

Creating new levels of efficiency with mobile GIS

The Challenge

- Introduce mobile GIS easily and efficiently
- Empower office staff with better ways to interact with mapping

The Benefits

- More efficient internal business
 processes
- Higher quality services help
 win major contracts



The Customer

Colas works closely with Local Authorities and the Highways Agency delivering innovative and intelligent highway maintenance solutions. With over eighty years of expertise, the company has continued to successfully secure and maintain a range of highway term maintenance contracts. Colas was one of the first service providers to successfully manage up to 33% of the UK's trunk road and motorway network.

In 2004, Colas was the first ever organisation to be appointed a ground-breaking highway PFI contract, for highway and street maintenance in Portsmouth for a period of twenty five years.

The Challenge

Colas is constantly exploring ways to improve its business processes. Having rapidly developed its use of Esri GIS, rolling-out ArcGIS for Server and ArcGIS Explorer, the natural next step was to make GIS more widely available across the company.

"We wanted to bring our GIS strategy up to date and give staff access to Esri GIS over the web on any device, either in the office or on the move," explained David Piesse, GIS Technician, Colas Limited. "We needed a streamlined approach and one that didn't need a lot of man hours to get it working or extra programming to create new mobile apps."

The Solution

ArcGIS Online was selected by Colas to extend the use of GIS across the business and out into the field. Operating seamlessly with its existing Esri investments, the cloud-based system easily increases the reach of Colas' GIS so it can be used anywhere, by anyone.

"ArcGIS Online is simple to use as the integration with ArcGIS for Server is completely automated. We can view and edit live map data in the field, on iPads or smartphones and don't need to manually update data when staff return to base," said Piesse. "Creating new apps for use on mobile devices, for an ad-hoc road survey for example, is also very straightforward and only takes about an hour."

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David Piesse, GIS Technician



Colas personnel can view and edit live map data on both smartphones and tablets



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Benefits

The new approach has not only transformed the way mobile teams operate but is also creating more efficient ways of working for office staff too.

A prime example of how it makes life easier for field personnel is when they perform road surveys, prior to any maintenance or resurfacing work. Teams now simply record the highway condition using the ArcGIS app on an iPad, in real-time. This streamlined data collection process has also significantly improved data accuracy, due to fewer steps being involved compared to the previous use of paper maps. Digital photographs are also simply attached to the map at specific locations to help explain any defects.

The Colas teams that respond to road accidents have also had their work practices upgraded by ArcGIS Online. Real-time access to mapping on Windows 7 smartphones means they can instantly see what falls under Colas' responsibility when assessing highway damage at an incident. Now they have the added confidence they are working with accurate data on boundaries, utilities and other features, which might have an impact on their course of action.

ArcGIS Online also allows office staff to work with GIS in other ways, freeing them from their desktops. Now they can collaborate and share map data on iPads instead, which also eliminates the need to print out paper maps. "ArcGIS Online helps fulfil all of our non-standard requests for mapping – when a map is needed out on site, for remote working at home, in a depot or at a supplier meeting, for example," said David.

This has made office-based staff realise GIS is not just about a paper or desktop map but rather a dynamic and interactive resource, as David continued: "Shifting people's perception of GIS is key to ensuring its true benefits are realised and this is happening through ArcGIS Online. By using tablets or smartphones, boundaries are removed and staff are having their eyes opened to new ways in which GIS can support the business and help them make better decisions."

Future plans at Colas include using ArcGIS Online to roll-out GIS to every member of its 400 office staff across 22 UK locations, plus the integration of ArcGIS Online into the organisation's asset management system for enhanced reporting.

"Introducing ArcGIS Online was a natural evolution within our overall GIS strategy," concluded David. "It's simultaneously helping to create a raft of more efficient ways of working and innovative highway maintenance services, which help win new contracts."