



Cambridge strives to be the next Smarter City

With the help of IBM, the City of Cambridge in Ontario is leading the way to create smarter, more interconnected cities. How analytics identifies and schedules maintenance for issues that haven't yet happened, and how the 90s PC game, SimCity, might play into this

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In a lot of ways, cities are just big companies. They may have a more complex relationship with their stake holders, and there may be more systems in play, but, essentially, it isn't much of a stretch to see them as a large, if sometimes fragmented, company.

According to Mike Hausser, director of asset management for the City of Cambridge, Ont., "cities, as you know, face a large challenge in organizing a large amount of infrastructure." "There aren't a lot of really good tools in the industry right now that help us solve those problems and they're unique to municipalities," Hausser says.

"In Cambridge, we have done a fair bit of analytic work ourselves but with limited resources and limited technology" Hausser says.

But once that analytic work was started by some visionary members in the water department, the city was able to implement the IBM Maximo Asset Management system to collect data from Cambridge's entire water network. It's a data set with 250,000 different assets. John Longbottom, strategy leader for IBM's Smarter Cities campaign, says "Cambridge has captured their assets so that they're codified in the system".

Because of that data capture, not only in a logistical sense, but also because it's "codified in a geospatial sense," said Longbottom, adding that IBM was in the unique position to offer a new set of tools to help analyze the data and streamline a lot of city practices.

More often than not, Longbottom said that, "a lot of the systems we have in cities are discrete and fragmented." IBM's Smarter Cities initiative "uses mathematical modeling and a bit of data to develop insight."

According to Longbottom, the theory of the project is that, "in a smart city, things need to be instrumented, integrated and interconnected."

This, in both scope and depth, is a fairly unique undertaking. According to independent technology analyst, Carmi Levy, "while a number of so-called smart city projects have been launched in recent years—most recently the Waterfront Toronto-linked project to deliver ultra-high-speed broadband to a new city neighbourhood—IBM's initiative is the most ambitious one yet because it extends well beyond simply laying out the basic infrastructure."

Using Smarter Cities, the City of Cambridge can use the analytics to identify maintenance issues anywhere along the line, before it breaks, schedule maintenance to roads so that all the stakeholders can get done what they need at one time and avoid unnecessary downtime, and even eventually submit the data to disaster tests and simulations.

According to Longbottom, that's just the first step. Based on their early success with Smarter Cities, IBM has recently announced a new product specifically for cities called the Intelligent Operations Centre (IOC).

In future, the IOC will be a portfolio of tools to help city planners and stakeholders visualize an entire city and its systems. "IOC is a command centre for the city" and "allows you to start projecting into the future" with far greater accuracy because of the amount of data you can include, says Longbottom.

IBM is also still experimenting with new ways to present the data so that all stakeholders can quickly understand without needing a great deal of explanation. He said that something resembling the 90s PC game, SimCity, is not out of the question.

For now, however, Cambridge is still adding to their data capture and looking at more city assets to incorporate into the system.

Says Hausser, "many other municipalities, when they implement asset management, tend to focus on one group of assets," but, "that type of tracking doesn't support the kind of solutions that truly optimize a city."