WellbeingToronto

Open Data / Open Analysis: The Democratization of Indicators and their Analyses

TORONTO

Definitions

Open Data is a philosophy and practice that makes data easily available in order to enable re-use of the data in new and unforeseen ways. (web2maps)

A piece of content or data is open if anyone is free to use, reuse, and redistribute it — subject only, at most, to the requirement to attribute and share-alike. (Open Definition)

etc…

NOTE:
OPEN DATA ≠ OPEN GOVT ≠ OPEN ANALYSIS

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10 Principles

Modified from the principles found now on the internet…

Government data is "open" if:

✓ **ACCURATE**: It is complete and accurate

✓ **RELIABLE**: It is collected at the source or can be linked back to the source

✓ **USEFUL**: It is useful to the community

✓ **PROTECTS PRIVACY**: It is at a level of granularity that does not breach privacy

✓ **CURRENT**: It is up-to-date

✓ **PROCCESSIBLE**: It structured to allow automated processing

✓ **NON-PROPRIETARY**: It is available in formats where no entity has exclusive control

✓ **LICENSE FREE**: It is free for open use and re-use where no entity has exclusive controls

✓ **ACCESSIBLE**: It is available to all users without discrimination

✓ **EXPLAINS**: It informs users what they are getting (relatively new)

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Current Environment in CANADA

Federal

- ***Geogratis & Geobase & Discovery Portal & Atlas of Canada - GeoConnections Natural Resources Canada***
- ***Office of the Information Commissioners Open Government Resolutions***
- ***Treasury Board of Canada – OpenData.gc.ca***
- ***Research Data Canada – National Research Council***
- ***ALMOST OPEN – Statistics Canada & Universities – Data Liberation Initiative***
- ***Data dot GC.ca, Citizen's initiative to Inspire the Canadian Government***
- ***Canadian International Development Agency (CIDA) Open Data***

Provinces

- ***Data BC – Province, OpenData BC – Citizen Led***

Source Datalibre.ca

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Current Environment in CANADA

Cities

- *G4 Open Data Framework; Municipal Open Government Framework*
- *City of Burlington (ON)*
- *City of Calgary (AB)*
- *City of Edmonton (AB)*
- *City of Guelph (ON), Guelph Coffee and Code – Citizen Led*
- *City of Hamilton (Transit Feed) (ON), Open Data Hamilton – Citizen Led*
- *OpenHalton (ON) – Citizen Led*
- *City of London (ON), OpenData London – Citizen Led*
- *Township of Langley (BC)*
- *City of Mississauga – Mississauga Data (ON)*
- *Montréal Ouvert (QC)- Citizen Led*
- *City of Nanaimo (ON)*
- *City of Niagara Falls (ON)*
- *District of North Vancouver (BC) GeoWeb*
- *City of Ottawa (ON), Citizens' APP Group – OpenData Ottawa*
- *Capitale Ouverte (QC)- Citizen Led in Québec City*
- *City of Prince George (BC)*
- *City of Surrey(BC)*
- *City of Toronto (ON); DataTO – Citizen Group*
- *City of Vancouver (BC); Open Data Wiki*
- *Region of Waterloo (ON) – Citizen Led*
- *City of Windsor (ON) Open Data Catalog*

Source Datalibre.ca

TORONTO

Toronto - Current Status

- Open Data launched in September 2009 (www.toronto.ca/open)

- Part of the original G4 (Edmonton, Ottawa, Toronto, Vancouver): Now developing OD frameworks, policies, and standards

- Internal City Committees to proactively review, refine, and develop OD polices related to:
    - records management, retention, and licensing
    - refined procedures for data capture and release
    - improved quality control
    - expanded representation across all areas of the City
    - a systematic approach!

- *After **data** comes **applications*** - New related business applications that focus on OPEN DATA and OPEN ANALYSIS (e.g., WELLBEING TORONTO – launched in June 2011) → www.toronto.ca/wellbeing

Community Response

Toronto
A city of Neighbourhoods

Photos courtesy of MORGUEFILE..com, Harvey Low personal collection, and City if Toronto

CHALLENGES

- The Municipal Funding Model (lack of resources & fiscal tools)
- Pressures of Urbanization and Offloading
- Economic & Social Transformation (Aging, Migration, Immigration, Changing economies)
- Weakening of the Global Economy
- Municipalities must **ADAPT**

SOME RESPONSES

- ✓ Mixed Service Delivery Model
- ✓ Creative Collaboratives & MOUs
- ✓ Open Data --> Open Mapping --> **OPEN ANALYSIS**
- ✓ **WELLBEING TORONTO** … *A different approach to Creative Mapping*

WELLBEING TORONTO

Background

Key Outcome from Strong Neighbourhoods Task Force:

- ❑ Established legitimacy of analysis and targeted investment at the neighbourhood level

Achieved through:

- ❑ Development of fact base to inform the identification of service inequities
- ❑ New method for measuring service accessibility
- ❑ Overlaid service accessibility information with demographic data
- ❑ Result central to the identification of 13 priority areas
- ❑ Now lays the foundation for new system of monitoring wellbeing across all neighbourhoods

What is WELLBEING TORONTO?

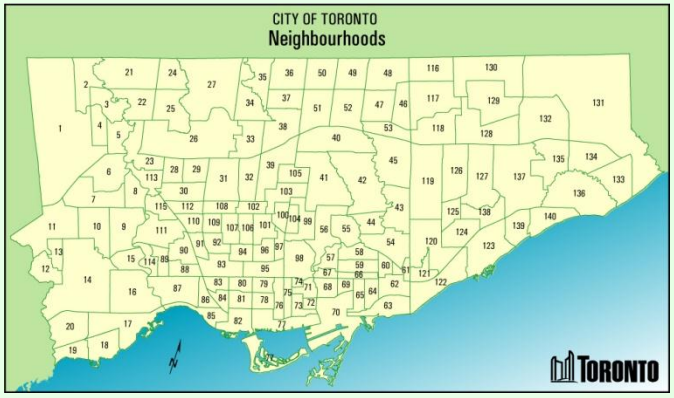
- ✓ A new web tool that helps measure neighbourhood wellbeing.
- ✓ Increases government capacity to manage and plan for the human services sector from a "systems" perspective
- ✓ Improves decision making, and government transparency when a place-based lens is needed
- ✓ Leverages & consolidates data across the entire corporation!
- ✓ Empowers users by allowing them to custom select indicators and see their results instantly on a map, graph or table, and to do their own analysis by emphasizing the importance (weighting) of indicators to suit their own needs!
- ✓ Provides transparency by providing access to over 150 indicators from City sources that describe neighbourhood wellness free for use by all levels of government and the public

WELLBEING TORONTO

- ☑ New web tool that helps measure "neighbourhood" wellbeing
- ☑ Select indicators and see your results instantly on a map, graph or table or table
- ☑ Combine and weight data to suit your own needs
- ☑ Improves decision making and government transparency when a place-based lens is needed
- ☑ Leverages & consolidates data across "silos"
- ☑ An evolving supplementary tool and new approach (NO MORE BLACK BOX)
- ☑ A collaborative Open Data approach, full range of indicators across domains, value-free, and accessed for free

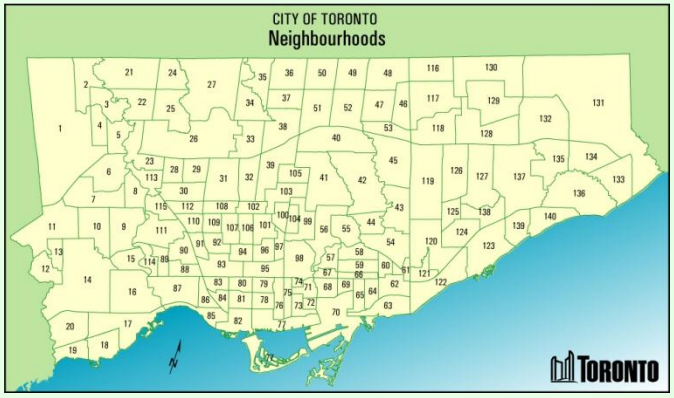
Strong Neighbourhoods – the Evolution

Traditional Analysis

Demographics → 

→ Needs

SNTF Analysis

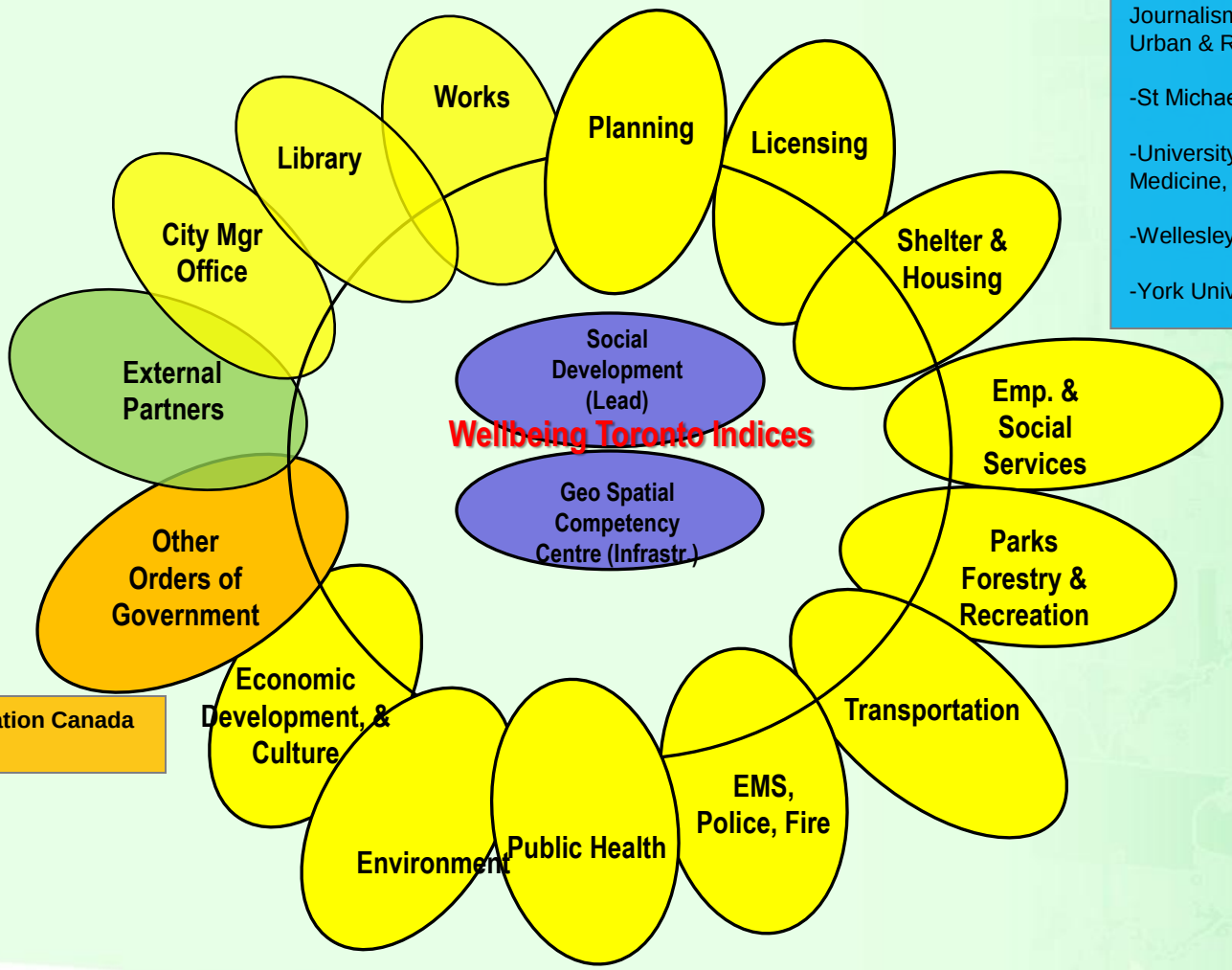
Demographics →
Service Access →


→ Inequitable Service Access

Partnerships & Collaborations

-FindHelp Info Services (211)
-TDSB TDCSB School Bds
- LHIN
- United Way
- St. Christopher House
- Centre for Inner City Health at St.Michael's Hospital
- Social Planning Toronto
- Housing Connections
- TCHC
- Toronto Community Foundation
- Woodgreen Community Services
- YMCA of Greater Toronto
- Academia

- Citizenship Immigration Canada
- Statistics Canada



ACADEMIC EXPERT PANEL

-McMaster University (Health)

-Ryerson University (Geography, Journalism, Politics, Public Policy, Urban & Regional Planning)

-St Michael's Hospital

-University of Toronto (Geography, Medicine, Planning, Social Work)

-Wellesley Institute

-York University (Geography)

QUALITY CONTROL

Accessibility: data can be obtained easily and at an affordable cost

Comparability: can be related to other indicators and standardized

Consistent: geographically spread and does not change much over time

Credible: believable to domain experts and comes from a reliable source

Relevant: indicator measures progress towards a goal, not just random number-counting. It resonates with the audience, both public and expert.

Measurable: indicator can be framed as a number, percentage or proportion

Valid: the indicator measures what it is intended to measure and not a by-product. Well-grounded in theory and fact.

Wellbeing Toronto

Indicator Domain Areas

Housing	Environment	Health	Safety	Education
Civics	Transport	Recreation	Culture	Economics

Human Services Infrastructure

Location of schools, libraries, recreation centres, etc.

Socio-demographics

Population Age, sex, income, education, etc.

Types of Indicators for first Release – June 2011

HEALTH
- Health outcomes (e.g., premature mortality)
- Community-based programs & services

HOUSING
- City program use (e.g., rent bank applications)
- Social Infrastructure (social housing, long-term care for seniors)
- Housing locations

ECONOMICS
- Employment & unemployment
- Local employment

ENVIRONMENT
- Green space, tree canopy
- Programs & resources (e.g., community gardens)

SAFETY
- Incidents (e.g., fire, crime, EMS)
- Location of services

TRANSPORTATION
- Public transit use
- Traffic statistics

RECREATION
- Program use
- Service infrastructure (arenas, parks & recreation centres)

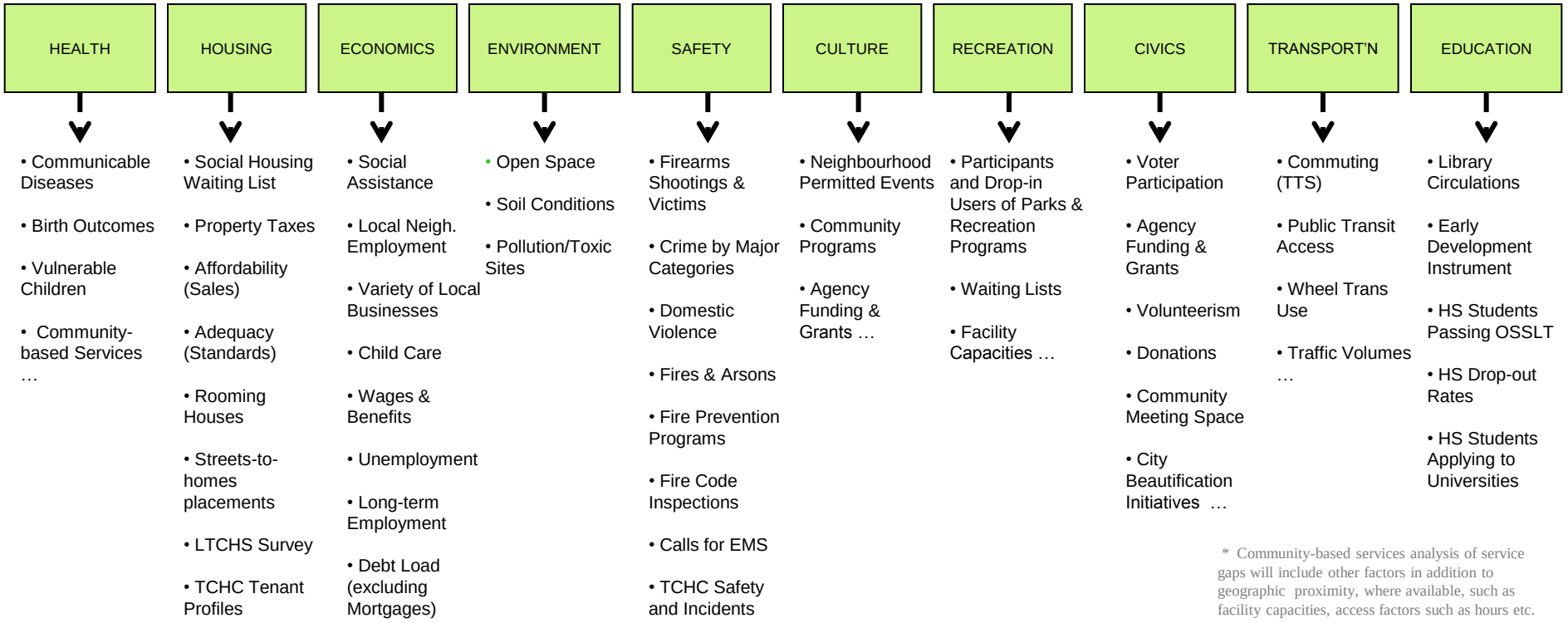
CIVIC ENGAGEMENT
- City beautification initiatives
- Voter turnout
- City program use (e.g., rent bank applications)
- Social Infrastructure (social housing, long term care form seniors)
- Housing locations (highrises/condominiums)

EDUCATION
- School preparedness
- School statistics (applications to universities/colleges, drop out rates)

DEMOGRAPHIC DATA (age, gender, income etc.)

Toronto Neighbourhood Well-being Indices

Version 1 – Indicators may change and evolve.



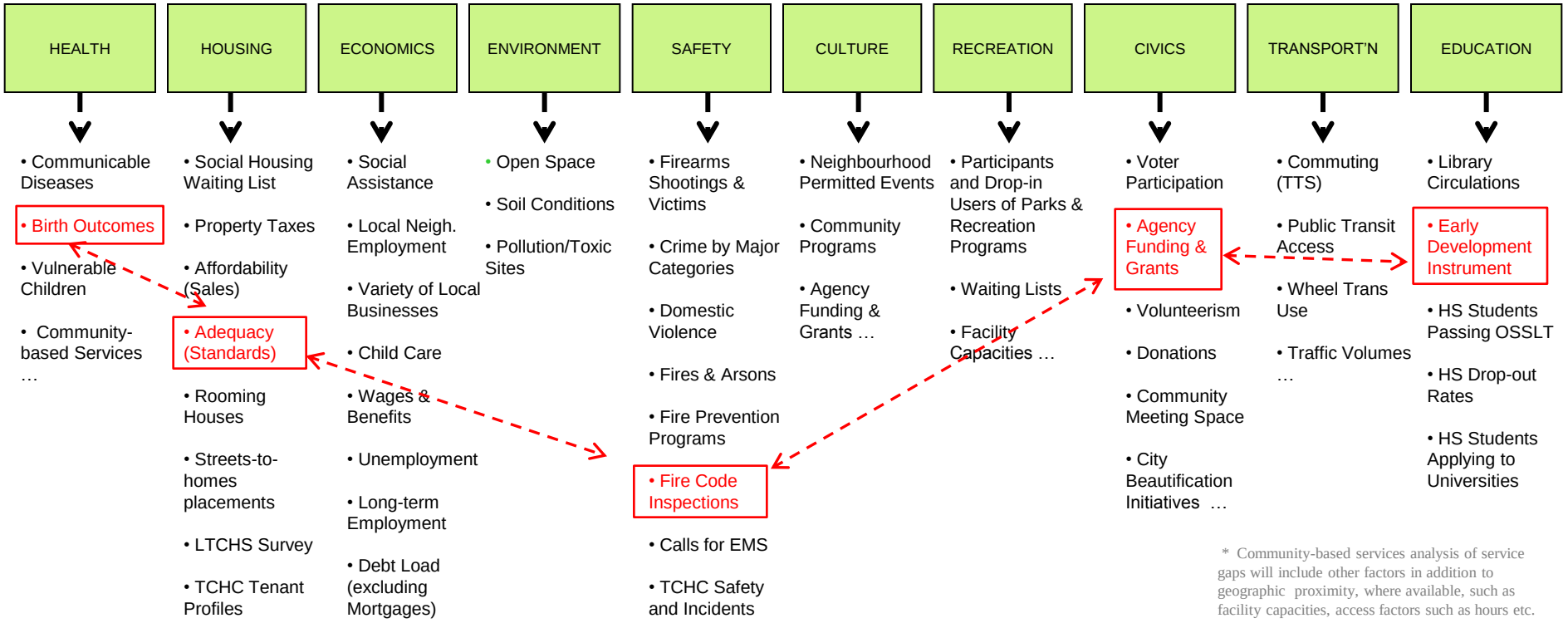
* Community-based services analysis of service gaps will include other factors in addition to geographic proximity, where available, such as facility capacities, access factors such as hours etc.

Socio-demographics: Age, Sex, Income, Ethnicity, Language, Poverty, Immigration, Tenure, etc.

Human Services Infrastructure: Recreation Centres, Police Stations, Parks, Libraries, TESS Offices, Clinics, Schools, etc.

Toronto Neighbourhood Well-being Indices

Step 1. Choose metric indicators



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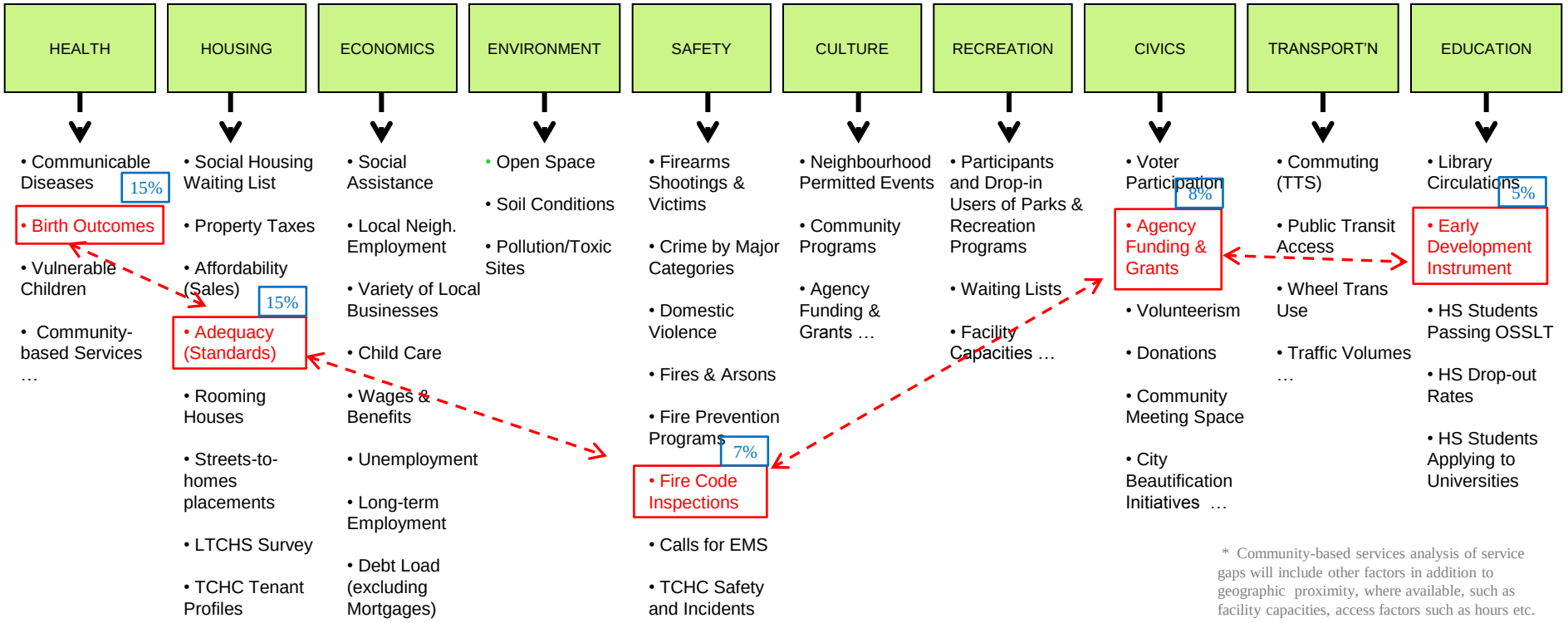
Human Services Infrastructure: Recreation Centres, Police Stations, Parks, Libraries, TESS Offices, Clinics, Schools, etc.

Toronto Neighbourhood Well-being Indices

Step 2. Choose socio-demographic and infrastructure indicators.
Step 3. Add weighting



* Community-based services analysis of service gaps will include other factors in addition to geographic proximity, where available, such as facility capacities, access factors such as hours etc.

15%

Socio-demographics: Age, Sex, Income, Ethnicity, Language, Poverty, Immigration, Tenure, etc.

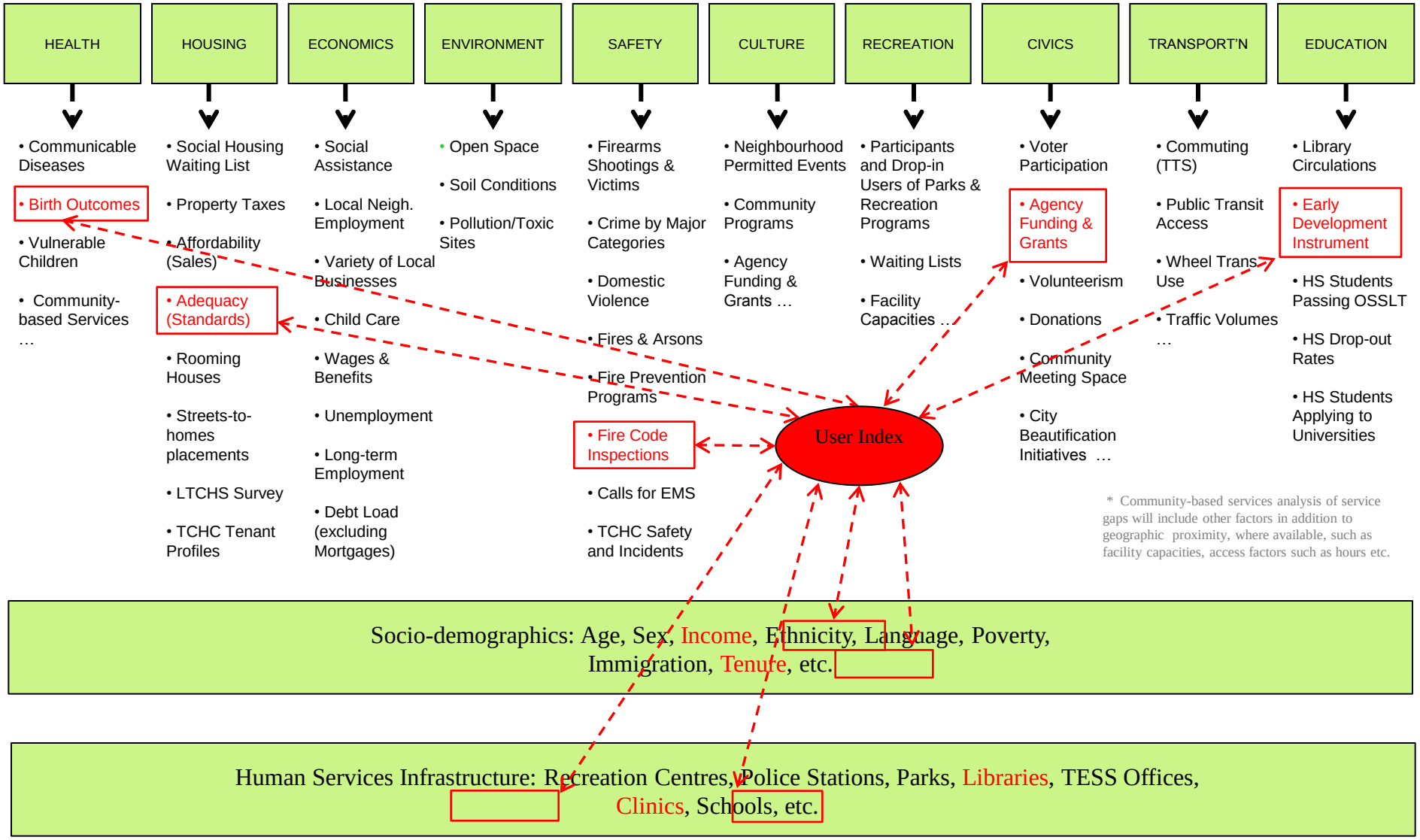
5%

Human Services Infrastructure: Recreation Centres, Police Stations, Parks, Libraries, TESS Offices, Clinics, Schools, etc.

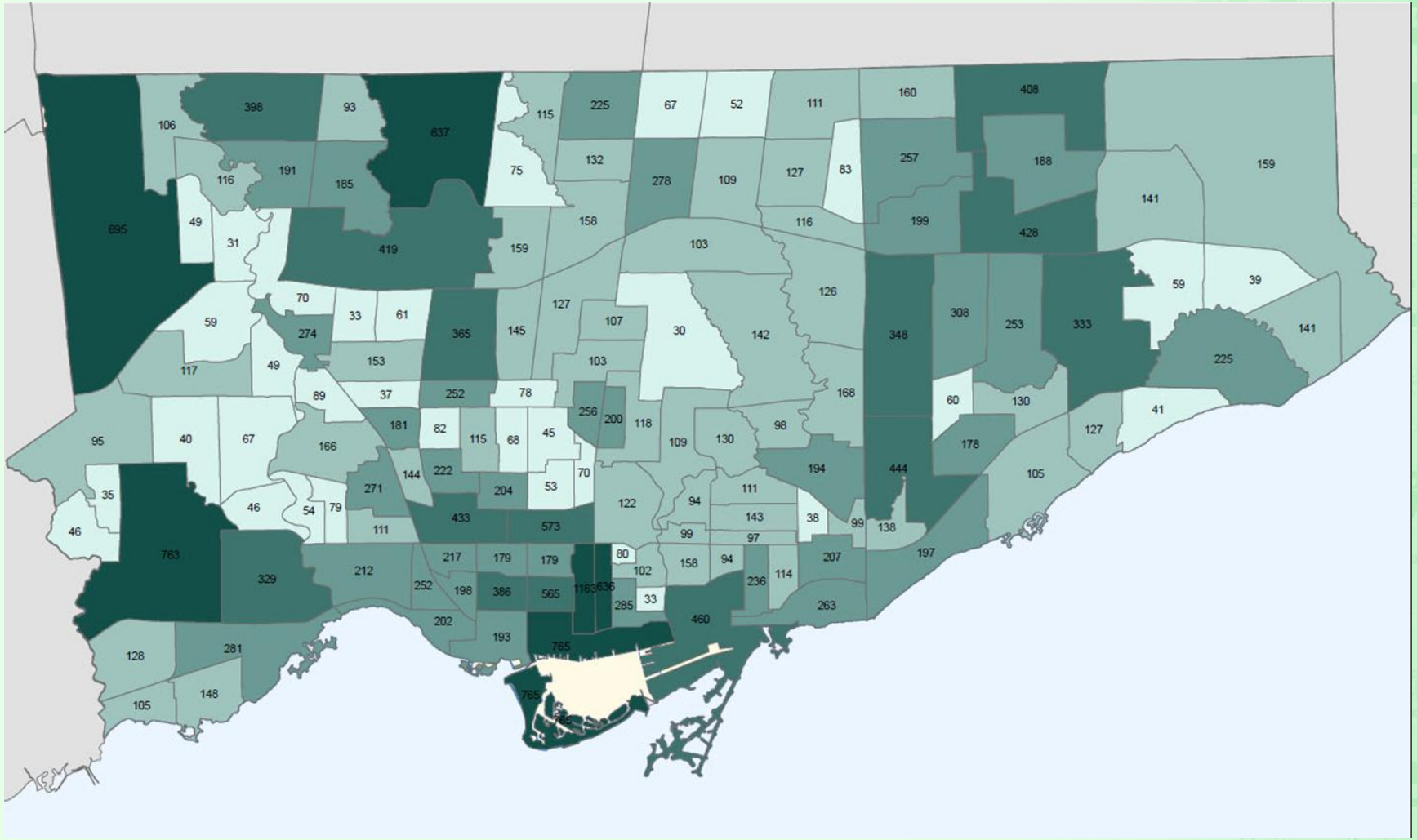
13% 17%

Toronto Neighbourhood Well-being Indices

Step 4. Create user-defined index.



Map the results!



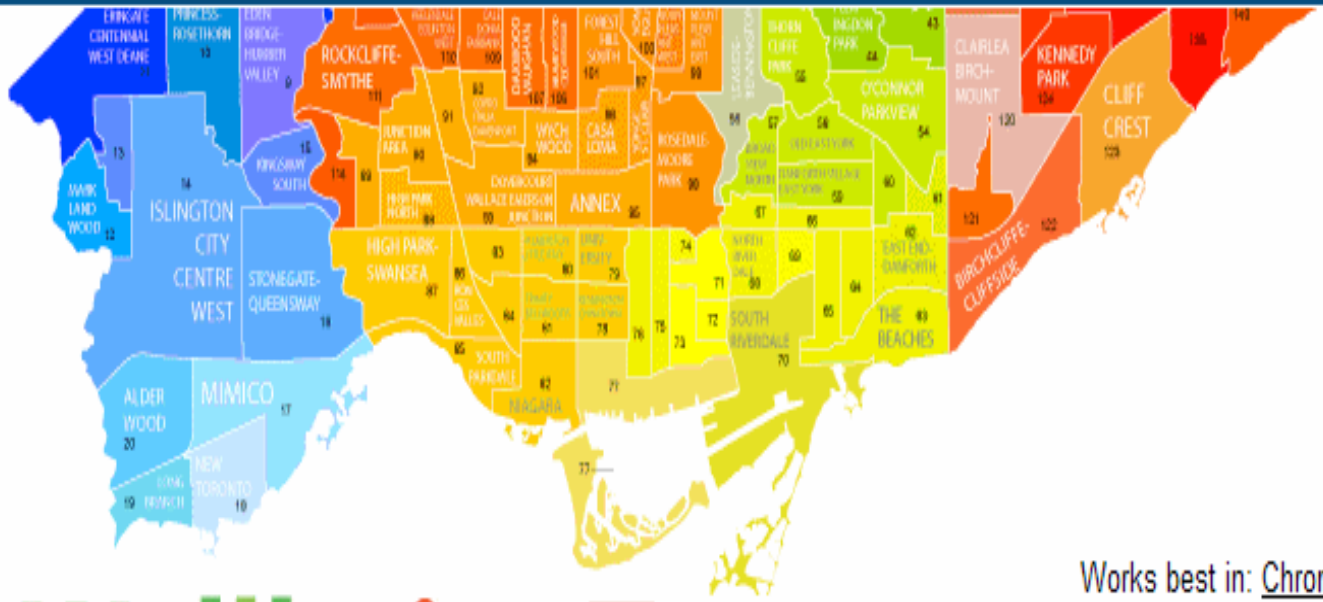
TORONTO

HOME CONTACT US HOW DO I...? SEARCH: GO

LIVING IN TORONTO | DOING BUSINESS | VISITING TORONTO | ACCESSING CITY HALL

WELLBEING TORONTO

- About Wellbeing Toronto
- Acknowledgments
- FAQ
- Tutorial & Guide
- Survey



WellbeingToronto

Beta

Works best in: Chrome 10, Firefox 4, Internet Explorer 9. May be slower in earlier versions. Does not work in IE6. Please upgrade to the latest version of your browser for optimal performance.

Get Started

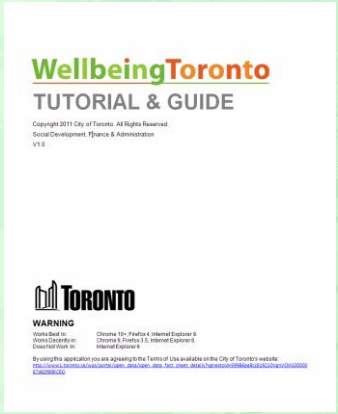
SUMMARY of MIS-USE & OPTIONS FOR MITIGATION

Like any data resource, there can be misuse:

- ❑ Combining indicators and assuming causation
- ❑ Assuming overall neighbourhood level trends are the same across the entire neighbourhood
- ❑ Assuming that the greater presence of service locations means that "an area is well served"

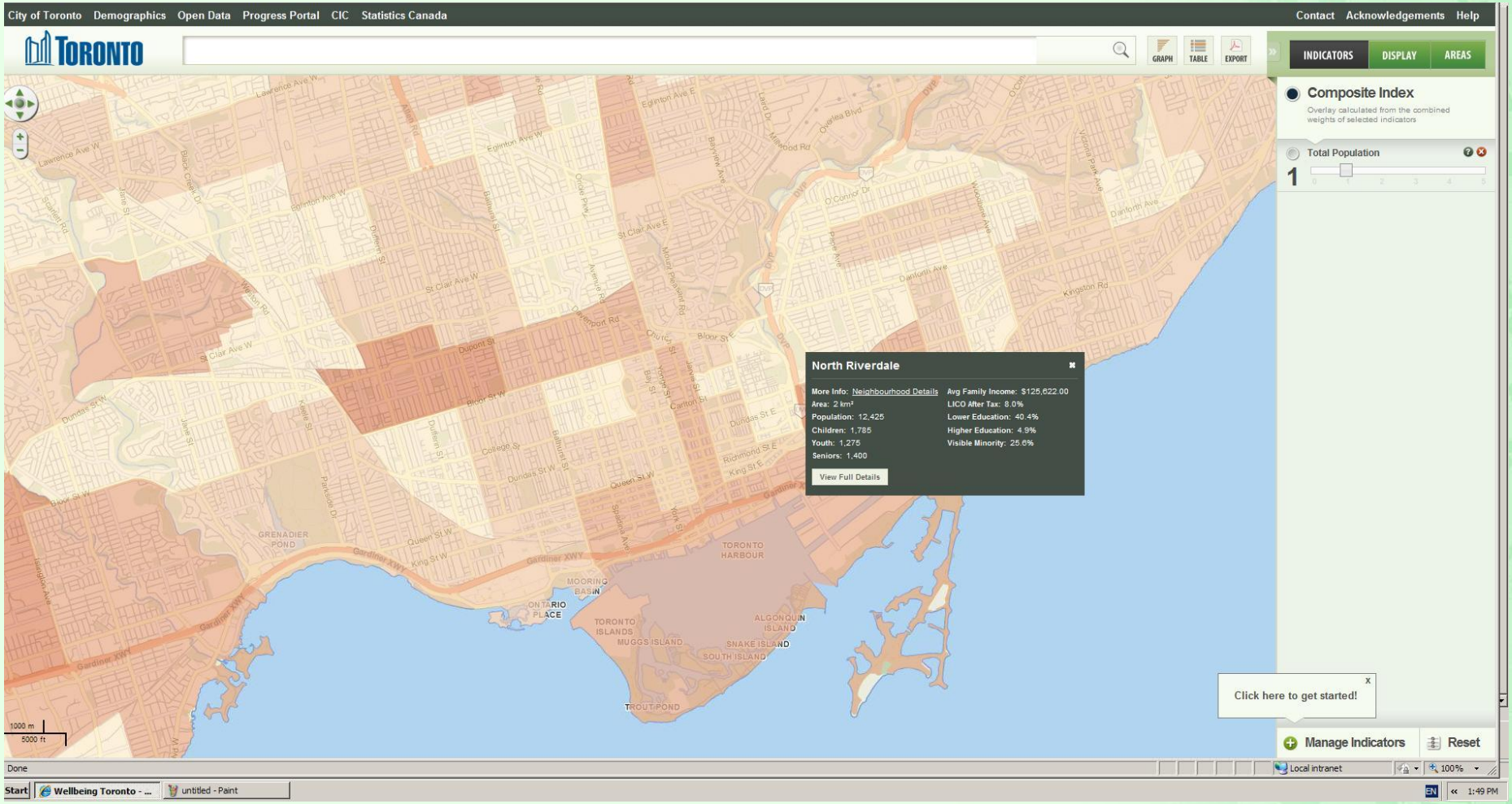
Mitigation:

- ❑ All indicators will be accompanied by descriptions of the data
- ❑ Detailed guidebook is available including FAQ
- ❑ Govt and non-govt researchers concluded that it is better to present sound data and good notation to user community "openly," that fosters healthy debate on neighbourhood issues

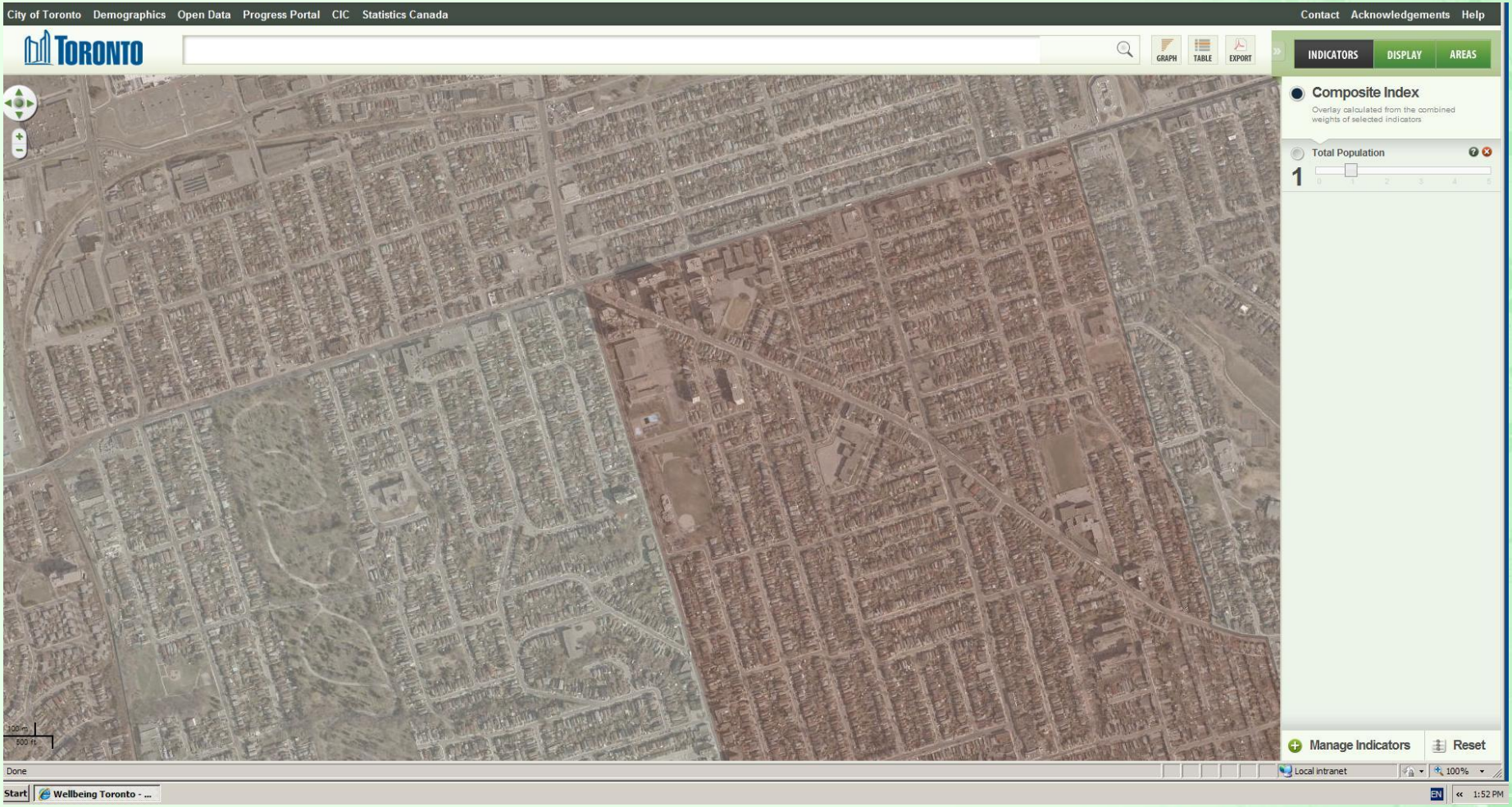


Demo!

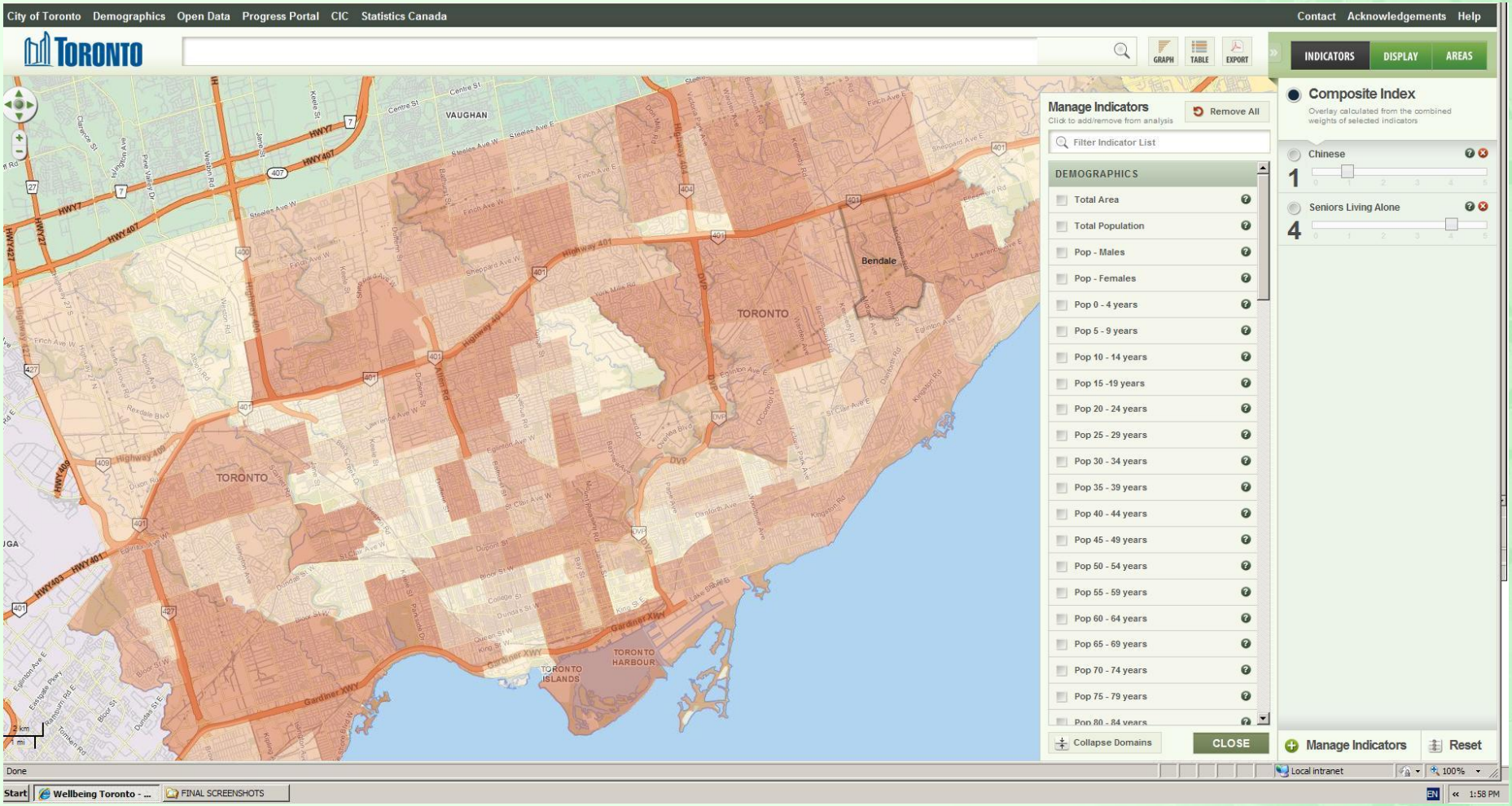
MISC. SCREEN SHOTS (BETA LAUNCH - JUNE 2011) – MAIN SCREEN



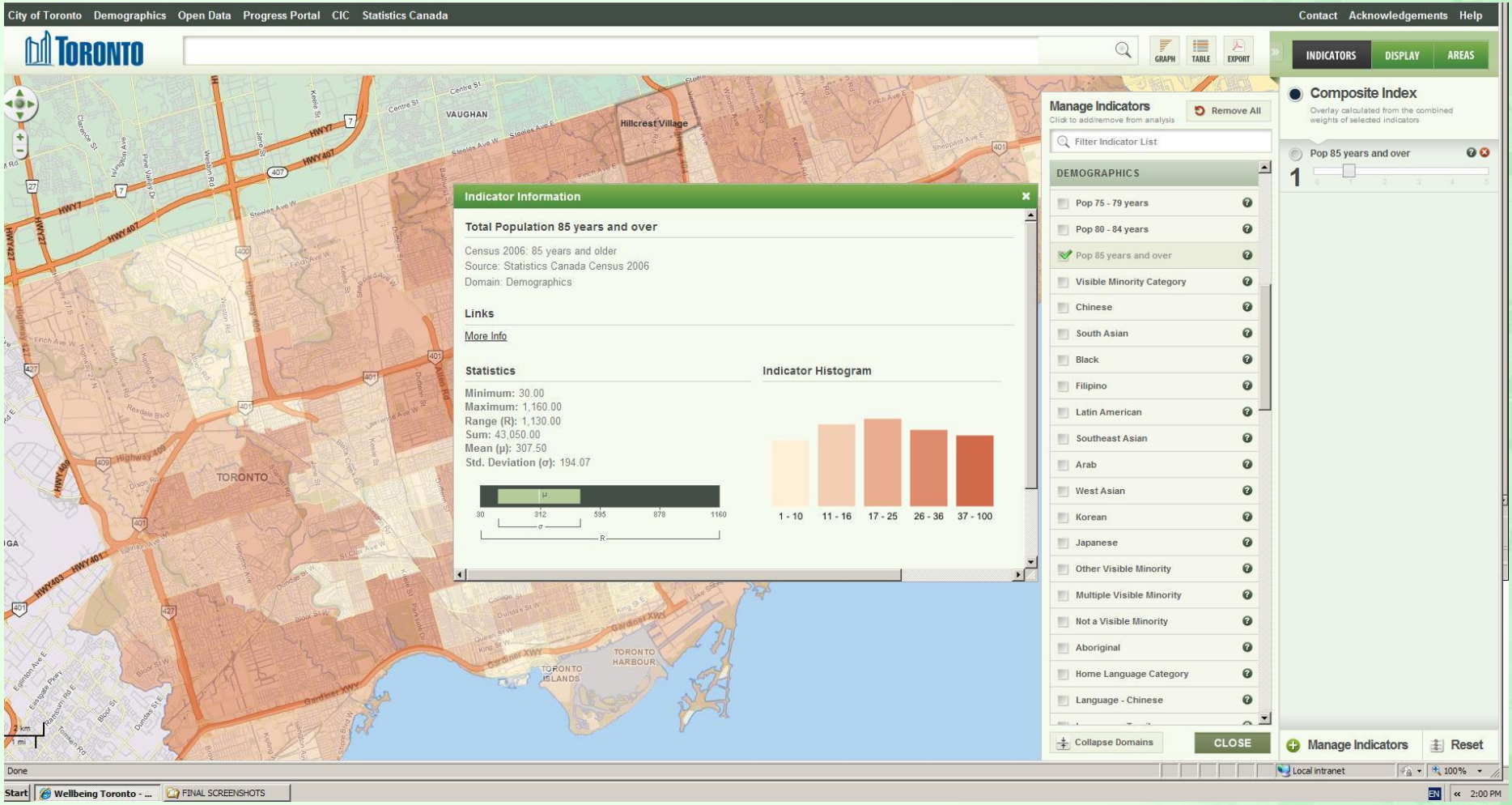
BASE MAP and ADDRESS SEARCHING



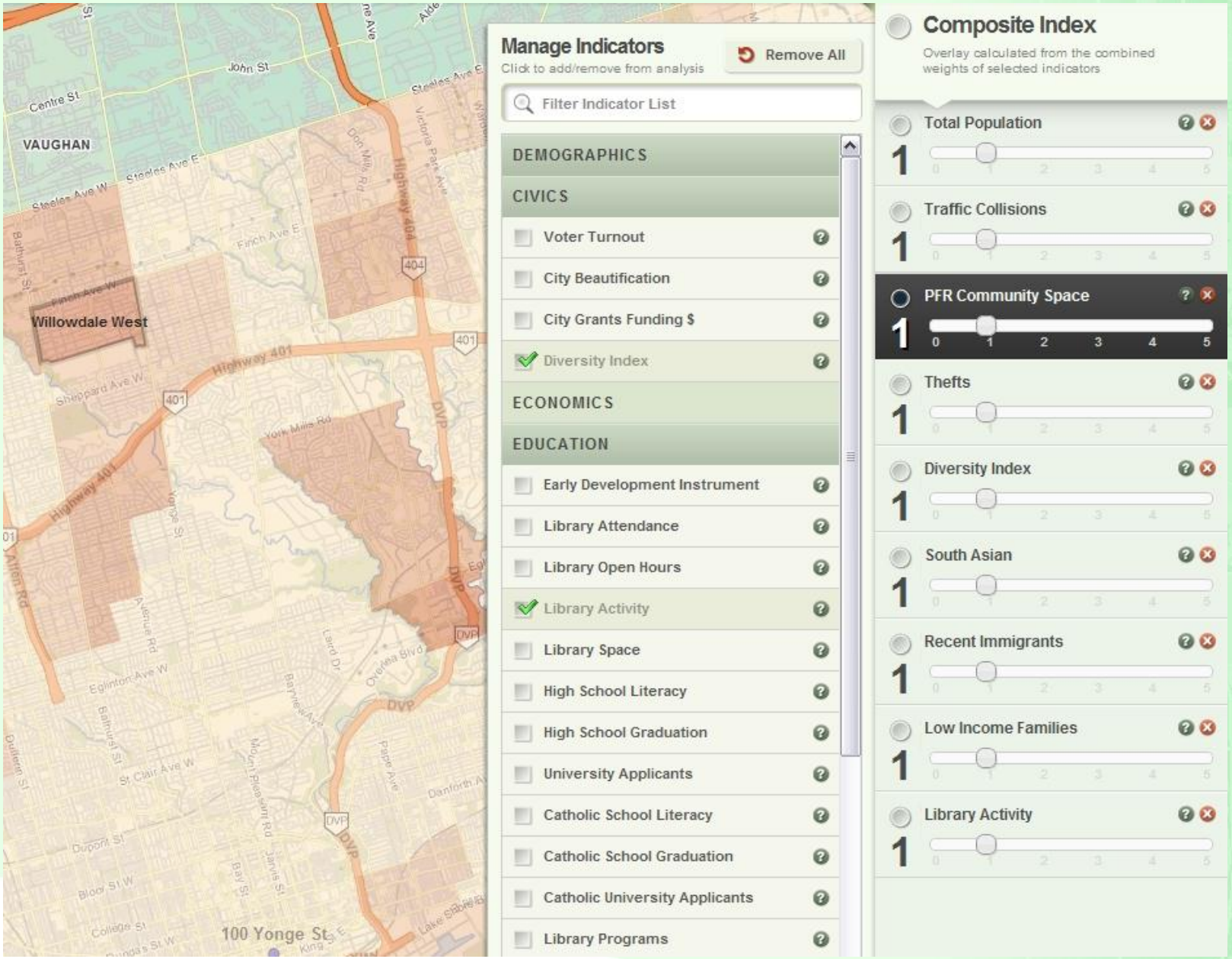
MAPPING MANY INDICATORS AT ONCE



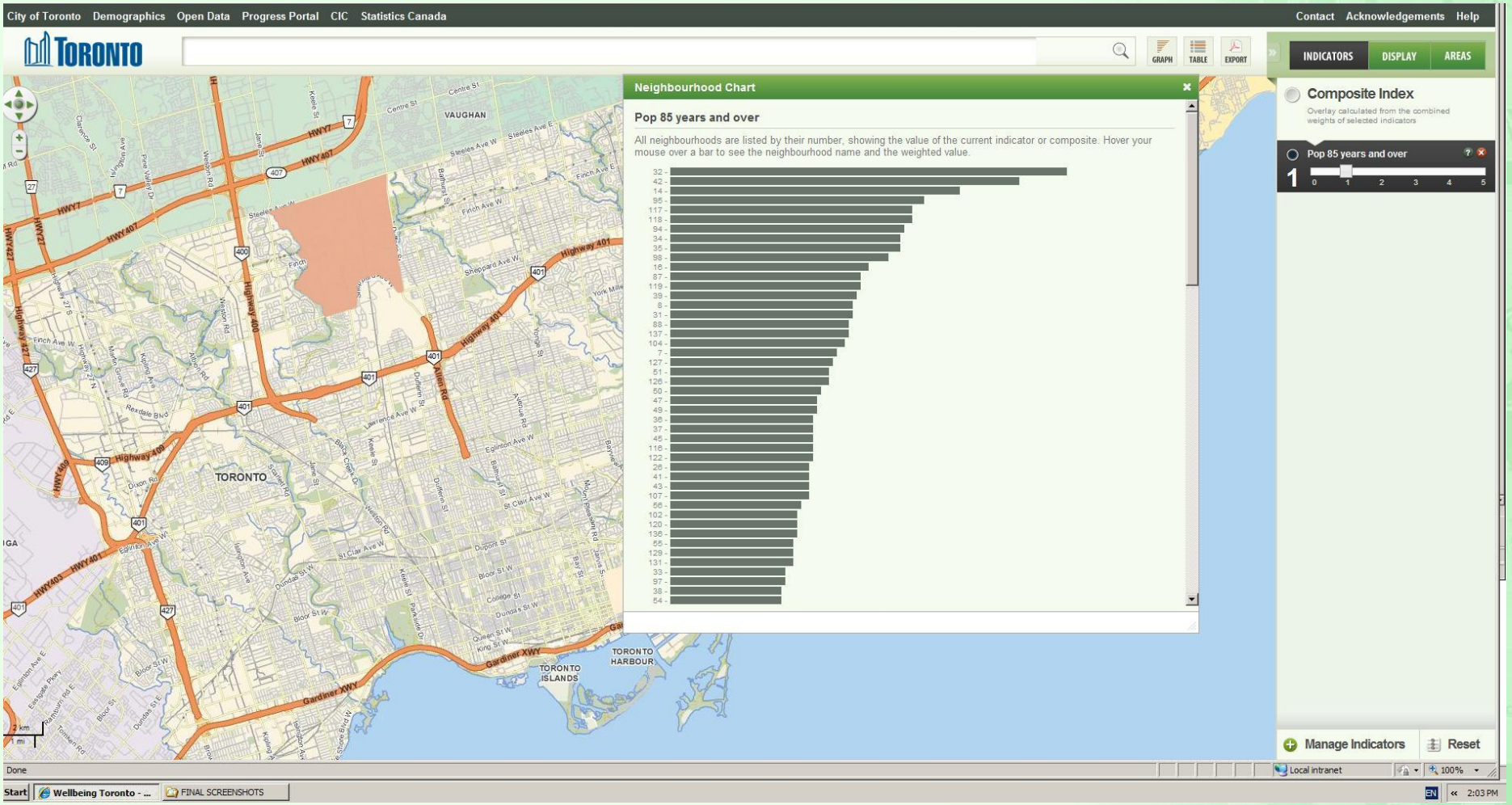
DETAILED STATISTICS



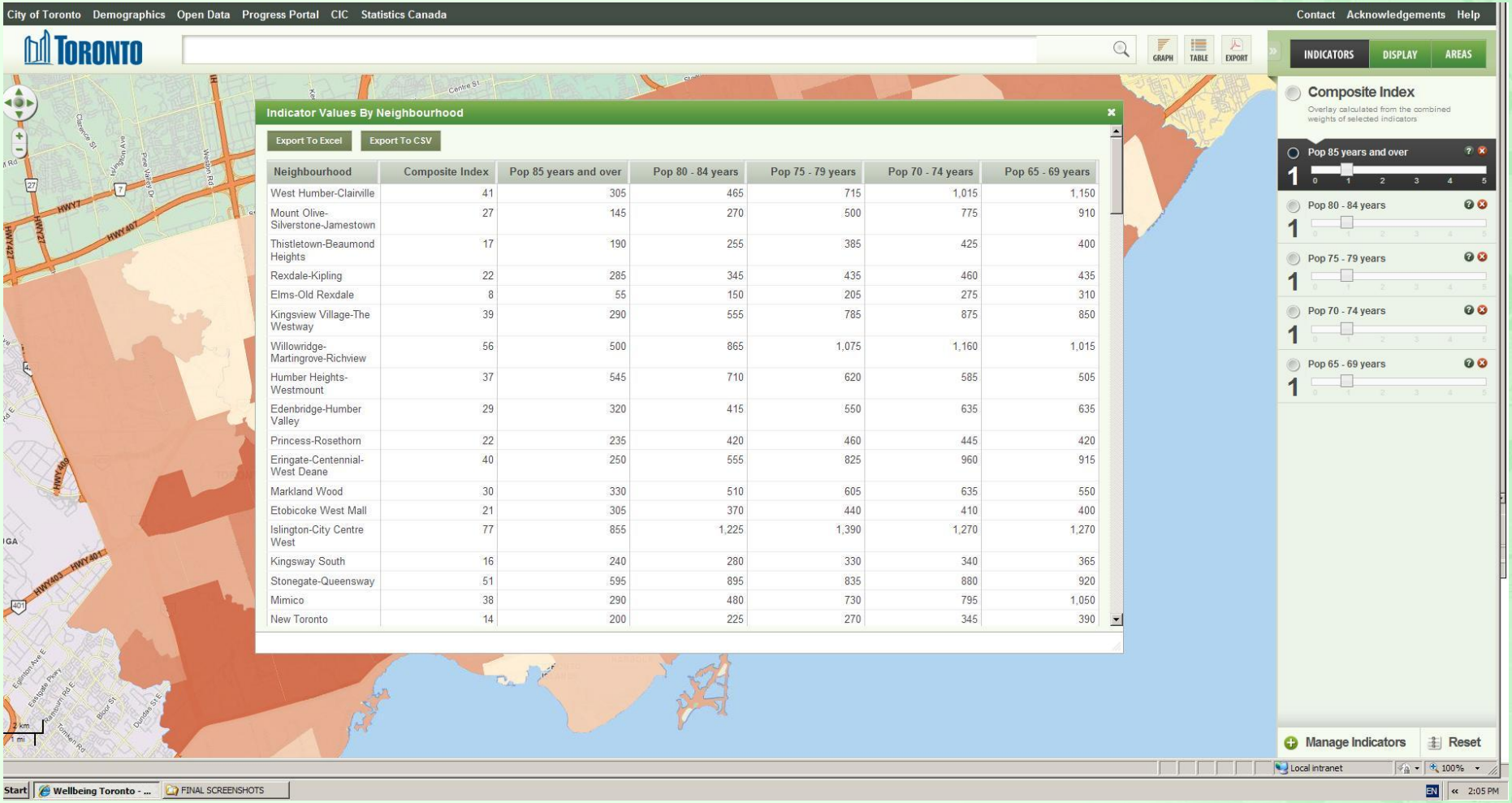
COMBINING STATISTICS



GRAPHING CAPABILITIES

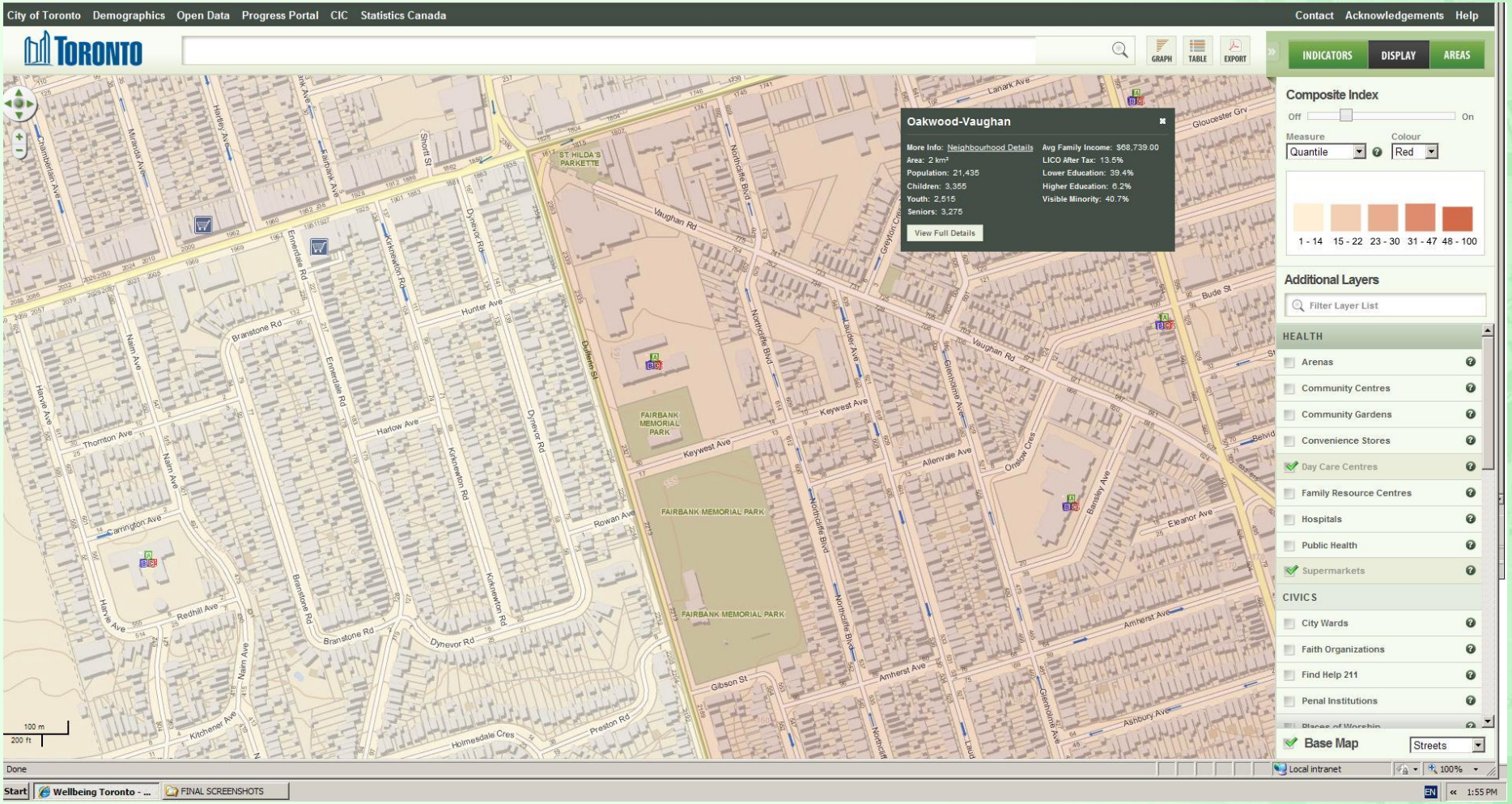


TABLES

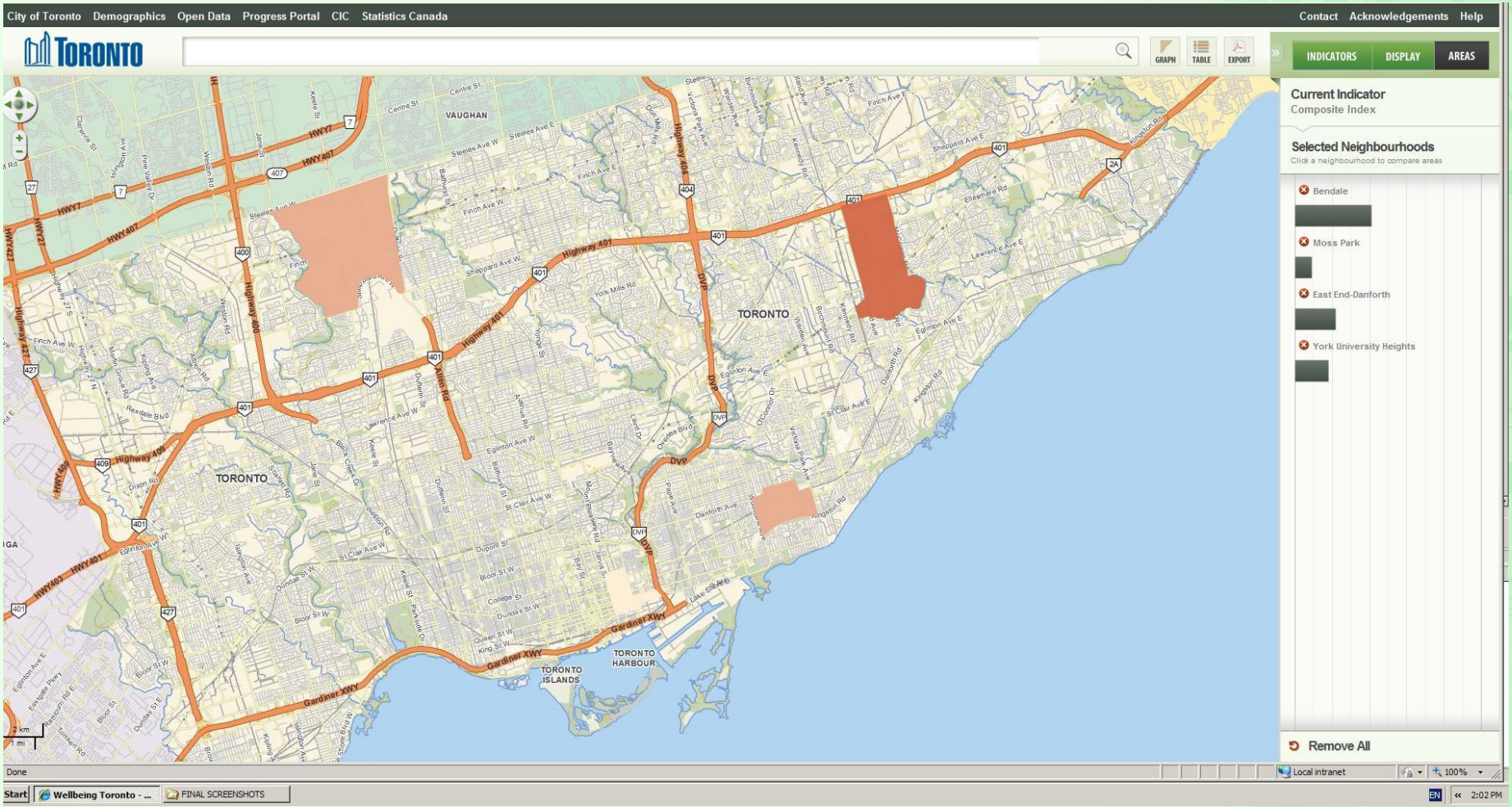


Neighbourhood	Composite Index	Pop 85 years and over	Pop 80 - 84 years	Pop 75 - 79 years	Pop 70 - 74 years	Pop 65 - 69 years
West Humber-Clairville	41	305	465	715	1,015	1,150
Mount Olive-Silverstone-Jamestown	27	145	270	500	775	910
Thistletown-Beaumond Heights	17	190	255	385	425	400
Rexdale-Kipling	22	285	345	435	460	435
Elms-Old Rexdale	8	55	150	205	275	310
Kingsview Village-The Westway	39	290	555	785	875	850
Willowridge-Martingrove-Richview	56	500	865	1,075	1,160	1,015
Humber Heights-Westmount	37	545	710	620	585	505
Edenbridge-Humber Valley	29	320	415	550	635	635
Princess-Rosethorn	22	235	420	460	445	420
Eringate-Centennial-West Deane	40	250	555	825	960	915
Markland Wood	30	330	510	605	635	550
Etobicoke West Mall	21	305	370	440	410	400
Islington-City Centre West	77	855	1,225	1,390	1,270	1,270
Kingsway South	16	240	280	330	340	365
Stonegate-Queensway	51	595	895	835	880	920
Mimico	38	290	480	730	795	1,050
New Toronto	14	200	225	270	345	390

SERVICE LOCATIONS



COMPARING NEIGHBOURHOOD DATA



PRINTING YOUR RESULTS

Childcare - Downtown

Composite Index

- 01 - 20
- 21 - 40
- 41 - 60
- 61 - 80
- 81 - 100

1 = Worse
100 = Better

This map was produced by the Wellbeing Toronto application. The content of the map and following charts (if any) are not endorsed by or affiliated with the City of Toronto in any way. Please consult the full Terms of Use for more details.

WellbeingToronto

Source: Wellbeing Toronto
Contact: spar@toronto.ca

TORONTO

WELLBEING TORONTO by the NUMBERS

- ✓ **1st** …
  - the "first time" the City has created a strategic tool for a comprehensive cross-sectoral "systems" perspective on human services planning for place-based planning
  - the "first time" Statistics Canada has provided the City with "open use" (free public access and download) of core Census Data
  - the "first time" the City has created new I&T mapping approach to establish a new mapping standard corporately
  - the "first time" the City has adopted both an *Open Data* and *Open Analysis* concept towards information for the public
- ✓ **26,040** … currently the number of *individual data elements* in WELLBEING TORONTO (186 indicators x 140 neighbourhoods)
- ✓ **39** … the number of internal and external organizations on our Steering Committee
- ✓ **108,000** … the number of web visits to WELLBEING TORONTO in 5 months since launch, relative to…
- ✓ **110,000** … the average number of annual web visits in the past to our existing web resources
- ✓ **$250,000** … the total cost of the project to date (excluding staff time)

WHAT THE PUBLIC AND MEDIA ARE SAYING …

DAILY BREW

A Y! NEWS BLOG

Wellbeing Toronto website takes step in opening more data to local taxpayers

By Marc Weisblott | Daily Brew – Thu, 30 Jun, 2011

Email Print

Cities across Canada have grappled with efforts to move data from the file cabinets of city hall to the computers of the people.

A new municipal venture called Wellbeing Toronto has marked a new step in that direction, since it will allow users to research statistics about 140 different neighbourhoods, and compare how they stack up.

Information collected by Statistics Canada, local school boards and the city itself was compiled to give residents a sense of how their streets compare to other parts of Toronto. The access could certainly transform how politicians decide to spend their money.

thestar.com

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HOT TOPICS: SANTA CLAUS FUND | EMERGING MARKETS | OCCUPY | ATKINSON SERIES: WOMEN AND ALCOHOL | MAPLE LEAFS | 501 QUEEN | POLITICS | ROYALS

Inside thestar.com

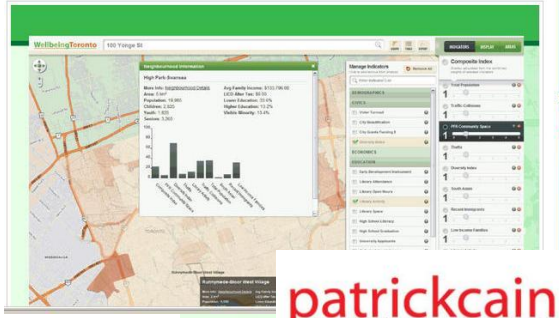
Looking for Black Friday deals? | Leafs go south in Carolina | School ball ban causes U.S. chuckles | Cooks win $50 million lotto | 'Filmumentary' goes viral

How does your neighbourhood rank? New site lets you compare

Article | Comments (29)

Published On Thu Jun 30 2011

Email | Print | (29)



TORONTOIST

NEWS | CITYSCAPE | POLITICS | CULTURE | PHOTOS | EVENTS | ABOUT | STAFF | CONTACT

NEWS

JULY 7, 2011 AT 10:00 AM | 4 COMMENTS

Mapping Toronto's Wellbeing

BY STEPHEN MICHALOWICZ

20110706towellbeing1.jpg

Last week, the City of Toronto launched the beta version of Wellbeing Toronto, a brand new website that lets users map and compare social, civic, and economic indicators, and rank the results by neighbourhood.

Yes, that's right, at long last Torontonians have access to a tool that can answer the questions that have plagued the city for centuries. Questions such as: which Toronto neighbourhood has the most (non-subway) TTC stops? (Answer: West Humber-Clairville, with 326 stops.) Or which area has the most sports facilities? (Answer: L'Amoreaux, with 78.) And most importantly, is there a relationship between the two? (Answer: yes actually, most the city's gyms, fields, and rinks are in the suburbs, where there also tends to be more bus stops.)

To give the application a workout, we went through all of the available data sets and compiled a list (below the fold) of what we think are some of the more interesting comparisons and insights.

TTC SERVICE ALER

ALL CLEAR: The delay at Lawrence West Static cleared and full service has resumed on the Y University – Spadina Line. #TTC | 2:07 PM No

Trains are currently bypassing Lawrence Wes bothways due to a Toronto Police Services Inv #TTC | 2:02 PM Nov 21

ALL CLEAR: The signal problem is now clear a service has resumed south bound between Fa

GLEANER COMMUNITY PRESS

Serving Toronto's most liveable communities with the Annex Gleaner and Liberty Gleaner

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← Kung Fu monks & barbecue beef at this year's Chinatown Festival
Simpsons trivia night every second tuesday of the month at Gladstone Hotel →

Plotting your move: Wellbeing Toronto launches

September 10th, 2011 - 2 Comments

By Julia Hennessey

Wellbeing Toronto allows the user to select multiple indicators for a neighbourhood at one time. Screenshot courtesy of City of Toronto.

OUR PAGES

- 'Tis the season to Glean: Holiday Wishlist and Covers
- Grading Our Greenspace: Annex 2011
- An open letter to interested freelancers and PR reps ...

OUR RECENT POSTS

- 'Tis the season to Glean: Holiday Wishlist and Covers
- Toronto proposes new "Streets Bylaw"
- BioCan moves in: Company, community mull massive project
- Local writer brings Macho Man-themed show to Kensington Market
- 18th Rendezvous with Madness film festival may be most provocative yet
- Lee Harvey Oswald's lover

OUR ARCHIVES

Select Month

patrickcain.ca

A journalist who makes maps for the Web

A blog about maps and new media

Wellbeing Toronto

This was also published at globalnews.ca

The City of Toronto's long-awaited Wellbeing Toronto map site launched today (in beta), giving users the ability to map 140 officially-defined neighbourhoods by dozens of different data points, from arson to breast cancer screening to sports facilities. It's a much more user-friendly approach to open data than we've seen in Toronto (and elsewhere) up till now.

Most of the possible maps are based on census criteria: age, income, ethnicity, employment.

Many of the grimmer social indicators take a familiar checkmark shape across the face of the city. Premature mortality, for example, works southeast from Rexdale down Black Creek Drive into the west end, through patchy parts of downtown and then northeast into Scarborough. It's the shape of Bad Things in Toronto – it's repeated on maps I've created with high school dropouts, STIs, homicides with male victims and on and on.

In any case, this is an outstanding resource, which brings together a number of resources that were always public in a one-stop-shop format. The issues below are tweaks:

- Some work still needs to be done on user-friendliness. Library use is measured on a 1-8 scale, which I "think" represents average annual contacts with the library system per year, but that isn't clearly explained.

- Actually, I'm not totally clear whether it's up to me to divide any given number by population or whether that's already done for me.

- The export-to-spreadsheet function isn't working properly – it exports data other than the data in the preview.

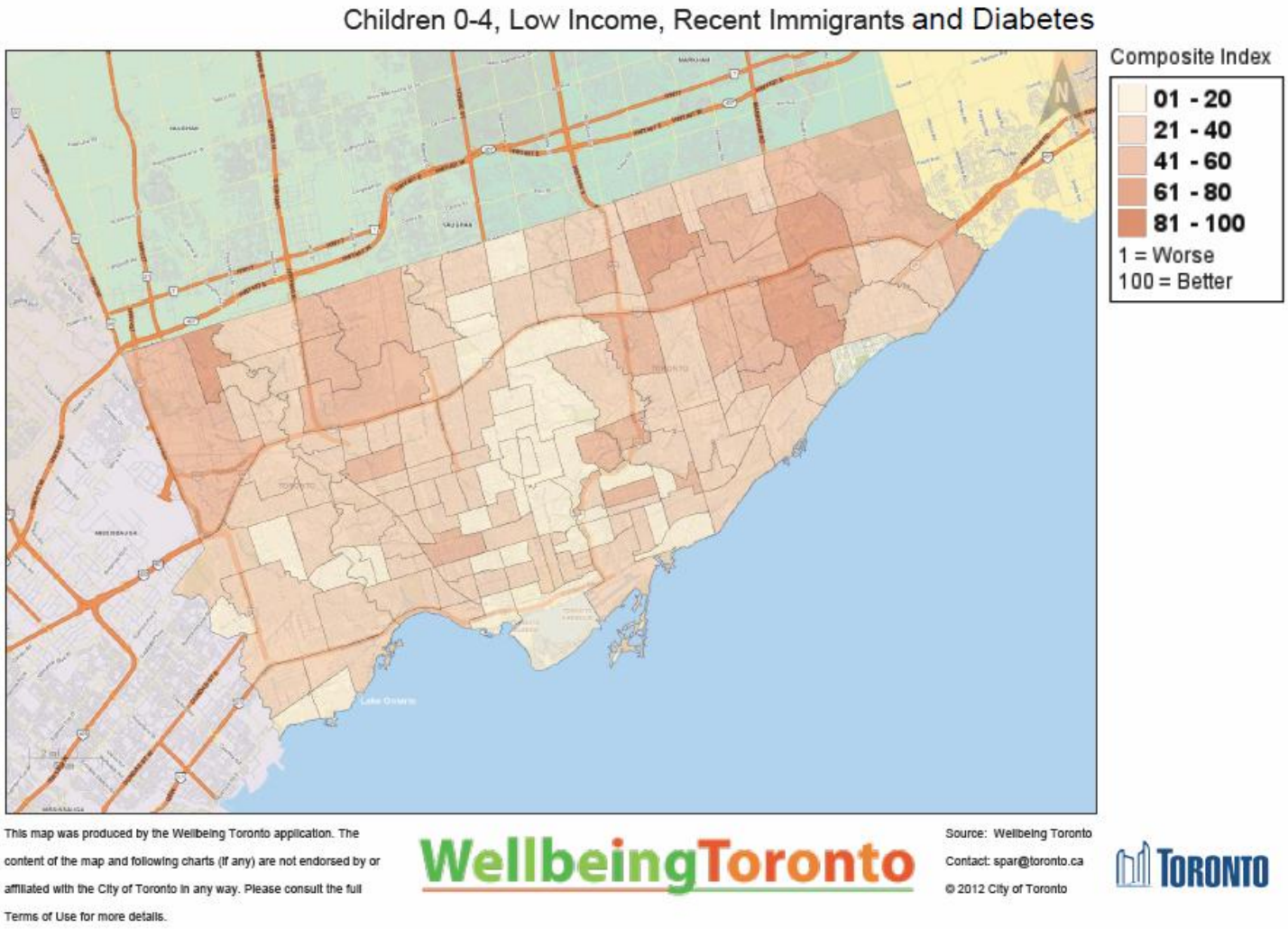
I am a Toronto-based journalist with experience creating and researching interactive maps, reporting and editing. I am a senior Web coordinator at globalnews.ca.

For much of 2010, I was a contributing editor at openfile.ca. I was a Web editor at thestar.com, the Toronto Star's Web site, from 2001 to mid-2010.

As well as being a generalist online editor, I created online interactive maps, on as wide a range of topics as possible. The subjects ranged from the serious, like reports of sexually transmitted disease or postal codes of drunk driving suspects, to maps that are just interesting, like dog licences or the range of urban bees.

Plus Blogs Blogs and Blogs…

Example of City Use (Public Health)



Example of Private Sector Use

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Data Map of Road Collision in the City of Toronto, Using Sphere Model Fiery Texture (data source: Wellbeing Toronto)

Road Collision Toronto Live Demo

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NEXT STEPS

WHERE WE ARE NOW..

- Enhancements…
- Community feedback & training
- Working on further collaborations
- **MORE INDICATORS!**

Intermediate Outcomes:

- Fact-based tool available to support planning and decision making
- Better-informed decision making by funders, policy makers, and the community
- Improved transparency in planning, analysis and decision making
- Improved coordination among funders, and policy-makers

Long-Term Outcomes:

- Enhanced understanding of the functioning of neighbourhoods and their service systems
- Improved ability to identify common outcomes that cross sectors and organizations

NEW FRONTIERS TO CONQUER

BILATERAL OPENNESS: Govts are getting better at *OUTBOUND* data (eg., releasing data), but are not yet equipped to deal with INCOMING data(e.g., value-added data that communities want to share with govt).

COMMON DEFINITIONS: What is considered OD?

STANDARDIZED LICENSING: What is considered open use?

CULTURE SHIFT (OPEN GOVT): Realization that DATA is not what makes one unique but rather the KNOWLEDGE applied to its use!

ENHANCED INTERNAL STRUCTURES AND PROCESSES: Commitment to create government systems that understand and integrate with OD principles vs. internal resources

ACCESSIBILITY: The challenges with disabilities, generational challenges, and those with other languages…

OPEN *ANALYSIS*: OD should be more than just a site for raw data! It should be about connecting and sharing knowledge as well.

RESOURCES: Not all data is from Govt. Finding creative ways to release free data while recognizing existing funding mechanisms, SLA's, MOU's, as well as the resources required to collect and maintain such data!

THE NEW CURRENCY: Creative collaboratives to share data instead of money, but how do we do that under current funding and fiscal resourcing?

TORONTO

Other Statistical Resources at the City of Toronto

- ✓ **Social Atlas**
  http://www.toronto.ca/demographics/atlas.htm
- ✓ **Neighbourhood Profiles**
  http://www.toronto.ca/demographics/neighbourhoods.htm
- ✓ **Ward Profiles**
  http://app.toronto.ca/wards/jsp/wards.jsp
- ✓ **Labour Force Data**
  http://www.toronto.ca/invest-in-toronto/labour_force.htm
  http://www.toronto.ca/economic_profile/labour_force.htm
- ✓ **Employment Data**
  http://www.toronto.ca/demographics/surveys.htm

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Wellbeing Toronto is located on the City's website at:
www.toronto.ca/wellbeing

TORONTO

THE COMPOSITE INDEX EXPLAINED…

How the Composite (user) Index is built:

Raw hood aggregates → 0-100 scale → 1-100 scale → weighted composite index

- 0-100 scaled value = a = 100 * ((raw value – minimum) / range)
- 1-100 scaled value = b = a + ((100 – a) / 100)
- Composite Index (inside app) = (v1 * w1) + (v2 * w2) / (w1 + w2)

Weighting options in the app are 0-5 (0=off, 1=lowest, 5=highest)