Giving Alberta anglers anytime, anywhere access to sport fishing regulations

Using advanced geospatial technology, a new responsive Web app makes complex and dynamic information easy to use by both sport fishers and government teams.

The challenge

Alberta Fish and Wildlife provides sport fishing regulations and information about the status and sustainable management of fish populations and fisheries in the province. Over time, providing current information on complex and ever-changing regulations became quite challenging due to a combination of factors. For example, guidance varies throughout the Province of Alberta's many lakes, rivers and streams, much information was stored in separate PDF files, and multiple environments further complicated the process.

As a result, keeping information current and accurate was tedious and time-consuming, making it difficult for the agency to give anglers the guidance they need to fish responsibly — both to help manage fish populations and to protect other natural resources.

Fish and Wildlife sought to give anglers easy access to accurate information anytime from any device in a simple, user-friendly app. At the same time, they wanted to make it easier for people to report illegal poaching and other concerns, including wildlife emergencies and public land abuses like extreme littering, clear-cutting and trespassing.

The solution

As part of a long-term application development services agreement with Service Alberta, the government's solution provider, CGI, implemented an enterprise-wide geospatial platform for the province that included a major deployment of the ArcGIS Enterprise portal from Esri – the global leader in mapping and geospatial analytics software.

The platform uses a common base map across applications and comprises 75 data servers hosted in Alberta's private government cloud. To date, CGI has deployed and currently provide end-to-end support for more than 40 geographic information system (GIS) applications on the platform.

"The geospatial app developed by CGI has significantly accelerated communication of fishing regulations and has improved ease of use for both anglers and ministry personnel."

With the enterprise platform in place, our team of industry experts and geospatial services (CGI Geospatial Center of Excellence) specialists deployed the new responsive app for both mobile devices and desktop web browsers in less than three months after work began – ahead of schedule.

We used an agile development approach that included a sandbox environment for incremental deployments and continuously gathering feedback from the user community.

User-friendly experiences

The easy-to-use application allows anglers to view regulations, including location-specific catch and fish size limits, in real time. An advanced search tool helps them find information about individual lakes and rivers.

Geolocation provides relevant information in a compact map format based on the sport fisher's current location. Anglers may search for a fishing spot by name, tap it on an interactive map or simply share their current location to get up-to-date local guidance.
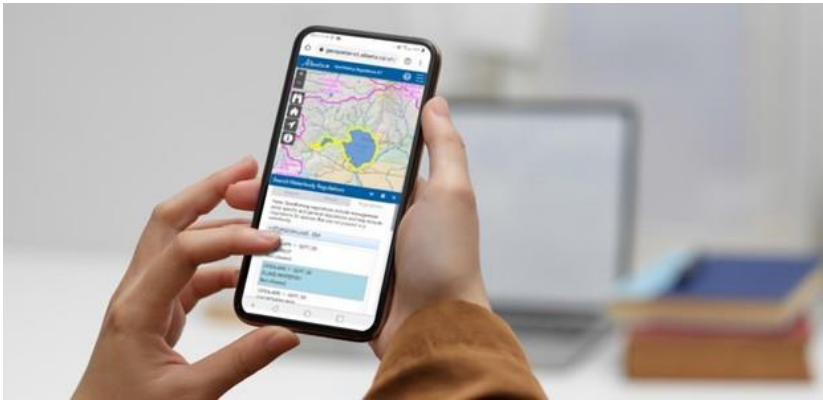
"With Alberta's new sport fishing application, anglers may access the latest regulations for specific bodies of water by searching for them by name or simply clicking on the interactive map."

While anglers are the end users, the app also dramatically improves ease-of-use and speed on the government side. As part of a transformative approach called Geospatial 2.0, business users can make regulatory updates without the need for a new development cycle and without the intervention of IT teams. All updates are accessible in real-time and driven by the regulator without any changes to the application front-end or back-end.

New insights from data analytics

The application also gives Fish and Wildlife access to robust reporting on end-user behavior — for example, how many users visit the site and its key sections, popular usage timeframes, types of devices used, and which online channels (e.g., social media, Alberta websites, etc.) brought them to the app.

Key features for anglers include:

- Map displays of fish management zones, watersheds, lakes and rivers

- A welcome panel with help, instructions, and links to contact Alberta's government

- A search panel to locate and identify bodies of water by name, by location, search in an area or a map click

- Mapping functions that include finger navigation, a legend and the option to center on the user's current location

- A new direct link to report poaching incidents in real time and promote sustainable exploitation of natural resources and protection of biodiversity

- The "Report a Poacher" tool also opened new avenues for outdoors people to report illegal or suspicious hunting and fishing activity or other abuses by phone call, text or online form. It also gives users the ability to upload photos. Anyone who reports a poaching incident may do so anonymously and may become eligible for a reward.

This data helps teams make decisions to add or improve features and help them measure the success of public information campaigns aimed toward fishing enthusiasts.

As CGI now maintains the application, we use the analytics to monitor and improve system performance. Our broader service agreement with the province encompasses more than 100 other applications where our experts are involved at every step of application development. From consulting to development and maintenance, we provide ongoing support and upgrades (hardware and software), patches and other fixes to ensure security, data privacy and high performance.

The results

Months after deployment, Alberta officials have noted the positive appreciation of users as well as the significant benefits to their work. In the interest of continuous improvement, we make sure to integrate modifications suggested by engaged users. Meanwhile, their autonomy has significantly improved since since the launch, they have not had to fill a single IT service request related to the application.

Deep geospatial expertise

The CGI Geospatial Center of Excellence in Quebec City has delivered differentiated value in developing the enterprise geospatial platform and its associated applications. Part of a global network with hundreds of experts in 13 countries, the center helps our clients enhance their information assets and identify synergies between geospatial solutions and business-critical areas, including: business intelligence, advanced analytics, customer/employee experience and remote asset management.

Building a more sustainable and inclusive world

At CGI, our ESG strategy is key to contributing to our strategic goal to be recognized by our stakeholders as an engaged, ethical and responsible corporate citizen within our communities. We prioritize partnerships with clients, while also collaborating with educational institutions and local organizations, on three global priorities: people, communities and climate.

Key benefits to date include:

- User-friendly app for both anglers and government community deployed for any device in less than 3 months

- Ease and speed of regulatory information updates for business user teams, without changes to the system by the IT teams

- New insights from data analytics to help improve the user experience and system performance

- Improved information governance, increased user involvement in the design and evolution of the application, and

- Improved environmental protection that contributes significantly to the Government of Alberta's ESG strategy

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 hundreds of locations worldwide, we provide comprehensive, scalable and sustainable IT and business consulting services that are informed globally and delivered locally.

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