

Building competitive advantage with enterprise GIS

Costain

The Challenge

- Build competitive advantage with an enterprise GIS platform

The Benefits

- Effective data sharing and collaboration
- Increased productivity in the field
- More efficient delivery of client services
- Improved management of large contracts
- Commercial advantage in new tenders



The engineering solutions company Costain started out with just a single licence for Esri's ArcGIS Desktop solution. Now, ArcGIS is a pivotal, enterprise system that is increasing employees' productivity, improving client services and giving the company a strong competitive advantage.

The Challenge

For many years, geographic information system (GIS) technology was little used at Costain. The company had a single licence for Esri's ArcGIS Desktop application and, from time to time, it used subcontractors to create stand-alone GIS applications for specific projects. "We had different approaches for different contracts, with GIS services being commissioned for some and not others," says Orla McManus, Head of GIS for New Business, at Costain.

As demand for GIS solutions increased, the use of subcontractors became a significant cost for the business. Furthermore, as each GIS application developed had a limited scope, defined by the needs of a specific project, the benefits of using GIS were constrained. Costain therefore decided to expand its use of Esri's ArcGIS platform internally and use it as a strategic tool to help it deliver industry-leading, technology-driven engineering solutions.

The Solution

Costain deployed ArcGIS Enterprise to create a single portal for geospatial information, for the entire organisation, hosted in its UK datacentres. It then developed a series of ArcGIS mobile apps and ArcGIS web apps to provide specific groups of employees with the capabilities they need to access data pertinent to their contracts and perform their jobs.

ArcGIS is currently used by groups of Costain employees including:

- Roads inspectors for managing 150,000 assets on a seven year highways and road maintenance contract
- Environmental teams for carrying out ecology, tree and archaeology surveys along a transportation route
- Contact centre staff for responding to telephone queries, noting asset defects and passing on information to maintenance teams

Costain has also created a 'Costain on a map' app to provide all employees with a gateway to the company's growing reservoirs of geospatial data, as well as other systems, such as HR and Building Information Modelling (BIM). "Today, GIS has overtaken BIM in terms of uptake within the business and has very much become our go-to tool for information," says Sophie Stouki, Head of GIS for Operations, at Costain.

"The ability of ArcGIS to collate data from many internal and third party sources and make it available to lots of people via a web browser is really powerful," Stouki adds. "Employees don't need advanced data skills or training to be able to access and use a wealth of open source and live operational data. We currently have around 1200 ArcGIS users, but this figure is going to explode into the thousands. GIS is going to be a part of pretty much every project going forwards."

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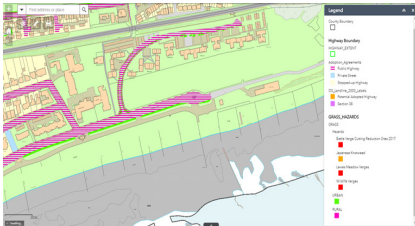
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Orla McManus, Head of GIS - New Business, Costain



ArcGIS being used for highways, assets and grass cutting management

The Benefits

Effective data sharing and collaboration

Costain’s enterprise GIS platform has significantly improved data sharing within the organisation and made it possible for employees to access a wide range of data sources on demand, from any location, via interactive web maps. As a result, employees now collaborate more effectively and save time across a wide range of activities. For instance, a team of ten environmental specialists has saved as many as 18 hours a week by using an ArcGIS web portal to gain rapid access to environmental data, reducing both the cost and duration of a key client project.

Increased productivity in the field

The roll-out of mobile ArcGIS apps in the field has led to significant productivity improvements, as employees no longer have to travel back to the office to find out information, print out maps or type up reports. For example, road inspectors working on one of the company’s largest highways management contracts now complete 60% more surveys in a week and provide live asset updates to the control room, rather than submitting reports three days later.

More efficient delivery of services

ArcGIS helps Costain to deliver more efficient services to its clients by making it far easier for employees to identify individual street assets and record information about their condition. Contact centre operatives, for example, have the information they need at their fingertips to identify faulty street lights accurately and can pass on a more precise location to the maintenance teams. Costain can, therefore, affect repairs more promptly and deliver a responsive service for its local authority clients and citizens.

Improved management of large contracts

On long-term highways maintenance contracts the use of ArcGIS helps managers to better understand the extent of required works. They can see, at a glance, which areas of grass and vegetation they are responsible for cutting and ensure verges and hedges covered by the contract are not missed. Equally, they can easily see adopted and private land, as well as third party apparatus, and avoid unnecessary interventions and associated costs.

A commercial advantage in tenders for new business

In a highly competitive marketplace, Costain is now better able to tender for high value new contracts as it uses ArcGIS to help demonstrate its ability to deliver advanced, technology-driven engineering solutions. “Prospective clients increasingly see GIS not as a nice-to-have, but as a definite requirement,” explains McManus. “Our extended use of ArcGIS puts us in a stronger position to win new business and deliver exceptional service for our clients in some of the UK’s biggest engineering projects.”

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