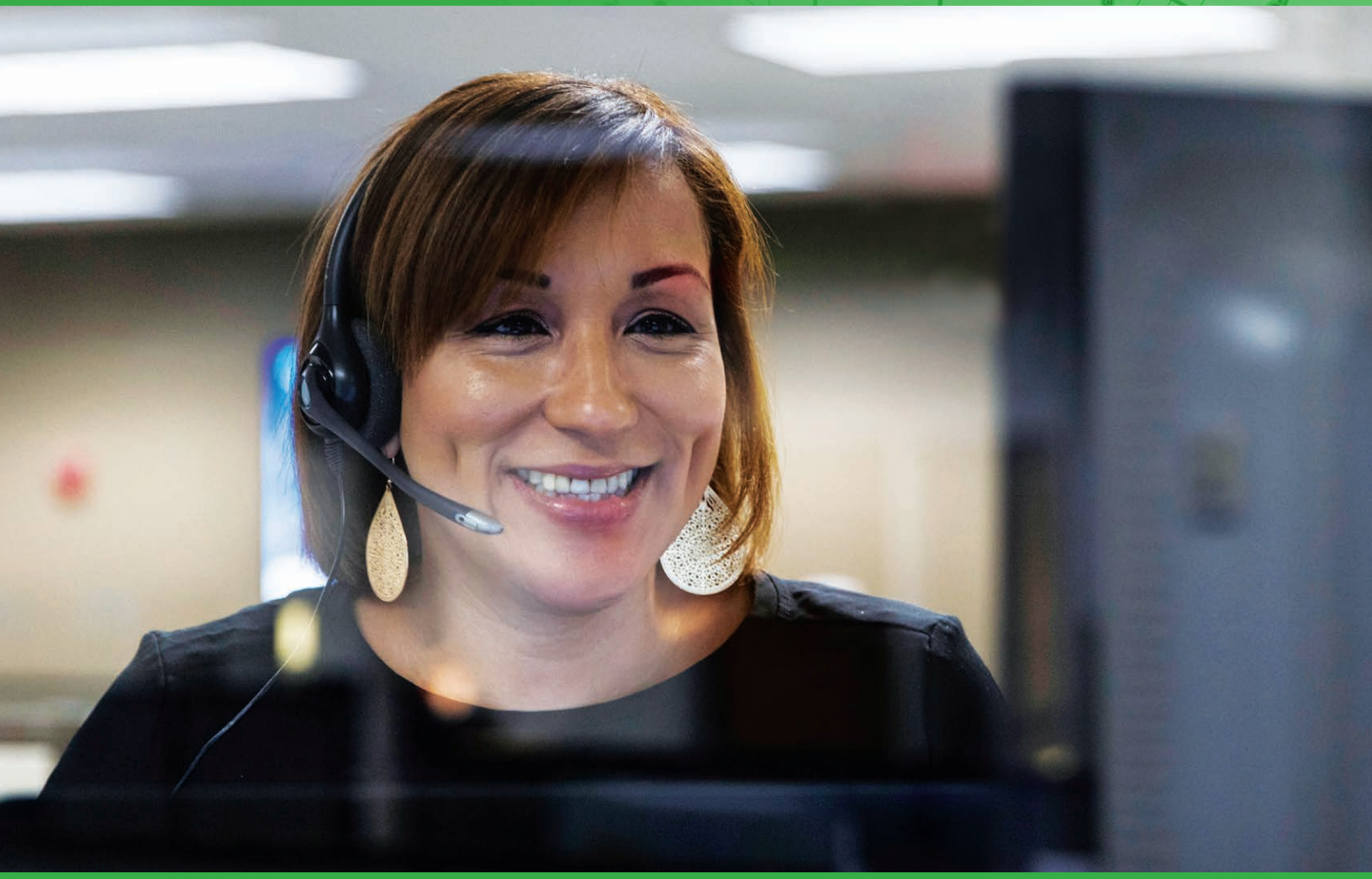
EXCEPTIONAL CUSTOMER CARE



A COMPLETE GIS

Water Utilities

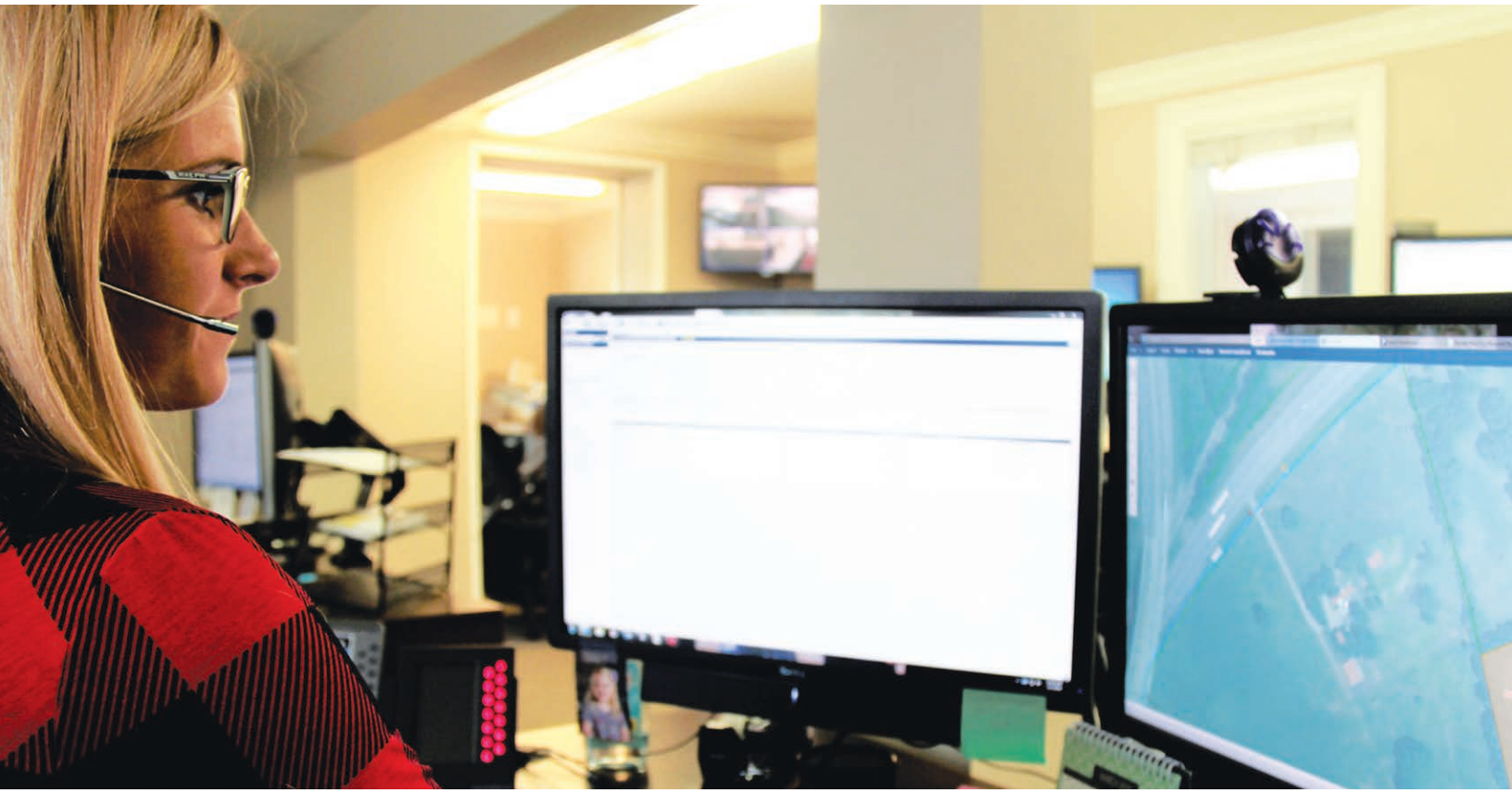
esri THE SCIENCE OF WHERE®

Introduction

Water utility customers have higher expectations than in the past. And this continues to rise as technology enables easier ways to engage customers. This means utilities must focus more intently than ever on those they serve. They need to understand what type of information customers want and how best to share it with them. Timely communication is essential to keep customers well informed and happy.

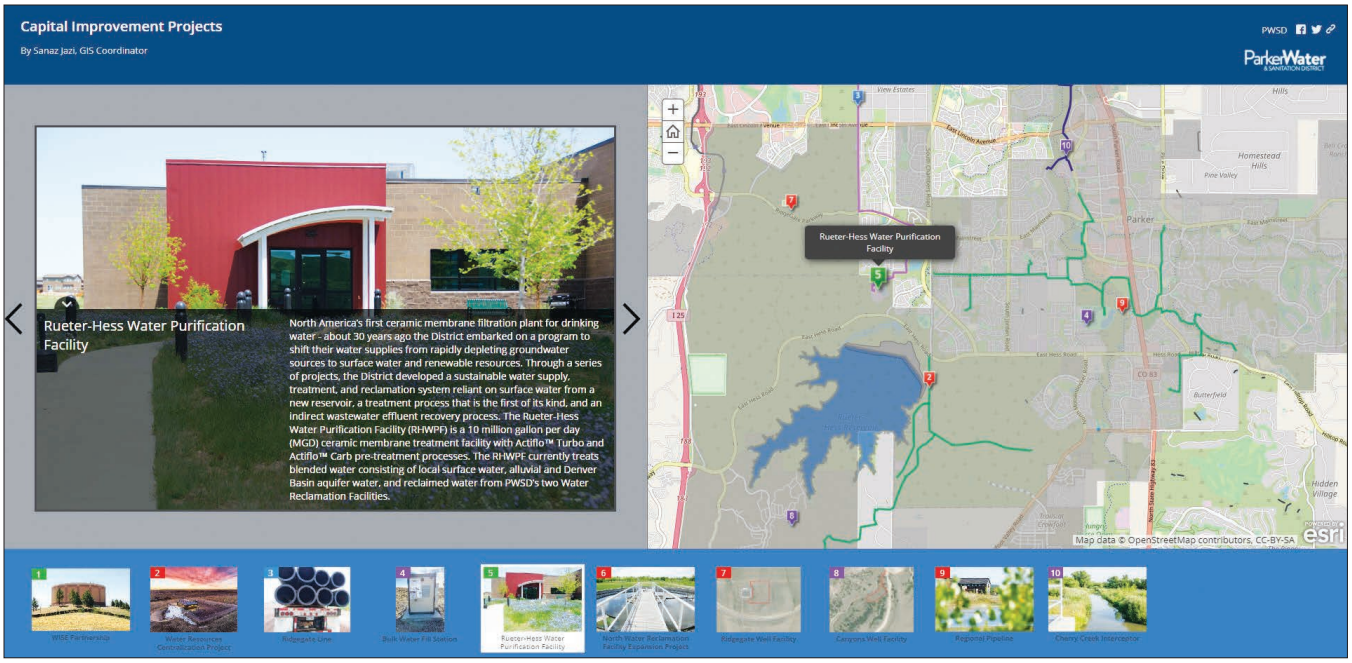
Customer care workflows within utilities need to be coordinated across different departments. This can be challenging as each department has different priorities and different ways of sharing information. Software solutions may or may not integrate across departments, resulting in data silos and reduced collaboration. This slows down response time and can negatively affect customer satisfaction.

Esri's ArcGIS® software provides out-of-the-box solutions that enable increased sharing and collaboration. Easy-to-use applications streamline workflows to keep everyone aligned and focused on the customer. Maps and apps can be embedded in websites to provide customer self-service options. Communication with all stakeholders is greatly improved, resulting in higher satisfaction internally and externally.



Contents

The Importance of Customer Care



The customer is the most important asset utilities have. Without customers, there is no purpose for serving clean, safe water. It is important to have satisfied customers because they support the work that utilities do by consistently paying their bills, supporting fee increases, and promoting the value of water.

Modern technology has set high expectations for the customer experience. Customers with a question or a problem expect immediate answers and fast resolution of the problem. A seamless experience is a minimum expectation. Meeting this expectation is important because of the following:

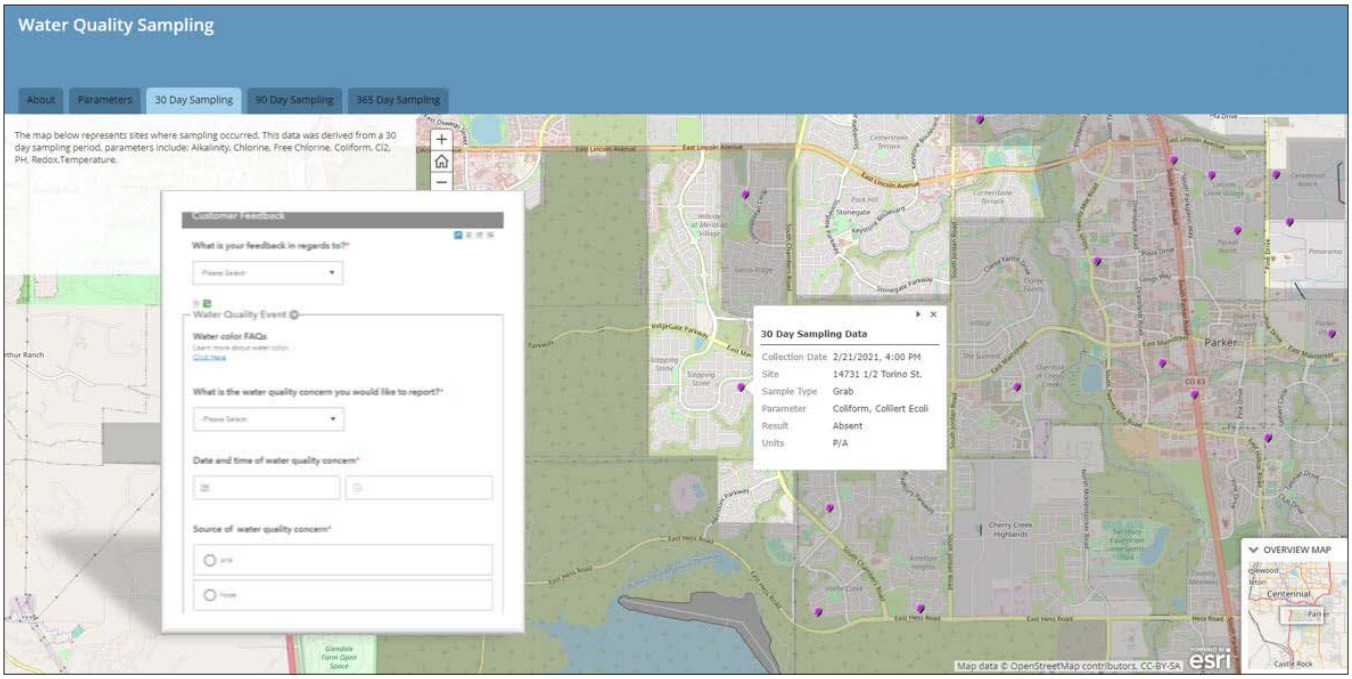
- Water is easily devalued. If customers are unhappy with their water service or water quality, they will not hesitate to buy bottled water and pay an enormous amount more for it. They will only use water for doing laundry and flushing toilets. This decreases how they value the water being served to them.
- Capital and operating expenses continue to grow. Unsatisfied customers will not support increasing fees. Satisfied customers are more willing to pay costs that fund upgrades to the system.
- Customers have a variety of options to connect with large audiences in social media groups, channels, meetups, and more. One dissatisfied customer can share their experience across social media outlets, increasing negativity toward the utility.

ArcGIS helps improve customer care, enabling utilities to make information accessible in real time, share milestones for capital projects, connect with stakeholders and customers, and teach the value of water. Easy-to-use maps and apps keep utility staff up-to-date about events and activities, enabling them to quickly answer customer questions. These same maps and apps provide field crews and office staff with the information they need to more efficiently perform their work, ensuring that the customer continues to receive clean, safe water. Immersive stories with text, interactive maps, and amazing photos are used to share educational resources, project updates, consumer confidence reports, and more! Social media feeds viewed within maps provide insight into customer opinions and experiences.

ArcGIS technology helps water utilities overcome customer care challenges by fundamentally transforming how they communicate and engage staff as well as customers.

Parker Water effectively provides customers with important district information, shares useful data through interactive web maps, and gathers valuable customer feedback by using smart forms. Learn how the utility created an engaging customer experience using maps and apps. **Leveraging Web Apps to Improve Customer Service**

Why Location Technology Matters



Each customer is associated with a location. They receive water via a specific connection point. They receive their bill at a specific address. Capital projects, shutdowns, leaks, and customer complaints all reference a location. Maintenance and operations rely on location to perform work. Utility networks are built using the location of assets.

Location is essential when answering vital questions:

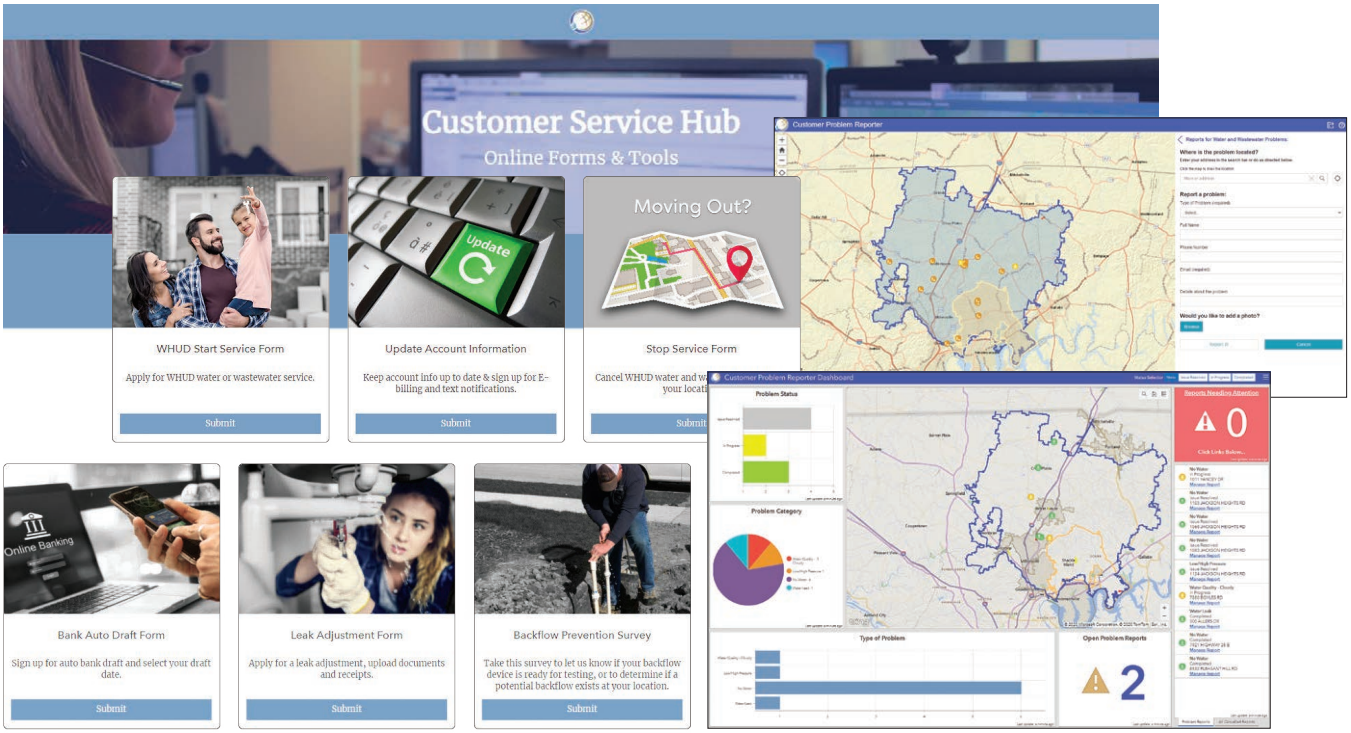
- Where are asset failures negatively impacting customers?
- Where are customer complaints coming from? Are they coming from the same area?
- Where should investments be made to improve sustainability?
- Where do environmental factors—such as the weather or soil conditions—pose the greatest potential impact on service reliability?

Esri's ArcGIS supports exceptional customer care by delivering world-leading location technology enabled with solutions that can quickly transform how water utilities work. ArcGIS brings disparate types of information together; provides a real-world model of the utility network; and reveals relationships between data, customers, and the network. Powerful analytics optimize data to reveal the unknown. Information is shared with stakeholders via easy-to-understand maps, charts, dashboards, and more!

"It's so exciting that GIS is now accessible to everyone. Only a few years ago, we used GIS for making maps, and now, it's a tool that we use to help drive decisions, manage assets, prioritize work, and yes, still make maps. I look forward to the continued integration of GIS into our everyday workflow!"

Rebecca Tejada, PE, Director of Engineering,
Parker Water & Sanitation District

Exceptional Customer Care



Exceptional customer care results in quality relationships with customers. It builds community and improves employee morale. Understanding utility events and activities and where they are happening provides customer service representatives with knowledge that enables them to better empathize with customers. Access to current, dependable data allows them to prioritize customer requests and delegate tasks to appropriate staff. And empowering customers with self-service solutions gives them a way to proactively seek the answers themselves.

ArcGIS provides solutions that greatly improve communication with all stakeholders, staff, and customers, resulting in higher satisfaction internally and externally. It does this by addressing three needs:

Understanding Spatial Relationships

Using location, ArcGIS enables the integration of business information systems. This provides utilities with a more holistic view of customer data. Customer interactions, location, demographics, and consumption can be viewed and analyzed within one platform. A deeper understanding of customer characteristics helps to define how to communicate and engage them.

Providing Extraordinary Service

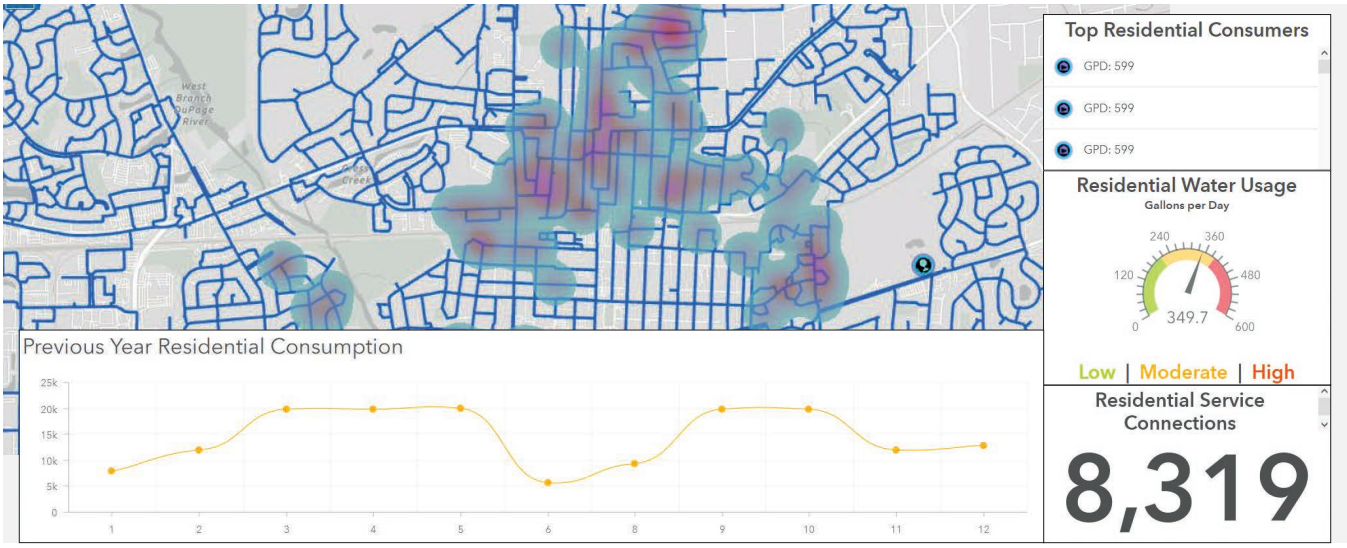
ArcGIS solutions improve field and office efficiency and communication. More efficient workflows result in quicker resolution of customer complaints. Sharing data across departments empowers customer service staff with the information they need to support customer inquiries. Sharing data within web maps and applications offers customers self-service options eliminating the need to call their utility.

Delivering Timely Communication

ArcGIS is key to meeting customers' expectations to be kept current about everything affecting their service. ArcGIS consumes real-time data from sensors, devices, weather services, and even social media feeds, providing utilities with a holistic view of their system and what's going on around it. When needed, messages containing information of interest to customers can be proactively sent, day or night. ArcGIS keeps customers abreast of what they want and need to know with self-service web maps, apps, and notification services.

White House Utility District uses ArcGIS solutions to gain incredible visualization of utility data, provide easy-to-navigate customer self-service applications, and automate emails to notify customers upon completion of work orders and service requests. Read the utility's story: **Harnessing the Power of GIS to Improve Customer Service**

Understanding Spatial Relationships



Connect Information Systems

Location is the common denominator when storing data from various utility systems, for example, customer information systems, meter data management systems, and work management systems. Connecting information from disparate systems provides a way to view, query, and analyze data in one place.

Using location, ArcGIS integrates important business information to establish interrelationships among customers, the network, and the world around them. This enables analysis of customer characteristics, behavior, interactions, and consumption. Understanding customers leads to proactive and improved customer care.

The Power of Spatial Data

Spatial data plays a large role in understanding customers. Visualizing customer location with consumption data, billing data, leak data, and more reveals patterns and trends. Including related demographic and sociographic information further exposes spatial relationships. The totality of this information provides a comprehensive overview of customers and how to best interact with and serve them.

The same is true for network assets. It is essential for utilities to have an authoritative digital representation of the network that details all components, their behavior, and their surroundings. Understanding where assets are is more than a dot on a map. Location can provide information about the type of soil assets are in, if they are in a flood zone, what critical customers are nearby, and more.

Understanding where customers are, where infrastructure is, and what's around them enables utilities to answer questions like:

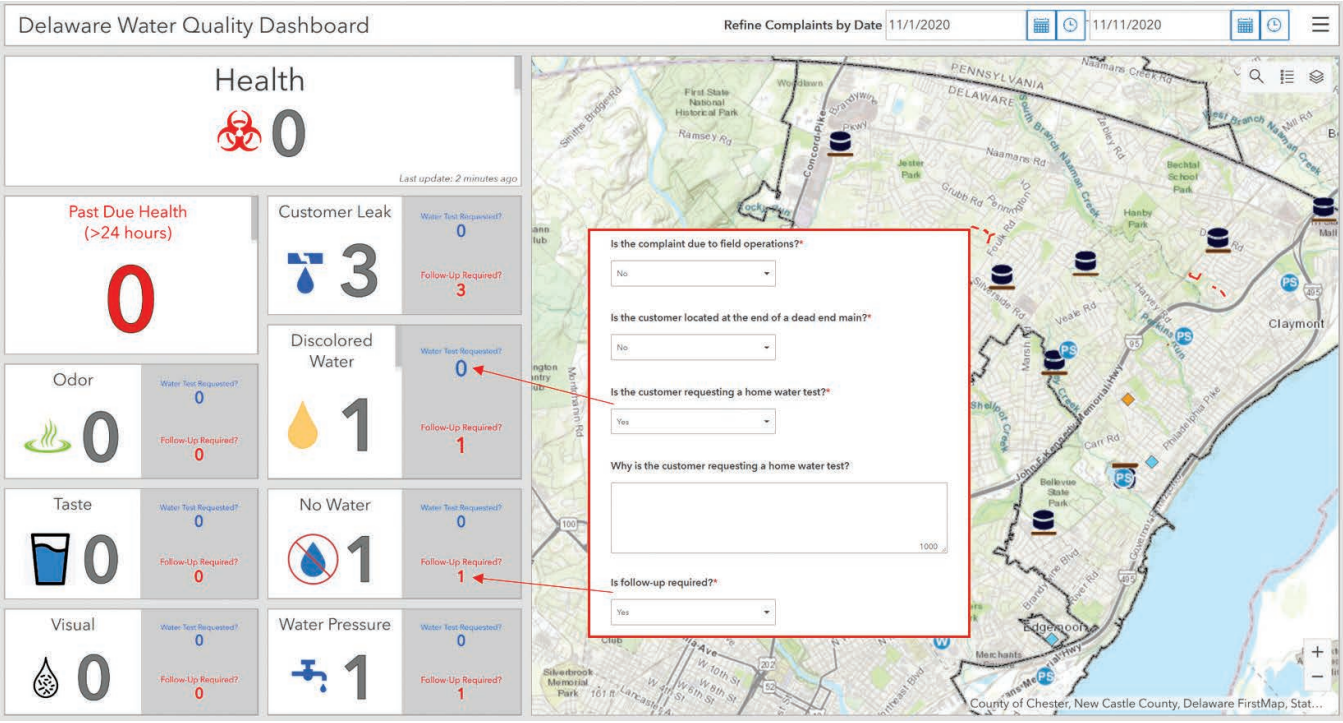
- How has demand changed or shifted over time?
- What customers have easements on their property?
- Is critical infrastructure located within a flood or fire zone?
- How many customers will be out of service if critical infrastructure stops functioning?

"The Know Your Flow program has created a new channel of customer engagement that has delivered quantifiable results. ArcGIS has helped us automate data-driven water use recommendations for our customers."

Tim York, Conservation Supervisor, Aurora Water

Learn about the Know Your Flow program and how Aurora Water is using GIS to support water conservation: **Aurora Water Provides Personalized Water Use Recommendations to Customers**

Providing Extraordinary Service



Customers ask utilities a wide array of questions. A geographic information system (GIS) is fundamental to a utility's ability to understand and analyze data to answer these questions.

Customer Trends and Patterns

Maps are the ideal frame through which customer service staff can view, analyze, and manage customer information as well as access utility data. Customer service representatives can quickly identify customer complaint clusters or patterns, view ongoing utility projects, and more. The intuitive nature of using a map provides an easy way to find the information needed to resolve customer inquiries, often within one call.

ArcGIS Dashboards is another way to quickly view and understand projects, tasks, and activities. Dashboards uses elements, such as maps, lists, charts, gauges, and indicators, to reflect the status and performance of people, services, assets, and events in real time. This at-a-glance display of information is very useful to customer service representatives as it provides them with quick access to the current status of utility work.

Impact of Utility Activities

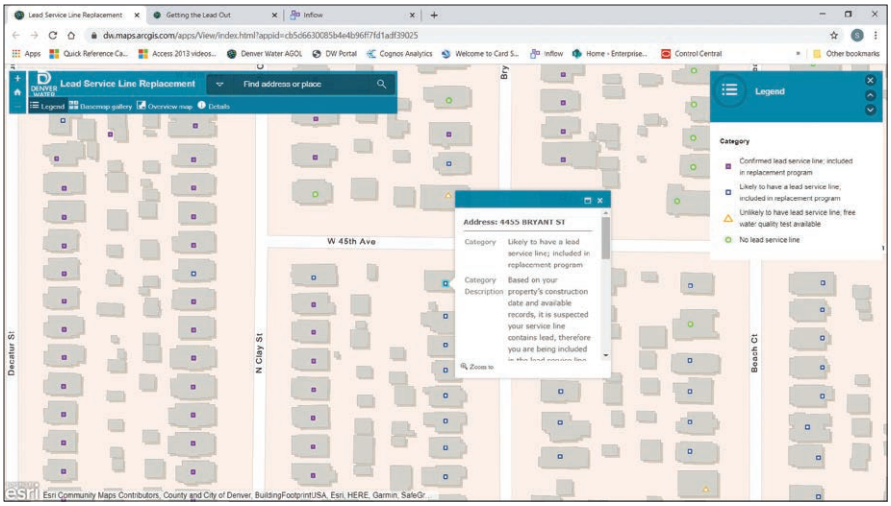
Sometimes answering a customer question requires more than a map or referencing stored data. The answer can only be found through analysis. To aid in answering these questions, ArcGIS provides the most comprehensive set of analytical methods and processes available.

Multiple data formats, sizes, and scales can be used. Analytics can be performed on real-time data as well as static data. This enables a utility to continually assess situations as updated data becomes available. The analytical applications and capabilities of ArcGIS empower customer service staff to answer utility questions and keep customers informed about how utility activities will impact them.

Understanding how and why an issue exists and preventing it from happening again are complex workflows, involving multiple people across many departments. Managing the effort was historically time-consuming and difficult. SUEZ needed a way to easily collect, visualize, and report on the complaints; alert the respective departments of their next steps in the process; share the collected data across multiple platforms; and maintain communication with the customer regarding the status of their issue.

Learn how ArcGIS provided solutions to meet the company's need: **SUEZ Improves Customer Satisfaction by Increasing Staff Collaboration**

Delivering Timely Communication



Customers expect to know about changes to their service, and they expect to know about it in a timely manner. They want to know if an outage will affect them, if construction is happening in their area, or if a hidden leak is resulting in extraordinarily high charges on their bill. "No surprises" is a cardinal rule in a utility's relationship with its customers.

Message Customers in Real Time

There are many ways that utilities communicate with customers. They use door hangers, send email, place phone calls, use public-facing websites, and more. Notifying customers of planned service interruptions can be organized and scheduled. But it is more difficult to ensure that customers are notified during unplanned events. Whatever the cause, confirmation of an outage triggers one of a utility's priority processes—restoring safe and reliable service to customers.

ArcGIS unlocks a new era of timely communication by enabling utilities to proactively send notifications to customers by email or short message service (SMS) in real time. Web GIS supports real-time updates to maps and applications that are shared via utility websites. ArcGIS ingests data feeds from sensors and enables alerts when thresholds are exceeded. When an activity or event impacts service, whether planned or unplanned, real-time messaging can prevent a rush of phone calls and frustration of customers as well as staff.

Self-Service

A utility's timely communication with customers can be facilitated through online resources. Maps and applications provide intuitive self-service capabilities. Maps on utility websites can quickly show service areas and provide information about starting, stopping, or transferring service. Customers can report issues via smart forms, pay their bill online, and even identify how they would like to receive alerts (email, text, phone, etc.). This enables customers to get the answers they need and communicate with their utility in the way that they choose.

Stakeholder Collaboration

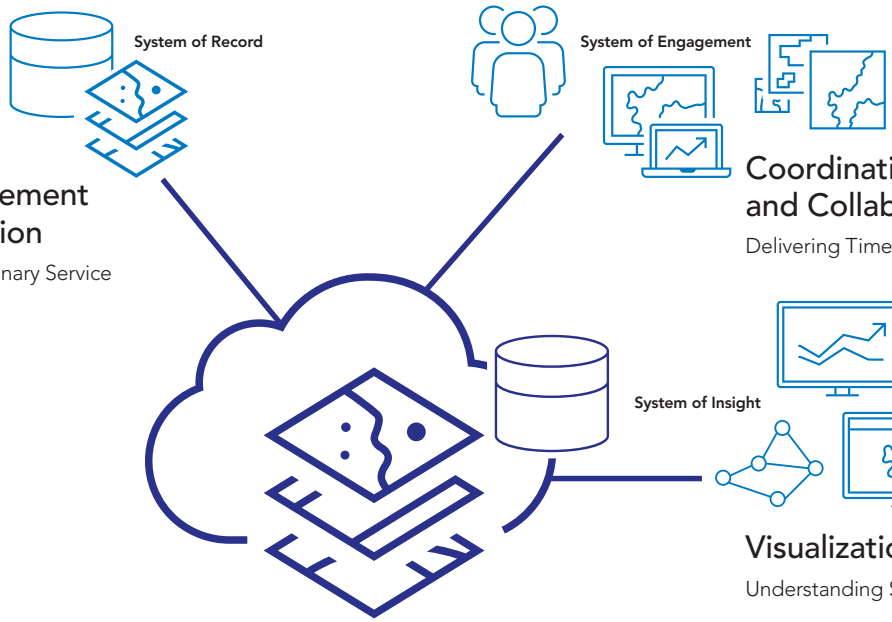
Water utilities often work collaboratively with local governments, neighboring utilities, regional organizations, contractors, and regulators to meet their service goals. This is often challenging as each organization manages data in different systems and has different priorities. ArcGIS uses location to integrate, analyze, visualize, and display data in maps, charts, and graphs. Easy-to-use applications deliver this information to stakeholders, enabling sharing and collaboration. Everyone is provided the same information, enabling them to achieve their goals and better serve customers.

"Delivering safe drinking water is Denver Water's most important responsibility, and we welcome the opportunity to work with partners in our community and at the state and federal levels to protect public health and the environment from old lead service lines."

Jim Lochhead, CEO, Denver Water

Denver Water used ArcGIS to inventory service lines, integrate various sources of information, locate customers, and inform the public about its Lead Reduction Program. Read the utility's story: **Denver Water Protects Customers with Data-Driven Lead Reduction Program**

ArcGIS—Enabling Exceptional Customer Care



Most utilities already use GIS in some capacity. Yet how they use it is changing. Water utilities are using ArcGIS to meet customer service challenges, not just to make conventional maps. They are using GIS as systems of record, engagement, and insight to provide a mature information system that creates real business value across the utility enterprise.

ArcGIS integrates business systems, providing a holistic view of customer information in one place. Understanding where customers are in relation to critical assets, consumption, utility projects, and customer demographics increases the ability to communicate and engage them. Timely communication and engagement are key to managing customers who are impacted by construction in their area, outages, leaks, main breaks, and more. Utility alerts and announcements shared via online resources and real-time messaging keep customers informed 24/7. Providing extraordinary service isn't limited to customer communications. Information flow between mobile workers, back-office staff, utility departments, and stakeholders is important. ArcGIS streamlines internal workflows and communications, providing customer service representatives with the information they need to support and resolve customer inquiries quickly.

As utilities continue to struggle with limited resources, ArcGIS continues to provide solutions that enable them to do more with less. ArcGIS empowers every department with solutions that help them to work more efficiently.

"The Customer Service Web Application has created a level of efficiency for customer service representatives that we haven't seen before. Whether pulling data/information for a service order or speaking with a customer, we can provide much more comprehensive, up-to-date information faster, improving the customer experience and making our jobs easier."

Katie Colonna, Customer Service Representative, SUEZ

Read our e-book *Enabling the Intelligent Water System* to learn more about digitally transforming utilities with a complete GIS. **Read e-book**

About Esri

Esri, the global market leader in geographic information system (GIS) software, location intelligence, and mapping, helps customers unlock the full potential of data to improve operational and business results.

Founded in 1969 in Redlands, California, USA, Esri software is deployed in more than 350,000 organizations globally and in over 200,000 institutions in the Americas, Asia and the Pacific, Europe, Africa, and the Middle East. Esri has partners and local distributors in over 100 countries on six continents, including Fortune 500 companies, government agencies, nonprofits, and universities. With its pioneering commitment to geospatial information technology, Esri engineers the most innovative solutions for digital transformation, the Internet of Things (IoT), and advanced analytics.

For more information, please visit go.esri.com/WaterUtilities.

Contact Esri

380 New York Street
Redlands, California
92373-8100 USA

1 800 447 9778
T 909 793 2853
F 909 793 5953

info@esri.com
esri.com

Offices worldwide
esri.com/locations

G1706268