

## Accelerating the delivery of next generation fibre networks

# 4site

### The Challenge

- Deliver a more accurate and efficient survey and design service for telecommunications companies

### The Benefits

- 50% faster completion of surveys in the field
- 25% faster turnaround of network designs
- Up to 20% cost savings for clients in the build phase
- Smarter network designs that optimise ongoing profitability



Engineering firm, 4site has reduced the time required to survey fibre networks in the field by 50% and improved the quality of its data using Esri's ArcGIS platform. The company can now design smarter networks to reduce costs for its telecoms industry clients and support the faster roll-out of next generation fibre networks.

### The Challenge

When telecoms companies roll out new fibre communications networks, the success and long-term profitability of the venture can hinge on the quality of the data collected at the very outset. For, if the data is incomplete or out of date, unforeseen issues can emerge that increase costs during the build phase and impede the efficient operation of the network for years to come.

The traditional approach for collecting data to inform the installation of new fibre networks was a highly manual one, fraught with the potential for errors. Surveyors typically used printed maps, note pads, laptops and cameras to conduct surveys in the field up to three days a week and then spent around two days in the office transferring their findings to spreadsheets. The engineering solutions company 4site identified an opportunity to streamline this survey process to not only improve the accuracy of the data collected, but also shorten the time required to share it.

### The Solution

After evaluating a number of possible geographic information system (GIS) solutions, 4site selected Esri's ArcGIS platform, including Collector App for ArcGIS, as the foundation for a customised survey app and process. "The real power of ArcGIS is that you can adapt it," says Niall Looney, Operations Director at 4site. "We were able to use products from the ArcGIS platform to develop a GIS-led survey workflow called 4Survey that we believe is the first of its kind in the fibre deployment industry."

Now, 4site's mobile teams use smartphones and ipads to view, query and collect data in the field pertaining to existing and planned fibre networks. The 4Survey app allows them to complete audits guided by pre-set drop-down boxes, verify existing network features, take and upload images, validate network maps and add new information points with attributes.

All of the information collected in the field using the ArcGIS mobile app is transferred digitally back to 4site's planners in the company's Fibre Centre for Excellence in Limerick, Ireland, in what is a completely paperless process. The planners can see survey data as soon as it becomes available and start designing new networks instantly. In the first six months following its introduction, 4Survey was used to provide survey, design and planning services for the roll out of fibre to more than 100,000 homes and businesses.

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Niall Looney, Operations Director, 4site



FTTH roll out: premises and consenting status

### Benefits

#### **50% reduction in survey time**

Using its ArcGIS survey app and workflow, 4site can now complete fibre network surveys for its clients 50% more quickly than before and, therefore, offer a highly efficient survey service for its telecommunications industry clients. Field-based surveyors work significantly more productively in the field, as they can perform all their required tasks using just one device and no longer have to return to the office to type up reports or manually link images to audits.

#### **Faster delivery of next generation fibre networks**

Because 4site's planners receive complete, accurate survey data direct to their desktops, the instant it is collected, they can now complete the planning and design phase for new fibre installations much more quickly. "4site has reduced its turnaround time for designing new fibre networks by around 25%," estimates Looney. "This means that we can help our clients to reduce their time to market and help them deliver next generation fibre networks to homes and businesses more quickly."

#### **Significant cost savings in build phase**

The improved accuracy of the survey data collected is expected to result in significant cost savings for 4site's clients during the build phase. Fewer unexpected issues will occur as a result of incorrect information, reducing the need for last minute design changes, expensive work-arounds and repeat site visits. According to Looney, "4site's clients could reduce their build costs by up to 20%, which, depending on the infrastructure profile, could result in savings of millions of Euros."

#### **Improved profitability for telecoms operators**

With the higher quality of data that is now collected during the new 4Survey process, 4site can work with its clients to design smarter fibre networks that will optimise future revenues and reduce ongoing maintenance costs. For example, networks can be planned to maximise the potential of clusters and ensure the network extends to as many potential customers as possible. "We can verify the areas that are seemingly unviable at an earlier stage and develop solutions to make them viable as part of the core fibre roll out," explains Looney.

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