



ESRI Canada

Case Study

Field Connectivity Powers Seamless Infrastructure Maintenance



City of Surrey Maintains Growing Infrastructure with Mobile GIS

The City of Surrey spans 316 square kilometers, making it geographically one of the largest cities in Canada. Four times a year, the City conducts “sector checks” that require three field crews to inspect visible assets along Surrey’s extensive road network and record infrastructure-related issues. To better manage this time-intensive task, the City implemented Cityworks which automates the generation of service requests and work orders, while equipping field crews with the ability to electronically access asset-related data.



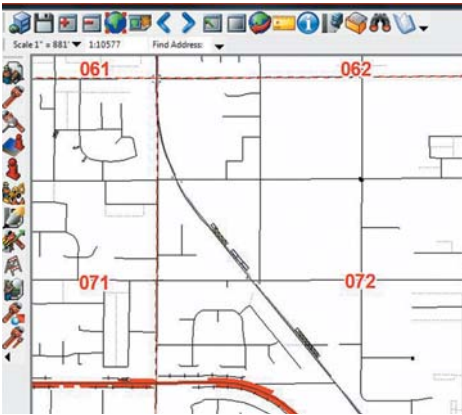
Challenge

Sector checks are an integral component of Surrey’s infrastructure management program that enable the City to comply with both provincial and municipal regulations, while ensuring the optimum safety of its assets.

In the past, field crews would record observations using a proprietary application, transfer the information onto a floppy disk and return to the office to upload data into a master Sector Checks database. During this upload, work sheets would be automatically created and distributed, for other crews to address recorded deficiencies.

However, a lack of system integration was creating operational challenges. The City stored asset information in a central GIS database that could only be accessed in the office. Field crews did not have access to electronic mapping software and relied on printed map books that were updated annually. Preventative Maintenance (PM) Program work and service requests were stored and maintained in Cityworks, requiring users to access multiple applications and datasets in order to fully visualize the current state of the City’s infrastructure.

To streamline workflows, the City would need to replace the aging, proprietary application with a Work and Asset Management System, as well as connect the field to the office through automated processes.



By clicking on an asset, staff can access and edit detailed information such as its age, make, material and work history.



Access to aerial imagery enables field crew to easily locate the infrastructure they are inspecting.

“The integration of workflows has made our jobs significantly easier while improving data accessibility across our growing City. Connecting field staff with current asset information means that our sector checks are performed both consistently and compliantly.”

Gord Simmonds

Project Supervisor & Computer Applications
City of Surrey

Solution

Surrey had previously integrated Cityworks Desktop into its existing IT environment and interfaced the application with the City's finance, human resources and warehousing systems to better manage asset lifecycles. Cityworks Desktop leverages data from within the central GIS database and makes it available to the entire department within the application.

Asset data is plotted on a map view, rather than maintained in individual proprietary databases, so that staff can easily visualize and analyze asset characteristics, as well as service request and work order history. By clicking on an asset, staff can access and edit detailed information such as age, make, material and work history.

To expand asset management capabilities across the enterprise, field crews were then equipped with Cityworks Anywhere – a mobile solution that interacts with the City's asset information and provides remote access to GIS data. Using lightweight Toughbook computers, City staff can locate and view assets through GIS-generated maps. Work requests are then transferred back to the central Cityworks database via docking terminals, where they are verified and leveraged to generate work orders, all through a single, integrated system.

Benefits

Through a single platform approach, the City of Surrey has extended access to critical asset information across the enterprise, ensuring that information is always up to date. The integration of service requests and work orders has eliminated multiple data entry points, which has significantly improved accuracy and enabled field staff to work more productively. These documents can now be easily accessed through a map view to check the status of work occurring throughout the City.

The Cityworks Anywhere mobile solution ensures that consistent information is recorded during sector checks and that data capture is always complete. Picklists within templates reduce typing requirements so that field crew can easily record information on the spot.

Real-time, GIS-based maps have replaced costly, printed map books which quickly become outdated due to Surrey's continuing rapid growth. The ability to access aerial imagery on lightweight Toughbooks also enables field crew to easily locate the infrastructure they are inspecting. This is especially useful for inspections that occur throughout the City's rural areas.



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Founded in 1984, ESRI Canada provides enterprise geographic information systems (GIS) solutions that empower businesses, governments, and educational institutions to make timely, informed and mission-critical decisions by leveraging the power of maps. The company distributes the world's leading GIS software from ESRI, Telvent, Cityworks and other technology partners. Headquartered in Toronto, the company serves over 10,000 customers from 16 regional offices across Canada.

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