



Presenting:

## **Fairer Fares: Engaging Citizens in Trade-off Decisions For Pricing Public Transit**

**by Lyle Walker**

DAAG Conference 2018

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# Session: Involving communities of interest in the decision process

## Fairer Fares: Engaging Citizens in Trade-off Decisions For Pricing Public Transit



Lyle Walker, Project Manager, TransLink  
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# TransLink: A Multi-Modal Regional Transportation Agency

## 2,100 VEHICLES



Bus & Community Shuttle



HandyDART



SkyTrain



West Coast Express



SeaBus

## 5 BRIDGES



Canada Line pedestrian and bike bridge (5 YEARS OLD)



Golden Ears Bridge (5 YEARS OLD)



Knight Street Bridge (37 YEARS OLD)



Pattullo Bridge (77 YEARS OLD)



Westham Island Bridge (104 YEARS OLD)



# Transit Fare Review

- Conducting a 2 year comprehensive **fare review**
- Transit is one of very few government services that has a **user fee**
- Public transit is a **monopoly** in most regions
- Mobility is a **basic need**
- Changes **impact** a lot of people
- Subsidized – **56% farebox recovery ratio for operating costs** in Metro Vancouver

# Reasons for exploring opportunities for changing the way we price transit



Perceived Unfair  
Pricing Structure



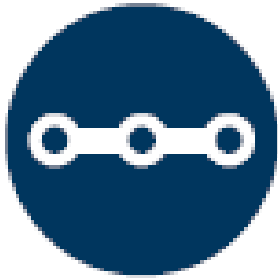
Leveraging New  
Technology



Flexibility to Support  
Policy and Investment

# Six components explored for fare review

Pricing by



Distance travelled



Service type



Time of day



Fare products



Customer discounts



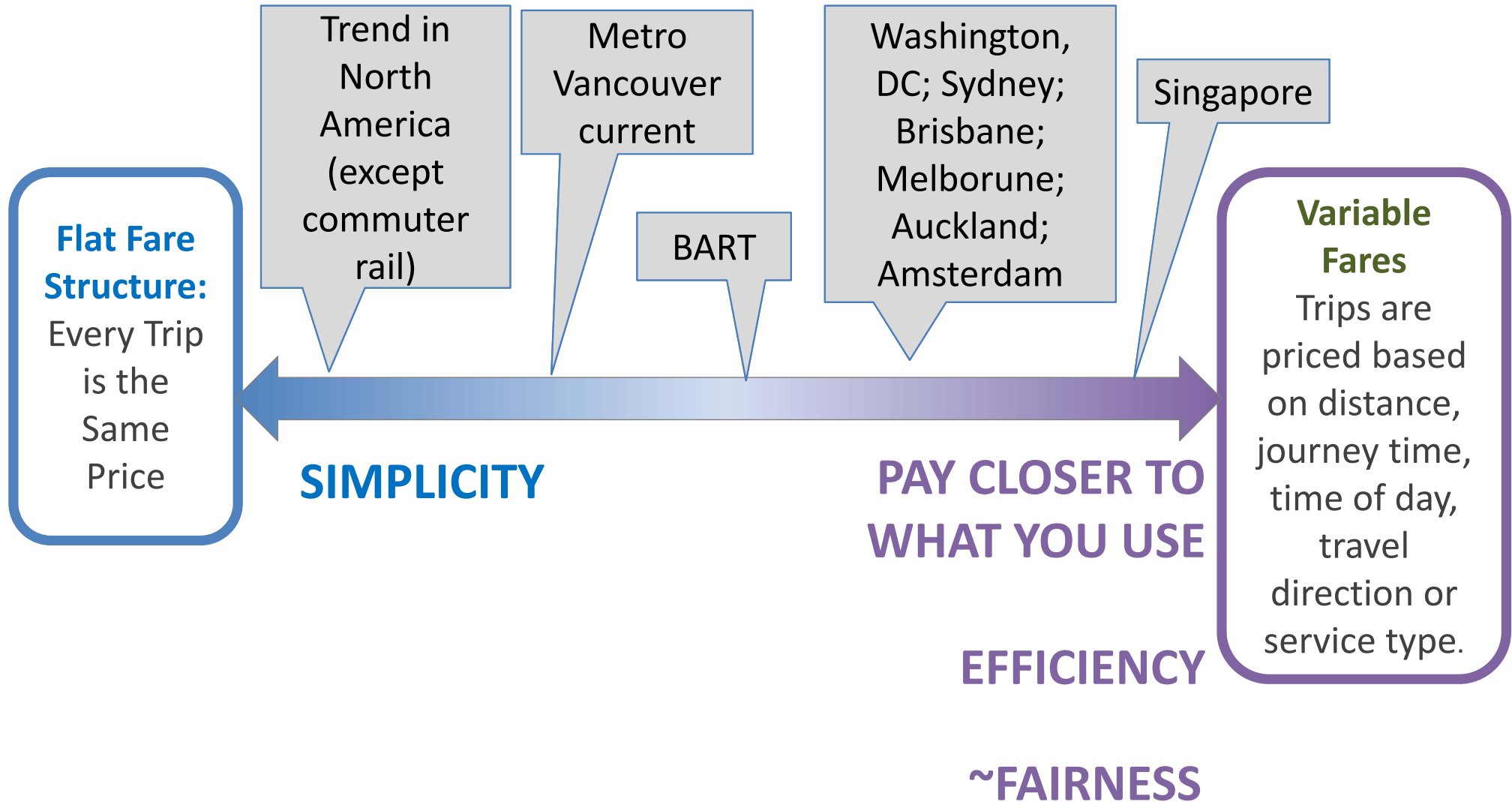
Journey/  
transfer time

# Objectives for Fare Structure

Promote an exceptional customer experience where paying for transit:

- Is simple
- Is fair
- Is affordable
- Helps grow ridership
- Helps improve service by reducing overcrowding
- Maintains revenue from fares to help pay for service

# Pricing is largely a tradeoff decision along a spectrum between simplicity and fairness



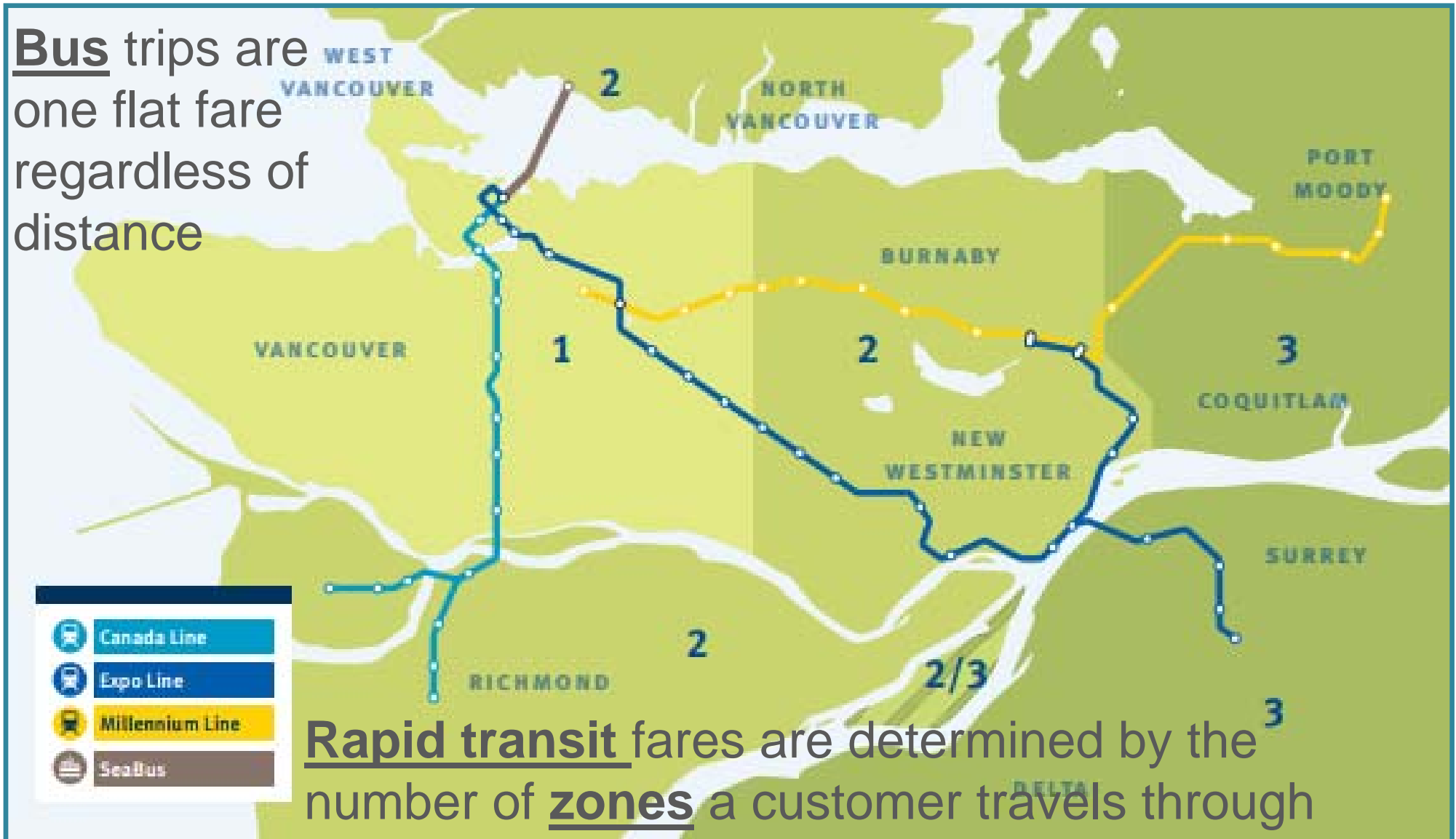


# Objective today is to explore fairness considerations

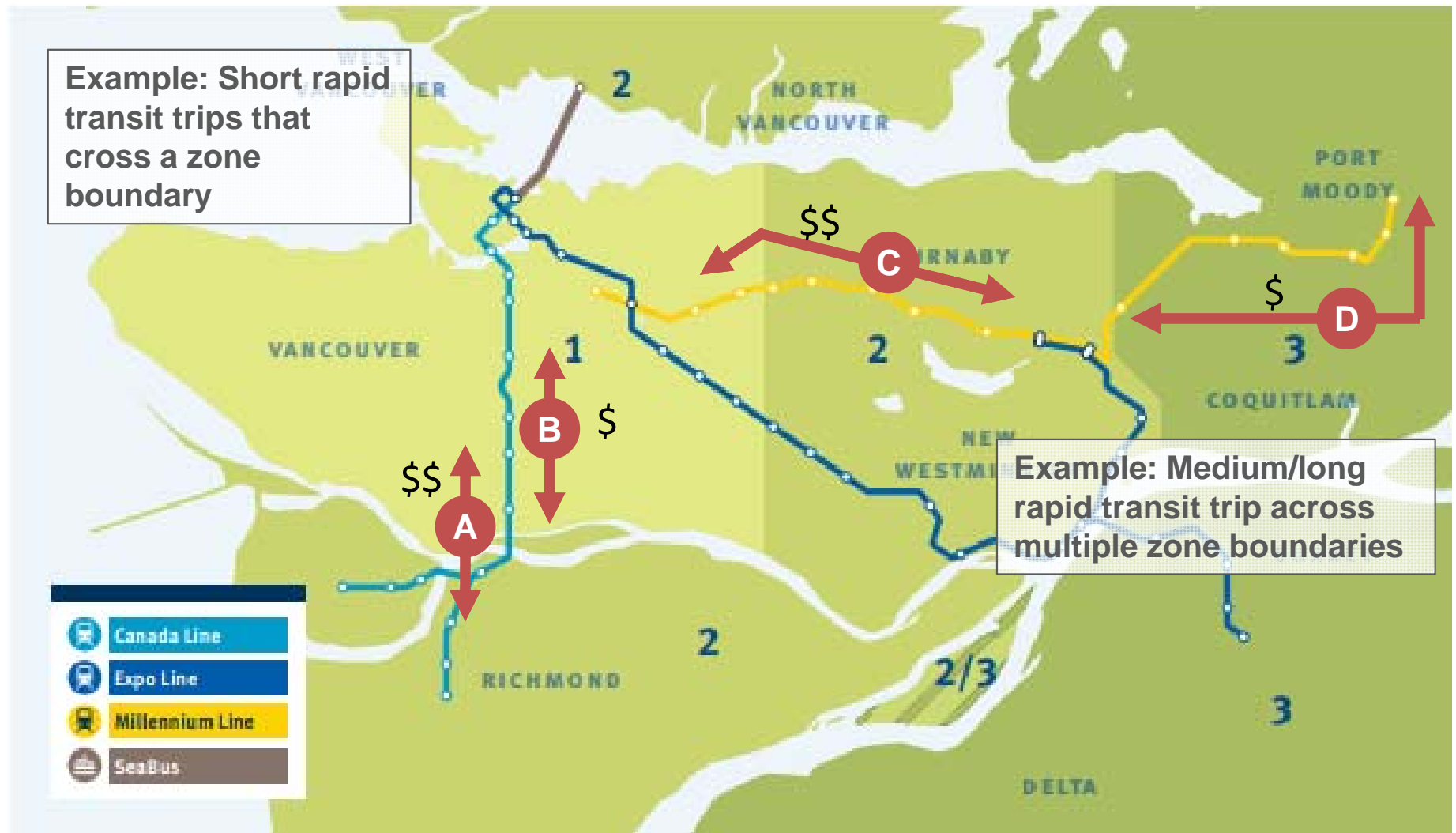
- Focus on the **distance component** of fares
- Within the context of **revenue neutrality**
- Offers conclusions and lessons learned

# Transit fare structure largely unchanged in 30 years

Bus trips are one flat fare regardless of distance



# Because of the location of zone boundaries, some trips of the same length pay different fares



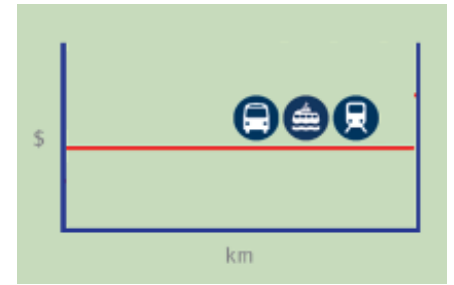
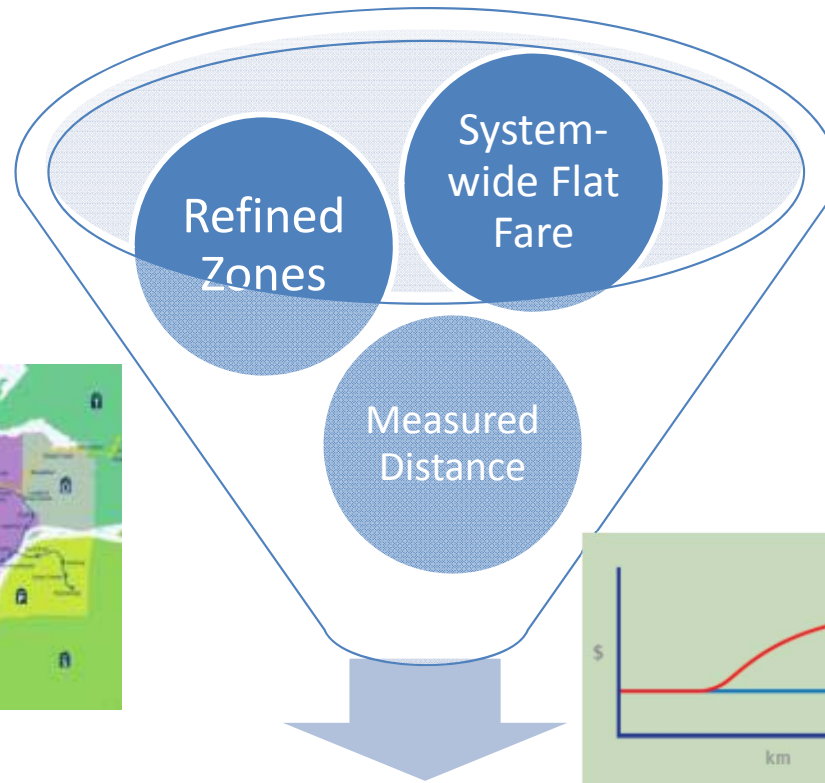
# Extensive Public Engagement Program

- **3 public surveys and 55,000 responses** – input on issues with current structure and level of support for different options
- On-line **videos**
- Over **25 stakeholder forums**, workshops and meetings
- On-line discussion forums

**Let's talk transit fares**

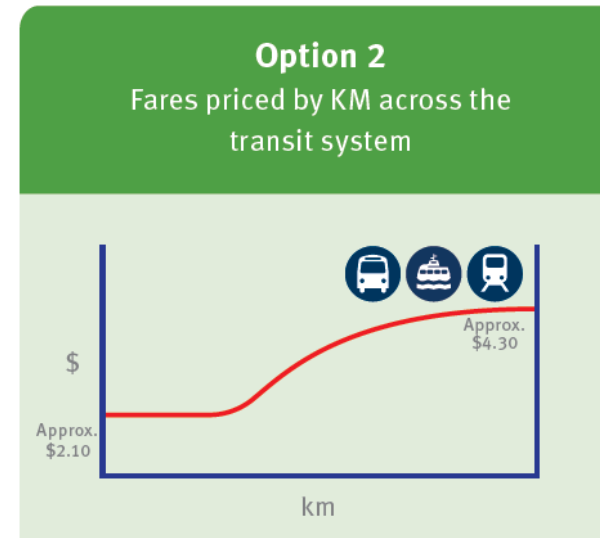
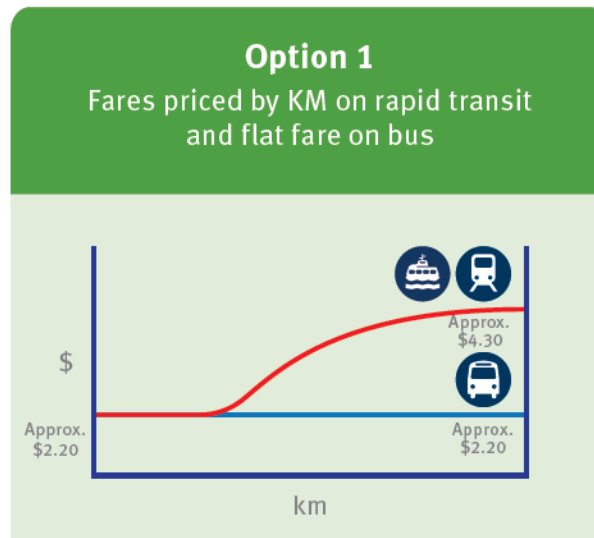
# Respondents have told us

- **Current zone system doesn't work well** (59% indicated that it doesn't work well)
- Fares should be **tied more closely to distance travelled** (72% agreeing/strongly agreeing)
- Preference for a **measured distance** based structure at least on rapid transit system
- Considered these in the options shortlisting process



Long  
List

Shortlisted  
two  
measured  
distance  
fare  
structures



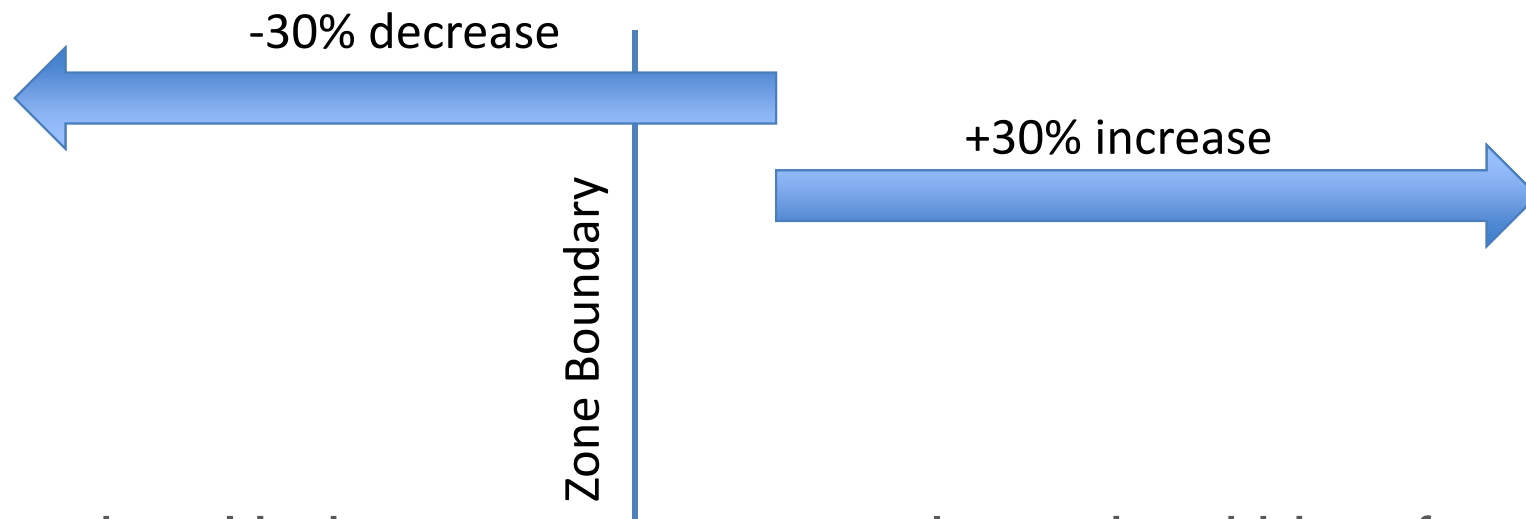
# Simplified Consequences Table

Options			
Objectives	Criteria	Option #1 Fares priced by km on rapid transit and flat fare on bus	Option #2 Fares priced by km across the system
Make it simple to learn and use	Logical and intuitive to explain and understand	Better than current system	Much better than current system
	Ease of predicting fare	Worse than current system	Much worse than current system
Make it fair	Alignment with user pay principle	Better than current system	Much better than current system
	Fares aligned with mode's quality of service	Same as current system	Worse than current system
Keep it affordable	Number of trips paying more than today (assuming adult stored value fare)	Up to 20% of trips	Up to 34% of trips
	Number of trips paying less than today (assuming adults stored value fare)	Up to 13% of trips	Up to 36% of trips
Grow transit ridership and use	System-wide ridership impacts (% change)	Less than +/- 1%	Less than +/- 1%

Too  
Simplistic?

# Inherent Biases about Fare Changes

- Anchoring to current fare paid
- Travelers near zone boundaries would experience the largest fare increases AND decreases



- Framing: Under current system, a long trip within a fare zone is a really good deal (lower \$/km than other trips of same length)
- What to do? Encourage customers to think about all their transit trips in a month (not just commuter trips) and for whole household



# Thinking about Fairness

- Fairness in the system is established by the firm (TransLink) who makes a pricing decision (the fare) that has an outcome evaluated by the transactors (customers) through an exchange.
- Determinants of fairness judgements are
  - Reference transactions
  - The outcomes to TransLink and its customers
  - The occasion for the action (the pricing decision) of TransLink

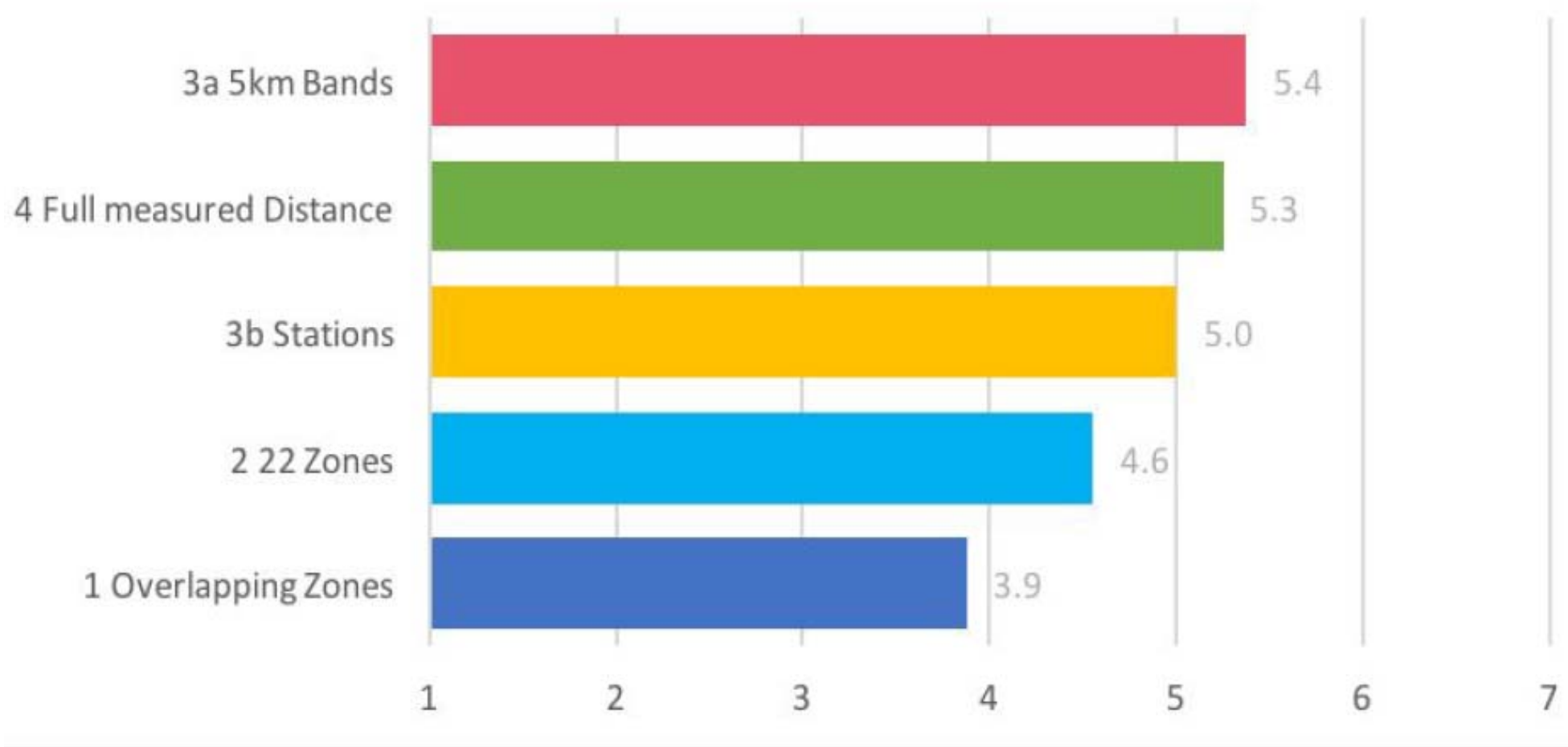
Sources: Kahneman et. al 1986. “Fairness as a Constraint on Profit Seeking”; OpenRoad Communications. 2016. TransLink Transit Fare Review Customer Experience Research. Prepared for TransLink.

# Thinking about Fairness

- Influenced by
  - Context
  - Personal experience
  - Perception of a surcharge vs. a discount
  - Culture
    - Individualistic cultures vs. collective cultures
  - Willingness to pay
  - Ability to pay
  - Value of time
  - Individual's specific situation
  - Framing

# User Research Testing found Measured Distance Systems are Perceived to be Fairer

## Fairness



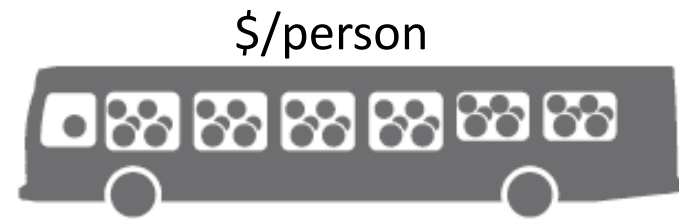
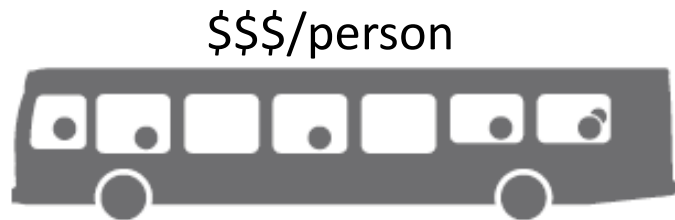
Source: OpenRoad Communications. 2017. Prepared for TransLink. Small sample size. 18

# Thought Experiments for What is Fair

1. Jarrett Walker's fair share of costs
2. Rawls' Theory of Justice

# Jarret Walker's Fair Share – Splitting the Costs Amongst Other Riders

- Share the costs amongst all the people travelling at the same time with you



- Fare = function of a) your distance and b) number of other passengers travelling at same time
- Equitable since everyone is paying for exactly their share of the cost
- But...get perverse outcomes
  - the least travelled routes that are least competitive with driving have the highest fares and vice-a-versa

# Fairness – Rawls' Theory of Justice

- Perceptions of fairness are individual and subjective.
- Philosopher John Rawls (1971) conducted a thought experiment called the “original position” where people selected the type of society they would like to live in **supposing they didn't know the social position they would occupy.**
- Has been applied to decongestion pricing (see WSP 2017)
- The **principles** are:
  1. **A set of basic rights for everyone**
  2. **Equal opportunities to change and adapt**
  3. **Inequalities should work in favour of the less advantaged**

# Rawls' Theory of Justice Thought Experiment Applied to Transit Fares

Imagine

- You just moved to Vancouver, found a place to rent and signed a 12 month lease
- But still looking for a job at different locations in the Region

OR

- You have an extended household who takes transit to a wider variety of locations and for different trip purposes

***Which fare structure would you prefer? Does this shift your view?***

# Rawls' Theory of Justice Thought Experiment Applied to Transit Fares

Principle #	Principle	Current Zonal System	Flat	Option 1) Hybrid Fare by Distance	Option 2) Full Fare by Distance
Rawls' #1	<i>A set of basic rights for everyone</i>				
Rawls' #2a	<i>Peer groups should not be treated differently for arbitrary reasons</i>				
Rawls' #2b	<i>Equal opportunities to change and adapt</i>				
Rawls' #3	<i>Inequalities should work in favour of the less advantaged</i>				
User Pay Principle	<i>The more you use, the more you pay</i>				



# Rawls' Theory of Justice Thought Experiment Applied to Transit Fares

## *Option 1 (bus is flat)*

- Generally consistent with Rawls' and User Pay Principle
- Everyone travelling the same distance pays the same fare if travelling on the same mode
- Accounts for willingness to pay for different modes

## *Option 2 (bus varies by distance)*

- Performs best on some principles (a set of equal rights for everyone) and user pay principle
- Everyone pays the same for the same distance travelled
- People taking local bus “pay more” in travel time
- Doesn't allow opportunity to adapt and lower fare

# Summary Thoughts on Fairness

1. Greater fairness
  - a) requires greater complexity for transit agency and users, but easier now with smart cards
  - b) will mean some people will pay more and some people will pay less than they do today – will take political will to go to a measured distance system
2. Public perception of fairness critical for informing public policy choices
3. Fairness goes beyond fares - externalities of auto use needs to be accounted for to create a level playing field
4. Fairness is a direction, not a destination – need to balance against other objectives

# Lessons Learned

1. Fairness is hard stuff to think about and even harder to communicate and get meaningful input from public and decision makers
2. But fairness is and should be a major driver of public policy – therefore need some way to assess it
3. Public input and user research are essential for understanding values and to design an acceptable new fare structure

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