Ontario Government

Delivering accessible mapping applications to the residents of Ontario

The GIS Centre of Excellence provides GIS leadership, expertise, and application delivery to five ministries in the Ontario Public Service.

About the GIS Centre of Excellence

The Land and Resources Cluster (LRC) is one of nine information and information technology (I+IT) clusters that support 28 ministries in the Ontario Public Service (OPS). The GIS Centre of Excellence (GIS COE) is part of the Land and Resources Cluster, which manages the I+IT needs of its member Ministries: *Natural Resources and Forestry*, *Northern Development and Mines*, *Food and Rural Affairs*, *Environment and Climate Change*, and *Indigenous Relations and Reconciliation*.

The GIS COE's role within the LRC is straightforward: they are mandated to provide leadership, expertise, and delivery of GIS applications and services using common processes, standards, and infrastructure.

The Challenge

The Province of Ontario was the first Canadian province to pass a law - the *Accessibility for Ontarians with Disabilities Act (AODA)* - that establishes standards to help people to be more active in their communities.

As a result of the AODA, the GIS COE had a legislated commitment to ensure that all existing and new public-facing applications met Web Content Accessibility Guidelines (WCAG) 2.0 AA criteria by January 1, 2016. Most of the COE's existing applications were Apache Flex-based, heavily-customized, and not accessible at all.

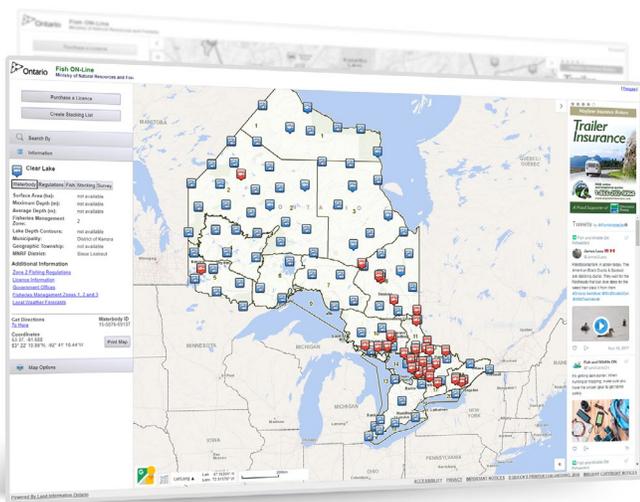**Geocortex**® | by Latitude Geographics®   Ontario

The Solution

The GIS COE made the decision to migrate their applications to JavaScript, largely because Latitude Geographics was beginning to incorporate accessibility tools into Geocortex Viewer for HTML5. They were also looking to move away from heavily-customized, one-off applications and leverage as much out-of-the-box functionality as possible.

Working closely with Latitude Geographics, the GIS COE started a full-scale migration of their applications in early 2015, and were able to meet the legislated deadline of January 1, 2016.

Some of the most commonly used WCAG/AODA-compliant applications (available in both official languages) are:

> ### Fish On-line:
> Allows Ontario residents to search for lakes, review fish stocking activities, learn about applicable regulations, and get directions to fishing license issuers.

The LRC's accessible Fish On-Line application, which provides important fishing information to Ontario residents.

> ### Make a Topographic Map:
> Provides general search and mapping capabilities suitable for creating topographic maps.

> ### Agriculture Information Atlas:
> Built for Ontario farmers, the Agriculture Information Atlas allows end-users to upload location data and generate a variety of required agriculture maps.

These applications employ functionality such as keyboard navigation, screen readers, and high-contrast visualization to ensure comprehensive support for users of all abilities.

The Result

Rather than building accessibility-compliant mapping applications from scratch, the GIS COE has been able to take advantage of out-of-the-box functionality to meet legislated requirements while also achieving substantial cost savings.

A configuration-first approach positions the GIS COE for inevitable technology change, and allows them to take advantage of new technology as it becomes available. With Latitude Geographics maintaining the accessibility functionality, the GIS COE can focus on supporting their clients, instead of worrying about applications breaking when new versions become available.

"We've appreciated the support from Latitude Geographics as a partner throughout this major transition for the LRC," explains Chris Eckstein, Manager of the GIS Centre of Excellence. "The tight integration with Esri's ArcGIS platform, and the powerful out-of-the-box tools offered with Geocortex Essentials, have made our application development much faster, and the applications are significantly easier to maintain over time."

The LRC's mapping applications are receiving well over one million visitors each year, and that number is continually growing. The new approach has not only made application development more efficient; it's proving to deliver higher quality and more useful applications to the residents of Ontario.