



Transit Network Design Workshop January 31, 2013



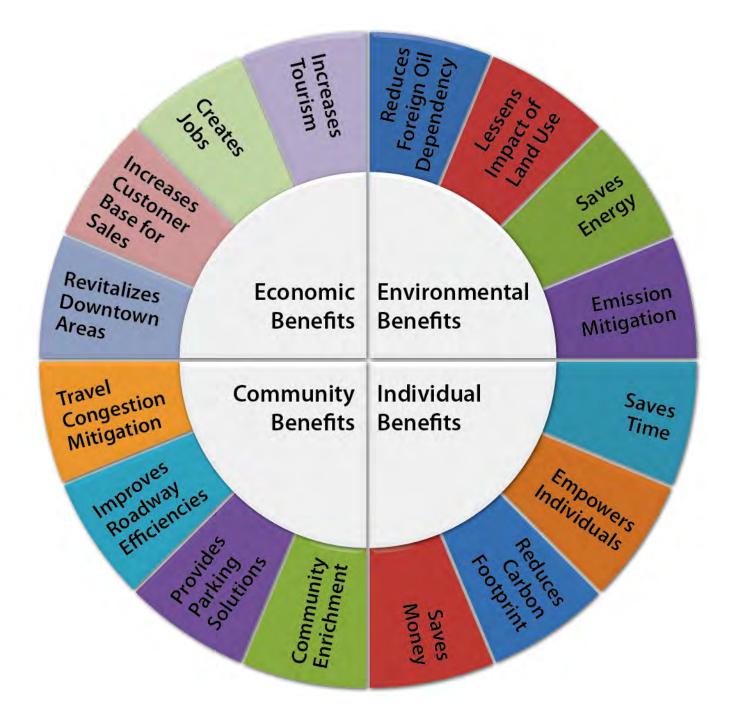
"Livability means being able to take your kids to school, go to work, see a doctor, drop by the grocery or Post Office, go out to dinner and a movie, and play with your kids at the park – all without having to get in your car."

- Ray LaHood, United States Secretary of Transportation



"There's extreme competition for talent, so it's recruitment, retention. What you've got in downtown Bellevue is a critical mass. You've got housing, you've got restaurants, you've got retail, and you've got transit."

- Steve Schwartz, Director, Jones Lang LaSalle (The Seattle Times, 1/14/13)





"Support planned growth and development in Bellevue with a bold transit vision that encourages long-term ridership growth."

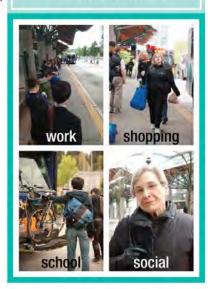
- Bellevue City Council, Project Principles (Approved July 9, 2012)

CURRENT TRANSIT NETWORK



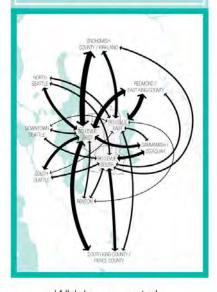
What service types are in place today and how well do they perform?

MARKET SEGMENTATION



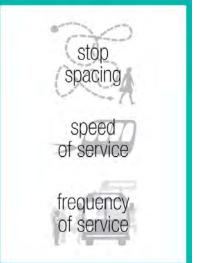
What are the attitudes and preferences that drive traveler choices?

FUTURE TRAVEL MARKETS



Which segments in which travel markets should transit services compete for?

MARKET DRIVEN STRATEGIES



What kinds of strategies can best seize these opportunities?

Corporations, Agencies, and Institutions

Riders, Former Riders, and Non-Riders

City of Bellevue Boards and Commissions



















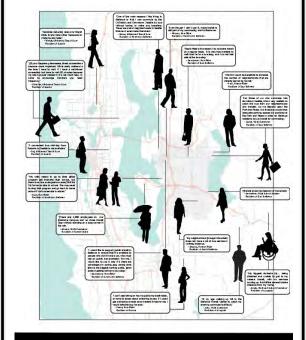












Bellevue Transit Master Plan

- 1.您認為貝爾優的交通設施有甚麼好的地方?
- 2. 您認為貝爾優的交通設施有甚麼不好的地方? 成文 Rapied Ride in f Par by 在 此去年中心 + \$70-5/15 星沙(前の 从 Rodmond 3 Pelleviews)



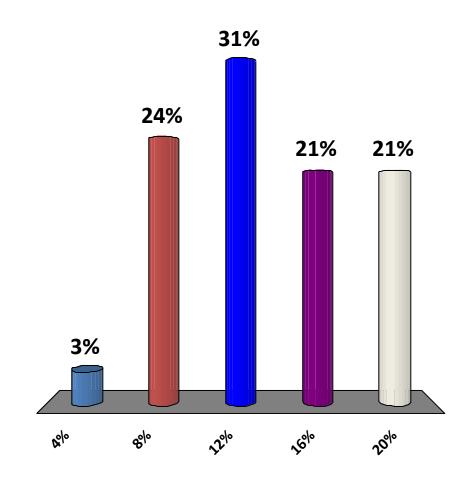




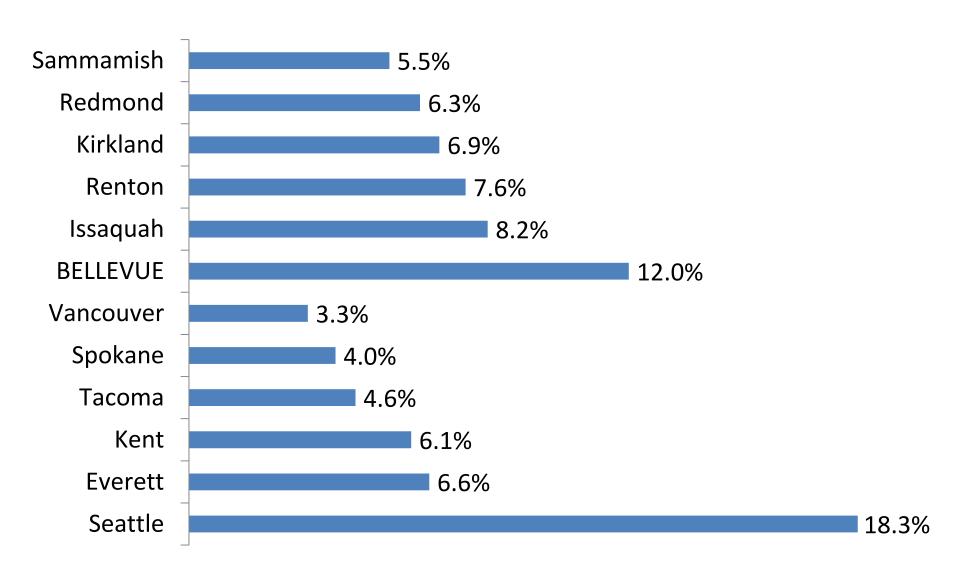


What percentage of commute trips in Bellevue are by transit?

- 1. 4%
- 2. 8%
- 3. 12%
- 4. 16%
- 5. 20%

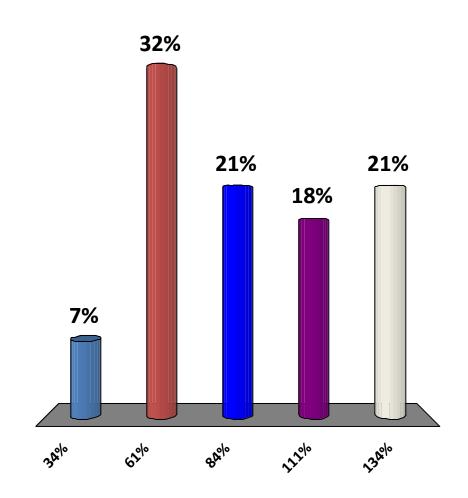


Percentage of Commute Trips by Bus in Eastside and Large Cities



What was the percent increase in daily bus usage in Bellevue from Fall 2003 to Spring 2012?

- 1. 34%
- 2. 61%
- 3. 84%
- 4. 111%
- 5. 134%



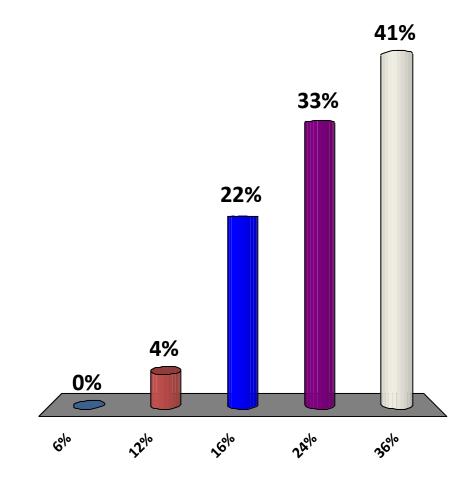
Transit Usage in Bellevue's Mobility Management Areas (MMA)

MMA	Fall 2003	Spring 2012	% Change
Downtown	7,346	17,700	141%
Eastgate	2,197	8,689	296%
Crossroads	1,706	3,501	105%
South Bellevue	2,908	3,275	13%
East Bellevue	1,695	2,688	59%
Factoria	1,724	2,331	35%
Richards Valley	1,301	1,969	51%
Bel-Red Northup	883	1,586	80%
Newport Hills	670	838	25%
Newcastle	384	831	116%
Bridle Trails	62	829	1,237%
Northeast Bellevue	532	786	48%
North Bellevue	512	685	34%
Wilburton	-	565	N/A
Total	21,920	46,274	111%

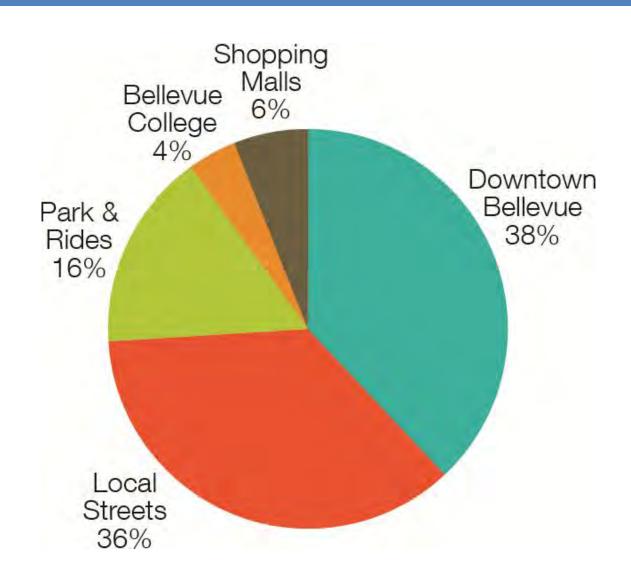
What percent of transit usage in Bellevue takes place at Park-and-Ride facilities?

[Eastgate P&R; South Bellevue P&R; Newport Hills; Wilburton; Eastgate Direct Access Ramp]

- 1. 6%
- 2. 12%
- 3. 16%
- 4. 24%
- 5. 36%



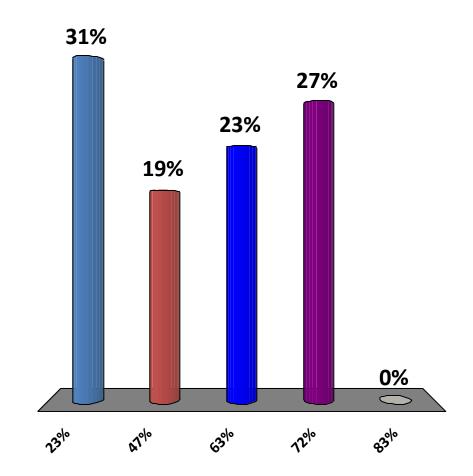
Daily Transit Usage Patterns in Bellevue



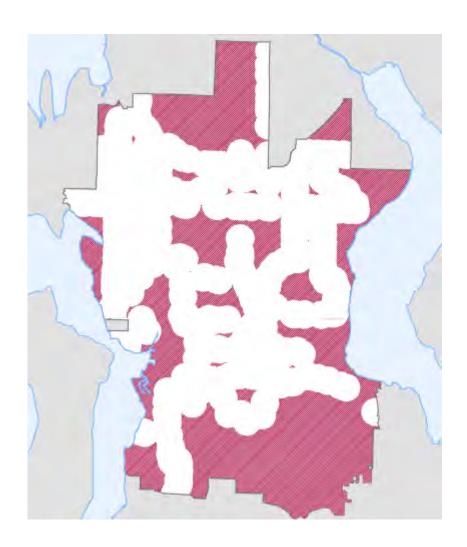
What percent of Bellevue's population (with ¼ mile of a stop) enjoys 30 min headways in the peak?

[Headway: The amount of time between consecutive trips in the same direction of travel.]

- 1. 23%
- 2. 47%
- 3. 63%
- 4. 72%
- 5. 83%



Areas in Bellevue Served by 30 Minute Headways in the Peak Period



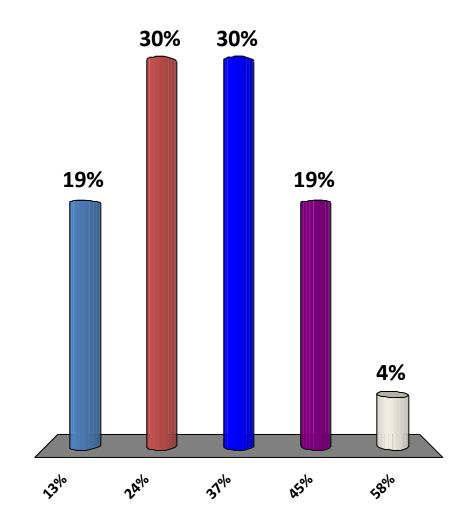
Percent of population served:

Residents - 72%
Older adults - 72%
Minorities - 75%
Speak language other than English - 87%
People in poverty - 83%
Affordable housing complexes - 88%
Major employers - 98%
Jobs - 92%

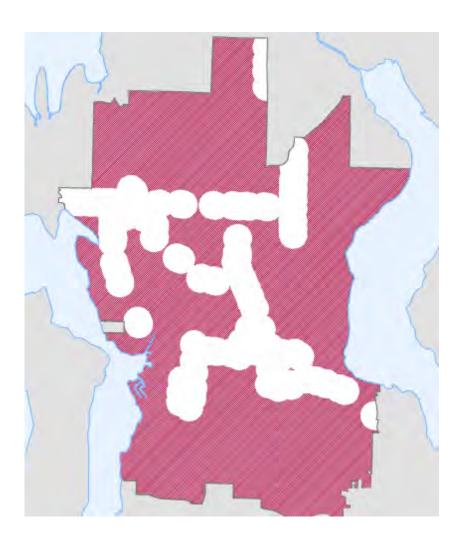
What percent of Bellevue's population (with ¼ mile of a stop) enjoys 15 min headways in the peak?

[Headway: The amount of time between consecutive trips in the same direction of travel.]

- 1. 13%
- 2. 24%
- 3. 37%
- 4. 45%
- 5. 58%



Areas in Bellevue Served by 15 Minute Headways in the Peak Period



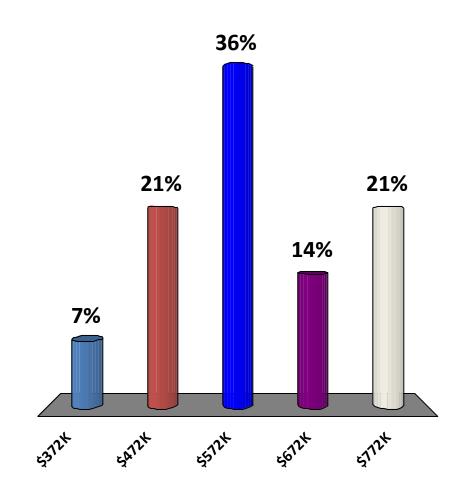
Percent of population served:

Residents - 37%
Older adults - 36%
Minorities - 42%
Speak language other than English - 56%
People in poverty - 51%
Affordable housing complexes - 56%
Major employers - 79%
Jobs - 63%

What is the cost to operate a conventional bus for one year?

[15 hours per day; 365 days per year]

- 1. \$372K
- 2. \$472K
- 3. \$572K
- 4. \$672K
- 5. \$772K



Bus Operating Costs

[15 hours per day; 365 days per year]



15 Hours per day	15	15 Daily Hours
365 Days per year	5,475	Annual Service Hours
\$141/Service hour	\$772,000	Annual Operating Cost

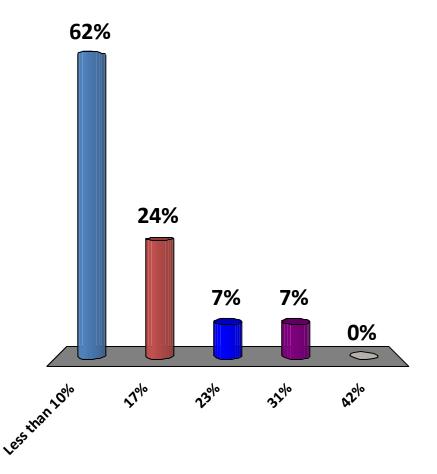
The cost to operate a conventional bus for one year is more than the cost of the bus itself.

How much cheaper is it to operate a van versus a 40' bus in a defined service area?





- 1. Less than 10%
- 2. 17%
- 3. 23%
- 4. 31%
- 5. 42%



Case Study

Route 240 : Downtown Bellevue to Renton via Newcastle, Factoria

- Boarding per Platform Hour = 22
- Cost per Boarding = \$5.50



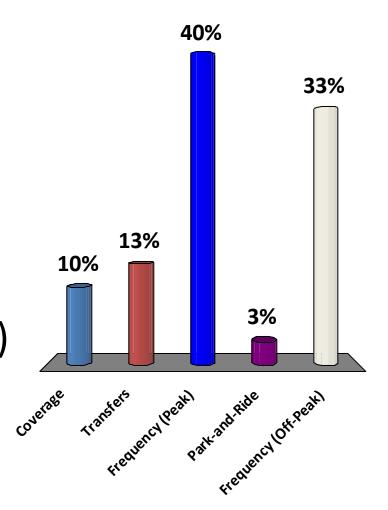
Route 925: DART service area of Newport Hills, Newcastle, and Factoria

- Boarding per Platform Hour = 1
- Cost per Boarding = \$135



What is the number one requested improvement among current transit riders in Bellevue?

- 1. Coverage
- 2. Transfers
- 3. Frequency (Peak)
- 4. Park-and-Ride
- 5. Frequency (Off-Peak)



Priorities of Respondents Overall & Bellevue Residents Who Use Transit

	All		Bellevue Resident	
Quality of Service	Count	Percent	Count	Percent
Increase Frequency During Peak	643	33.2%	149	22.8%
Increase Frequency to Reduce Overcrowding	249	12.9%	74	11.3%
Increase Vehicle Capacity at Park & Rides	183	9.5%	65	9.9%
Other	168	8.7%	54	8.3%
Increase Frequency During Midday	152	7.9%	58	8.9%
Revise Schedules to Improve Connections	131	6.8%	44	6.7%
Expand Service Coverage in Bellevue	114	5.9%	71	10.9%
Install Additional Shelters	60	3.1%	30	4.6%
Increase Frequency on Weekends	50	2.6%	30	4.6%
Extend Service at Night on Weekends	48	2.5%	20	3.1%
Increase Frequency During Late Night	47	2.4%	22	3.4%
Expand ORCA Sales Locations in Bellevue	41	2.1%	18	2.8%
Extend Service at Night on Weekdays	32	1.7%	13	2.0%
Increase Bicycle Capacity at Park & Rides	18	0.9%	6	0.9%
respondents	1,936		654	

Increase in population between 2010 and 2030 - Bellevue PCD Department

Increase in jobs between 2010 and 2030 - Bellevue PCD Department







1,219,965

2010 daily person trips to/from/inside Bellevue

- BKR travel demand model (MP0r12.1)

1,750,539

2030 daily person trips to/from/inside Bellevue

- BKR travel demand model (MP0r12.1)

Spring 2012 daily transit ons/offs in Bellevue
- King County Data

2030 daily ons/offs in Bellevue

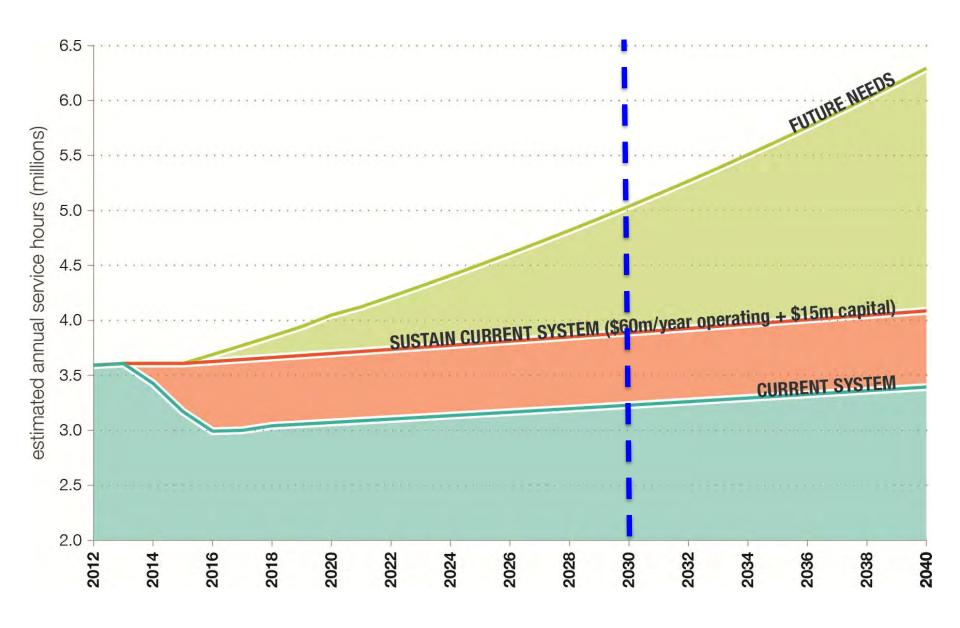
- BKR travel demand model (platform MP30r6.2)

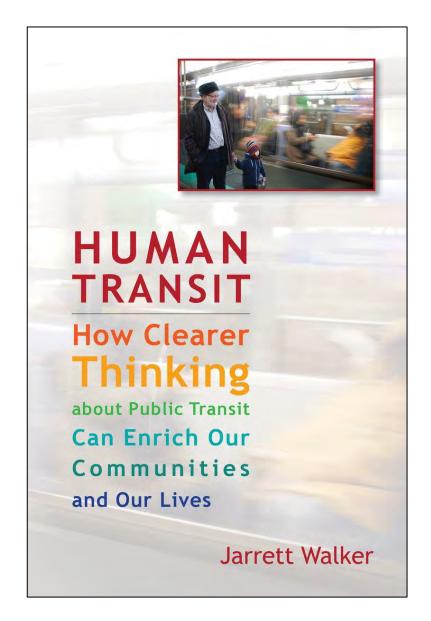
2030 daily ons/offs at Bellevue LRT Stations

- BKR travel demand model (platform MP30r6.2)

2030 daily bus usage (ons/offs) in Bellevue

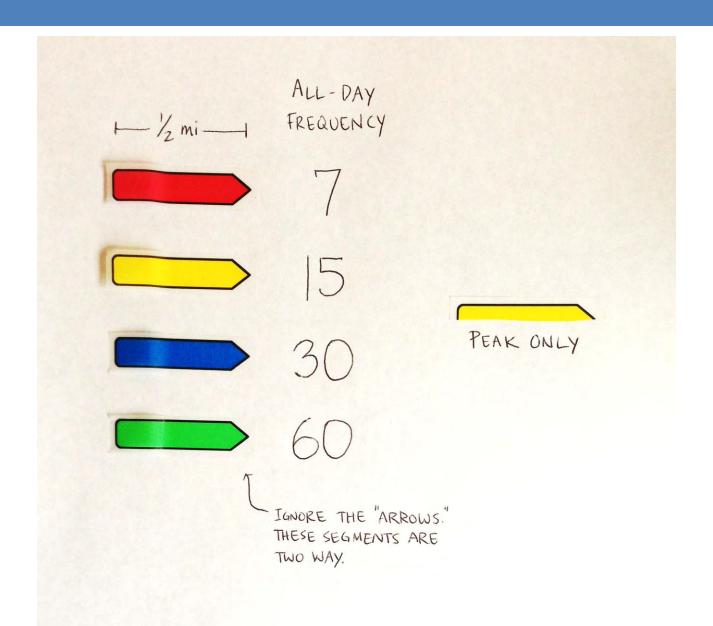
- BKR travel demand model (platform MP30r6.2)



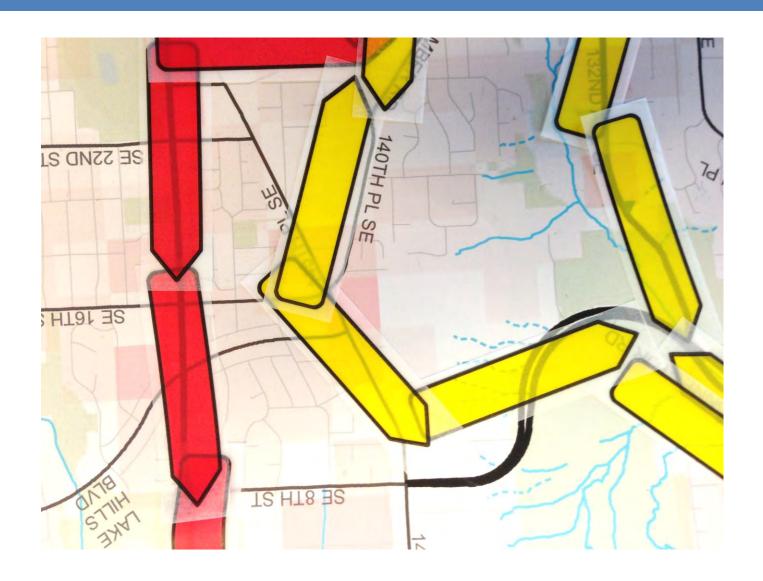


http://www.humantransit.org/

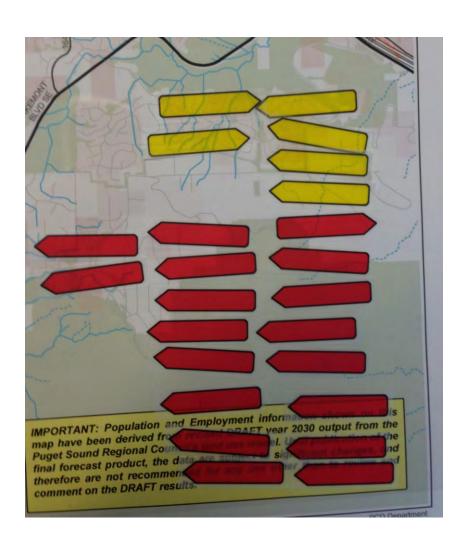
Network Design Exercise



Network Design Exercise



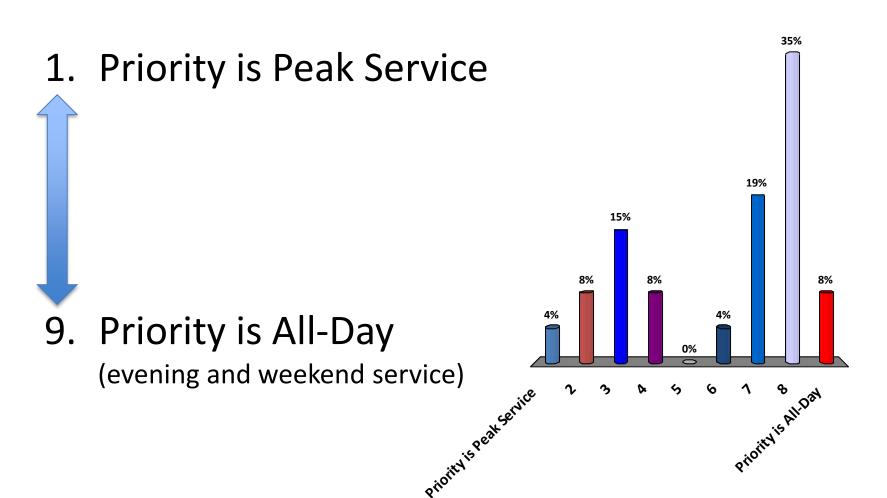
Network Design Exercise



Trade-Offs

When we invest in transit, we have to make choices. Here are a few tough choices on which we'd like your opinion.

Should investments focus on peak period commuter service, or on building a network that runs all-day?



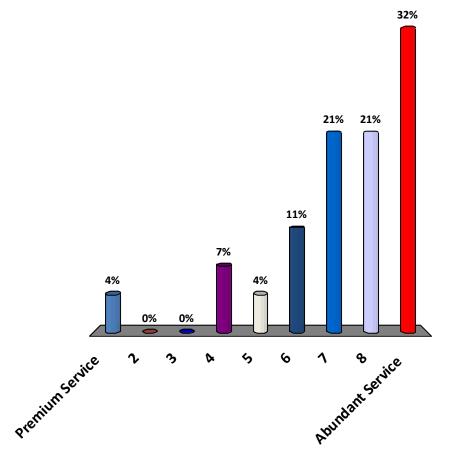
During peak commute, should we focus on running direct service from many places to each commute destination, or can we ask people to transfer?

25% 1. Avoid Transfers 21% 21% **Encourage Transfers**

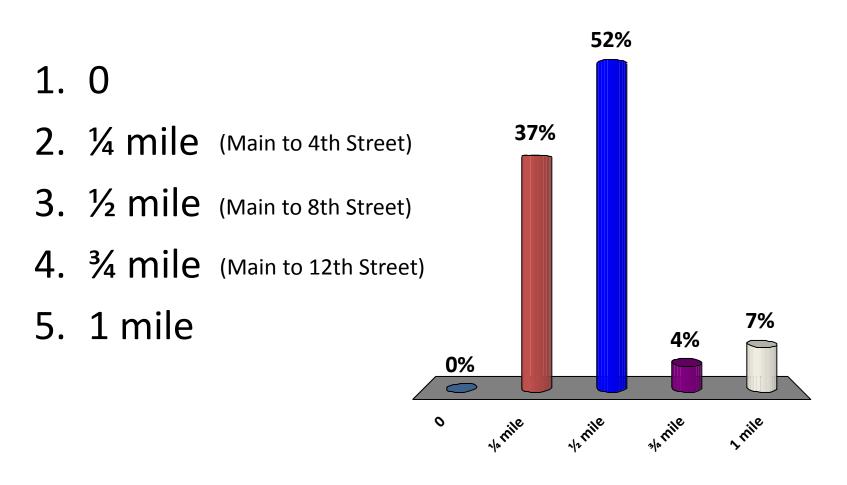
Should we focus more on investments that make service more attractive to higher end markets or focus on making service as abundant as possible?

1. Premium Service

9. Abundant Service



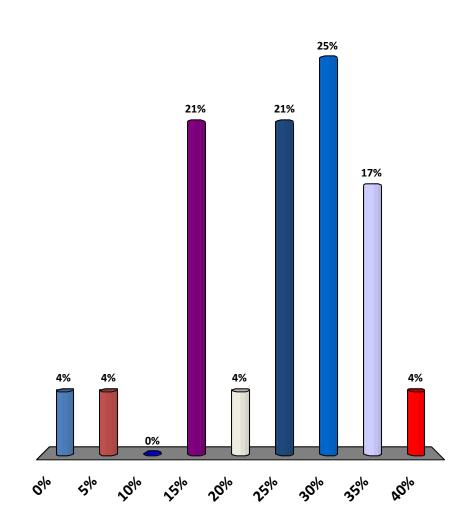
How close to a home or job is close enough to count as being served (assuming decent sidewalks and service worth walking to)?



What % of the population is it OK not to serve?



- 2. 5%
- 3. 10%
- 4. 15%
- 5. 20%
- 6. 25%
- 7. 30% We Are Here
- 8. 35%
- 9. 40%



Next Steps