



"Above all, do not lose your desire to walk. Every day I walk myself into a state of well-being and away from every illness. I have walked myself into my best thoughts, and I know no thought so burdensome that I cannot walk away from it." Søren Aabye Kierkegaard, Philosopher (1813-1855)



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## Vancouver's Transportation 2040 plan has a vision of "a city with a smart and efficient transportation system."

The plan supports "a thriving economy while increasing affordability; healthy citizens who are mobile in a safe, accessible, and vibrant city; and an enhanced natural environment that ensures a healthy future for people and the planet."

Active modes of transportation-that is, walking, cycling, and rolling-are central to that vision for Vancouver. Public transit, private vehicles, and goods movement also have important roles to play, but our vision cannot be achieved without building infrastructure and a culture that supports and encourages Vancouverites to choose walking and cycling for more of their trips.



#### Transportation 2040 Targets and Progress

## Mobility target: By 2040, make at least two-thirds of all trips on foot, bike, or transit.

As an interim target, Transportation 2040 also supports the Greenest City target to make at least half of all trips by foot, bike, and transit by 2020. We have reached this target five years early, with 50 per cent of trips in the city made by walking, cycling, and transit in 2015.

By 2040, the total number of trips made by sustainable modes will grow significantly, while motor vehicle volumes will remain the same.

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#### **Traffic Related Fatalities**

Source. VPD Inamic Fatality Data (1996-2013)

## Safety target: Zero traffic-related fatalities

People walking and cycling are among the most vulnerable road users on our streets. Vancouver's ultimate safety goal is to eliminate all fatalities from our transportation system.

Traffic fatalities have been declining for the last 20 years, even as Vancouver's population has continued to grow.

However, one fatality is too many. As we approach 2040, we will continue enhancing our infrastructure and working with partners to improve safety and reach our target. Building a walkable and bikeable city through increased density, mixed land use, traffic-calming, interesting streetscapes...

Vancouver is a world leader in the development of complete, compact, and livable communities that allow most people to meet their daily needs...

Many health benefits are associated with sustainable transportation, including reduced rates of obesity, diabetes, heart disease and cancers...



## **Greenest City Action Plan**

Active transportation will help us meet many of our Greenest City goals. Fewer car trips in Vancouver mean reduced greenhouse gas emissions, contributing to cleaner air and helping to combat climate change.

Building a walkable and bikeable city through increased density, mixed land use, traffic-calming, interesting streetscapes, connected infrastructure, and a supportive culture is key to achieving our Greenest City vision.

Read more at: vancouver.ca/greenestcity



## **Renewable City Strategy**

Renewable energy is energy that is naturally replenished as it is used. Our goal is to get 100 per cent of our energy in Vancouver from renewable sources before 2050.

We already have what it takes - Vancouver is a world leader in the development of complete, compact, and livable communities that allow most people to meet their daily needs through walking, cycling, and transit. The Renewable City Strategy positions Vancouver to increase its economic diversity for a stronger, more resilient economy.

Read more at: vancouver.ca/renewable-city



## Healthy City Strategy

The ways we move around the city impact our health as individuals and communities. An array of accessible, sustainable transportation options allows people to save time and money while improving health and well-being.

Many health benefits are associated with sustainable transportation, including reduced rates of obesity, diabetes, heart disease and cancers, and less respiratory and cardiovascular disease. Active transportation allows us to make exercise part of our daily routine and gives us opportunities to connect with others in our communities.

Read more at: vancouver.ca/healthycity



#### Walking to Work in Large Canadian Cities, 2011

## How Vancouver Compares

Vancouver is a leader in active transportation mode share in North America, especially when walking and cycling are taken together. In this section are some commuting mode share numbers from other cities across Canada and the U.S.

Even in 2011, Vancouver was leading among large Canadian cities by a wide margin for walking and cycling to work, and we have come a long way since then. See pages 20-21 for more up-to-date mode share numbers.

The U.S. numbers cannot be compared directly to Vancouver as they are collected through the American Community Survey, but they can give us a sense of how we are doing.



#### Cycling to Work in Large Canadian Cities, 2011

## Walking and Cycling to Work in Large U.S. Cities, 2011-2013



Source: 2011 National Household Survey; American Community Survey, 2011-13

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# How Vancouverites are Getting Around





#### Mode Share for All Trips

Source: 2015 Transportation Panel Survey

## Vancouverites are making more of their trips on foot and by bike every year.

Cycling has long been the fastest growing mode share. Since 2013, cycling trips have increased from four to seven per cent of all trips made. Walking trips have also increased, while car and transit trips have decreased slightly.

## Walking Volumes

#### Change in Pedestrian Volumes, 2008-2013



Source: 2013 Pedestrian Survey

Since 2013, walking trips have increased from 26 to 27 per cent of all trips in Vancouver.

The City conducts a comprehensive pedestrian count every five years. In 2013, the count covered 400 locations on 60 commercial streets across Vancouver.

The busiest walking locations downtown were along:

Granville Street, Burrard Street, Georgia Street, and Robson Street.

The busiest walking locations outside of downtown were clustered around:

- Two SkyTrain stations at Commercial Drive and Broadway,
- Cambie Corridor around Canada Line stations, and
- Broadway transit corridor.

View the full 2013 Pedestrian Survey at: vancouver.ca/walkvancouver

## Cycling Volumes

2010 2011 2012 2013 2014 2015

Burrard Bridge Daily mid-week bike trips\*

7,000

6,000

5.000

4,000

3.000

2,000

1,000

0

Seawall at Science World Daily mid-week bike trips\*



Dunsmuir Viaduct Daily mid-week bike trips\*







Winter (January/February)

Summer (July/August)

Source: City of Vancouver bike counter data. \*Average of Tuesdays, Wednesdays, and Thursdays, except statutory holidays

Since 2013, cycling trips have increased from 4 to 7 per cent of all trips in Vancouver.

The City collects data on bike volumes using automated bike counters in several locations along our bike routes. We report out monthly on the counts at 10 different locations. The data includes a monthly total and a midweek daily average.

The volume of people cycling is increasing as we expand our bike network, and particularly in areas with new allages-and-abilities (AAA) infrastructure. Above are the volumes on some of our busiest routes.

View the monthly bike counter updates at: vancouver.ca/protected-bike-lanes

# Who is Walking and Cycling in Vancouver?



#### Mode Share by Age Group

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Source: 2015 Transportation Panel Survey

## Age

Vancouverites of all ages walk and cycle to get around. Transit is the most commonly used mode among 18-24 year olds, many of whom are likely to be students with transit passes. Driving is more common in older age groups. Walking is most common in the 25-44 age group and least common for those 18-24. The cycling mode share is equal amongst the three younger age groups and less common for those over 65.

#### Female Cyclists on Hornby Street



## The share of women cycling on Hornby Street grew 40% after a protected bike lane was constructed in 2011.

## Gender

The number of women cycling is often used as an indicator of a route's perceived safety and comfort. The share of women cycling on Hornby Street has increased from 28 per cent of all riders in 2010, when the route was a painted bike lane, to 39 per cent in 2015, after a protected bike lane was constructed in 2011. 15



Source: 2015 Transportation Panel Survey

## Geography

Though people walk and cycle in all of Vancouver's neighbourhoods, there are clear geographical differences in the ways we get around. Walking is most common downtown.

(16)



### Cycling Mode Share by Home Area

Source: 2015 Transportation Panel Survey

Cycling is most common in the Vancouver Port area, made up of the Downtown Eastside, Strathcona, and **Grandview-Woodland** neighbourhoods.



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Source: 2015 Transportation Panel Survey

## Income

While people with higher incomes choose to switch from transit to driving, walking and cycling are similar across all income levels.

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#### Mode Share by Vehicle Access

## Access to Private Vehicles

Vancouverites who have access to private vehicles use active modes less often than those without cars, but still choose walking and cycling for 30 per cent of their trips.



## Trips Made by Foot and Bike

## Ten per cent of Vancouverites cycle to work and 24 per cent walk to work.

## Destinations

Vancouverites choose different ways of getting around for different kinds of trips. Active modes are most often chosen for commuting, shopping, dining, and recreational or social outings.

#### Mode Share by Destination



7% 10% 20% 64%



**To School** 

Shopping



Source: 2015 Transportation Panel Survey



Walking and Cycling Mode Share by Time of Day

Source: 2015 Transportation Panel Survey

## Time of Day

Travel patterns vary by time of day. The number of walking trips peaks in the early afternoon, while the number of cycling trips is highest in the morning and evening commute times.

#### Walking and Cycling by Season



Percentage of respondents who walk and cycle at least occasionally.

Source: Active Transportation Survey, 2015

## 32,000 people in Vancouver bike at least 5 times per week in rainy cold weather.

Source: 2015 Transportation Panel Survey

## Seasons

Vancouverites make different travel choices in different seasons. Cycling trips vary more between the light and dry season and the dark and rainy season than walking trips. 23

# Walkability + Bikeability





Source: walkscore.com, 2014

## Vancouver's Healthy City Strategy recognizes that healthy urban environments are characterized by complete, compact, and connected communities.

In 2015, 69 per cent of residents lived in neighbourhoods with a Walk Score of 70 or higher, which indicates that most errands can be accomplished on foot.

The strategy has a target to increase Walk Scores across Vancouver's neighbourhoods.

## Vancouver's total bike network

# 24%

300km

## designed for allages-and-abilities



from the Vancouver Convention Centre to Spanish Banks, Seaside Greenway is Vancouver's longest

View and download our most up-to-date cycling map at: vancouver.ca/bikevancouver



54%

Longest Greenway: Seaside Greenway

## would like to travel by bicycle more often.

2015 Transportation Panel Survey



#### Designing for All Ages and Abilities (AAA)



Shared use lane

Painted bike lane

Buffered bike Local street lane

bikeway

Protected bike lane

Off-street pathway





## Infrastructure: 2013-2015

For our first annual report card, we are taking a look back at major improvements made to walking and cycling routes in the first three years of our Transportation 2040 plan.



The upgrade addressed safety issues at the intersection of Union Street and Main Street, and brought this section of Union Street up to a AAA design.

## Union Street Bikeway Upgrade (2013)

The Adanac Bikeway extends from Downtown to Boundary Road where it connects with Burnaby's Francis Union Bikeway. The Union Street upgrade significantly improved connections between the Adanac Bikeway, the Seawall/ Seaside Greenway, the Carrall Street Greenway, and the Dunsmuir Viaduct protected bike lane.

The upgrade addressed safety issues at the intersection of Union Street and Main Street, and brought the section between Gore Street and Main Street up to a AAA design through the installation of protected bike lanes and paintand parking-buffered bike lanes.

Read more at: vancouver.ca/adanacbikeway



People of all ages and abilities can now walk and cycle along the Greenway from Stanley Park to Hornby Street through the West End.

## Comox-Helmcken Greenway (2013)

The development of Section 1 of the Comox-Helmcken Greenway provides an east-west connection through the West End. People of all ages and abilities can now walk and cycle along the Greenway from Stanley Park to Hornby Street.

The Greenway connects parks, schools, community centres, neighbourhoods, and retail areas. Benches, trees, and gardens beautify the street and provide places to rest and socialize.

Read more at: vancouver.ca/comoxgreenway

#### **Greenway Health Benefits**





The City commissioned a study by the UBC Health and Community Design Lab and partnered on another study with the Centre for Hip Health and Mobility. Both studies reinforced the health and well-being benefits to nearby residents of improved access to walking, cycling, and social opportunities along the Comox-Helmcken Greenway.

Source: UBC Health & Community Design Lab - Study of Travel, Health, and Activity, Comox-Helmcken Greenway: 2012-2015

## **Average Daily Bicycle Volumes**



## Seaside Greenway: Point Grey Road Active Transportation Corridor and York Bikeway (2014)

Phase 1 of the development of an Active Transportation Corridor along Point Grey Road provides a safe, convenient, and comfortable connection between Burrard Bridge and Jericho Beach Park. People of all ages and abilities can now walk and cycle the full 28-km length of the Seaside Greenway from the downtown Convention Centre to Spanish Banks Park, through Coal Harbour, Stanley Park, English Bay, False Creek, Kitsilano, and Point Grey.

To make this AAA improvement, Point Grey Road between Alma and Macdonald Streets was converted to a trafficcalmed residential street, redistributing 10,000 daily vehicle trips to other arterial roads. The project also enhanced connections for cycling commuters between downtown, Kitsilano, and Point Grey via a new local street bikeway on York Avenue.

Phase 2 of the project (2016-17) will make further improvements to the pedestrian realm along Point Grey Road, including wider sidewalks, raised crosswalks, lighting upgrades, additional traffic calming, and other amenities.



#### **Burrard Street and Cornwall Avenue**



## Burrard-Cornwall Protected Intersection (2014)

Major improvements were made to the Burrard-Cornwall intersection at the south end of the Burrard Bridge. By simplifying the complex intersection, a major collision hotspot was addressed and safety and connectivity were improved for all users. Crossing the street on foot or bike is now much easier, requiring only two crosswalks instead of five.

#### Read more at: vancouver.ca/pointgreycornwall

Source: Bicycle counters and estimates; See council.vancouver.ca/20160504/ documents/pspc2-presentation.pdf for more information on methods 33



# Perceptions + Motivations


# In January 2015, we conducted two surveys on perceptions of active transportation using the City's Talk Vancouver online panel.

Nearly 1,000 panelists took part in the Walking Questionnaire, and nearly 1,300 panelists in the Cycling Questionnaire.

The results of these surveys indicate some common perceptions and attitudes toward walking and cycling in Vancouver.

# Walking Perceptions

#### Walking...



# Talk Vancouver panelists largely saw walking in a positive light, as a reliable and convenient way to get around that is relaxing, and good for health and the environment.

Well-lit, wide sidewalks were most important to panelists, and they enjoyed walking in vibrant places.

The graphs above show the percentage of respondents who agreed or strongly agreed with each statement.



Source: Talk Vancouver Walking Questionnaire, 2015



say walking is a good way to get fit and healthy. 37

# **Cycling Perceptions**

#### Cycling...



# Talk Vancouver panelists saw cycling as a reliable and convenient way to get around that is healthy and good for the environment.

Secure bike parking, well-lit routes, and routes separated from vehicle traffic were important to panelists.

The graphs above show the percentage of respondents who agreed or strongly agreed with each statement.



Source: Talk Vancouver Cycling Questionnaire, 2015



do not like cycling when the route means sharing the road with vehicle traffic.

# Walking Motivations



01

My destination is close

02

To get exercise/get or stay fit



Walking is a fun/ enjoyable/relaxing way to travel



Walking is an efficient/ convenient way to travel



The route is safe for walking—plenty of room to walk, separated from traffic, well-lit

#### **Barriers to Walking**

Distance/would take too long	59%
Need to do other things during trip/too many items to carry	52%
Don't want to arrive at destination sweaty/untidy	26%
Route feels unsafe (potential crime, not well-lit, not many people around)	22%
Bikes on the sidewalk	22%
Being struck by a vehicle/bicycle	15%
Trip would require walking up/down hills	13%
Sidewalks are too narrow/not separated enough from traffic	12%
Have a disability or health concern	8%
Don't feel physically fit enough to walk	8%
None or very few of the people you know walk for their trips	6%

Source: Active Transportation Survey, 2015

### **Motivations + Barriers**

In Fall 2015, we conducted a survey of 1,250 residents to better understand why and when Vancouverites do and do not choose to walk and cycle.

Respondents' decisions to walk and cycle for both commuting and non-commuting trips were influenced by fitness, joy, and convenience. Proximity of destination and route safety were also important motivators for walking, while route convenience and environmental sustainability were bigger motivations to cycle.

When asked what made them less likely to choose an active mode, issues of safety, logistics (i.e. multi-purpose trip, appearance), and distance topped the lists for both walking and cycling.



Source: Active Transportation Survey, 2015

#### **Barriers to Cycling**



Source: Active Transportation Survey, 2015



find riding in dark or wet conditions a barrier.

# Addressing Barriers





#### **Collisions and Fatalities by Road User**



Source: ICBC Collision Data, 2009-13; VPD Traffic Fatality Data, 2009-13

# Eliminating transportationrelated fatalities is a key goal of Transportation 2040.

Improving safety for vulnerable road users-including people walking and cycling, children, seniors, and people using mobility aids-is a critical part of achieving that goal.

People walking and cycling make up a small share of road users involved in collisions, but are much more vulnerable to injury and fatality than occupants of motor vehicles.



#### Walking Safety

## Feeling safe while walking depends on high-quality infrastructure as well as a sense of personal safety.

#### Pedestrian Safety Study (2012)

In 2012, the City commissioned a Pedestrian Safety Study to analyse collision patterns and safety issues for people walking throughout Vancouver. The study found that collisions involving people walking have been declining since 1996.

The study identified a number of key hot spots, many of which are located at intersections on arterial roads. To enhance safety, the City has completed improvements at priority intersections, including crosswalk countdown timers, pedestrian safety 30 km/h zones, LED lights, new traffic signals, and longer crosswalk crossing times.

Read more at: vancouver.ca/files/cov/pedestrian-safety-study-2012-final-report.pdf

Source: 2012 Pedestrian Safety Study

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#### **Pedestrian Collisions**

Approximately three quarters of pedestrian collisions classified in the Pedestrian Safety Study occurred at intersections.





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Source: 2015 Cycling Safety Study
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#### **Cycling Safety**

A large part of feeling safe while cycling is being protected from higher-speed motor vehicle traffic, whether through physical barriers, or traffic-calming measures designed to slow vehicle speeds.

#### **Cycling Safety Study**

In 2015, the City commissioned a Cycling Safety Study to better understand cycling safety issues throughout Vancouver. The study found that the annual number of collisions involving people cycling have remained consistent since 1996 even as the number of daily cycling trips has increased significantly.

The City uses education, enforcement, and engineering to improve cycling safety. Key practices include:

- Protected bike lanes and protected intersections
- · Bicycle signals with vehicle turn lanes
- Pavement markings and green paint at lanes, driveways, and intersections
- Improved visibility at intersections, lanes, and driveways
- Sufficient and consistent width on busy local street bikeways
- The Cycling Spot Improvement Program (read more at vancouver.ca/spotimprovements)
- Separation for walking and biking on off-street pathways
- Designing for slow cycling on the Seawall and other paths
- Promoting safe behaviour for all modes of transportation
- Bylaw enforcement

Using these tools, we are working to address high-collision corridors and intersections identified in the report, as well as others throughout the city.

Read more at: vancouver.ca/files/cov/cycling-safety-study-final-report.pdf

Source: 2015 Cycling Safety Study

Nearly half of all cycling crashes classified in the Cycling Safety Study are a result of a conflict with a motor vehicle.



# collision with motor vehicle



fall to avoid collision with motor vehicle



collision with motor vehicle door

Source: 2015 Cycling Safety Study



# The person cycling had the right-of-way in 9 out of 10 bicycle-vehicle collisions where ROW could be determined.



Source: Vancouver Police Department

#### **Bike Theft**

Fear of bike theft is a barrier to cycling and a factor in overall cycling safety. The number of reported bike thefts has been growing since 2012.

DUVER

# Help #endbiketheft.

REGISTER your bike with 529 Garage. It's easy, it's free and it will help Vancouver Police return more of the thousands of stolen bikes they recover each year.

ALWAYS use a high-quality hardened steel lock, securing the wheel AND frame to dedicated bike parking racks.

REPORT suspicious activity and all bike thefts. This helps the VPD target their efforts, better understand the problem and do better work.

Voit www.529garage co to help #endblietheft.

529 Garage

Few bikes get returned to their owners when recovered by police because many owners don't record and share their bike serial number and description.

Help defend your bike against theft by:



Registering your bike with 529 Garage bike registry for free



thieves

Getting a 529 Garage decal to discourage



Locking your bike properly

The City's Greenest City Action Plan team, Park Board, Vancouver Police Department, and Vancouver Police Foundation are working with Project 529 Garage to register 10,000 bicycles by 2018.

Read more at: vancouver.ca/streets-transportation/register-your-bike-to-reduce-theft.aspx



#### **Education and Promotion**

Educating, promoting, and celebrating are important to build a culture in Vancouver that supports and encourages active transportation.

Our aim is for Vancouverites to see walking and cycling as convenient, fun, and normal ways to get around every day.



#### This is How We Roll Photo Shoot and Sweepstakes

The City hosted the "This Is How We Roll Photo Shoot and Sweepstakes" at three locations in July 2015 to promote active transportation and to let people know about upcoming public engagement on the 10th Avenue corridor.

The collection of photos from the shoot show the faces of everyday Vancouverites who get around on foot and bike – and who like to have a little fun while doing it!



#### One Million Bikes Across Burrard Bridge

On Saturday, August 22, 2015 at approximately 11:15am, the millionth bike of 2015 crossed the Burrard Bridge. The City held a celebration at the south side of the bridge on Thursday, August 20 to mark the occasion by having people guess the exact time the bike counter would hit one million, as well as handing out fun BikeVancouver swag and "thank you" chocolates to people passing by on bike or on foot.



#### **Bike to Work Week**

Bike to Work Week is celebrated across BC every spring, and in Metro Vancouver a second time every fall.

In 2015, close to 12,000 Vancouver residents participated in the spring and fall events (up from 8,200 in 2014). Nearly 2,000 of these participants were new bike commuters (up from 1,500 in 2014).

# **Photo Credits**

**Cover Image** Steve Chou

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#### AAA (all-ages-and-abilities) cycling routes:

a route designed to feel safe and comfortable for everyone, including seniors, families with young children, and new riders

**Active transportation:** travelling by walking, cycling, rolling, or any other method of movement by human power

**Infrastructure:** the "hardware" that makes active transportation possible, including sidewalks, bike lanes, streets, and pathways

**Mode share:** the proportion of trips taken using a particular method — or mode — of travel (e.g. walking, cycling, transit, auto)

**Right-of-way:** the legal right to proceed before others in a particular situation or place (e.g. at an intersection)







#### For More Information:

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