

Building, validating and sharing a trusted digital twin

Jurassic Fibre

The Challenge

- Create a platform for capturing, sharing and updating network data

The Benefits

- A single version of the truth
- Effective internal communication and collaboration
- 20x faster business workflows
- High quality service for customers
- Rapid roll-out of broadband network

The telecoms company Jurassic Fibre uses Esri's ArcGIS system to build, validate and share a trusted digital twin of its actual and proposed broadband network. This digital twin provides over 460 employees, from surveyors and planners to construction engineers and sales people, with a single version of the truth that they can depend on for real-time decision-making.

The Challenge

Jurassic Fibre was founded in 2018 with the aim of bringing full fibre, ultrafast broadband to digitally-deprived areas of South West England. As a brand new, start-up business, it needed a complete suite of solutions that could be deployed quickly to support end-to-end business processes, from network planning and design to construction and sales. Esri's ArcGIS system met this requirement perfectly, providing out-of-the-box applications and tools that could be easily configured to support the new company's preferred ways of working across all business teams.

The Solution

Jurassic Fibre selected ArcGIS Enterprise and deployed this foundational software in the cloud on the Microsoft Azure platform. It then steadily rolled out a succession of ArcGIS solutions to support all of the company's 460 employees, across every team and business function. There are also 30 'super users' in GIS, IT and planning teams who manipulate geospatial data and use the ArcGIS system intensively.

When Jurassic Fibre identifies a new target area for the roll-out of ultrafast broadband, existing address and telecoms infrastructure data is loaded into the ArcGIS Enterprise database to give the company's surveyors a starting point. The surveyors then use the ArcGIS Field Maps app on mobile devices to view this information in the field, collect additional information and mark potential broadband network routes on maps. All of this information is fed directly into ArcGIS Enterprise creating a rich digital twin of Jurassic Fibre's existing and planned telecoms network.

Back in the office, designers use the ArcGIS digital twin to inform their network designs; planners view the digital twin to organise construction; and the construction team views the same digital twin on mobile devices during the build phase to manage activities on site. All departments within Jurassic Fibre have discrete mapping apps, giving them precisely the functionality they need, as well as their own ArcGIS Dashboards allowing them to track their progress against targets.

Jurassic Fibre particularly appreciates the ease at which geospatial data can be shared with different groups of users, in real time, and transferred seamlessly between its many ArcGIS apps, dashboards and solutions. "ArcGIS offers that complete package of field, mobile, desktop and online apps and displays," says Gemma Malone, GIS Data Quality Assurance Manager at Jurassic Fibre. "Pretty much every part of the business uses ArcGIS to some extent, whether this is updating maps, collecting data, creating designs or monitoring progress on dashboards."

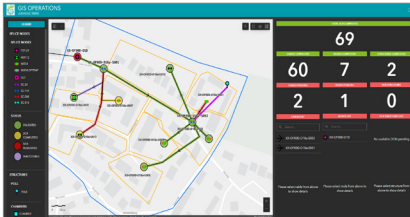
Esri UK | Millennium House
65 Walton Street | Aylesbury
Buckinghamshire HP21 7QG
T 01296 745500 | F 01296 745544
E info@esriuk.com | www.esriuk.com

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Arindam Basu, Head of GIS and Inventory, Jurassic Fibre



An ArcGIS Dashboard which visualises data collected by surveyors and highlights areas needing correction

The Benefits

A single version of the truth

The primary benefit of ArcGIS is that it enables Jurassic Fibre to provide all employees with one trusted source of live data. Everyone can see the current situation, on any device, which is particularly beneficial downstream during the build phase. “For us, ArcGIS is a critical system of engagement that enables us to ensure that a single version of the truth is transferred and communicated to all teams, at once,” says Arindam Basu, Head of GIS and Inventory at Jurassic Fibre.

Effective internal communication and collaboration

As all teams are working from the same digital twin, they can communicate and collaborate highly effectively – whether they are installing fibre networks in rural Dorset, managing sales at the head office in Exeter or working in the technical team in Jamaica. “In an industry in which things change on a daily basis, having live maps and dashboards enables all employees to understand, monitor and communicate what is going on in the network,” Basu says. “ArcGIS is the heart of the whole business.”

20x faster business workflows

Jurassic Fibre has recently used ArcGIS to create a new mobile process, enabling surveyors and other employees working in the field to verify the ‘as-built’ infrastructure from their mobile devices, by just clicking on assets on digital maps on their mobile devices. Any assets that are not shown correctly can be flagged and records updated quickly. “The as-built verification process is at least 20 times faster than before,” explains Kimani Williams, Senior GIS Map Developer at Jurassic Fibre, “plus we are capturing much more data through this approach, which is enabling us to improve the accuracy of our digital twin.”

High quality service for customers

Using its ArcGIS mobile and web-based solutions to capture and edit data on a daily basis, Jurassic Fibre is now constantly improving the quality and accuracy of its digital twin. This is important because the more accurate the digital twin becomes, the less likely it is that unexpected issues will be encountered at the installation phase. Consequently, the company can avoid unnecessary delays in customer installations and provide a high quality service for customers.

Rapid roll-out of broadband network

The single version of the truth, the improved collaboration and the streamlined processes, that have all been achieved with ArcGIS, help Jurassic Fibre to accelerate the delivery of ultrafast broadband and optimise revenues. “ArcGIS definitely helps us to roll out our fibre network at a faster pace than we would be able to do otherwise,” Malone says. “ArcGIS also helps us to more accurately calculate build costs and understand business opportunities that exist within our expanding network.”

Esri UK | Millennium House
65 Walton Street | Aylesbury
Buckinghamshire HP21 7QG
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