

Succeeding in a new field



The engineering services company Secto has just begun to use GIS for the first time to help it seize new business opportunities in the fixed-line telecommunications market. Using Esri's ArcGIS suite, it has developed mobile solutions for engineering crews that improve their efficiency and safety in the field. The organisation is also using ArcGIS Dashboards to monitor the progress of field work in real time and help it communicate effectively with its client. Secto is now growing its GIS team and plans to expand its use of GIS to transform manual and paper-based processes in other parts of its business.

It was a new business opportunity that propelled Secto into the GIS world. The engineering services organisation wanted to build on its long experience of wireless and mobile telecoms and enter the fixed-line telecoms market, so it could play a part in delivering the new national broadband network for Ireland. GIS is used extensively by National Broadband Ireland and other contractors involved in the delivery of this critical communications network, so Secto felt that GIS would be a prerequisite to its success in this new field.

Justin Donaghy was appointed as Secto's first ever GIS technician, and soon afterwards the decision was taken to invest in Esri's ArcGIS platform, including, in particular, Esri's solutions for mobile working. "ArcGIS Online was the obvious choice, partly because everyone else involved in the national broadband rollout is using it, but mainly because it is easy to use and offers all the capabilities we need to support large numbers of mobile workers," Donaghy explains.

Despite the fact that Secto had no prior experience of using GIS, and just one newly-appointed GIS technician, it was able to start developing and rolling out GIS apps at exceptional speed. The organisation took advantage of out-of-the-box solutions to spin up a wide range of solutions for data collection, data sharing and data visualisation. "This is the first time that I have been involved in a GIS project from the start," says Donaghy. "It has been all go, but I have been amazed by how much we have been able to do, so quickly."

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In the first few months alone, Secto rolled out GIS services to over 100 people, including desk-based Secto employees and mobile crews from multiple subcontractors. “We can set up a new crew member with GIS services in just 10 minutes and have him out working in half an hour,” Donaghy says. “Having this flexibility and scalability is helping Secto to grow rapidly and take on more work in the fixed-line market.”

Crews now use ArcGIS on their mobile devices in the field to help them work efficiently when installing broadband infrastructure. They receive their assignments for the day via ArcGIS Workforce and can access maps and plans relating to the location where they are working via ArcGIS Field Maps. They then complete forms in ArcGIS Survey123 to upload data and images of work they have undertaken, such as the installation of a subduct.

This mobile use of ArcGIS helps to improve safety for crews working across a huge area of rural Ireland. Using ArcGIS Field Maps, they can see the locations of potential hazards such as underground electric cables and gas pipes. They can also click on links in the digital maps to get instant access to safety documentation, such as traffic management plans, which are saved on SharePoint. “Crews no longer have to carry huge files of photocopies of safety documents in their vans,” Donaghy points out. “Now, it’s just click, click, click, which is brilliant.”

Elsewhere in the business, office staff use ArcGIS Workforce to assign tasks to specific crews, and quality control managers use ArcGIS Online to view data and images collected with ArcGIS Survey123 and verify that crews have reinstated the condition of footpaths in the right way. When front line managers inspect work in the field, they can edit and update ArcGIS Field Maps to confirm that jobs are completed.

“ ArcGIS helps us to ensure that we are all on the same page. We can share maps and talk the same language.

Justin Donaghy, GIS technician at Secto

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Fifteen separate ArcGIS Dashboards have been created, one for each deployment area, which give managers instant access to data about the progress of activities, including live statistics on the number of completed jobs. These dashboards help Secto to meet the reporting requirements of its client, National Broadband Ireland, and deliver good customer service, something which is of paramount importance to Secto. In everything it does, the organisation strives to deliver the ‘Secto Edge’, which is described as an unrivalled experience built on commitment, agility and expertise. “Good communication with our customers is an important part of delivering the ‘Secto Edge’,” according to Donaghy.

Secto has plenty of plans for the future. It is expanding its GIS team and aims to develop many more ArcGIS Dashboards. Most significantly, it intends to learn from its use of GIS in its fixed-line telecoms operations and adopt GIS in its core business for the first time, to help it transform manual and paper-based processes and improve the efficiency of its services in mobile and wireless telecoms markets.

Secto has only been using ArcGIS and supporting the national broadband rollout for a few months, but it is already very clear that its strategy to expand into the fixed-line telecoms market has been a success. “With our strong background in the wireless market, it would have been a wasted opportunity to not get involved in helping to deliver the new national broadband infrastructure,” claims Donaghy. “Entering into the fixed-line market has been a good move for us, and ArcGIS has given us the capabilities we needed to make it happen.”