



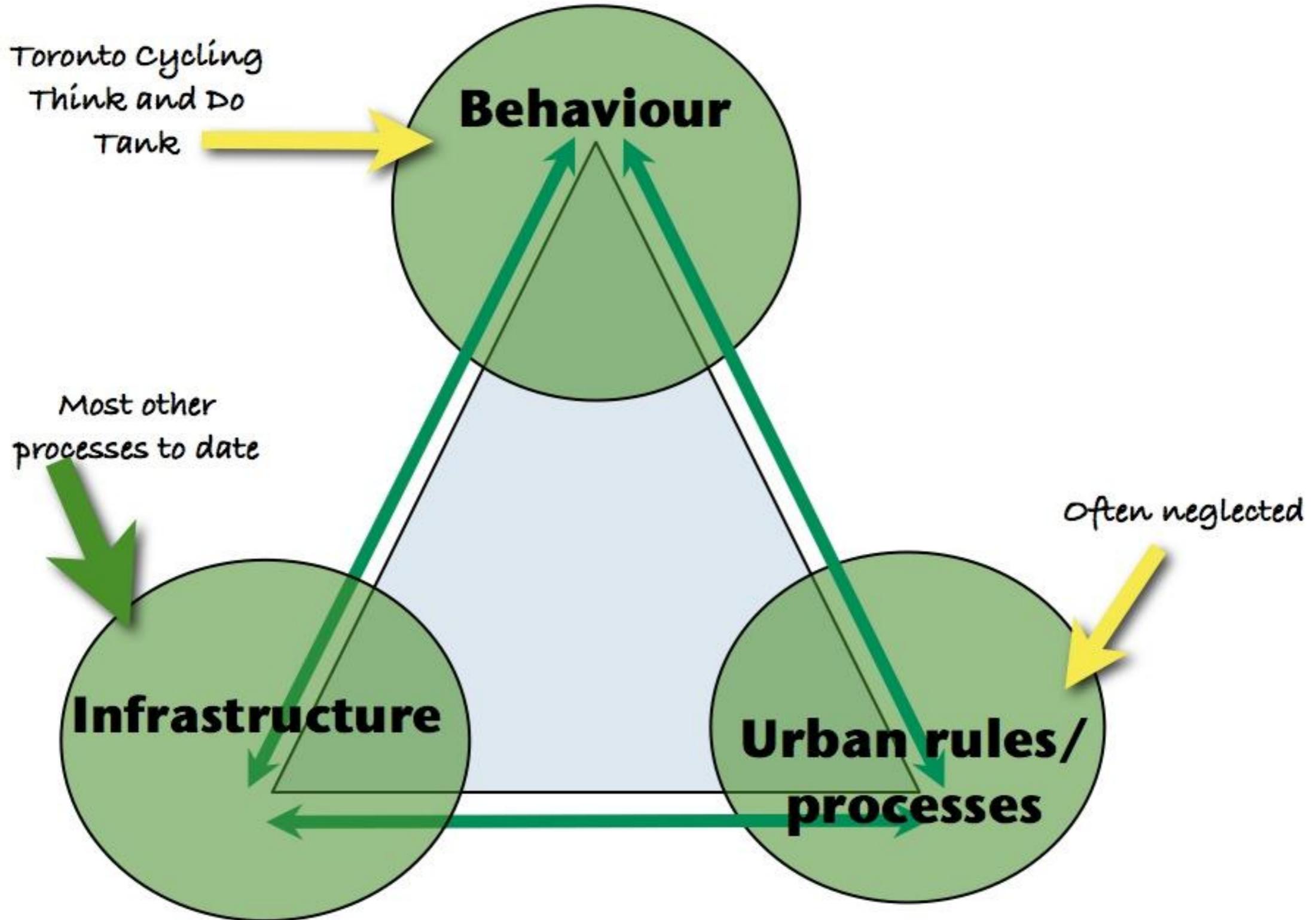
A TOOLKIT TO ACCELERATE THE ADOPTION OF CYCLING FOR TRANSPORTATION

Findings from a review of the literature on behaviour change interventions
to increase urban cycling

A seminar presentation for the World Social Marketing
Conference

Toronto, Canada
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April 22, 2013

3 main components to increase cycling





Streams of Research

1. Reviewing the behaviour change literature
2. Mapping current cycling patterns in Toronto
3. Exploring the economic benefits
4. Developing an integrated suite of tools for pilot project implementation



Guadalajara, Mexico

Photo credit: Emma Cohlmeier



Tokyo, Japan

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Toronto

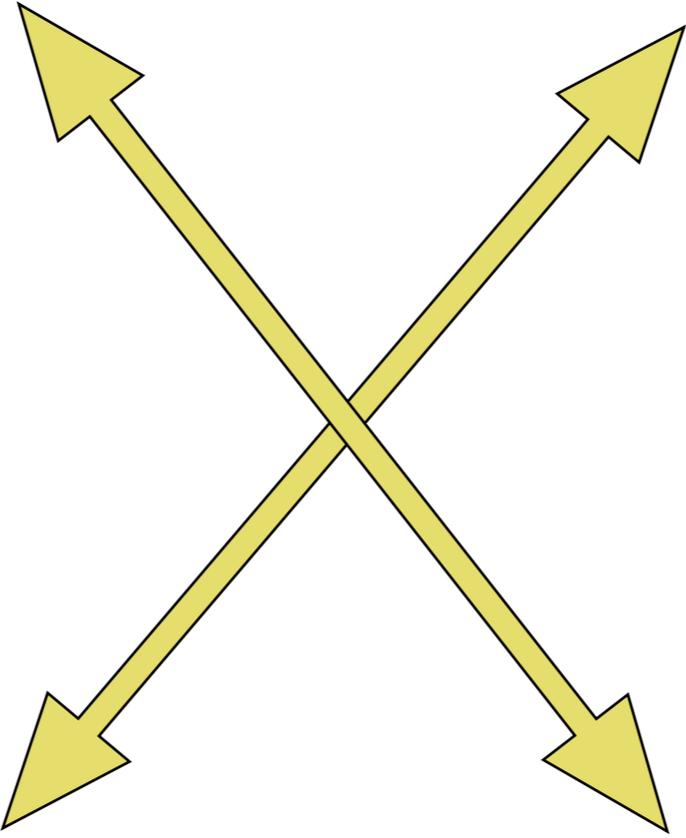
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Academic literature

+

Practical examples of cycling
initiatives and promotional programs

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



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

Behaviour Change Principle

Visual Images, Prompts & Reminders

	Description	Author(s) Year	Title Source	Location	Summary	Method of Evaluation/Framework	Key Messages
Open Streets	Ciclovías to serve as mass marketing programs for cycling and walking	Cervero, R., Sarmiento, O., et al. 2010	Influences of Built Environments on Walking and Cycling: Lessons from Bogota Case study in Sustainable Transportation Journal	Bogota, Colombia	<ul style="list-style-type: none"> - Bogota is internationally recognized for advancing sustainable transportation, particularly its BRT and Ciclovía infrastructure - 121 km of city roadways are closed each Sunday of the year for Ciclovías - Study evaluates how facilities and the attributes of physical built-environment – urban densities, land-use mixes, accessibility and proximity to transit, are associated with walking, cycling and Ciclovía participation 	<ul style="list-style-type: none"> - Extensive, city-wide multistage stratified sampling approach - Very high participant response rate - Factors influencing utilitarian and recreational walking, cycling and Ciclovía participation were assessed with evaluative and predictive statistical models - Comprehensive study, yet very Bogota/South America specific 	<ul style="list-style-type: none"> - Ciclovías recognized as promising programs to promote physical activity, social capital, social inclusion and improve population's quality of life - Provide a compelling visual, recurring public reminder of the possibilities of city streets as places for people, cyclists and alternative use (to cars)
	Supports, incentives and public 'prompts' to encourage recent and sustained behaviour change	O'Fallon, C. 2010	Bike Now: Encouraging Cycle Commuting in New Zealand – New Zealand Transport Agency Research Report 414	New Zealand	<ul style="list-style-type: none"> - Bike Now research project undertaken to determine the most effective action or set of actions to implement in a workplace setting to encourage people to take up (and continue) cycling to work - Multiple initiatives studied (bike bus, cycling events, incentives, training) - Involved 40 workplaces in Auckland, Wellington, Nelson and Blenheim for a 12-month period from 2007-2008 	<ul style="list-style-type: none"> - Thorough project trial and programme evaluation, with multiple and consecutive evaluative surveys – deemed successful intervention - Very comprehensive report, with emphasis on behaviour change perspective, not physical infrastructure - Some biases did exist: potential recall bias, self-selection bias, no control group - Difficult to isolate specific initiatives, or groups of Bike Now action, as being "pivotal" to change 	<ul style="list-style-type: none"> - Results show that a multi-strategy, process-based programme does encourage people who were previously either non or occasional cyclists, to cycle to work - Additional Bike Now "offerings" to encourage behaviour change made available to the public and to targeted groups– email support groups, bicycle user groups, attractive displays at local community destinations, discounts as bike shops, bicycle map creation, events, celebrations, etc.
Cycle to Work Schemes	Self help promotional pack to increase active commuting to work	Mutrie, N., Carney, C., et al., 2002	"Walk in to Walk Out": A Randomised Controlled Trial of a Self Help Intervention to Promote Active Commuting Case study in Journal of Epidemiology and Community Health	Scotland, UK	<ul style="list-style-type: none"> - Study conducted to determine if a self help intervention, based on the transtheoretical model could increase active commuting behaviour to work (walking and cycling grouped together) - Interactive materials delivered to participants as an informative prompt, included a booklet of educational and practical information on route choice, personal safety, cycling facilities, useful contacts, reflective accessories and an activity chart, to interactively chart progress - Study targeted participants who were deemed to be thinking about active commuting (contemplators) as well as irregular active commuters (preparers) 	<ul style="list-style-type: none"> - Conducted in 3 workplaces in Glasgow, Scotland - Randomised controlled trial including intervention group who received the "Walk in to Work Out" promotional pack and a control group who did not receive the pack until 6 months later - 12 month check-ins for long-term behaviour change 	<ul style="list-style-type: none"> - Intervention group twice as likely to increase walking to work as the control group – initiative deemed a success - Intervention not successful for cycling - Authors state, "the physical environment for cycling must be improved before cycling will become a popular option"

Includes a sequence of steps for promotional program design

Based on behaviour change theory and evidence

CYCLING PROMOTION TOOLKIT

List of practical options at each step

- 
- 1 Segment Target Population
 - 2 Identify & Remove Barriers
 - 3 Implement Commitment Strategies
 - 4 Sustain the Behaviour Change

Ongoing social support through modeling, local hubs and periodic events

1

Incorporate a Strategic Segmentation of the Target Population

A greater impact is achieved with the careful targeting of populations likely to change their behaviour

- 📖 Individualized, travel marketing programs show consistent positive results in the literature
- 📖 Responsive to the different motivations and deterrents of the various targeted groups
- 📖 Link to lifecycle and the life course perspective

Options to consider

- ✦ Prepare cycling promotion toolkits that **take advantage of life course transition periods** (Chatterjee et al., 2011)
- ✦ **Collaborate** with other sectors and local organizations that have pre-existing relationships with the (defined) target population (Chatterjee et al., 2011)
- ✦ **Approach targeted groups differently**, paying attention to their specific demographic and spatial realities (Christensen et al., 2012; Gatersleben & Appleton, 2007; Yang et al., 2010)

2 Identify and Remove Barriers

Ultimately, it is when barriers, both internally and externally, are low, that behaviour change programs will be effective

- ✦ Attitudes and perceptions act as a common, deep-rooted barrier to cycling
- ✦ Consistent pattern of gender difference amongst cyclists
- ✦ A fear of cycling is a common barrier
- ✦ Parent's attitudes and misperceptions of cycling and cycle safety is a significant barrier to young people cycling
- ✦ Habit and habit strength is a strong predictor of bicycle use

Options to consider

- ✦ Establish **group training rides** (Aldred & Jungnickel, 2012; Cleary & McClintock, 2000; Sloman et al., 2010; Telfer et al., 2006)
- ✦ Support **women-only cycle initiatives** (Baker, 2009; Cycle to Work Alliance, 2011; Dickenson et al., 2003)
- ✦ Implement **cycle training workshops for parents** (Handy, 2011; The National Center for Safe Routes to School, 2007)
- ✦ Support a local media or community-led marketing campaign, incorporate images of “**similar others**” and the notion of “**normal, everyday people**” on bicycles (Christensen et al., 2012; Daley & Rissel, 2011; Gatersleben & Hadded, 2010)

3

Make Use of Commitment Strategies

Moving from intention to action

- ✦ Foot in the door techniques
- ✦ Start with a small commitments
- ✦ Promote a “give it a try” mentality

Options to consider

- ✦ Host a **mass community cycling promotion event** (Bowles et al., 2006; Rose & Marfut, 2007; Pucher & Buehler, 2008)
- ✦ Model a new cyclist program on requiring all “new recruits” to sign a contract or a **pledge** (Surborg, n.d.)
- ✦ Host a **workplace cycle challenge or bike bus to school** scheme (Cycle to Work Alliance, 2011; UK Eastern Region Public Health Observatory, 2011; Luton, 2008; Rose & Marfut, 2007; Tools of Change Landmark Case Study, 2010; Transport for London, 2010)

4

Sustain Behaviour Change

“Maintenance is important for behaviour change to be sustained – it does not just happen” (Rose, 2003)

- ✦ Positive feedback, prompts and reminders are important motivators to sustain behaviour change
- ✦ Community-led (bottom-up) approach to implementation encourages an embeddedness and sense of ownership of the program in the community
- ✦ Large-scale, recurring events (Open Streets and Ciclovía) provide a visual imagery and constant reminder of cycling in the city

Options to consider

- ✦ **Track** commitment campaigns to award those of do fulfill their pledge (Cooper, 2007)
- ✦ Incorporate **fun and usable prompts and reminders** as a means of reinforcement (Cooper, 2007)
- ✦ Implement a **recurring city-wide program**, such as an Open Streets or Ciclovía (Sarmiento et al., 2010; Mason et al., 2011)

Encourage ongoing social support through modeling, hubs and periodic events

The use of various techniques to draw people in and inspire widespread participation

+A myriad of interventions should be included and (often) repeated throughout program design – depending on scope, local context and available resources

Options to consider

- ✦ Implement a **cycling ambassadors program** (Davis, 2008, De Geus et al., 2008; Dill & Voros, 2007; Titze et al., 2008)
- ✦ Incorporate **group cycle and route planning training** (Telfer et al., 2006)
- ✦ Create **local hubs** and encourage local community involvement (Aldred & Jungnickel, 2012; Bauman et al., 2010; Sloman et al., 2010)
- ✦ Focus on school-travel planning and **school-based cycle promotion** (Tools of Change Landmark Case Study, 2009; Transport for London, 2010; The National Center for Safe Routes to School, 2007)
- ✦ Provide **discounts and small gifts** as incentives (Cooper, 2007; Davis, 2008)

**Adaptability is
key!**

Next Steps

- ✦ Official release of the *Toolkit and Mapping Cycling Behaviour in Toronto*
- ✦ Pilot project implementation
- ✦ Check out our website:

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Thank you!