

Forestry Commission digital transformation, integrating the power of location

The Forestry Commission is the government department responsible for protecting, expanding and promoting the sustainable management of woodlands and increasing their value to society and the environment. This remit includes the regulatory oversight of tree felling in England.

10% of England is woodland with over 40,000 private owners. FCE is split into five regions with more than 40 woodland officers.

Before the project, applications for a felling licence were mainly manual, which created several issues:

- **Double-entry of data**
- **Geospatial data poorly captured**
- **Customers unable to submit existing electronic data from their systems**
- **Regional not national processes**

The FCE required a system to digitise and centralise the process of applications for tree felling. This process required forestry businesses to communicate with the FCE, detailing the exact land area they proposed to complete a variety of management activities on.

The solution

CGI experts began discovery work with FCE and identified the main project challenges:

- **All processes needed to be in one spatially enabled self-service portal**
- **The map needed to be used to drive the system**
- **Users needed to be able to upload data from their GIS tools**
- **Regular notifications would be beneficial to users as their applications progressed**



The Benefits

The intelligent solution to a complex set of challenges now provided improved:

Data Quality

With data now captured electronically and more accurately

Customer Experience

As applications were now moved from downloadable forms to online

Transfer of data

As the solution was now optimised for ease of use for landowners with more land to easily pull data from geospatial tools into the Felling licences online

Back office processes

Now using one national system instead of slightly different regional services

This resulted in more efficiency, improved geospatial data quality, uniformed processes and improved interactions with customers and nationally aligned processes.

To deliver this vision, CGI employed our geospatial services platform, CGI GeoApp, which offered all the tools needed to deploy location-based services successfully. Built on open standards CGI GeoApp was able to integrate proven and supported open-source tools into a single out-of-the-box solution that was quick and simple to deploy, configure and manage. Using an agile development process in-line with GDS standards, we used the CGI GeoApp platform to develop a proof of concept quickly.

Many of the systems that CGI delivers use a web browser as the interface, ensuring accessibility on any device that is browser enabled and connected to the internet. Many of these systems are 'responsive', adapting the interface to the dimensions of the browser screen so the same solution can be easily used on a wide range of devices and platforms, including mobile platforms.

Working closely with key stakeholders, CGI rapidly created a prototype and then iteratively developed this to a working platform, Felling Licences Online (FLO). It was designed as a web application to be responsive and usable on a wide range of platforms so that it could be used in the field as well as office environments. It was run through Amazon Web Services platform and based on our CGI GeoApp system and the OSGeo family of open standards based spatial tools. It combined with a range of other open-source tools, using open standards to communicate across decoupled components. The use of well-known tried and tested components meant that the challenges with delivery were not technical. The challenges focused on helping the customer to understand:

- **The value of a responsive system – and how 'user experience' is key**
- **The advantages of open standards**
- **Using open-source software does not present a support risk**

Our approach to solving these issues was to use many proofs of concept and 'show and tells' within the agile approach so that the customer could see the accrued value and direct the project accordingly, shaping future iterations. CGI designed and delivered an online collaboration platform that allowed:

- **Role-based access**
- **Online digitisation, integrity checking and ongoing licence application**
- **Automated checking of applications against spatial constraints (e.g. protected areas)**
- **Collaboration/work in progress between the applicant and the FC**
- **Seamless communication with the FC's back-end GIS and administration systems**

The project referenced in this case study was delivered by SCISYS, which CGI acquired in December 2019.

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CGI GeoApp

About CGI

Founded in 1976, CGI is among the largest IT and business consulting services firms in the world. At CGI, we are insights-led and outcome-based to help clients accelerate returns on their investments.

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