



On May 27, 2013, the Toronto Centre for Active Transportation (TCAT), a project of the Clean Air Partnership (CAP), hosted its sixth annual Complete Streets Forum at Toronto's Hyatt Regency Hotel. This year, the Forum featured 14 sessions led by 38 expert speakers, two hands-on workshops and four mobile walking and cycling tours. Similar to years past, the Forum brought together delegates from diverse sectors to share research, best practices, tools and creative solutions to accelerate the adoption of Complete Streets, or streets designed for all ages, abilities and modes of travel.

The first Complete Streets Forum, in 2010, served as an introductory event, the 2011 Forum was about "building alliances," and last year's 2012 event featured a diversity of sessions on the adoption of Complete Streets across Canada. This year's Forum emphasized evidence-based, real-world problems and solutions, focusing on the

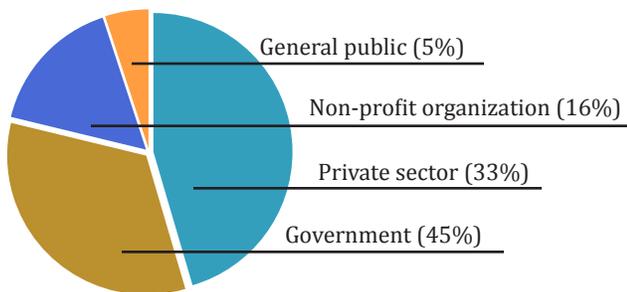
following themes:

- » Challenges and Compromises
- » Motivators and Accelerators
- » Economic, Health & Safety Outcomes, Impacts & Advances

Exciting additions to the 2013 Forum included a handful of interactive components, from cycle track and contra-flow bike lane tours, to pedestrian improvement zone guided walking tours, the beta-test unveiling of TCAT's popular Complete Streets Game, the provincial launch of Canada Walks' WALK Friendly Ontario Designation Program (a program that recognizes municipal excellence in walkability) and poster presentations from emerging student leaders in the field. It was a busy day of big ideas, provocative sessions and engaging workshops. There were 228 participants in total, with delegates coming from the Greater Toronto Hamilton Area (GTHA) and beyond.

Survey Results

Where participants work



Participants left the Forum with



Where participants came from

GTHA Ajax, Brampton, Burlington, Caledon, Hamilton, Markham, Mississauga, Newmarket, North York, Oakville, Oshawa, Pickering, Richmond Hill, Scarborough, Thornhill, Toronto, Unionville, Vaughan, Whitby

OUTSIDE GTHA Barrie, Belleville, Caledonia, Chicago, Dundas, Edinburgh, Ferndale, Fonthill, Fort Erie, Georgetown, Goodwood, Guelph, Huntsville, Kelowna, Kingston, Kitchener, Lindsay, London, Midhurst, Montreal, New Liskeard, New York, Ottawa, Owen Sound, Peterborough, San Francisco, Sault Ste. Marie, Seoul, St. Thomas, Sydney, Thorold, Thunder Bay, Tillsonburg, Vancouver, Welland, Winnipeg, Woodstock

Introduction to Complete Streets

CONSIDERING HEALTH, LAND USE PLANNING AND TRANSPORTATION INFRASTRUCTURE

While the economic, environmental and social benefits of active transportation have quickly become common knowledge in most world-class cities, targeted efforts to encourage citizens to make walking and cycling a part of their daily routine are still needed. The Complete Streets movement is a definite step in the right direction, advocating for consistency, safety and comfort in the design and operation of street networks for all road users and for all types of travel. While support for Complete Street design and policy is on the rise, further action, including dedicated investment in infrastructure, clearly defined public policy, roadway design standards and an engaged civil society are integral for this important change to happen.

"[The debate] is about how do we direct change... about planning real places, where people choose to live."

– Jennifer Keesmaat

The 2013 Complete Streets Forum Moderator, Antonio Gomez-Palacio started the day's event with a discussion on the importance of bringing together diverse sectors and actors – linking public health, land use planning and transportation infrastructure. Dr. David McKeown, the Medical Officer of Health for the City of Toronto reminded the audience of the impact that a city's built form has on individual levels of physical activity. The Toronto Public Health Road to Health report (2012) provides evidence of the relationship between transportation choice and health outcome. Increases in active transportation, as a mode share, not only provide health benefits from physical activity, but also translate to economic gains. In Toronto alone, \$400 million in savings could be had if a shift was made, on potential walkable and bikeable trips (0-7 km distances), from inactive to active modes of travel.

From a planning perspective, Jennifer Keesmaat, the Chief Planner for the City of Toronto, highlighted the importance of providing citizens with choice in how they move around their city. As urban centres continue

POPULATION POPULATION GROWTH IN DOWNTOWN TORONTO



Areas with the best transit are seeing the highest employment growth and development. Source: Jennifer Keesmaat.

to move away from sprawling road networks and automobile-dependent neighbourhoods, it becomes increasingly important to plan for a city with active transportation as a real and easy option for daily mobility. Toronto, like many other cities of its size, is experiencing tremendous growth and development, with a particular resurgence of the downtown. Growth is happening in the core because this is where more mobility options are available. While Toronto has detailed its approach to creating complete communities in its Official Plan, a complementary Complete Streets policy does not yet exist. Keesmaat advocated that the two must be mirrored to create opportunities for safe and easy active modes of transit, an enhanced public realm and vibrant places and neighbourhoods.

Stephen Buckley, the General Manager of Transportation Services for the City of Toronto led the creation of the Complete Street guidelines in Philadelphia, before embarking on his new role in Toronto. Speaking from experience, he explained the importance of creating strategic guidelines that not only influence the development of transportation infrastructure, but also provide a practical formula that can be operationalized. While these documents are conceived as "guidelines," allowing for flexibility and opportunity to align existing policies, "executive orders" and Complete Street typologies must also be legislated alongside to regulate and ensure successful implementation.

Philadelphia's general Complete Street typology is 26ft wide with 7 or 8 ft sidewalks. From here, the right-of-way is further broken down to include various elements and where these should be prioritized. By creating a scheme to identify the elements and a hierarchy (preferred, desirable and space permitting), the city identified minimum sidewalk widths and pedestrian/cycle pathways for each street type.

Challenges and Compromises

The challenges of successfully establishing a Complete Street brings unexpected obstacles, difficult choices and pragmatic realizations.

Walworth Road Mixed Use Demonstration Project

Peter Piet, a Chartered Landscape Architect with Steer Davies Gleave led a popular session discussing the transformation of Walworth Road into a mixed priority route demonstration project in London, England. Previously, Walworth Road in South London served as an artery for buses going into Central London. However, the community around Walworth Road suffered, as:

- » The wide roadway with dedicated bus lanes left little room for sidewalks
- » Muggings were common on the cramped, unpleasant sidewalks
- » Cars and delivery vans were parking in the bus priority lanes, reducing their effectiveness and creating gridlock

Ultimately, there was no sense of place on Walworth Road – it was simply a means of transporting buses and traffic through the area. To address these concerns, a redevelopment project was developed to identify the specific problems and design the solutions within the community.

“Do not spend 5-6 months developing your idea and then bring it to the public and say ‘here it is.’ Grow consensus throughout the project, take them [the public] on that journey.”

– Peter Piet

In the Walworth case, it was determined that removing the bus lanes to widen the sidewalks was necessary. This was very controversial at the time and the idea was met with a great deal of resistance from Transport for London (the city’s transportation authority). Additional challenges included the time spent on negotiation with the various

(and often disconnected) government sectors, unexpected costs for data collection and surveying, long bureaucratic processes and requirements and the loss of key players throughout the project. However, with strong local political support, dedicated stakeholders and engaged community members, the project was able to remove the bus priority lanes (yet still maintain the bus flow), reduce traffic speeds, widen the sidewalks and change the character of the road to a street, or even a place. Interestingly, there was a 14% increase in rental values and land values in the area after project completion.



Forum participants discuss the challenges, compromises and opportunities on the Sherbourne Cycle Track Bike Tour. Photo by Kemal Kapetanovic.

Separated Bike Lanes: The Toronto and Ottawa Experience

Ottawa and Toronto are making headway in the implementation of Complete Street practices. Zlatko Krstulic, a Transportation Planner for the City of Ottawa explained how the nation’s capital continues to find creative ways to deal with the challenges of implementing Complete Streets. In Ottawa, multimodal transportation is the focus, including attention to cycle route selection and evaluation, implementation of separated bike lanes, improved connections between employment and education nodes and a targeted investment in transportation infrastructure in the downtown to serve its growing population.

Stemming from challenges during the implementation phase and in response to issues of safety and bicycle-motor vehicle conflicts, the following measures were put in place:

- » Mandatory yields for motorized vehicles turning right (across bike lanes)
- » A straight ahead six-second advance signal for cyclists, giving them extra time to clear an intersection

- » Modal counts to track the often underestimated bike lane usage
- » Pilot and pop up projects to gain public support and to “socialize” ideas

Unlike the Ottawa example, Toronto’s first separated cycle track on Sherbourne Street was installed without a pilot project. Daniel Egan, Manager of Cycling Infrastructure and Programs for the City of Toronto, explained that while commendable for being the first installation, complications with the design and quick implementation have arisen. Narrow road conditions, compliance with city servicing and transit passenger pick-ups and drop-offs are some of the challenges that emerged. Compromises had to be made in the design of the bike lane, including the construction of ramps, as opposed to rounded curbs to separate the bike lane from traffic (to accommodate emergency vehicles), as well as the inclusion of “bays” designed for delivery vehicles, which have subsequently caused confusion as well as numerous parking infractions. As Toronto prepares to install 14 km of cycle tracks over the next few years, the Sherbourne Street cycle track is an important first project for Toronto, with lessons learned and a much needed, on-the-ground precedent from which to build public support and advocacy for future cycle tracks in the city.



Participants build Complete Streets with scaled, movable blocks, representing different components of the street, including bike lanes, sidewalks, traffic lanes, streetcar tracks, trees and cafes. Photo by Chris Hardwicke.

Motivators and Accelerators

While Complete Streets are not yet a mainstream approach to road planning and design, communities across Canada are embracing this inclusive approach. Innovative initiatives to motivate and accelerate the Complete Streets

development process are important, particularly for communities in the beginning phases of implementation.

Complete Streets Game - A creative public engagement tool

The Complete Streets Game, the beta-test unveiled at this year’s Forum, is an innovative and interactive community consultation tool developed by TCAT Steering Committee member Chris Hardwicke. The Game provides participants with a kit for designing a street cross-section. In groups, participants work together to prioritize and redesign both a busy downtown street as well as a wider suburban street into a Complete Street.

Pop Up Projects - A great planning tool to “test out” new ideas

Justin Swan, a Senior Project Manager for the City of Ottawa presented a session on interim public realm and transportation design solutions. Pop up projects offer a quick, cost-effective and low-risk option to trial new programs and processes. Pop up projects allow decision-makers to:

- » Envision new ideas
- » Gain experience, monitor results and evaluate
- » Confirm/revise basic assumptions (traffic impact, parking, maintenance, operations)
- » Manage risk, as opposed to mitigating
- » Maximize public engagement
- » Build support for change

Wide Open Possibility: Making and Re-Making Streets in the Suburbs

A group of urban design and public realm experts, including Ronji Borooh, City Architect and Head of Urban Design for the City of Markham; Ian Chodikoff from Farrow Partnership Architects; Angela Gibson, Head of Policy and Research for York Region’s Transportation and Community Planning Division; Chris Hardwicke, Senior Associate from Sweeny Sterling Finlayson & Co Architects; and Sean Hertel, an Urban Planning consultant, discussed the unique opportunities to create better streets in the suburbs.

While often criticized, streets in suburban areas offer innovative ways to incorporate active transportation into the street design. Undoubtedly, while there are many challenges to retrofitting suburban arterials into vibrant main streets, these often under-designed streets with ample space provide a unique and exciting opportunity for re-design. For example, the vast open spaces of suburban intersections have great potential for re-allocation amongst different users, the abundance of marginal spaces (edges of parking lots) could be transformed into rich urban environments, and a particular focus on pedestrian and

bike linkages at transit stations, are some distinct solutions particular to suburban urban form.



Re-imagining a suburban street. Source: Chris Hardwicke.

Economic, Health & Safety Outcomes, Impacts & Advances

The benefits and tangible successes of Complete Streets must be clearly articulated to justify further investment in the future. There are now sufficient Complete Streets throughout Canada to evaluate them both qualitatively and quantitatively. New research, data collection and analysis is emerging to study not only the economic, health and safety valuations of Complete Streets, but also the more nuanced changes in mode share, safety concerns, diversity of users and public opinion.

Q Why are there major differences in cycling injury rates across countries?

A Safety in numbers and route design.

Impacts of Route Infrastructure on Bicycling Injury Risk

Anne Harris, Assistant Professor at Ryerson University presented a summary of the results from the Bicyclists' Injuries and the Cycling Environment (BICE) Study. The BICE Study looked at cycling injuries from utilitarian cycling in Vancouver and Toronto. The study, conducted from 2008-2009, surveyed 690 participants (cyclists who were injured), asking them how they were injured. The research focused on infrastructural characteristics by location. For example, in Toronto, one third of the all cycling injuries involved a streetcar track, a unique and defining characteristic of the city.

The study concluded:

- » Route infrastructure is a strong determinant of cycling safety
- » Shared lanes (sharrows) offer little protection, where parked cars are present
- » Separated cycle tracks were the safest of the 15 studied route types

Thinking BIG

Lessons Learned from Three Case Cities: Chicago, Vancouver and San Francisco

BE BOLD, BE ASPIRATIONAL

A recurring theme from this year's Forum was the need to be bold, to be aspirational and to set clear objectives and targets. Jerry Dobrovlny, Director of Transportation for the City of Vancouver shared some of Vancouver's inspirational steps in the quest to become the Greenest City in the World. Vancouver's newest transportation master plan, Transportation 2040, boasts an ambitious goal: to have at least two thirds of all trips within Vancouver taken by foot, bike or transit by 2040. While this may seem ambitious, historically, the city has an excellent track record of not only meeting, but exceeding targets for mode share change.

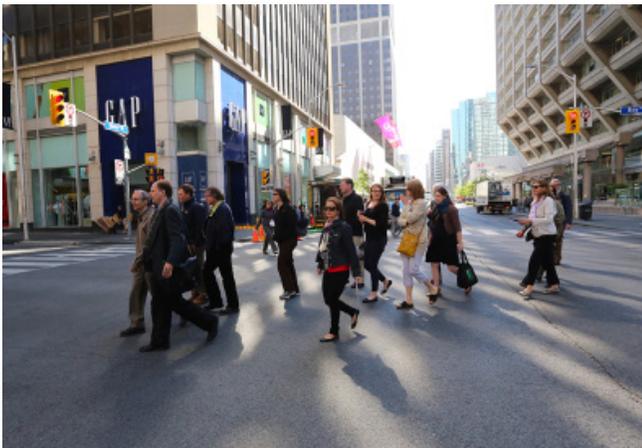
An exciting evening keynote presentation, involving a conversation between Toronto's Paul Bedford, former Chief Planner for the City of Toronto and Gabe Klein, Commissioner for Chicago's Department of Transportation exposed the recent and aspirational goal to make "the City of Chicago the most bicycle-friendly city in the United States." Klein detailed Chicago's plan to:

- » Expand cycling infrastructure to include a 645-mile network of cycling facilities
- » Provide bicycle accommodation within a half-mile of every Chicagoan
- » Eliminate completely all pedestrian-vehicle fatalities by 2022

A little closer to home, Loy Cheah, Director of Transportation Planning for the Transportation and Community Planning Department for The Regional Municipality of York, shared the region's hopeful plan to develop a Lake to Lake cycling route, connecting Lake Simcoe at the northern edge of the GTHA to Lake Ontario to the south.

“The understanding that each travel mode supports the others is crucial. There is no competition between modes – they all need each other to keep a city moving.”

– Timothy Papandreou



Forum delegates participate in a pedestrian improvement zone walking tour. Photo by Yvonne Bambrick.

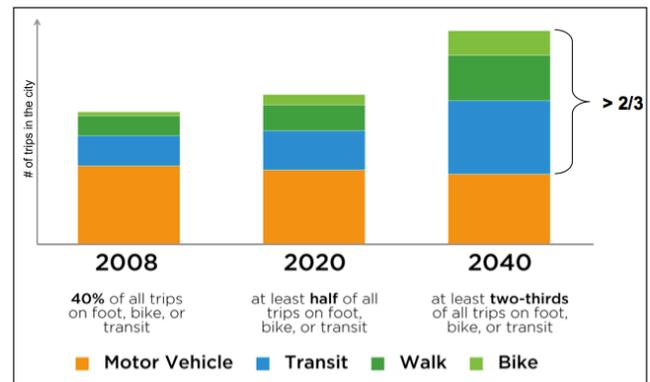
INTEGRATION – BREAKING DOWN THE SILOS

Timothy Papandreou, Deputy Director of Sustainable Streets for the San Francisco Municipal Transportation Agency highlighted the importance of cross-sector resource sharing and collaboration. He creatively coined the terms “plangineers” (planners + engineers) and “advocrats” (advocates + bureaucrats), emphasizing the need to not only connect transit modes, but disciplines too. In practice, cities like San Francisco and Chicago have created inclusive transportation agencies to deal with the planning and operation of all travel modes, including roads, public transit, taxis, car sharing programs, cycling and walking. These all-in-one agencies seek to generate integration amongst modes, streamline service delivery, share costs and conduct “big picture planning”. Furthermore, these integrated authorities allow for easy sharing of resources. It is important that staff and decision-makers do not always start from scratch or “reinvent the wheel”, rather build on successes of the past, make use of existing materials and documents (both internal and external) and leverage connections with other projects, affiliated organizations and funders.

QUALITY DATA IS KEY TO MAKING RATIONAL DECISIONS

All keynote speakers addressed the importance of collecting good quality data. Evidence-based backup is an excellent way to overcome resistance, address common fears and concerns and “sell” the case for increases in investment, both politically and to the public.

As cities become more experienced and familiar with active transportation as a mode share, needs-based data collection becomes important. For example, San Francisco conducted a “Level of Traffic Stress” test to identify hidden blockages in the bike network. It was revealed that certain areas of the network was fragmented, causing heightened stress and safety concerns, often deterring the average cyclist. From here, interventions were prioritized and implemented to make cyclists feel more comfortable and safe so they could make a continuous journey.



Vancouver's 2040 mode share targets. Source: Jerry Dobrovolny.

It is not only about the data collection itself, but also in how it is represented. For example, Dobrovolny from the City of Vancouver learned that when discussing transportation mode share with city residents, it is best not to use pie charts (which make it look like cars are losing out), but bar charts instead, so drivers can see that the number of car trips is not going down by much, rather that there are many new additional trips being taken by walking, cycling and transit.

“Why do we do this? Because we love our cities.”

– Timothy Papandreou

MARKETING OF INITIATIVES - TELL PEOPLE AND GET THEM EXCITED

Gabe Klein from Chicago’s Department of Transportation reminded the audience that the design and implementation of Complete Streets is not enough – marketing, messaging and education are essential and should not be an afterthought. Lessons could be taken from the private

sector, to understand the art of capturing public attention and “buy in”. For example, the marketing industry spends billions of dollars each year to graphically, visually and orally convince consumers to buy and/or support a particular good or service. Klein highlighted the importance of using innovative techniques and ensuring streamlined communication to “sell” ideas, creating “buy-in”. He explained the importance for stakeholders to assume a salesperson role, where marketing and messaging is tailored, targeted and personal.

"The future is in sharing, not ownership."

– Gabe Klein

SHARING ECONOMIES

Session leaders consistently spoke of the need to build a city where people have choices in how they get around. It is not about one or the other, but about building a multi-modal network. Interesting reference to the emerging sharing economy came into play. Car sharing, transit-connector bike sharing, even scooter sharing programs are popping up in cities worldwide as convenient, equitable and highly-marketable solutions to complete transit networks.

Looking Ahead

Developing a Sense of Urgency – The need for investment NOW

Using an evidence-based approach, this year’s Forum featured sessions exploring the challenges, motivators and accelerators and practical program solutions to accelerate the adoption of Complete Streets. With particular relevance to the GTHA, the timely release of Metrolinx’s

recommended investment strategy for the Big Move (GTHA’s regional transportation plan) highlights that there is no better time for continued efforts and investment in active transportation in communities across Canada.



Forum delegates "practice what they preach." Photo by Kemal Kapetanovic.

"You need engaged citizens, political will, and staff leadership for change to happen."

– Timothy Papandreu

#CSF2013 {250 TWEETS IN TOTAL}



@jen_keesmaat Fastest growing cohort buying bikes in downtown Vancouver are those btw 55-65; build protected lanes and they will come. #CSF2013 (most re-tweeted)

@STRCanada By building a city where people have choice in how they get around, you build a city that can accommodate whatever changes come. #CSF2013

@CycleToronto Brilliant: San Fran develops Level of Traffic Stress indicator to determine how comfortable cyclists feel, street by street. #CSF2013 #bikeTO



Speakers

Paul Bedford – Professor of Urban Planning, University of Toronto and Ryerson University
 Ronji Borooh – City Architect + Head of Urban Design, City of Markham
 Stephen Buckley – General Manager, Transportation Services, City of Toronto
 Fiona Chapman – Manager, Pedestrian Projects, Transportation Services, City of Toronto
 Loy Cheah – Director, Transportation Planning, Regional Municipality of York
 Ian Chodikoff – Architect + Urban Designer, Farrow Partnership Architects
 Emma Cohlmeier – Urban Planner, Toronto Cycling Think & Do Tank
 Jerry Dobrovolsky – Director of Transportation, City of Vancouver
 Daniel Egan – Manager, Cycling Infrastructure, Transportation Services, City of Toronto
 Jayne Engle-Warnick – Senior Planner, Montreal Urban Ecology Centre
 Angela Gibson – Head, Policy + Research, Transportation and Community Planning, Regional Municipality of York
 Antonio Gomez-Palacio – Principal, DIALOG
 Trevor Haché – Policy Coordinator, Ecology Ottawa
 Kate Hall – Active Transportation Consultant, Green Communities Canada
 Chris Hardwicke – Senior Associate, Sweeny Sterling Finlayson & Co Architects
 Anne Harris – Associate Professor, Ryerson University
 Jacquelyn Hayward-Gulati – Manager, Cycling Office, City of Mississauga
 Sean Hertel – Urban Planning Consultant
 Jennifer Keesmaat – Chief Planner, City of Toronto
 Jacky Kennedy – Director, Canada Walks, Green Communities Canada
 Gabe Klein – Commissioner, Department of Transportation, City of Chicago
 Zlatko Krstulic – Transportation Planner, City of Ottawa
 Trudy Ledsham – Project Coordinator, Toronto Cycling Think & Do Tank
 Sharon MacKinnon – Public Health Nurse, City of Hamilton
 Dr. David McKeown – Medical Officer of Health, City of Toronto
 Allison Miller – Transportation Demand Management Coordinator, City of London
 Kate Mulligan – Research Consultant, Healthy Public Policy, Toronto Public Health
 Emily Munroe – Director of Partnerships and Programs, 8-80 Cities
 Timothy Papandreou – Deputy Director, Sustainable Streets, San Francisco Municipal Transportation Agency
 Peter Piet – Chartered Landscape Architect, Steer Davies Gleave
 Ashley Priem – Program Coordinator, EcoSuperior Environmental Program
 Susan Sauvé – Transportation Demand Management Planner, City of Peterborough
 Stephanie Sciberras – Physical Activity Specialist, City of Kingston
 Brett Sears – Senior Project Planner, Transportation Planning Department, MMM Group
 Nancy Smith Lea – Director, Toronto Centre for Active Transportation (TCAT)
 Mark Spencer – Vice President, Fort Erie Active Transportation Committee
 Justin Swan – Senior Project Manager, City of Ottawa
 Jonathan Tong – Transportation Consultant, Steer Davies Gleave
 Katie Wittmann – Graduate Urban Planning Student, University of Toronto
 Ryan Anders Whitney – Complete Streets Manager + CLASP Facilitator, TCAT
 Leslie Woo – Vice President, Policy, Planning & Innovation, Metrolinx

Presented by

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