

407 ETR Uses Mobile GIS Solution for Road Network Management

Mississauga, Ontario, Canada

407 ETR provides field inspectors on-the-fly technology from Hexagon Geospatial® for improved operations and communications. 407 ETR is a privately operated, all-electric open access toll highway which spans across 108 kilometers from Burlington to Pickering, Ontario, Canada.

It was the first electronically operated toll highway in the world. Transponders or license plates are read at the highway entrance and exit points, and the distance traveled between those points are used to calculate the toll charge.



When 407 ETR reviewed its existing asset management system, the company realized it had too many different software systems that weren't connecting information with each other. Many issues arose from its outdated software processes which were managed by several disparate systems that did not have mobile capabilities for 407 ETR's off-site field operators.

The Challenge

407 ETR needed a common location for all levels of the organization to update asset management information, especially when field operators were working off-site.

The Solution

GeoMedia® Smart Client was able to integrate and streamline 407 ETR's asset details into one common interface with a solution that IT staff, GIS staff, and non-GIS staff alike could use.

Extending GIS to the Field

407 ETR has leveraged Hexagon Geospatial products and services for more than nine years. When the need for a single geo-enabled, end-to-end data collection and validation system arose, 407 ETR looked to Hexagon Geospatial to provide a solution that fit its operational needs. From the beginning licensing stage to installation and production, Hexagon Geospatial deployed a smart solution based on GeoMedia Smart Client in four and a half months. This integrated, bi-directional solution enables 407 ETR to collect, manage, and share data securely within and outside its departments. The solution workflows connect fully between 407 ETR's asset management software and GIS system.

With GeoMedia Smart Client, information is made available to both internal and external personnel in real time. The application's ease of use enables even inexperienced GIS users to exploit the wealth of information contained in the database. As a result, an inspection of 407 ETR's 8,000 signs was completed in just five weeks, when in previous years it had taken approximately four months.

Hexagon Geospatial's mobile application helps 407 ETR work faster, saving time for its data updates that can now be done on-the-fly. Tara Venton, product owner at 407 ETR, states, "Hexagon Geospatial's Smart Client solution had fully configurable workflows that adhere to our set of business rules. We were able to build an end-to-end asset management system that simplified all of our business processes. With our new system in place, we can extend powerful GIS capabilities to non-technical end-users, which we haven't been able to do in the past."

407 ETR was able to impress its field operators, who did not have a GIS background, with the new system – something the organization knew would be important for a successful project. The ideas and feedback of 407 ETR field operators was crucial to the success of the project and its ultimate adoption to the Highway Operations team.

GeoMedia Smart Client also eliminated the use of paper-based recording of inspections that would require the inspector to record the information on paper and then manually transfer the information into a database in the office.

Many of 407 ETR's complex technical problems have been addressed with the implementation of GeoMedia Smart Client. 407 ETR now has a system that is fully integrated into one interface, which makes it user-friendly for users on all technical levels. By using GeoMedia Smart Client and



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GeoMedia Smart Client Interface

aerial imagery, the company has improved its data model and asset location accuracy. Also, 407 ETR has successfully implemented roadside connectivity to all of its field operators by adding mobile software outside of the office.

Building the Future with Smart Hexagon Geospatial Technology

By implementing GeoMedia Smart Client, 407 ETR has an open and shared data infrastructure which guarantees fast and low-cost additional integration in the future. 407 ETR will continue to move forward, adopting modern technologies to provide a better overall integration for its organization.

407 ETR expects to evolve its use of GeoMedia Smart Client for predictive reporting and analytics. It can use its current architecture and processes as leverage for future asset classes, such as fleet, pavement, tolling, and cameras.

The company also wants to build workflows for online and offline modes as the highway grows to areas where 3G coverage does not exist. The GeoMedia Smart Client interface allows 407 ETR to seamlessly integrate signage changes into configurable workflows. 407 ETR has leveraged advanced geospatial functionality via simple-to-use map-based tools, streamlining its processes and honing its expertise.

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Hexagon is a global leader in digital solutions that create Autonomous Connected Ecosystems (ACE). Our industry-specific solutions create Smart Digital Realities™ that improve productivity and quality across manufacturing, infrastructure, safety and mobility applications.

Hexagon's Geospatial division creates solutions that visualize location intelligence. From the desktop to the browser to the edge, we bridge the divide between the geospatial and the operational worlds.

Hexagon (Nasdaq OMX Stockholm: HEXA B) has approximately 20,000 employees in 50 countries and net sales of approximately 4.3bn USD. Learn more at [hexagon.com](https://www.hexagon.com).

For more information, visit [hexagongeospatial.com](https://www.hexagongeospatial.com) or contact us at marketing@hexagongeospatial.com.