

Vancouver
Seattle
Portland
San Francisco

A DIY fish trip



Why?

A bit of context

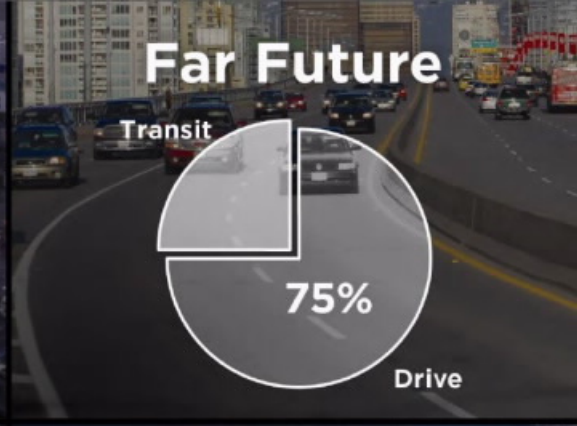
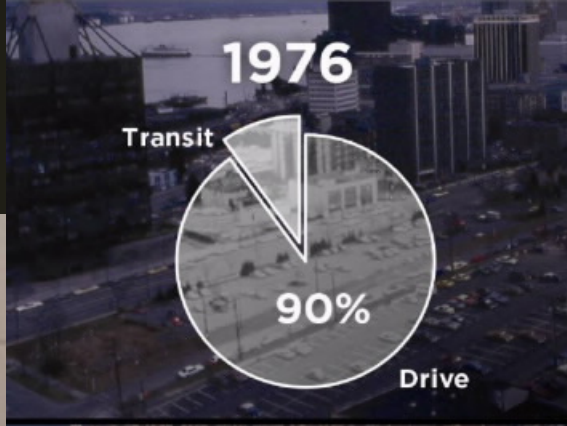
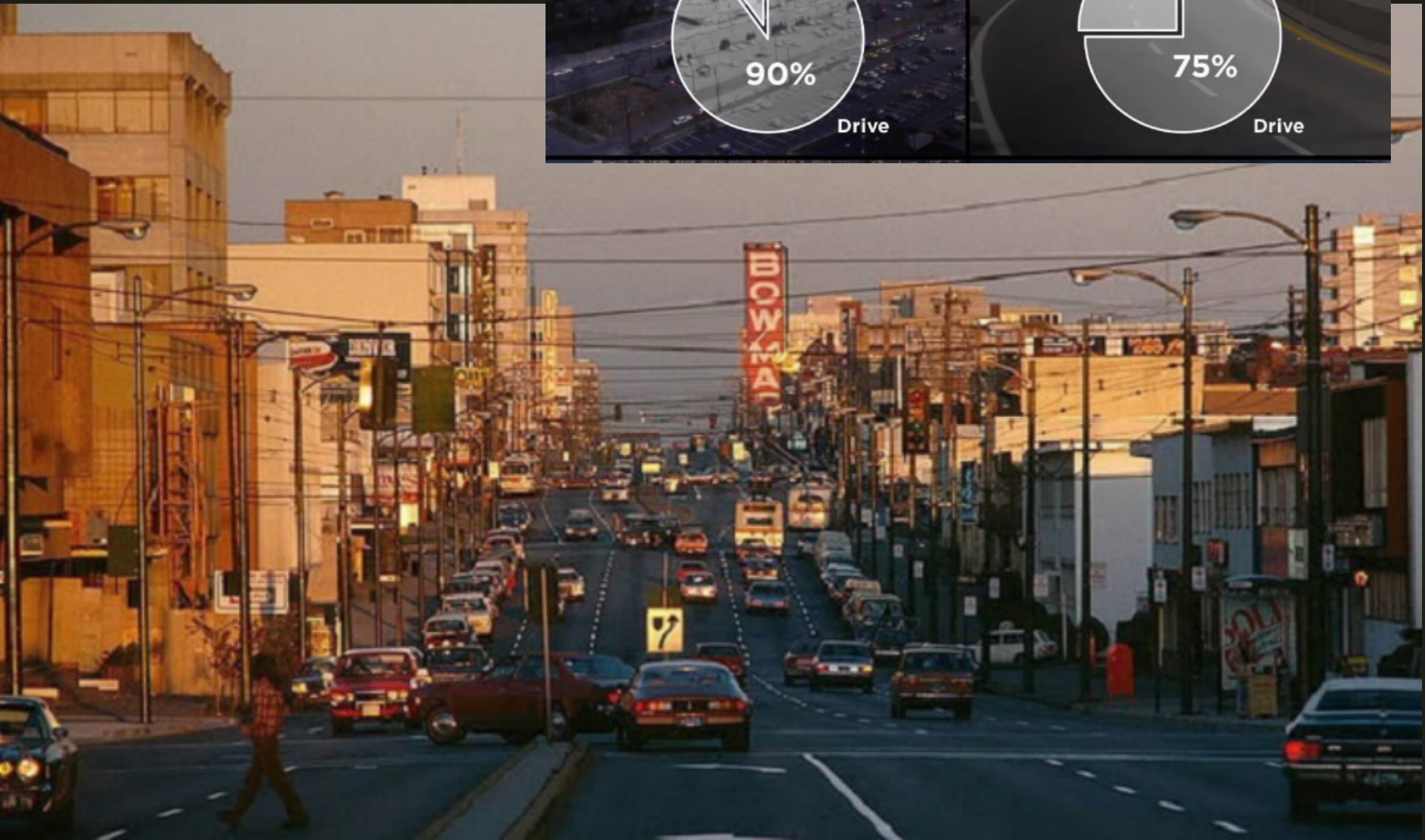


A bit of context



Too different?

Can we somehow relate?



Vancouver, 1980s



Vancouver, 1980s



Vancouver, Dunsmuir viaducts, 1970s



San Francisco, Embarcadero Freeway



LEGEND

- STRUCTURE
- GRADED
- - - TUNNEL

LOOKING WEST
EMBARCADERO IN FOREGROUND



18972
8-23-49



Portland, City centre (now Pioneer Square)



Will the last person
leaving SEATTLE -
Turn out the lights.



San Francisco, first Freeway Revolt/
foundsf.org
Seattle, 1970s

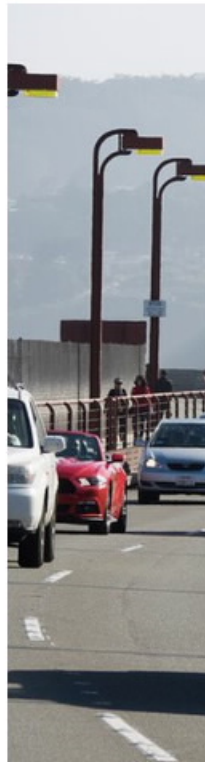
SAN FRANCISCO TRANS

San Fr world,

Traffic data sta

BY ADAM BRINKLOW |

TWEET SHARE



ItsaWaB

Local News | Traffic Lab

Seattle is a world-class city – for traffic congestion

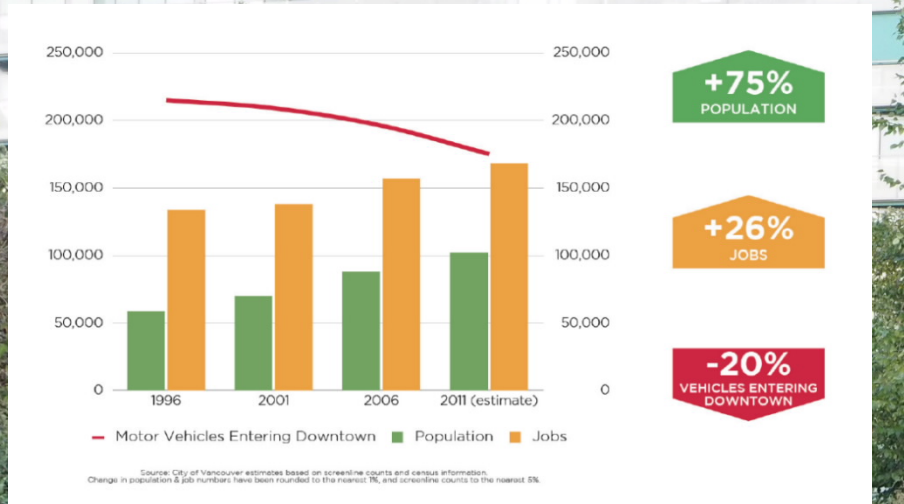
Originally published February 21, 2017 at 6:00 am | Updated February 22, 2017 at 10:37 am



1 of 2 A 2015 emergency-repair job on an Interstate 5 South expansion joint near the West Seattle exit clogged traffic through Seattle with backups reaching 13 miles north of the repair site. This view looks north from... (Mike Siegel/The Seattle Times) More ▾

Despite what some
Part 1 of 11

So what's interesting?

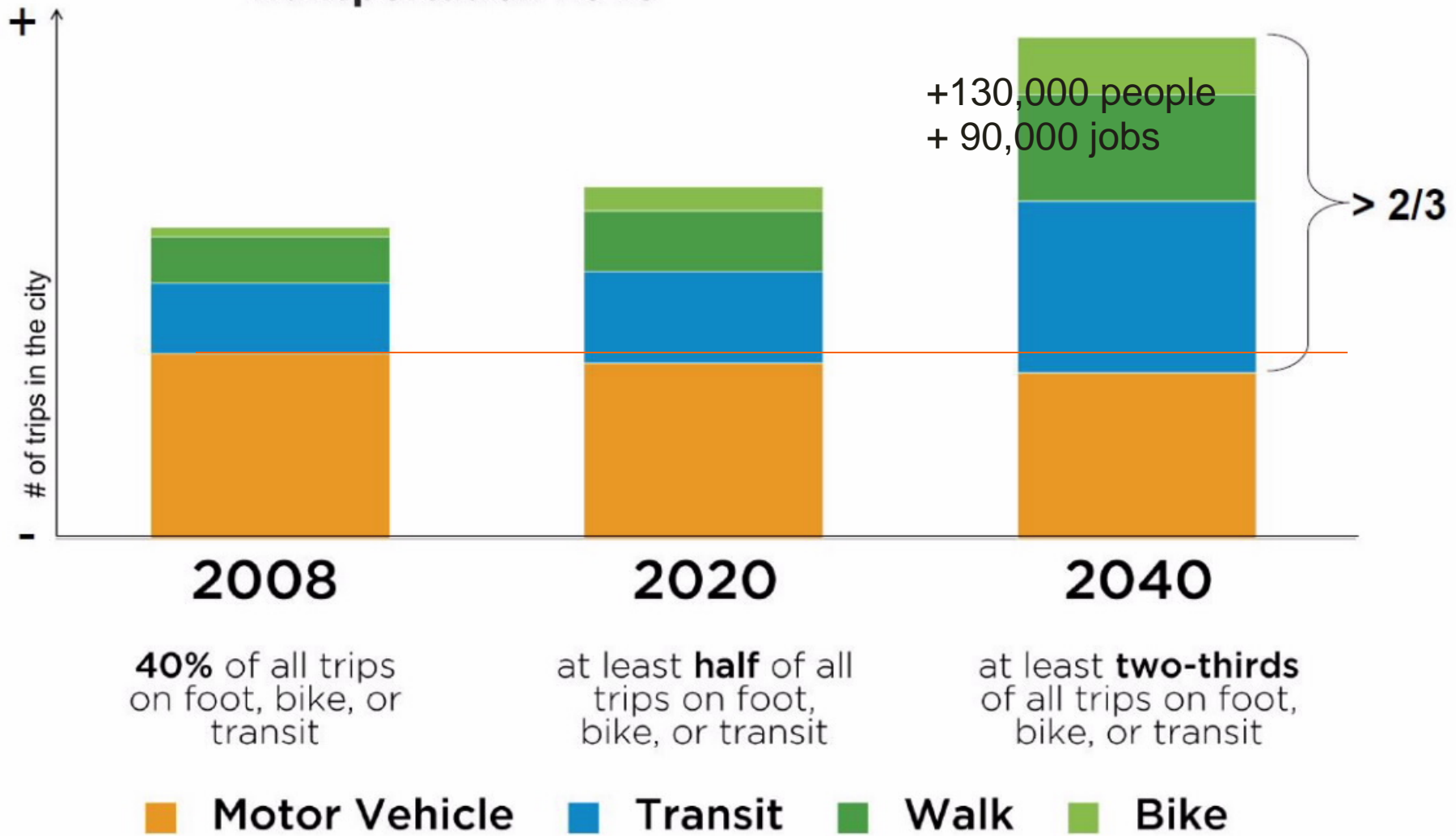


Vancouver

Vancouver Transportation 2040 plan as adopted by the Council

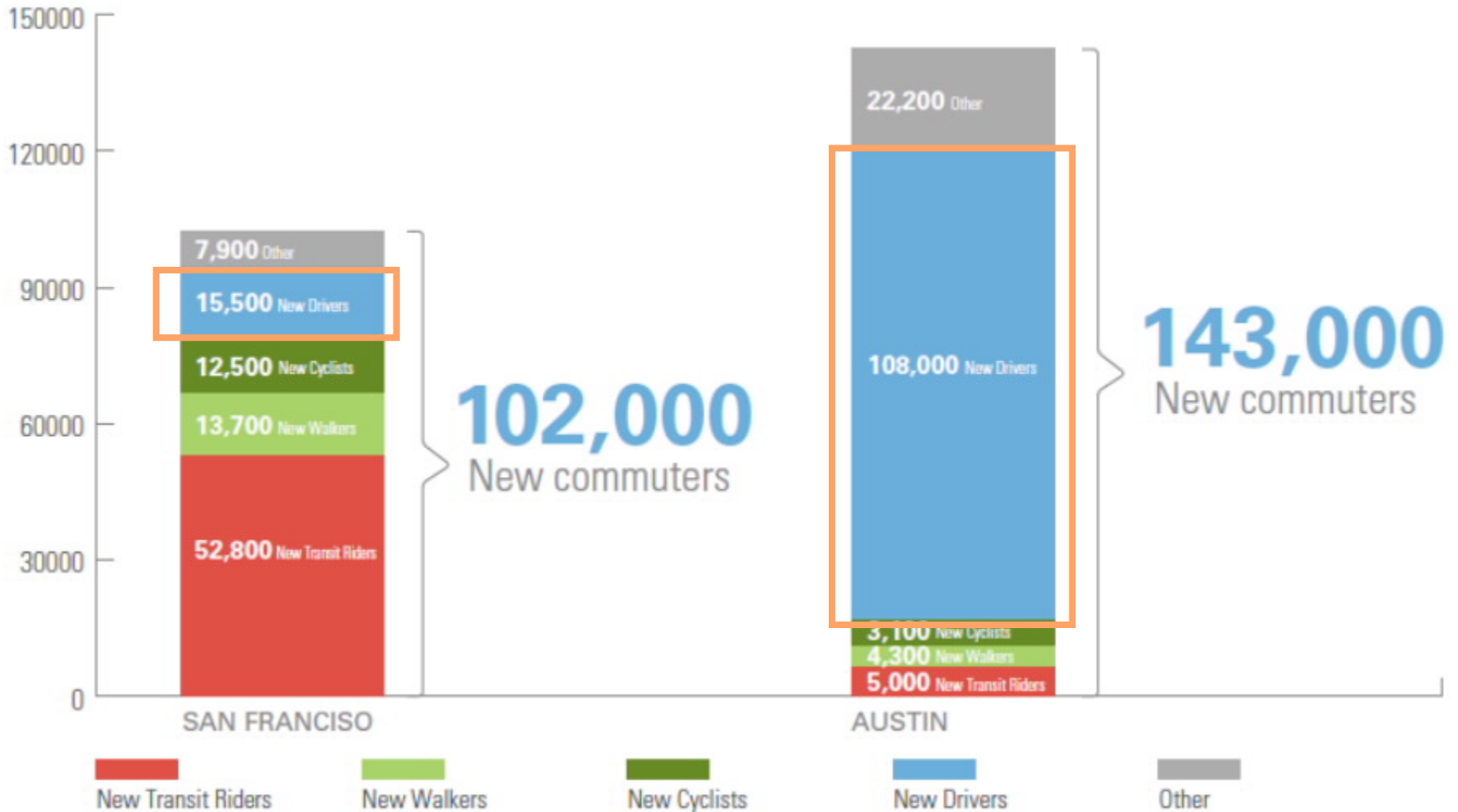
PLAN TARGETS

Transportation 2040



For all trips originating in the City of Vancouver.
 Source: 1994, 1999, 2004, and 2008 TransLink Trip Diary Surveys. 1994, 1999, and 2008 data was collected in the Fall, while 2004 data was collected in the Spring and adjusted for seasonal transit variation. 2008 data corrected for removal of 0-4 age group (non included in past survey results). Trips by commercial drivers (couriers, taxis, trucks, and bus drivers) not included.

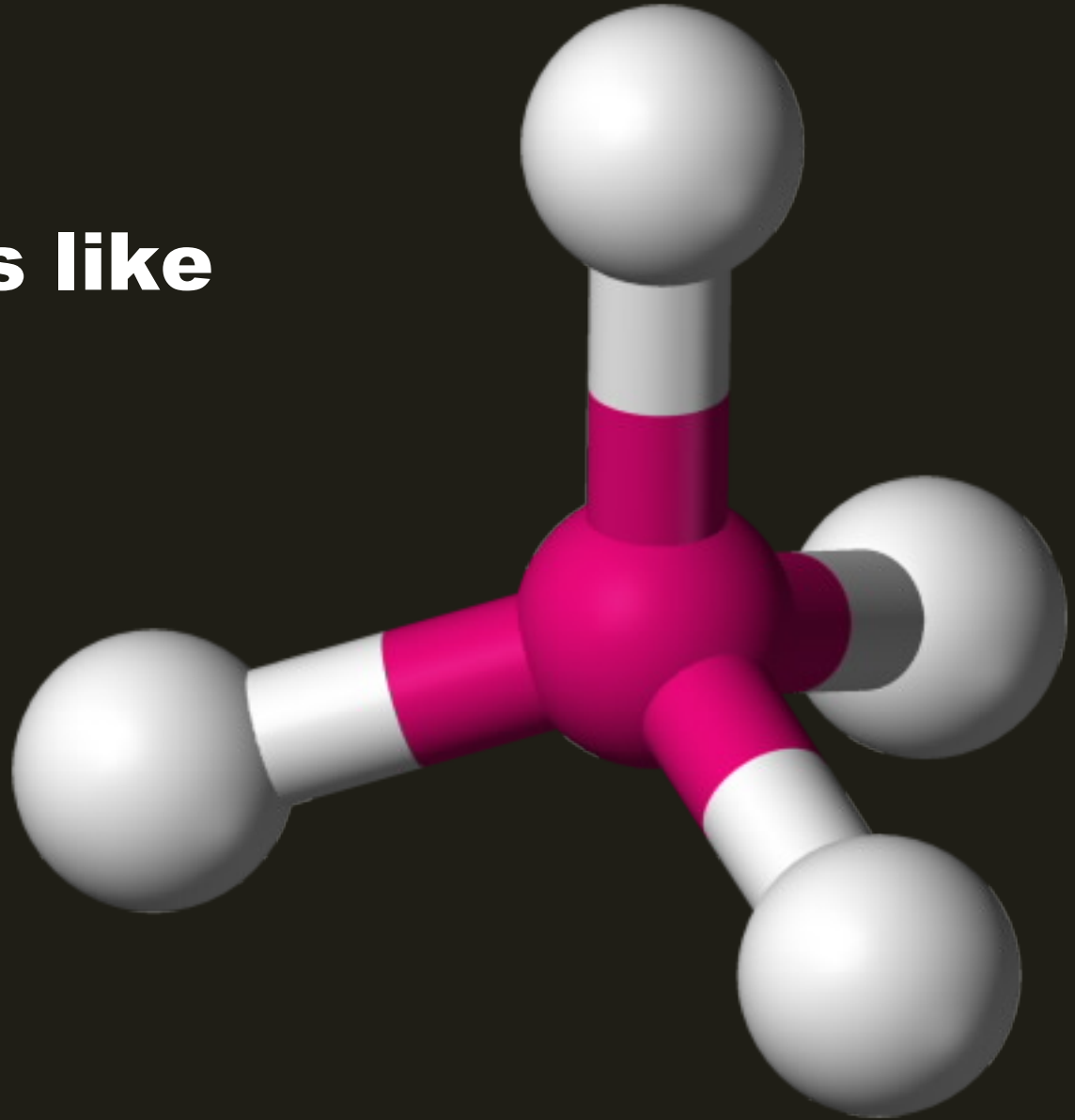
Commuter growth in Austin and San Francisco (2006 - 2015)





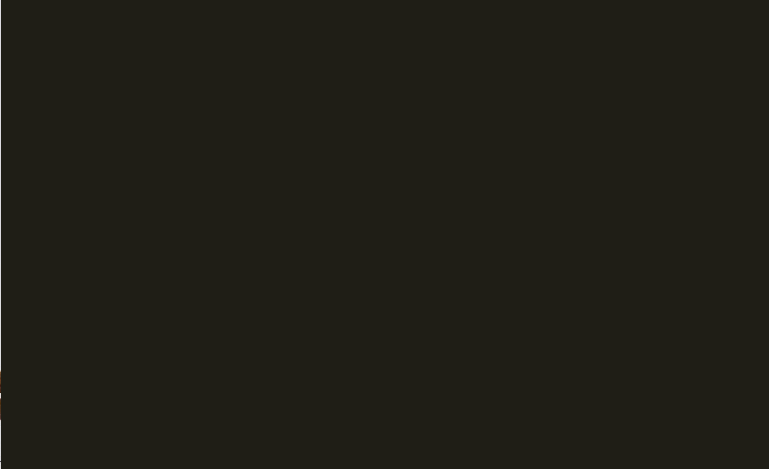
Ice Cap Organics
Pemberton BC
ORGANIC

**How it looks like
in 5 ideas**



A disclaimer

1. Access & streets





010

DA

010

010



Spalten
ICE CREAM

NO FIT

Spalten
ICE CREAM

DOG
EARED
BOOKS

20th ST

SOTE

BOOKS

NEW DVD





N Caltrain/Ball Park

1410 B

STOP DO NOT PASS

INJURED?
800.800.0000 BARNES

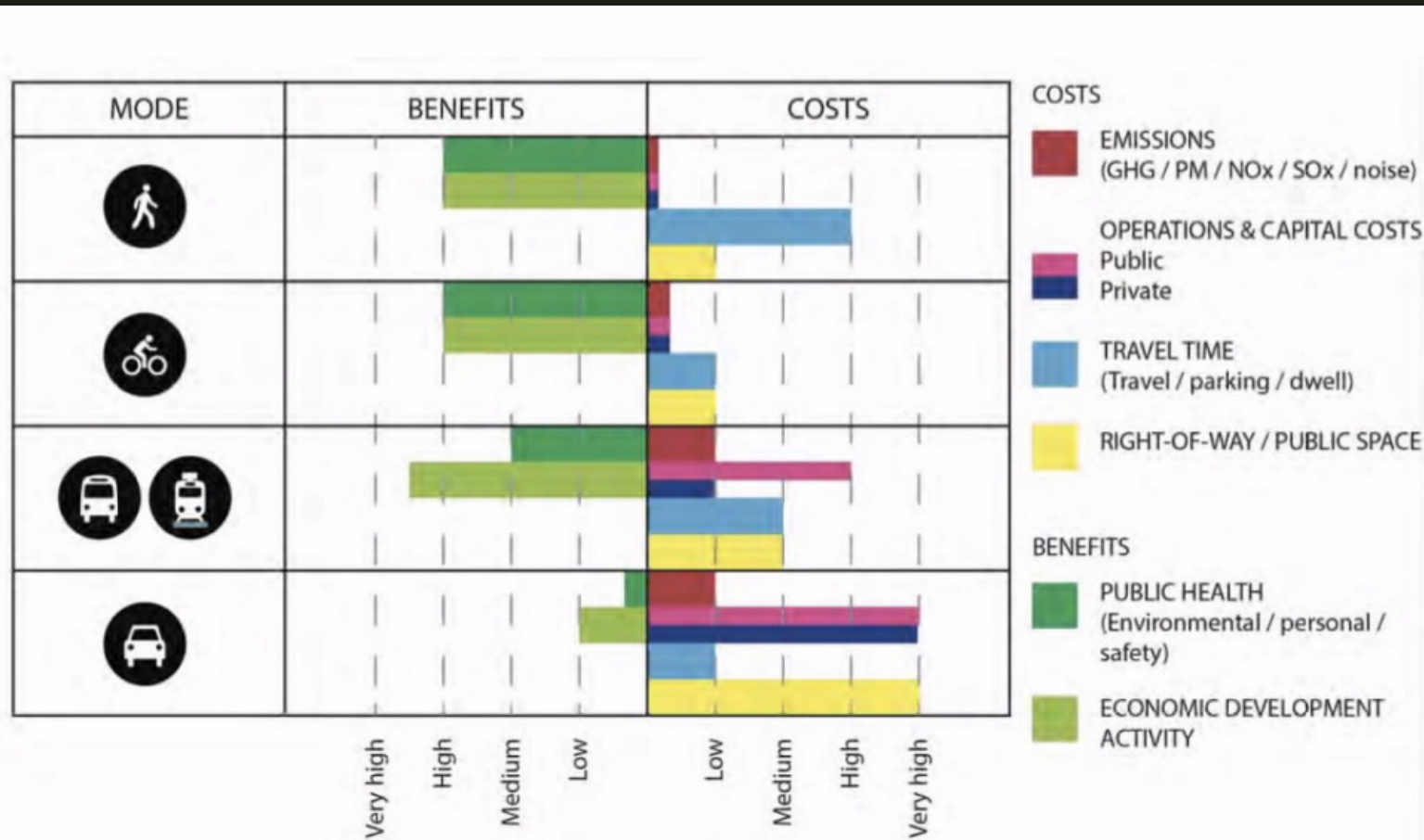
900

Cole

71M768

2. Moving people and goods

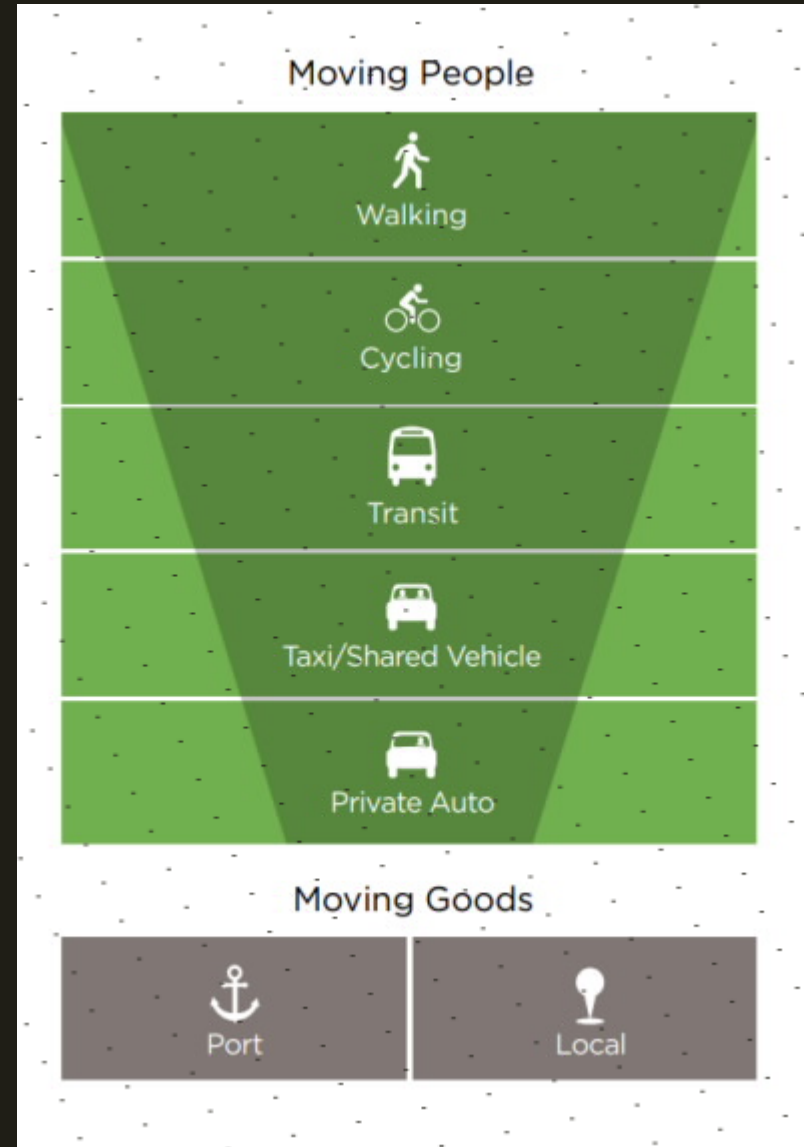
Clarity on costs and benefits



Integration

Modal benefits analysis inform investment priorities

... informing priorities



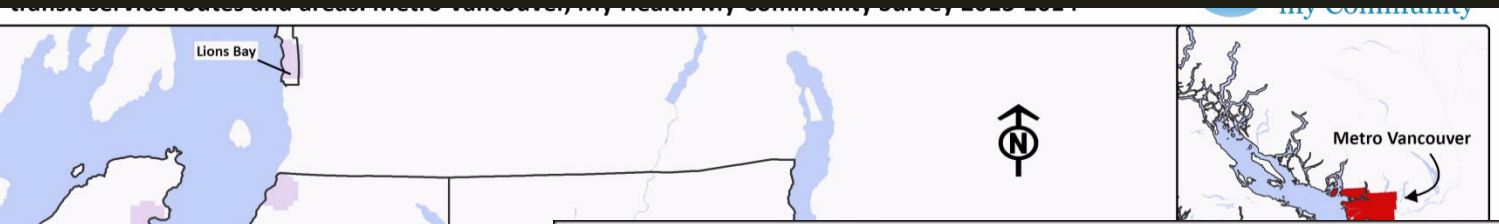
Vision of the needs, and the changing “markets”



SFMTA, presentation, San Francisco Complete Streets Strategy, Timothy Papandreou Deputy Director Sustainable Streets, 2013



Efficient PT, integration



Walking, Cycling and Public Transit Use

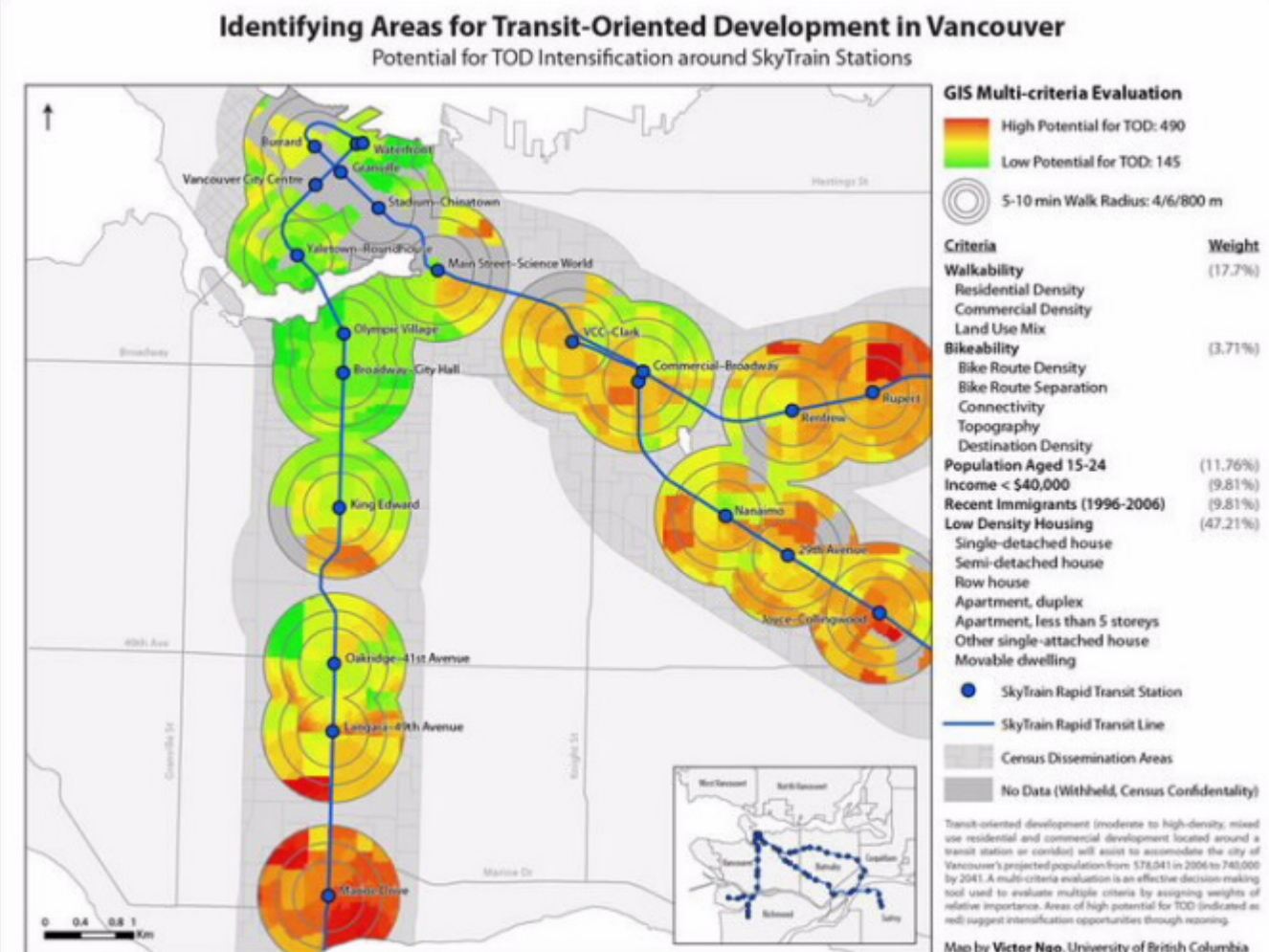
- Lower than average
- Higher than average
- No data/data suppressed

Transit Service Routes and Areas

- Existing B-Line/SeaBus
- Proposed B-Line
- Existing Rapid Transit
- Proposed Rapid Transit
- New Transit Service Areas
- New or Expanded Transit Exchanges

Data source: My Health My Community Survey, 2013-2014.
 TransLink data source: Investments proposed in the Mayors' Council Transportation and Transit Plan, 2014.

Copyright © 2015 Vancouver Coastal Health, Public Health Surveillance Unit. Not for C



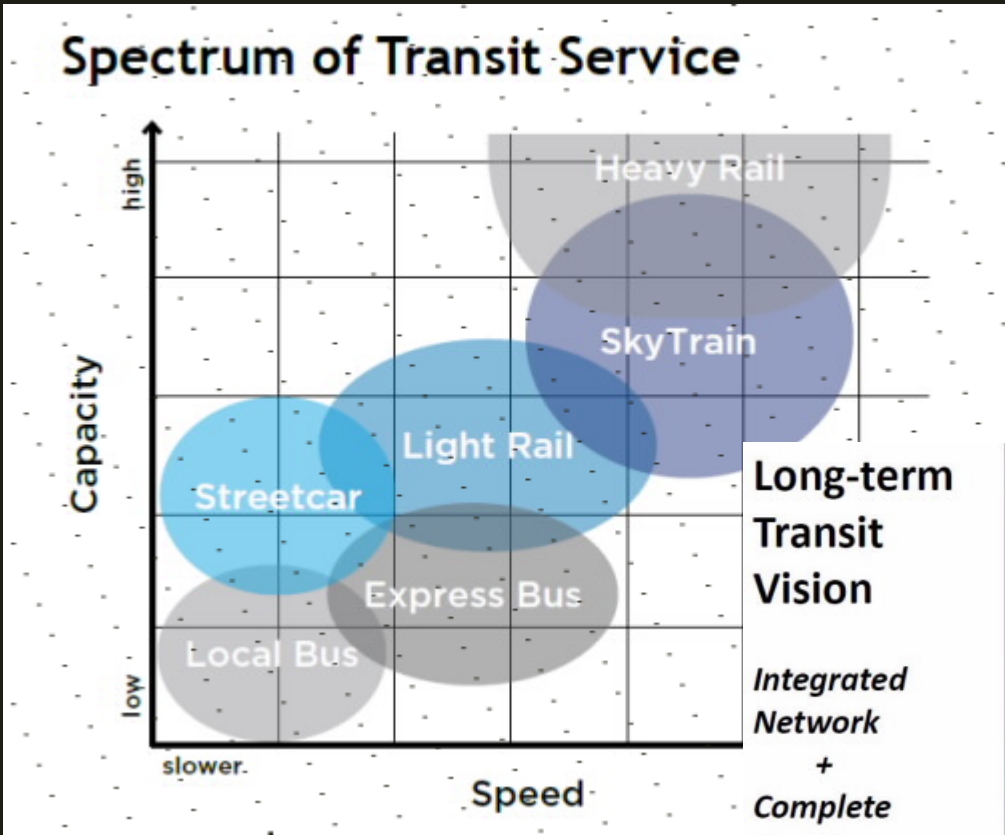
Refer to Spacing Vancouver article published on Feb. 27, 2012. Sources: Statistics Canada 2006 Census, City of Vancouver, TransLink, UBC Health & Community Design Lab, UBC Cycling in Cities

Transit-oriented development (moderate to high-density, mixed use residential and commercial development located around a transit station or corridor) will assist to accommodate the city of Vancouver's projected population from 578,043 in 2006 to 740,000 by 2041. A multi-criteria evaluation is an effective decision-making tool used to evaluate multiple criteria by assigning weights of relative importance. Areas of high potential for TOD (indicated in red) suggest intensification opportunities through rezoning.

Map by Victor Ngo, University of British Columbia

PT hierarchy and integration

Vancouver Transportation 2040



**Long-term
Transit
Vision**

*Integrated
Network*

**+
Complete
Streets**

- Multimodal Hub
- Local Service
- Core Network Connector
(high frequency/high capacity)
- Core Capacity Line
(high frequency/high capacity/high speed)
- Regional Rail Line
- Regional Ferry Line
- Regional Bus Line



**Infrastructure
Support**

Integrated Transit Network Vision

Walkable neighbourhoods



Connected walking and cycling networks



3. Innovation is not only new tech

HOMEGROWN BY HEROES

www.inzanaranch.
store@inzanaranch

PRODUCE

ORGANIC ROASTED ALMONDS

ORGANIC ROASTED ALMONDS

A woman with dark curly hair and sunglasses, wearing a pink floral patterned blouse and blue jeans, stands on the sidewalk looking towards the other woman.

A woman with long dark hair, wearing a red t-shirt, black leggings, and brown cowboy boots, stands on the street holding a coffee cup and a leash. A grey jacket is tied around her waist.







#VIVAROBSON Social Media Image



#VIVAROBSON Temporary Vinyl Decals

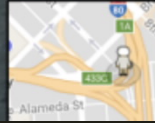


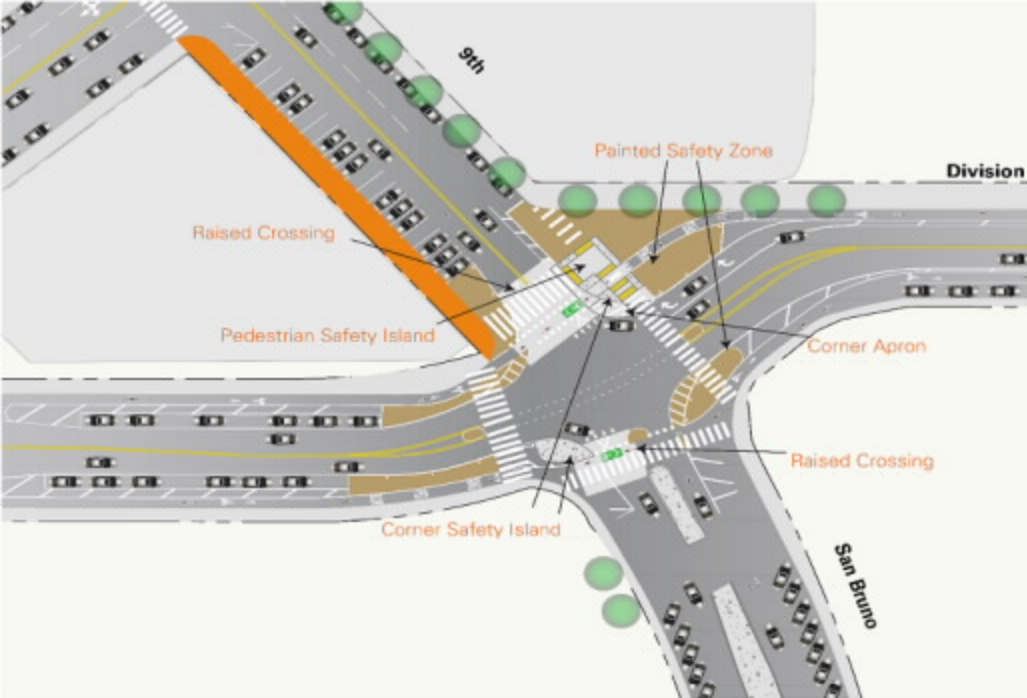
Moveable Chairs and Tables with Temporary Engagement Decals on 800 Robson, September, 2016

13 San Bruno Ave
San Francisco, California
Google, Inc.
Street View - mai 2011

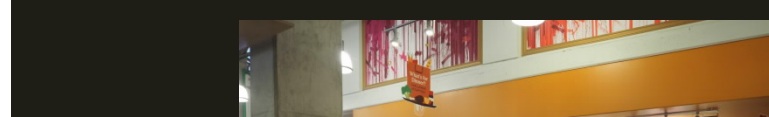
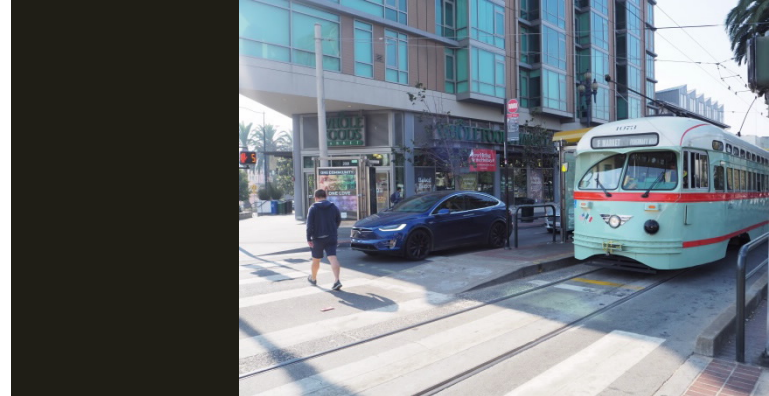


PUBLIC PARKING
Monthly Parking Available
1 20th
7 3000







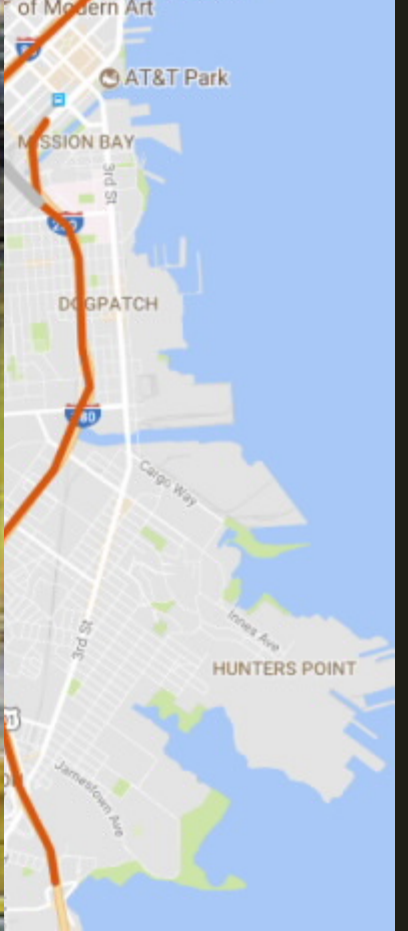
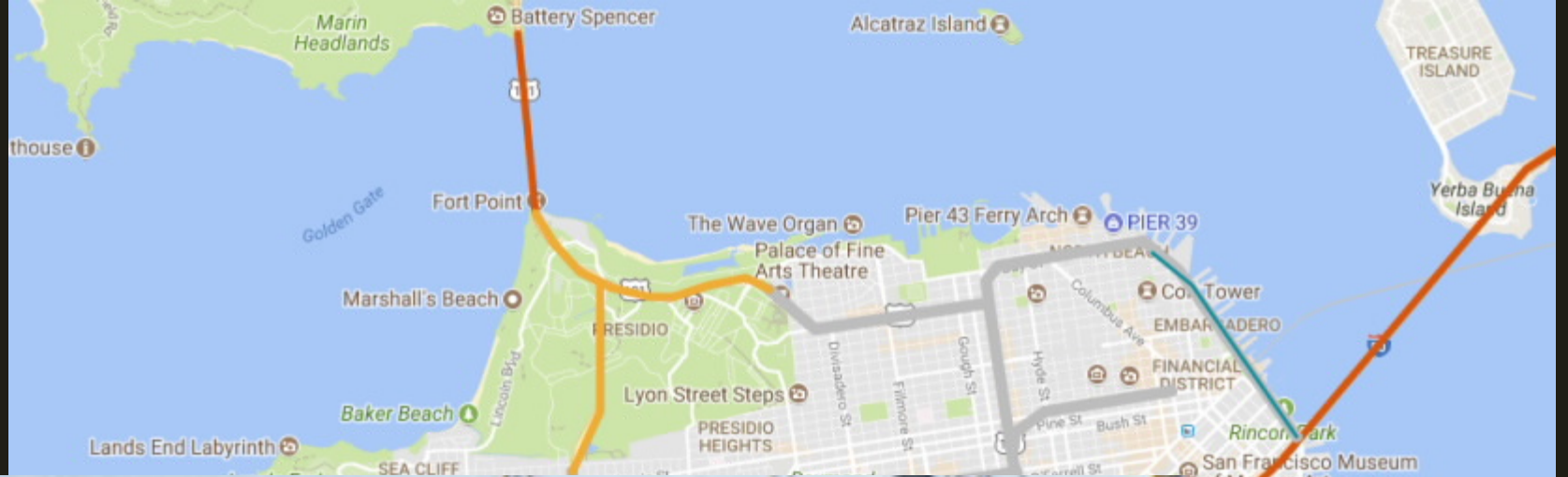


- A Improve pedestrian safety on major traffic streets
- B Enhance the existing cluster of cultural and institutional uses in the Civic Center area
- C Improve the quality, vitality and accessibility of the area's neighborhood commercial streets
- D Support new mixed use residential development on the former freeway parcels
- E Create a network of civic streets and open spaces, with new parks, street improvements and extensive tree planting
- F Support residential infill within the fine-grained physical pattern of existing residential neighborhoods



- G Encourage... use... Ma...
- H Cre... the...
- I Enc... con... stre...
- J Stru... cult...
- K Improve the intersection of Church and Market Streets as a major transit hub

<https://www.sfmta.com/projects/sustainability-climate-action>





4. Density, but quality



San Francisco, mixed use, local shops, neighbourhood activity hubs



San Francisco, South of Market (SOMA) redevelopment, public space (South Park)



Portland, Pioneer Square



San Francisco, community garden downtown (Tenderloin)



TY
F
KS

BOOKS

San La Talle

San La Talle

LeBaron

NO
PARKING
IN
ZONES
EXCEPT
ON
SIGNALS

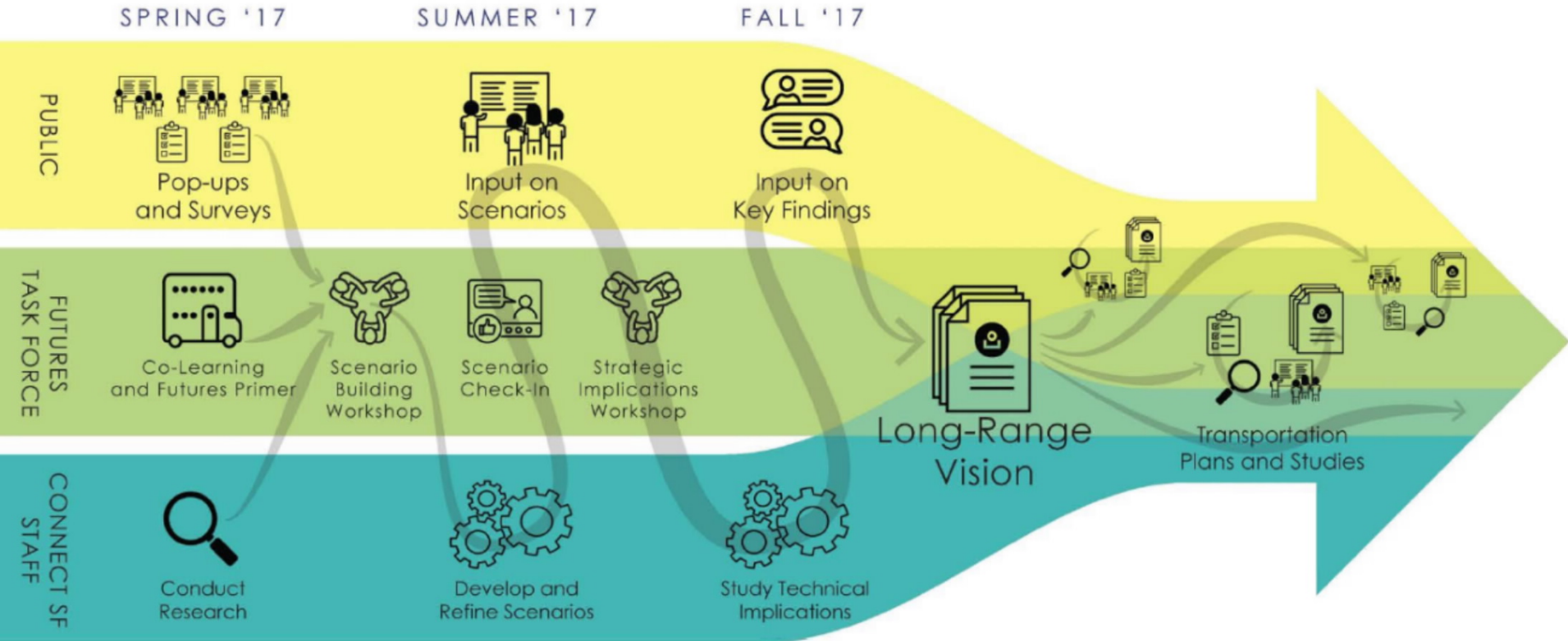
ONE WAY

W

W

5. Evidence, vision, commitment

ConnectSF Process



- Modal Studies
- SF Transportation Plan
- Transportation Element

**Sustainable =
healthier =
safer =
resilient =
more
equitable =
better for the
local
economy**

Healthier, Safer, Resilient and more Equitable

Implementing the climate actions can also provide multiple important co-benefits including:

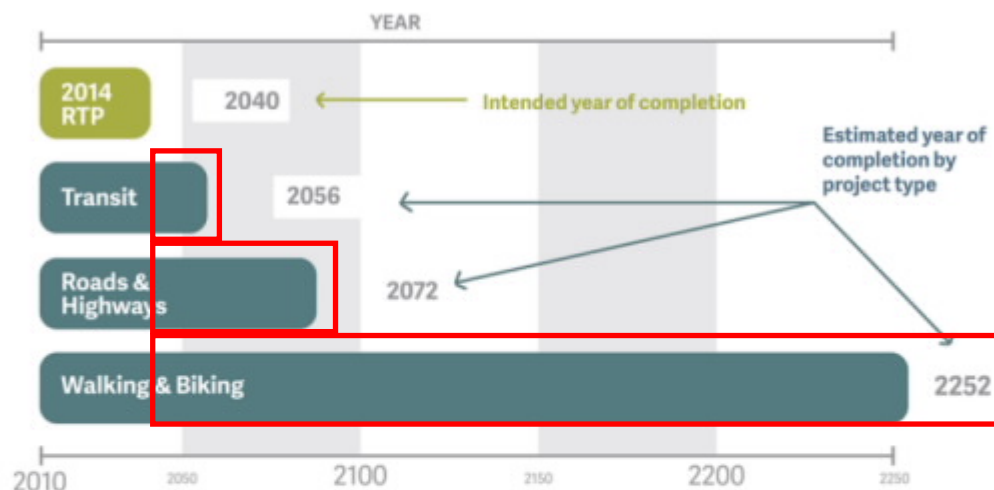
- Improving public health through the reduction of harmful air pollutants and through encouraging active transportation modes
- Reducing congestion and travel time
- Promoting dense and affordable development
- Providing safe, reliable, efficient and affordable transit
- Improving the public realm
- Creating green jobs
- Increasing resilience
- Building a more equitable San Francisco

Therefore, each of the strategies are viewed in the context of these other co-benefits and the initial capital cost of implementing the strategies.



Innovation in funding and delivery

At current rates of federal and state investment, greater Portland's planned transportation network will not be complete until 2252.



At current rates of investment, greater Portland's planned transportation network will not be complete until 2252.

[Click for a larger version.](#)

Most people would like these improvements for their families and communities to come sooner than 2242.

This is a good opportunity to examine how we fund our transportation system.

Portland
Investment
rates not
aligned with
targets

Transformation

- Bold policies
- Innovative projects
- Strategic investments
- Sustained leadership



THANK YOU

QUESTIONS?

Tamara Bozovic

@tamara_bozovic

tamara.bozovic@nzta.govt.nz

Clarity on actions and (co)benefits

COMPLETE STREETS

Long-Term Strategies:

		GHG REDUCTION POTENTIAL	CO-BENEFITS				COST
							
CST-1	Conduct community planning to support the building of a comprehensive protected bicycle network to support bicycle mode shift.		✓	✓	✓		  
CST-2	Implement Vision Zero policy to create safer streets.		✓	✓	✓		  
CST-3	Integrate "Pavement to Parks" concepts and green infrastructure into transportation plans and projects.		✓	✓	✓		  

LEGEND



Potential to reduce greenhouse gas emissions



Potential to advance equity



Potential to improve public health



Consistent with Transit First Policy



Potential to support jobs and prosperity



Initial Capital Cost (public)

Changing context, revised solutions

GEORGIA AND DUNSMUIR VIADUCTS/EASTERN CORE



GOAL FOR ECONOMY: Improve downtown connections and create new neighbourhoods

OBJECTIVE

The viaducts are two elevated roadways connecting the False Creek Flats area to Downtown. Originally built in 1915 to bypass the tidal waters, rail lines, and industry below, they were rebuilt in the 1960s as the first step in a proposed freeway system that was abandoned after public opposition. Land use around these structures has changed a lot since then, leaving the viaducts as an isolated stretch of freeway connected at both ends to an urban street network. They are more expensive to maintain than ground-level roads, they divide historic neighbourhoods from False Creek, and they occupy two blocks of centrally located land.

STUDIES OR ACTIONS COMPLETED

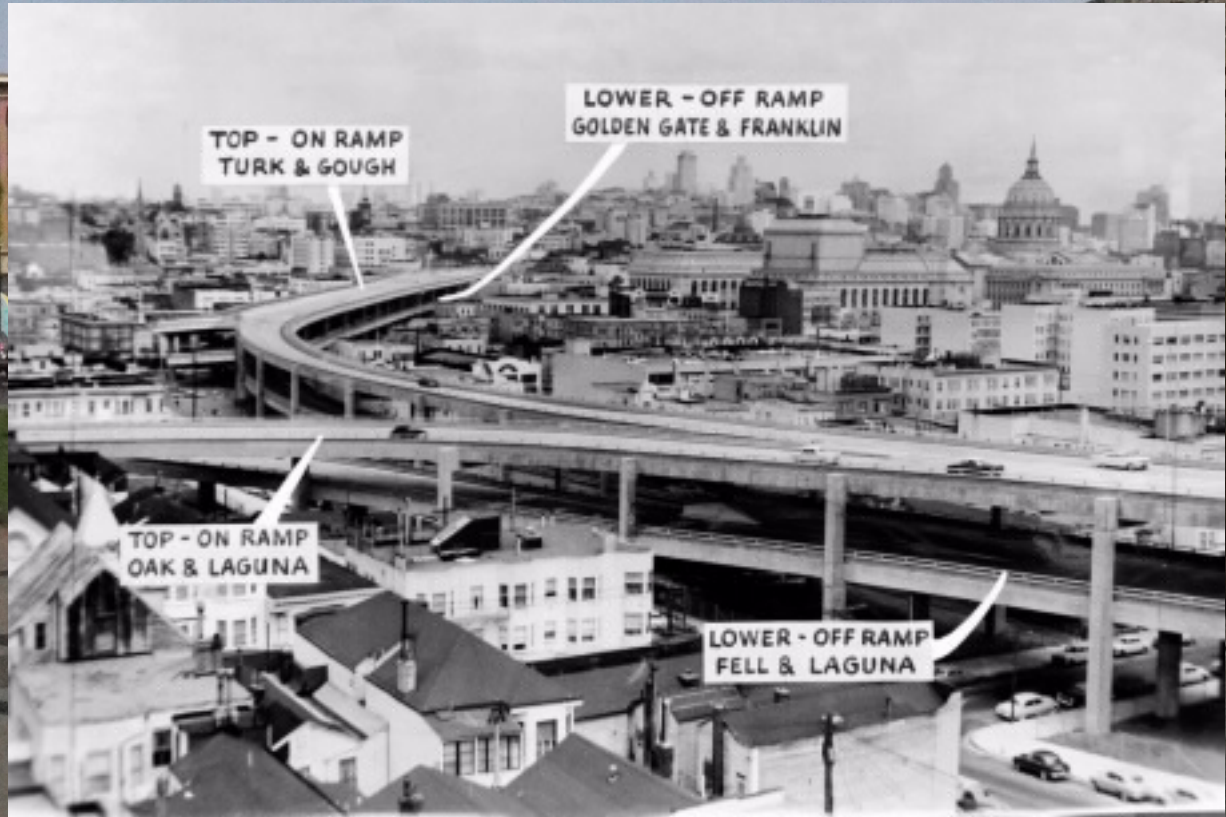
City staff, working in collaboration with a team of urban designers, landscape architects, transportation and structural engineers, and cost consultants, developed a concept for the area that identified key opportunities. The proposal is to remove the viaducts and replace them with an at-grade road network, which repairs a major gap in the city's urban fabric, improves walking and cycling connections, creates new parks and open space opportunities, and generates nearly seven acres of developable land for housing—including affordable housing. Significant work has been done to ensure that effective transportation routes to and from the downtown core remain for people and goods movement. The conceptual planning and transportation analysis of this phase of work was shared widely with the public.

NEXT STEPS

The next step is to complete an area planning exercise for the viaducts that includes the surrounding Northeast False Creek lands, in parallel with work on the Eastern Core/False Creek Flats. Northeast False Creek/Viaducts area planning will focus on imagining a future with an at-grade road network that replaces the viaducts, and will explore what landowner agreements and financial strategies are necessary to make it a reality. The Eastern Core Strategy seeks to improve transportation connectivity in the broader area for all modes, while enhancing industrial and commercial activity. These area plans are anticipated to take up to two years to complete, with stakeholders from various communities, past and future of the viaducts.

Vancouver Transportation 2040





San Francisco, public space and housing in the area of the former Hayes Valley Freeway (decommissioned in 2006)

Evidence

Shared understanding of
problems and causes

Vision

Strategy 1

Strategy 2

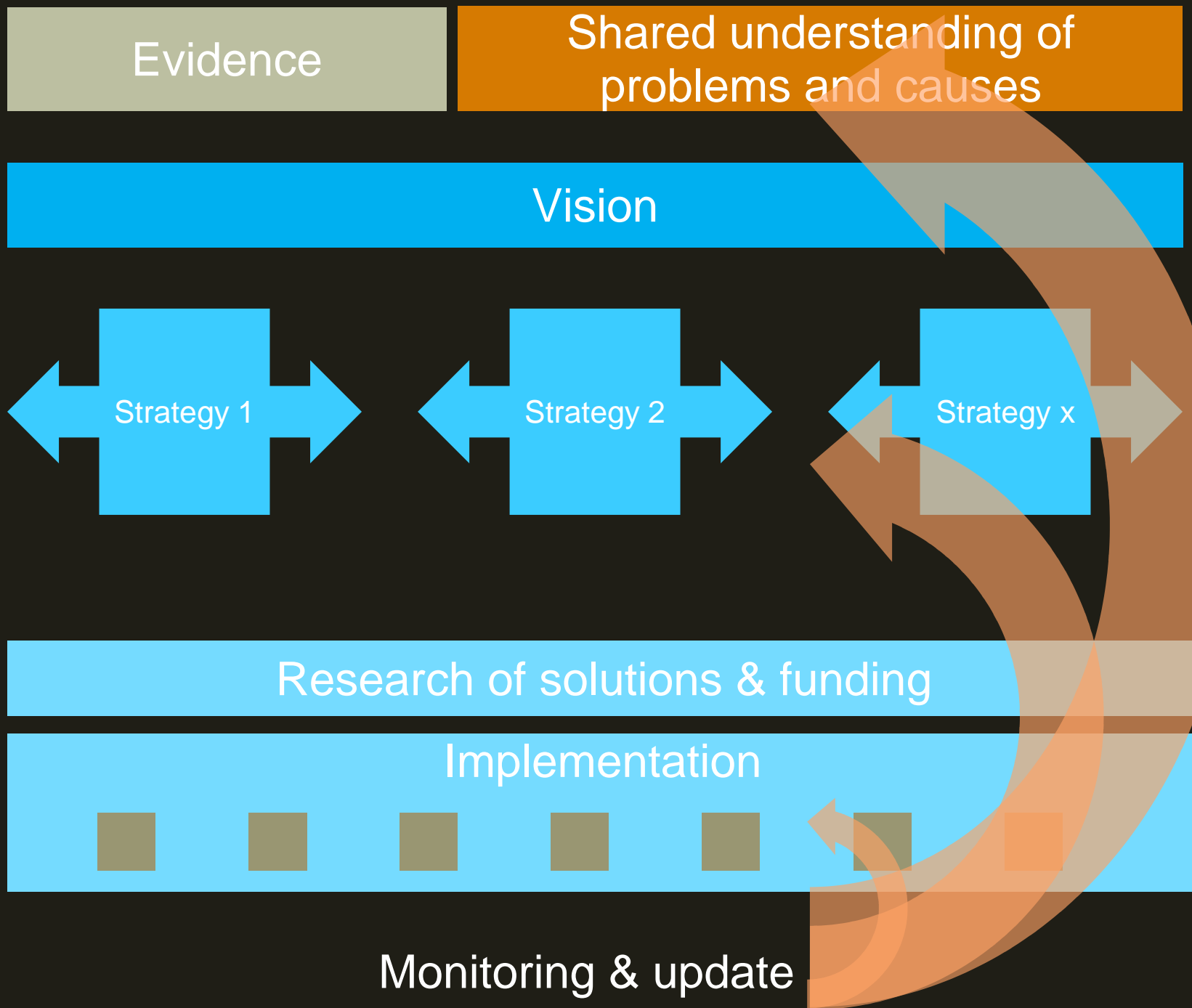
Strategy x

Research of solutions & funding

Implementation

Monitoring & update

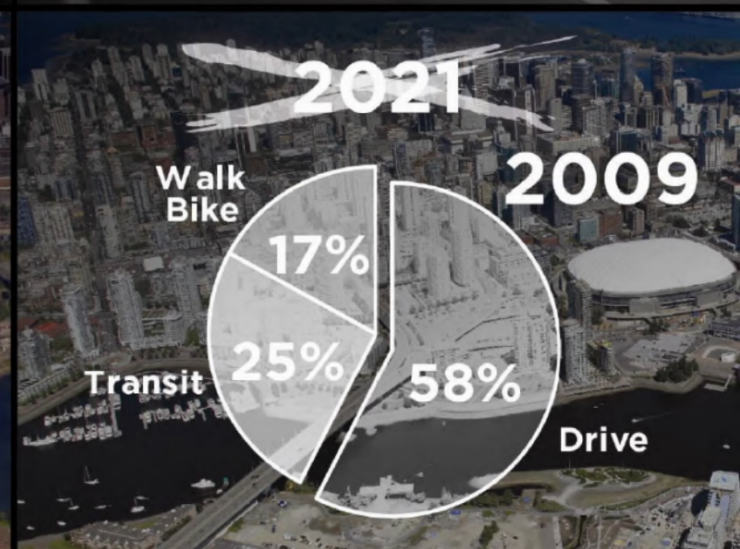
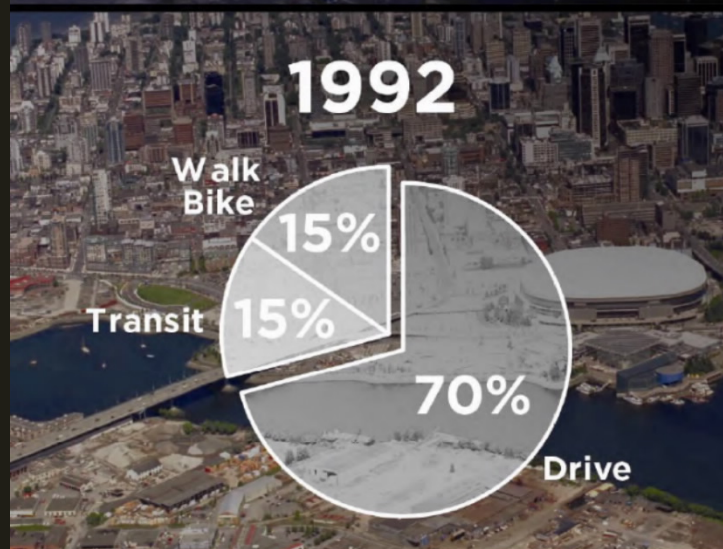
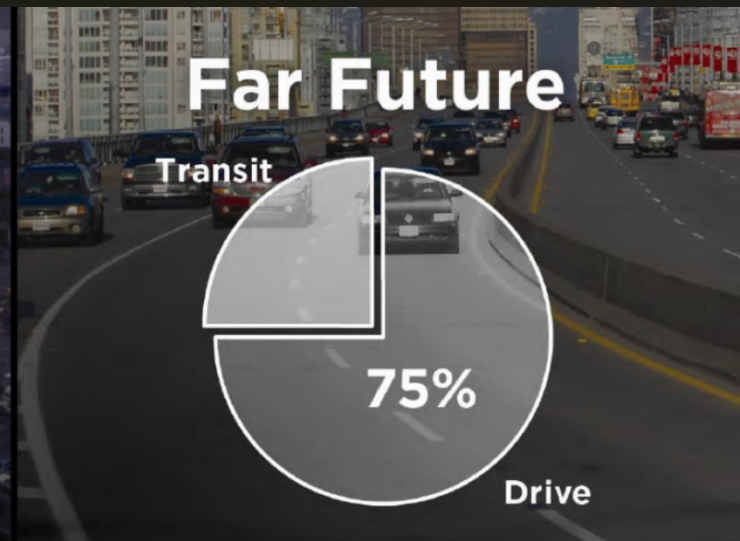
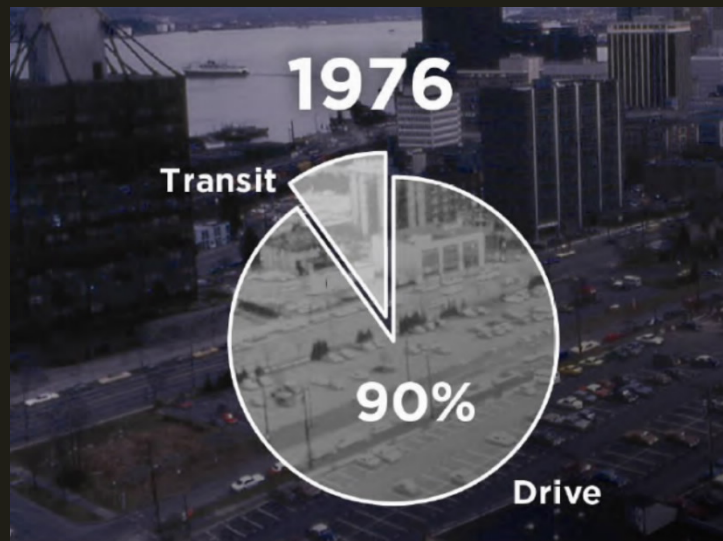
Transparency, commitment



Vision Before Budget

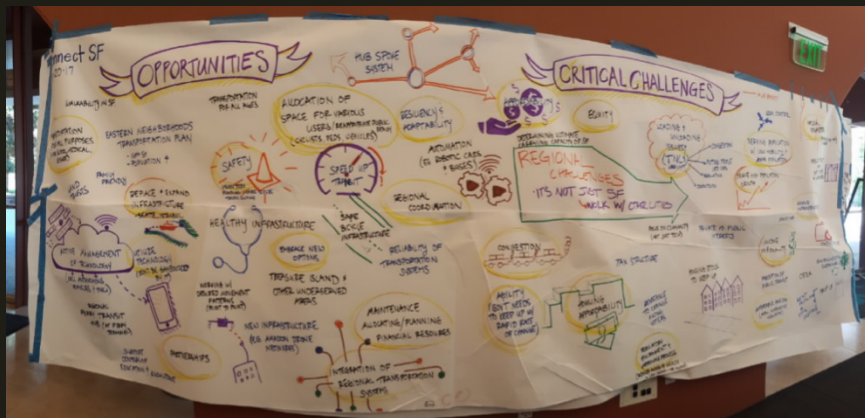
In turn, our planning approach and process has changed. While previous plans focused first on budgets and how to slice the investment pie, Transportation 2035 first sought to define a vision for what the region's transportation system ought to look like in 2035, and then identified, in broad strokes, those policies and investments that would carry out that vision (see page 6). In our desire to put priorities before projects, we made a special effort to look beyond simple infrastructure solutions, and to consider a range of operational improvements and policy innovations.

People movement



Vancouver

Making clear links



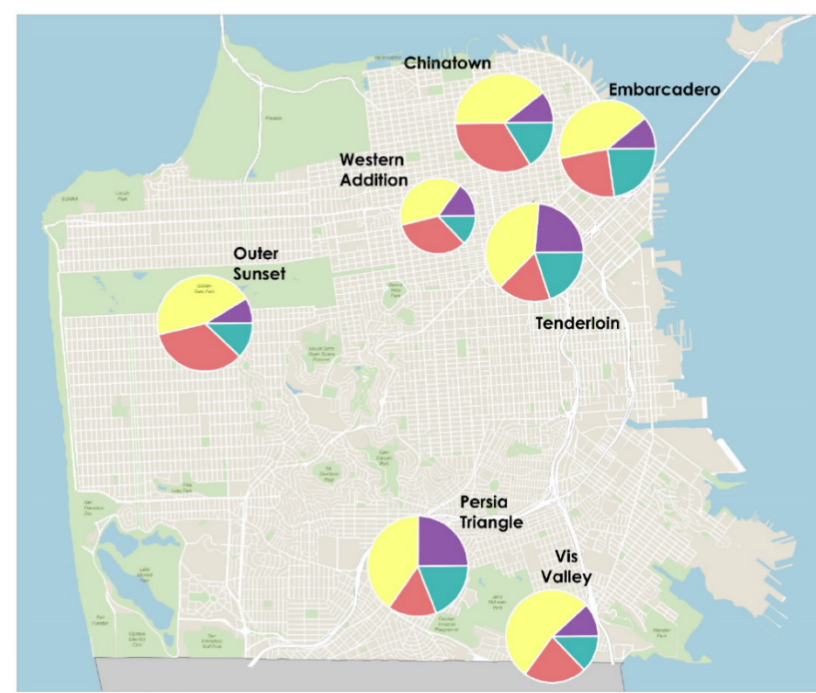
City of Vancouver - Local Government
5 hrs · 📍

Our public spaces are alive with activity all year round. Where in Downtown Vancouver do you like to go to experience public life during the autumn months?

Learn more at <http://vancouver.ca/placesforpeople>
#PlacesforPeopleVan

👍 Like 💬 Comment ➦ Share

Pop-Ups: Core Values by Location



Connect SF
Pop-up Summary
June 2017

550 Responses


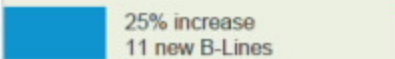


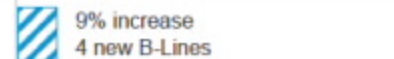



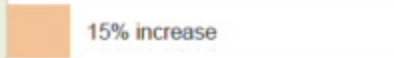

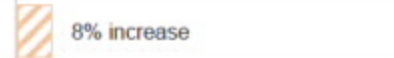



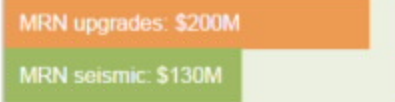
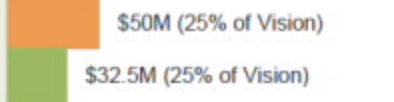
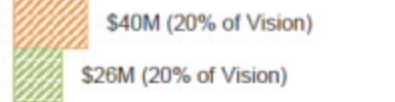


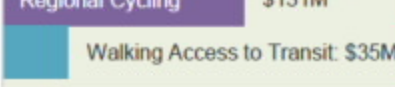
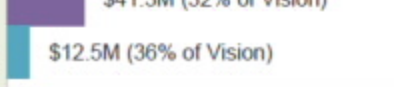
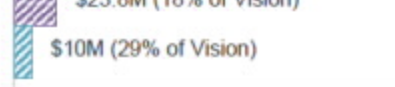
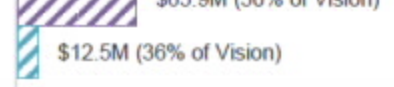

- Equity
- Safety and Livability
- Economic Vitality
- Environmental Sustainability

0 0.5 1 2 Miles
Scale 1:48,567

By downloading this map, you are agreeing to the National Geographic (NG) Terms of Use. The data on this map is provided as a service to the City of Vancouver. The City of Vancouver is not responsible for any errors or omissions in the data. The City of Vancouver is not responsible for any damage or loss of data that may result from the use of this map. The City of Vancouver is not responsible for any damage or loss of data that may result from the use of this map. The City of Vancouver is not responsible for any damage or loss of data that may result from the use of this map.

ConnectSF

Completing the 10-Year Vision for Metro Vancouver Transit & Transportation

	Entire 10-Year Vision	Phase One Approved / Underway	Phase Two Working Assumptions	Phase Three Remaining Investments
Bus Service 	 <p>25% increase 11 new B-Lines</p>	 <p>10% increase 5 new B-Lines</p>	 <p>6% increase 2 new B-Lines</p>	 <p>9% increase 4 new B-Lines</p>
SeaBus Service 	<ul style="list-style-type: none"> 1 new SeaBus 10 min peak frequency 	<ul style="list-style-type: none"> 1 new SeaBus 10 min peak frequency 		
HandyDART Service 	 <p>30% increase</p>	 <p>15% increase</p>	 <p>7% increase</p>	 <p>8% increase</p>
SkyTrain & West Coast Express (WCE) 	<ul style="list-style-type: none"> 114 Expo/Millennium Lines cars 22 Canada Line cars 10 WCE cars + locomotive 	<ul style="list-style-type: none"> 28 Expo/Millennium Lines cars 22 Canada Line cars 5 WCE cars + 1 new locomotive Upgrades to Expo/Millennium & Canada Line stations 	<ul style="list-style-type: none"> 86 Expo/Millennium Line cars (including Broadway Extension) Upgrades to Expo/Millennium & Canada Line stations 	<ul style="list-style-type: none"> 5 WCE cars Upgrades to Expo/Millennium & Canada Line stations
Major Projects 	<ul style="list-style-type: none"> Millennium Line Broadway Extension Surrey-Langley Rapid Transit Pattullo Bridge Replacement 	<ul style="list-style-type: none"> Pre-construction on Broadway Extension Pre-construction on Surrey-Newton-Guildford LRT Design for Pattullo Bridge Replacement 	<ul style="list-style-type: none"> Construction of Broadway Extension Construction of Surrey-Newton-Guildford LRT Construction of Pattullo Bridge Replacement Pre-construction on Surrey-Langley LRT 	<ul style="list-style-type: none"> Construction of Surrey-Langley LRT
Major Roads Network (MRN) 	<ul style="list-style-type: none"> MRN expansion: 1% annual increase + one-time 10% increase  <p>MRN upgrades: \$200M MRN seismic: \$130M</p>	<ul style="list-style-type: none"> MRN expansion: 1% annual increase + one-time 10% increase  <p>\$50M (25% of Vision) \$32.5M (25% of Vision)</p>	 <p>\$40M (20% of Vision) \$26M (20% of Vision)</p>	 <p>\$110M (55%) \$71.5M (55%)</p>
Walking & Cycling 	 <p>Regional Cycling: \$131M Walking Access to Transit: \$35M</p>	 <p>\$41.3M (32% of Vision) \$12.5M (36% of Vision)</p>	 <p>\$23.8M (18% of Vision) \$10M (29% of Vision)</p>	 <p>\$65.9M (50% of Vision) \$12.5M (36% of Vision)</p>
Transit Exchanges 	13 new or expanded transit exchanges	3 updated transit exchanges, in addition to 2 exchanges as part of Surrey pre-construction work	2 upgraded transit exchanges	6 upgraded transit exchanges

Phase One investments dependent on enabling legislation for new regional development fee

Working assumptions as of Feb 2017

Subject to refinement after Phase Two development

**SAN FRANCISCO
MUNICIPAL TRANSPORTATION AGENCY**

DIVISION: Sustainable Streets

BRIEF DESCRIPTION:

Adopting the 2017 Transportation Sector Climate Action Strategy, which provides a framework for the reduction of greenhouse gas emissions from the transportation sector and for increasing the resilience of the transportation system in advance of future climate impacts.

SUMMARY:

- The City Charter mandates that the SFMTA develop a Climate Action Strategy.
- San Francisco is a global climate action leader and achieved two significant climate goals in 2017.
- First, San Francisco's annual greenhouse gas emissions were reduced by 28 percent from 1990 levels and second, over fifty percent of all trips were made by transit, walking and bicycling.
- **The transportation sector accounts for 46 percent of citywide greenhouse gas emissions and is heavily dependent on carbon intensive fossil fuels.** In addition, many of San Francisco's vital transportation corridors, assets and facilities are located along the shoreline which could be significantly impacted by projected sea level rise and coastal flooding events.
- **In order to meet the climate goals, the transportation sector will need to be transformed.**
- The 2017 Transportation Sector Climate Action Strategy provides a framework for the reduction of emissions from the transportation sector and for increasing the resilience of the transportation system.

ENCLOSURES:

1. SFMTAB Resolution
2. 2017 Transportation Sector Climate Action Strategy

APPROVALS:

DIRECTOR



DATE

11/27/2017

RISING TO THE CHALLENGES

Our world is constantly changing. Vancouver faces a number of challenges—some old, some new, some global in nature, and others unique to our region. With commitment and creativity we can face our transportation future head-on by supporting our economy, protecting the environment, and improving quality of life for everyone.

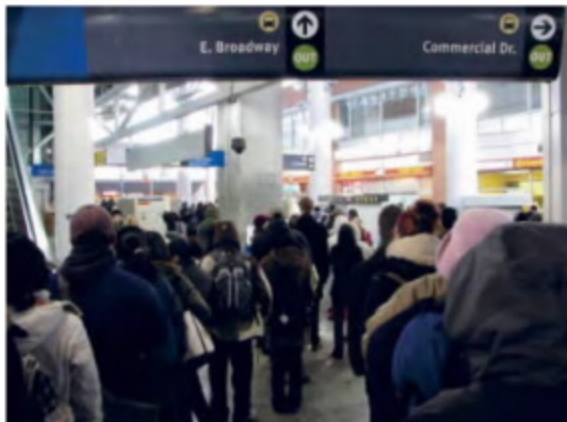
A GROWING CITY WITH LIMITED ROAD SPACE

The city is growing. Over the next 30 years, we're expecting about 130,000 new residents and close to 90,000 new jobs, bringing more trips and more life to the city. The street network is largely built out, leaving few opportunities for building new roads, but by **using our existing streets more efficiently** we can move more people in the limited space we have.



DEMAND FOR TRANSIT

Vancouver has one of the busiest transit systems in North America. Unlike in most cities, **transit demand far exceeds capacity**, but ongoing funding challenges have limited service improvements. If stable, long-term funding can be found, strategic investments will increase transit capacity, helping us meet existing and future demand, and enabling us to reach City, regional, and provincial transportation targets.



COSTS OF SEDENTARY LIFESTYLES

The financial burden of physical inactivity is substantial, costing the provincial health care system more than \$570 million in 2005. About **45% of British Columbians are overweight or obese**, and the rate of obesity in BC children has nearly tripled in the past 25 years. We can **help reverse this trend by making active transportation choices like walking and cycling more convenient and comfortable**, so that physical activity becomes part of the daily rhythm of life.

HIGH COST OF HOUSING

Vancouver is an expensive city and the high cost of living is a concern for many residents. Although housing costs are usually viewed as the main problem, **transportation is a big part of the solution**. We can **help residents save thousands of dollars each year by reducing the need to drive or own a car**. Complete communities—where homes, workplaces, and schools are near to each other—and inexpensive transportation options help to reduce household costs.



Utilize land use to support shorter trips and sustainable transportation choices.

BACKGROUND

It is often said that **the best transportation plan is a good land use plan**. Land use and the built environment influence travel behaviour in a number of ways, often referred to as the “Five Ds of the Built Environment”:

1. **Destinations** – locating major destinations and centres **at rapid transit stations** or along corridors makes them easy to serve efficiently with frequent transit
2. **Distance** – a **well-connected, fine-grain pedestrian network** enables shorter, more direct walking connections and is easier to serve cost-effectively with transit
3. **Density** – higher levels of residential and employment density support more local amenities within walking and cycling distance, and justify high levels of transit service
4. **Diversity** – a diverse mix of land uses and housing types makes it easier to live, work, shop, and play without having to travel far
5. **Design** – **well-designed buildings and public realm** create interesting places where people feel safe to walk or cycle

Good land use decisions have been and will continue to be a major part of Vancouver’s success with transportation. Over the years, we have strived to build complete communities that bring people closer to their daily destinations and make walking the easiest and most convenient option for many trips. We design buildings that put “eyes on the street” to foster feelings of safety, and locate density to support efficient transit service.



Guerrero

4

KRUU THAI



The first thing you should know is that a car is not going to do much good. Traffic here is horrible—10th worst in the country! So if you do have a vehicle, you might want to save yourself some time and chuck it in a lake. Drivers here spend an average of 55 hours a year stuck in traffic, and 58 hours a year looking for parking. Don't waste your precious youth decaying in a car.

BACK
SCH



There is a new way to ride to work.



SHOP NOW

What are Corridor Strategies?

What is Corridor Planning?

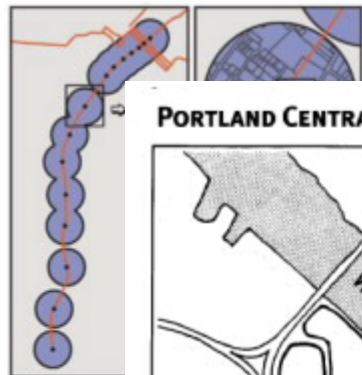
- Different scales:
parcel, station, corridor, region
- *Corridor Planning* examines the areas around each station along a single transit line

What is on the table?

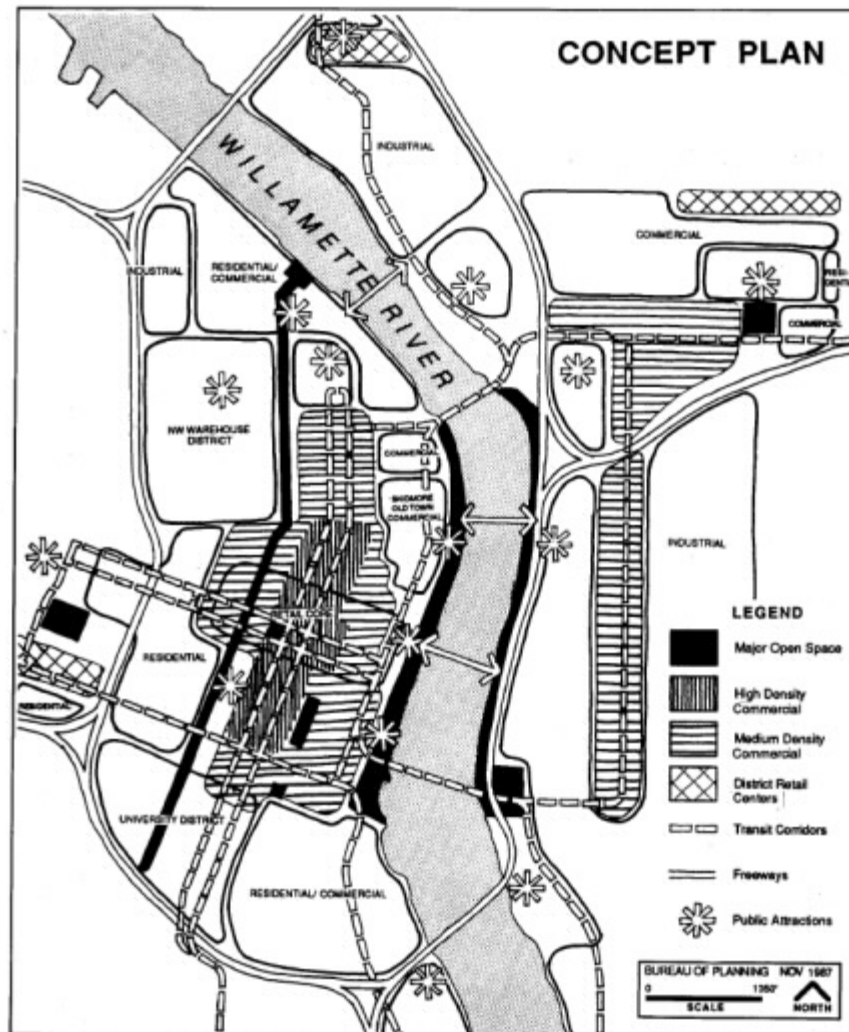
- Recommendations at corridor level, station area type level, or local or regional level
- Recommendations at the state level
- Recommendations for non-profit and private partners

What is NOT on the table?

- Going beyond scope or resources
 - Station area planning
 - Alignment determination



PORTLAND CENTRAL CITY PLAN



"TRANSIT CORRIDORS ARE THE SPINE FOR FUTURE GROWTH. THE MOST INTENSE DEVELOPMENT WILL LOCATE ALONG THE TRANSIT CORRIDORS." — CENTRAL CITY PLAN

Serious delivery

... using the momentum, building on it

COMPLETE STREETS



Goal: By 2025, increase the number of “complete streets” throughout the city which encourages sustainable mode shift, increases safety and improves the public realm.

Streetscapes design and amenities play a large role in determining mode choice and travel behavior, and thus per-capita greenhouse gas emissions.

Past investments prioritizing the movement and storage of automobiles explain much of the transportation sector’s high percentage of greenhouse gas emissions. A 2014 study found that only 2.4 percent of street space in San Francisco was devoted to transit-only or bike-only lanes even though automobile trips account for fewer than half of all trips.⁹ In order to change this paradigm, urban centers such as San Francisco need to build “complete streets” which include pedestrian, bicycle, and streetscape improvements as part of any planning or construction projects in the public right-of-way. These changes will help advance mode shift goals, increase public safety and improve public health and the public realm. The San Francisco Better Streets Plan contains a definition of a “complete street”:

“..streets are designed and built to strike a balance between all users regardless of physical abilities or mode of travel. A Better Street attends to the needs of people first, considering pedestrians, bicyclists, transit, street trees, stormwater management, utilities, and livability as well as vehicular circulation and parking.”

growth in commutes by foot (13,000) and bike (12,000) are nearly double those by car (15,000). Prioritizing walking, bicycling and transit over





Vancouver Burrard Bridge

Figure 3-7 Cycling Facilities Illustration



Bicycle paths far away from motor vehicles



Local neighbourhood streets with little traffic and low speeds



Major streets, provided they have bike lanes separated from traffic with a physical barrier



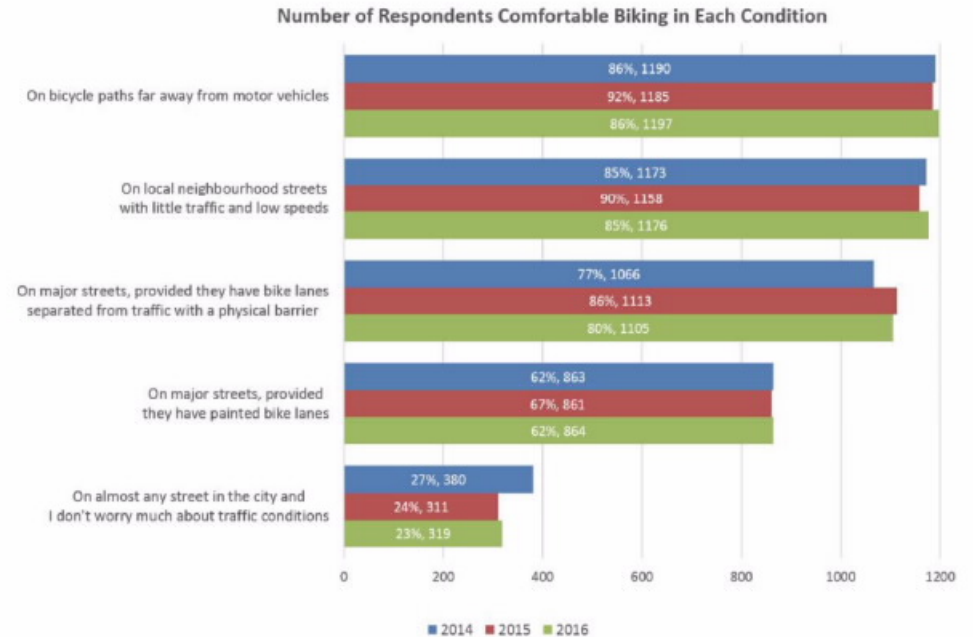
Major streets, provided they have bike lanes



Almost any street in the city regardless of traffic conditions

2016 Transportation Panel Survey Report
March 2017
City of Vancouver

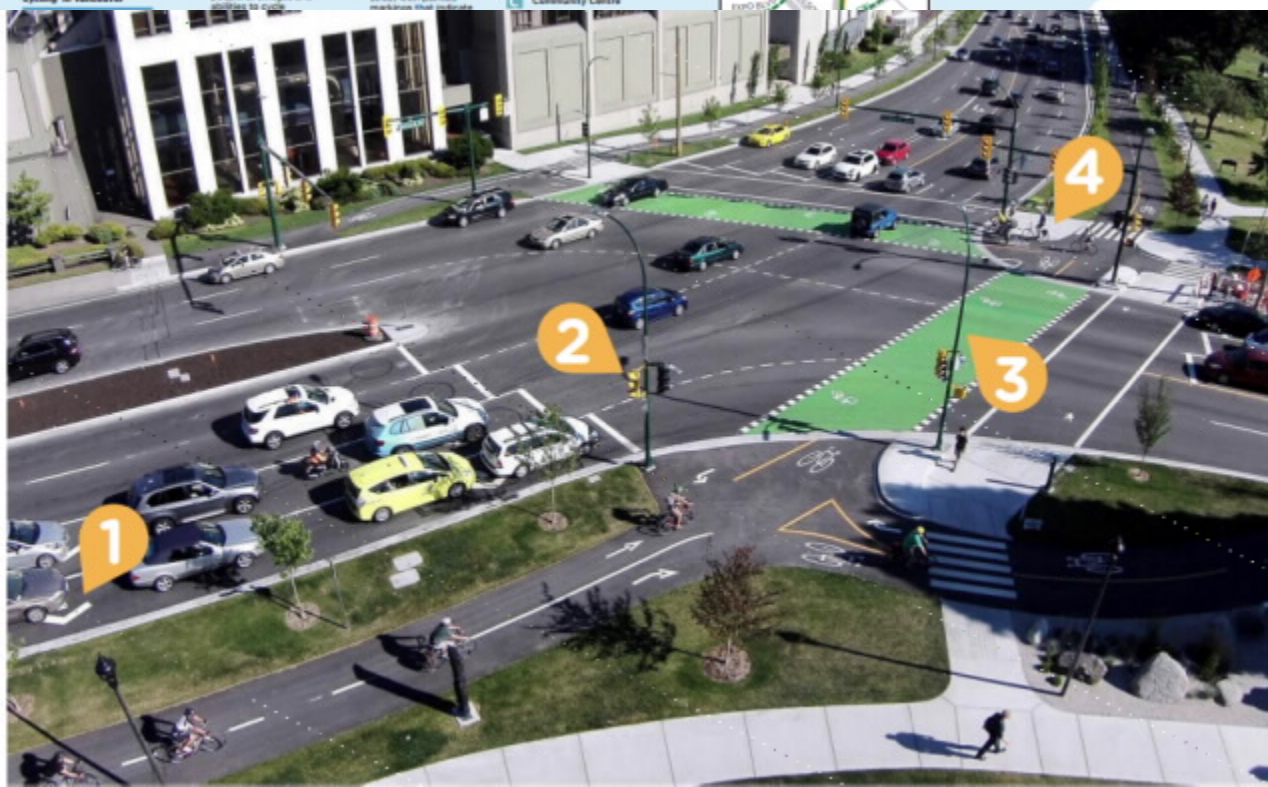
Figure 3-8: Bicycle Facility Preferences



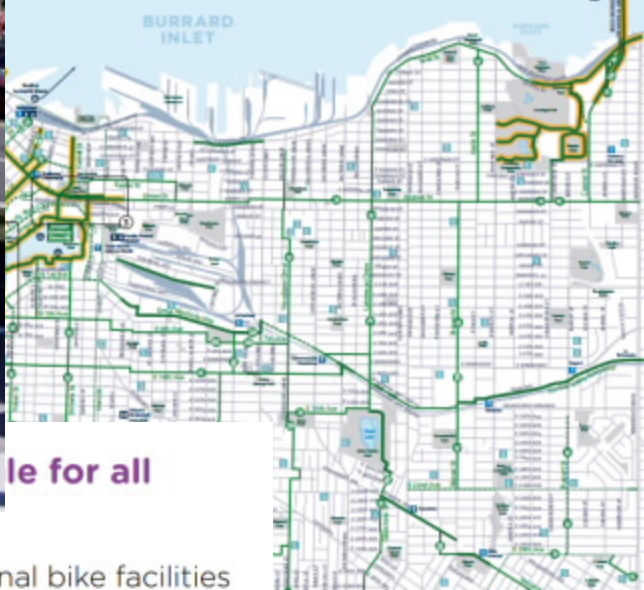
Cycling in Vancouver

Legend

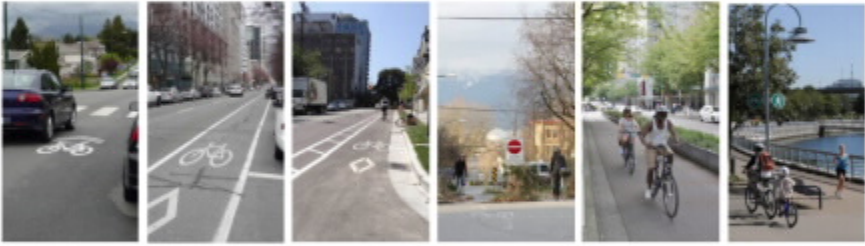
- AAA Network: Most comfortable for people of all ages and abilities to cycle
- Shared Use Lanes: A relatively busy street with painted markings that indicate
- Hospital
- Community Centre



Disclaimer of responsibility: This map is produced as a guide to cycling opportunities in the City of Vancouver. The City, its employees, officers, directors and representatives do not guarantee the accuracy of the information contained therein nor warrant the safety of any route, highway, road, street, designated cycling route or trail or information. © 2017 City of Vancouver



le for all

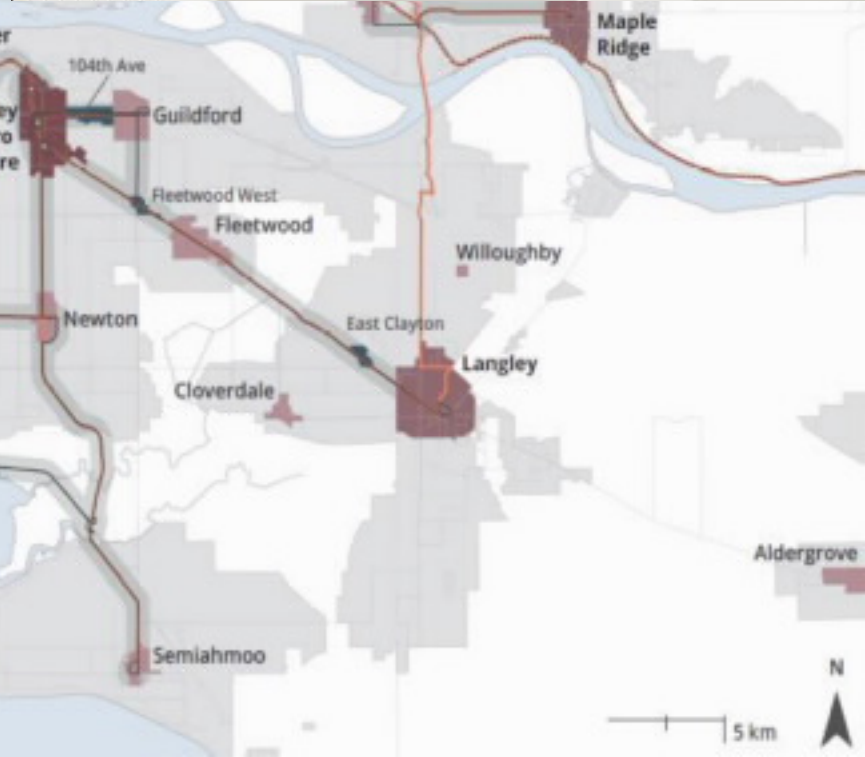
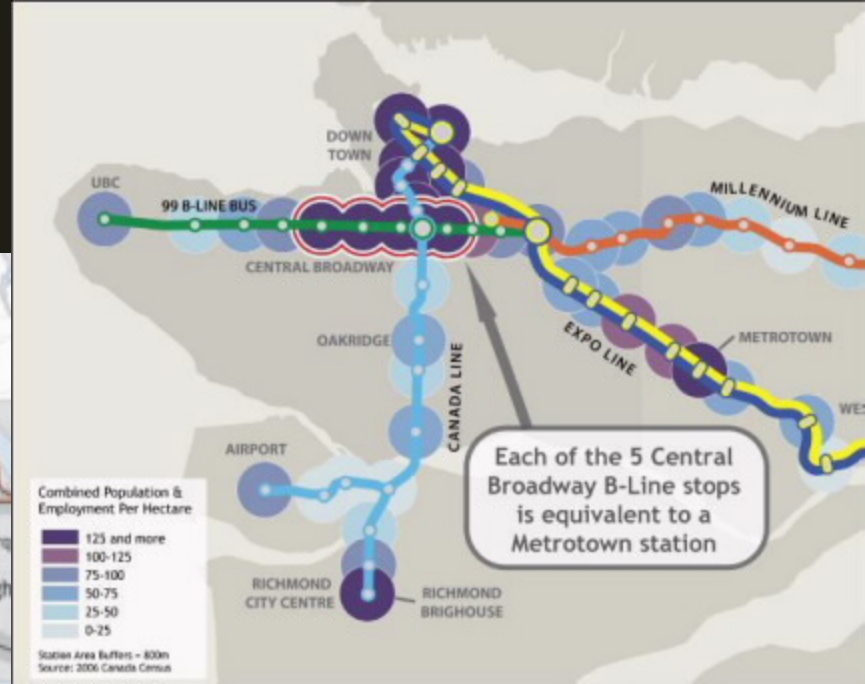
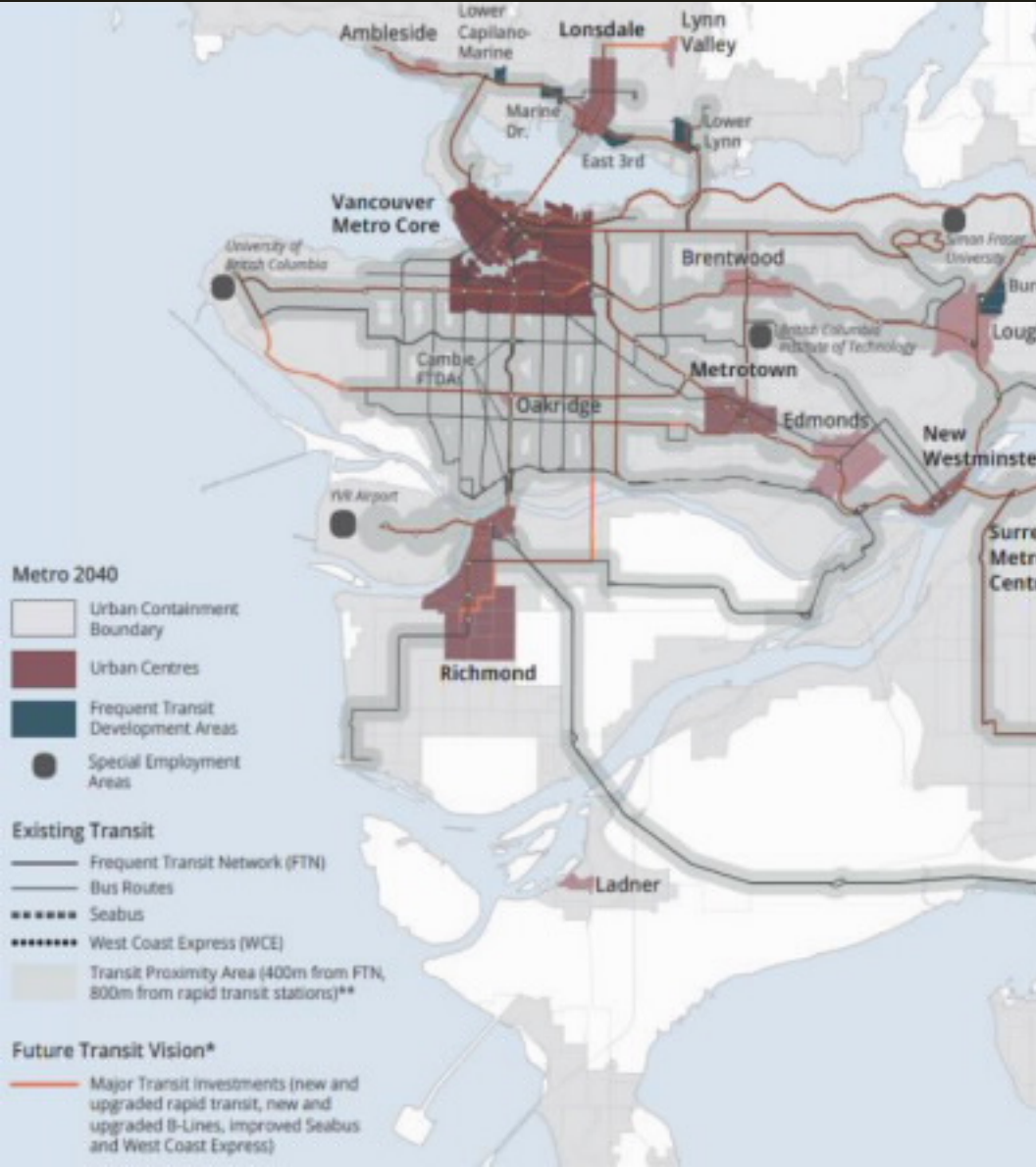


Major Street Shared Use Lane	Painted Bicycle Lane	Paint Buffered Bike Lane	Local Street Bikeway	Protected Bike Lane	Off-Street Pathway
------------------------------	----------------------	--------------------------	----------------------	---------------------	--------------------

Unsuitable for AAA facility | Suitable for AAA facility








Many types of traditional bike facilities only appeal to people who are comfortable riding in traffic. However, bikeways on quiet streets, protected bike lanes, and off-street pathways appeal to people who are interested in cycling but concerned for their safety.²

- The general approaches to creating AAA cycling routes on city streets are:
- Ensuring low motor vehicle speeds and volumes on local streets, or
 - Providing physical separation on busy streets



Long-term Transit Vision

*Integrated
Network
+
Complete
Streets*

-  Multimodal Hub
-  Local Service
-  Core Network Connector
(high frequency/high capacity)
-  Core Capacity Line
(high frequency/high capacity/high speed)
-  Regional Rail Line
-  Regional Ferry Line
-  Regional Bus Line



More with less

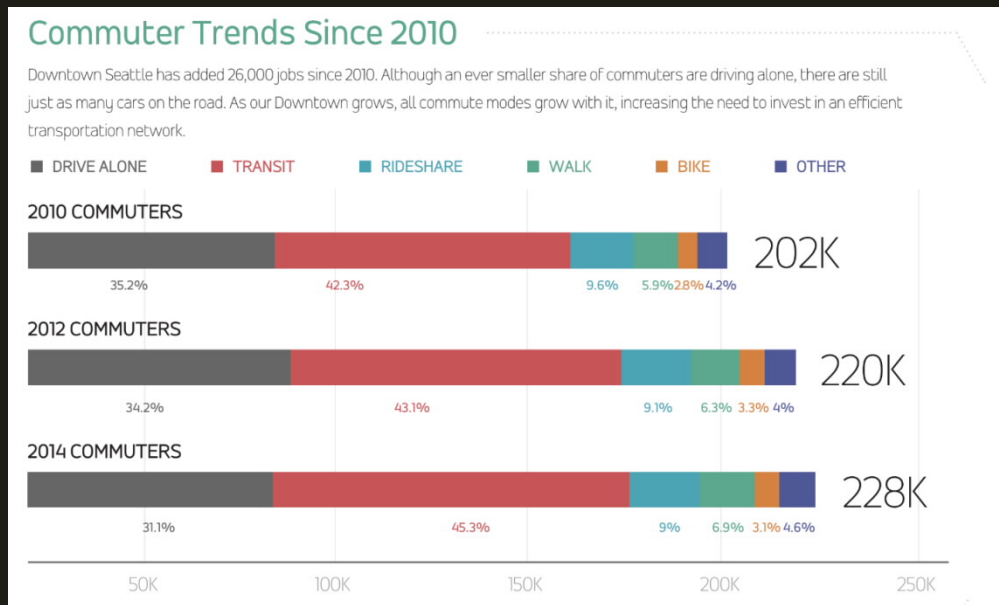
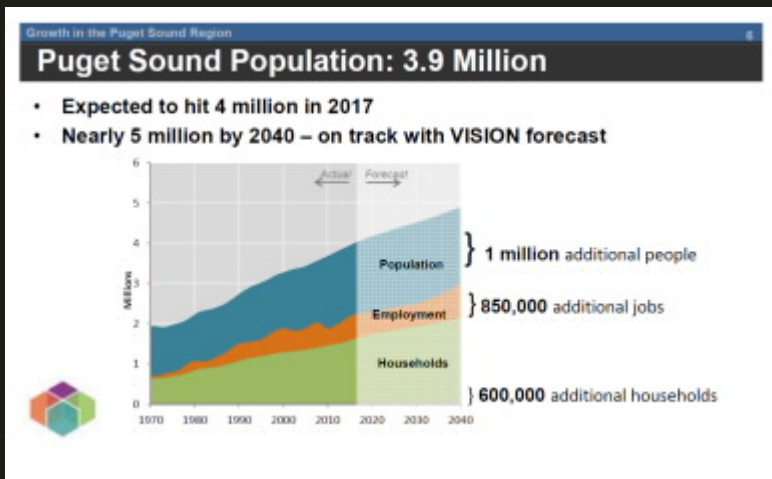
Same bridge, more capacity



Vancouver Burrard Bridge

Growth and shift in mobility

Seattle



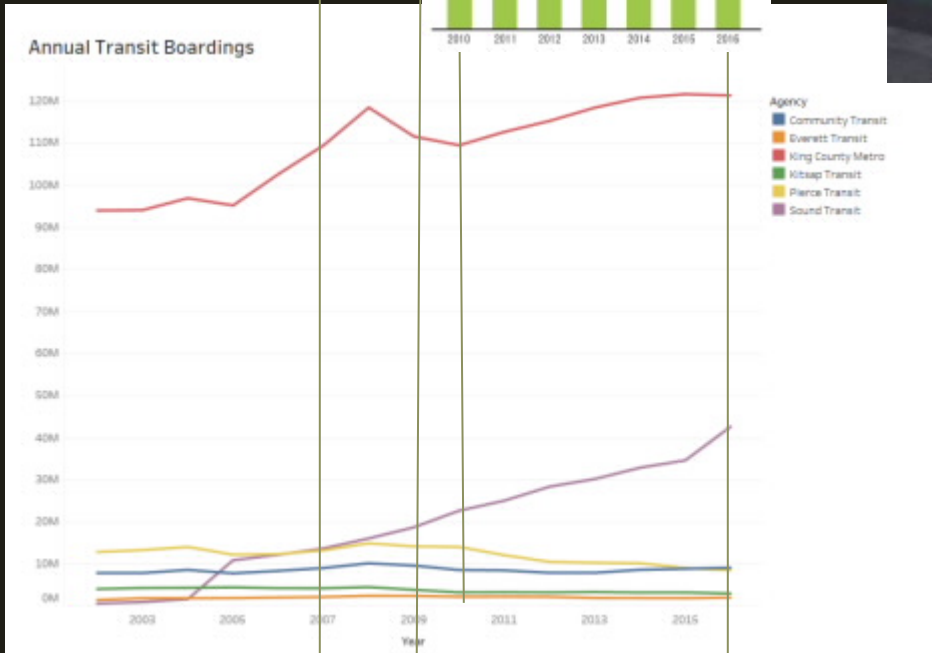
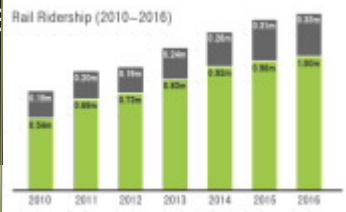
Seattle

Central Link,
downtown-
airport

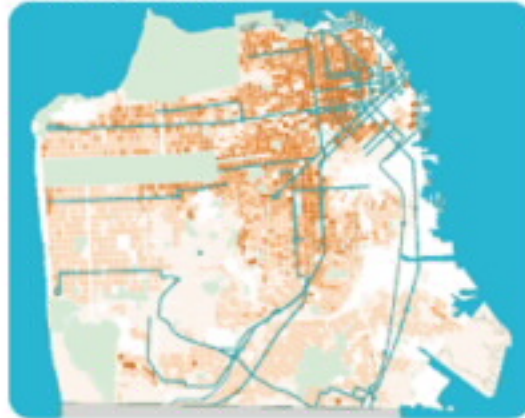
University LR
extension

BusRapid
network, 2010++

South Lake
streetcar



Housing Density



- Transit Centers
- Core Transit Streets

Units Per Net Acre

- 0 – 15
- 15 – 30
- 30 – 45
- 45 – 90
- 90 – 150
- > 150
- Parks

Much of San Francisco's housing is clustered in the older, more urban neighborhoods in and around the downtown. These areas are relatively dense, and support a wide variety of retail and neighborhood services. They also enjoy relatively frequent and reliable transit service. Together, these amenities make it easy to live with fewer cars.

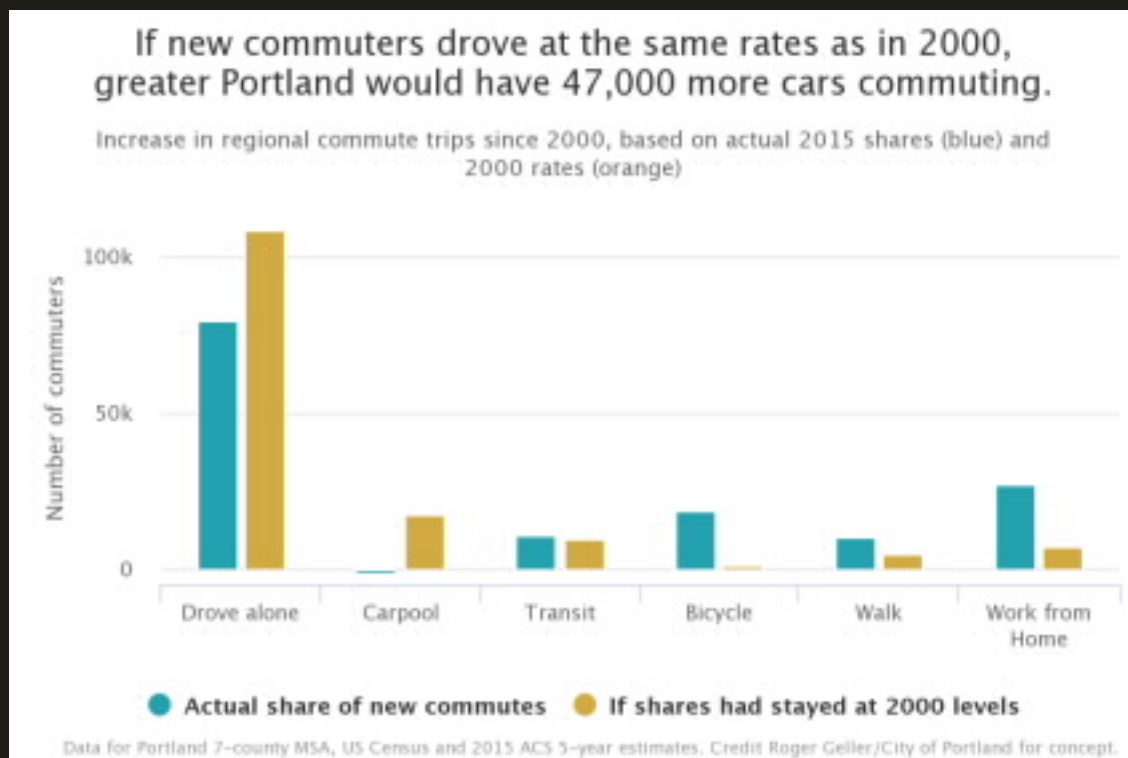
Our parking requirements fail to recognize that many parts of San Francisco work well precisely because they support a lifestyle less dependent on cars. Many places were built before the advent of the automobile, are easily accessible on foot and by transit, and have a variety of neighborhood-serving shops within an easy walk of home. They rely on a critical mass of people and activity in close proximity, providing access to a wide variety of goods and services close by. If we can revise our parking requirements to build on these urban qualities, new development can add to the character of our city, rather than detract from it.

Car Ownership

Growth and shift in mobility

Portland

Reliance to car decreasing, but still high, despite image!



2016 COMMUNITY SURVEY: Portlanders' ratings of city livability drop to new low, November 2016

<https://www.oregonmetro.gov/news/you-are-here-snapshot-greater-portland-move>



notable example is the recent elimination of vehicle traffic in Times Square in New York City. Increasingly common in the U.S. are "road diet" projects that re-allocate a portion of the public right-of-way for modes other than cars, though such projects do not necessarily decrease the capacity of the roadway as measured by vehicle throughput.

Impacts of Highway Capacity Expansion

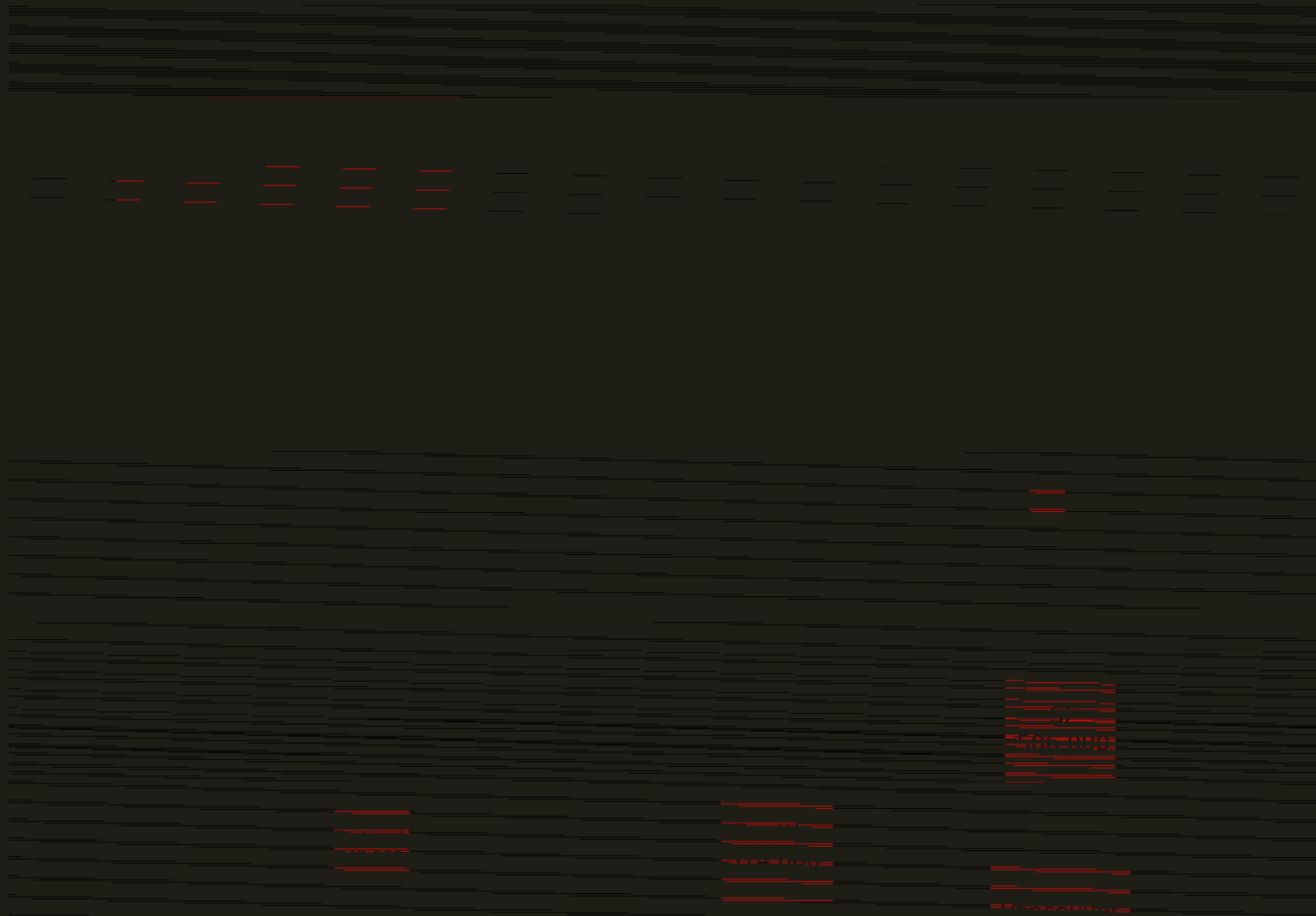
Increased highway capacity can lead to increased VMT in the short run in several ways: if people shift from other modes to driving, if drivers make longer trips (by choosing longer routes and/or more distant destinations), or if drivers make more frequent trips (Noland and Lem, 2002; Gorham, 2009; Litman, 2010). Longer-term effects may also occur if households and businesses move to more distant locations or if development patterns become more dispersed in response to the capacity increase. Capacity expansion can lead to increases in commercial traffic as well as passenger travel (Duranton and Turner, 2011).

The induced-travel impact of capacity, the change in VMT that results from of a road segment and its number of highway equates to eight lane miles)

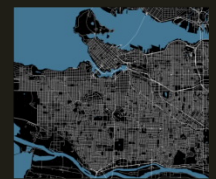
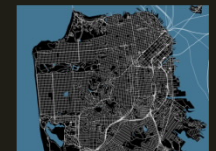
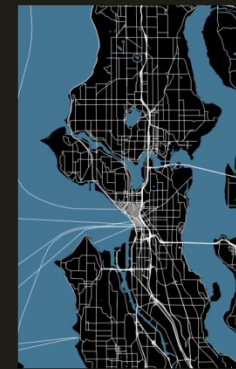
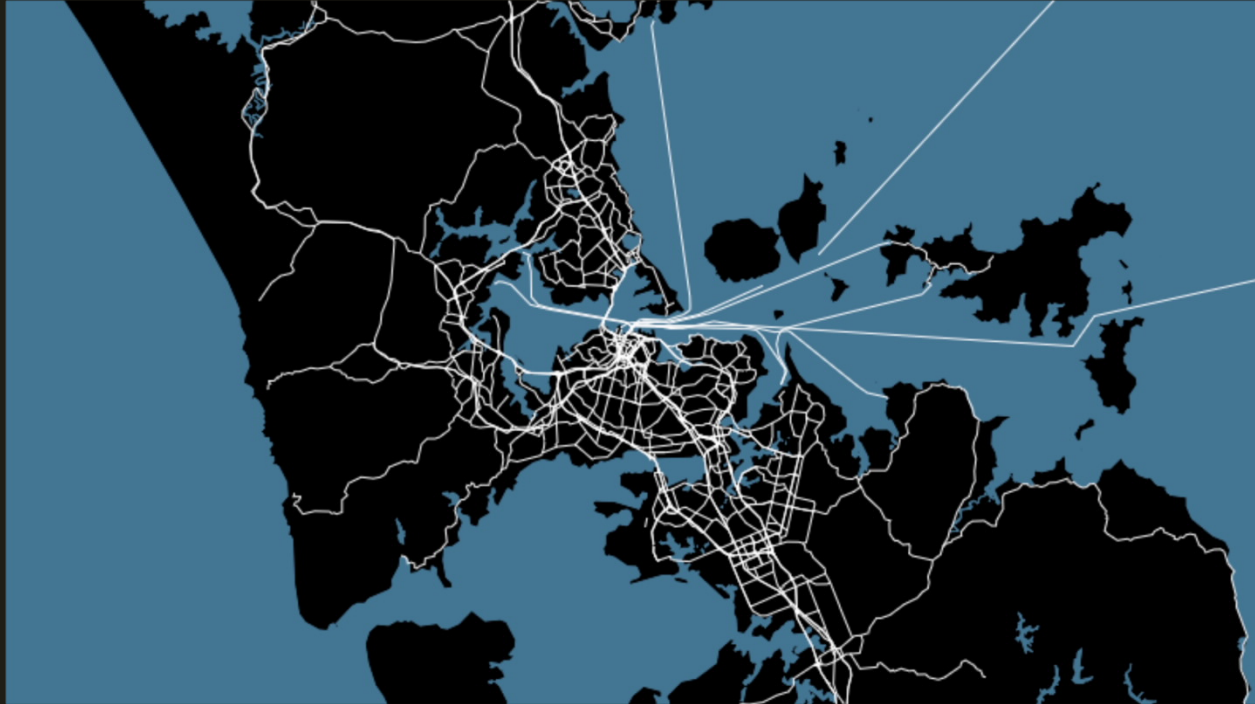
The screenshot shows the California Air Resources Board website. At the top, there are navigation links for "Home", "Help & FAQs", and "Contact". The main header includes the "CA.GOV" logo and the "CALIFORNIA AIR RESOURCES BOARD" logo. Below the header, there is a search bar and a "Google" logo. The page content is titled "Senate Bill 375 - Resources for Target Setting". A sub-header reads "This webpage provides links to resources related to the target-setting portion of statewide implementation of Senate Bill 375 (SB 375). By June 30, 2010, ARB must propose draft regional greenhouse gas reduction targets for passenger vehicles in 2020 and 2025, and adopt final targets by September 30, 2011." Below this, there are several sections: "Click on the links below for quick navigation to each topic area:" with links for "Bill Information", "Regional and Local Agency Information", "Regional Planning Information", and "Other ARB-Related Activities and Information"; "Bill Information:" with links for "Text of SB 375", "Text of companion legislation, SB 375", and "Description of some key elements of SB 375"; and "Regional and Local Agency Information:" with links for "Links to California MPOs and Air Districts websites", "California Air Pollution Control Officers Association", "California State Association of Counties", "League of California Cities", "MPO Model Self-Assessment for RTAC", "Map of California MPOs", "Map of California Air Districts", "California Association of Councils of Governments", "Institute for Local Government", "Local Government Commission", and "MPO Data Summary Spreadsheet for RTAC".

<https://www.arb.ca.gov/cc/sb375/resources/resources.htm>

A bit of context



A bit of context

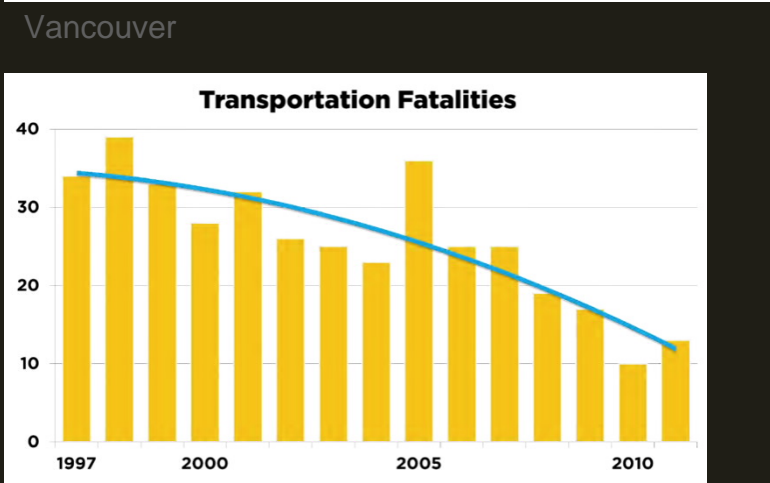
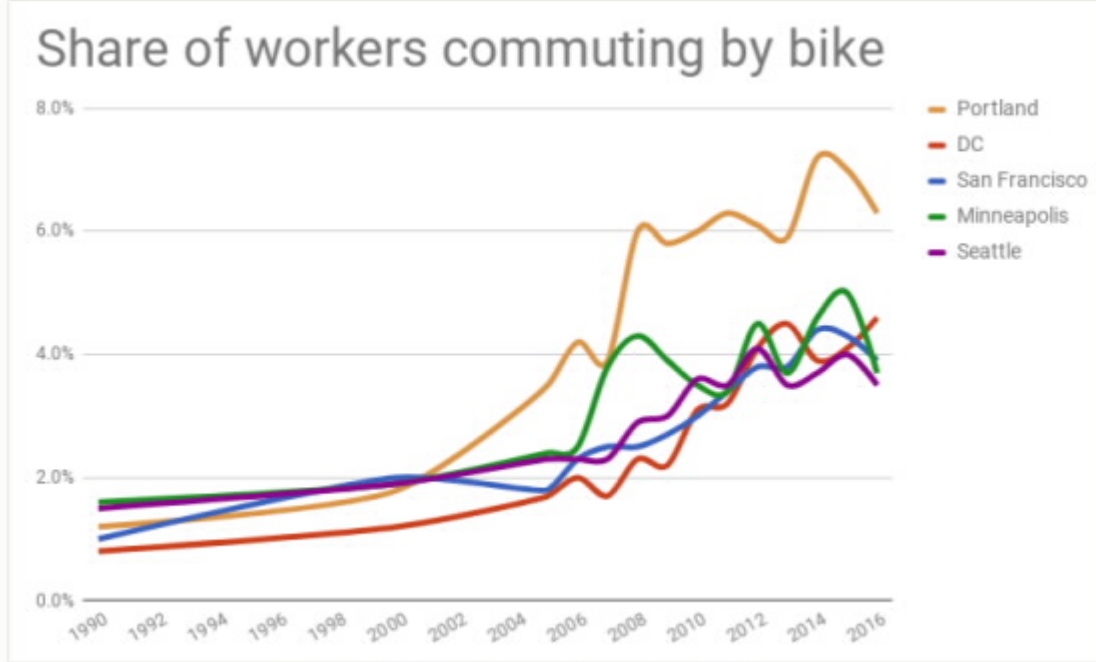
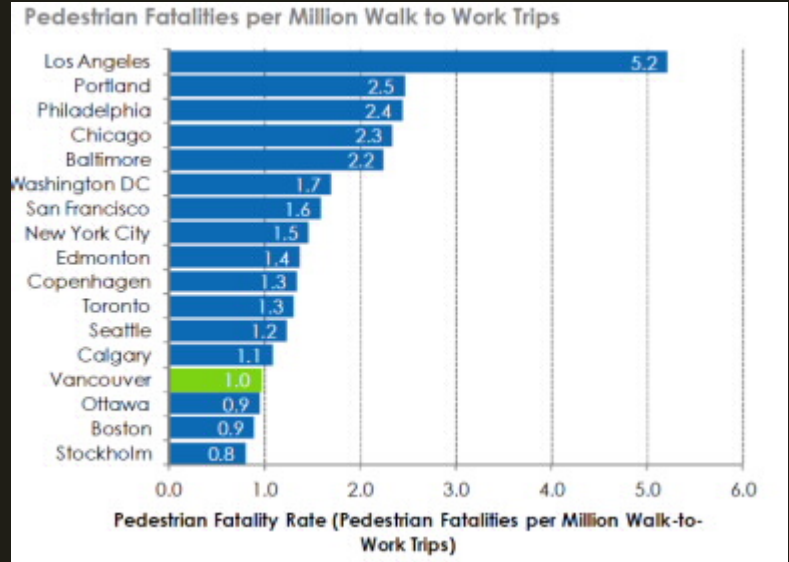
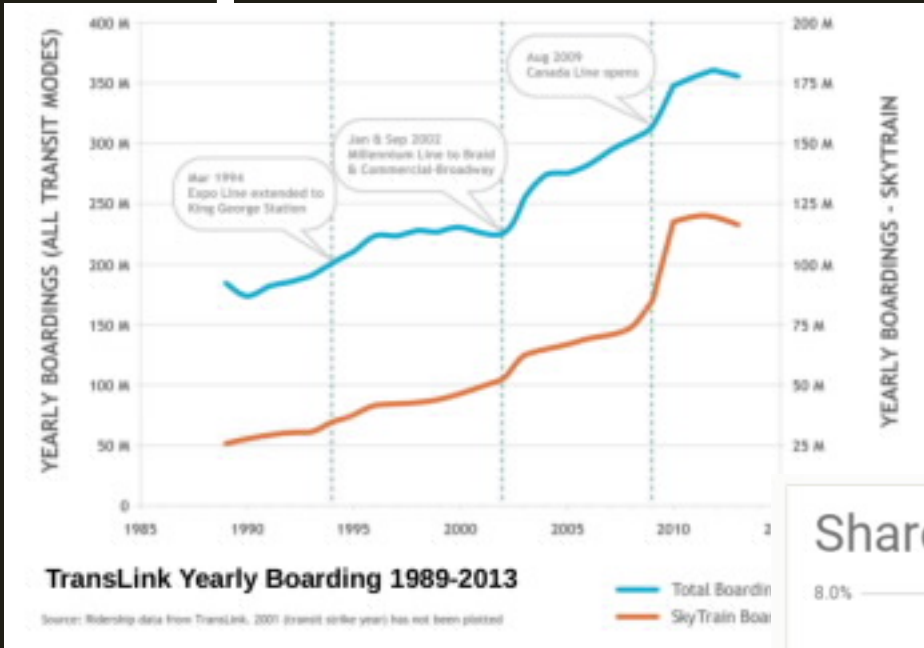


10 km



THIRD STREET.

People movement

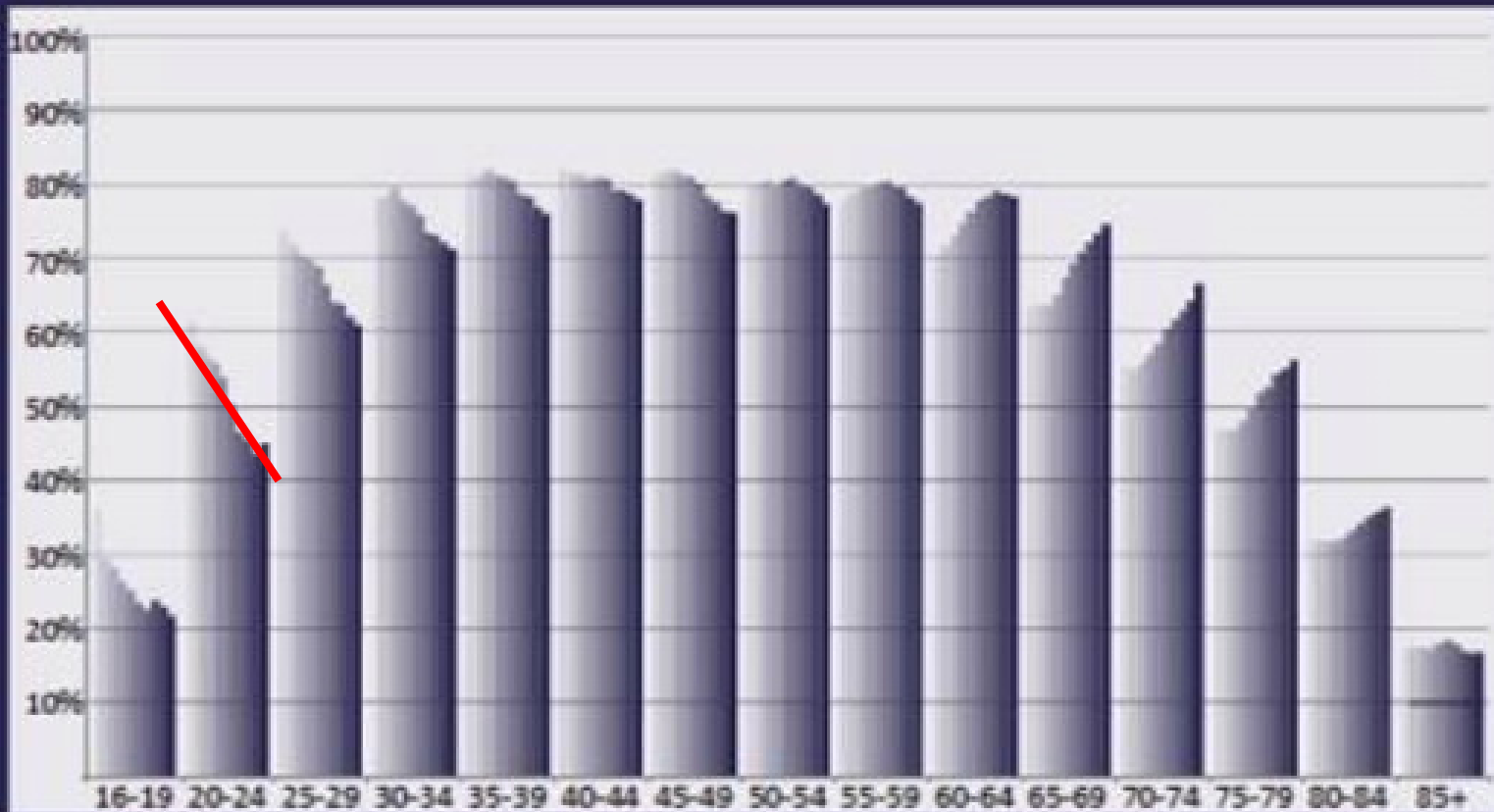


Vancouver Transportation 2040

Data: U.S. Census Bureau. Chart: Michael Andersen.

Active drivers licenses, 10 years

Vancouver - UBC / UEL





NO PARKING

The University Club
of Portland
www.uclubportland.com

ONE WAY
SW 49th

ONE WAY
←

EXPO CENTER
67
TRIMET
MAX

Figure 9. Pedestrian Ratings for Conditions of Crossings.

