



Client Profile



Region of Peel

“Our whatIf? planning model gives us the flexibility to answer time critical questions and inform decision makers.”

- Ron Jaros, Planning Manager, Research and Information

Home to over one million people, the Region of Peel is the second largest municipality in Ontario, and encompasses three area municipalities – Mississauga, Brampton and Caledon. Peel enjoys a strong economy, cultural diversity and a healthy natural environment. However, the region continues to experience rapid growth, increasing immigration and now an aging population.

The Region’s planning mandate is to **manage growth and change to create a more liveable region**. In this effort, the Research and Information Team (Planning Policy and Research) serves several vital functions, including:

- Development, amendment and review of the Regional Official Plan, the main vehicle for Regional planning policy
- Planning research, which includes immigration and aging studies, population and employment forecasting, development application monitoring and building permit monitoring
- Making research and information available to various end users, or clients, which include the area municipalities, other regional departments, developers, various provincial and federal departments, and the Region’s public

Challenges

Ron Jaros, Planning Manager of Research and Information, identifies one of the greatest challenges the team faced – providing clients with consistent, reliable information. Consistency issues occurred at two levels:

- Planning datasets exist in the context of complex relationships with other data. Every time data is updated or different assumptions used there is an impact on related data. The update process was lengthy, manual, undocumented and therefore inconsistent. The result was unreliable information, and little regional capacity to perform custom forecasts in a timely fashion.
- There was no single point of access to regional demographic and socio-economic data, and information was provided to clients through inconsistent channels. There were cases of Regional Council receiving reports from different departments, citing inconsistent figures that should have been identical.

Clearly, data consistency was a serious concern for the organization charged with the provision of planning information.

A more specific challenge described by Peel’s Roman Kuczynski, Principal Planner, is the Province of Ontario’s recent Growth Plan (Places to Grow). The plan helps regions manage future growth in several ways, including directing more development to urban areas and thereby reducing sprawl, promoting transit supportive densities and preserving employment areas for future economic opportunities. The challenge for Peel lies in incorporating the Growth Plan’s targets and policies in the Regional Official Plan and developing the required intensification strategy.



Ron Jaros, Planning Manager (right), and Roman Kuczynski, Principal Planner, of Research and Information

Solution

In 2001 the Region of Peel acquired its first whatIf? planning model for allocating population, dwelling units and employment to 633 geographic zones. Immediately, the model enabled the planning department to rapidly provide high-quality data for their most demanded forecasts. More recently the Region upgraded to the whatIf? Population and Land Use Model (PLUM) product, which has all the functionality of their first model but also a population module that enables the Region to produce its own population forecasts. The number of geographic zones has increased to more than 800, and projections are run to the year 2056 in one-year steps.

The whatIf? planning model was implemented in a collaborative effort involving the Research and Information staff and the whatIf? Technologies team. Through a series of on-site workshops the whatIf? team identified custom requirements for the model and specific data needs. Once implemented, the staff was trained in using the whatIf?

model software to create new scenarios, or forecasts. The teams were able to hold many of the workshops remotely via web-conference technology.

In conjunction with their whatIf? planning model, Peel's planning department launched the Peel Data Centre – a publicly available web portal that Jaros calls their “one stop shop for demographic and socio-economic data”. Much of the information made available is produced, directly or indirectly, through Peel's whatIf? planning model. The Peel Data Centre is available at www.peeldatacentre.ca

Benefits

Using a whatIf? model has directly resolved the planning department's difficulties with data consistency. Now, with a robust framework for allocating population, dwellings and employment, planning staff can quickly turnaround repeatable forecasts. This is made possible by the whatIf? software's capability to “remember” the complex relationships between multiple variables, as well as all previous settings for each variable.

Peel's whatIf? model supports one of the planning department's major responsibilities, the Regional Official Plan. In this capacity the model is used to: test urban boundary expansions; analyze implications of proposed policies; consult with major stakeholders; and monitor implementation of the plan.

The Research and Information team now acts as an efficient, reliable “hub” for regional data – continually informed by updated data, shifting policies, priorities and assumptions – and incorporating these into a detailed, consistent vision of future regional development. The whatIf? planning model is the data engine for this hub, and much of this information is provided via the Peel Data Centre, a consistent delivery channel.

Examples of the “spokes” of this hub, incoming and outgoing information, are:

- Demographic data, both historical and forecast, on fertility, mortality, immigration, emigration, etc
- Forecasts for Public Works planning, Sanitary Sewer and Water, by Small Geographic Units
- Forecasts for area municipality Transit and Transportation Master Plans, by traffic zones
- Forecasts for the Peel Police, by police patrol zones
- Forecasts for School Boards, by school catchments areas
- Special purpose analysis (Mississauga City Centre and Northwest Brampton development scenarios; East-West Transportation Corridor)

Another whatIf? benefit is the confidence the team has gained in their data and forecasts, a result of the transparency and automatic documentation provided by the whatIf? model platform. Every forecast generated is repeatable, and users are able to explain a particular result by tracing through the clear model structure. “It's very useful when we're involved in a case at the Ontario Municipal Board and need to defend our numbers,” says Jaros.

With the recently finalized Places to Grow plan for the Greater Golden Horseshoe comes the significant task of

aligning Peel's Regional Official Plan. It is here that whatIf?'s Population and Land Use Model (PLUM) has and will continue to play a central role. Says Kuczynski, “PLUM encompasses all the intensification and density concepts relevant to the Growth Plan, including percentage of development within the built boundary, greenfield development density, and urban growth centre density.” The intensification strategy that Ontario's Ministry of Public Infrastructure Renewal requires all Regions to prepare in accordance with Places to Grow is built right into PLUM's logic and essentially lays out how much growth is planned, where, and also when it will occur.

Looking forward, Kuczynski sees two areas in which whatIf? planning models can be better utilized and expanded at the Region of Peel. The first is in the area of multiple-scenario planning – going beyond the “single future” municipal planning paradigm and exploring a range of alternate future scenarios. The other is integrated planning – bringing together traditionally separate regional functions, such as water and sewer infrastructure, transit and transportation, human services and finance, into a more holistic, long-term planning environment. As it happens, this is an area of growing interest across Canada as municipalities consider how to prepare the Integrated Community Sustainability Plans mandated in the 2005 Federal Gas Tax agreements.

whatIf? Technologies

whatIf? Technologies Inc. is an international leader in building simulation models for long-term integrated planning. Founded in 1989, the firm has significant expertise in urban and regional planning models. The firm is also a recognized innovator in the application of simulation modelling technology to other areas, including: natural resource management; energy analysis including energy end use, emissions and fuel production systems; demography; sustainable development at global and national scales; technology impact assessment; and human resource strategic planning.

For further information contact:

whatIf? Technologies Inc.
338 Somerset Street West, Suite 3
Ottawa, Ontario K2P 0J9

info@whatiftechnologies.com
www.whatiftechnologies.com
Tel: (613) 232-5613

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