



# BUILDING BIKE CULTURE BEYOND DOWNTOWN

A GUIDE TO SUBURBAN COMMUNITY BIKE HUBS

 the centre for  
active transportation

a project of

 Clean Air Partnership



## Project Team

### The Centre for Active Transportation at Clean Air Partnership

Nancy Smith Lea, Director  
Yvonne Verlinden, Project Coordinator  
Trudy Ledsham, Research Lead  
Jiya Benni, Report and Graphic Design

### Access Alliance Multicultural Health and Community Services

Marvin Macaraig, Community Health Promoter and Scarborough Cycles Bike Hub Coordinator

### Birchmount Bluffs Neighbourhood Centre

Enrique Roberts, Executive Director

### CultureLink Settlement and Community Services

Kristin Schwartz, Assistant Manager Sustainable Communities

### Cycle Toronto

Jared Kolb, Executive Director  
Keagan Gartz, Director of Programs and Engagement  
Kevin Cooper, Campaigns and Engagement Manager

### Toronto Cycling Think & Do Tank, School of the Environment, University of Toronto

Beth Savan, Principal Investigator

## Funding Partners

**Metcalf Foundation**

**Mitacs**

**Cover page photo:** Marvin Macaraig

### Please cite as:

Ledsham, T. & Verlinden, Y. (2019). Building Bike Culture Beyond Downtown: A guide to suburban community bike hubs. The Centre for Active Transportation at Clean Air Partnership.



# CONTENTS

Executive Summary	6
The Suburban Dilemma	8
Why Suburban Cycling?	10
The Suburban Potential	11
Community Portrait: Scarborough	12
How We Incubate Cycling	13
Step 1: Find the Neighbourhood	15
Step 2: Identify Local Barriers	24
Step 3: Remove Barriers and Start Cycling	26
Setting Up the Hub	
Programs:	
Safe Cycling Workshop	
Neighbourhood Bike Ride	
Staff Ride	
Learn to Ride	
Earn Your Bike	
Mentorship	
Step 4: Keep Cycling	38
Programs:	
Civic Engagement	
Do-It-Yourself Bike Repair	
Bike Maintenance Workshops	
Special Event Ride	
Conclusion	43
References	44
Image and Graphic Credits	46





# COMMUNITY BIKE HUB

**Community Bike Hub:** A welcoming space where people can learn more about cycling, meet other people who cycle, and go cycling together. Increasingly common in urban cores, they usually offer do-it-yourself bike repair where knowledgeable staff or volunteers help clients fix their own bikes. Our suburban version includes additional programming such as bike loans, bike mentorship, earn your bike, and guided rides, to encourage people to adopt cycling in areas where few people cycle.



# EXECUTIVE SUMMARY

## TAPPING INTO SUBURBAN POTENTIAL

In early 2015, with cycling on the rise in the city's urban core, four Toronto community organizations asked themselves the question, how can we build bicycle culture beyond the downtown? Beyond installing bike lanes, which are critical yet can be difficult and time-consuming to achieve especially in suburban settings, what can be done to support cycling in neighbourhoods where very few people currently travel by bike?

This question came out of a growing appreciation of the untapped potential for cycling in suburban neighbourhoods. In Toronto's suburban communities of Etobicoke, Scarborough, and North York, 1.5 million trips made each day are 5 km long or less (see page 8). While work trips may be longer, trips to the grocery store, the doctor's office, to visit friends or to the gym are often short and could be cycled.

## SOLVING THE SUBURBAN DILEMMA

People are hesitant to try cycling, however, because the environment is so unsupportive. Wide, high-speed roads and a lack of bike lanes can make getting on a bicycle feel uninviting and unsafe. At the same time, it is difficult for city staff and politicians to build bike lanes, particularly those that re-allocate road space away from motor vehicles, when so few people cycle.

Community bike hubs can help solve this frustrating chicken-and-egg scenario. Our approach follows a four-step model to support behaviour change (see page 14). We focus on addressing other barriers besides infrastructure, such as access to a working bicycle, repair services, route knowledge, and riding skills. We incubate cycling by creating a supportive community where people can meet other people who cycle, learn more about cycling, and give cycling a try.

## FINDING THE RESOURCES

Opening a community bike hub takes financial and human resources. In a suburban area with low cycling, it can be a challenge to find funding. One of the wonderful things about cycling, though, is its huge diversity of associated benefits (see page 19). What goals are agencies, the municipality and community groups working towards in your community? How could cycling help achieve those goals? In our experience, the community bike hub has helped improve health, reduce carbon emissions, empower youth, address poverty, grow skills, settle immigrants and refugees, and even divert waste from the landfill. Each of these goals has its own funding avenues to explore.

In-depth collaboration with organizations based in the community also increases program success. Their local experience, community presence, and credibility are indispensable. Our model partners them with organizations that have cycling and programming expertise. By working closely together, this competency is transferred from the cycling organization to the local agency, who are then able to take advantage of future opportunities to grow.

## BUT EVERYONE DRIVES!

A common assumption about suburban communities is that everyone owns a car and drives it everywhere. We take a finer-grained approach, recognizing that suburban communities are not uniform. Neighbourhoods differ from one another in terms of wealth, transit access, population density and destinations. Mapping factors such as household car ownership, density of short trips and existing cycling mode share helps identify neighbourhoods where a cycling intervention has a good chance of success (see page 16). Rather than a blanket city-wide campaign, we focus on incubating cycling in a neighbourhood with high potential. Once established, the community bike hub can then support initiatives in more neighbourhoods nearby.

## THE HOW-TO

From 2015-2018, thanks to generous funding from the Metcalf Foundation, we launched an innovative project called “Scarborough Cycles: Building bike culture beyond downtown” to test our community bike hub approach. The results have been incredible. In an area with only one bike shop, next to no bike lanes, and very few cyclists, we have repaired over 2,000 bicycles in the past three years. We have led over 1,000 people on rides and provided training in cycling skills and bike maintenance at 13 workshops. More than 2,500 volunteer hours have helped make all this possible.

This report, **Building Bike Culture Beyond the Downtown: A Guide to Suburban Community Bike Hubs**, summarizes what we have learned and lays out our approach for others to use. While many barriers to suburban cycling exist, so does much potential. We hope this guide will help you discover it.





# THE SUBURBAN DILEMMA

In many North American cities, cycling has increased over the last two decades (Pucher & Buehler, 2012), but the growth has been slow and uneven. In Toronto, for example, cycling in the downtown has been on the rise since 1996. In its inner suburban communities of Etobicoke, North York and Scarborough, however, cycling rates are lower today than they were in 1996 (see Figure 1).

Toronto's suburban neighbourhoods were built during the 1950's post-war housing boom and were designed with the assumption that everyone would own a car. Wide, high-speed arterial streets frame residential enclaves which often have cul-de-sacs instead of through streets. Cycling infrastructure, if it exists, usually consists of trails intended for recreation, rather than the connected grid of routes needed for transportation. The often-hostile cycling environment is a significant barrier to cycling adoption.

It is unsurprising, then, that few people cycle outside of downtown. At the same time, the fact that few people are currently cycling makes it difficult for politicians and city staff to implement cycling improvements. Bike lanes that lack a groundswell of popular support are vulnerable to changes of government and even removal, as was the case in Scarborough in 2011, when newly added bike lanes on Pharmacy Avenue and Birchmount Road were taken out. Yet, public support for a safe cycling network is increasingly widespread (Angus Reid MARU/VCR, 2016).

This frustrating chicken-and-egg scenario applies to all aspects of suburban cycling culture: there are few bike shops because few people cycle, but at the same time, not having a local place to buy or service a bicycle is a barrier that prevents more people from cycling. Social norms are also a barrier. Cycling is often seen as a child's activity,

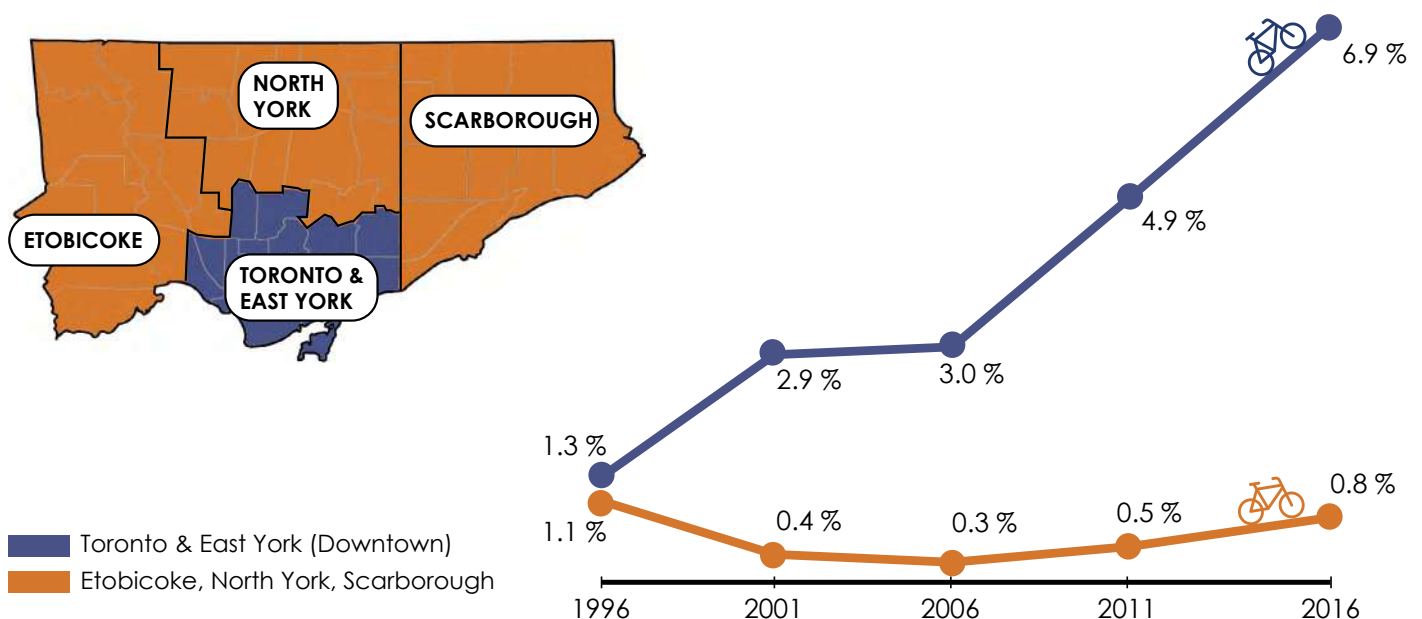


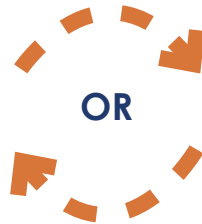
Figure 1: Cycling rates in Toronto (adapted from Ledsham and Savan (2017) and DMG TTS (2016))



# WHAT COMES FIRST?

## PEOPLE RIDING BIKES

More cyclists mean more support for bike lanes, more business for bike shops and more positive social norms around cycling for everyday travel.



## SUPPORTS FOR BIKE RIDING

But until bike lanes, bike shops and positive social norms have been established, people are unlikely to start cycling.

Figure 2: Successfully installing cycling infrastructure often necessitates a critical mass of existing cyclists, yet many people are reluctant to try cycling if the infrastructure does not exist.

a recreational past-time, a sport requiring technical equipment and a high level of fitness, or as a last resort for people living in poverty. These perceptions discourage many people from trying cycling but will only be changed if more people are seen getting on their bikes.

**Building Bike Culture Beyond Downtown** seeks to break this frustrating circle. We approach the challenge by building local capacity among organizations and individuals to incubate and grow cycling culture. As more people bike and support for cycling grows, local champions can work together with city staff and decision-makers to constructively address infrastructure gaps.



Figure 3: In 2008, traffic lanes were reduced on Pharmacy Ave in Scarborough to add painted bike lanes. They were removed by the next term of Council, in 2011.

# WHY SUBURBAN CYCLING?

As traffic congestion continues to worsen and urban populations face health, inequity and climate change challenges, cities are increasingly viewing cycling as part of the solution. For those living without access to a car, particularly in suburban areas with infrequent transit service, cycling can fill an important transportation gap. Moreover, a 5 km trip by bike gives you 20 minutes of zero-emission exercise, while the same trip by car leaves you sedentary and emits an average of 1.25kg of CO<sub>2</sub> into the atmosphere (EPA, 2018). Recent studies have found that commuting by bike lowers your risk of dying from cancer, heart disease and many other causes by at least 40% (Celis-Morales et al., 2017), while physical inactivity can shorten your life by 2.6 years, nearly as much as smoking (Manuel et al., 2016). In Toronto, as in many other cities, people living in suburban neighbourhoods face poorer health outcomes than those living downtown (Toronto Public Health, 2012).

Many cities have targeted transportation in climate change action plans, as it is the second highest contributor to greenhouse gas emissions (Environment and Climate Change Canada, 2018; The Atmospheric Fund, 2018). Toronto has a goal that, by 2050, 75% of all trips under 5 km will be walked or cycled (TransformTO, 2017). With most of these trips located outside the downtown, change is needed in suburban neighbourhoods in order to meet these goals and ensure the health and transportation benefits of active transportation are available to communities throughout the city.



Figure 4: Exploring the neighbourhood around AccessPoint on Danforth as part of our Healthy Eating and Active Living Ride 2017

# THE SUBURBAN POTENTIAL

People live locally. Even in the most car-centric environments, many of the trips people make every day are less than 5 km long and could be cycled in under 20 minutes. In Toronto's suburban communities of Etobicoke, Scarborough, and North York, 1.5 million trips made each day are 5 km long or less. In fact, the majority of short trips in the city are made outside of the downtown.

Even outside of Toronto, in Peel, Halton, Durham, York, and Hamilton, short trips remain prevalent. A recent report found that every day, 4.35 million trips in the Greater Toronto and Hamilton Area (GTHA) are short enough to be cycled, but are not. This number represents one third of all trips currently made by car, transit, taxi/rideshare and other motorized modes. Most (82%) are car trips (Mitra, Smith Lea, Cantello & Hanson, 2016).

In these regions outside of Toronto, most short trips are for shopping or other discretionary purposes (i.e., to the local library, the community centre, the dentist's office, etc). While places of work may be located too far away to bike, trips to transit are usually short. Even though only 2.6% of all trips to transit are longer than 5 km, the vast majority are currently driven. These trips represent great cycling potential!

These patterns are not unique to the Toronto region. In the UK, the City of London undertook a similar analysis and found that 8.17 million trips per day could be cycled, which represents nearly two thirds of all trips by motorized vehicles. Over half of these trips were located in suburban areas (Transport for London, 2016).

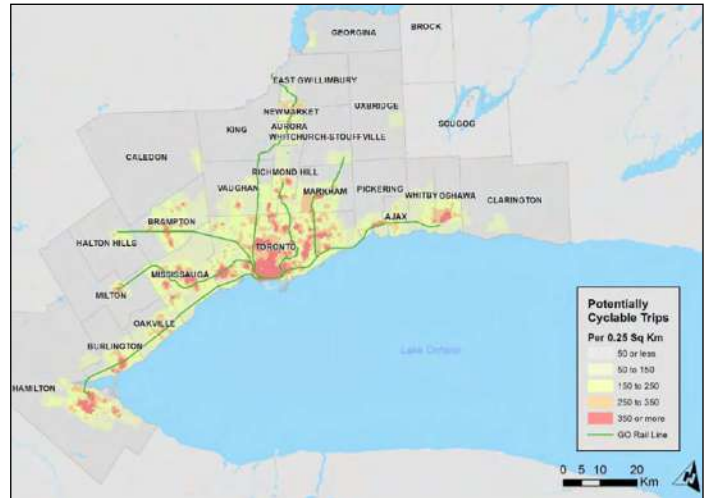


Figure 5: Potentially Cyclable Trips in the Greater Toronto and Hamilton Area, 2011 (Source: Mitra et al., 2016)

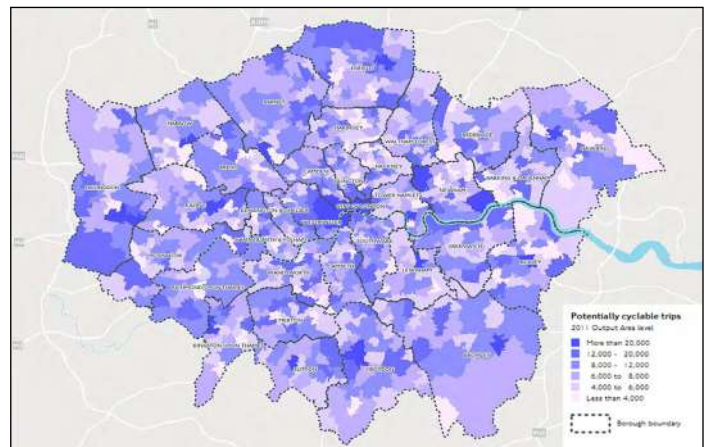


Figure 6: Potentially cyclable trips by trip origin, London (Source: Transport for London, 2017)

# COMMUNITY PORTRAIT: SCARBOROUGH

Since 2015, we have been working to incubate cycling in Scarborough, a suburban community east of Toronto's downtown. Results from our travel survey and analysis of transportation data revealed many barriers to cycling, as well as opportunities for cycling to meet local transportation needs.

## BARRIERS TO CYCLING

### PHYSICAL

- No working bicycle
- No safe bike lanes
- Lack of bike parking
- High speed traffic
- Only one bike repair shop in Scarborough



### SKILLS & KNOWLEDGE

- Unfamiliar with location of bike paths, bike lanes and bike parking
- Unfamiliar with road laws
- Uncomfortable riding on the street
- Unsure where to find bike repair services



### SOCIAL NORMS

- Very few people cycling, and of those very few are women
- Fear of theft
- Belief that cycling requires a high level of fitness
- Belief that cycling is only a recreational past-time or more suited to children



## OPPORTUNITIES TO INTRODUCE CYCLING

### TRANSPORTATION NEED

- In many neighbourhoods, over a quarter of households do not own a car (DMG TTS, 2016)
- Nearly half of women (46%) do not have a driver's license (Ledsham, 2016)
- Large areas of Scarborough are transit deserts (Martin Prosperity Institute)



### CYCLING POTENTIAL

- Almost 500,000 trips per day are 5 km or less, a distance easily cycled in 20 min (DMG TTS, 2016)
- Currently, 69% of these short trips are driven (DMG TTS, 2016)



### SHIFTING ATTITUDES

- 88% of Scarborough residents support building a safe cycling network (MARU/VCR&C, 2016)
- Over 40% of respondents to our Scarborough travel survey had considered cycling for everyday trips





# How We Incubate Cycling

Trying something new is not easy, even under the best conditions. It is even harder when the environment is not supportive. In our search for better ways to spark cycling adoption in suburban environments, we looked to social psychology research. We took proven strategies for how to encourage and sustain positive behaviour change (such as quitting smoking or reducing energy consumption), and aligned them with cycling interventions that had evidence of success (Savan, Cohlmeier & Ledsham, 2017). The result was a four-step model for incubating cycling, which we then applied in two suburban neighbourhoods in Scarborough.

At the core of our model is social support, fostered through a community bike hub. This human infrastructure is a critical component for those adopting and sustaining a change in behaviour. Social connections formed based on a common interest help people stay motivated. The hubs provide opportunities for knowledge-sharing about everything from cycling routes to how to securely lock up a bike or carry groceries by bicycle. The social aspect also normalizes cycling by making it feel less niche and more mainstream. This supportive environment is created through the collaboration of local partners with cycling experts and community volunteers.



Figure 7: The 'Tour de Scarborough,' a special event ride started by our community bike hub (top), and youth learning about bike repair in the 'Earn Your Bike' program (bottom).

## What is a Community Bike Hub?

Community bike hubs are welcoming spaces where people can learn more about cycling, meet other people who cycle, and go cycling together. Increasingly common in urban cores, they usually offer do-it-yourself bike repair, where knowledgeable staff or volunteers help clients fix their own bikes. Our suburban version includes additional programming such as bike loans, bike mentorship, earn your bike, and guided rides, to encourage people to adopt cycling in areas where few people cycle.

# A FOUR-STEP MODEL FOR INCUBATING CYCLING

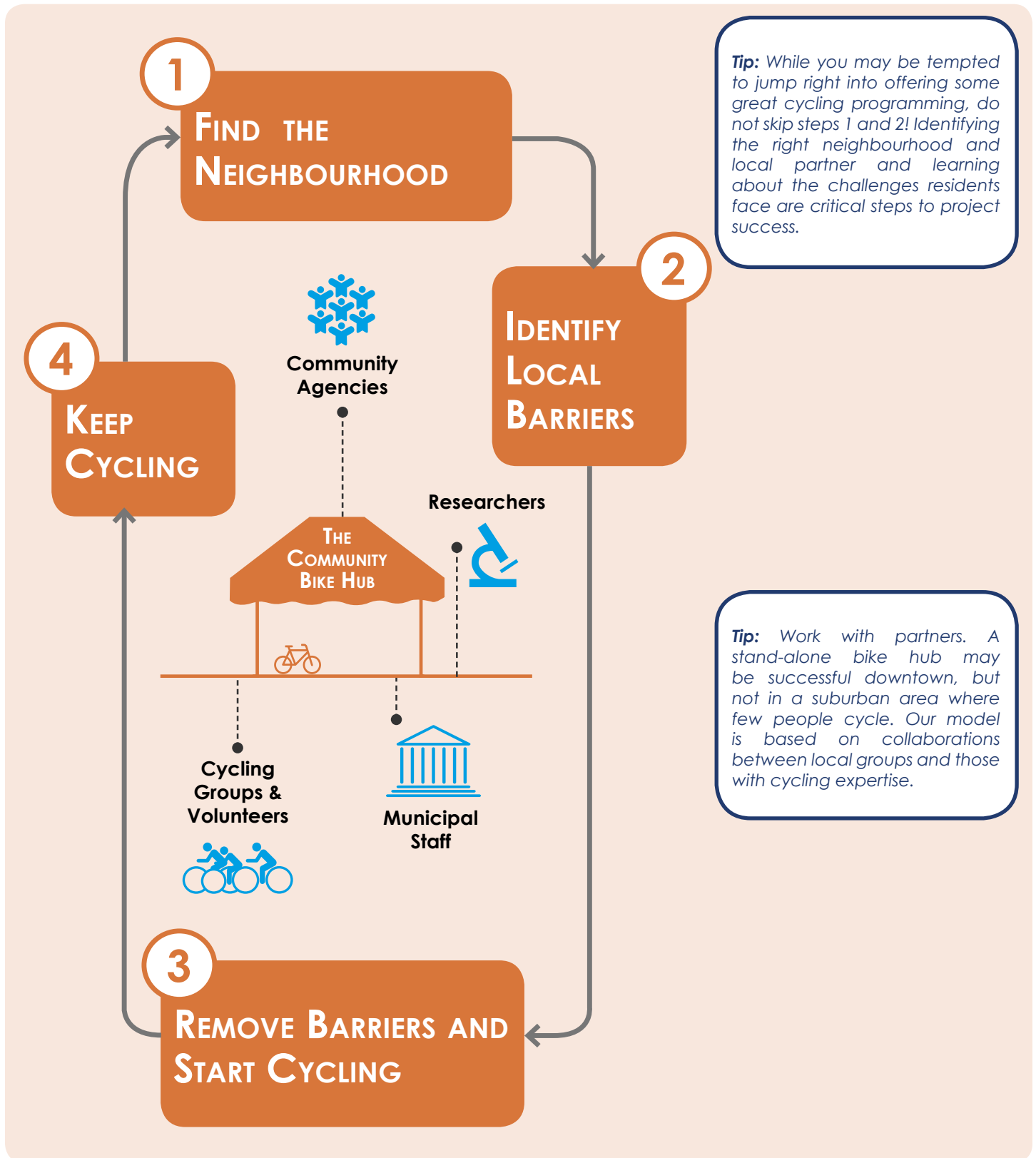
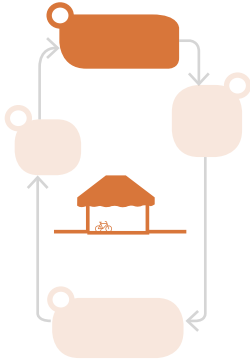


Figure 8: This four-step model is designed to encourage and support behaviour change through strategic and collaborative action. Keep in mind the model's circular nature; repeating many interventions and techniques throughout the process is part of its effectiveness (adapted from Savan, Cohlmeier & Ledsham, 2017).

# STEP 1 • Find the Neighbourhood



It is important to think strategically about the location of a suburban community bike hub and the partners involved. Contrary to what some people assume, suburban neighbourhoods are not uniform, and some are more suited to cycling than others. Mapping a wide variety of factors can help identify these more bike friendly neighbourhoods.

## Scarborough Households Without a Car

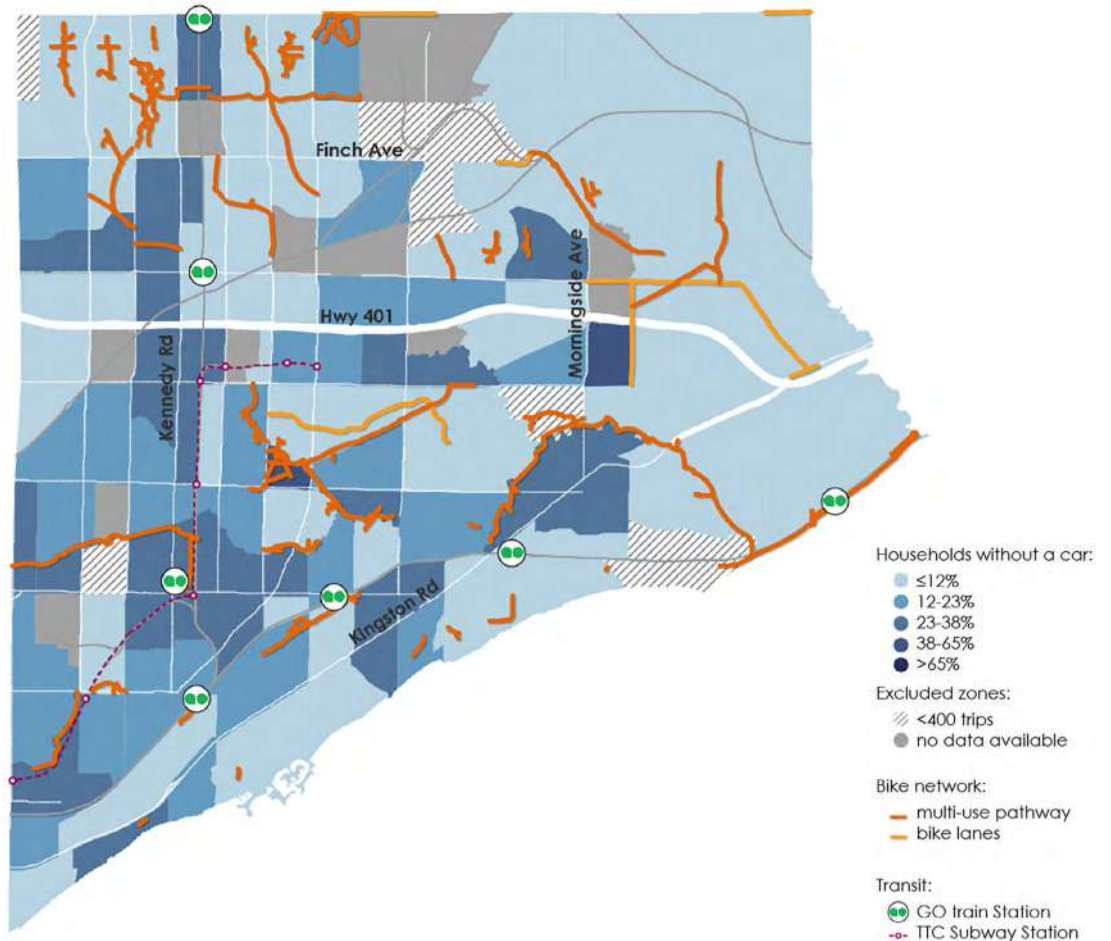


Figure 9: A map of households without a car in Scarborough, 2011 (Adapted from Pfertner, 2015)

# MAPPING LOCAL CHARACTERISTICS

What makes a neighbourhood good for cycling? While bike lanes might immediately jump to mind, a high density of short trips, topography, local destinations and many other factors all play a role. Extensive research has been conducted on cycling influencers in cities around the world (for example: Heinen et al., 2010; Hunt, 2007; Winter et al., 2011; Dill & Carr, 2003). We created the following list by looking at this research, as well as at correlations between neighbourhood characteristics and high rates of cycling in Toronto (Ledsham et al, 2013).

For each of these factors, we identified metrics and mapped the data, looking for neighbourhoods where important factors converged and there were no significant barriers. Several neighbourhoods had multiple positive factors, and we narrowed our search for a suitable community partner to these high potential locations.

**Data Sources**

*Our data came from the Transportation Tomorrow Survey and Toronto Open Data. Not all communities will have access to these data sources and some may have other suitable measures. Use the best set of data available to you.*

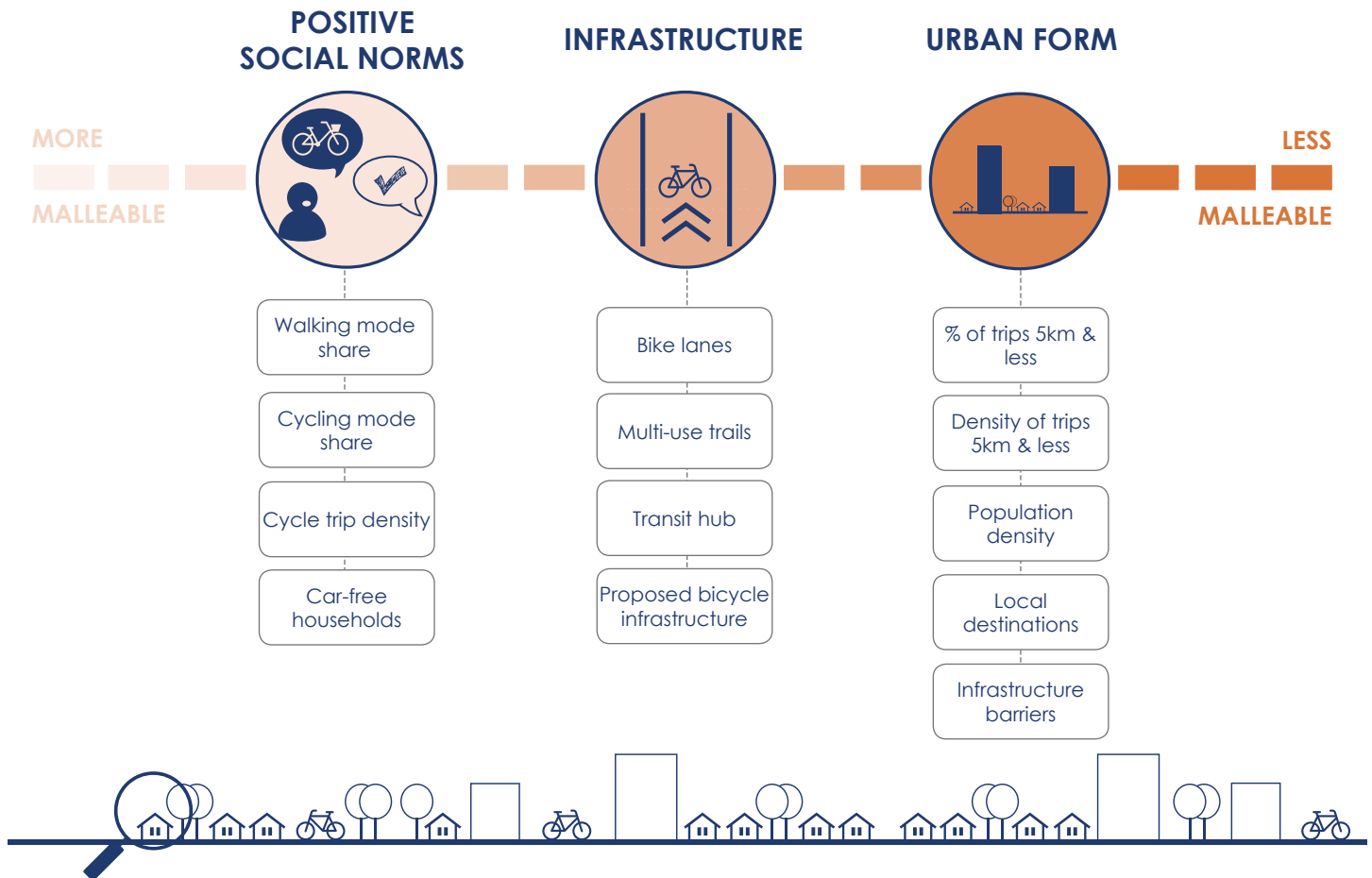


Figure 10: Factors for evaluating neighbourhood cycling potential



## POSITIVE SOCIAL NORMS



### MEASURE

### RATIONALE

Walking mode share	Higher levels of walking creates feelings of safety on the street and establishes active transportation as an option.
Cycling mode share	Higher levels of cycling help people considering cycling to see it as a viable option.
Cycle trip density	More cycling trips per sq.km means people are more likely to encounter a cyclist, thereby increasing perceptions of cycling as a normal activity.
Car-free households	A higher per cent of households without cars means more people are open to other transportation options.

## INFRASTRUCTURE



Bike lanes	Bike lanes in the neighbourhood create safe spaces for cycling, including group rides for beginners.
Multi-use trails	Multi-use trails in the neighbourhood create safe spaces for cycling, including group rides for beginners.
Transit hub	Transit hubs create multi-modal possibilities for longer trips.
Proposed bicycle infrastructure	A successful community bike hub creates support for upcoming infrastructure projects.

## URBAN FORM



% of trips 5 km & less	Trips 5 km & less are easily cycled in less than 20 minutes and a higher per cent of short trips means more potential for change.
Density of trips 5 km & less	More short trips per sq.km. means more potential for change in the neighbourhood.
Population density	More people per sq.km. is generally associated with higher levels of mixed use and active transportation.
Local destinations	The presence of local destinations such as shops, places of worship, colleges/universities, transit stations are indications of mixed use and a higher propensity for active transportation.
Infrastructure barriers	Highway and rail corridors often force people cycling and walking to make long detours in order to safely cross.



Figure 11: Evaluating Neighbourhood Cycling Potential: Measures and Rationale

## Potential Sites for a Community Bike Hub

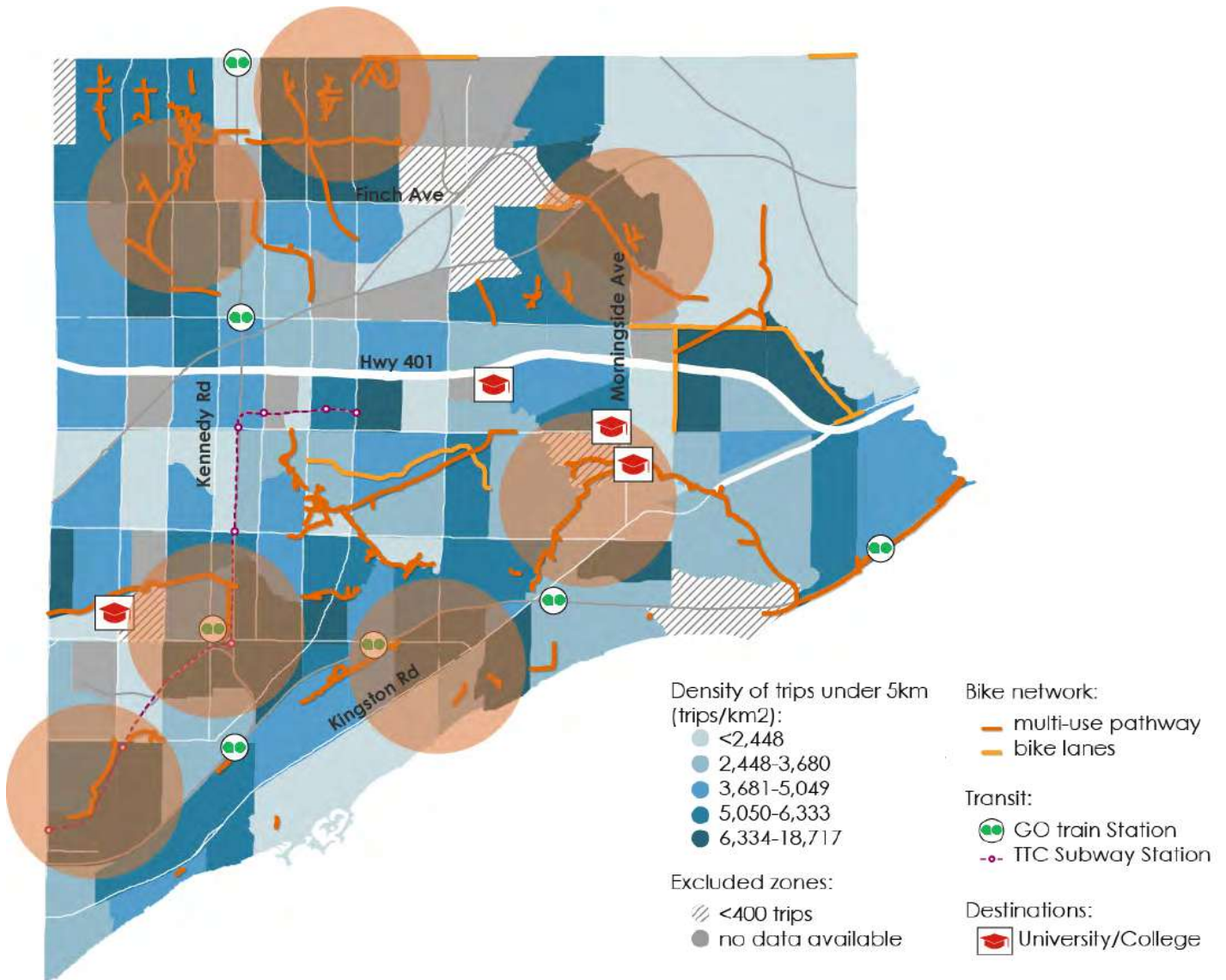


Figure 12: A map showing the density of trips under 5km in Scarborough (2011), with potential sites for a community bike hub highlighted. (Source: Adapted from Pferner, 2015)

### Different Ways to Target a Population

The goal of Step 1 is to segment the population in order to target those who have the greatest potential of changing their behaviour and adopting cycling. Here, we have segmented the population geographically to focus on certain high potential neighbourhoods. You could also choose to segment the population based on other characteristics, such as age, socioeconomic status, newcomers to the community, etc. These approaches would be particularly useful when the community bike hub's location is predetermined and you are looking to target a population within a specific neighbourhood.

## FINDING LOCAL PARTNERS

Once neighbourhoods with relatively high cycling potential have been identified, the search can begin for local organizations which can host a community bike hub, in partnership with a cycling organization.

This approach has many advantages that a stand-alone startup venture would lack. The local agency brings the strengths of an established physical space, staff, organizational capacity, access to clients and volunteers, and the intangible, but critical resource of community presence and credibility. Along with a deep appreciation for

the benefits of cycling, cycling organizations bring technical and programming expertise and competence. Through this model, bicycle programming competence is transferred from the cycling organizations to the local community, who are then able take advantage of future opportunities to grow.

The local partner organization could be an agency working in health, youth, poverty reduction, settlement services, employment skills and more. In all of these areas, organizations have client needs that may be met through bicycle programming (see Figure 13). Reaching out beyond the bicycle or transportation sectors increases opportunity.

### A Big Tent Approach to Cycling Programming

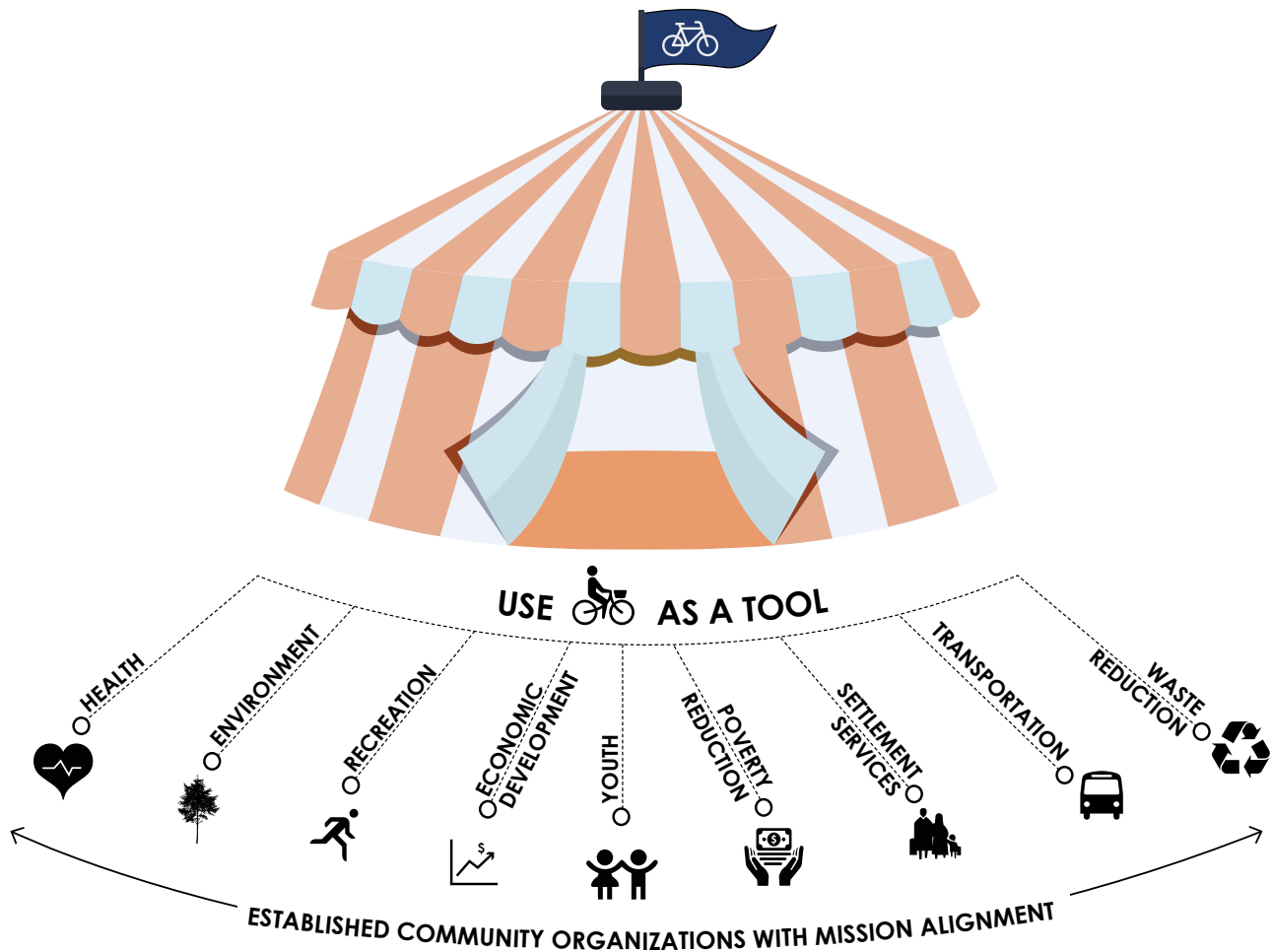


Figure 13: Many local organizations will have program objectives that could be met through cycling. Spread the net wide, and then zero in. For Scarborough Cycles, we started with a long list of nine potential partners and did detailed analysis for the four that looked most promising.

## HOW TO IDENTIFY AND EVALUATE POTENTIAL PARTNERS

Potential partners should be evaluated against four key categories: people, space, organizational strength and mission match (Figure 14). Depending on the resources, skills and goals that you bring to the table, some factors may be more important in a potential partner than others.

In our case, we brought cycling competencies and funding (from the Metcalf Foundation) to the project. We found that having partners with interested staff, established facilities, and financial stability was critical. Additionally, a mission (in this case, community health) that was directly met and enhanced by cycling provided a solid base for joint action and long-term partner interest.

A number of different tools can be used to find information about each potential partner, including:

1. **Evaluation of immediate neighbourhood** based on the factors from the larger neighbourhood scan (urban form, social norms and infrastructure from Figure 10).
2. **Internet research** on organization to identify mission, financial strength and stability (annual reports), existing partnerships, hours of operation, and programming.
3. **Site visits** to assess the suitability of the facility and neighbourhood including a bike tour looking for quiet routes and destinations.
4. **Meetings with leadership** to find out about client needs, staffing, recruitment capacity, number of clients, staff interest in cycling, space availability, and the potential to integrate cycling into current programming.

### Creating Local Cycling Champions

Before becoming a Scarborough Cycles bike hub partner in 2016, Access Alliance Multicultural Health and Community Services had no prior experience in offering community cycling programming. Building on their experience with our partnership, they obtained funding from the province in the third year of the program to open a satellite bike hub location in collaboration with another community agency. They also successfully responded to a request for proposals (RFP) from the City's Tower Renewal and Waste Management Services to open an additional community bike hub site. In a very short space of time, Scarborough moved from having no community bike hubs to four, and the conversation about cycling in Toronto's suburban communities is changing.





Figure 14: Evaluating potential partners for suitability as hosts of cycling programming

### Municipal RFPs—Challenges and Opportunities

*In an area where there is no established bicycle culture, agencies without cycling competencies are unlikely to respond to a municipal RFP to host a community bike centre, or if they do, they may be unsuccessful. An unusual aspect of our work was that, as organizations with cycling programming expertise, we partnered with organizations with community knowledge but no cycling experience.*

*To facilitate this kind of collaboration, a municipal program could consider a two-pronged RFP—one for the organizations with cycling competencies and one for the established community partners.*

## FACTOR DESCRIPTION

## RATIONALE

### PEOPLE



Does the organization have <b>interested staff</b> that could potentially adopt the program and continue it in the future?	Having staff who are interested in acquiring cycling competencies will help the organization take ownership of the program.
Would the <b>client population</b> of the agency benefit from cycling programming?	Cycling programming needs to meet client needs or there will not be long-term sustainability.
Does the organization have an <b>active transportation champion</b> ?	Champions are known to influence cycling uptake. Is there someone who could be empowered as an internal champion with resources and programming support?
Is there a <b>cycling advocacy organization</b> in the neighbourhood? Does the partner organization have an organized <b>volunteer</b> program?	Local cycling organizations are an initial source of volunteers to support programming, especially mentorship. An established internal volunteer program helps with recruitment.

### SPACE



Is there a suitable space to run basic road <b>skills training</b> workshops?	Bicycles require space for storage and activities. The space requirements are not huge, however, there does need to be accessible space for skills training, fleet storage and repair and earn your bike programs. Additionally, the space should offer opportunity to build community. Connections with others related to cycling help support behaviour change. The suitability of the space can only be assessed through a site visit.
Is there a suitable space to run <b>bicycle repair</b> workshops and earn your bike <b>clinics</b> ?	
Is there a suitable <b>storage space</b> for a bicycle fleet/library?	
Is there outside space for <b>street signage</b> to engage target populations?	A community bike centre requires street visibility for passing cyclists and potential cyclists. Visibility helps build cycling norms in the neighbourhood. Site visit necessary.

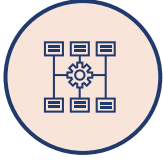


Figure 15: Evaluating potential partner suitability: factor descriptions and rationale

## FACTOR DESCRIPTION

## RATIONALE

### ORGANIZATIONAL STRENGTH



Does the organization have the <b>financial capacity</b> for start-up and sustainability?	Examine annual reports for: revenues, expenses, assets, reserves, liabilities, per cent revenue from top funders, intent of funding - does it align with cycling benefits?
Does the organization have capacity for <b>recruitment</b> of participants?	Ideally participants will come from established client base so that a community relationship is already established.
How many <b>days and hours per week</b> does the organization operate?	Opening hours on evenings and weekends mean more flexibility and access for drop-ins.
<b>How many clients</b> does the organization serve annually?	More clients mean more access to people potentially interested in cycling.

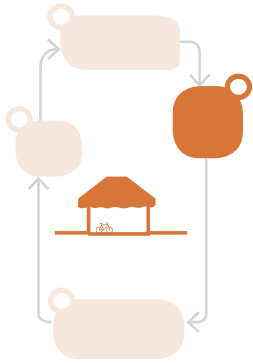
### MISSION ALIGNMENT



Does the long term mission of the organization have <b>alignment with cycling benefits</b> ?	Mission alignment creates an ongoing rationale for supporting cycling partnerships and programming.
Would <b>cycling add value</b> to current programming?	Adding value to current programming efficiently leverages resources. What links could be created between current programming and cycling? E.g. youth, health, environment programs, etc.
Does the organization have <b>partnerships</b> with like-minded organizations? Is the organization partnership oriented?	Since this is a partnership model, organizations who have partnering experience offer more opportunity. Examine current partnerships for further synergies with cycling.



# STEP 2: Identify Local Barriers



In areas where cycling is not yet common, encouraging people to cycle requires more than an appeal, and even more than infrastructure. While bike lanes are important, we also know that many

other supports are missing, including access to bicycles, accessories, repair services, cycling skills and knowledge, and positive social norms (Spotswood et al., 2015). Understanding this maze of barriers and addressing them is a critical component of making cycling a feasible option.

## TRAVEL SURVEYS

While some barriers to cycling will be common, a travel survey is a useful tool to find out more about the specific barriers faced by people in the community. The findings will allow you to tailor programming to local needs.

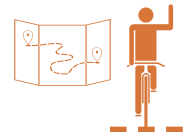
### PHYSICAL

- A bicycle
- Bike lanes
- Bike parking
- Bike repair shop
- Bike bags/baskets
- Child seat



### SKILLS & KNOWLEDGE

- Riding
- Road rules
- Routes
- Managing transitions to work or transit
- Attire



### POSITIVE SOCIAL NORMS

- Biking is fun and viable for everyday travel.
- You do not need to be fit, brave and dressed in lycra to bike.



Figure 16: Potential barriers to look for (from Spotswood et al., 2015)

### More Than Bike Lanes

Although better infrastructure is a critical factor associated with more cycling (Buehler & Pucher, 2012), research is increasingly finding that bike lanes alone are not enough (Aldred & Jungnickel, 2014; Shove, 2012). Culture, social norms and competencies are part of both the problem and the solution when it comes to low cycling rates (Schultz et al., 2007). Both Copenhagen and Portland point to active efforts to promote cycling culture as a key contributor to their current high cycling rates (Larsen, 2017; Andersen, 2013).



## An Example Travel Survey

In our travel survey, we wanted to answer three questions: 1) How do people currently travel? 2) Why would they choose to cycle? 2) What is keeping them from cycling?

### How do people currently travel?

The people we surveyed were more likely to take transit, less likely to drive and more likely to cycle than other residents of Scarborough. As part of our targeting work, we deliberately chose to work in a neighbourhood where there was already some (albeit little) cycling. Some cycling suggests that the neighbourhood is suitable. It also offers the beginning of a change in social norms and a potential volunteer base.

### Why would they choose to cycle?

We found that health was a prime motivator for cycling among all respondents. Pleasure, concern for the environment, and fitness resonated more among those with higher incomes. As incomes decreased, saving money, convenience and seeing family and friends cycling became more important motivators to people.

#### Top Reasons for Cycling

- Good for health (78%)
- Fitness (56%)
- Save money (55%)
- Good for the environment (51%)
- Gives me pleasure (47%)
- Independence (22%)

### What is keeping them from cycling?

People with lower incomes were more likely to identify individual barriers such as poor health, lack of a bicycle or lack of knowledge. At household income levels above \$80k, communal issues such as lack of safe lanes and traffic speed became more important.

Bicycling infrastructure, or a lack of it, had very real impacts on how people perceived the risks associated with bicycling. As the distance between home and the nearest bike lane increased, so did fear of cars and injury.

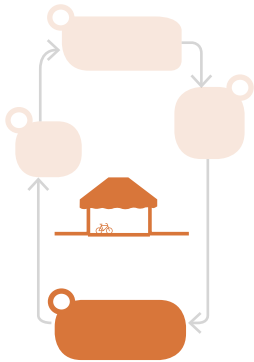
#### Tip

*Use neutral language in your questions. We found that men were less likely than women to report feeling fear or a lack of confidence cycling on the roads, but were equally likely to report that high traffic volumes and vehicle speeds prevented them from cycling.*

### Using Results to Inform Programming

These results revealed to the team the need to provide bicycles and learning opportunities. Once these initial barriers had been addressed, individuals could join programming such as group rides, bike mechanic skills, and workshops on all weather riding. In addition, we saw an appetite for civic engagement opportunities related to cycling, such as community audits of cycling infrastructure and workshops on how to engage with the political system to support transportation options. The survey results also highlighted the opportunity to focus on health as a motivator, a key area of mission overlap with one of our local partners, Access Alliance Multicultural Health and Community Services.

# STEP 3: Remove Barriers & Start Cycling



Once barriers have been identified, it's time to start addressing them. The focus of Step 3 is to remove barriers and initiate cycling adoption. We achieve this by setting up a community bike hub and offering an array of supportive, introductory programs.

worker. While cycling expertise is important, a hub coordinator first and foremost needs people skills to be able to create a welcoming space and build relationships with clients, volunteers and other organizations.

The coordinator may also be responsible for administrative work, including grant writing and project reporting. Our project's success was directly tied to the amount of time that was dedicated to the project by our hub coordinator (1.0 FTE). Additional seasonal staff members are also helpful.

## SETTING UP THE HUB

Every hub will look different, depending on the space available, your resources and the needs you are aiming to meet. Each one will, however, have the same three key ingredients: people, space, and equipment.



### People

People are the most valuable ingredient in the success of your bike hub. In our experience, creative solutions can be found for a shortage of space and even some materials, but having dedicated human resources in place is critical.

#### Staff

A community bike hub needs a coordinator. Depending on the organization you are partnering with, this could be a community health worker, a youth worker, or an outreach

#### Where to House Hub Employees

In our Scarborough Cycles project, the Hub Coordinator started as an employee of The Centre for Active Transportation, and transitioned in the second year to being an employee of Access Alliance, one of our local host partners. We would recommend making this transition as quickly as possible to facilitate the integration of cycling into the local host's own programming. As a local employee, the Bike Hub Coordinator is better able to make connections to the host partner's other staff and programs. It also allows them to access internal systems, such as scheduling, training and recruitment.

## **Volunteers**

A core group of dedicated volunteers should be recruited from the local community to assist with the bike hub's launch. They should be willing to commit a few hours a week to help with do-it-yourself bike repair, bike rides, or other events, while the client and volunteer base is being built.

A community bike hub can offer many opportunities for people to become involved and build skills. Roles need not be limited to bike mechanics. Volunteers can help with registration, data collection and entry (if you are conducting surveys), dismantling unusable bikes, cleaning and sorting reusable parts, communications, outreach at events, and hospitality.

Some of these jobs are well-suited to drop-in volunteering, where people attend an orientation session and then help out at set times each week (usually during DIY bike repair), as they are able. For those with variable work schedules, this system can work better than a volunteer rotation.

The host organization may also have a volunteer recruitment platform where positions can be advertised and volunteers can be matched. Providing many avenues for people to become involved is critical to creating a welcoming atmosphere and building community.

## **Clients**

To build a client base for the bike hub, look for places of synergy with existing programs of the host and other local organizations. This may take the form of workshops for youth, bike repair at a local food market or other community events, or group rides for people identified as being at risk for diabetes. The host organization is an invaluable resource when it comes to client recruitment.

## **Marketing**

*Branding can help heighten awareness of your program. As an innovator working to incubate cycling in an area where it is not common, an opportunity exists to establish your voice as the local expert on cycling through the local media, social media platforms and your own website. Give the program a name, a logo, a catchphrase, and its own media presence, separate from the participating organizations. Ensure that partners are sharing your message with their networks.*

## **Insurance and Liability**

*Before programming starts, insurance that covers cycling activities needs to be obtained. Insurance companies vary widely in their understanding of the risk involved in cycling programming. Some offer coverage that is prohibitively expensive with onerous requirements; others have very affordable options available for non-profits.*

*Research will be needed to determine local options, and cycling organizations operating in a nearby community may be able to offer suggestions. Be prepared to provide program descriptions and to require participants to sign a traditional physical activity waiver or other document indicating that they understand the risks of participating and will not hold the organization legally responsible in the event of injuries or loss of property.*



# Space

Bike hubs require space, however if space at the host organization is limited or unavailable, there are many creative solutions. A side yard may be able to accommodate a shed and some work stations. A shipping container could be set up in a parking lot. A local school may be able to store bicycles in their basement, especially if their students are taking part in the program. Estimated costs for some of these space solutions are included in the table below. The best situation, though, is to have permanent, indoor space, so time does not have to be spent setting up and taking down, and so that programming can run year-round.

As much as possible, the space should be visible, identifiable and welcoming. Signage on the street explaining the community bike hub and its opening hours can help drive drop-in traffic. Painting a shipping container with a colourful mural about cycling can help identify its bicycle programming purpose to people in the community and establish cycling as a social norm.



Figure 17: An unused side alleyway can be transformed into a bright and welcoming bike repair space. Posters and a tent enhance visibility, while a gate and shed provide secure storage.



Figure 18: A brightly-painted shipping container (left) provides work space, storage and a focal point for this community bike hub while a branded tent (right) helps establish a presence at community events.







## Equipment

There are many resources available that describe the tools and materials needed to set up a DIY bicycle repair shop (for example, [How to Start a Bike Kitchen](#) and [BikeCollectives.org](#)). A suburban community bike hub is a bit different in that it seeks to incubate cycling, rather than serve an existing cycling population. This goal requires some additional equipment, namely a fleet of bicycles.

Funders can sometimes be reluctant to support the purchase of bicycles because of liability concerns (see note on insurance and liability) and because bicycles are typically viewed as a personal piece of equipment. However, the cost of a bicycle is a significant barrier to entry for many people. Providing bicycles for specific programs (i.e. neighbourhood bike rides, learn-to-bike, and bike mentorship) gives people the opportunity to try cycling and recognize its benefits for themselves, before committing to purchasing one of their own.

Municipally-backed bike-sharing facilities are becoming more common in suburban areas and offer an interesting alternative. For example, discounted passes could be offered to target groups and a free, one-time pass for participants in a neighbourhood group ride.

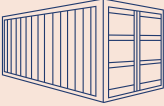





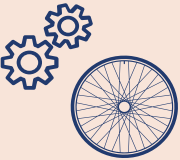


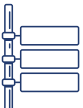
A variety of initial set-up costs, and some maintenance costs, are estimated in the table below. A bike shop may be able to offer a discount on bicycles and accessories, and setting up an account with a bicycle equipment wholesaler can also help save money.

As mentioned above, every hub will look different, and the costs will be different as a result. No need to buy a shipping container if you have access to indoor workspace!



Figure 19: The community bike hub needs space and equipment for bike repair and storage (left). A van and a tent (right) makes this community bike repair station mobile.

## Setting up a Community Bike Hub: Estimated Costs

1	<b>Shipping container, with cycling-themed mural</b> If indoor space is not available, a shipping container placed in a parking lot can be a good solution. A cycling-themed mural helps with place-making and identifies its purpose to the community.	\$2,000 - \$3,500	
2	<b>Storage shed, with padlocks</b> Another space solution. Secure storage is important for bicycles, donated parts, bike stands and tools.	\$1,000 - \$1,500	
3	<b>Bicycles</b> Buying bicycles of good quality reduces maintenance costs, provides a positive experience for participants and combats stigma that links cycling with poverty. Commuting-style bicycles with fenders, gears and racks encourages everyday cycling for transportation. Upright positioning improves comfort, visibility and feelings of safety for new riders.	\$7,000 - \$10,000 for 16 bicycles	
4	<b>Helmets, locks and lights</b> Proper equipment is important for safety and security, but the cost can present a significant barrier to entry, if not provided.	\$2,500 - \$3,500 accessories for 16 bicycles	
5	<b>Bicycle repair stands and tools</b> Some tools are bicycle-specific while others are general purpose and available from the hardware store.	\$300 - \$500 per repair station	
6	<b>Consumables</b> Consumables include brushes, cloths, oil, and gloves, and small parts such as cables, brake pads and tubes. Some DIY repair shops charge a fee (\$5-\$7/hr) to use their workspace or ask for a donation. It is a good idea to have an inventory of small parts on hand that can be sold at cost or for a small profit.	\$50 - \$150 per month	
7	<b>Used bicycles and parts</b> A supply of used parts and bicycles in need of refurbishment is required to run earn your bike sessions. It may take some time to build this supply, but as more and more people find out about your program, donations of used bicycles will become more frequent. Police services, municipal waste departments and property management companies such as condominium boards may also have discarded or unclaimed bicycles to donate.	By donation	
8	<b>Health and safety equipment</b> First aid kits, reflective vests, orange pylons, two-way radios, and portable tool kits with air pump and patch kits are important for rides.	\$250 - \$350	
9	<b>10'x10' collapsible canopy with branding</b> A canopy provides shade and shelter for outdoor workspaces at the hub. It can also be used to create a mobile bike repair space at local community events and festivals. Branding it helps promote your name in the community.	\$1,000 - \$1,500	
10	<b>Outdoor signs</b> Clearly identifying the bike hub, including its purpose, activities and hours, is important for growing community awareness.	\$200 - \$400	

*\*All amounts are in Canadian dollars and reflect costs in 2015, when the Scarborough Cycles hub was established.*



## Programs

Programming falls under steps 3 and 4 of our model: Start Cycling and Keep Cycling. Step 3 programs target those who have never cycled, who may have cycled in the past (i.e. as a child) but have stopped, or who ride recreationally, but feel uncomfortable venturing off trails for more utilitarian trips.

Programs for these clients address critical barriers, like access to a bicycle, and teach core competencies, like traffic rules, how to lock a bike or where it is safe to ride in the neighbourhood.

The following pages describe a variety of Step 3: Start Cycling programs. They are listed from least resource-intensive to most. For each, an estimation of time investment from staff and volunteers is given, as well a range of costs (see below). These costs are over and above initial set up costs, and assume that the following is already in place:

- a workspace
- bicycle repair stands and tools
- a collapsible outdoor canopy
- a fleet of bicycles with locks, helmets and lights

Once the initial equipment investment has been made, many of these programs are relatively affordable to run.

### Cost Ranges

- Less than \$250 \$
- \$250 - \$1,000 \$\$
- \$1,000 - \$5,000 \$\$\$
- More than \$5,000 \$\$\$\$

### Programming in Schools

Many of the programs listed in the following pages can be offered in a school setting. Safe cycling workshops, learn to ride programs, neighbourhood bike rides and bike maintenance workshops, as well as civic engagement activities, can all take place during class time or after school with older students. When working with schools, consider their policies and guidelines regarding partnerships with external organizations, physical safety, excursions off school property, and media. These vary by school board.

# SAFE CYCLING WORKSHOP

Teach rights and responsibilities when riding on the road, route planning, types of bicycle infrastructure, equipment and safe cycling techniques.



**Intended Audience:** People who know how to ride and are interested in riding more, but feel nervous and uncertain about the rules of the road. For some, including those new to Canada, this fear is augmented by a strong desire to avoid interactions with police.

## FORMAT

- A one hour session in a classroom setting



### Human Resources

- 1 Staff: 3 hours

Staff should have CAN-BIKE or similar training.



### Space

Indoor meeting space with seating & AV equipment.



### Equipment

- Helmet and bicycle for demonstration purposes
- AV equipment
- Power point presentation (may be available from your municipality or a neighbouring cycling advocacy organization. If developing your own presentation, add to staff time.)
- Name tags
- Snacks

### Benefits

Participants meet others who are interested in cycling. A workshop can act as a gateway to other cycling programs, such as a community ride.

### Variation

Cycling in all weather conditions, commuter cycling, cycling with children



*This is frequently people's first venture into cycling programming. Small snacks and name tags help people feel welcome and help build community.*



**\$ per workshop**



# NEIGHBOURHOOD BIKE RIDE

Lead a small group on a short (about 1 hour) ride along a safe, local route.



**Intended Audience:** Accessible to novice riders and youth, as well as those who are more advanced. Length, level of difficulty and age-appropriateness should be clearly communicated.

## FORMAT

- **Regularity (i.e. weekly or monthly rides) helps build an ongoing sense of community/ownership among residents.**
- **Additional themed rides can also be scheduled.**



### Human Resources

- 1 Staff/Volunteer: 3 hours
- Volunteer for every 10 to 15 participants: 1.5 hours each

Each ride should have a leader and a 'sweep' assigned to the rear of the group.



### Space

Quiet roads, bike lanes and paths. Secure storage space for loaner bikes.



### Equipment

- Orange safety vests for the ride leader and all assistants
- Bicycles and helmets for those who need them
- Route maps
- Two-way radios or mobile phones for communication
- First aid kit
- Air pump, patch kit and basic tools
- Waivers



*It is important to be extra welcoming to newcomers!*

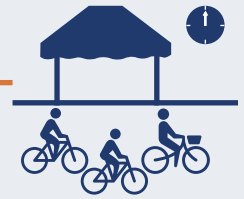


**\$ per ride**

# STAFF RIDE

Lead staff on a bike ride over lunch.

**Intended Audience:** Staff at the local host organization.



## FORMAT

- **Half hour rides at lunchtime**



### Human Resources

- 1 Staff: 1.5 hours
- 1 Volunteer for every 10 to 15 participants: 1 hour each.

If the group is small, a volunteer may not be necessary. A participant can act as the 'sweep' assigned to the rear of the group.



### Space

As much as possible, the route should be along quiet roads, bike lanes and paths so people of varying skill levels can participate.



### Equipment

- Orange safety vests for the ride leader and all assistants
- Bicycles and helmets for those who need them
- Route maps
- Two-way radios or mobile phones for communication
- First aid kit
- Air pump, patch kit and basic tools

### Benefits

Giving staff opportunities to participate in the bike hub builds organizational buy-in and referrals. Staff also act as role models to clients. As a team-building activity, it strengthens connections between staff and promotes a healthy workplace.

### Variation

Provide on-bike training for staff who do not know how to ride.

Organize a half- or full-day cycling program, including training and a group ride, to staff who are expected to refer clients or participants (e.g. health professionals or outreach workers).

Make bicycles available to staff as an option for short, work-related trips.

**\$ per ride**



# LEARN TO RIDE

Teach people how to ride a bicycle.

**Intended Audience:** Children and adults who do not know how to ride a bike.



## FORMAT

- Lessons can be offered in a group setting, with participants learning at their own pace. Classes can also be separated by skill level. Most people will require more than one lesson and time to practice before they are confident balancing and ready to move on to biking in a group.



### Human Resources

- 1 Staff for every 6 participants: 3 hours

Staff should be trained in bicycle instruction.

### Benefits

Participants who learn to ride can graduate into neighbourhood bike ride, mentorship or earn your bike programs. Cycling is a great activity for health, and it also provides an efficient and affordable transportation option.



### Space

A paved, open space free from traffic, such as a blocked off section of parking lot.

### Variation

Separate lessons can be offered for adults, women or other groups who may feel uncomfortable learning beside children or in mixed settings.



### Equipment

- Bicycles and helmets for those who need them
- Orange pylons
- Waivers



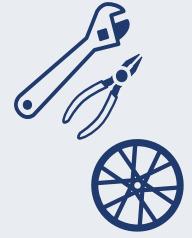
*When launching a community bike hub, we suggest focusing your energies first on connecting and encouraging people who already know how to ride. A learn to ride program offered later on will then benefit from being part of an established community with a network of volunteers.*

**\$\$ per session**



# EARN YOUR BIKE

Refurbish a used bicycle over a number of weeks with the help of a skilled mechanic. Keep the bicycle at the end!



**Intended Audience:** Generally targeted to youth who cannot afford a bicycle, but can also be of interest to adults.

## FORMAT

- One two-hour session each week for eight weeks.



### Human Resources

- 1 Staff: 90 hours
- 1 Volunteer for every 6 participants: 16 hours each.

Staff should have bicycle mechanic and teaching skills. Time outside of the sessions is required to gather used bicycles and parts and plan the curriculum.



### Space

Workshop space with one stand per participant.



### Equipment

- 1-2 used bikes per participant (obtained from community donations, the city's waste services division or local police force)
- New and used parts
- Tools
- Consumables such as grease, gloves, brushes, cleaning materials and rags
- Bicycle repair stands

### Benefits

Bicycles are diverted from the landfill, and participants gain a new method of transportation. People who successfully complete this program often go on to become local cycling champions and give back to the hub by volunteering.

### Variation

Partner with a high school co-op or an adult job skills training program. Or partner with a local bike shop to offer work placements to program graduates.

Offer sessions targeted to groups who are under-represented in cycling or who could benefit from an additional method of transportation (for example, in most suburban areas, women are currently less likely to cycle than men and also less likely to own cars or drive).



*Participants often refurbish two bikes, one for themselves and a second for the program to use or to be donated to a local school, agency, or community event.*

**\$\$\$ per 8-week program**





# MENTORSHIP

Connect new cyclists with experienced cyclists through an organized program that includes the loan of a bicycle and accessories.



**Intended Audience:** People who know how to ride a bicycle and would like to ride more. Most often, they do not own a bicycle and feel uncertain about the rules of the road and where to ride.

## FORMAT

- **Match participants who are new to the neighbourhood and/or new to cycling in groups of three or four with a volunteer mentor who is an experienced cyclist. Loan bicycles, helmets and locks as needed and as capacity permits. Organize cycling workshops, group rides and other events related to cycling, and support mentors to lead their own activities. Incorporate activities where participants make a public commitment to bike and are recognized for their achievements.**



### Human Resources

- 1.5 Staff: 6 months
- 1 Volunteer for every 3 or 4 participants: 35 hours each

Staffing is for a group of 50 program participants, and tasks include recruiting participants, coordinating the matches, lending and retrieving equipment, and organizing training and other group activities.



### Space

Meeting space for group activities, storage space for the fleet of bicycles. A paved, open space free from traffic for bike loaning day, such as a blocked off section of parking lot.



### Equipment

- One bicycle per participant
- Helmets, lights, bells and locks
- Waivers and borrowing agreements
- Hospitality for large group activities and closing ceremony

### Benefits

Participants gain access to a bike, and mentors pass along route information and basic cycling competencies such as traffic laws, taking a bicycle on transit, carrying items and attire. Research on cycling mentorship has revealed:

- Significantly increased rates of cycling for both transportation and recreation;
- A significant association between recreational cycling and cycling for transportation;
- Significant associations between the number of new social connections developed and increases in recreational cycling.

Participants also report positive benefits related to finances, health and sense of belonging.

### Variation

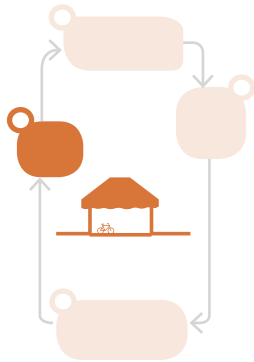
The program can easily be tailored to help participants experience specific benefits of cycling which are consistent with the goals of the host organization. For example, a health centre may focus on fitness goals, while a settlement agency may prioritize opportunities for participants to get to know their community and meet new people.

**\$\$\$\$ per 4-month program**



This initiative pairs well with a student-focused program that can use the bikes during the school year, or with a learn to bike program whose participants then graduate to mentorship.

# STEP 4: Keep Cycling



Programs under Step 4 target those who are cycling more regularly. While they may be comfortable riding a bike and familiar with local routes, they still face many barriers that make suburban cycling difficult, such as

a lack of safe infrastructure and a lack of repair shops. Step 4 programs aim to address these barriers while continuing to build a sense of community among people who cycle. Importantly, these programs include civic engagement opportunities to work with city staff and local decision-makers to address barriers that are beyond the community bike hub's control.

Again, for each, an estimation of time investment from staff and volunteers is given, as well a range of costs (see below). These costs are over and above initial set up costs, and assume that the following is already in place:

- a workspace
- bicycle repair stands and tools
- a collapsible outdoor canopy
- a fleet of bicycles with locks, helmets and lights

Once the initial equipment investment has been made, many of these programs are relatively affordable to run.



Figure 20: Residents conducting a Bike Parking Audit along Danforth Ave in Scarborough

## Cost Ranges

Less than \$250	\$
\$250 - \$1,000	\$\$
\$1,000 - \$5,000	\$\$\$
More than \$5,000	\$\$\$\$

# CIVIC ENGAGEMENT

Organize opportunities for people to engage in local cycling issues and advocate for improvements.



**Intended Audience:** Adults and youth who cycle regularly.

## FORMAT

- **Activities can include conducting a bike parking audit of a local main street and presenting the results to the business improvement association, giving input on the city's bike plan or on the reconstruction of a local road, conducting bicycle/pedestrian counts on key routes, or holding a cycling summit to brainstorm a list of local priorities.**



### Human Resources

- 1 Staff: 5-10 hours
- 4 or more Volunteers: 15 hours each

These activities will depend heavily on the interest and initiative of local champions and bike hub volunteers, but staff from the bike hub or a cycling advocacy organization may play a facilitator role.

### Benefits

Improved cycling infrastructure will encourage more people to bike, which has health, environmental and economic benefits. Participants gain a sense of satisfaction and build connections to the community by participating in change-making.



### Space

Indoor meeting space.



### Equipment

- Surveys and reports
- Posters and flyers
- Hospitality



**\$-\$\$ per activity**

# DO-IT-YOURSELF BIKE REPAIR

Provide bike stands, tools, and used and new parts so people can fix their own bikes. Knowledgeable staff or volunteers float between clients, giving instruction and advice.



**Intended Audience:** Youth and adults who own bicycles but lack the tools or knowledge to make repairs by themselves.

## FORMAT

- **Drop-in hours offered one or more times a week on a regular, published schedule. A fee may be charged for work station time, either at a set rate or by donation/pay what you can. New and used parts may be sold at cost or for profit.**



### Human Resources

- 1 Staff/Volunteer with bicycle mechanic skills for every 3 or 4 work stations: 4 hours
- 1 or more Volunteers: 4 hours each

Volunteer roles are not limited to bicycle repair. Other needs include reception, cash handling, evaluation (conducting participant surveys and entering data), parts sorting, and refreshments.



### Space

Work stations with bike stands and tools, storage space for parts, reception and waiting area. Can be outdoors or temporary, but dedicated indoor space allows for year-round programming and less set up/take down.



### Equipment

- Bicycle repair stands
- Tools
- Storage
- Consumables such as grease, gloves, brushes, cleaning materials and rags
- A small inventory of the most commonly needed parts (especially cable, housing, brake pads)
- Used parts can be harvested from donated bicycles, and an account can be established with bicycle part wholesalers
- A canopy or tent (especially if at a community event or festival)

### Benefits

Fixing your bicycle yourself is a more affordable option, and in some suburban neighbourhoods, it is the only option available because there is no local bicycle repair shop.

Bicycles and parts are diverted from the landfill. People build social connections with others who cycle.

### Variation

Provide bike repair at community events and festivals to reach more people and increase the visibility of your organization (add the cost of transporting equipment).

Offer job skills training in partnership with high school co-op or adult trades programs.

Offer workshops targeted to groups who are under-represented in bicycle repair shops and may feel intimidated in a regular session (for example, women, non-English speakers, LGBTQ, etc.)



*Make the space welcoming! Repair shops can be intimidating places. Volunteers and mechanics should have teaching as well as technical skill.*



*Be realistic about what you can and cannot fix. Starting out, focus on simple fixes like flats and brake pads, and refer full refurbishments to a bike shop.*

**\$ per session**



# BIKE MAINTENANCE WORKSHOP

Teach a hands-on session about a specific bike repair, such as fixing a flat, adjusting your brakes or cleaning your chain. Participants can bring their own bicycles to work on or can practice on bicycles provided.



**Intended Audience:** Adults or youth interested in learning more about repairing or maintaining their bicycle.

## FORMAT

- A two hour session offered a few times a season or more frequently.



### Human Resources

- 1 Staff for every 4 or 5 participants: 4 hours
- 1 or more Volunteers: 4 hours each

If developing your own workshop content, add to staff time.

### Benefits

Some neighbourhoods do not have any local bike repair shops, making these skills all the more essential. Participants meet other people interested in cycling. Often those who are interested in training will also volunteer at the hub with the DIY bike repair or earn your bike program.



### Space

Workshop or outdoor space

### Variation

Offer workshops at different levels, making it clear if each is intended for beginners or those with some previous experience.

Offer workshops targeted to groups who are under-represented in bicycle repair shops and may feel intimidated in a regular class (for example, women, non-English speakers, LGBTQ, etc).

Take this workshop on the road and offer it in various community spaces, especially at community events and festivals (add cost of transporting equipment).



### Equipment

- Repair stands (some topics can be taught without stands)
- Tools and consumables
- Bicycles for participants who do not bring their own

**\$ per workshop**



# SPECIAL EVENT RIDE

Lead a large group on a longer (2-3 hour) ride for a special occasion or to showcase a nice bicycle route.

**Intended Audience:** The skill level required will depend on the route, but will likely involve sections of riding on the road. Length, level of difficulty and age-appropriateness should be clearly communicated.



## FORMAT

- **The ride can include stops along the way to discuss interesting features (landscape, history, infrastructure, architecture, etc.) and end with a picnic or at another community event. Shorter versions of the ride (with later start points) can be offered to increase accessibility.**



### Human Resources

- 1 Staff: 18 to 25 hours
- 1 Volunteer for every 10 to 15 participants: 5 hours each

Staff tasks include organizing the route, lining up people to speak, registration, waivers, and event logistics. Each ride should have a leader and assistants (at least one with First Aid training) riding throughout and at the rear of the group. If riding with a very large group on busy roads, it may be necessary to notify the local police. They may provide a bicycle or motor vehicle escort.

### Benefits

A large-scale ride may garner local media attention. People engage in a healthy activity, and the supportive environment allows participants to stretch their skills (for example, by riding further or to unfamiliar places).

### Variation

A multitude of possibilities exist, depending on the destinations available in the local community. Partners can include historical societies, schools and colleges/universities, business associations, settlement agencies, parks and recreation, art groups and many more.



### Space

Gather at a meeting point (preferably transit-accessible) with enough space for people to wait. As much as possible, the route should be along quiet roads, bike lanes and paths so people of varying skill levels can participate.



### Equipment

- Permit, if ride ends with refreshments in a park or public space
- Orange safety vests for the ride leader and all assistants
- Bicycles and helmets, if providing them for those who need them (may require transporting them to start point)
- Route maps
- Two-way radios or mobile phones for communication
- First aid kit
- Air pump, patch kit and basic tools
- Waivers



**\$\$\$-\$\$\$\$ per ride**

# CONCLUSION

Promoting cycling in a suburban environment can seem like a daunting task. A car-centric culture means that even short trips are often driven, and very few people cycle. Cycling infrastructure projects can face political opposition and are sometimes at risk of removal.

Yet even in this challenging environment, we have discovered that an appetite for change exists and that building a culture of cycling is possible. Cycling can be a meaningful way for established local community agencies to reach a broad range of goals. Using our innovative four-step model, we see great potential for the expansion of community bike hubs in suburban environments. And by creating these welcoming, fun, supportive spaces, community members can connect and become emboldened to try something with dramatic health, environmental and life-style consequences - riding a bicycle.

# REFERENCES

Aldred, R., & Jungnickel, K. (2014). Why culture matters for transport policy: the case of cycling in the UK. *Journal of Transport Geography*, 34, 78-87.

Celis-Morales, C. A., Lyall, D. M., Welsh, P., Anderson, J., Steell, L., Guo, Y., Maldonado, R., Mackay, D. F., Pell, J. P., Sattar, N., & Gill, J.M.R. (2017). [Association between active commuting and incident cardiovascular disease, cancer and mortality: prospective cohort study](#). *BMJ* 2017;357:j1456

Dill, J., & Carr, T. (2003). Bicycle commuting and facilities in major US cities: if you build them, commuters will use them. *Transportation Research Record: Journal of the Transportation Research Board*, (1828), 116-123.

Data Management Group (DMG). *Transportation Tomorrow Survey (TTS) 2016 Internet Data Retrieval System*.

Environment and Climate Change Canada. (2018). [National Inventory Report 1990-2016: Greenhouse Gas Sources and Sinks in Canada](#).

Environment Protection Agency, (2018). [Greenhouse Gas Emissions from a Typical Passenger Vehicle](#). *Green Vehicle Guide*.

Heinen, E., Van Wee, B., & Maat, K. (2010). Commuting by bicycle: an overview of the literature. *Transport reviews*, 30(1), 59-96.

Hunt, J. D., & Abraham, J. E. (2007). Influences on bicycle use. *Transportation*, 34(4), 453-470.

Larsen, J. (2017). The making of a pro-cycling city: Social practices and bicycle mobilities. *Environment and planning A*, 49(4), 876-892.

Ledsham, T., Liu, G., Savan, B., Watt, E., and Wittmann, K. (2013). [Mapping Cycling Behaviour in Toronto](#), Toronto Cycling Think and Do Tank

Ledsham, T. & Savan, B. (2017). [Building a 21st Century Cycling City](#). Metcalf Foundation.

Manuel, G., Perez, R., Sanmartin, C., Taljaard, M., Hennessy, D., Wilson, K., et al. (2016). [Measuring Burden of Unhealthy Behaviours Using a Multivariable Predictive Approach: Life Expectancy Lost in Canada Attributable to Smoking, Alcohol, Physical Inactivity and Diet](#). *PLoS Med* 13(8): e1002082. doi:10.1371/journal.pmed.1002082

Martin Prosperity Institute. (n.d.). [Transit Deserts & Hulchanski's Three Cities](#). Martin Prosperity Insights. Rotman School of Management, University of Toronto.



MARU/VCR&C. (2016). [Measuring Torontonians' interest in a safe cycling network.](#)

Mitra, R., Smith Lea, N., Cantello, I., & Hanson, G. (2016). [Cycling Behaviour and Potential in the Greater Toronto and Hamilton Area.](#) Transportation and Land Use Planning Research Laboratory at Ryerson University.

Pfertner, M. (2015). Density of trips under 5km. Toronto Cycling Think & Do Tank. Data Source: DMG TTS, 2011.

Pfertner, M. (2015). Households without a car. Toronto Cycling Think & Do Tank. Data Source: DMG TTS, 2011.

Pucher, J., & Buehler, R. (2012). City cycling. MIT Press.

Savan, B., Cohlmeier, E., & Ledsham, T. (2017). Integrated strategies to accelerate the adoption of cycling for transportation. Transportation research part F: traffic psychology and behaviour, 46, 236-249.

Schultz, W., Nolan, J., Cialdini, R., Goldstein, N., & Griskevicius, V. (2007). The constructive, destructive, and reconstructive power of social norms. Psychological Science, 18(5), 429–434.

Shove, E., Pantzar, M., & Watson, M. (2012). The dynamics of social practice: Everyday life and how it changes. Sage.

Spotswood, F., Chatterton, T., Tapp, A., & Williams, D. (2015). [Analysing cycling as a social practice: An empirical grounding for behaviour change.](#) Transportation Research Part F, 29, 22-33.

The Atmospheric Fund. (2018). [Keeping Track: 2015 Carbon Emissions in the Greater Toronto and Hamilton Area.](#)

Toronto Public Health. (2012). [Road to Health: Improving Walking and Cycling.](#)

Transform TO. (2017) 2050 Pathway to a Low-Carbon Toronto, Report 2: Highlights of the City of Toronto Staff Report.

Transport for London. (2017). [Analysis of Cycling Potential 2016: Policy Analysis Report.](#)

Winters, M., Davidson, G., Kao, D., & Teschke, K. (2011). Motivators and deterrents of bicycling: comparing influences on decisions to ride. Transportation, 38(1), 153-168.

# IMAGE AND GRAPHIC CREDITS

- p 6 - p 10 - Figure 1: Adapted from Ledsham and Savan (2017) and DMG TTS (2016)
- p 11 - Figure 3: Taysir Alam
- p 10 - Figure 4: Marvin Macaraig
- p 13 - Figure 5: Mitra et al, 2016
- Figure 6: Transport for London, 2017
- p 13 - Figure 7 (top): Marvin Macaraig
- Figure 7 (bottom): Marvin Macaraig
- p 17 - Figure 9: Adapted from Toronto Cycling Think & Do Tank, Maximilian Pfertner, TTS(2011), and DMG (2015)
- p 20 - Figure 12: Adapted from Toronto Cycling Think & Do Tank, Maximilian Pfertner, TTS(2011), and DMG (2015)
- p 28 - Figure 17: Marvin Macaraig
- Figure 18 (both): Marvin Macaraig
- p 29 - Figure 19 (left): Marvin Macaraig
- Figure 19 (right): Tina Ismail
- p 32 - Marvin Macaraig
- p 33 - Marvin Macaraig
- p 34 - Marvin Macaraig
- p 35 - APOD
- p 36 - Marvin Macaraig
- p 38 - Figure 20: Marvin Macaraig
- p 39 - Marvin Macaraig
- p 41 - Marvin Macaraig
- p 42 - Marvin Macaraig

Design elements were created using vectors designed by the following authors: HeadsOfBirds, Aldric Rodríguez, Dinosoft Labs, Till Teenck, Juraj Sedlák, Anton, icon 54, Ekaterina Martirosian, Creative Mania, Demograph™, mikicon, Luis Prado, Berkah Icon, CINDYFLA, Sakchai Ruankam, Gregor Cresnar, Pedro Vidal, sahua d, Chunk Icons, Vectors Market, Tracy Hudak, Wilson Joseph, Georgiana Ionescu, beth bolton, Zahi Asa, Luis Prado, Liliane Lass Erbe, Gan Khoon Lay, Ivan Chernykh, Arthur Shlain, Zoran Djordjijevic, Laymik, Alexander Skowalsky, Alex Muravev, Ed Gray and Jhun Capaya from the Noun Project.