

Reenergising key business processes from field to client

LSTC Group

The Challenge

- Streamline processes from data capture and data analysis to data sharing

The Benefits

- Increased business efficiency
- Richer data to inform routing plans and feasibility studies
- Shared understanding of design decisions
- Significantly improved business agility

The decision to migrate from Esri's ArcMap to ArcGIS Pro and ArcGIS Online enabled LSTC to reenergise key business processes and streamline the way that it collects, analyses and shares data, from field to client. The electricity industry services provider can now operate more efficiently and avail of more extensive, accurate data to help it plan the best routes for new electricity lines.

The Challenge

LSTC specialises in the design and survey of overhead lines, underground cables and substation systems, and its teams of engineers, asset inspectors and planners need to collect data in the field on an almost daily basis. Previously, they used a custom-built solution, but this Windows-based data capture software didn't enable them to upload images alongside survey data or draw maps while in the field. Digital maps, work schedules and pdf reports for clients all had to be created manually when employees returned to the office, in what were unnecessarily disjointed and time-consuming business processes.

The Solution

LSTC was already using Esri's ArcMap solution to support route planning, but had not previously considered using geographic information system (GIS) technology to streamline its field-based operations. The company's Director Martin Straker participated in a series of webinars about Esri's full suite of ArcGIS solutions and, as he says, "This sparked our interest in using GIS more extensively. We started to understand the whole ArcGIS concept and how it could support our business in more ways."

A few months later, LSTC took the decision to migrate to Esri's ArcGIS Pro and ArcGIS Online, opening the door for the company to make greater use of ArcGIS tools across multiple teams within the business – in the field, desktop and online. Experts from Esri UK's Professional Services team supported LSTC with the product migration, helping the company to optimise its use of ArcGIS Pro and ArcGIS Online and transform business processes.

Now, LSTC's route planners, surveyors and inspectors use ArcGIS Pro instead of ArcMap to view environmental data, map existing and potential electricity transmission and distribution routes and gain a comprehensive understanding of potential constraints along the way. The team finds ArcGIS Pro much simpler to use, with a cleaner interface, easy-to-find tools and a seamless link between the desktop and ArcGIS Online. Users can more easily incorporate live content and up-to-date base mapping into projects, work on multiple maps simultaneously and save and reuse their own mapping templates.

LSTC has used ArcGIS Pro, ArcGIS Online, and ArcGIS mobile solutions to build seamless workflows. For example, surveyors and inspectors now use a combination of ArcGIS Field Maps, ArcGIS Collector and ArcGIS Survey123 to collect survey data and images in the field, as well as view and edit digital maps. All of the data collected about the condition of electricity poles is collated in ArcGIS Pro, where it can be analysed, interrogated and visualised on interactive maps. Work schedules for clients, indicating which poles need repairs or replacement, are automatically generated from the data in ArcGIS Pro, without any manual intervention, and progress data can be shared with clients using ArcGIS Dashboards.

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Martin Straker, Director and Founder, LSTC



Searching and importing ArcGIS Online and Living Atlas content is seamless in ArcGIS Pro

The Benefits

Increased business efficiency

The migration to ArcGIS Pro and ArcGIS Online has improved efficiency in the planning and environmental departments, as employees can do the same tasks that they have done in the past, more quickly and easily. Managers can also use ArcGIS Pro to deploy inspectors more logically so that they can survey more poles in the shortest amount of time. Equally, in the field, asset inspectors can effortlessly capture images alongside data, for the first time, as well as draw up maps on site. LSTC anticipates that the time savings gained will enable the company to complete more projects, with the same staff, ultimately delivering a good return on investment in ArcGIS.

Richer data to inform routing plans and feasibility studies

LSTC now has a larger, more varied and more accurate reservoir of data, which it can analyse in ArcGIS Pro and use to inform its routing plans and feasibility studies for clients. The Esri Living Atlas provides access to more extensive data resources, while employees can collect more data and images in the field to build up a fuller picture of sites. “With the ability to analyse so much more data, we can answer questions that weren’t even questions when we started to conduct our surveys,” says Rob Salter, Managing Director of LSTC.

Shared understanding of design decisions

Using ArcGIS Pro, LSTC can visualise existing and proposed new electricity transmission and distribution routes and easily demonstrate why routes need to be diverted, to avoid conservation areas or other utilities, for example. This helps employees within LSTC to collaborate more effectively and also improves communication with clients. As Rob explains, “ArcGIS enables us to show clients more easily why we have made certain routing or design decisions and why the routes proposed are the most suitable.”

Significantly improved business agility

With LSTC’s previous Windows-based data capture solution, it used to take a long time to implement survey changes, as each change required a full software update. Using ArcGIS tools however, LSTC has the agility to change and add survey questions on demand. Isaac Wood, Data Capture Manager at LSTC, says: “In the past, it could have taken two or three weeks to change survey questions, whereas with Survey123, changes can be made within an hour and delivered out to everyone in the field that same day.”

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