Voyager Search Takes York Region Beyond GIS

March 2017

Overview

The Regional Municipality of York, also known as "**York Region**," is situated north of the City of Toronto. It's home to approximately 1.2 million residents and is made up of nine towns and cities that cover an area of 1,776 square kilometers (or just over 685 miles).
It has a two-tier government structure with services provided by York Region and its nine local area municipalities, similar to county and local governments here in the United States. Due to its progressive efforts in the area, York Region is considered a public sector leader in GIS.

Voyager for All Data Access

As a longtime customer, York Region's Geographic Information Services Branch recently renamed the Data, Analytics and Visualization Services Branch (commonly known as just "Branch"), has been one of Voyager's most creative. No longer does York Region limit its usage of Voyager Search to GIS-related tasks. Instead, the government entity has consistently demonstrated an ability to find new and innovative ways to leverage the Voyager software to make the process of using Branch applications simpler and more productive.

The Branch works to supply data to a variety of audiences – the general public, internal staff and even consultants. For York Region, the term "consultant" means anyone who works with a department, such as transportation or environmental, that outsources for the building of roads, pipes, sewers and more. Consultants

work on various parts of a project, like engineering, creating specs, maps and overall designs, for which they need data from York Region.

Currently there are four key ways in which York Region is leveraging Voyager, with plans for even more uses in the works.

1. **Data Discovery.** York Region began its relationship with Voyager by using the software to create what it calls its **Data Discovery Portal**, which provides a catalog on the web for consultants who are looking for specific types of data. Using Voyager's COTS software, York Region was able to create the Data Discovery site with minimal configuration, saving time and the manpower it would have taken to custom develop. The Branch simply pointed Voyager at its data sources and Voyager's built-in scheduler allowed for an automated indexing of data to ensure any changes to the data or metadata were reflected in the web accessible search.
Data Discovery enables consultants to see what data is available first before submitting a request, while providing access to metadata that was already being captured using Esri's ArcCatalog.

2. **Open Data.** The open data application offers all the features of **Data Discovery** plus the ability for users to download data and for York Region's system administrators to track those downloads.
Once they had all this data in the catalog, York Region realized they wanted to do more with it, which included providing access to a greater number of audiences. Running the latest version of Voyager Search, the

Branch was able to customize Voyager's **Navigo UI** and brand it with York Region logos, social feeds, and more. Navigo also enabled the Branch to create categories to help **Open Data** users filter quickly right out of the box.

"In the past, GIS analysts within the Branch had done this work manually," said John Houweling, Director of Data, Analytics and Visualization Services at York Region. "The conversion of the data into multiple formats was time consuming and difficult to maintain. But now with the Voyager/FME Server integration, users of Open Data can download data in the format and projection system they want. If a less popular data format is requested, FME Server processes the data as requested and sends a download link to the client when the processing is complete."

Without Voyager, Houweling said, they would have spent months building a custom solution that would require ongoing manual maintenance – especially given that users execute approximately 6,000 to 10,000 downloads annually.

"Because Voyager is easily repurposed for other needs, we are always looking for new ways to make our data more accessible and discoverable for users," said Houweling. "That's what this is all about."

Users of York's Open Data software include **Google Maps** and **Yelp!**. In fact, York Region is the first site outside of the U.S. that puts trusted government data into an application people are already using, in this case restaurant reviews in Yelp!

New to the Open Data Site

Recently, York added in an extra button, aptly titled "automate downloads," to help users that want to download specific information, such as restaurant review data, on a regular basis. This feature automatically downloads a zip file that has a preconfigured Python script that users can then customize using the copy URL function from the processing screen. They simply paste the URL into the script and the system grabs the updated data every day, while automating the download process.

Screenshot of the York Region Open Data portal showing search results.

OPEN DATA — What are you looking for?

164 Results

Municipal Boundary
This data shows the regional boundary which indicates the jurisdiction between York Region and neighbouring regions. The municipal boundaries define the limits of the Region's nine area
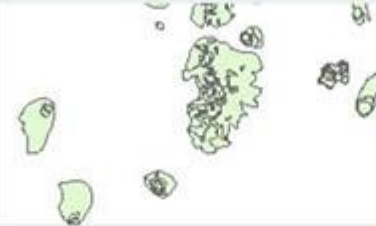
+ Add to Cart   Preview ∨

Wellhead Protection Areas - Clean Water Act
Shows areas of influence on the land around a municipal well, the size of which is determined by how quickly water travels underground to the well.

+ Add to Cart   Preview ∨

Vulnerability Scores - Clean Water Act
Shows the Vulnerability Scoring (VS) zones in accordance with the Technical Rules for the Clean Water Act (issued December 2008) for all municipal well

+ Add to Cart   Preview

Address Points
The address points dataset is a based on information provided by local area municipalities within the Regional Municipality of York. Addresses may represent properties, individual

Bike Path
Contains data on the location of bike paths in York Region as well as details about the path such as, surface type, facility class (i.e. shared road, bike lane, etc...) and the path length. The data is a

Contours, 5 metre 2011
This data set displays the elevation contour lines for the Regional Municipality of York, Ontario Canada. The interval of the contours is 5 metre and is stated above mean sea level.
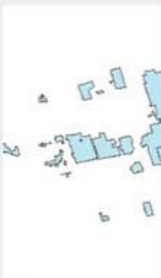
3. **Self Serve Data Depot**. The Self Serve Data Depot, otherwise known as the SSDD, provides York Region consultants with direct online access to more than 400 hosted and maintained data sets 24 hours a day, seven days a week. Regional project staff uses the system's map-like interface to define the project's geography of interest for the consultant. The consultant can then select the data sets from a

structured and searchable catalogue – adding each data set to their "shopping cart" before downloading. The new process puts the consultant in control. Here's how it works:

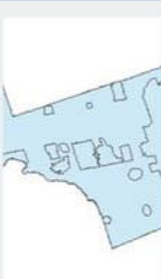A. Regional staff registers the consultant with the SSDD Registration Site by inputting basic project and contact information and defining project geography of interest.

B. The consultant signs a license agreement, essentially asserting ownership and protecting the data's use and distribution. Registration is finalized and an account created.

C. The consultant can now freely use the service to get the data they need from the nearly 400 data layers available. When a data set changes, or if the project scope changes, the consultant simply logs back on to get the latest information.

As an added benefit, working with software vendors such as Voyager means SSDD will be easier to maintain since it will get upgraded when the underlying software (i.e. Voyager) gets upgraded. There is also less concern about becoming incompatible with legacy software.

Voyager

parcel ✕ Within ⌄ ♀ Where is it located? 🔍

2,184 Results ⌄

♡ Save search

Card Table

Relevance ⌄ ↕ Filter

State of the Environment (SOE) Prime Farmland

Format: SDE Data

Agricultural farmland in York Region intersected with soil class 1, 2, 3 and specialty crop areas.

+ Add to Cart Tools ⌄

State of the Environment (SOE) Wetland

Format: SDE Data

A representation of lands that are saturated with water for the majority of the year, promote

+ Add to Cart Tools ⌄

State of the Environment (SOE) Specialty Crop Areas

Format: SDE Data

Specialty crop areas for York Region designated in the 2005

+ Add to Cart Tools ⌄

State of the Environment (SOE) Greenlands

Format: SDE Data

To identify a linked, sustainable, natural environment system for the Region.

+ Add to Cart Tools ⌄

State of the Environment (SOE) Lake Simcoe Beaches

Format: SDE Data

Beaches on Lake Simcoe. Beaches on Lake Simcoe

+ Add to Cart Tools ⌄

State of the Environment (SOE) Areas of Life Science Natural and Scientific Interest (ANSI)

Format: SDE Data

Areas of Natural and Scientific

+ Add to Cart Tools ⌄

State of the Environment (SOE) Parcels with a Pit or Quarry

Format: SDE Data

Parcels with a property code of 593 indicating the presence of a

+ Add to Cart

State of the Environment (SOE) Water courses

Format: SDE Data

A representation of rivers that have a width less than 20 meters, in York Region. The featured

+ Add to Cart Tools ⌄

State of the Environment (SOE) Water Service

Format: SDE Data

These polygons represent areas serviced by municipal water within York Region. They are defined

+ Add to Cart Tools ⌄

State of the Environment (SOE) Watersheds

Format: SDE Data

Watersheds are defined as geographic areas from which water drains to a particular

+ Add to Cart Tools ⌄

State of the Environment (SOE) York Region Land Mass

Format: SDE Data

York Region landmass without any water polygons.

+ Add to Cart Tools ⌄

State of the Environment (SOE) Urban Area in 2001

Format: SDE Data

Historical representation of urban centres and towns/villages from 2001.

The YorkInfo Partnership

The Self-Serve Data Depot was originally built to support the YorkInfo Partnership. The Partnership members, some of whom collaborated with the Branch and supported its design and development efforts, include all nine local municipalities, the local school boards, and the local conservation authorities.

The core mandate of the YorkInfo Partnership is to share data. As a result, partners have established core trusted data sets, data standards, and common business practices supporting data acquisition and management.

The partnership also helps ensure all parties, even smaller municipalities, have the tools and analytical capacity to use data to create their own information products and deliver their services. It's an achievement they could not have afforded on their own.

Using Voyager Search for Non-GIS Projects

One of the coolest benefits offered by SSDD is the *presentation library*. With this feature, members can log onto the site, select "presentation library," and get access to videos, presentation materials and more. This not only offers access to previous presentation materials, but it also contains helpful items like images that have been purchased and are approved to use. "What the Branch has done with Voyager's software has evolved from simply an internal data management tool to something completely beyond GIS by using it for internal asset management," noted Houweling.

In 2016, the Self-Serve Data Depot was honored with two awards: the MISA Ontario "**Excellence in Municipal Systems**" Award and the GTEC "**Award of Distinction**."

4. **YODA (York's Online Data Access Catalog).** As York Region's **internal catalog**, also known as a data registry, this contains all of the data that is being held within the region, which comes to approximately 1,720 records. York indexed a SQL database where each row in the table contains the metadata related to one file. By taking this approach, other users can easily search for the information they need without writing a complicated SQL query or hitting an important system of record, like this database. Further, the Open Data site leverages the YODA indexing, but the path to the data points instead to the spatial database where the files are being stored so that they can be downloaded.

Looking Ahead

Each municipality within York Region has its own data sets, which contain hundreds of pieces of data and records. Voyager's Federated Search means that publically available data on separate Voyager instances can be managed locally but searched universally using one interface. York Region staff has already shown this to be doable and work is underway to make it a reality. A current example: York Region is working with the Town of Newmarket to create a **Federated Open Data Site**. The idea is to have users click on a particular record, which then opens on one of York Region's many partner sites. Given the two-tier government structure, sometimes people don't know which layer their data is from, and they don't care. They just want the data, so

making it easy for them to get what they want is a key goal.

Seeing Tangible Results

Voyager's configurable system has saved York Region a significant amount of time and money. Given the Branch did not have a custom solution, getting Voyager up and running quickly was imperative, and it continues to save the government entity money on maintenance as well.

With time and resources freed up, the Branch can now focus on making more data layers accessible and discoverable to everyone. And with Voyager's "Google like" interface that includes helpful built in features such as auto-complete, users can easily find the information they want. Everyone – from the Branch staff to the many audiences it serves – has realized the value of the Voyager Search system.