

Cycling in Toronto: A Dutch perspective on Urban Growth and Development

Toronto, Canada's most populous city, is experiencing a surge of growth and development. This growth is not only seen in its expanding skyline, but also in its evolving congestion issues. To maintain the city's liveability and to promote sustainable mobility, significant attention has been given to the development of cycling infrastructure over the past 15 years. Drawing inspiration from the Dutch cycling culture and infrastructure, renowned as one of the world's finest, this article explores the latest developments in Toronto's cycling scene. Stay tuned as we pedal through the streets of Toronto, where we examine the city's cycling infrastructure, its challenges in a car-centric culture, the societal challenges and opportunities posed by urban growth, all from a Dutch perspective.



Exploring Downtown Toronto through the bike-sharing system

The reference situation: Cycling in The Netherlands

In the Netherlands, cycling is more than just a mode of transportation; it's a symbol of national culture. The Dutch cycling culture is deeply ingrained in the society, with bicycles being used for commuting, shopping, school runs, and leisure activities. The country's infrastructure supports this culture with extensive, well-maintained bike paths, ample bike parking, and integration with public transport. Cycling infrastructure for cyclists is as ubiquitous as roads for cars. The flat landscape and short distances between cities make cycling a practical and efficient choice of transport. This integration of cycling into daily life contributes to the Netherlands' high quality of life, promoting health, reducing traffic congestion, and supporting environmental sustainability.

Rapid economic and demographic growth leads to challenges in transportation

Toronto, Canada's largest city and the fourth-largest in North America, is renowned for its mix of modern skyscrapers and historic architecture. Consistently ranking among the most liveable cities globally, Toronto serves as the economic capital of Canada, hosting numerous large Canadian and multinational corporations and the Toronto Stock Exchange. The city's Gross Domestic Product (GDP) has grown by an average of 2.4 percent annually since 2009¹. The City of Toronto has a population of around 3 million people,

¹ Source: [City of Toronto](#), [Statista](#)

representing about half of the population of the Greater Toronto Area (GTA). This urban area has seen notable demographic growth, partly due to an influx of migrants. The increase in population has stimulated urban development, with many historical buildings in Downtown Toronto being replaced by residential towers, often exceeding 200 metres in height. However, the rapid economic and demographic growth has also presented significant challenges, particularly in transportation and congestion.



Historic building in Downtown Toronto that will be replaced by a residential tower

Currently, Toronto ranks as the third most congested city in North America. In 2022, Torontonians lost an average of 118 hours per year in traffic, a nearly 60 percent increase from the previous year². Early 2024, TomTom completed a report that ranked Toronto as third city in the world for 10-kilometer travel times. The traffic index study found it took an average of 29 minutes to travel 10 kilometres in Toronto in 2023, an increase of 50 seconds compared to 2022³. The traffic congestion in Toronto is partly due to Canadians' significant dependence on cars, which is a result of the distribution of land use patterns. However, efforts have been made in recent years to enhance alternatives to car travel, such as investing in public transportation and promoting other modes like cycling. In downtown Toronto, developers are integrating additional bicycle facilities alongside or in place of parking spaces, reflecting a growing preference for public transit and cycling among younger generations. With the city experiencing a surge in construction projects to accommodate its growing population and sustain its status as one of the world's most liveable cities, these initiatives seem vital to alleviate pressure on its infrastructure.

Toronto's developing cycling landscape and infrastructure

Geographically, Toronto is well-suited for cycling. The terrain is relatively flat with gentle slopes and numerous river valleys, eliminating the difficulty of steep inclines for cyclists. It's spacious, grid-like street layout provides a predictable and straightforward path for cyclists, making it easy to navigate through the city. While the city centre is compact enough to make cycling a convenient option, it is also spread out to the extent that cycling frequently becomes a more practical alternative to walking.

The City of Toronto has a diverse cycling network of a total of 271 on-street kilometres. The on-street cycling infrastructure includes cycle tracks (79 kilometres), bicycle lanes (which include buffered and contra-flow lanes, totalling 137 kilometres), and wayfinding and route connector "sharrows" (shared lane pavement markings, totalling 55 kilometres)⁴. By comparison, Amsterdam has a total of 890 kilometres of cycling infrastructure (for a population of nearly 900,000 residents). 35 percent of this network comprises entirely segregated cycle paths, while the remainder consists of paths alongside roads, both buffered and marked bicycle lanes⁵.

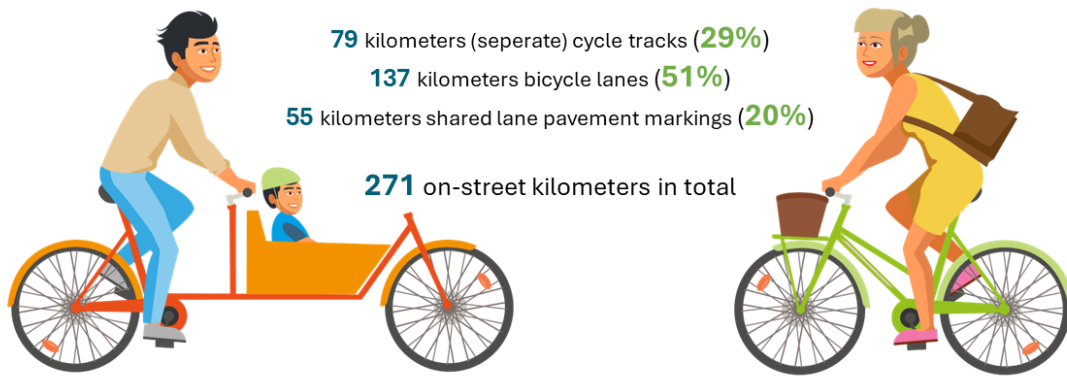
² Source: [CBC News](#) (2023)

³ Source: [Global News](#) (2024)

⁴ Source: [City of Toronto](#) (2022)

⁵ Source: [CBS Statistics Netherlands](#) (2022)

Toronto's cycling infrastructure in numbers



A significant portion of Toronto's cycling network consists of routes running from the east to the west side of the city. Along these routes are the safest forms of cycling infrastructure, namely cycle tracks, which are completely separated from other traffic. However, on most important north-south connections, the infrastructure primarily consists of less protected bike lanes or "sharrows". In areas with a lot of automobile traffic, such as the streets of Yonge and Jarvis, there is little to no dedicated cycling infrastructure.



Cycle track on Gerrard Street East (left) and the absence of cycling infrastructure on Yonge Street (right)

Cycling is one of the fastest growing transportation modes in Toronto. Historically, bicycle infrastructure was confined to parks, river valleys, and the lakefront, primarily catering to recreational purposes. In recent years, there has been a notable rise in cycling among Torontonians, particularly among utilitarian cyclists — those who cycle for commuting, errands, or social visits. While the proportion of residents who identify as recreational cyclists has remained stable (26 percent in 2019 compared to 25 percent in 2009), the number of Torontonians identifying as utilitarian cyclists has surged from 29 percent in 2009 to 44 percent

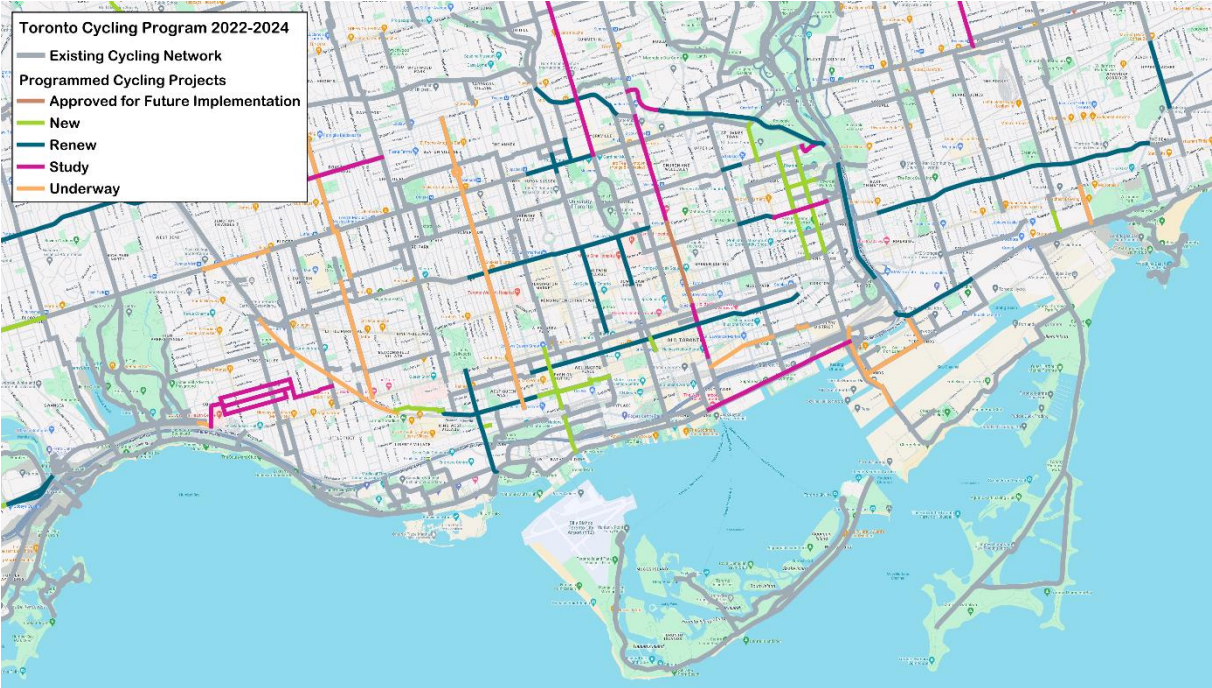
in 2019. Additionally, there's a growing trend of combining cycling with public transportation: in 2019, 45 percent of utilitarian cyclists reported regularly or occasionally using this combined mode of transportation, up from 35 percent in 2009⁶.

Decentralized approach shapes bicycle infrastructure

Especially in the past few years, significant efforts have been made to expand the city's cycling infrastructure. Out of the overall 271 kilometres of bike lanes, over 40 percent has been implemented in the last five years. These implementations often occur in a pilot-like manner, initiated by the four city districts that comprise Toronto. Such pilot projects serve not only to assess feasibility but also to bypass the lengthy procedures of environmental assessments, municipal obligations, and potential political interference that could obstruct implementation. The administration of the districts largely determines whether and where cycling infrastructure is implemented. The political orientation of these districts has a significant influence: there is usually a pronounced preference for either cycling or cars, but rarely for both at the same time.

The city's decentralized approach to decision-making and implementation regarding cycling infrastructure is evident in its network of bike lanes. Across different districts, the presence of bike lanes varies significantly. While some neighbourhoods have ample bike lanes, others have scarce provisions. Additionally, bike lanes can abruptly end when transitioning from one district to another. This diversity in facilities also applies to the type of bike lane: there are many types of bike lanes, each with their own rules, such as where motorists are allowed or not allowed to park on certain types of bike lanes. This occasionally results in unclear and consequently unsafe traffic situations.

Despite the pilot-like approach to implementing cycling infrastructure, there is centralized policy formation by the City of Toronto. Since 2001, the City of Toronto has been working on policies to expand and enhance the cycling network. In the most recent Toronto Cycling Network Plan 2021, significant steps are taken to connect existing routes, expand into new areas, and renew existing paths⁷. There is a strong emphasis on safety, equality, and improvement of cycling infrastructure. It also outlines a long-term vision for the cycling network, key city-wide cycling routes, and a three-year rolling program for short-term implementation.



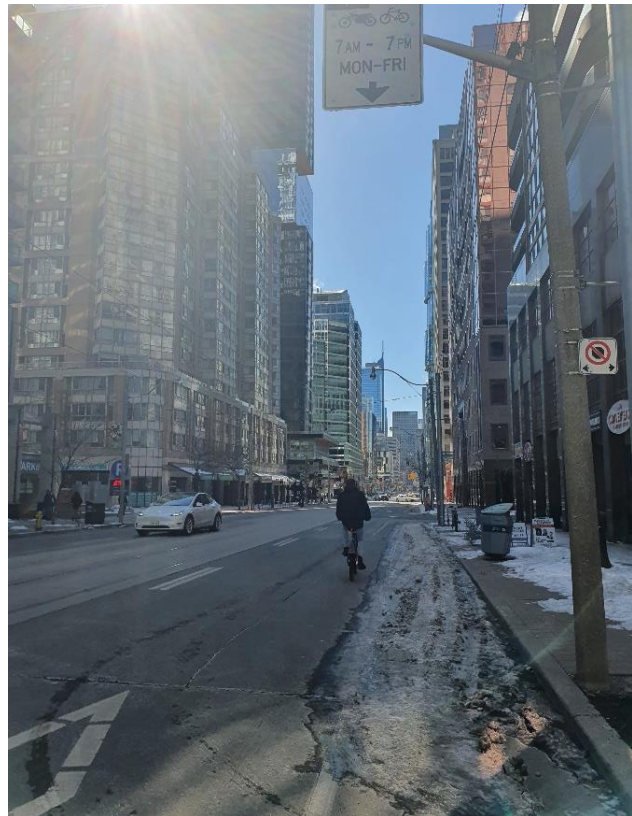
Existing Cycling Network and Programmed Cycling Projects in Downtown Toronto. Origin of data: City of Toronto, 2022

⁶ Source: City of Toronto, Cycling Public Option Survey (2019)

⁷ Source: City of Toronto (2024)

Safety as important issue due to lack of cycling-aware culture

As the number of cyclists and cycle paths grows, new challenges emerge, particularly regarding safety. From my personal experiences, cycling in Toronto feels notably unsafe. In just the past six months, I have narrowly avoided being hit numerous times, more frequently than throughout my entire cycling life in the Netherlands. This heightened risk of accidents, I believe, is largely due to the limited presence of a cycling-aware culture. Other road users often overlook cyclists, resulting in situations where you are not recognized as a cyclist and are frequently denied right of way. Many accidents occur due to what is known as “dooring”: when someone opens their parked car door without checking for approaching cyclists. Another safety issue arises during Canada’s winters, which are often cited as an impediment to greater bike use, especially when bike lanes are repurposed for snow storage along the side of streets.



Snow storage on a cycle path on Bay Street

I am not alone in occasionally feeling unsafe while cycling: a survey among Toronto residents reveals that about 20 percent of them do not cycle at all because they don’t feel safe enough in traffic. Furthermore, more than a third (35 percent) of residents cycle occasionally but would like to cycle more if the streets felt safer and there were dedicated cycling infrastructure, such as separated bike lanes. While such infrastructure exists, it is limited. Over 70 percent of bike lanes are bicycle lanes or “sharrows” and consist solely of painted lines on the road, often shared with other vehicles. These lanes are commonly repurposed as loading and unloading zones by taxis or cars, sometimes leading to dangerous situations in traffic.

35% of Torontonians would like to travel more by bike if the streets felt safer and if there was dedicated cycling infrastructure – City of Toronto Cycling Study (2019)

Bike sharing systems: Toronto versus the Netherlands

Since 2011, Toronto has operated a bike-sharing program initiated by the city to promote sustainable transportation and biking: Bike Share Toronto. Governed by the city, the system offers comparable or even lower costs to using public transit like buses, trams, or subways. Personally, I have subscribed annually for about 120 CAD (90 euros), granting unlimited rides throughout the year — and in my opinion it is a hassle-free alternative to dealing with bike theft or maintenance costs. This is cheaper than in the Netherlands, where bike-sharing is privatized and more expensive: the most used “OV-fiets” costs 6.70 CAD (4.55 euros) per 24 hours and there is no option for an annual subscription. Also, in the Netherlands you have to return

the bike to the station where you rented it, offering less flexibility than Bike Share Toronto where you can dock your bike at any other station. One drawback of this bike sharing system is that Downtown stations occasionally run out of bikes as the day progresses, requiring users to walk further to find one. However, the app documents this feature, providing real-time updates on bike availability at each station.



A Toronto Bike Share spot displays a Biking Lawyer ad for cyclist accident aid

Especially the relatively low annual costs of Bike Share Toronto are interesting. In Canada, in contrary to the Netherlands, most employees pay for their commuting costs themselves. If a person rides to the office once a week during the summer months with a yearly subscription (May – September), the annual subscription costs are already covered. This makes the bike-sharing system an affordable and convenient option for commuting short distances, for example to work. Many companies which are either

renovating existing or building new offices include shower facilities in addition to bicycle storage. This is used as a means to promote cycling as well as to obtain credits toward a LEED certification, one of the world's most widely used green building rating systems.

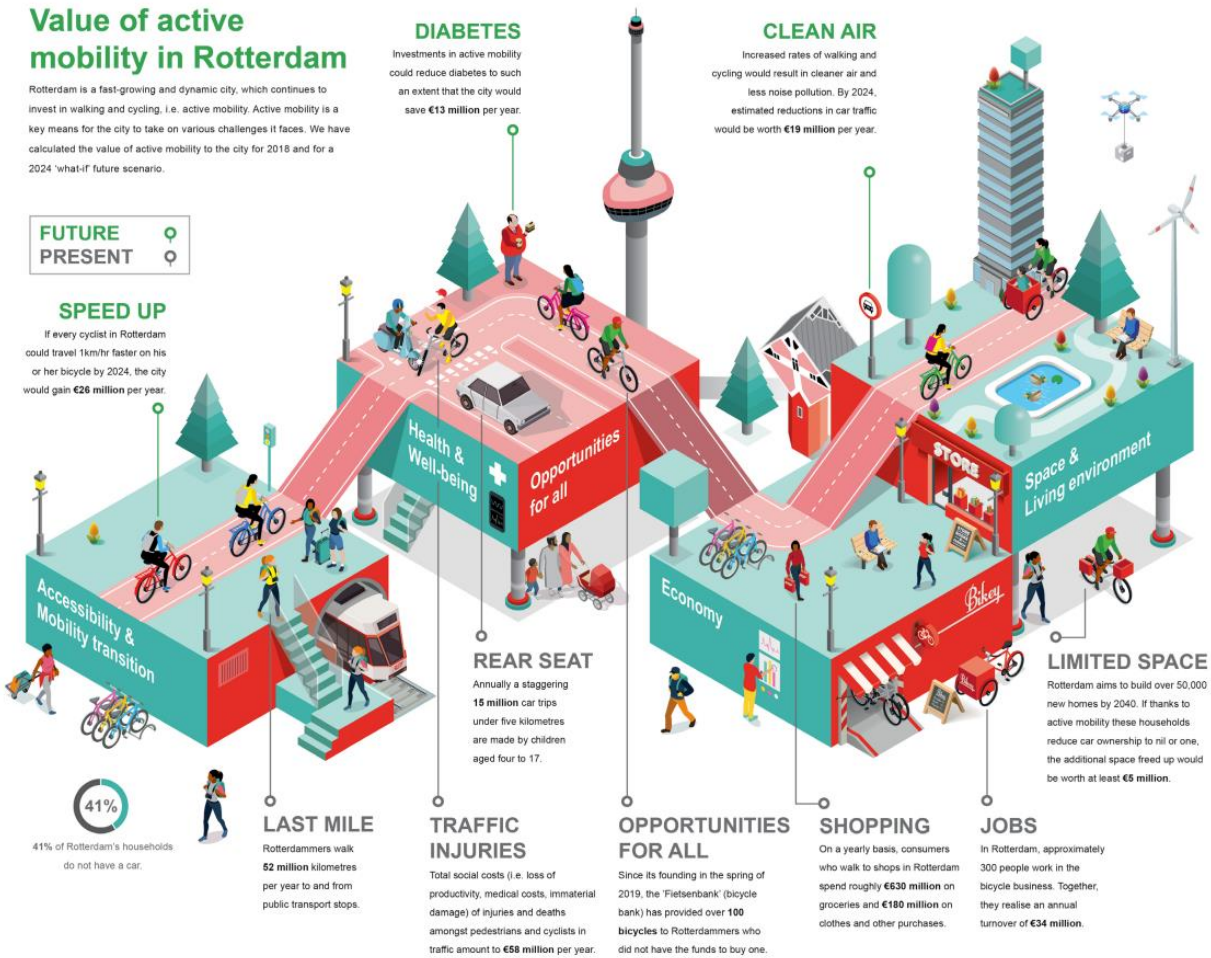
Assessing bike infrastructure investment value via Bikenomics

Infrastructure projects like roads, railways, and bridges represent significant investments. These projects aim to enhance societal and economic prosperity through improved connectivity and efficiency. For instance, reducing travel time between two locations by extending the subway in Toronto may enable a greater exchange of people, goods and services, thereby leading to economic growth and employment. While these projects may not yield direct cash returns, they contribute to greater societal well-being and economic growth by facilitating the exchange of goods and services and reducing environmental burdens, such as CO₂-emissions. Socio-economic impacts, encompassing both tangible and intangible consequences, determine the overall value of such investments, where the benefits should outweigh the costs for collective welfare. Decisio, the company that I work for, often calculates this using a Social Cost-Benefit Analysis (SCBA).

What is a Social Cost-Benefit Analysis?

A Social Cost-Benefit Analysis (SCBA) is a systematic and cohesive method to assess all the impacts caused by an investment project or other policy measure. It comprises not just the financial effects (investment costs, direct benefits such as profits, taxes and fees, et cetera), but all the social effects related to pollution, environment, safety, travel times, spatial quality, health, indirect (i.e. labour or real estate) market impacts, legal, etc. The main aim of SCBAs is to help policymakers to make informed and rational decisions about different courses of actions, by systematically and cohesively comparing the costs and the benefits of different alternatives. To ensure comparability, effects are expressed in the same unit (i.e. they are monetized). The valued outcomes represent the importance society places on the project results.

Bikenomics uses the same principles of the SCBA and applies economic thinking to cycling. Many people link the term “economy” with money. However, money serves merely as a unit of measurement for value. Essentially, the higher the price paid for something, the more value is perceived in it. Hence, Bikenomics studies how cycling influences societal wellbeing by looking at the value of its impacts. This way, it offers a systematic approach to evaluate the societal value of cycling projects. By comparing initial and future investment costs with the economic value of societal impacts, Bikenomics determines the social efficiency and overall value for money of cycling initiatives. This method facilitates decision-making, enhances communication with stakeholders, and ensures that cycling receives the attention it deserves in transportation planning. While Bikenomics may require extensive data analysis, the process itself offers valuable insights and a deeper understanding of the issues at hand, ultimately contributing to more effective policymaking and project implementation.



Example of Bikenomics in the City of Rotterdam, the Netherlands. Source: Decisio and Dutch municipality of Rotterdam, via CIVITAS Handshake

Whether considered as a leisure pursuit or utilized as a means of getting around, cycling has various influences on our societal well-being. Serving as an affordable, adaptable, and eco-friendly mode of transportation, cycling holds the potential to enhance accessibility and foster social integration. This is especially pertinent for individuals who, due to personal or financial constraints, lack access to other modes of mobility. Encouraging cycling, particularly as a substitute for short or moderate car trips, can have several individual and communal advantages⁸, including:

⁸ Source: CIVITAS Handshake, Bikenomics: Making the case for cycling investment in your city

- Improved physical and mental health, with a reduction in direct health costs, as well as an increase in life expectancy and quality of life;
- More competitive public transport;
- Decreased environmental impacts associated with the consumption of fossil fuels, such as local air pollution;
- Increased employment via the cycling tourism sector, and subsequently, enhanced sustainable access to local resources;
- Regenerated public space.

Given the numerous socio-economic benefits, the costs of investing in cycling infrastructure are often relatively low, particularly when compared to the expenses associated with building infrastructure for cars, trains, or subways. Consequently, it is essential to quantify the return on investment to society as a whole and present persuasive figures to support investments in cycling infrastructure, thereby demonstrating cycling as a wise investment choice.

More information on the principles of Bikenomics can be found in [this article](#). Do you prefer a visual explanation instead? In [this video](#), an expert of Decisio explains the basic principles of Bikenomics: what it is, how it is done and how to use it effectively in new policies.

Conclusions and recommendations

In one of the fastest-growing cities in North America, expansion and densification are not only contributing to economic growth but also presenting challenges in terms of mobility. Various measures are being implemented to address these challenges, such as expanding public transportation and the bicycle network.

Cycling is gradually receiving more attention as an attractive and faster alternative for short distances. More residents are opting to use bicycles, as within the city, travel times of up to 5 kilometres are often comparable between cars and bicycles, making it a viable alternative for commuting — weather permitting. However, limited awareness of cyclists in traffic and associated safety issues are impeding this growth. The City of Toronto is actively working on improving bicycle infrastructure and safety, which appears crucial given the potential for cycling among residents who currently find bike safety inadequate.



Cycle Path on Spadina Avenue

From my perspective, there are still numerous opportunities to further promote this form of sustainable mobility, aiming not only to alleviate congestion in the city but also to enhance the well-being of its residents. The majority of opportunities lie in enhancing safety, fostering a cycling-conscious culture, and cultivating an environment that encourages cycling.

Cycling and walking offer positive and future-proof changes by maintaining cities' attractiveness and accessibility, while also addressing challenges such as sustainability, clean air, and public health. Various SCBAs (Social Cost-Benefit Analyses) conducted globally on the development of bicycle infrastructure consistently yield positive outcomes, quantifying the return on investment to justify investments in cycling infrastructure and proving cycling is a sound investment. Ultimately, by embracing and enhancing sustainable transportation options like cycling, the city can strengthen its position as one of the most liveable cities in the world, nurturing a healthier and more vibrant urban environment for everyone.

Colophon

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Bibliographical Note: *Suzanne Steegman is a senior consultant at Decisio, an economic research and consultancy firm based in Amsterdam, the Netherlands. She has extensive experience in conducting social cost-benefit analyses, economic impact studies, business cases and policy evaluations. While temporarily residing in Toronto, Suzanne wrote this article reflecting on the cycling infrastructure and culture, drawing from both her professional background and personal experiences. The main goal of this article is to provide readers with a blend of personal anecdotes, offering a nuanced perspective on the economic dynamics and urban development of the city.*