



# Creating More Cyclists:

*A strategy for Accelerating Adoption of  
Cycling for Urban Transportation*

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# Outline



## Background

### Accelerating Cycling Adoption Through:

- Understanding Travel Patterns
- Developing a Cycling Adoption Tool Kit
- Refining the Tool Kit for use in Commercial and Not for Profit Settings

### Future Direction & Policy Implications

# Research Goals and Partners



- To understand how lessons from the field of behaviour change can be applied to cycling adoption for transportation, to hasten mode shift and to enhance the local economy, environment and social inclusion;
- To fill a gap in the literature about cycling adoption with a rigorous, evidence based study.



**spacing**

*dandyløose*  
TORONTO ON TWO WHEELS

**tcat**

toronto centre for  
active transportation

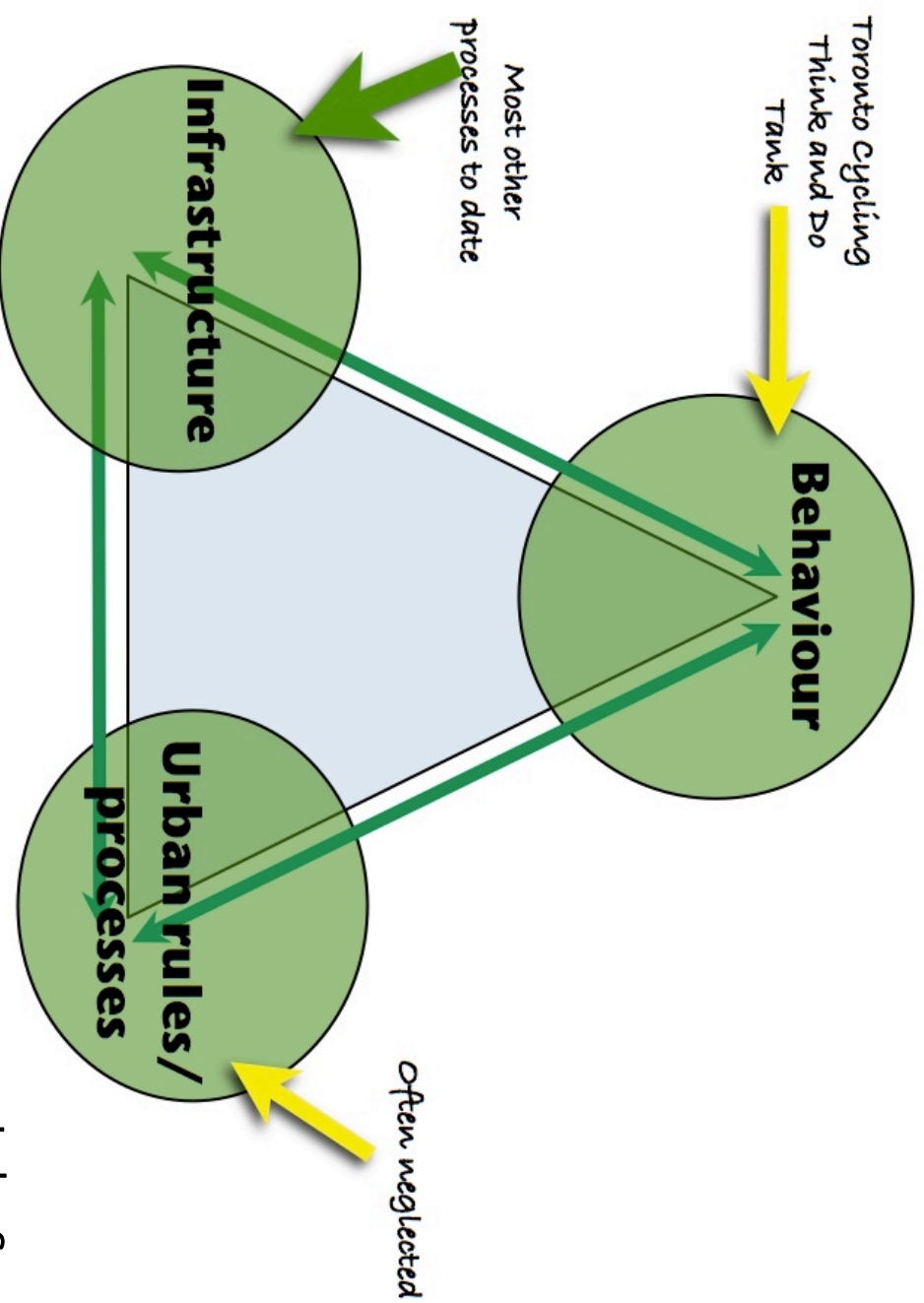


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# Drivers to Promote Cycling

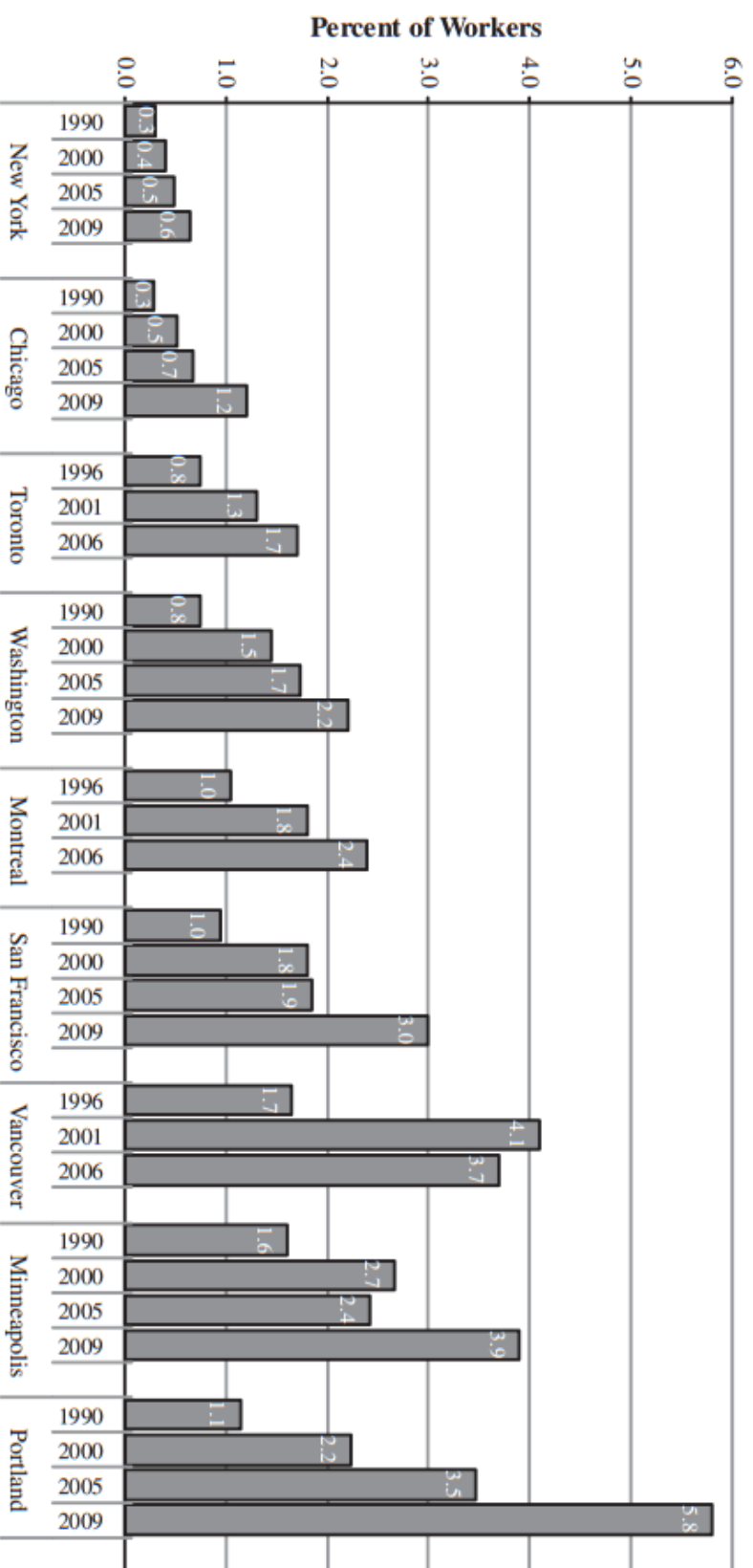
## *3 main components to increase cycling*



# Cycling Trends in North America



Trend in share of workers commuting by Bicycle in North American Cities:



**Fig. 4.** Trend in share of workers commuting by bicycle in large North American Cities, 1990–2009. *Sources:* USDOC (1980–2000, 2010a); Statistics Canada (1996–2010).

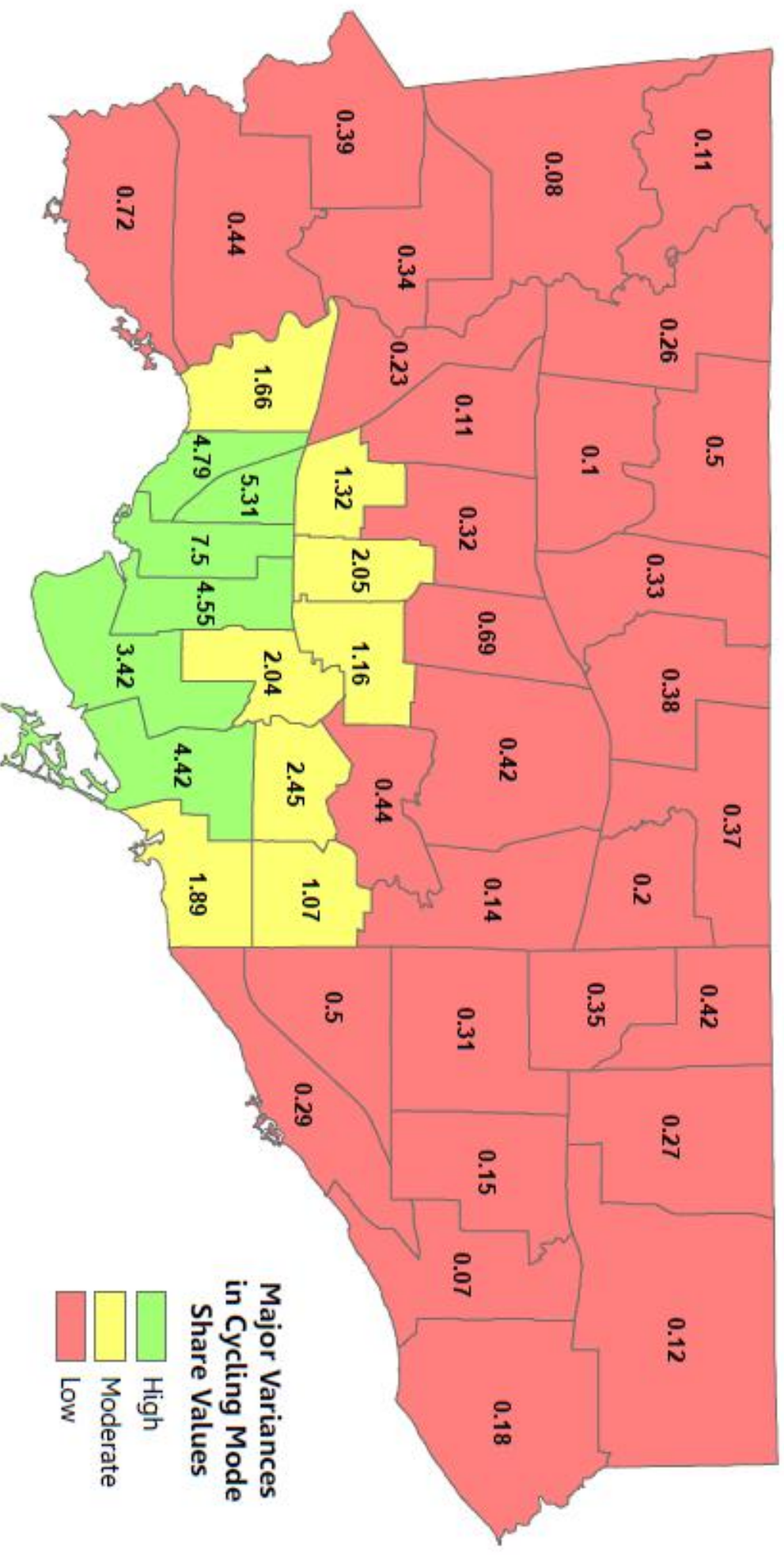
# Accelerating Cycling Adoption



## Goals:

- Identify demographic & physical determinants of utilitarian bicycle use.
- Understand barriers to participation
- Develop social strategies to increase participation
- Design Tool Kit
- Target populations

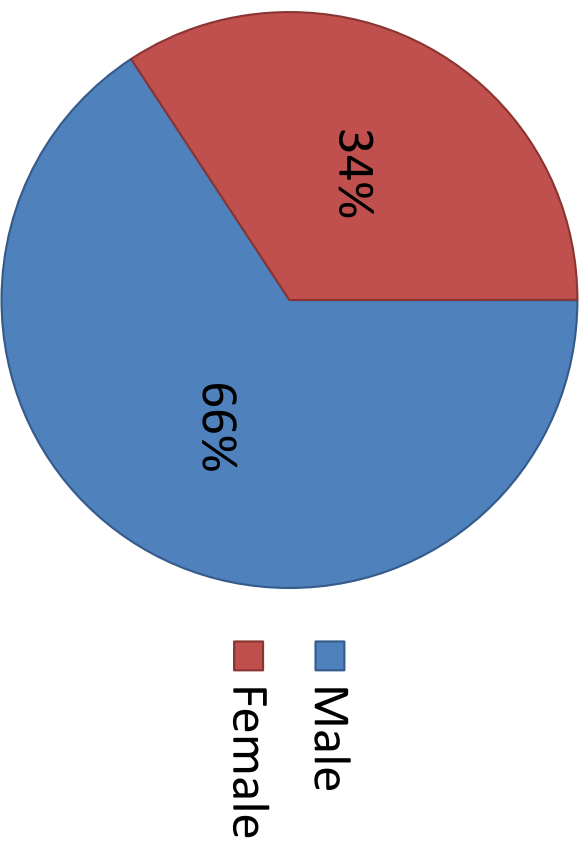
# Cycling Mode Share



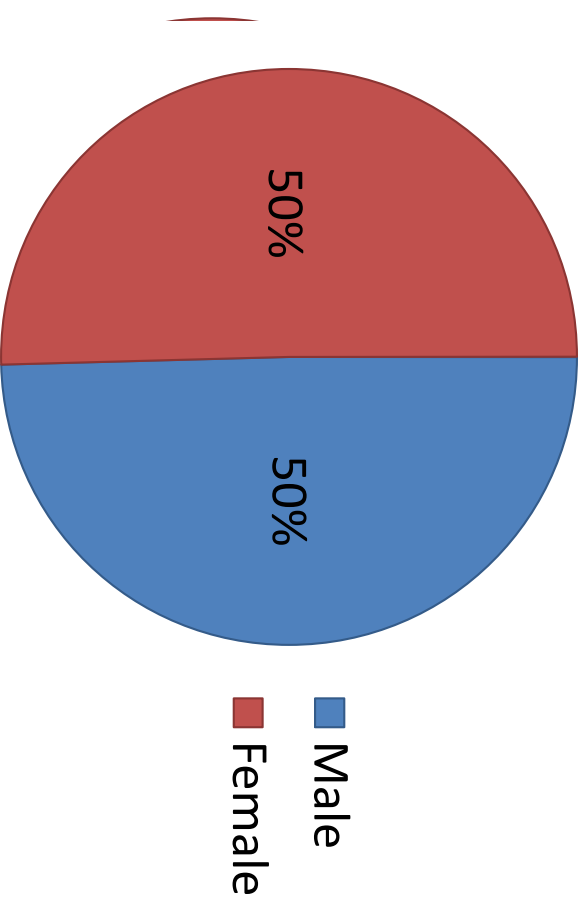
# Who Cycles?



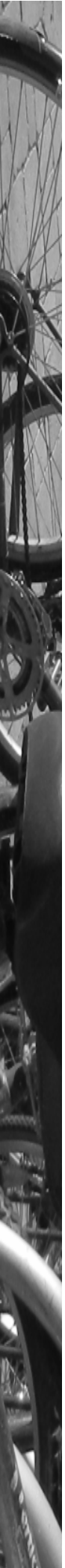
**Cycling Trips**



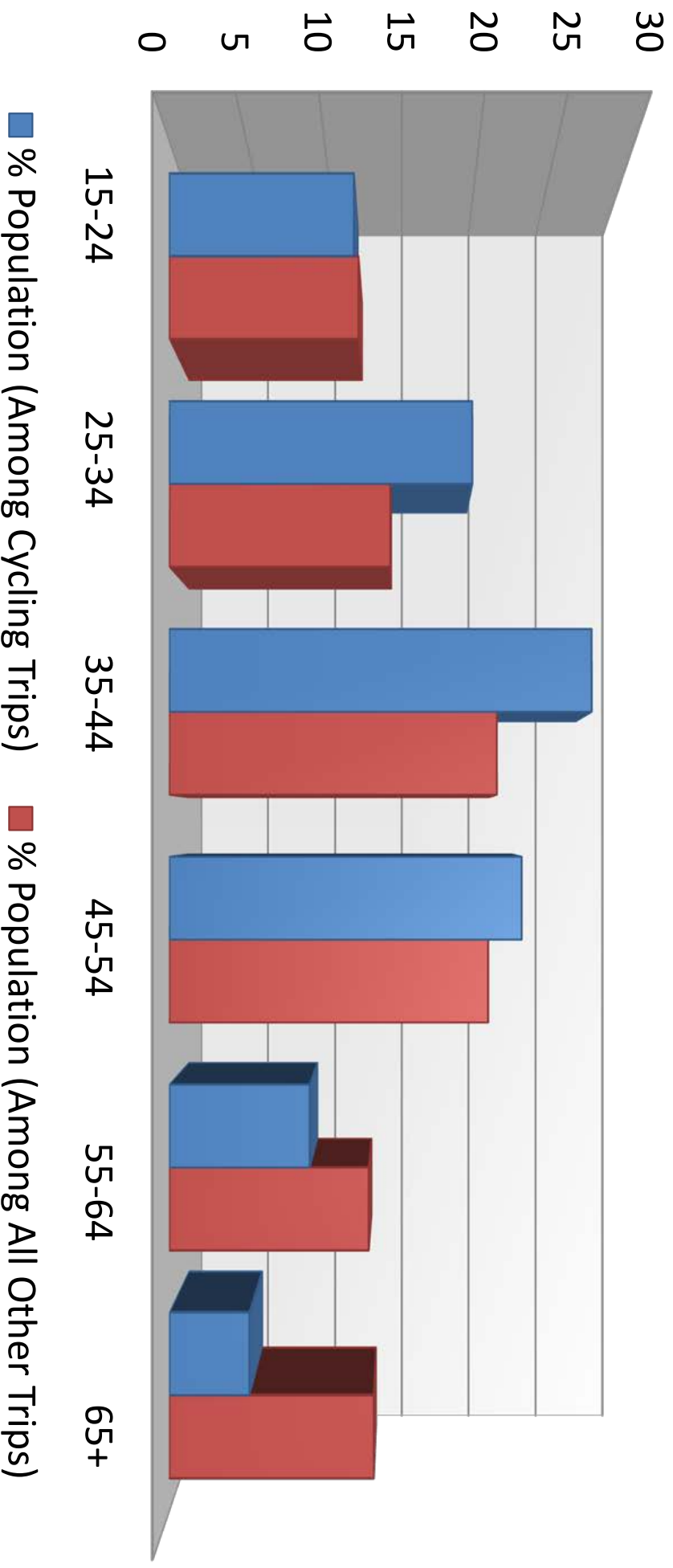
**All Other Trips**



# Who Cycles?

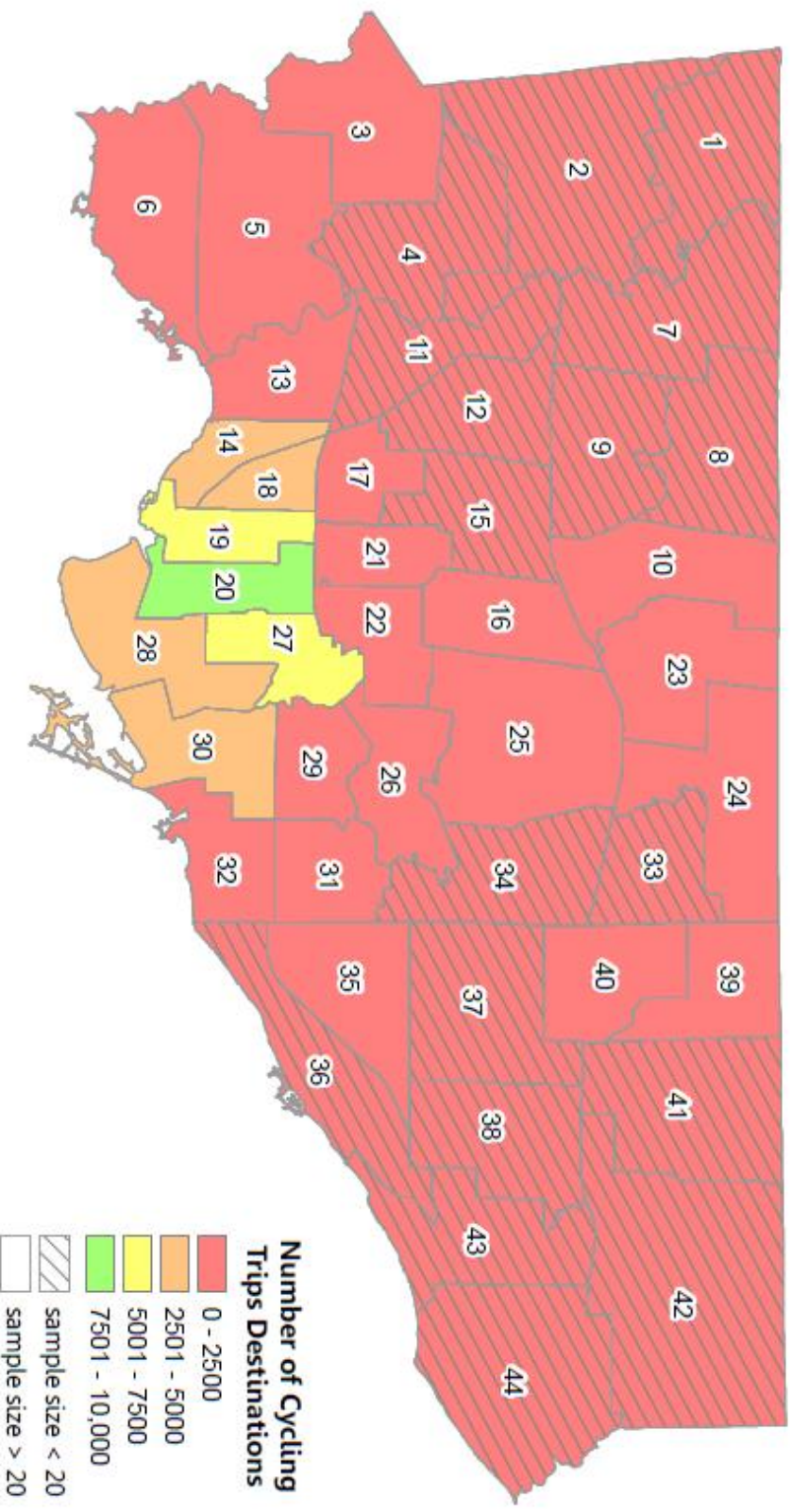


## Age Distribution of Trips Taken



# Trip Characteristics

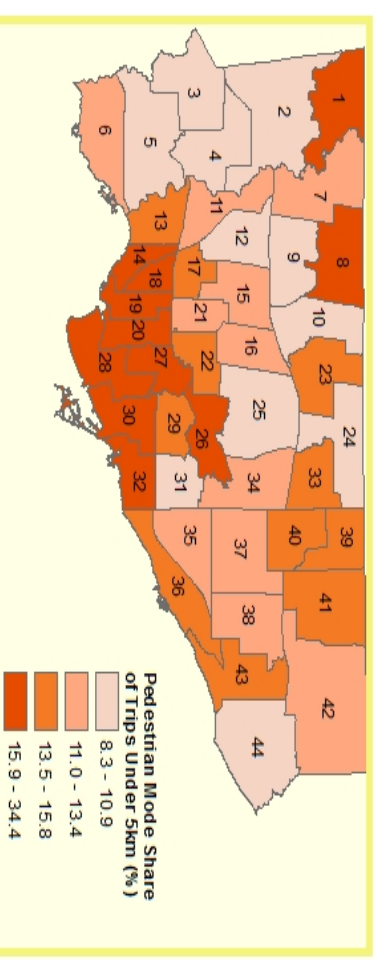
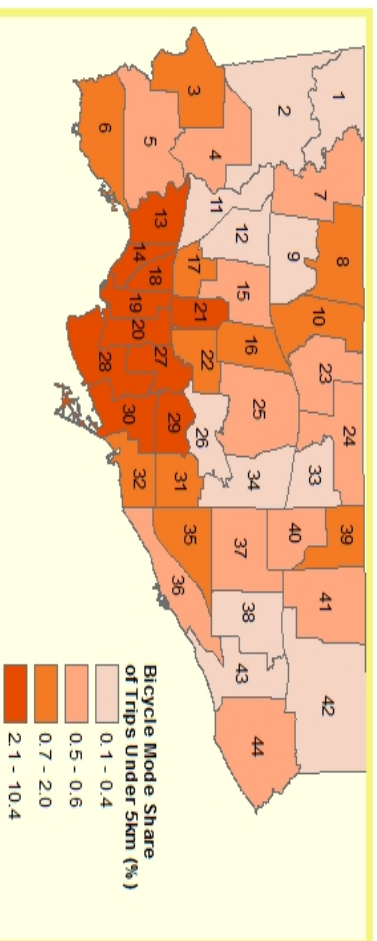
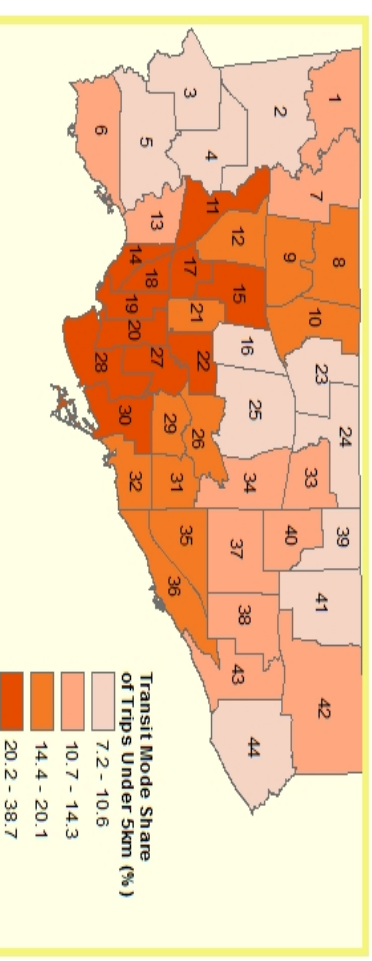
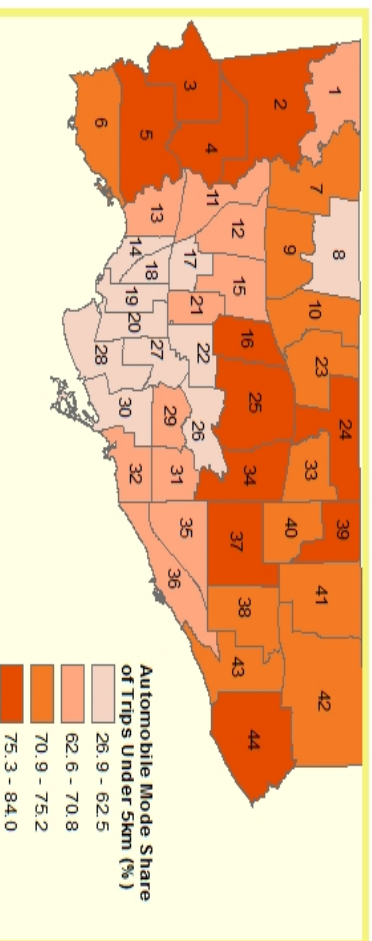
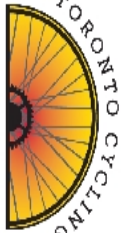
Short: most  
are under 3  
km. and  
even more  
are under 5  
km.  
2 to 3  
cycling trips  
per day.



# Trips Under 5 KM by mode


## Toronto Mode Share of Trips Under 5km

A Ward-by-Ward Look at Automobile, Transit, Bicycle and Pedestrian Mode Shares of Trips Under 5km

Created for the Toronto Cycling  
Think & Do Tank  
By Katie Witmann  
Date: January 2013  
Source: Transportation Tomorrow  
Survey 2006

0 5 10 20 Kilometres

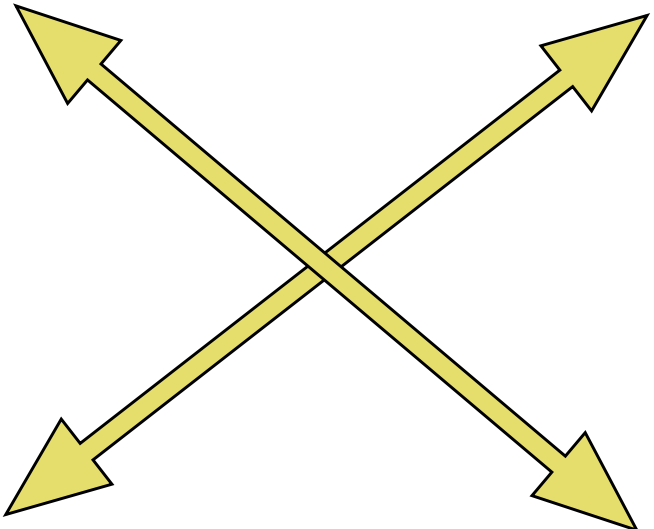


- |                       |                       |                            |                            |                            |
|-----------------------|-----------------------|----------------------------|----------------------------|----------------------------|
| 1 Etobicoke North     | 10 York Centre        | 19 Trinity-Spadina         | 28 Toronto Centre-Rosedale | 37 Scarborough Centre      |
| 2 Etobicoke North     | 11 York South-Weston  | 20 Trinity-Spadina         | 29 Toronto-Danforth        | 38 Scarborough Centre      |
| 3 Etobicoke Centre    | 12 Parkdale-High Park | 21 St. Paul's              | 30 Toronto-Danforth        | 39 Scarborough-Agincourt   |
| 4 Etobicoke Centre    | 13 Parkdale-High Park | 22 St. Paul's              | 31 Beaches-East York       | 40 Scarborough-Agincourt   |
| 5 Etobicoke-Lakeshore | 14 Parkdale-High Park | 23 Willowdale              | 32 Beaches-East York       | 41 Scarborough-Rouge River |
| 6 Etobicoke-Lakeshore | 15 Eglinton-Lawrence  | 24 Willowdale              | 33 Don Valley East         | 42 Scarborough-Rouge River |
| 7 York West           | 16 Eglinton-Lawrence  | 25 Don Valley West         | 34 Don Valley East         | 43 Scarborough East        |
| 8 York West           | 17 Davenport          | 26 Don Valley West         | 35 Scarborough Southwest   | 44 Scarborough East        |
| 9 York Centre         | 18 Davenport          | 27 Toronto Centre-Rosedale | 36 Scarborough Southwest   |                            |

# Literature Review of Social Strategies



Behaviour Change Principle	
Identify and Remove Barriers	
Social Norms	
Social Cues & Modeling	
Local Hubs & Community Involvement	
Foot in the Door & Pledges	
Visual Images, Prompts & Reminders	
Branding	
Feedback	
Incentives	



Emma Cohlmeier, 2012

Cycling Initiative	
Open Streets	
Safe Routes to School	
Cycle to Work Schemes	
Cycle Training and Education	
Cycle Promotion Events	
Bicycle Share Programs	
Route Planning Tools	
Advocacy	

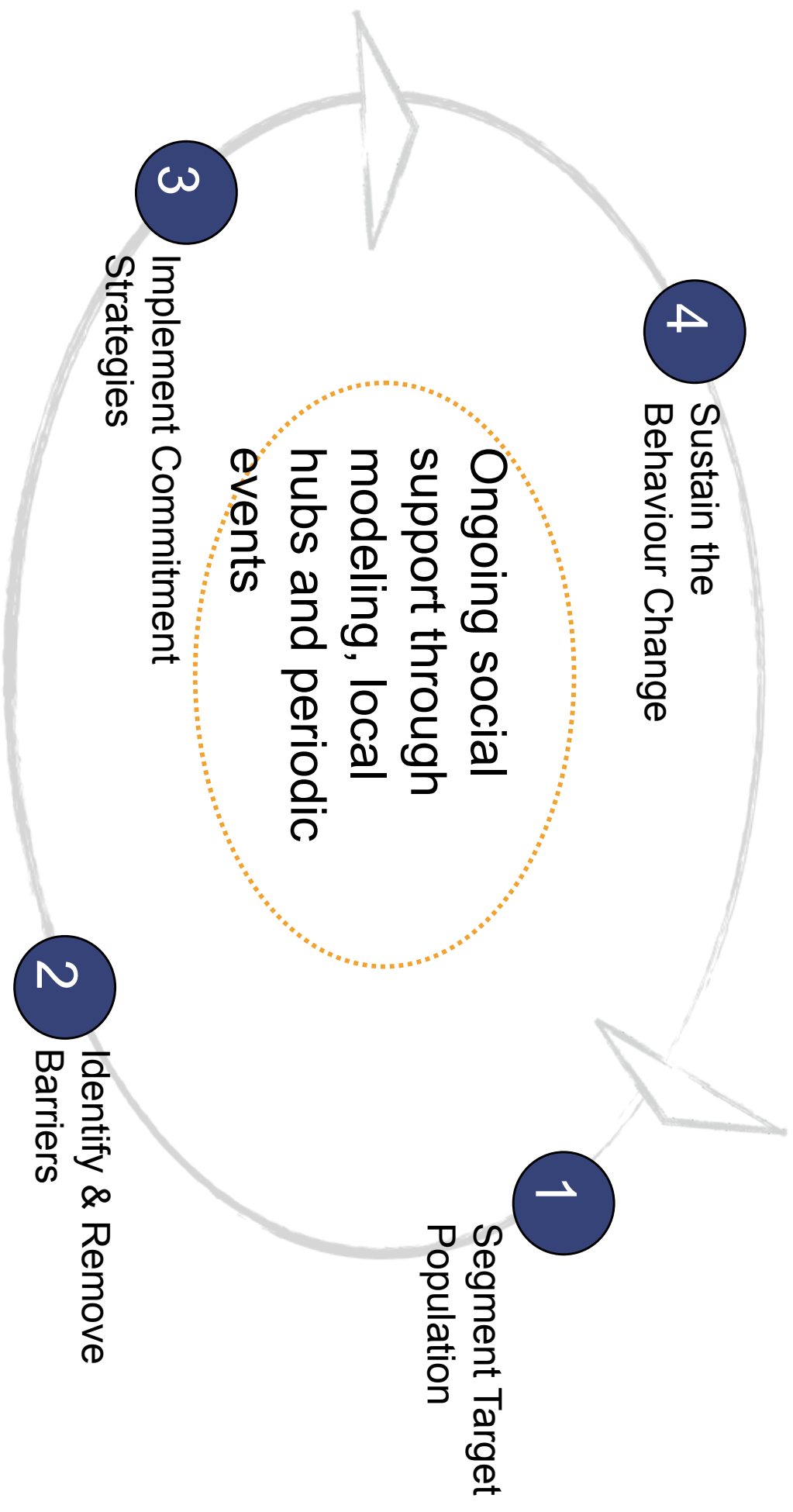
# Literature Review: Summary



## KEY MESSAGES

- Information based campaigns do not lead to significant behaviour change.
- Fear is constructed with the prevalence of cycling safety programs
- Parent's perceptions are significant barriers to youth cycling
- Cyclist stereotypes & individual's attitudes are deep rooted barriers to cycling
- Interconnectedness of physical environment, individual factors and societal structures cannot be ignored
- Anticipated moments of life change can be used as fertile times for changing behaviour.

# Accelerating Cycling Adoption: Tool Kit



# Harnessing the Tool Kit



## Goals:

- Social entrepreneurial business strategy for bicycle stores to increase size of market through targeting of potential, rather than existing cyclists
- Cycling Adoption Toolkit adapted for use by stores and NGOs for local delivery.

# Cyclists: Great customers

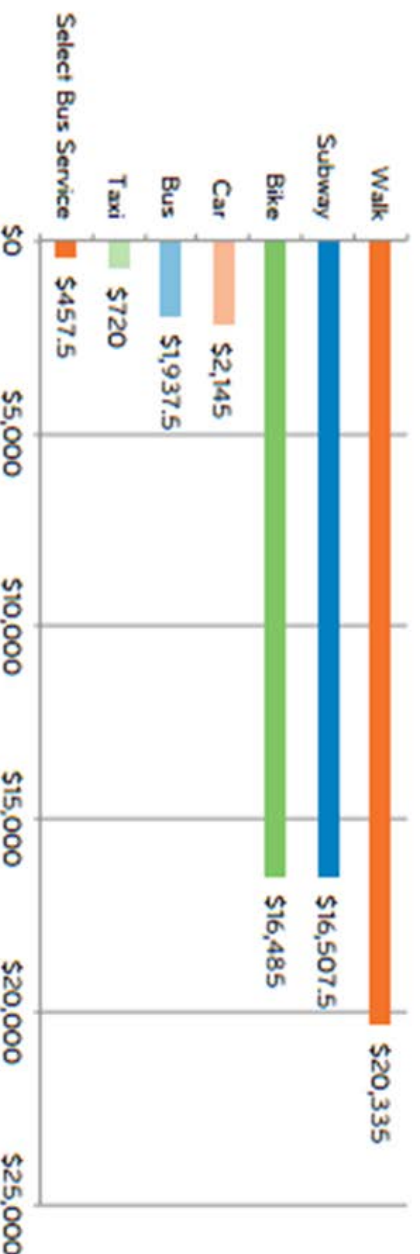
In Toronto and Portland, after pedestrians, cyclists are responsible for the largest monthly per capita spending within a studied neighborhood.

*-OTREC, 2012; TCAT, 2009; 2010*

In New York's East Village – where bike lanes are in place – cyclists top all groups, including pedestrians, in monthly per capita spending.

*-Transportation Alternatives, 2012*

**Total Aggregate Spending by Transportation Mode**



# Bike lanes: Good business

## In New York:

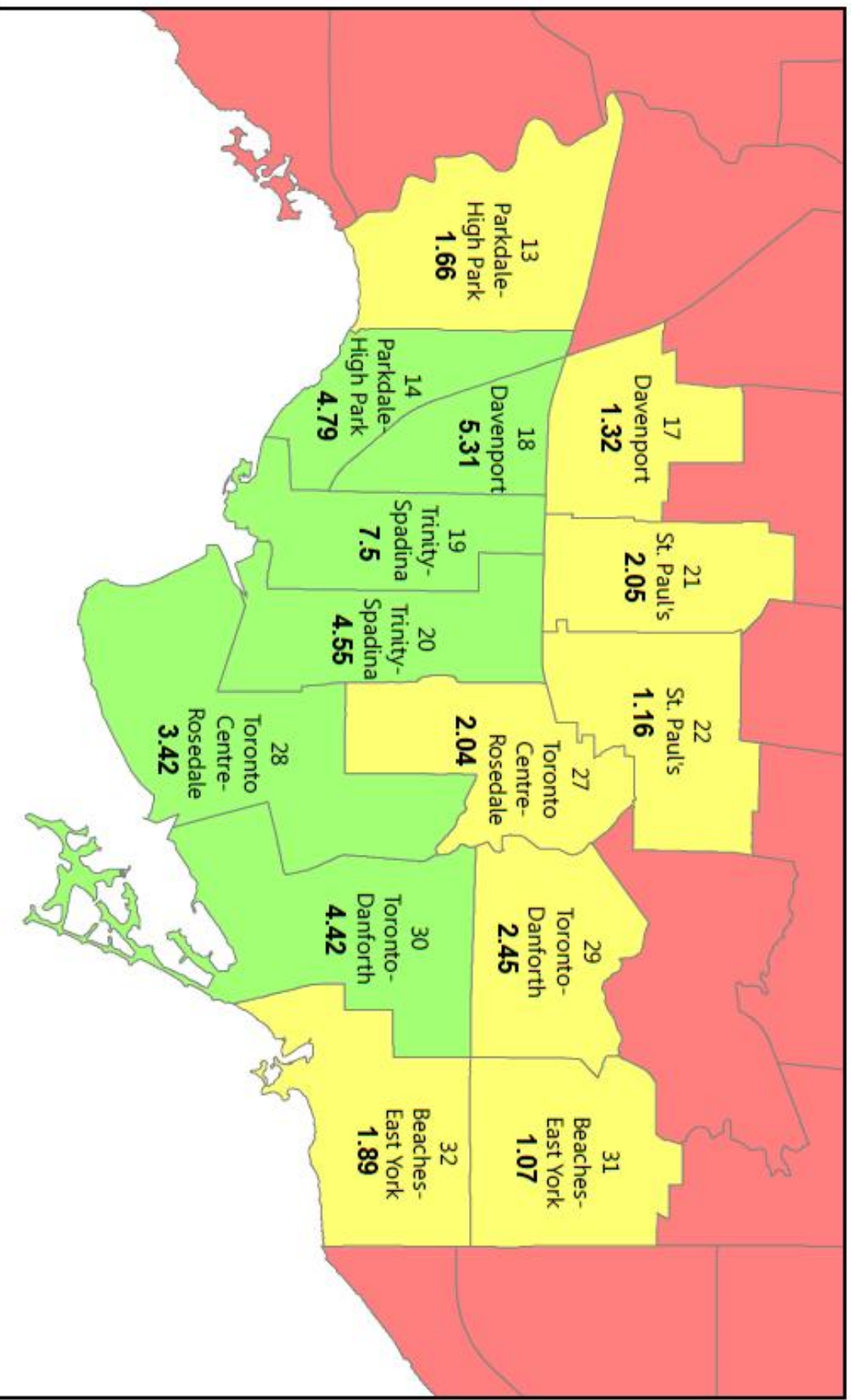
**“Up to 177% increase in bicycle volumes”** in First and Second Avenues (buffered bike lanes were incorporated to both). Accompanied by **“47% fewer commercial vacancies”** compared to 2% more borough wide.

**“49% fewer commercial vacancies”** at Union Square (included widened sidewalks and a protected bike lane), compared to a 5% increase borough wide.

**“Up to 49% increase in retail sales”** in businesses located at 9<sup>th</sup> Ave. (where buffered bike lanes were added) compared to a 3% increase borough wide

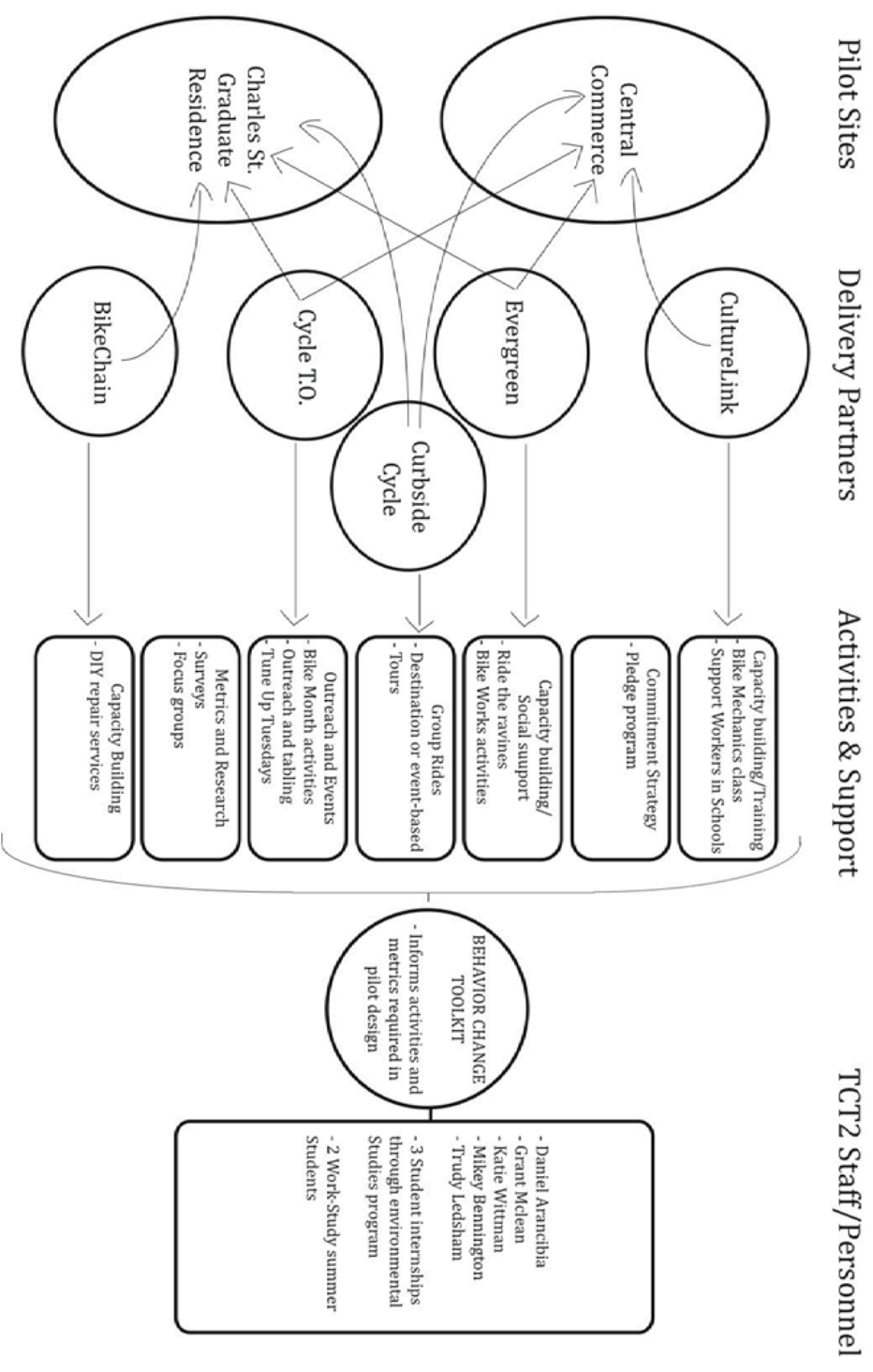
- *New York City Department of Transportation, 2012*

# Wards of Interest



# Integration of Community Partners

## PILOT DIAGRAM



\* Arrows show relationship of partners to their own activities and to each Site

# Conclusion and Next Steps



Behaviour change initiatives can significantly accelerate cycling adoption at a fraction of the cost of physical infrastructure; our tool kit will be used to test this in two pilot projects with community partners this coming summer

Cyclists are strong economic accelerators; businesses should seize the opportunity and support investment in cycling behaviour and infrastructure to increase competitiveness.

Our business strategy will combine our tool kit with economic drivers to create a template for developing new markets using behaviour change to achieve mode shift.

Expanded research program will test these hypotheses in varied landscapes with more partners, exploring the relationship between behaviour change and infrastructure drivers.

# Thank You – Questions, Comments, Suggestions

Guadalajara, Mexico

Photo credit: Emma Cohlmeier



# Some References



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**Transportation for Tomorrow Survey** (2006)