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HAMILTON, ONTARIO, CANADA, USES A GIS-ENHANCED WEB SITE

The idea of offering new services in an era of increasingly tight budgets can scare local government managers and leaders. With limited revenue sources available and the public's general aversion to tax increases, the worry is about sustainability. How can the local government pay for the new service over the long term?

At the same time, community residents are demanding that their local government provide the same convenience and access to services as they receive from the private sector. How can a local government best respond to such demands?

Technology provides one important answer. Although an investment in system development is usually required, improved technology can greatly enhance the ability of the local government to respond to the needs of its citizenry without breaking the budget. Local government Web sites, including those that use geographic information system (GIS) technology, can offer an array of new local government services for residents at a reasonable cost.

The city of Hamilton provides a variety of business services to its residents through Web-based GIS applications. One of the more popular sites helps parents locate nearby child care in their neighborhood. Source: City of Hamilton, Ontario, Canada.

AN EXAMPLE FROM CANADA

Hamilton, Ontario, Canada (www.hamilton.ca), has been creating innovative GIS-enhanced Web sites (www.map.hamilton.ca) for years, and it has received various industry technology awards for innovative and useful e-government services. Hamilton's GIS-enhanced site, map.hamilton, serves up more than 78,000 maps every month.

To produce such a large volume of maps without the aid of the Web site would represent an enormous drain of staff time and resources. But with the Web site, literally thousands of citizens and other customers can easily access the information they need at a relatively minimal cost to the city.

Hamilton began its Web efforts with a Web site dedicated to local economic development. It provided tools for assisting clients in finding industrial, institutional, and commercial properties for sale or lease. Visitors to the site can search for properties by size, class, and type. The Web site provides orthophotography, census, infrastructure, traffic, and utility data. It also incorporates a business directory so that Hamilton can help businesses map the locations of potential customers, suppliers, and competitors.

Information on properties for sale or lease comes from commercial listing services that include photos of the properties. Many, if not most, initial development searches begin on the Web now. Commercial and industrial site developers research available properties at all times of the day. Having a presence on the Web is crucial to being considered as a possible location. Hamilton's online tools give the city the profile and presence it needs to capitalize on potential opportunities. Much of the data used for the economic development Web site was first used for internal applications. The planning and development department uses GIS and Web technologies for managing vacant-land inventory, subdivision and development tracking, heritage site management, demographic analysis, population modeling and forecasting, urban forestry, zoning, official plans, addressing, long-range planning, growth-related integrated development, environmentally sensitive areas, source-water protection, downtown renewal, building and licensing, community planning and design, and cartographic services. In fact, geospatial technology is used in virtually every aspect of Hamilton's day-to-day activities as it supports functions in public works, finance and taxation, public health, community services, emergency services, and planning and development.

STILL MORE
While building the economic development site, the staff realized that several exist the public. Making applications public simply meant using the hardware and software acquired for the economic development Web site. The city soon released a general atlas site, a gallery of jurisdictional maps, and an aerial-photo viewer showing current and historic imagery.

Another site provides information on capital improvements, including road, sewer, and water projects. It also shows the locations, schedules, costs, and contacts for all planned projects. A site dedicated to property taxes provides thematic maps showing tax impacts and reassessments along with tools for looking up assessment values and taxes payable. The site offers tax comparisons among similar properties within neighborhoods. Another Web site provides an inventory of child care information.

The strategic goals in providing these services are to spend money wisely and use technology to improve business processes. Hamilton's GIS solutions are doing that by improving customer service, aiding economic development, and helping staff members work in a more efficient way every day. The GIS-enhanced Web sites have also proved to be useful as a way for staff and

constituents to communicate and collaborate on issues. When problem solving by phone or online, citizens and staff can be looking at the same map or picture on the Web.

If a picture is worth a thousand words, then a map is worth ten thousand. And integrated intelligent maps and pictures are worth a million. The city of Hamilton's Web-based GIS applications provide users with a wealth of municipal information, including an application that allows users to access digital orthophotography of buildings in the community, such as the above shot of the Hamilton City Hall. Source: City of Hamilton, Ontario, Canada.

The city has a broad vision of future possibilities for other external government services using GIS. In late 2006, Hamilton will introduce a new Web site that features additional interactive maps and photos. This new portal will showcase the city as a tourist destination, highlighting local attractions, shopping opportunities, and lodging. A new community Web portal (www.myhamilton.ca) was launched on September 13, 2005. The portal uses e-commerce technology and embedded GIS map-it functions to facilitate the purchase of various permits; promote community events; and assist citizens, businesses, and visitors in accessing government services.

Plans for future Web services using GIS include location-based services such as "Where's my bus?" or "Where's my snow plow?" and tools for searching for "What's nearby?" for finding a given location such as the closest library, park, child care, or other municipal service.

In short, by using GIS-enhanced Web services, Hamilton has found a creative way of enhancing and expanding local government services without breaking its budget.

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