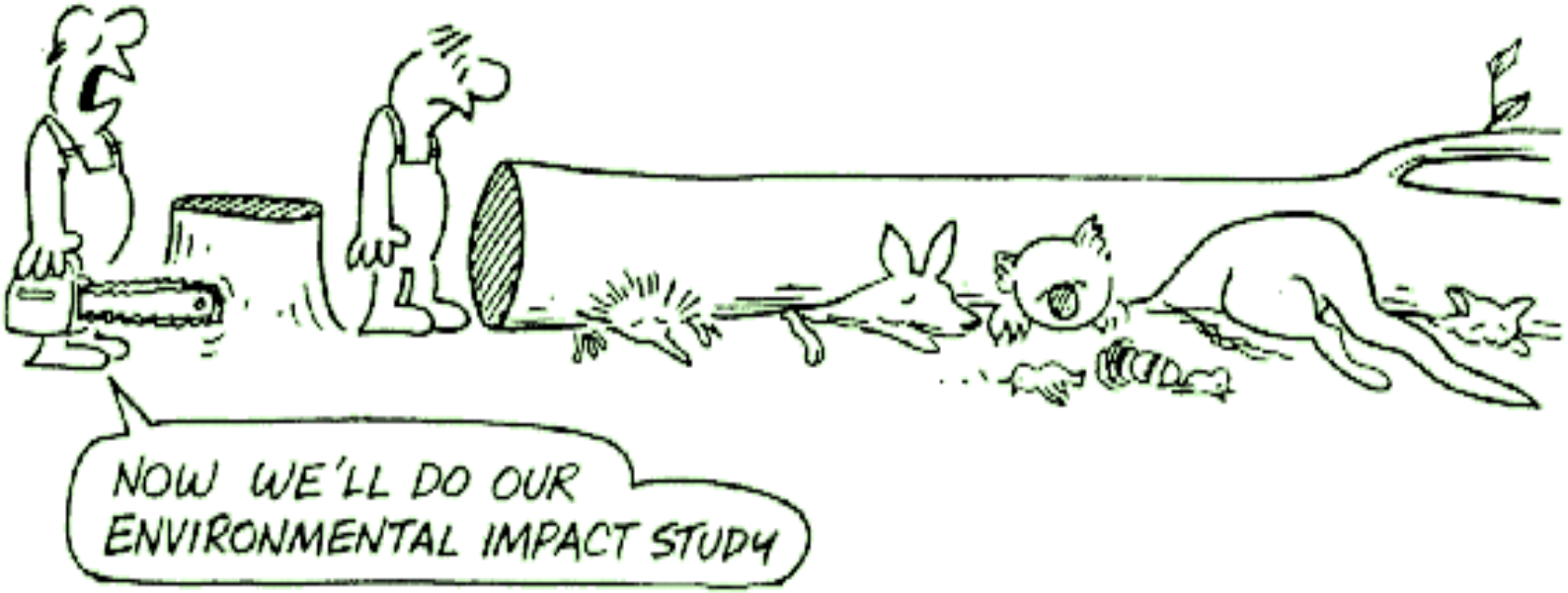
Principal Investigator: Professor Ann Dale, Royal Roads University

Royal Roads University: Chris Strashok, Robert Newell
whatIf? Technologies: Michael Hoffman, Marcus Williams, Deryn Crockett, Robert Hoffman, Bert McInnis
Torrie Smith Associates: Ralph Torrie
SSG: Yuill Herbert

Research Partners: Devin Causley, FCM and Mary Herbert-Copley

We gratefully acknowledge the support of the Canada Foundation for Innovation.

Canada Places + Spaces



An integrated decision-making tool

The model

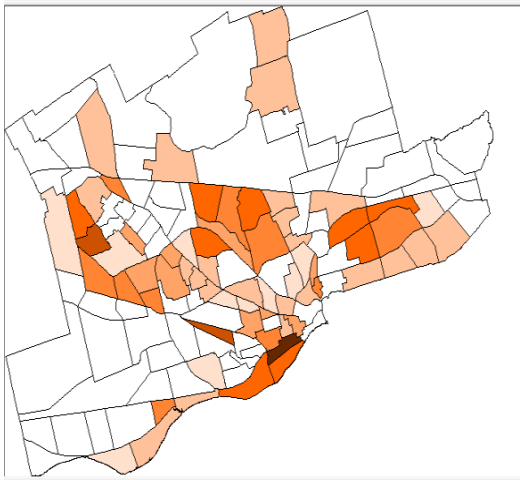
- has a **biophysical foundation** in that it represents: population and demographics; buildings and urban form; physical infrastructure and services (transportation, water, waste, energy);
- **social infrastructure and services** (education, healthcare, recreation); and economic activity (labour, products and services).
- attempts to account for the **financial states and activities** of the public sector, private sector and households within the community and financial flows leaving and entering the community.

Canada Places + Spaces

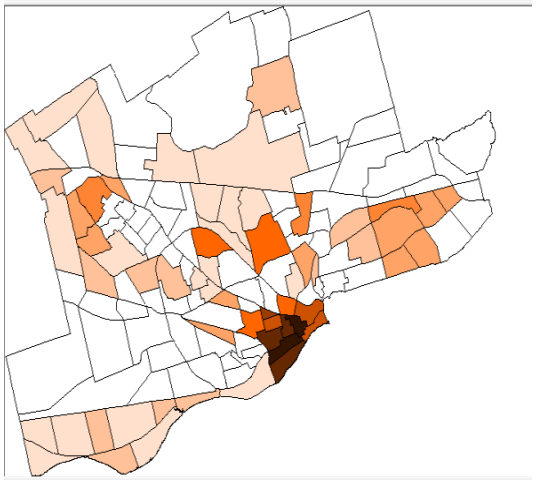
Future development patterns

new dwellings

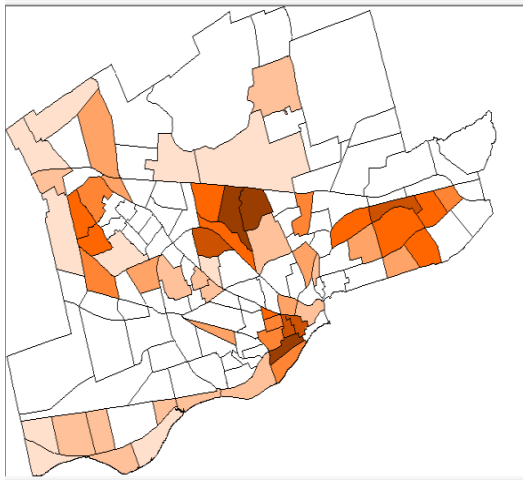
Reference

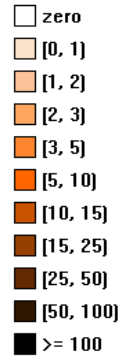


Smart Growth



Employment Concentration





dwelling unit / hectare

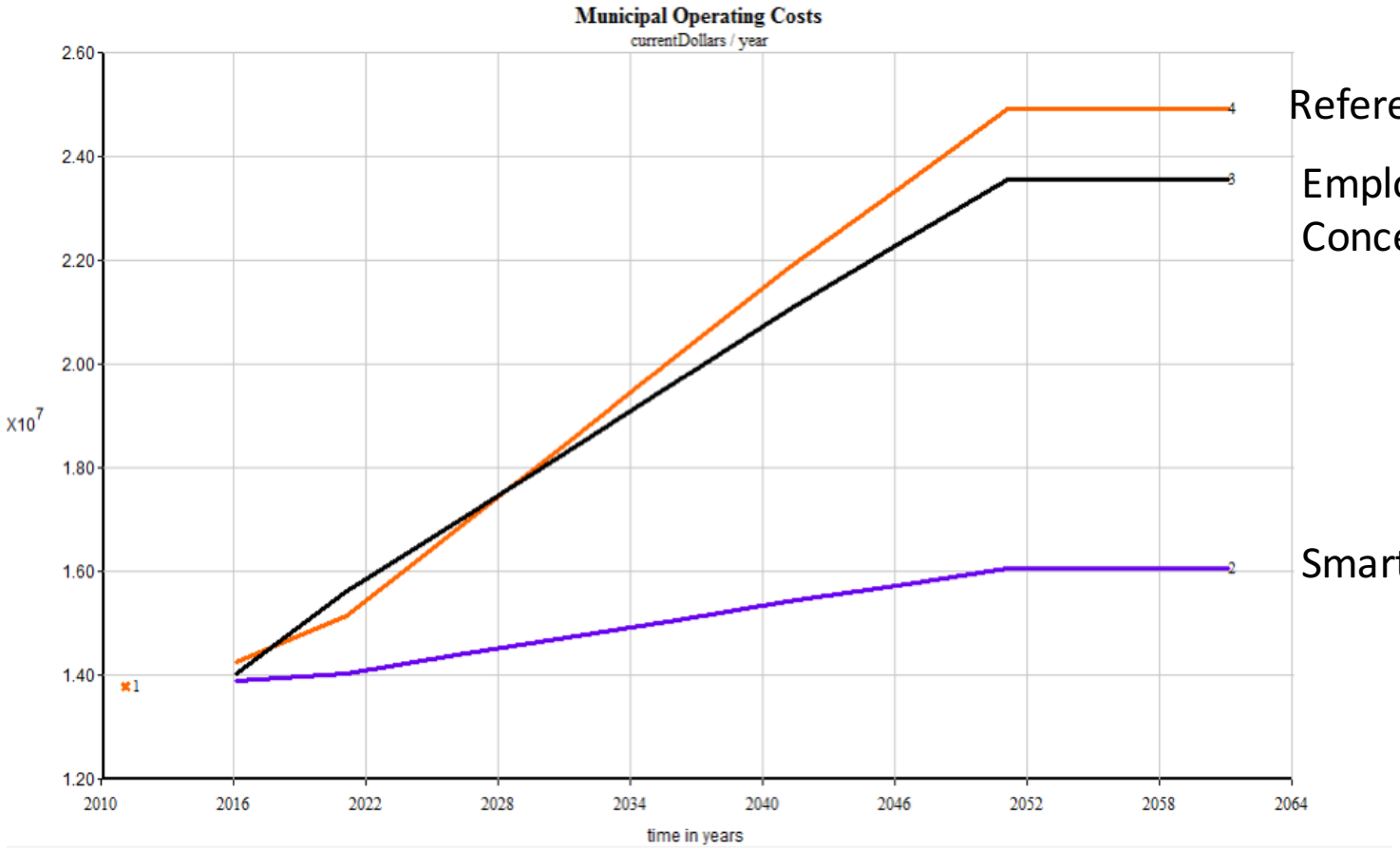
Canada Places + Spaces

What did we find?

- In the reference scenario, total operating costs climb from $93 million in 2016 to $133 million in 2041.
- By 2041, municipal operating costs (roads infrastructure, services) were just under $11 million less in the Smart Growth Scenario than in the Reference Scenario(~$104/person).

Canada Places + Spaces

Operating costs- roads



Reference

Employment Concentration

Smart growth

Canada Places + Spaces

What does it mean?

- Concentrating future development downtown will minimise the tax burden, but also:
- Decreased GHG emissions, household energy costs.
- Other co-benefits include:
  - Increased walking, cycling
  - Access to green space
  - Lower transportation costs

Canada Places + Spaces