The Foundation of a Smart City

Brightly helps Aberdeenshire better streamline and manage public works

**Client**
Aberdeenshire Council

**Geography**
Aberdeenshire, Scotland

**Vitals**
- Scottish council area spanning 2,439 square miles
- Resident population of more than 250,000
- Responsible for nearly half a million public works assets, including 3,400 miles of roads and 1,600 bridges

**Challenges**
The inspection, maintenance and repair of Aberdeenshire’s public works is handled by staff from numerous departmental teams working in 30 maintenance locations.

**Results**
- Consolidation of disparate inspection, maintenance, and repair software
- Improved communications that break down departmental siloes
- Deployment of IoT ‘Smart Gullies’

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Overview

Aberdeenshire is a vast rural council area in northern Scotland. Its rugged landscape includes craggy mountains, an extensive coastline, small towns, farmland, and Balmoral Castle (Queen Elizabeth II’s summer residence). Aberdeenshire Council is responsible for managing all the public works assets in its council area. These include 45,000 street lights, 1,600 bridges, 3,400 miles of road, 70,000 drainage ditches, cemeteries and playground equipment. All told, Aberdeenshire maintains more than 422,000 assets.

Business challenge

The inspection, maintenance and repair of Aberdeenshire’s public works is handled by staff from numerous departmental teams working in 30 maintenance locations. The council needed a way to consolidate the multiple software systems used in its asset management cycle. It wanted employees to be able to communicate easily across departmental teams, thereby streamlining work processes. It also needed to simplify resident reporting, such as when a resident finds a streetlight outage or new pot hole. And Aberdeenshire knew it would eventually have to find a way to more effectively tackle flooding and other weather-related issues that affect roads.

Solution

Aberdeenshire Council deployed Brightly Confirm infrastructure asset management software solution. This solution provides public bodies with the insight needed to make informed decisions on asset repair and maintenance.

The council uses the solution to improve employee collaboration, and to better track the status of its assets. The council also uses Confirm Connect, a mobile asset management program that uses smartphones and tablets to enable the real-time flow of information between headquarters and field workers. Seventy Aberdeenshire inspectors use Confirm Connect in the field, recording any asset flaws they find and feeding that information into Confirm software.

A public portal allows residents to log in, note problems they’ve found with council assets, and point out the problem area on a map – important because many roads in this rural area are unnamed.

Finally, Aberdeenshire installed a number of ‘Smart Gullies’ at historic flooding locations. This new technology allows the Council to monitor blockages and

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Dave Clark
Principal Systems Development Officer,
Aberdeen Council

Smart Gully
water level within storm drains (known as gullies in the United Kingdom) in real time. This gives prior warning of required maintenance or potential flooding events, and means a team can be on site much earlier to prevent, or at least minimise, any disruption caused by overflowing or blocked drains.

"With Confirm, we have a method for recording and sharing information on these assets," explains Dave Clark, principal systems development officer with Aberdeenshire Council.

"That makes a big difference. Previously, we had all this information on separate systems and there was no possibility for approaches such as joint working and developing a single unified model of our assets."

Benefits

Confirm software has enabled Aberdeenshire to consolidate disparate inspection, maintenance, and repair software systems into a single solution. Hundreds of dashboards record the status of more than 90 types of assets, while improving workflow and communications, reducing inefficiencies and helping Aberdeenshire move toward a more holistic “street scene” view of its assets. This view allows the council to see not just its assets, but its assets in relation to each other, helping to build a smarter city.

Improved communications have helped to break down departmental siloes. When a problem arises with a bridge that affects nearby roadways, for example, Confirm promptly alerts professionals in separate road and bridge departments, enabling them to work in tandem to ease traffic conditions. Improved communications also affect the public at large. Using the corporate web portal linked to Confirm, residents can more easily report issues.

The deployment of the IoT ‘Smart Gullies’ has also integrated seamlessly with this solution. Whilst the initial pilot scheme has helped Aberdeenshire tackle known flooding hotspots, the longer-term goal is to further transform the Council’s gully cleaning operation. Aberdeenshire has more than 70,000 gullies, which are currently cleaned on a scheduled basis, with little knowledge of which ones need cleaning, and which don’t. By placing a larger number of these devices at strategic points throughout the drainage network, and feeding their data directly into Confirm, Aberdeenshire will be able to prioritise its cleaning schedule, reduce the number of expensive drain-emptying trucks on the road, and lower its carbon footprint.

Dave believes this programme will be as successful as others tackled with Confirm. “What we’ve been able to achieve using Confirm is to understand our assets, where they are and what state of repair they’re in. Then we can apply this new technology and understanding of what’s around us to provide better services to our citizens,” he says.

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Smart Gully components

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