



Client Success Story

“Highways Hub” puts people at the center of a disciplined asset management system

Client

Derbyshire County Council

Vitals

- Manages local services for the East Midlands county of Derbyshire (excluding the city of Derby)
- Economy, Transport & Environment department maintains nearly 5,300 kilometers (3,300 miles) of roads and their associated structures and equipment
- Reduced funding means the county must optimise use of all resources

Challenges

Thousands of miles of pavement, bridges, traffic signals, and even six canal locks needing to be kept in good repair by only 12 two-person reactive maintenance crews

Results

- An average of four jobs completed per day now up to eight
- Reduced repair backlog by 62% in one year and improved on-time job completion rates
- Urgent repairs completed within two hours 100% of the time - up from 67% prior

Overview

One glance at the Derbyshire County Council website says it all: This local council is all about service. Every webpage helps residents to easily access the information and processes they need to live, work and play more enjoyably. Connecting residents and tourists to all their activities are some 3,300 miles of roads, cycle paths and footpaths and their associated bridges, signage and other transportation assets. With the help of Brightly, the county's new Highways Hub is skilfully and cost-effectively managing them all.

Business challenge: lack of clarity

Keeping thousands of miles of pavement, as well as bridges, traffic signals and even six canal locks, in good repair is a never-ending task. It is especially challenging in Derbyshire County, as the county council employs only twelve two-person reactive maintenance crews. Even with hard work and the best intentions to provide timely repair of all reported road and pavement issues, some of the most important jobs were falling behind schedule.

Angela Glithero, the department's assistant director of resources and improvement, explains why: "We would get reports of potholes or other defects on the roads, and we'd send the crews out to repair them. We had a complicated and inconsistent paper system, which meant we couldn't easily identify which defects the crews were repairing each day."

A reduction in funding further drove the need to increase efficiency. Five years ago, Derbyshire County received a yearly budget of about £23 million for highways maintenance; now the county receives slightly more than £10 million.

Solution

Angela and her colleagues realized that the key to overcoming these challenges lay in bringing people together and having them collaborate through an integrated information system. For Derbyshire County, this meant the creation of a new office, called the Highways Hub. Located in a large room in the Derbyshire County Council building, the Highways Hub is currently made up of 22 people, split into three multi-functional 'area' teams. Each team includes staff dealing with customer inquiries and processing of licences, insurance claims handling, winter service provision, co-ordination of works activities and associated permitting, reactive maintenance scheduling and temporary traffic management. More functions are due to be included soon, as a review of the staffing structure in highways is implemented.

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Angela Glithero

Assistant Director of Resources and Improvement, Derbyshire County Council

Business services assistant Maxine Reynard illustrates how the Highways Hub is helping to improve the workflow: “If I receive calls from the Police relating to temporary traffic signals not working, I am now able to liaise with colleagues in Street Works and Traffic Management to easily identify key contacts and reduce congestion more quickly. “Street Works colleagues can also use information on the permitting side of the system to identify where temporary lights may not be licensed.”

Coordination begins with a single asset repository

The information technology underpinning the Highways Hub is the county’s new Single Asset Management System (SAMS), based on Brightly Confirm Intelligent Infrastructure Management. For years, the county had been using Confirm to input and route customer inquiries, so it was an obvious candidate for SAMS. Still, Angela and her peers shopped around, partly to comply with procurement rules but also to see what else was out there. “We looked at various products on the market, and the most effective path for us was to stick with Confirm,” Angela says. “With help from the Brightly team, we completely re-engineered the system from start to finish.”

The Confirm asset register is the central repository for the SAMS asset data. Any issue that residents report through the website, or the Highways Hub team receives over the phone or by email, is automatically logged in that register. Highways Hub staff use Confirm Workzone to schedule repairs, coordinate road closures and plan maintenance such as road surfacing, among other tasks.

Out on the roads, the repair crews use Brightly Confirm Connect on their mobile devices to access their work schedules and log reports and photos of completed work. “Back at the Highways Hub, we can see where the crews are, what time they started, which jobs they’ve already completed and whether they’ve got time to do anything else as the day goes on,” Angela says.

Getting locations right with spatial analysis

While the Confirm solution is the core of AMS, Derbyshire County is also making novel use of Portrait Dialogue, a customer engagement solution typically used by commercial enterprises for personalized customer communications and marketing. As part of its commitment to service excellence, Derbyshire County is using Portrait Dialogue to thank residents for their defect reports and let them know when the repair has been completed. The county also plans to use the customer engagement software to automatically

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comply with requirements to notify other local and national authorities of highways issues. “We’re successfully using Portrait Dialogue to inform people better, without taking any more of our time,” Angela says.

There is another bit of technology that most Highways Hub users never see, but which is key to getting the right location-based information to those who need it: the Brightly Spectrum Spatial web GIS application. Integrated with the Confirm system, Spectrum Spatial includes an advanced geocoder that converts addresses or other location references that people use into more accurate geospatial coordinates called geocodes, which is the standard way locations are represented in the SAMS database.

This locational accuracy has various real-world impacts: For instance, when a resident requests notification of all planned highway work within ten miles of her home address, Spectrum Spatial ensures that the notifications she receives in fact pertain to the area she requested. The geocoding capability also improves the accuracy of the SAMS asset location maps, helping repair crews get to the right location the first time.

Benefits

Prior to the establishment of SAMS, each of the repair crews had been able to complete, on average, four jobs a day. Now they’re each completing around eight jobs a day and have reduced the repair backlog by 62 percent in one year. Derbyshire County has also improved its on-time job completion rates. It completes the most urgent repairs within its target two-hour window 100 percent of the time now, up from 67 percent before the Highways Hub. Other repairs are completed more quickly as well; repairs in both the 5-day and the 28-day windows are 51 percent more likely to be completed on time.

Easier to measure, easier to manage

More importantly, the county has been able to better control what work gets done. “Because we’ve got all the data and the intelligence in one place, the schedule can be more easily prioritized to make sure we’re doing the most urgent jobs first and arranging the most efficient route for the workforce,” Angela says.

Having proven their ability in reactive maintenance, the Highways Hub staff have set their sights on becoming more proactive. Preparing for storms is one example: Using UK Environment Agency flood data available from Brightly, staff can use SAMS to

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determine the state of the relevant storm drains and then issue work orders, as necessary, to ensure that the drains are ready to accommodate the deluge.

Integration brings improvements across the council

Ultimately, the goal is to have SAMS serve as a platform for measuring and improving operational, financial and human resources performance. This requires integration with other council information systems. Most recently, the county worked with Brightly to integrate the Confirm application with its SAP financial system. Now, creating work orders in Confirm automatically creates orders in SAP, and costs accrued in SAP flow back to Confirm for comparison against targets. “With all the financial information coming back into Confirm, we will potentially save huge amounts of time and work for many people,” Angela says. Sam Holmes, an accountant in the finance team concurs: “Confirm allows customized financial reports to be directed to scheme managers and budget holders via their personal dashboards. That replaces the need to download data from SAP and maintain spreadsheets in multiple formats, saving time and improving consistency.”

New information systems always take some getting used to, but the Highways Hub is likely shortening that learning curve while helping team members improve customer service. “I recently had an inquiry in relation to surface dressing,” recalls Business Services Assistant, Robert Hodgson. “I was able to liaise with other team members who had expertise in areas of Confirm not familiar to me. This helped to enhance my own knowledge and therefore provide a more comprehensive response to the customer.”

The SAMS project has taken nearly two years, and some council officers didn’t believe that changing the way we work could make such a dramatic improvement. But through a lot of hard work, Angela says, she and the many colleagues involved have proved that “change is possible by getting the right people on board, obtaining the right technology and working with providers like Brightly.”

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Accountant, Derbyshire County Council