

Okanagan Valley Transportation Symposium #2:

Transit Overview

September 16, 2011



Presentation Outline

- Travel Patterns and Demographics
- Transit in the Okanagan Today
- Urban Form and Transit
- Transit Mode Characteristics
- Multi-modal Planning & Sustainability
- Synthesis



2007 North and Central Okanagan Household Travel Survey

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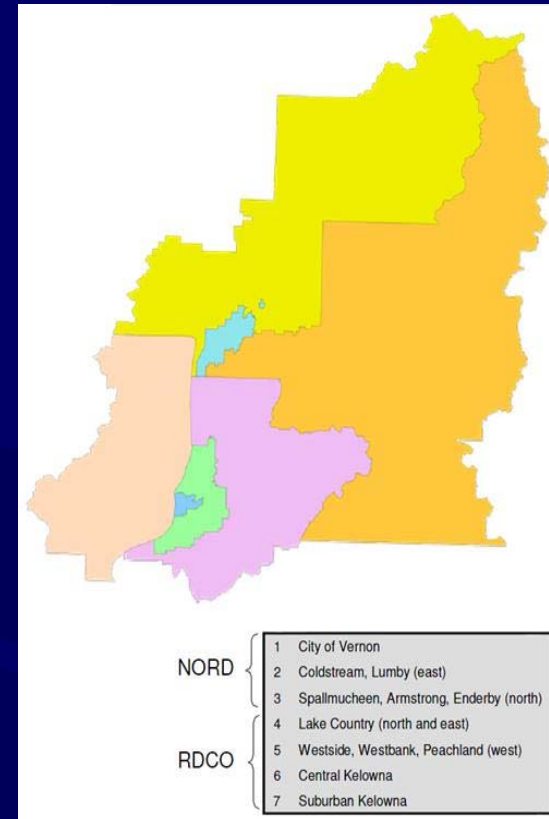
synovate
Research reinvented

Project Title 2007 North and Central Okanagan Household Travel Survey

Prepared for The City of Vernon & The City of Kelowna

Prepared by Julie Winram

Date July 13, 2007



Travel Mode Percentages by Time of Day

Travel Mode	Travel Mode Percentages						Total Trips
	Night 0000-0559	AM Peak 0600-0859	Midday 0900-1459	PM Peak 1500-1759	Evening 1800-2359	Total (%)	
Auto Driver	83.5%	64.9%	74.1%	68.5%	66.8%	69.8%	525,065
Auto Passenger	8.8%	16.6%	13.6%	19.0%	27.2%	17.6%	132,249
Commercial Vehicle Driver	2.0%	1.2%	0.9%	0.7%	0.2%	0.9%	6,418
Transit Bus	0.5%	1.4%	1.1%	1.2%	0.6%	1.2%	8,717
School Bus	0%	5.2%	1.5%	2.9%	0.2%	2.4%	17,982
Bicycle	2.2%	2.8%	1.0%	2.0%	1.4%	1.7%	13,098
Roller blades/skateboard	0%	0.2%	0.1%	0.1%	0%	0.1%	628
Walk	2.6%	6.6%	6.2%	4.3%	2.6%	5.2%	38,942
Taxi/airport Shuttle	0%	0%	0%	0.1%	0%	0%	242
Others	0.3%	0.6%	1.0%	0.8%	0.5%	0.8%	5,875
Auto- Combo Driver/Pass	0%	0.1%	0.2%	0.2%	0.4%	0.2%	1,566
Other combo	0%	0.4%	0.3%	0.3%	0.1%	0.3%	2,001
Trip Totals	8,676	148,317	267,057	201,677	114,768	100%	752,720

Average Trip Time By Mode and By Trip Purpose

Mode	Average Trip Time (Minutes)					
	Night 0000- 0559	AM Peak 0600- 0859	Midday 0900- 1459	PM Peak 1500- 1759	Evening 1800- 2359	Total
Auto Driver	17.8	15.9	14.2	16.5	14.7	15.2
Auto Passenger	16.3	12.7	14.1	15.1	13.9	14.1
Transit Bus	20.9	27.4	26.9	31.3	30.5	27.9
School Bus	0	23.9	21.5	24.8	28.6	23.7
Bicycle	24.4	17.1	14.9	20.3	19.6	18.0
Walk	15.6	14.0	14.5	17.2	14.1	15.0
Others	22.5	21.6	20.8	19.2	18.6	20.4
Auto-Combo Driver/Pass	0	10.4	22.1	13.0	14.7	16.7
Other Combo	0	22.7	19.2	20.7	23.9	20.3
Total	17.8	15.9	14.6	16.8	14.7	15.5

Transit Trips times typically 2x Auto Times

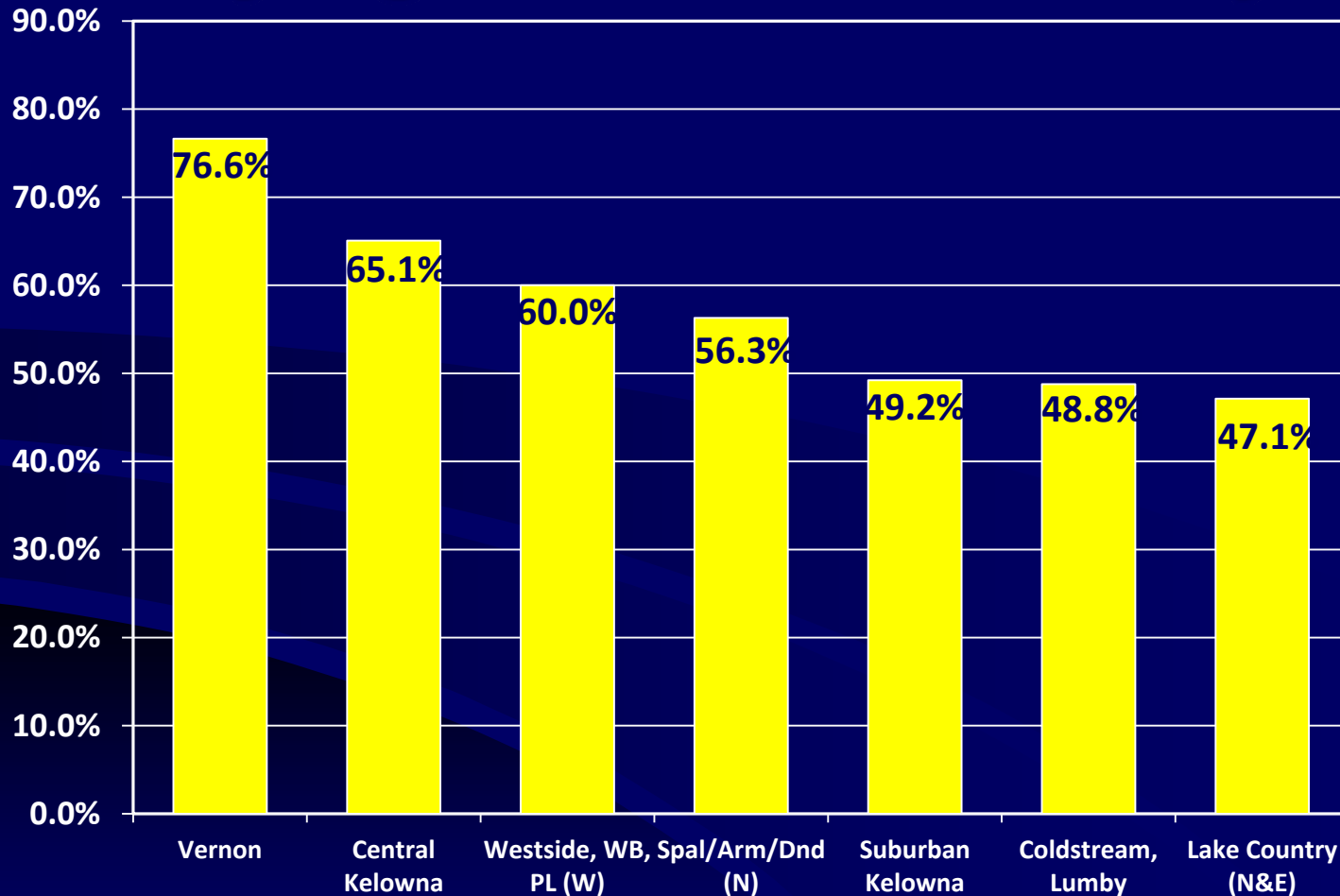
Travel Modes by Age Groups

Age	Mode Share Over 24 Hours							Total Trips
	Auto Driver	Auto Pass	School Bus	Transit	Walk	Bike	Other	
05-17	1.0%	49.5%	95.2%	23.5%	37.3%	27.4%	7.5%	109,854
18-24	4.8%	5.5%	2.5%	16.5%	4.7%	8.3%	5.1%	38,125
25-34	11.9%	5.4%	0%	11.1%	10.2%	10.5%	6.1%	75,869
35-44	21.5%	6.2%	0.7%	8.0%	9.8%	16.5%	17.1%	129,075
45-64	47.5%	20.6%	1.6%	22.0%	28.0%	33.4%	52.3%	300,880
65+	13.3%	12.9%	0%	18.9%	10.1%	3.9%	11.8%	95,843
Total	69.2%	17.5%	2.4%	1.2%	5.1%	1.7%	1.7%	749,603

Age

Transit

Percentage of Trips Staying within Community



Source Data: 2007 North and Central Okanagan Household Travel Survey

Population-Age: Okanagan Similkameen

Males:
Version (Total)

Females:
Version (Total)

P 35 (40686)

P 35 (43682)

2011



2000 1600 1200 800 400 0
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0 400 800 1200 1600 2000

Population-Age: Okanagan Similkameen

Males:
Version (Total)

Females:
Version (Total)

P 35 (44581)

P 35 (49854)

2036



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Population -Age: Central Okanagan

Males:
Version (Total)

Females:
Version (Total)

P 35 (94541)

P 35 (97392)

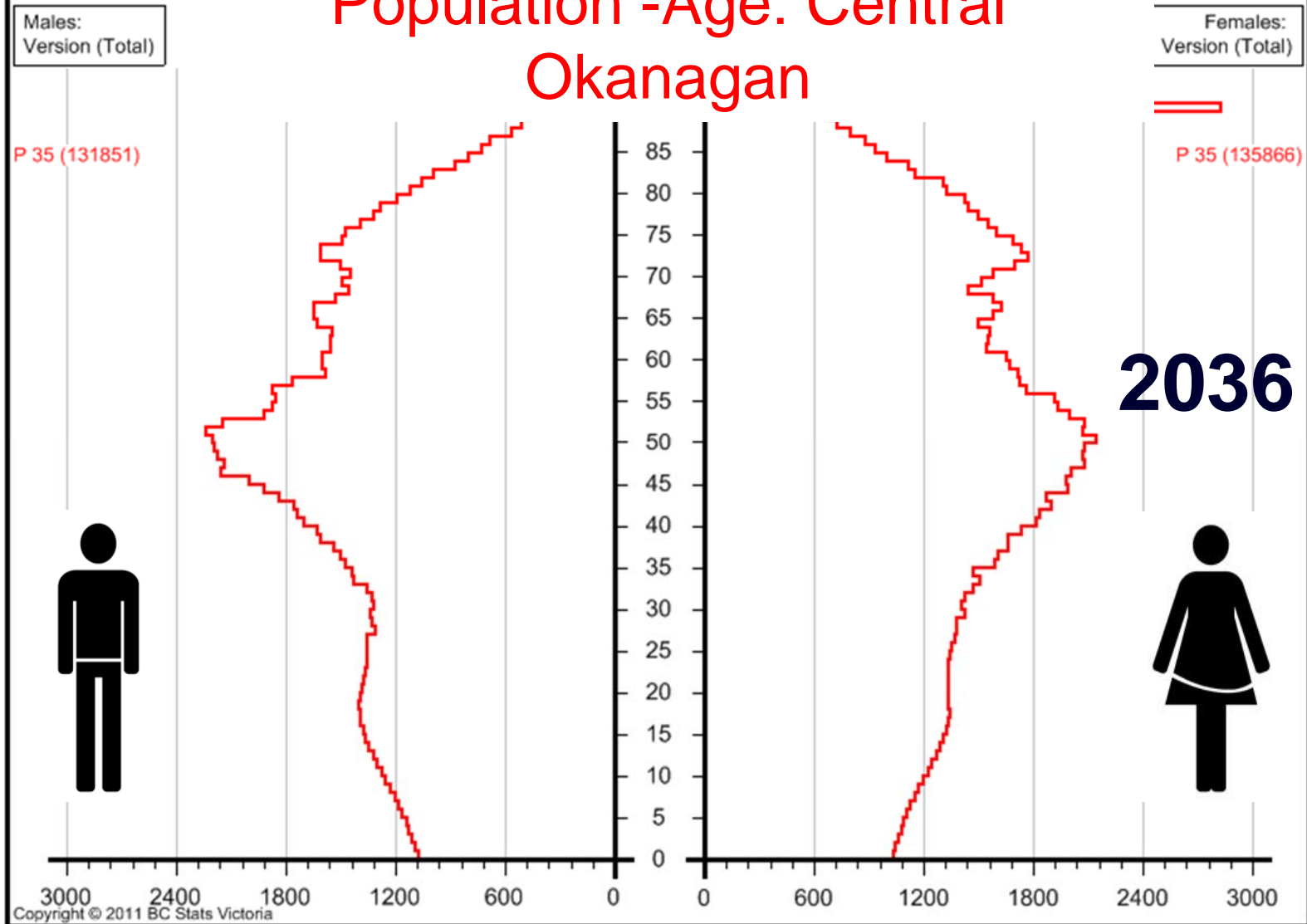
2011



3000 2400 1800 1200 600 0
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0 600 1200 1800 2400 3000

Population -Age: Central Okanagan



Population -Age: North Okanagan

Males:
Version (Total)

Females:
Version (Total)

P 35 (41730)

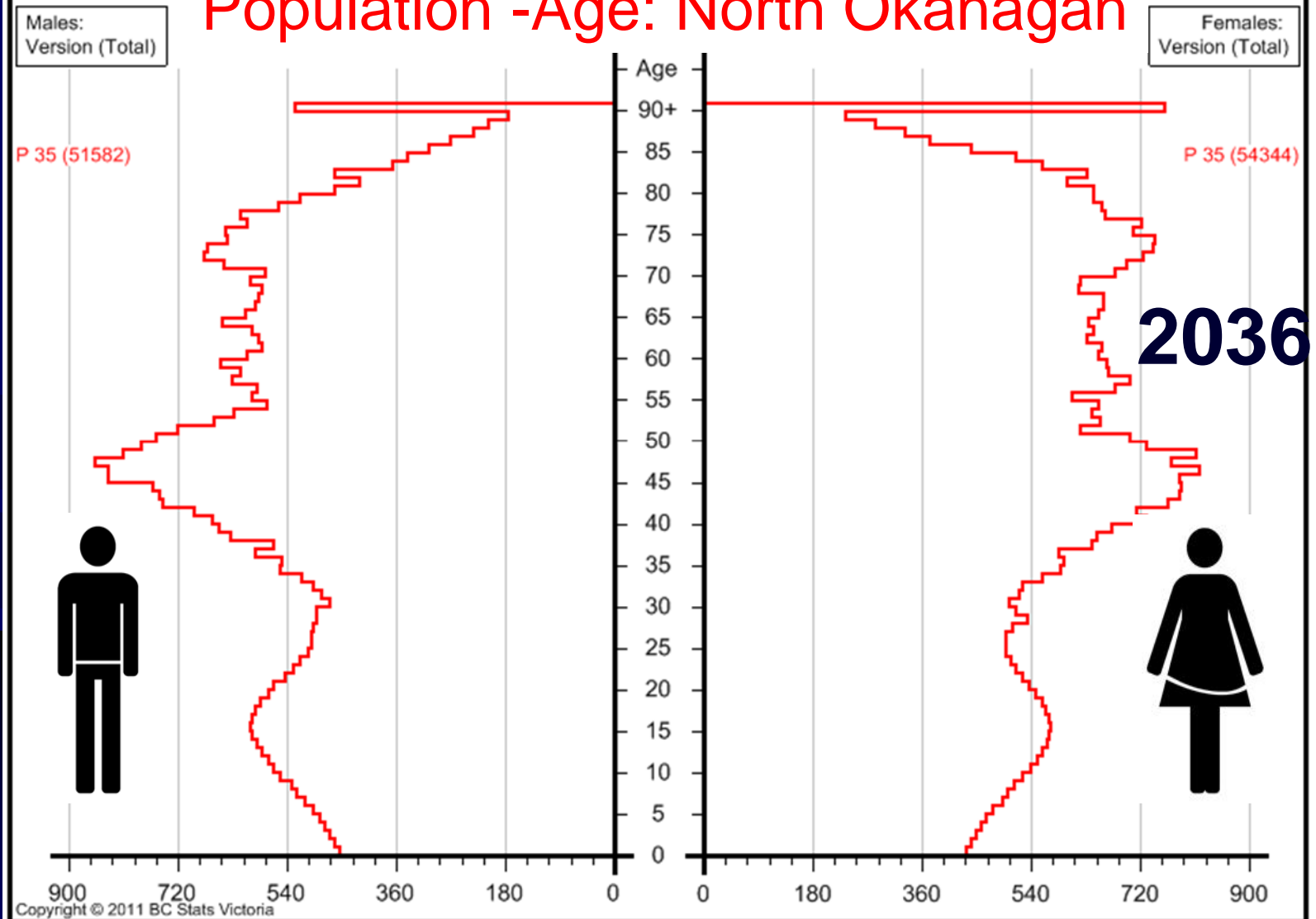
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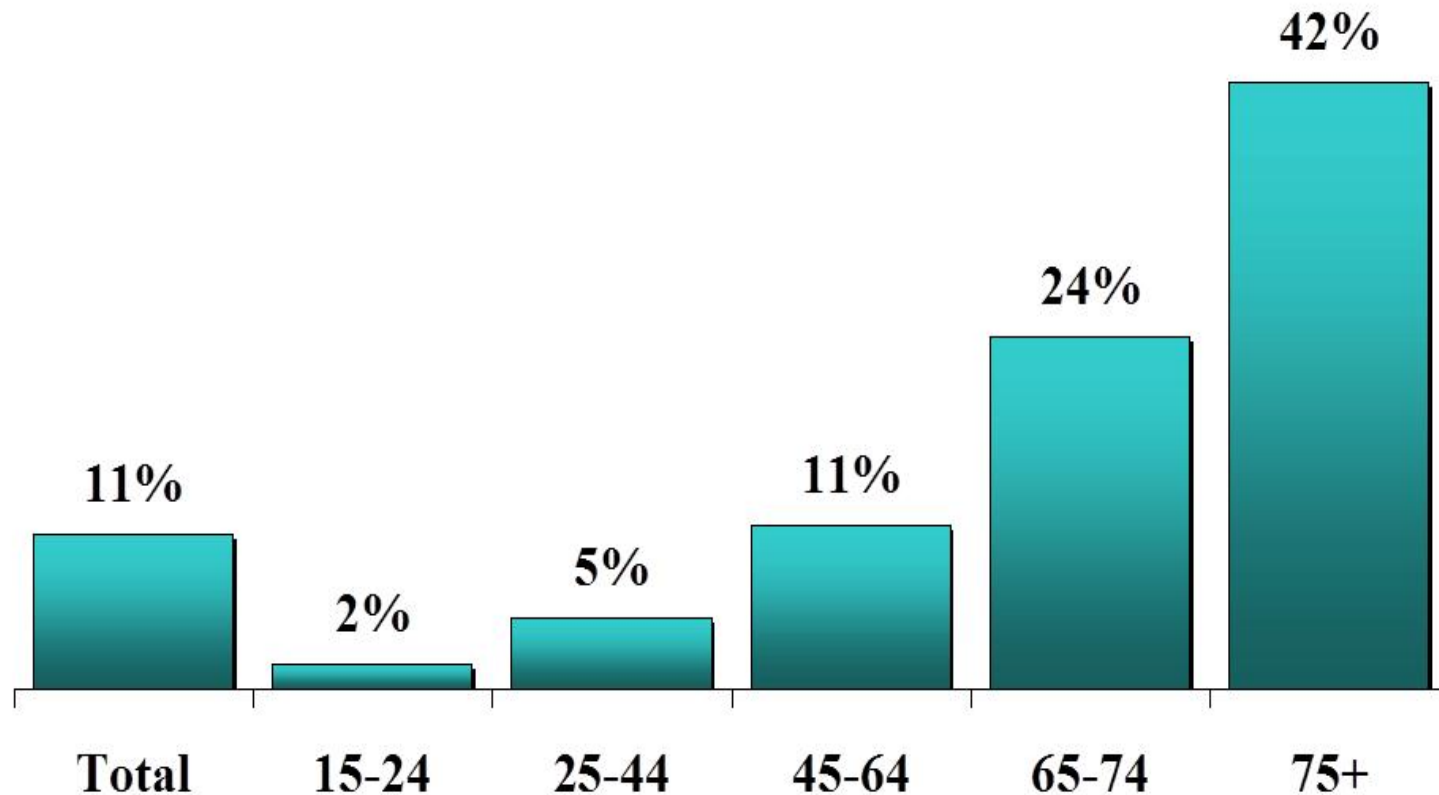
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Population -Age: North Okanagan



Percentage of People With Mobility Impairments, British Columbia, 2001

Difficulty walking half a kilometre or up and down a flight of stairs



Implications for Travel and Transit

- Most travel is local
- Okanagan is aging
- More significant in South
- Lower growth in younger residents
- Implications for trip purposes & destinations



Transit Services in the Okanagan

Conventional Transit



- Kelowna Regional
- Penticton
- Vernon Regional



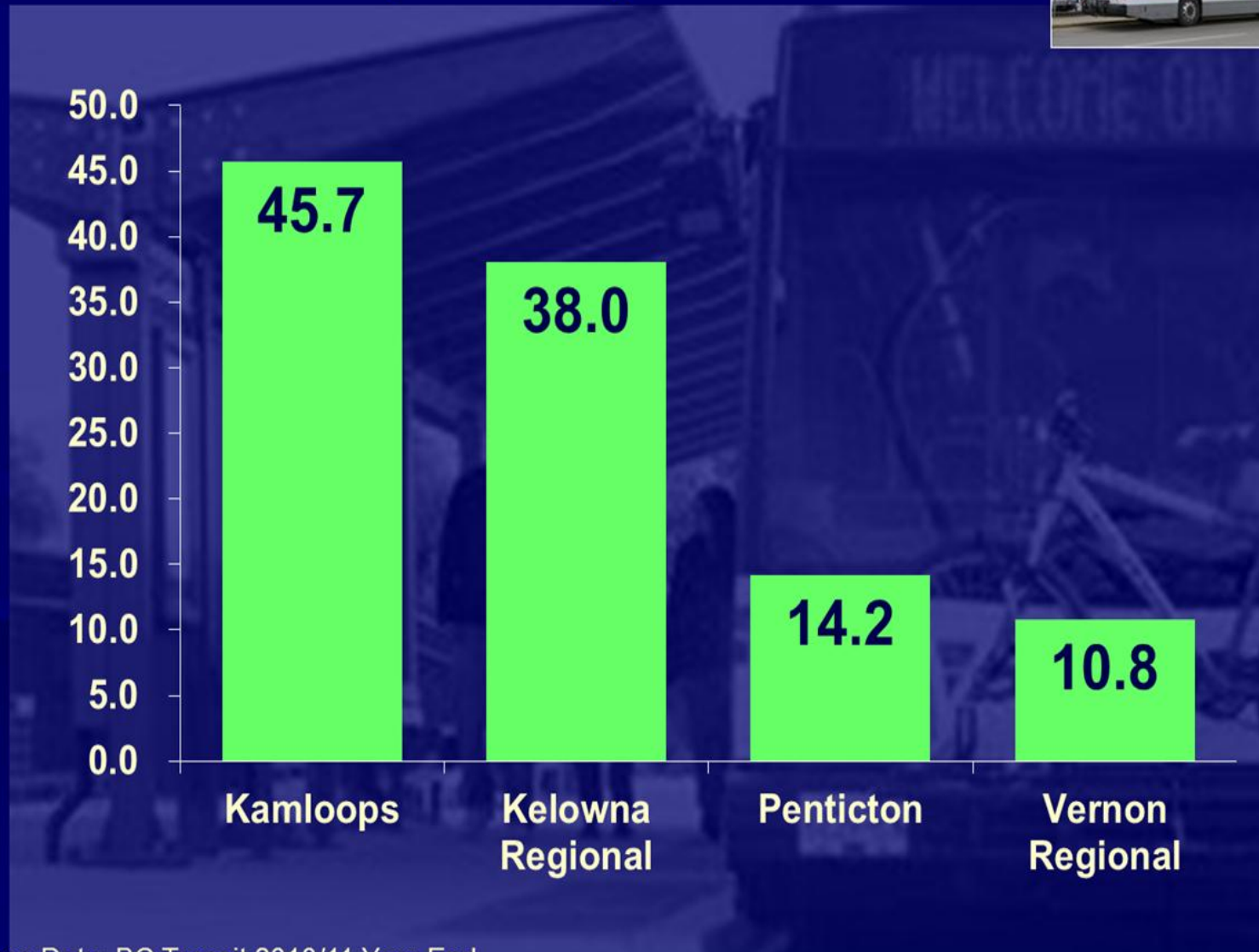
Custom & Paratransit



- Kelowna Regional
- North Okanagan
- Okanagan - Similkameen
- Osoyoos
- Penticton
- Vernon Regional

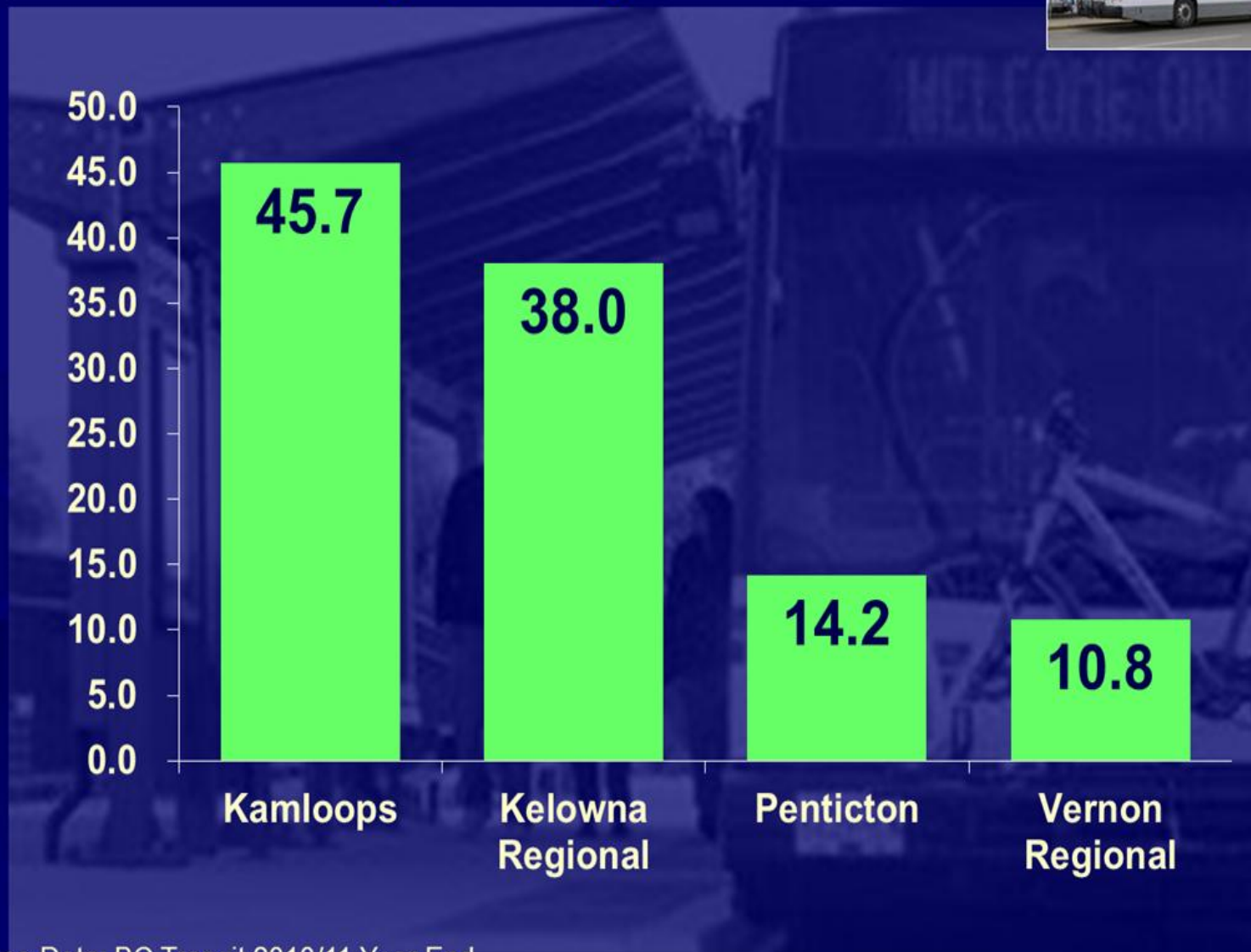


Transit Rides per Capita: 2010-11



Source Data: BC Transit 2010/11 Year End

Transit Rides per Capita: 2010-11



Source Data: BC Transit 2010/11 Year End

Local Cost per Capita: 2010-11



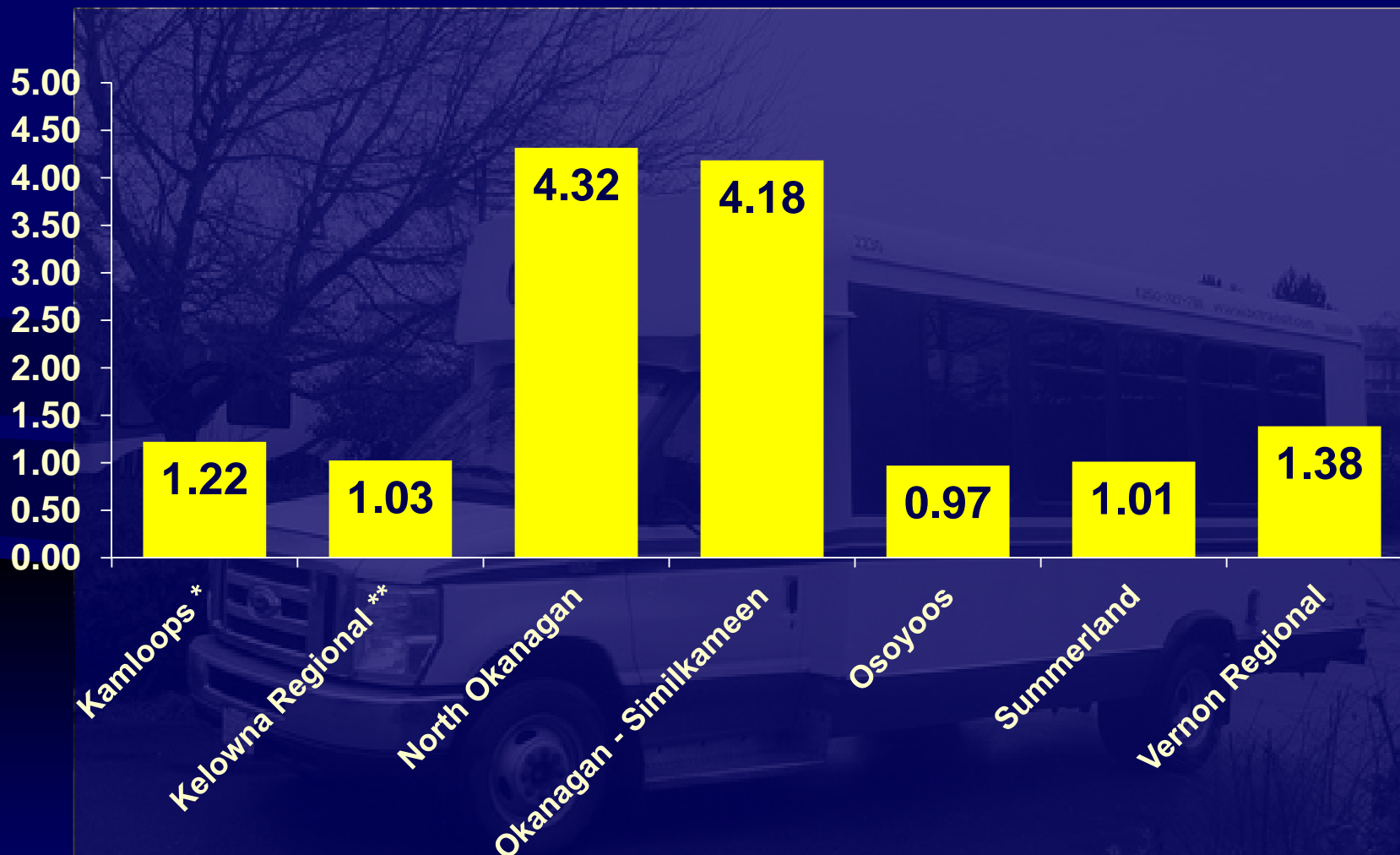
Source Data: BC Transit 2010/11 Year End

Total Cost per Ride: 2010-11



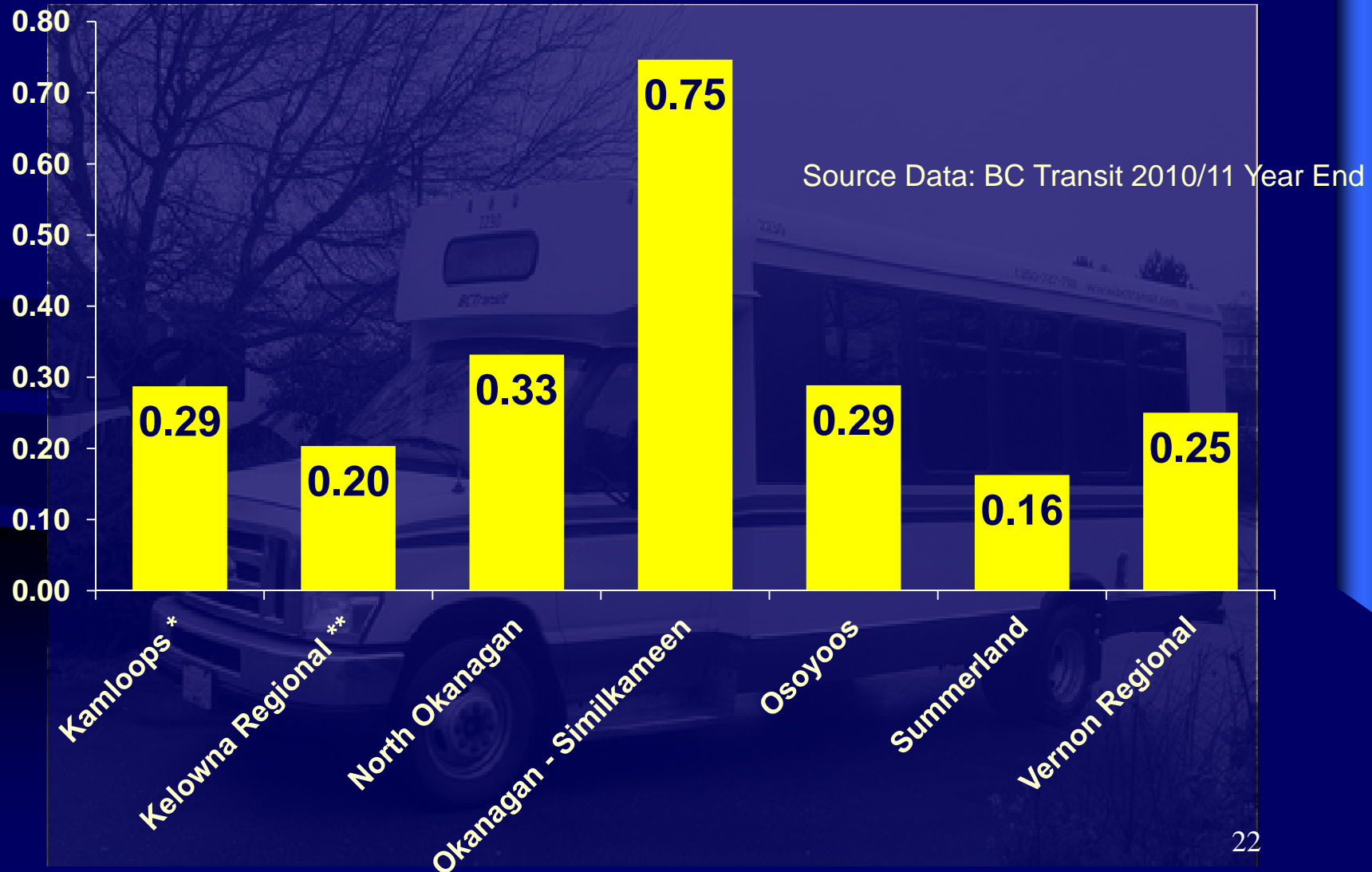
Source Data: BC Transit 2010/11 Year End

Custom Transit/Paratransit – Rides per Capita: 2010-11



Source Data: BC Transit 2010/11 Year End

Custom Transit/Paratransit – Service Hours/Capita: 2010-11



Custom Transit/Paratransit – Local Cost/Capita: 2010-11



Source Data: BC Transit 2010/11 Year End

Custom Transit/Paratransit – Cost Per Ride: 2010-11



Source Data: BC Transit 2010/11 Year End

What is a Transit Trip?

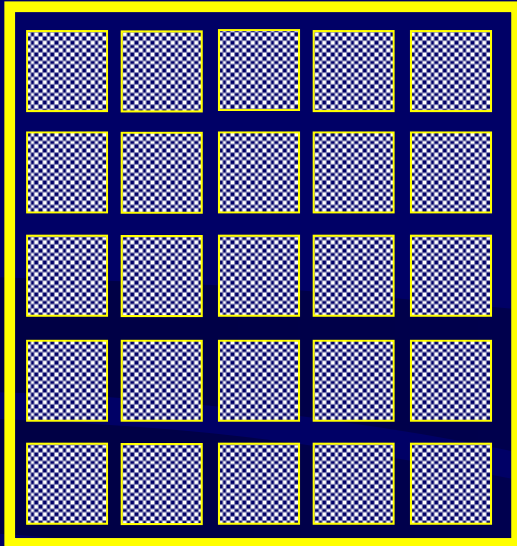


Elements of Transit-Friendly Design

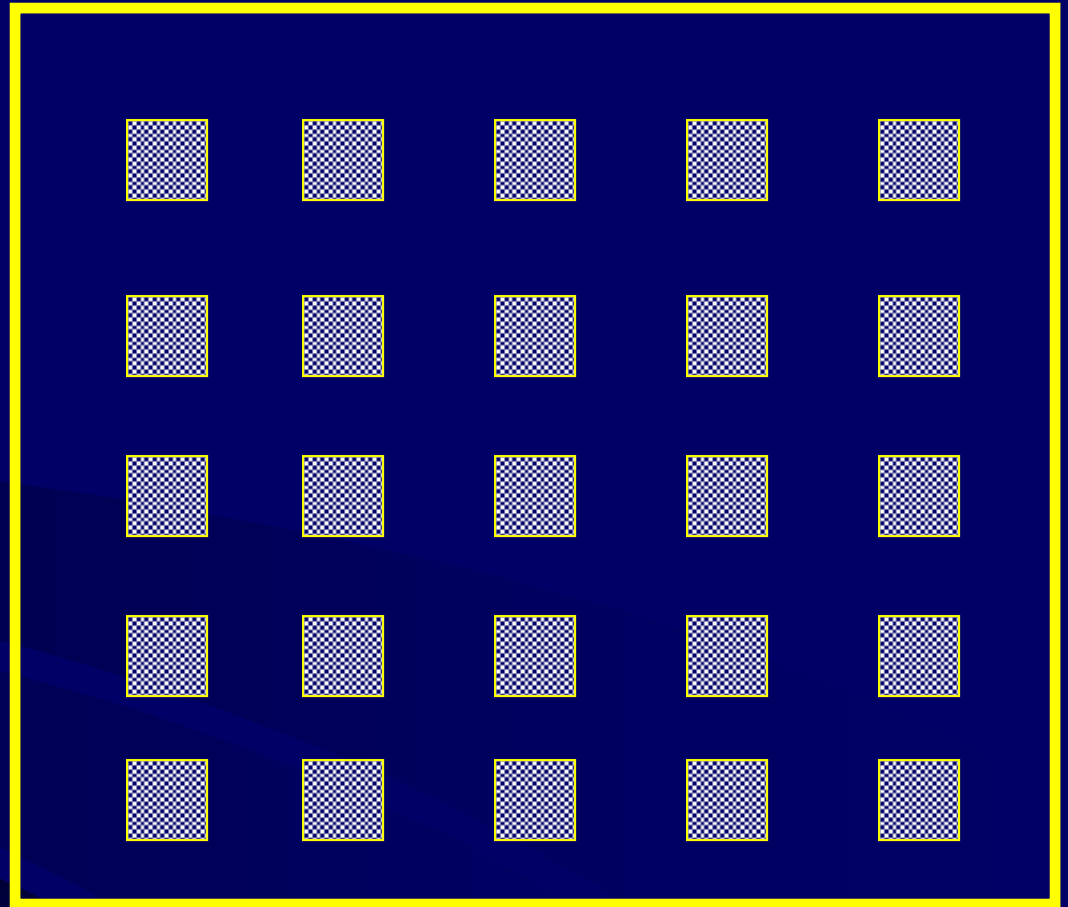
- Density
- Land Use Mix
- Pedestrian Amenities
- Road/Street Network and Design



Urban Form

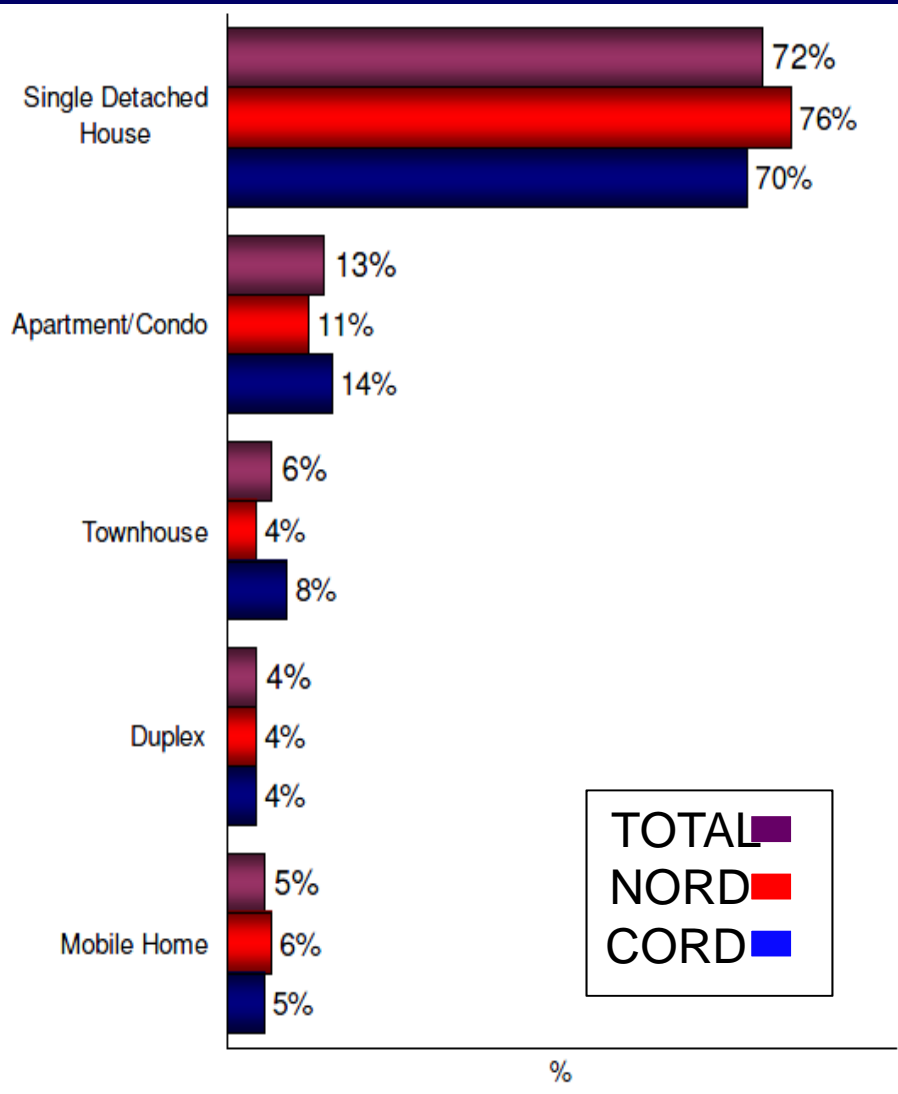


Walk Bike Transit



Automobile

Type of Dwelling



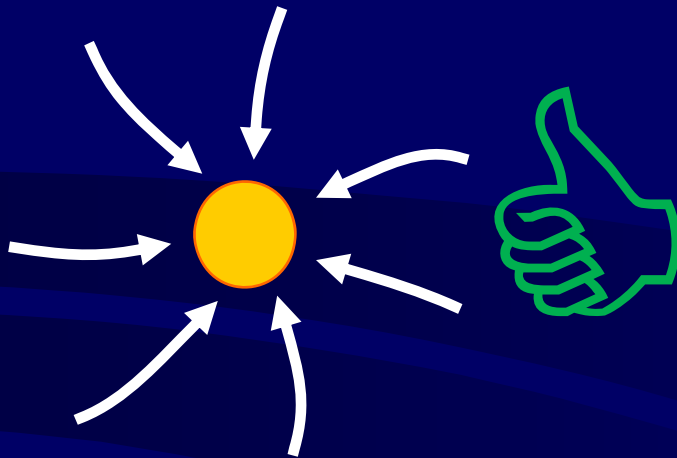




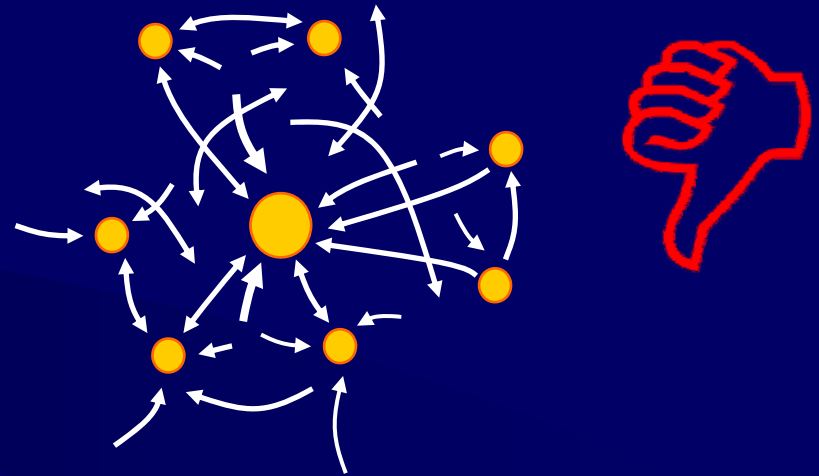
Change



Urban Movement Patterns: What Transit Can Do Well

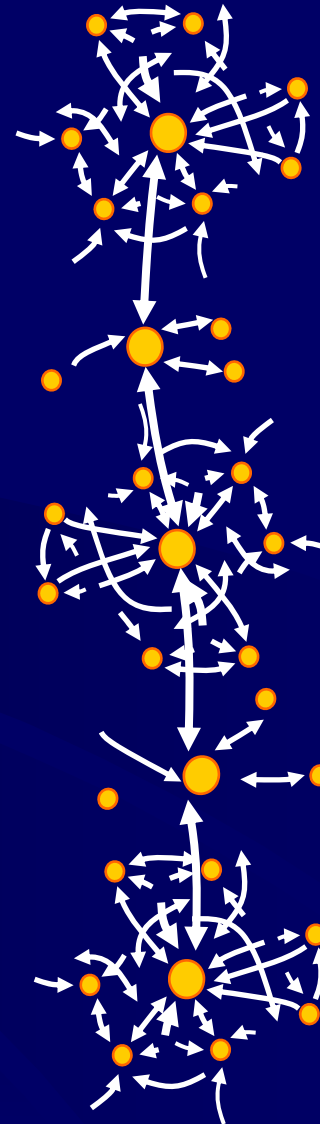
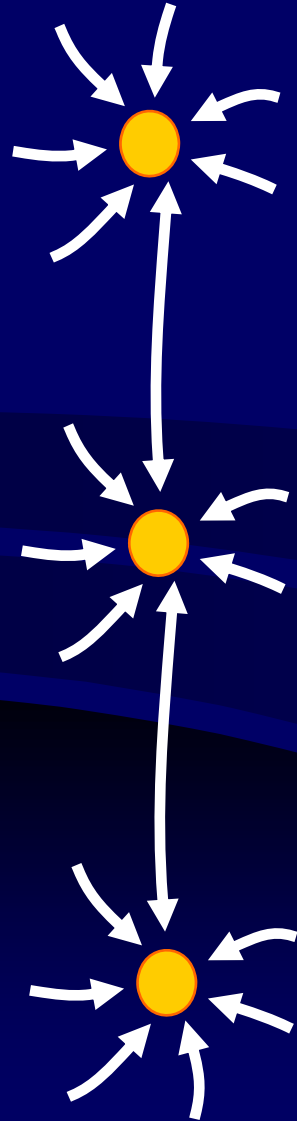


Many Origins –
Strong Centre

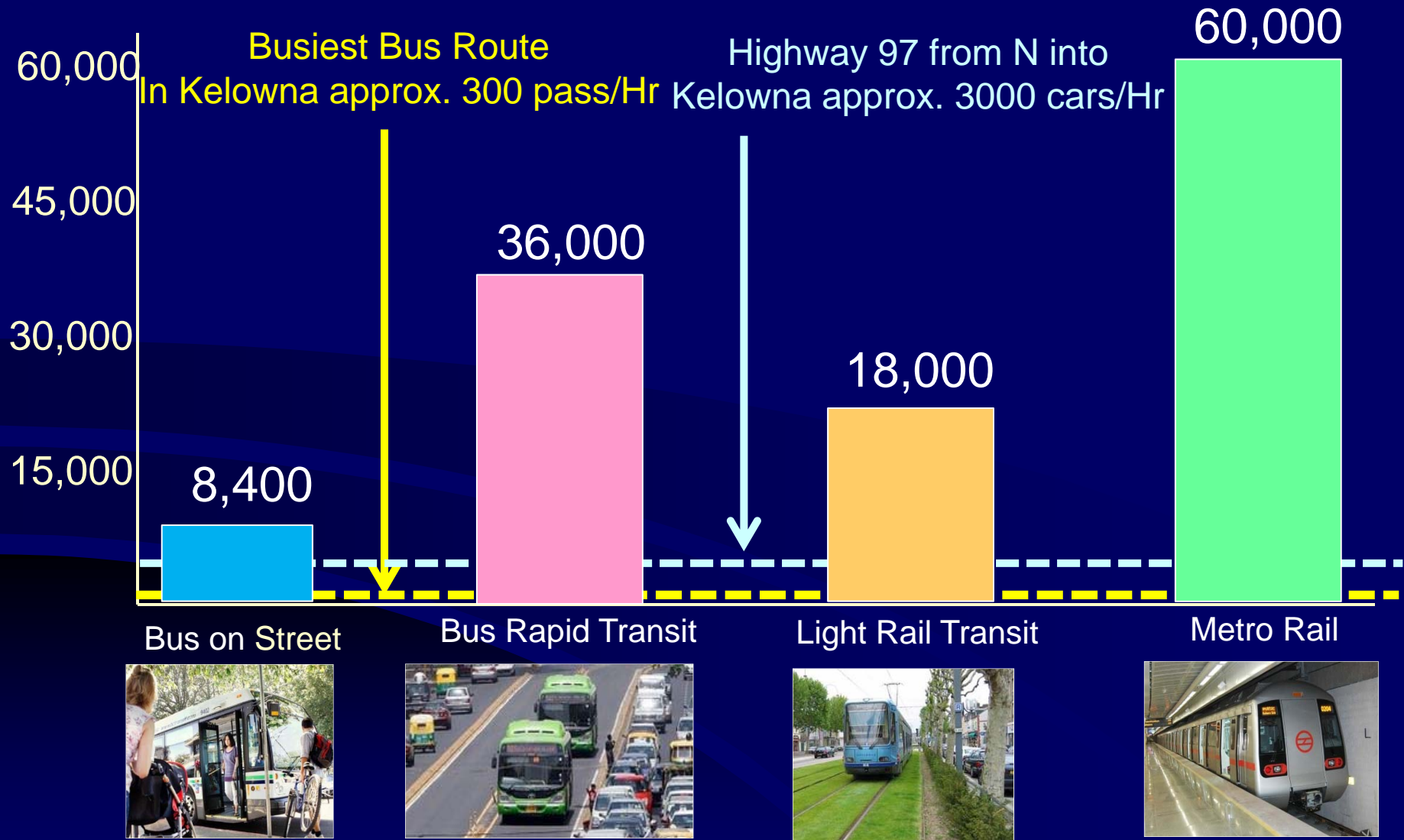


Many Origins –
Weak Centre

Inter-City Transit



Maximum Transit Capacities – Pass/Hour*



*Source: Professor Nigel Wilson, MIT: http://ocw.mit.edu/courses/civil-and-environmental-engineering/1-258j-public-transportation-systems-spring-2010/lecture-notes/MIT1_258JS10_lec03.pdf

Transit Outlook

- Significant potential for better local transit
 - Low ridership levels today
 - Requires increased focus on complete communities
- Limited role for inter-city transit
 - Demand would limit frequency of service
- Demand suited to Bus rather than Rail
 - Destinations are dispersed
 - Relatively low ridership & high costs
 - Preserve Rights-of-Way

Roles and Responsibilities for Transit

BC Transit	Local Government	Local Operating Company
Administer contracts	Provide local funding	Deliver specified transit service
Set performance standards	Approve fares and service levels	Provide trained staff
Audit systems	Set system service/ridership objectives	Manage labour relations
Select operating company	Promote ridership	
Provide professional services		
Planning, marketing, asset management and financial services		

Key is Stable, Predictable and Appropriate Revenues/Funding

Need for Multimodal Planning

- For Sustainability and Resilience
 - Modes are planned together: Pedestrian, Bike, Transit, Auto
 - Success depends on integration, especially for transit
 - Need to develop integrated multi-modal 'transportation' plans
 - Challenging with current roles/responsibilities
- Complex Funding/Institutional Arrangements
 - Between Province and Municipalities
 - Between local governments

Key is Stable, Predictable and Appropriate Funding

Synthesis

- Physical Structure
 - Low densities, dispersed destinations
 - Highly auto-dependent communities
 - Often pedestrian, bike and transit unfriendly
 - Communities have limited resilience today
- Demographics
 - Population is aging – needs will be significant
 - Lower growth in ‘traditional’ transit markets

Synthesis continued

- Trip Characteristics

- Most trips remain local
- Limited market for 'regional travel'
- Transit usage is low – significant potential for growth
- Likely increase for medical/social trips with older pop'n

- Transit Modes

- Much more can be done by bus
- Keep options open for rail transit

Synthesis continued

- Focus should be Urban/Sub-regional Transit
 - Current services below threshold of utility for many people
 - Intra-regional demand is low
 - No present role for rail
- Integrated Transportation Planning
 - Essential to advance sustainability
 - Challenging under current structure
 - Problem of '*who pays, who benefits*'
 - Different governments/agencies, timescales, funding

