Helping build back better – using location technologies and data to create Smart community platforms

Active Travel promotes healthy and sustainable travel in Wales, with the aim of making walking and cycling become the preferred ways of getting around over shorter distances.

The Welsh Government funds it via grants to 22 local authorities that pay for the development and upkeep of route infrastructures such as footpaths, cycleways, signage and crossings.

The main challenge faced by local authorities was the lack of a suitable central solution or platform for managing their Active Travel datasets (i.e. road and path network). Before implementing Active Travel, the Welsh Government lacked the option to access the Active Travel data from all local authorities into a single place, providing them with a single view across all the authorities. The Welsh Government also faced the issue of data silos as the legacy application was a standalone solution that comprised the reuse of a key dataset across the government.

The solution

The solution needed to be simple and intuitive to use, provide a common approach and conform with government design guides. At the heart of Active Travel is a database fed from multiple sources, including location data sources such as Ordnance Survey and Sustrans. Citizens are another vital source of information: members of the public are encouraged to update Active Travel on the status of route infrastructure. If someone encounters a cycleway that has been rendered unusable or dangerous, they can submit a report to notify the authorities and other Active Travel users.

Working with Welsh Government DataMapWales and Active Travel teams, CGI designed an open architecture based on open standards that created a one-stop-shop web-based solution. Using an agile approach, we engaged with stakeholders and users of the system to ensure the best possible application was delivered within the agreed timescales. The solution can pull the client's existing data into the system and develop consistent approaches to editing and maintaining the data. A user manual and 'how-to' videos were produced to help users transition to the new tool in parallel.

DataMapWales' Active Travel application is now the approved system for local authorities to prepare their Active Travel Network Map and submit it for approval by the Welsh Ministers. Now sitting within DataMapWales, Active Travel provides a shared platform to the 22 local authorities in Wales. The application provides a single source of information and datasets such as schools, public toilets, cycle parking and other relevant infrastructure, bringing benefits and information to the Active Travel routes user base.

DataMapWales:

A spatial data and applications platform for the Welsh Government. It provides an open data service for the public and public authorities, enabling information to be shared in a common format. It also provides a platform on which geospatial applications can be deployed.

Open is the enabler

Active Travel demonstrates how technology can bring a community together – with location technologies and data enabling a rich, dynamic platform that serves the needs of lots of different users and helps the Welsh Government and local authorities promote their health and sustainability goals.

None of this could happen without open architecture, built on open standards, to share data across the Active Travel platform securely. The security aspect is critical: users have to have complete confidence in the integrity of the data if they are going to deploy it across multiple domains.

As well as facilitating community engagement, the solution supports Active Travel's funding model, enabling the Welsh Government to monitor the condition and usage of its assets.

A smart community platform like Active Travel would not be useful if citizens could not access it – seamlessly – across different interfaces. The solution's architecture is interoperable and cross-platform. It provides flexibility to ensure the data format is not a barrier to sharing and using it.

The result

The web-based solution removed the need for local desktop GIS systems providing all local authorities with a usable system.

- Increased accuracy of routes–as a result of the solution, it is easier for the Welsh Government and local authorities to create, maintain and promote Active Travel routes using a standard approach. These provide uniform iconography using OS mapping, which ensures increased routes' accuracy.
- Online editing capability–ensures local authorities can maintain their data in a consistent format using a browser. Intuitive and easy to access and use. The use of a visual tool enables the sight of many areas on the maps at once. For example, built-up areas and settlements can be overlaid with a base map to plot routes on top. This identifies gaps on routes and allows the Welsh Government to view settlements' density and create a visual representation using colour-coded maps to identify the gaps.
- Easier Network reporting to the Welsh Government–using statistics from the application reduces the local authorities' workload when fulfilling their policy obligations with the Welsh Government. Also, reporting is made easier and more meaningful because the data is consistent in style across each local authority. The Welsh Government can see, access and report on the data and the network's growth easily over time.

With Open Standards in play, the sky is the limit when it comes to use cases for smart community platforms. Insights from these rich, dynamic resources could drive all kinds of public services and amenities.

About CGI

Insights you can act on

Founded in 1976, CGI is among the largest IT and business consulting services firms in the world.

We are insights-driven and outcomes-based to help accelerate returns on your investments. Across 21 industry sectors in 400 locations worldwide, our 77,000 professionals provide comprehensive, scalable and sustainable IT and business consulting services that are informed globally and delivered locally.

For more information

Visit cgi.com
Email:
pascal.coulon@cgi.com.