Creating a "place of opportunity" with enterprise GIS
Northern Ireland Water

The Challenge

- Support business transformation by replacing two legacy GIS packages with a single enterprise GIS platform

The Benefits

- Responsive services for customers
- More efficient business processes, creating cost savings
- A more accurate Corporate Asset Register, the second most used application within the business
- Enhanced safety for personnel in the field
- Better informed decision making

When Northern Ireland Water selected Esri's ArcGIS mapping platform as its new corporate GIS system, it didn't just get all of the functionality that the business needed. It also gained a suite of additional tools, creating a "place of opportunity" for improving its customers' experience, reducing costs and removing inefficient processes.

The Challenge

Northern Ireland Water was founded in April 2007 as a government-owned company to provide water and sewerage services for 1.8 million people in Northern Ireland. In its first decade, the company underwent a significant transformation, developing new operating models to enhance the way that it delivered customer services and maintained 42,300 km of water mains and sewers. By 2017, however, the company's aspirations for continued business improvement were being constrained by its two, separate, existing geographic information system (GIS) applications.

"The need for location-based services was growing throughout the organisation, not only for office-based staff but also for our mobile workforce," says Sean O'Boyle, Asset Information Development Manager at Northern Ireland Water. "We urgently needed to replace our fragmented approach to GIS with a single enterprise system that would support the entire organisation and fuel our drive to deliver even better customer services."

The Solution

Northern Ireland Water selected Esri's ArcGIS because the solution's capabilities exceeded the organisation's predicted requirements. "ArcGIS gives us all of the features and capabilities that we were looking for – but it also takes us to another place of opportunity," explains O'Boyle. "We can rapidly deploy new web and mobile applications using standard, out-of-the-box ArcGIS tools, to meet new business requirements and moreover we can do this all in house."

With support from Esri Ireland, Northern Ireland Water completed the initial project implementation at an impressive pace, moving from no ArcGIS capabilities at all to a full enterprise ArcGIS platform in less than a year. The consultants from Esri Ireland passed on their knowledge to employees during the project, so that by the time the systems went live, in-house teams were competent in using and managing ArcGIS. "The whole project went live on budget and on time, according to the schedule we set on day one," notes O'Boyle.

ArcGIS is now used daily by hundreds of users and is available to 1035 employees in total. It is integrated into key workflows right across the organisation and is a core part of the organisation's Corporate Asset Register, the second most used application within the business after email.

A key solution for Northern Ireland Water is Esri's ArcGIS for Water Utilities, a set of maps, services, apps and automated processes that have been specifically developed to meet the needs of international water companies. The integrated nature of ArcGIS means that business specialists can edit asset or customer data using ArcGIS on the desktop and then make it instantly accessible to employees via web apps and mobile solutions, all at the click of a button.

Learn more at: esri-ireland.ie

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> **Northern Ireland Water's new Corporate GIS, implemented using ESRI technology, gives us the advantage of being able to swiftly deploy spatial solutions to aid decision making.**
>
> Sara Venning, Chief Executive, Northern Ireland Water

Northern Ireland Water's situational awareness web map provides managers with a clear overview of customer issues in real time
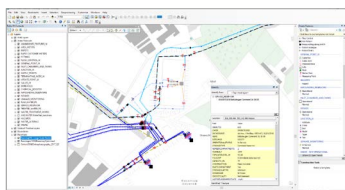
ArcGIS for Water Utilities – network editing tools are fundamental to data management in the Corporate Asset Register

Benefits

Responsive services for customers

The enterprise-wide implementation of ArcGIS gives all employees in the organisation instant access to accurate location information, which they can use to help them deliver a more responsive customer service. For instance, the locations of all issues reported by customers are streamed real-time on a web map. Displayed on a four metre screen in the customer call centre, this situational awareness map allows incident managers to better monitor the situation in real-time and react quickly to resolve issues.

More efficient business processes

ArcGIS has improved business efficiency by replacing numerous manual, paper-based processes and eliminating the unnecessary duplication of data. In the Developer Services team, for example, engineers now use ArcGIS to design water main networks for planned new residential developments significantly quicker than before, enabling them to deliver a fast, professional and cost-effective service for customers.

A streamlined approach to capital delivery

Northern Ireland Water has exploited the seamless functionality of ArcGIS platform to build a successful proof of concept which delivers the capability to manage the complete life-cycle from engineering design through approvals, construction and on to "as built" asset records making what Paul Davison, Head of Water Capital Delivery at Northern Ireland Water, describes as "A step change in collecting accurate asset data."

Enhanced safety for personnel working in the field

Using Esri's Survey 123 for ArcGIS, Northern Ireland Water is now developing a new mobile app that will help the company to identify and respond to potential health and safety risks more quickly. Employees will use their smartphones or tablets to collect data in the field about the locations of trenches, equipment, infrastructure and other potential hazards. Whereas this information might previously have taken up to two weeks to be typed up in a report, it will be transferred to head office in real-time, saving time and allowing managers to intervene rapidly if a safety issue is identified.

Better informed decision making

In a wide variety of ways, ArcGIS gives senior managers at Northern Ireland Water faster access to better quality information. The organisation's Chief Executive Sara Venning says: "Northern Ireland Water's new Corporate GIS, implemented using ESRI technology, gives us the advantage of being able to swiftly deploy spatial solutions to aid decision making. This has been particularly evident during incident planning where logistics and location information is of critical importance to us in striving to respond rapidly to our customer needs."

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