

## Case Study: Gloucestershire Highways



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### Gloucestershire Highways Proactive Asset Management Strategy

**Come rain or snow... Gloucestershire's highways infrastructure has been under the weather in recent years, but thankfully a proactive asset management strategy has kept the roads open!**

During the winter of 2008/9 Gloucestershire Highways, a partnership between Gloucestershire County Council and its highways contractor Atkins, was confronted by the most severe winters to hit Britain for more than two decades.

This was preceded by the summer floods of 2007 in which the county saw all its major road and transport routes closed, coupled with the loss of a local water treatment plant and threats to two of the County's power stations, plummeting the region into the UK's largest peace time emergency since World War II. Surface runoff caused significant damage to the highways network and it had to be managed, funded and rebuilt.

#### UK's Largest Highway Authority

Gloucestershire Highways maintains over 3,300 miles of roads making it one of the UK's largest Highway Authorities. The asset management strategy and the technology that underpins it have proven critical to how Gloucestershire Highways has survived these natural disasters in recent times.

Key to the successful management of its network is a strategic technology partnership with Exor Corporation and its founders, which dates back to the mid 1980's. This enduring relationship has seen Gloucestershire Highways at the forefront of technology advances over the last two decades. And both have been pioneers of asset management strategies, which in the last few years have seen Gloucestershire Highways cope with extreme weather patterns affecting its Highways assets.

Prior to the severe weather events in 2007 Gloucestershire Highways dealt with approximately 20,000 potholes annually. During 2008/9 Gloucestershire Highways identified 30,000 potholes for repair. The number is still increasing and during this financial year 18,000 potholes have already been identified and repaired. If this number is factored for the year of 2009/10 the figure could rise to 43,200 potholes. Approximately 25% of these were reported by the public.

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Exor helps to manage the repair work from the initial report from the Safety Inspector or member of the public, the raising of the works order for the repair to be programmed and the record of the completion time and notes. This provides a clear audit trail from when the problem was reported to the repair which provides evidence in the defence of claims.

#### Infrastructure Visibility

The strategic relationship between Gloucestershire and Exor began in the mid 1980s, when the council’s County Surveyors Department, as it was then known, was looking for clearer management information. This required linking local roads to maps, and the creation of a routine maintenance management system (RMMS) – a database of information about the geographical position of the road network, maintenance requirements, required resources for planning maintenance works, and the performance of the maintenance contractors.

The resulting solution, RoMIS, has Exor highway maintenance management software at its core. The fact that the software has been developed specifically for highways maintenance management, rather than general information management, is crucial to its success.

#### Customer Focus

In response to National Government’s improving accessibility to services initiative, in 2006, a corporate decision was taken to introduce a 08000 number for highways calls. The aim was to provide increased accessibility to the highways service for reporting simple problems such as potholes and street lights. As part of the Corporate Contact Centre the operators would use the council’s main customer relationship management (CRM) system which would send information to Exor Public Enquiry Manager (PEM) as the back office system. This enabled the County Council to log and manage all enquiries alongside all other public request logging and develop a database of all customers who contacted the Council.

#### Rapid Response

But this merger with general Council enquiries came at a price. Councillors, in particular, began to notice it was becoming harder to get a rapid response to their enquiries. Delays were introduced, and first-hand information was proving harder to come by. In addition to this, the complexity of the enquiries following the floods increased, with many of the enquiries relating to flooding and drainage problems, which require more intricate solutions.

The frustration became significant enough for Councillors to fund a 12-month trial, whereby the original area-office systems would be reinstated, using Exor Public Enquiry Manager. The 08000 number would be routed to the most appropriate area office based on the caller’s STD (subscriber trunk dialling code).

“The corporate contact centre is a catch-all service, and is not staffed by people with highways expertise,” explains Howard Brewer, Environment Directorates Applications and Systems Coordination Manager at Gloucestershire County Council. “Exor Public Enquiry Manager (PEM), on the other hand, is specifically designed for highways maintenance management, so it can capture and process information very quickly.”

Since the Council is driven by targets for responsiveness, a degradation in service was not acceptable. Over a three-month period from April 2009, Gloucestershire Highways has logged 22,451 records relating to incident reporting and enquiries from Councillors and the general public.

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#### Service-Level Agreements

Reports of potholes, one of the hottest issues, are inspected within 5 working days. Flooding or other emergencies and serious incidents, such as those caused by road traffic accidents, fallen trees or oil spillages, must receive a response within just two hours. These are among the key performance indicators by which Gloucestershire Highways is measured.

Within these tight timeframes, the reported problem must be logged and converted to a work order, which is fed to the highways contractor, Atkins.

Using the Exor software, the process of raising an emergency works order has been automated from the entry of the initial PEM enquiry. The works order is then posted to the FTP (file transfer site) where Atkins picks up the report and deploys the gang. This process takes approximately 4 minutes. In addition to this the Traffic Management Act compliant notice is sent automatically. Such efficiencies rely not only on the specialist nature of the Exor applications, but on the ability to integrate information from a wealth of different sources to build up a holistic picture of Gloucestershire Highways’ road infrastructure and associated assets.

#### Right of Way Integration

Currently, the Council is working to integrate public-right-of-way data – formerly managed at a departmental level - with the central highways repository, so that maintenance requirements on stiles and small bridges can be planned alongside works on roads.

Integrating Exor’s Public Rights of Way (PROW) solution with Gloucestershire Highways’ other Exor applications will bring new efficiencies, for example making it easier to allocate calls between departments from a single solution.

Indeed, Gloucestershire County Council is one of Exor’s first PROW customers, the solution having been developed on a partnership basis, thereby providing an excellent example of local government and private sector collaboration. Here, Exor has worked very closely with Gloucestershire County Council using the latter’s specialist expertise and Exor’s industry and IT knowledge to provide the required solution.

“The idea is to reduce duplication and make us even more responsive,” Brewer explains.

Although each maintenance and management team has its own KPIs and reporting mechanism, the Council is able to draw all of the information together over the top of these individual systems, for more holistic measurement and reporting.

#### Flood Damage

When the devastating floods of 2007 hit Gloucestershire, the temporary loss of the local power supply cut access to computer systems across the county. Yet, afterwards, the Exor system proved invaluable for monitoring the high volumes of calls that came in, and for recording potholes and other problems that needed to be deftly addressed.

Says Scott Tompkins, Asset Manager at Gloucestershire Highways: “What’s not widely publicised is how well the authority handled what was one of the UK’s largest peace-time emergency operations. The events of July 2007 were a one-in-two-hundred-years event, yet the impact on the infrastructure of the locality affected more people than the flood damage itself.”

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A wet spring followed by a wet summer meant water courses were already saturated. Heavy rain meant water courses began to flood and the drainage system struggled to cope. Many of the major roads were no longer passable. The potential flooding of two major power stations (Walham and Castlemeads) along with the flooding of the Mythe Water Treatment Plan led the county to invoke ‘emergency’ status, and the whole county went into crisis management for four days, with senior managers working night shifts.

Following the floods a survey of the entire network had to be undertaken to determine the level of the flood damage. Over 1,000 work schemes were identified and managed through Exor, each requiring a map, text and photo of the road’s condition. All of this evidence had to be collated in order for the service manager to provide map-based evidence and historical data to the Department for Transport to support the case for additional funding for urgent road-works. These had to be prioritised quickly, too.

#### Showing Success

Following the successful application for additional funding from the Department for Transport, Gloucestershire Highways planned, programmed and delivered the schemes within a short timescale. Almost all of the additional schemes were delivered. Gloucestershire Highways received a lot of praise in how quickly it responded to the emergency, during which millions of pounds of roadway were washed away, all rail services, major routes and many minor roads were closed, over 350,000 people lost clean water supplies and the highways drainage system all but collapsed.

While Tompkins notes that Gloucestershire County Council has always been highly responsive, he concedes that it has fallen down on letting people know about its performance. “There are more political and customer pressures now to be responsive – and to be able to prove this,” he says. “Not only is Exor a good planning tool, it’s also very good at proving what we’ve done, and how quick we’ve been. It helped us build the business case for a £16.5 million claim for infrastructure funding with the DfT (Department for Transport) in 2008 when the flood hit the county. Now, we can both show what we’ve achieved and also hone in on any areas that may need improvement.”

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