Mobility Pricing: What, Why, Where, When, How?

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What is Mobility Pricing?

- A user fee for the roads & public transit to manage the demand for travel that is "system wide, comprehensive, and dynamic"
- Improves efficiency of transportation infrastructure use by directly targeting congestion
- On roads, can serve as an incremental or substitute revenue source
- My initial focus = congestion & roads

CANADA'S **ECOFISCAL** COMMISSION
Practical solutions for growing prosperity

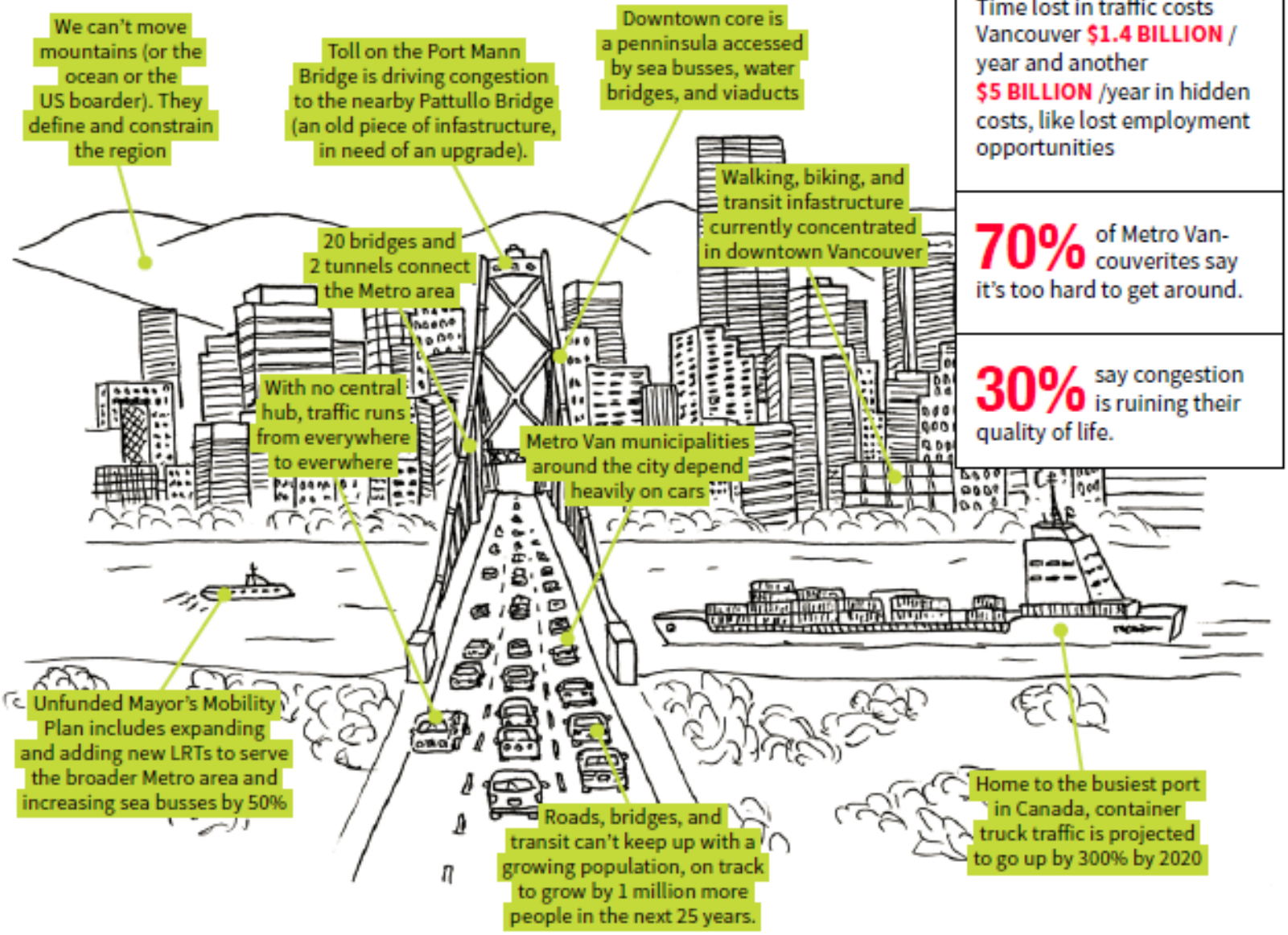
WE CAN'T GET THERE FROM HERE:

WHY PRICING TRAFFIC CONGESTION IS CRITICAL TO BEATING IT

71%
of Canadians in Canada's 4 biggest cities say that traffic makes it hard for them to get around

- ↑ Rising commute times
- ↑ Gridlock daily in many parts of Metro Vancouver
- ↑ No funding for new infrastructure
- ↑ Current tolling policy flawed and contributes to congestion

THE ANATOMY OF TRAFFIC CONGESTION IN METRO VANCOUVER



HOW BAD IS IT

Time lost in traffic costs Vancouver **$1.4 BILLION** / year and another **$5 BILLION** /year in hidden costs, like lost employment opportunities

70% of Metro Vancouverites say it's too hard to get around.

30% say congestion is ruining their quality of life.

Congestion: Even Worse than it "Feels"

TIME LOST IN TRAFFIC IS LOST MONEY

Congestion directly costs...

$7 BILLION / YEAR
in Toronto and rising

$1.4 BILLION / YEAR
in Vancouver and rising

Most of that comes from lost time.

HITS TO OUR POCKET

90% of the goods we consume are transported by trucks

An hour of time lost in traffic = up to $200 per transport truck

Consumers pay for the majority of that cost

THE COSTS WE DON'T SEE

Limits workforce access for businesses

Foregone shopping trips

Vancouver loses as much as $1.2 billion/year in hidden costs

HURTING OUR HEALTH

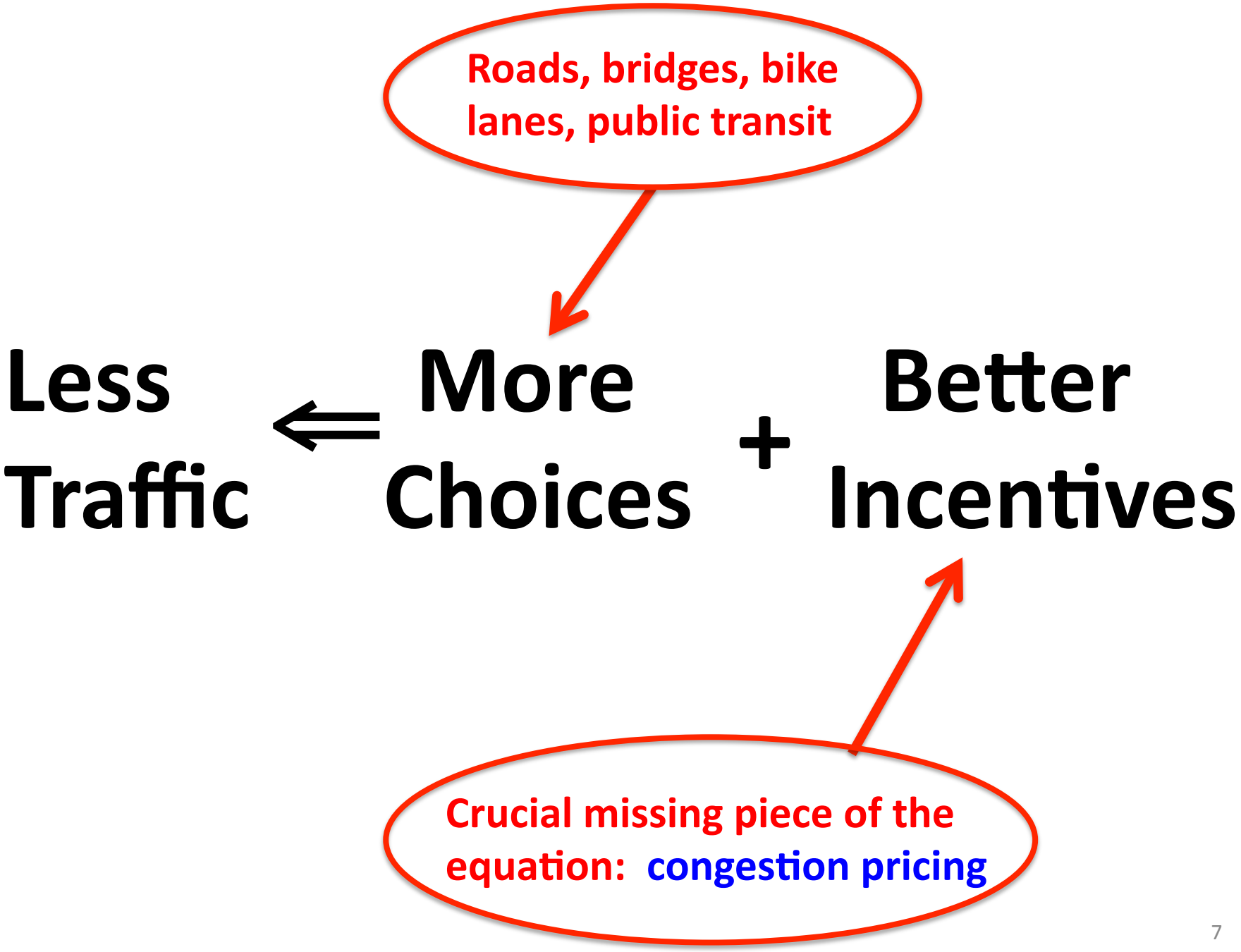
1/3 OF CANADIANS live in homes that are exposed to traffic related air pollution

$4 -7 BILLION / YEAR = healthcare costs of traffic induced air pollution

Air pollution and smog from traffic increases the risk of:

- asthma
- high-blood pressure
- cancer
- reproductive health problems
- childhood development problems

The Traditional "Solution" Doesn't Work


Roads, bridges, bike lanes, public transit
Less Traffic
⇐
More Choices
+
Better Incentives
Crucial missing piece of the equation: congestion pricing

Congestion Pricing Works!

STOCKHOLM

Saw a 9-14% reduction in GHG emissions and a 7–9% reduction in air pollutants

LONDON

Reduced gridlock downtown by 36%

MINNEAPOLIS

Sped up rush hour traffic on all lanes, including untolled ones

MILAN

Reduced road casualties by 24%

SAN DIEGO

Created a new rapid bus service in its fast-lane

SAN FRANCISCO

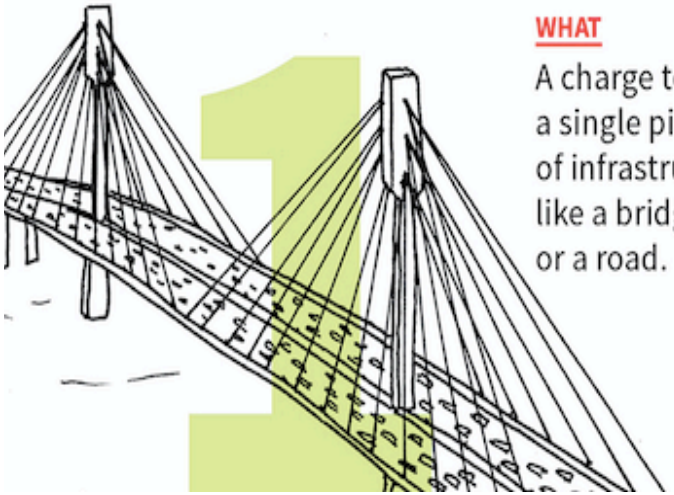
Cut down on cars circling for parking by 50%

Cities are Different

➔ No One-Size-Fits-All Policy Solution

Mobility Pricing Options for Roads

BRIDGE AND ROAD TOLLS (AKA "SINGLE ENTITY PRICING")



WHAT
A charge to use a single piece of infrastructure like a bridge or a road.

RATIONALE
Lowers traffic congestion on site, sometimes by pushing it elsewhere.

WHO/WHERE
Ontario's Highway 407, Quebec's Autoroute 30, and Vancouver's Port Mann Bridge.

HOW
Advances in techology make collecting tolls seamless.

COOL FACT
Commuters using the 407 save on average 20 minutes per day.

Application to Metro Vancouver?

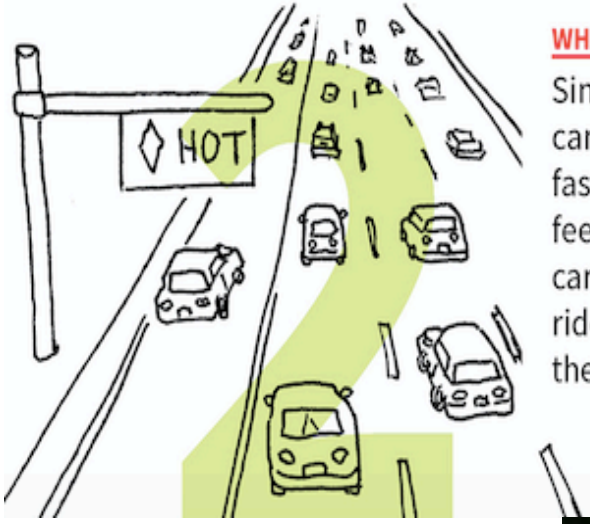
Pros:

- Reduce congestion on unpriced bridges (Pattullo, Alex Fraser, north Shore)
- More efficient use of roads, if dynamic pricing
- Collect revenue

Cons:

- Infrastructure costs for gantries, back office costs
- Travel that doesn't cross bridges
- Requires change in provincial policy

HOT LANES (HIGH-OCCUPANCY TOLL LANES)



WHAT
Single drivers can access fast lanes for a fee, along with carpools and bus riders who use the lanes for free.

RATIONALE
Allowing more drivers on under-used carpool lanes improves highway flow.

WHO/WHERE
Minnesota, Florida, California, Georgia, and Washington DC.

HOW
HOT lane fees can vary by time of day or by levels of traffic.

COOL FACT
Cities through-out the US paired HOT lanes with more rapid bus transit.

For Metro Van:

- Hwy 1 and 99 to replace HOV lane?
- How much revenue?

CITY CENTRE PRICING (AKA "ZONE-BASED" PRICING)

WHAT
A fee to enter, exit, or move around a particular area or a fee to cross a defined perimeter around an area.

RATIONALE
Controls the flow of traffic into, out of, and around a super congested downtown hub.

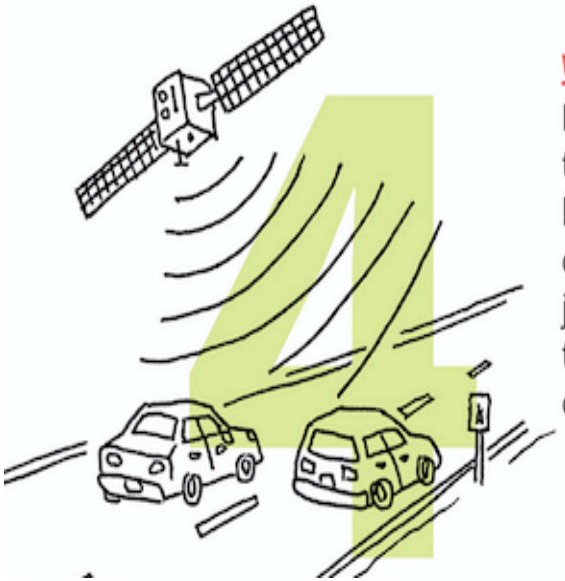
WHO/WHERE
Milan, Singapore, London, and Stockholm.

HOW
Encourages alternate modes of travel into the downtown.

COOL FACT
Stockholm reduced the number of vehicles heading downtown by 30% while reducing GHG emissions and pollution.

Metro Van? No. Traffic patterns too dispersed.

DISTANCE-TRAVELLED CHARGES ("PAY-PER-KM")



WHAT
People pay for the number of kilometers they drive in a given jurisdiction (e.g. the metro area or province).

RATIONALE
Encourages people to spend less time on the road in their cars. Period.

WHO/WHERE
Germany, Oregon, and Singapore.

HOW
GPS systems and smart phone technology are evolving to make distance traveled programs less clunky.

COOL FACT
Germany's program raises €18 million for road maitenance annually.

Would be bigger incentive to reduce congestion if dynamic pricing, but…

- Complexity
- Technology
- Privacy concerns

With just distance-based, ICBC could administer
New revenue source or offset some of gas tax?

SMART PARKING (DEMAND-BASED PARKING PRICING)

WHAT
Different from regular meters, parking prices shift in real time with demand.

RATIONALE
Optimizes the use of parking space and cuts down on cars "circling" for a spot.

WHO/WHERE
San Francisco and Calgary.

HOW
Drivers access real-time information about spot availability and price.

COOL FACT
An estimated 30% of down-town traffic is cars cruising for parking.

Likely would only apply to specific areas of municipalities in Metro

The best reason
to price congestion is to
reduce congestion!

Why else?

What to do with the revenue?

A tough sell?


STOCKHOLM
Before pilot: public acceptance = 34%
After pilot: public acceptance = 70%

Ecofiscal's 4 Recommendations About Pilot Projects:

1. Cities -- design them
2. Provinces -- enable them
3. Feds -- finance them
4. All -- study them