EPCOR Utilities Inc., Canada

EPCOR Water Services Inc., Canada increases efficiencies with a mobile web mapping solution built on iSMART®.

Background

EPCOR Water Services (EPCOR) supports the entire water network for the City of Edmonton, Alberta, Canada. As part of its "Network Field Link" project, EPCOR worked with eSpatial to develop a mobile web mapping solution built using iSMART. The solution integrates its current workflow management system with its GIS database to provide a completely integrated solution which can be utilised across the company to increase efficiencies and provide access to integrated information to company stakeholders.

The challenge

EPCOR's work management system managed routine and emergency maintenance on the water infrastructure throughout the city based on a work order system. Without a web Interface, field workers were unable to see what other work was required or ongoing near their current work location and were unable to send real time status updates. Changes were telephoned in and were not tracked consistently which led to insufficient information and paper trails. The managers were unsure as to the state of the facilities in the field and were unable to monitor or review work as they didn't have appropriate access to completed or outstanding work. Foremen and schedulers were unable to schedule or dispatch work effectively as they didn't have appropriate access to spatial information about outstanding work.

EPCOR recognised that in order to mitigate the service interruptions and improve crew scheduling, the development of a web map application was required. Specifically, field workers would have the ability to view outstanding work and facilities as layers on a map along with associated information. Additionally, when executing work tasks and interacting with facilities the field workers have the ability to update non-spatial information related to the work and/or facility and to generate alerts to other primary stakeholders.
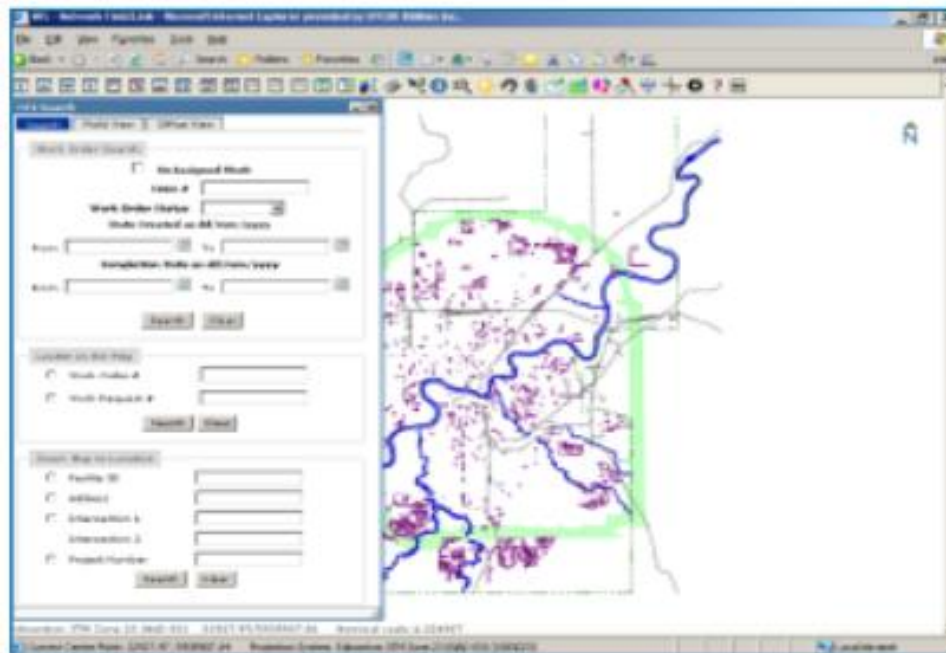
The solution

 EPCOR and eSpatial designed a solution that integrates EPCOR's work management system with EPCOR and the City of Edmonton's spatial data to create a complete mobile web mapping application that can be utilised across the company to increase efficiency and provide company stakeholders with access to integrated information.

The solution incorporates iSMART and Oracle Spatial technologies, and implements management of work orders; work requests; inspection reports; viewing and editing of facility attributes; message

sending; and customised searches for spatial data, including intersections, addresses, facilities, work orders, and work requests. The application also spatially displays:

- Work orders.
- Work requests.
- Special events and projects.
- Facilities (valves, hydrants, water mains, chambers, plus 16 others).
- City of Edmonton data (addresses, intersections, neighborhoods, boundaries, rivers, rail lines, alleys, plus 4 others).

Benefits for EPCOR

The solution provides a centralised geospatial web infrastructure that leverages the strengths of iSMART and Oracle Spatial to support the following activities:

Field workers
- Remotely update and complete work order or work request information.
- Remotely trigger facility name plate information update requests via an email notification for manual updating.
- Remotely update facility status.

- Remotely complete inspection or deficiency reports.
- Remotely view inspections or deficiencies spatially.

Foremen and schedulers
- Spatially view all outstanding work.
- Spatially view work in order to help facilitate planning and prioritise work.
- Convert work requests to work orders.
- Assign work.
- Perform basic analysis to visualise overdue work orders, location of work orders, and conditions of facilities.

Managers
- Access to a simple and easy to use application that provides improved data accessibility.
- Access to a simple and easy to use application that provides improved efficiency of data maintenance.

"The addition of iSMART to the EPCOR environment has allowed us to link our existing GIS and Work management systems and increase the business benefits and extend the life of these existing tools while improving the quality and timeliness of the information within these two systems and meeting the specific needs of our field crews".

Susan Ancel - General Manager, Network Services and Operations, EPCOR Water Services Inc.

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About iSMART

iSMART transforms data with a geographic component into easily-understood maps, charts and graphs that can be interpreted to provide actionable business insights.

Combining the latest innovations in software delivery and usability with the full functionality of a Geographic Information System (GIS), iSMART makes location intelligence available to any organisation.

iSMART is an affordable, predictable, and scalable location intelligence tool, suitable for both GIS experts and newcomers to location intelligence alike. It also provides an ideal enterprise grade hosted services delivery platform for geospatial applications.

About eSpatial

eSpatial is a leading provider of Geographic Information Systems (GIS), and a pioneer in the provision of location intelligence delivered via Software-as-a-Service (SaaS).

Our flagship product, iSMART, has pioneered the availability of a full-function GIS or location intelligence tool with SaaS delivery.

As an established presence in the GIS and location intelligence space, eSpatial has developed considerable expertise and intellectual property in spatial software use and development.

We are proud to work with leading technology partners such as Oracle, NAVTEQ and Digital Globe; and to count many leading organisations amongst our global customer base.

eSpatial is headquartered in Dublin, Ireland.

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