



Opinion Research Northwest

2008 Washington State Ferries Customer Survey



WASHINGTON STATE TRANSPORTATION
COMMISSION

Preliminary Findings On-Board Survey



Opinion Research Northwest

Project Overview



*WASHINGTON STATE TRANSPORTATION
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Statement of Purpose / Outcomes

Purpose

- To gather information on travel behavior and attitudes from a representative sample of ferry customers
- To identify fare policy, operational, and customer-centric strategies that could be effective in modifying peak hour vehicular travel and/or increasing walk-on passenger travel while continuing to accommodate demand for existing and future ridership

Key Outcomes

A better understanding of customers attitudes and behaviors to:

- Estimate the impact changes in fare policy, operational, or customer-centric strategies could have on travel behavior
- Inform decisions that will better utilize existing ferry capacity, increase operational efficiency, reduce the need for capital expansions, and improve cost-efficiency while maintaining ferry revenues and continuing to meet customer needs

On-Board Survey Objectives

- Develop and implement a quantitative research methodology that yields reliable and statistically valid baseline results
 - Methodology must be replicable in future years
 - Methodology must provide reliable data at aggregate level and allow for reliable analysis among key customer segments
- Provide a comprehensive profile of WSF customers
 - Travel behavior
 - Demographics
- Test customer attitudes toward possible changes in fare policies and/or operations
 - Identify market segments most likely to be impacted by changes in pricing and/or operations

Sampling

- Cluster sampling used
 - Appropriate when "natural" groupings – in this case trips – are evident in a statistical population
 - Frequently used in transportation research
 - Very efficient means for sampling
 - Affords the opportunity to sample a large number of customers for a relatively low cost

Sampling (cont'd)

- Stratified cluster sampling used
 - Improves efficiency
 - Insures representation of key strata
- Stratified by:
 - Route
 - Number of trips surveyed on each route ensures representation proportionate to ridership on that route
 - And a sample size large enough for reliable analysis at the route level
 - Time of day
 - Peak versus off-peak
 - Weekday versus weekend

Sampling (cont'd)

- Data is weighted according to the sampling plan, to represent general population of WSF customers within routes
 - Currently uses January 2006 ridership data
 - Current 2008 data is now available from WSF and data will be updated to reflect current ridership figures
- The results provided here represent a preliminary picture of WSF customers
 - This data will be combined with the second wave of on-boards to provide a more comprehensive picture of customers

Key Definitions – Peak

- Morning peak
 - Eastbound trips departing from the west side terminal between 5:30 and 9:00 a.m.
- Afternoon peak
 - Westbound trips departing from the east side terminal between 3:00 and 7:00 p.m.
- Weekend peak
 - Westbound trips originating between 8:00 a.m. and Noon on Saturdays
 - Eastbound trips originating between Noon and 8:00 p.m. on Sundays

Plan – Sampled Trips /Route

Route	# of One-Way Trips			
	Total	Peak Weekday	Peak Weekend	Off-Peak
Seattle / Bainbridge	18	10	3	5
Seattle / Bremerton	6	4	1	1
Edmonds / Kingston	16	10	3	3
Mukilteo / Clinton	15	9	3	3
Fauntleroy / Vashon / Southworth	13	8	1	4
Point Defiance / Tahlequah	4	2	1	1
Keystone / Port Townsend	4	2	4	0
Anacortes / San Juans	3	2	1	0
Total	79	47	14	17

Actual – Sampled Trips /Route

Route	# of One-Way Trips			
	Total	Peak Weekday	Peak Weekend	Off-Peak
Seattle / Bainbridge	18	10	3	5
Seattle / Bremerton	6	4	1	1
Edmonds / Kingston	16	10	3	3
Mukilteo / Clinton	15	9	3	3
Fauntleroy / Vashon / Southworth	13	8	1	4
Point Defiance / Tahlequah	4	2	1	1
Keystone / Port Townsend	3	2	1	0
Anacortes / San Juans	2	1	1	0
Total	77	46	14	17

Interviewing Outcomes

Route	Estimated Returns*	Actual Returns	% of Estimate
Seattle / Bainbridge	1,789	2,060	115%
Seattle / Bremerton	581	758	130%
Edmonds / Kingston	1,000	996	100%
Mukilteo / Clinton	999	646	65%
Fauntleroy / Vashon / Southworth	539	519	96%
Point Defiance / Tahlequah	185	93	50%
Keystone / Port Townsend	200	128	64%
Anacortes / San Juans	191	271	142%
Total	5,510	5,471	99%

* (based on January 2006 WSF Ridership)



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Key Findings



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Customer Characteristics

Customer Demographics

- WSF customers match the gender split in the general population in Washington
 - 50% male / 50% female
- WSF customers are somewhat older than the general population in Washington
 - Relatively few (5%) are less than 25 years of age
 - Over half (54%) are between the ages of 45 and 64, compared to 36% in the general population
 - On average, WSF customers are 52 years of age

Customer Demographics (cont'd)

- Four out of five (79%) WSF customers are employed
 - 63% are employed full-time
- 16% are retired
 - An above-average number of Mukilteo / Clinton, and Edmonds / Kingston customers are retired – 26% and 21%, respectively

Customer Demographics (cont'd)

- WSF customers are relatively affluent
 - Median household income is \$81,397 compared to
 - \$52,583 for Washingtonians in general
 - \$55,257 for Kitsap County
 - Among the system's primary routes, Seattle / Bainbridge riders are the most affluent, with a median household income of \$95,445
 - Among the system's primary routes, Seattle / Bremerton riders are the least affluent, with a median household income of \$68,480

Tenure Riding

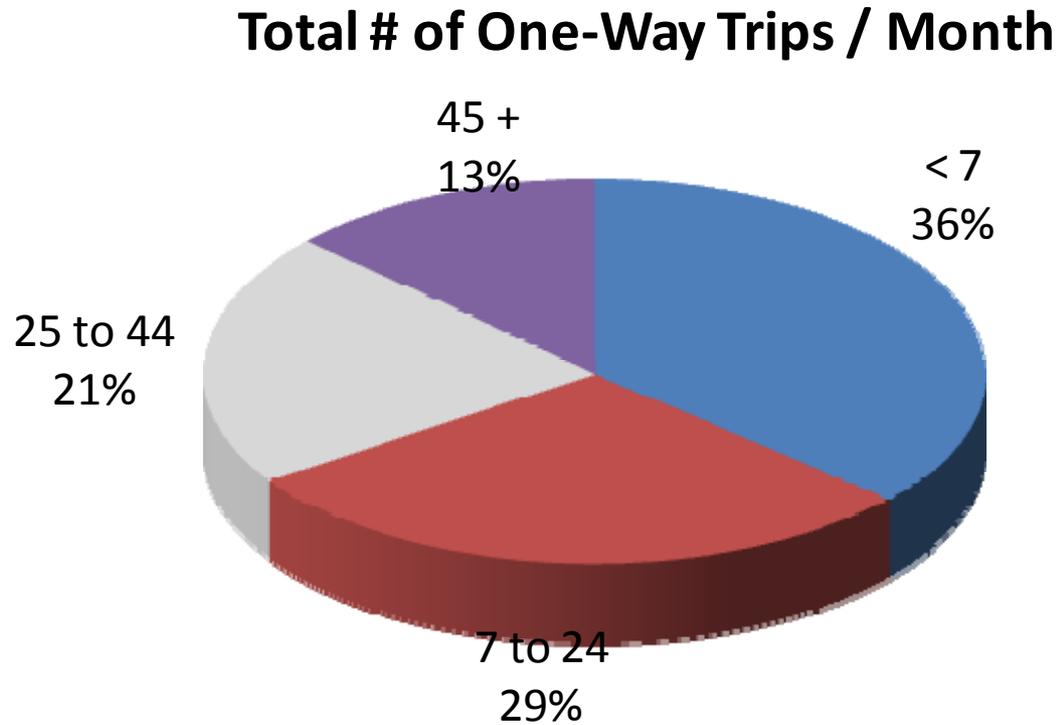
- On average, WSF customers have been riding the ferries for 12 years – three out of five (60%) have been riding for more than 10 years

	ALL	SEA/ BAIN	SEA/ BRE	EDM/ KIN	FAU/ VAS	FAU/ SOU	PTD/ TAH	MUK/ CLI	KEY/ PTT	ANA/ SAN
First Time	2%	2%	3%	1%	<1%	2%	3%	0%	2%	5%
< 1 Year	4	4	9	4	3	9	0	3	8	2
1 – 2 Yrs.	6	7	11	5	6	6	1	6	8	4
3 – 5 Yrs.	12	13	13	10	14	12	10	14	11	8
6 – 10 Yrs.	15	15	21	14	16	14	10	14	12	8
> 10 Yrs.	60	59	43	66	61	57	74	64	59	72
Median	11.7	11.5	8.6	12.4	11.7	11.2	13.2	12.2	11.5	13.1

Q12: How many years have you been riding the ferries?

Frequency of Riding

- WSF customers take an average of 20 one-way trips per month



Percents do not sum to 100% due to rounding

Frequency of Riding by Route

- Fauntleroy / Vashon riders are WSF's most frequent riders – averaging 33 one-way trips / month

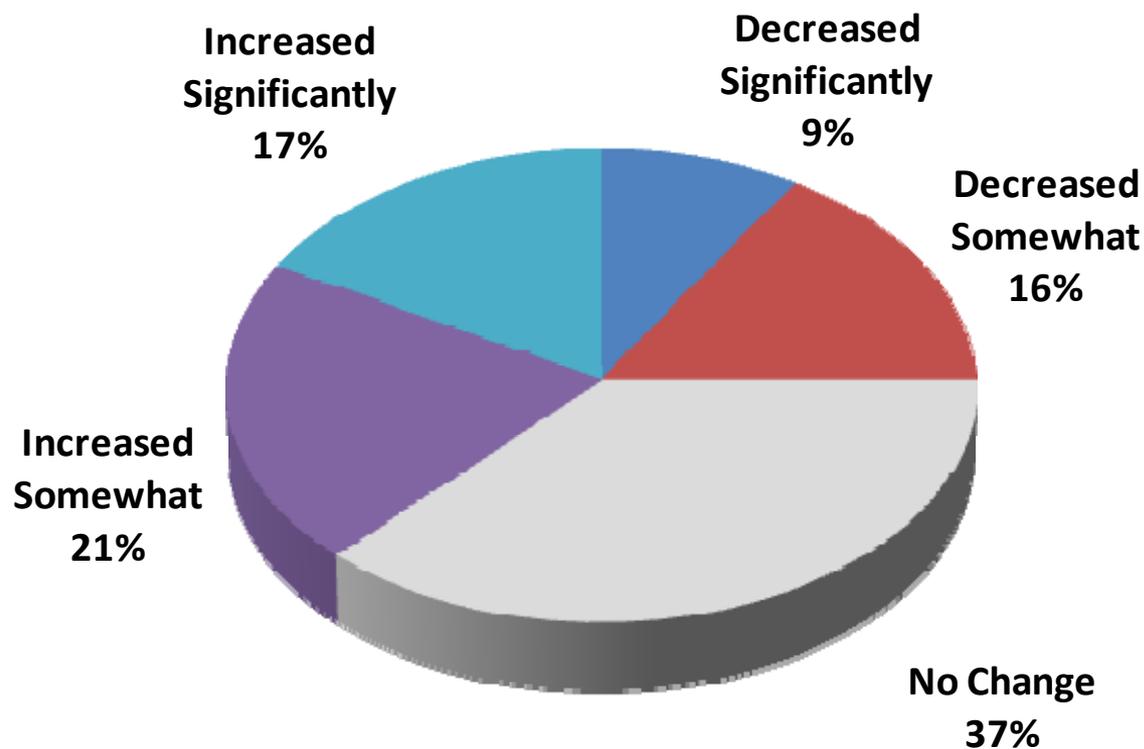
	SEA/ BAIN	SEA/ BRE	EDM/ KIN	FAU/ VAS	FAU/ SOU	PTD/ TAH	MUK/ CLI	KEY/ PTT	ANA/ SAN
< 7 Trips	33%	34%	43%	10%	28%	25%	28%	63%	77%
7 to 24	26	21	31	25	35	28	42	21	19
25 to 44	25	31	18	32	26	30	17	9	3
45 +	16	14	7	33	11	17	13	6	<1
Mean	22.8	23.9	15.9	33.2	21.9	25.1	19.7	11.3	5.3
Median	16.0	20.0	8.0	36.0	17.0	22.0	12.0	4.0	3.0

Q4: How many one-way trips do you take in a typical month for today's primary purpose between these two locations?

Q10: How many additional one-way trips do you take on the ferry in a typical month?

Change in Frequency of Riding

Q13: Since you started riding the ferries, has the frequency with which you ride . . .



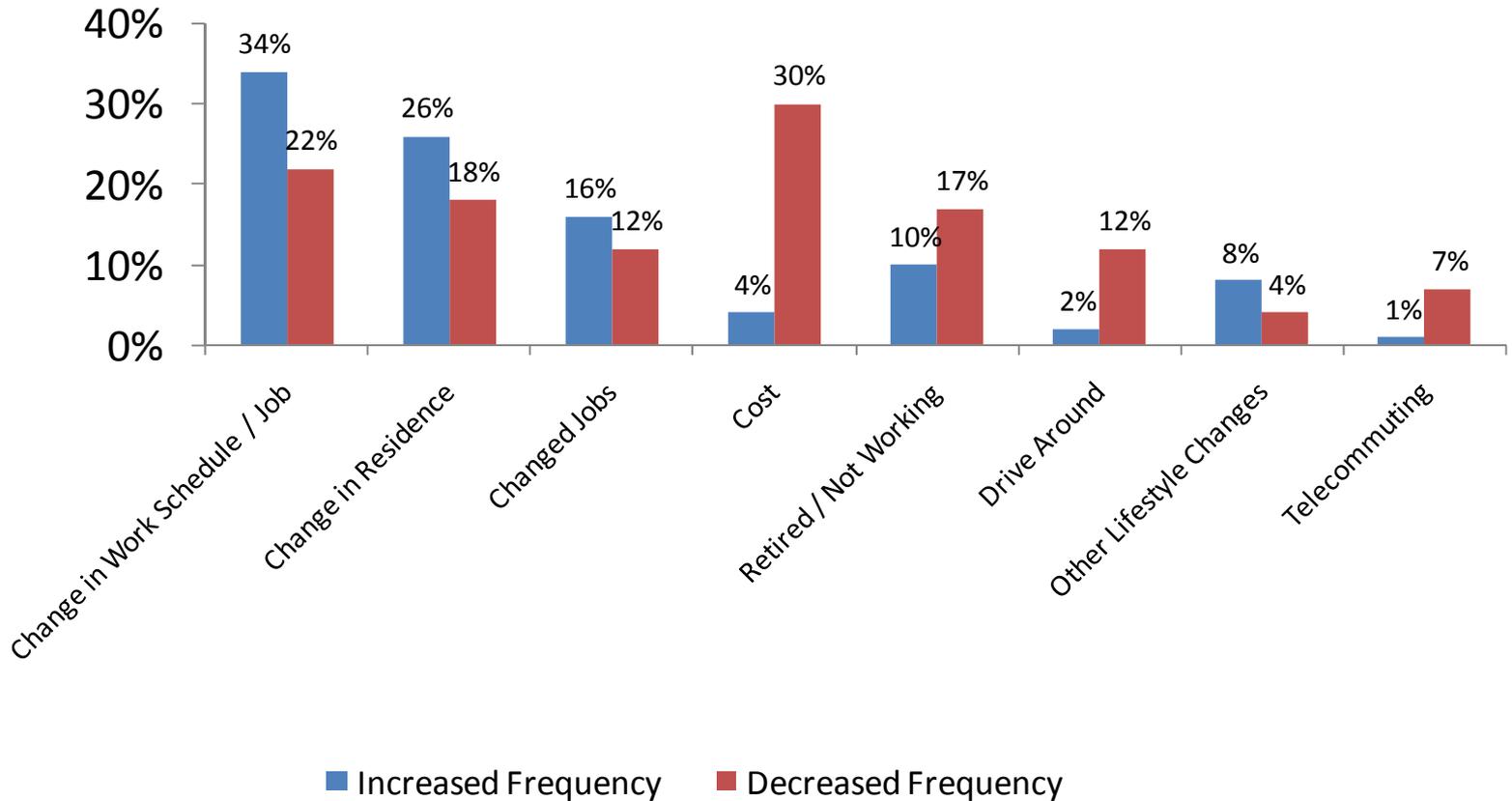
Change in Frequency of Riding (cont'd)

- The reported increase in ridership is greatest among those traveling between Fauntleroy and Southworth – 50% are riding more.

	SEA/ BAIN	SEA/ BRE	EDM/ KIN	FAU/ VAS	FAU/ SOU	PTD/ TAH	MUK/ CLI	KEY/ PTT	ANA/ SAN
↑ Significantly	14%	16%	19%	19%	24%	14%	20%	21%	18%
↑ Somewhat	19	20	22	22	26	22	22	25	27
No Change	42	45	34	39	34	36	33	30	27
↓ Somewhat	17	12	16	16	12	16	17	13	17
↓ Significantly	8	8	9	4	5	11	9	11	11

Q13: Since you started riding the ferries, has the frequency with which you ride?

Reasons for Change in Ridership



Trip Purpose

	% of Trips	# of Weekly Trips
Commute Work / School	35%	133,179
Social	18	69,005
Personal Business	16	59,140
Tourism / Recreation	11	41,771
Work-Related Business	8	29,672
Medical	4	15,890
Special Event	4	13,476
Shopping	2	7,316
Other	3	9,961
Total Classified		379,411
Not Classified		10,561

Q3: What is the primary purpose of this specific trip?

Trip Purpose by Route

		SEA/ BAIN	SEA/ BRE	EDM/ KIN	FAU /VA	FAU/ SOU	PTD/ TAH	MUK/ CLI	KEY/ PTT	ANA/ SAN
Commute Trips	%	41%	50%	29%	59%	45%	40%	27%	14%	4%
	# / Week	46,248	22,451	21,815	10,177	8,359	2,451	19,264	1,373	1,071
Social	%	12%	11%	29%	5%	20%	13%	23%	27%	21%
	# / Week	13,045	4,715	21,865	790	3,757	793	15,951	2,605	5,485
Personal Business	%	15%	13%	15%	11%	13%	13%	22%	12%	17%
	# / Week	16,200	5,954	11,228	1,841	2,339	795	15,258	1,103	4,410

Trip Purpose by Route (cont'd)

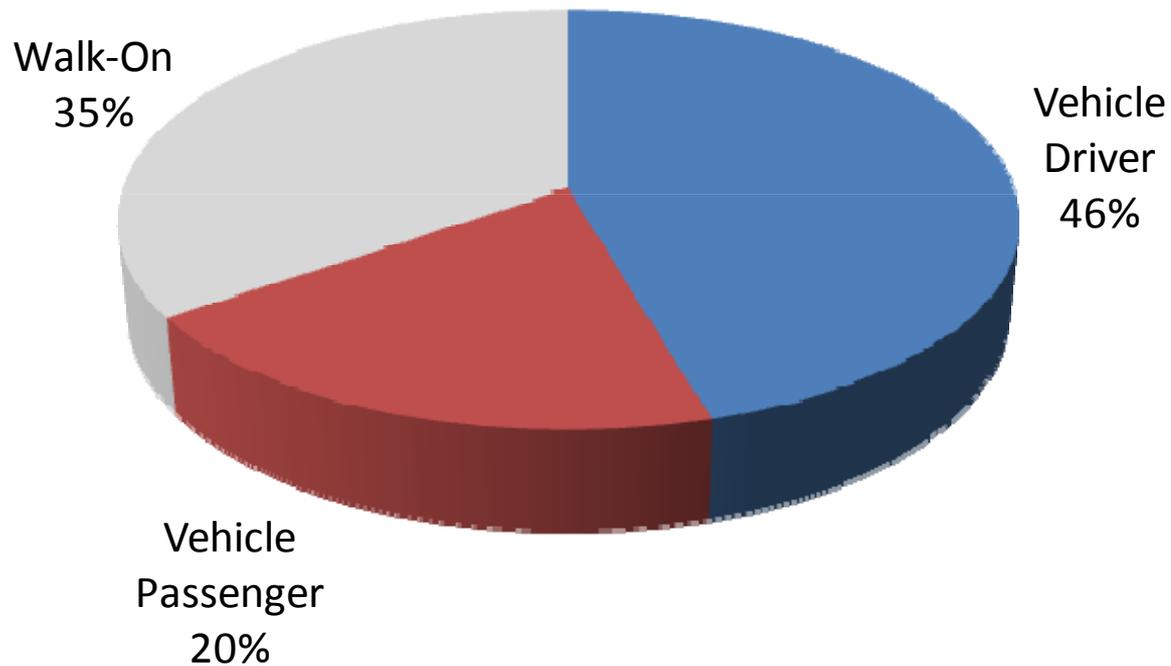
		SEA/ BAIN	SEA/ BRE	EDM/ KIN	FAU /VA	FAU/ SOU	PTD/ TAH	MUK/ CLI	KEY/ PTT	ANA/ SAN
Tourism	%	11%	8%	11%	3%	6%	12%	7%	21%	33%
	# / Week	12,164	3,748	8,147	549	1,041	755	4,886	2,036	8,446
Work / Business Activity	%	7%	9%	10%	7%	10%	9%	5%	18%	5%
	# / Week	7,866	3,950	7,605	1,226	1,901	539	3,642	1,743	1,201
Medical	%	5%	2%	2%	6%	2%	4%	5%	4%	8%
	# / Week	5,522	922	1,719	1,065	410	270	3,486	352	2,145

Trip Purpose by Route (cont'd)

		SEA/ BAIN	SEA/ BRE	EDM/ KIN	FAU /VA	FAU/ SOU	PTD/ TAH	MUK/ CLI	KEY/ PTT	ANA/ SAN
Special Events	%	5%	4%	2%	4%	3%	4%	3%	1%	1%
	# / Week	5,854	1,648	1,828	698	528	277	2,228	59	358
Shopping / Other	%	5%	2%	3%	5%	1%	5%	8%	3%	10%
	# / Week	4,774	1,092	1,755	810	244	310	5,580	294	2,419
Not Classified	# / Week	1,910	1,553	2,701	485	271	177	2,865	99	501

Travel Mode for Sampled Trip

Mode – Sampled Trip



Percents do not sum to 100% due to rounding

Travel Mode by Route

- Walk-on travel is highest on the Seattle / Bremerton Route

	ALL	SEA/ BAIN	SEA/ BRE	EDM/ KIN	FAU/ VAS	FAU/ SOU	PTD/ TAH	MUK/ CLI	KEY/ PTT	ANA/ SAN
Vehicle Driver	46%	33%	28%	53%	65%	61%	66%	55%	47%	51%
Vehicle Passenger	20	20	7	22	8	9	20	25	35	28
Walk-On	35	47	64	25	27	29	14	20	19	21

Travel Mode by Trip Purpose

- Travel mode for commute trips is nearly equally split between those walking on and those in a vehicle – as a driver or passenger

	ALL	COMMUTE	PERSONAL	RECREATION	SOCIAL	OTHER
Vehicle Driver	46%	40%	52%	43%	40%	63%
Vehicle Passenger	20	8	24	30	30	17
Walk-On	35	52	24	27	30	20

Travel Mode by Travel Time

- Vehicle travel is higher in the afternoon peak than in the morning peak, suggesting that a greater number of non-commute trips are made during the afternoon peak periods

	ALL	MORNING PEAK	AFTERNOON PEAK	WEEKEND PEAK	OFF-PEAK
Vehicle Driver	46%	33%	42%	44%	51%
Vehicle Passenger	20	13	16	31	21
Walk-On	35	53	42	25	29

Frequency of Travel

- On average, the number of sampled trips taken monthly represents 76 percent of the total trips taken by a typical WSF customer

	Number of Sampled Trips / Month*	Total Monthly Trips**
< 7 Trips / Month	48%	36%
7 to 24 Trips / Month	23	29
25 to 44 Trips / Month	23	21
45 + Plus Trips / Month	5	13
Mean	15.9	20.0
Median	8.0	12.0

* Q4: How many one-way trips do you take in a typical month for today's primary purpose between these two locations?

** Q10: How many additional one-way trips do you take on the ferry in a typical month?

of Sampled Trips by Mode

- WSF customers take an average of 16 sampled (typical) trips / month
 - They walk on for nearly one-third (32%) of these trips
 - Nearly two out of five (38%) drive on all of the time

		Total Number of Monthly Trips			
	All	< 7	7 to 24	25 to 44	45 +
Average # of Sampled Trips	15.9	2.0	8.9	32.8	42.8
Average % of Sampled Trips Vehicle Driver	40%	43%	46%	3-%	26%
Average % of Sampled Trips Vehicle Passenger	15%	25%	18%	5%	4%
Average % of Sampled Trips Walk-On Passenger	32%	23%	23%	45%	50%
% of Riders Whose Sampled Trips are 100% Vehicle Driver	38%	43%	46%	30%	21%
% of Riders Whose Sampled Trips are 100% Walk-On	19%	17%	11%	29%	22%

Vehicle Travel by Route

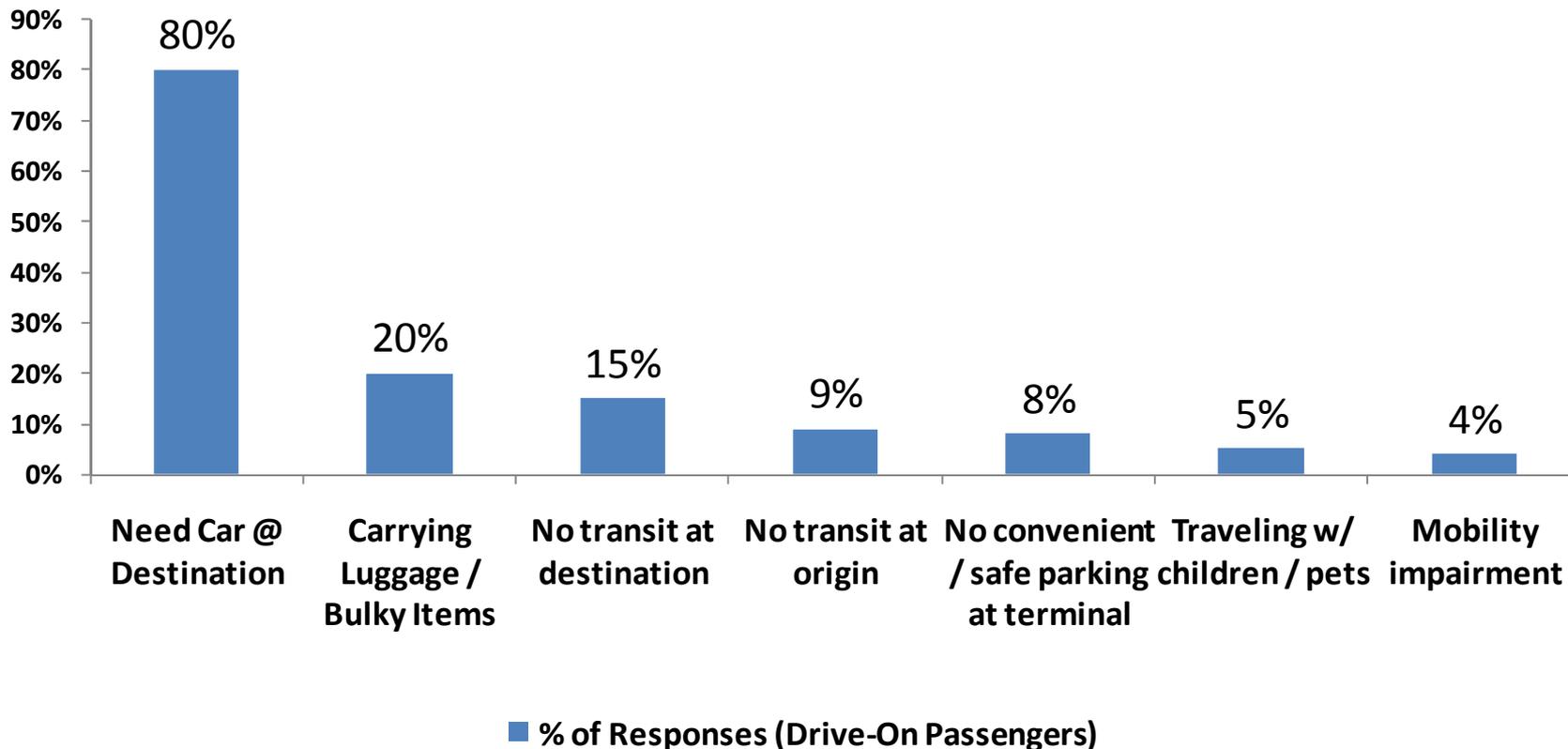
	ALL	SEA/ BAIN	SEA/ BRE	EDM/ KIN	FAU/ VAS	FAU/ SOU	PTD/ TAH	MUK/ CLI	KEY/ PTT	ANA/ SAN
Average # of Sampled Trips	15.9	17.9	20.5	13.0	25.7	18.3	18.5	15.0	8.3	3.5
% Vehicle Driver	40%	25%	26%	48%	56%	57%	63%	50%	44%	51%
% Trips 100% Vehicle	38%	22%	24%	46%	50%	59%	57%	48%	44%	51%
% Trips 100% Walk-On	19%	26%	44%	13%	8%	15%	10%	6%	9%	10%

Vehicle Travel by Trip Purpose

- Three out of ten (31%) WSF commuters make 100 percent of their commute trips as a vehicle driver

	ALL	COMMUTE	PERSONAL	RECREATION	SOCIAL	OTHER
Average # of Sampled Trips / Month	15.9	34.6	7.0	3.0	5.0	8.7
% Vehicle Driver	40%	31%	48%	41%	37%	60%
% Sampled Trips 100% Vehicle	38%	28%	45%	39%	36%	54%
% Sampled Trips 100% Walk-On	19%	29%	10%	17%	16%	9%

Factors Influencing Mode Choice



Q9B: Which of the following influenced your decision to drive on the ferry instead of walking on?
(Sums to more than 100%; multiple response question)

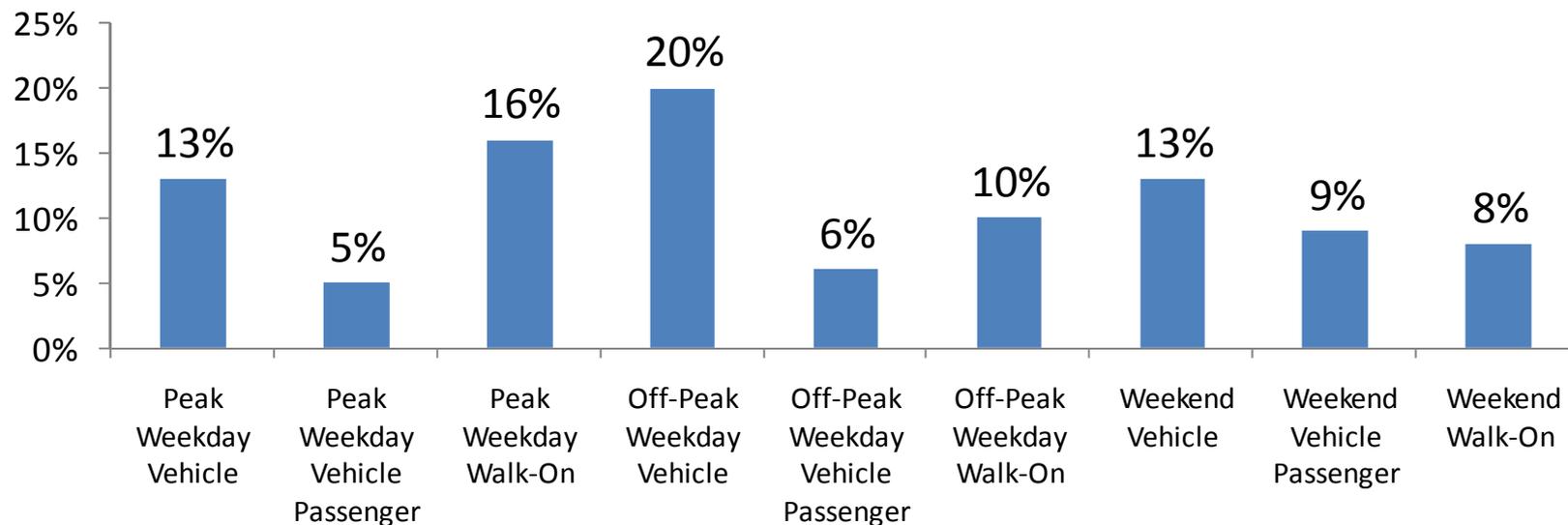
Factors Influencing Mode Choice

- Key differences by route
 - Fauntleroy / Vashon route more likely to cite lack of public transportation as a factor
 - 27% no convenient bus / train at destination
 - 16% no convenient bus / train at origin
 - 13% no convenient / safe parking at terminal
 - Keystone / Port Townsend
 - 92% need car at destination
 - 30% carrying luggage / bulky items
 - Anacortes / San Juans
 - 44% carrying luggage / bulky items
 - 16% traveling with children / pets

Travel Times

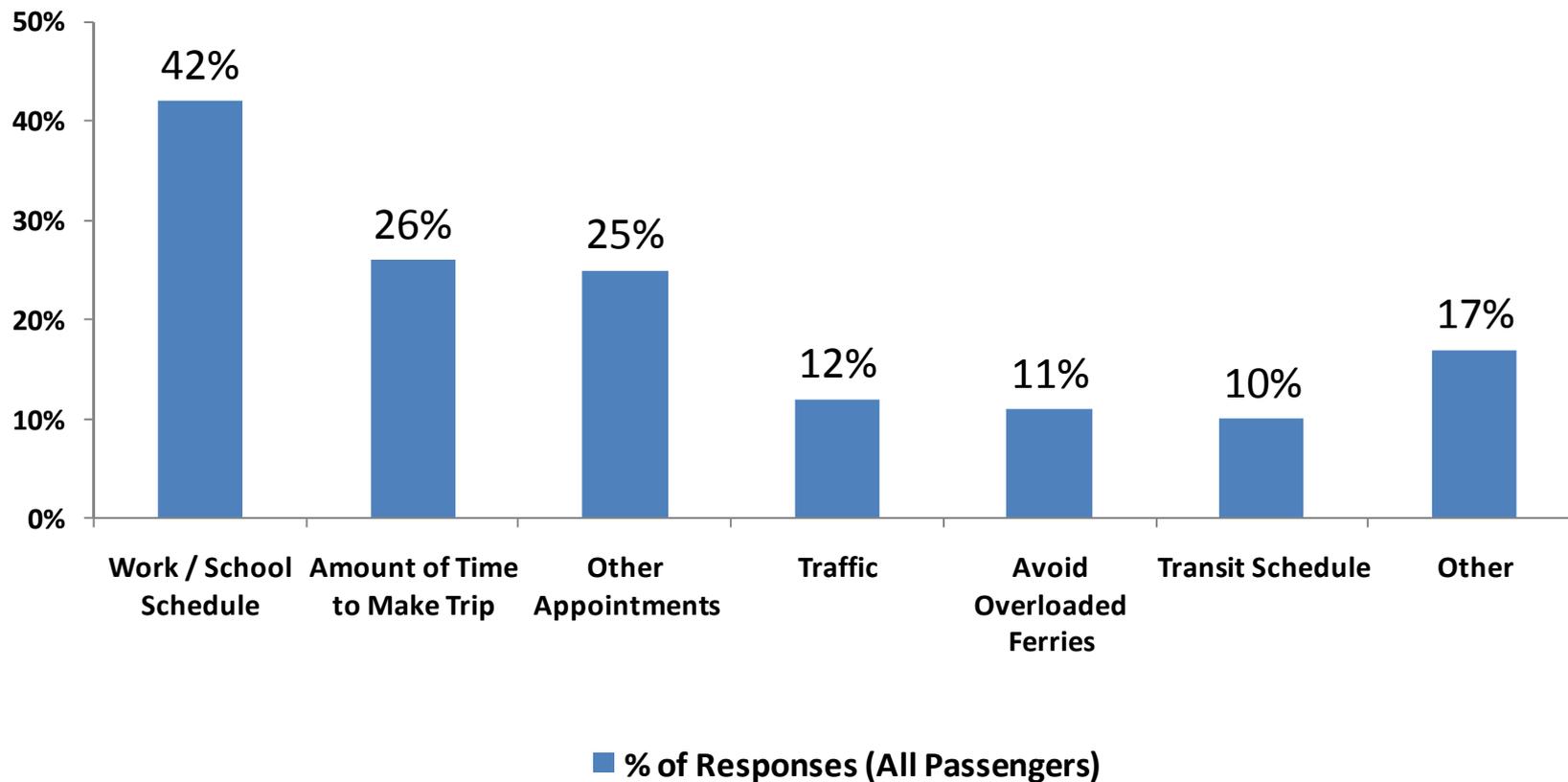
- More than one-third (35%) of current primary travel is during peak weekday travel periods – split nearly equally between vehicle and walk-on travel

% Travel Time by Mode by Period *



* Reflects reported travel and time period weighted to actual ridership figures (January 2006)

Factors Influencing Travel Times



Q6: *In deciding which ferry sailing to catch, which of the following influenced your decision to travel at this specific time? (Sums to more than 100%; multiple response question)*

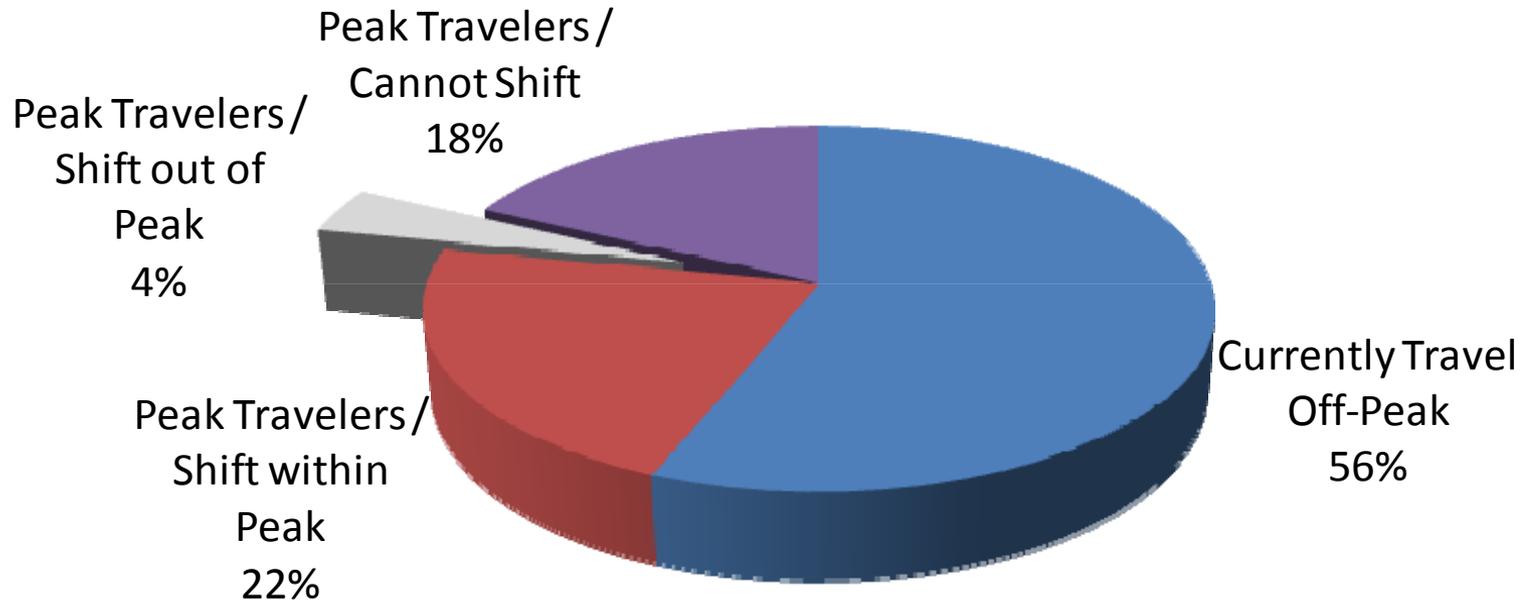
Factors Influencing Travel Times by Travel Time

	Morning Peak	Afternoon Peak	Weekend Peak	Off-Peak
Work / School Schedule	75%	61%	11%	32%
Amount of Time to Make Trip	18	20	39	27
Other Appointments Schedule	17	19	25	30
Traffic	9	18	14	11
Avoid Overloaded Ferries	8	9	13	12
Convenient Transit	7	8	13	10

Q6: In deciding which ferry sailing to catch, which of the following influenced your decision to travel at this specific time? (Sums to more than 100%; multiple response question)

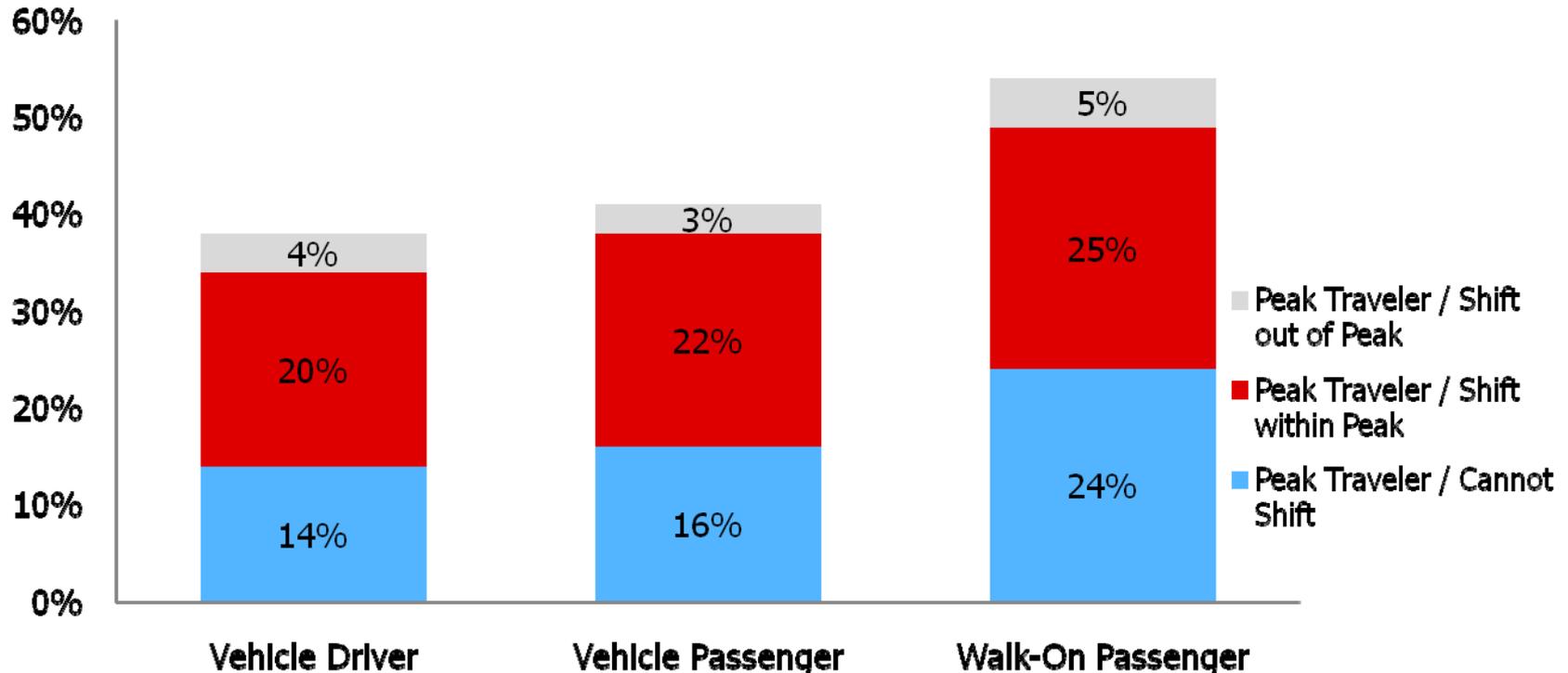
Flexibility in Travel Time Choice

Q7: Could you have taken an earlier or later boat?
If so, what time?



Flexibility in Travel Time Choice by Boarding Mode

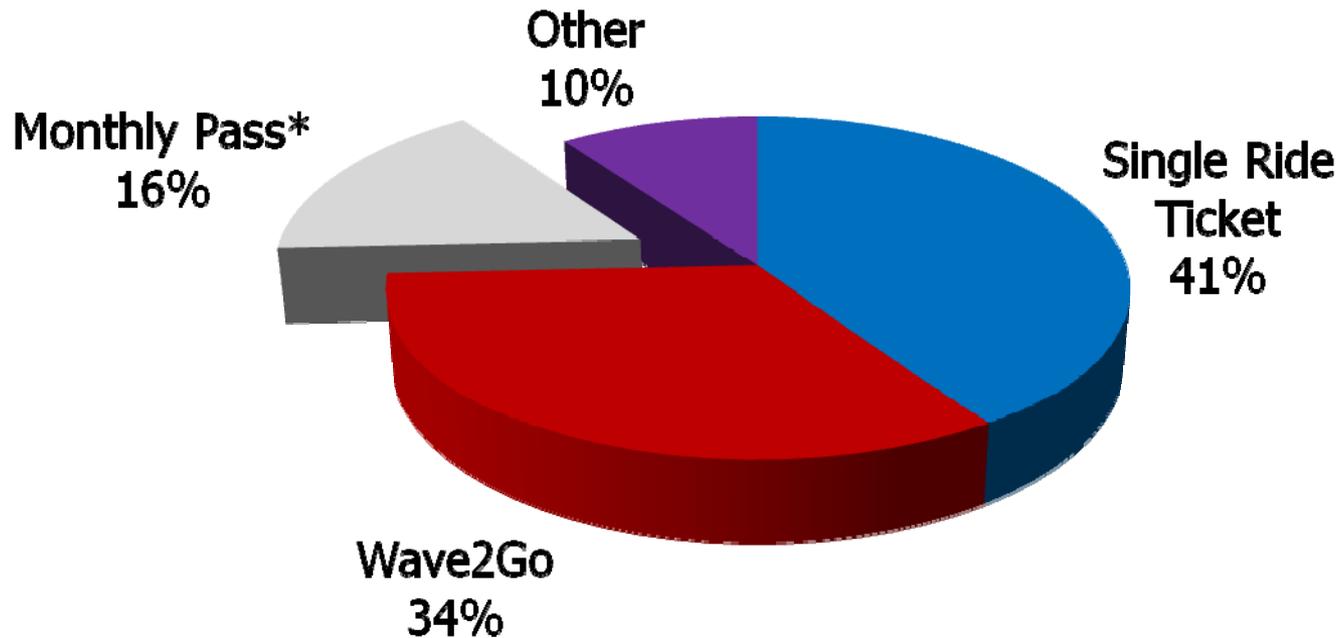
- There is no difference among those suggesting they could shift their travel out of peak travel periods by the different boarding modes



Columns do not sum to 100 percent; only peak travelers shown

Fare Payment

Q19: How did you pay your fare for your trip today?



* Includes monthly WSF pass and Puget Pass

Fare Payment

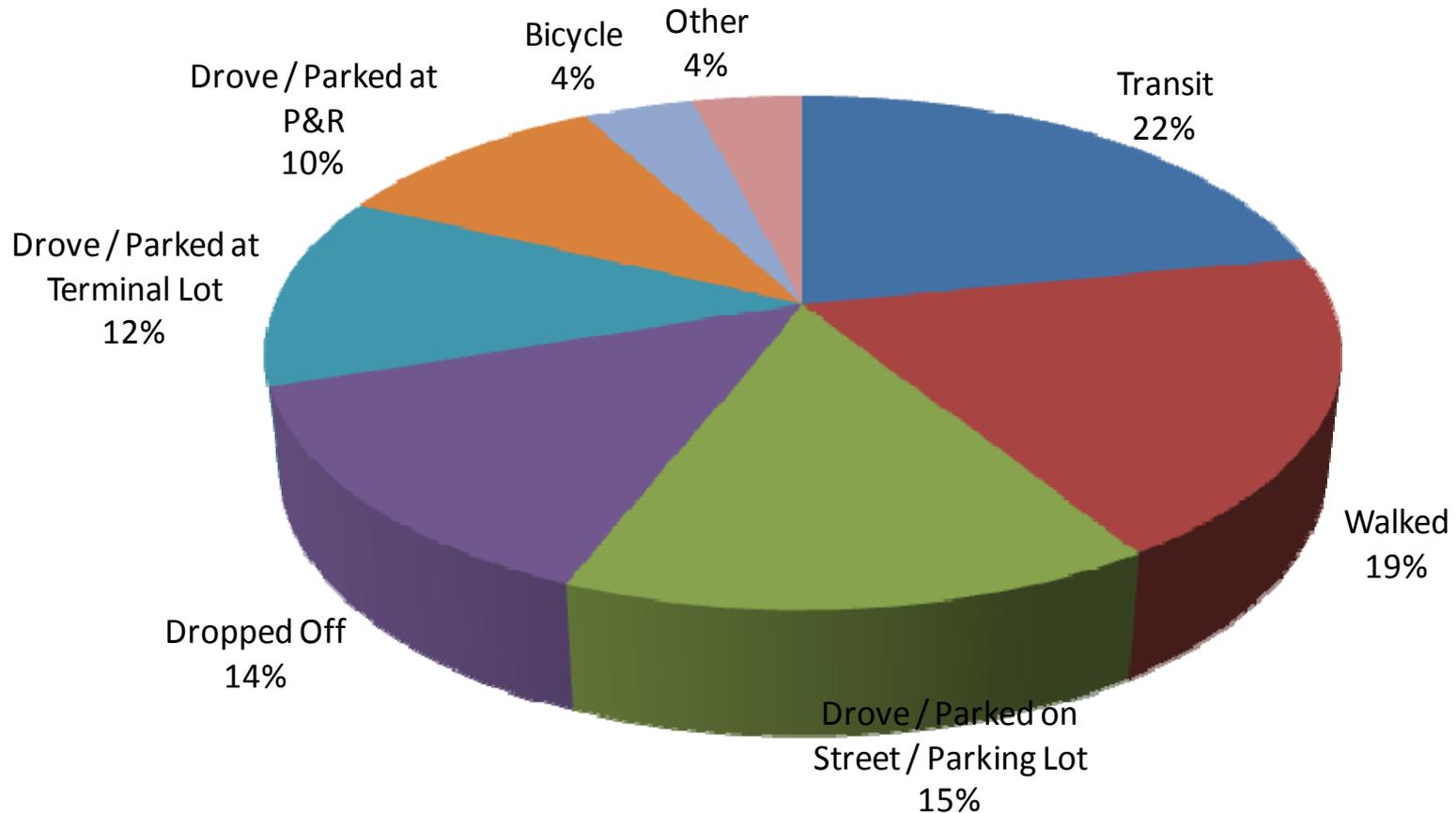
	# of One-Way Trips / Month			
	< 7	7 – 24	25 – 44	45+
Single Ride	74%	40%	8%	6%
Wave2Go	10	44	52	46
Monthly Pass *	2	6	35	44
Senior / Youth	8	7	3	2
Other	6	4	2	3

Q19: How did you pay your fare for your trip today?

* Includes monthly WSF pass and Puget Pass

Accessing the Ferry – Walk-Ons

% of Walk-On Passengers Accessing the Ferry by:



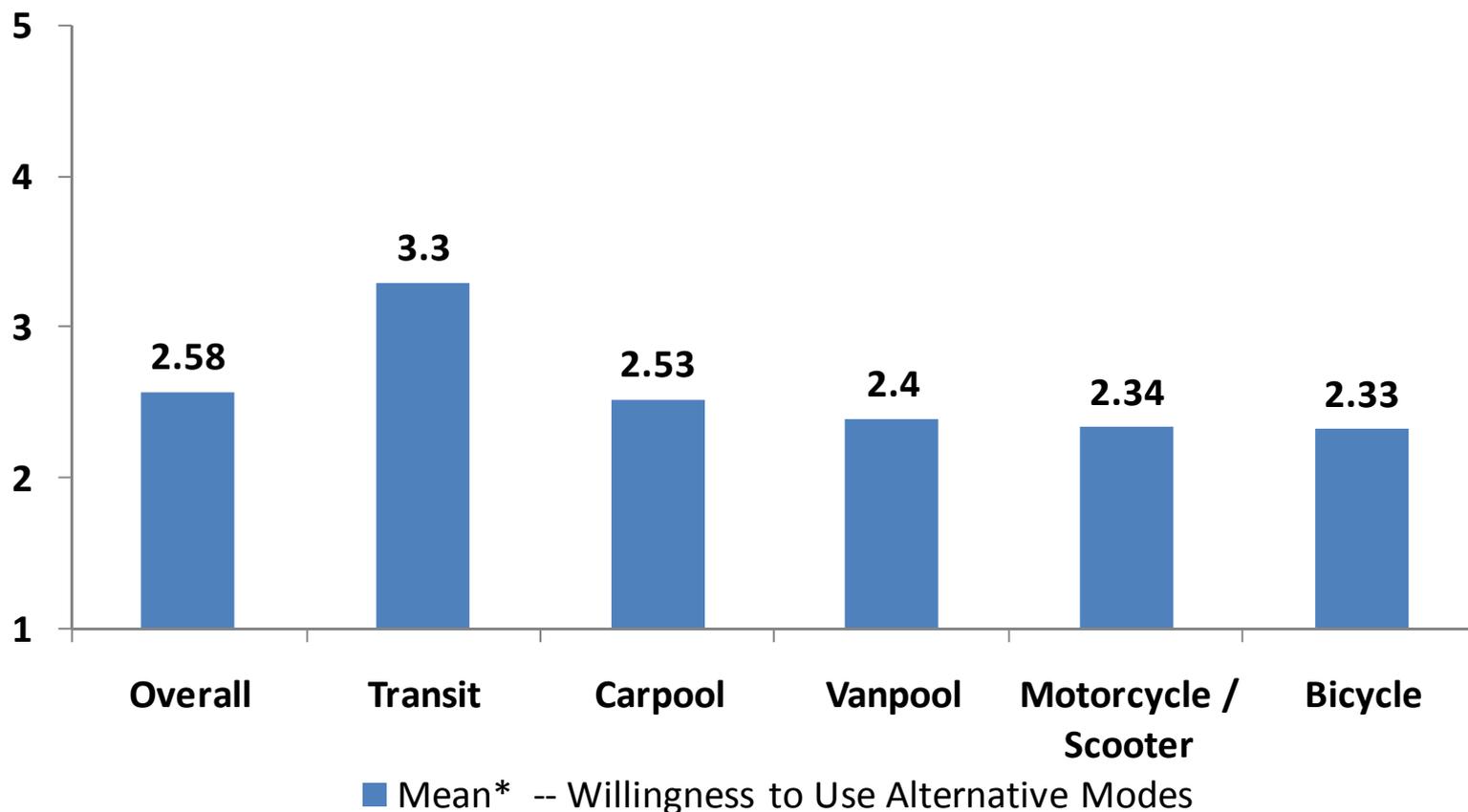
Q8: How did you get to this ferry? (Passengers who walked)

Accessing the Ferry by Route

	ALL	SEA/ BAIN	SEA/ BRE	EDM/ KIN	FAU/ VAS	FAU/ SOU	PTD/ TAH	MUK/ CLI	KEY/ PTT	ANA/ SAN
Transit	20%	26%	24%	4%	34%	19%	0%	22%	7%	4%
Walked	19	23	33	11	7	9	13	4	7	8
Drove / Parked Street / Lot	17	12	13	40	10	8	7	26	14	2
Dropped Off	13	13	14	12	16	23	7	9	7	22
Drove / Parked @ Terminal	12	11	5	13	14	22	34	8	56	42
Drove / Parked @ P&R	10	6	4	15	16	11	27	25	0	17

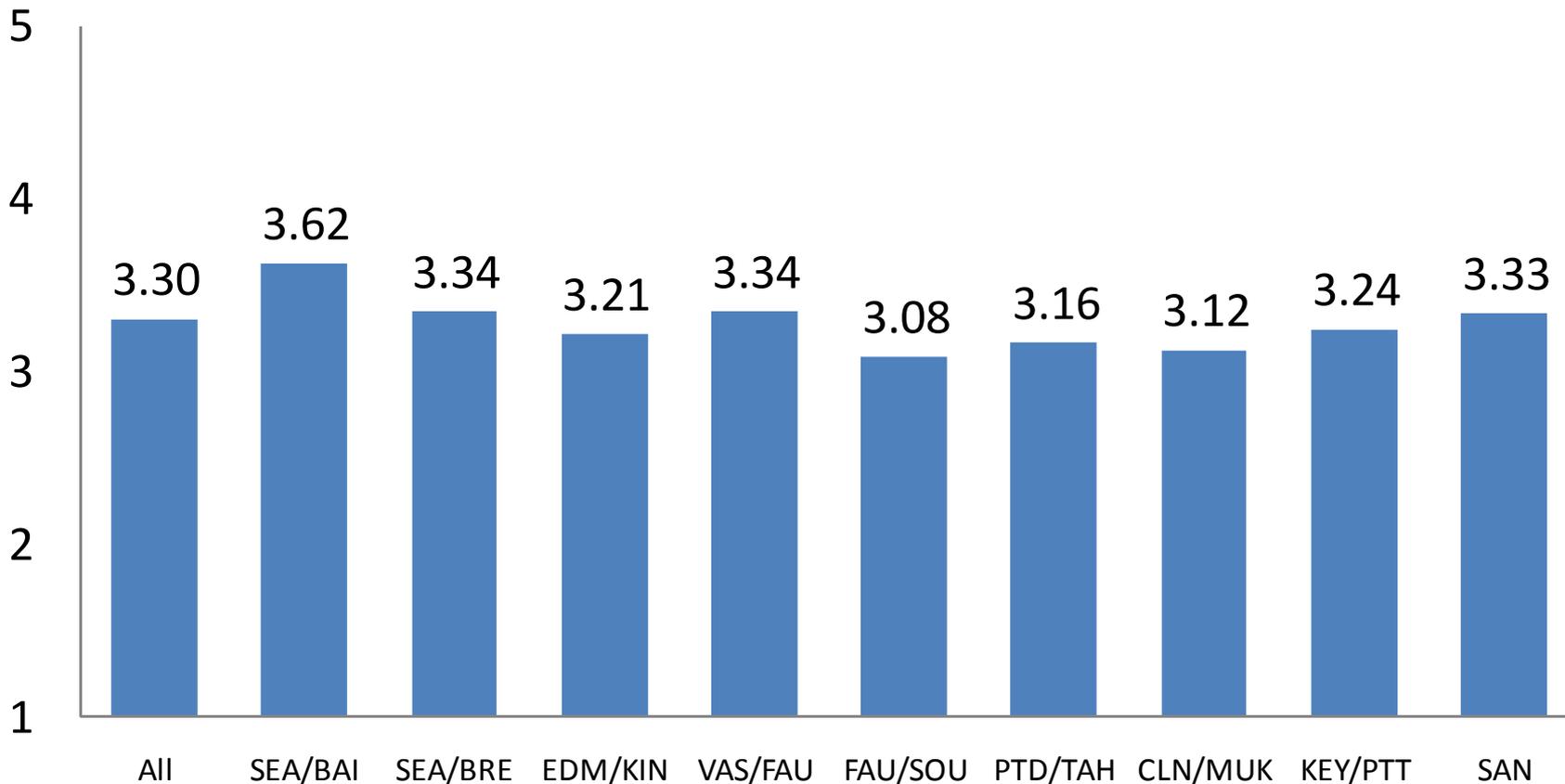
Q8: How did you get to this ferry? (Passengers who walked)

Willingness to Use Alternative Modes



Mean based on 5-point scale where "1" means "not at all willing" and "5" means "very willing." Base vehicle drivers and vehicle passengers.

Willing to Use Transit by Route



Mean based on 5-point scale where "1" means "not at all willing" and "5" means "very willing."

■ Willingness to Use Transit



Opinion Research Northwest

Key Findings

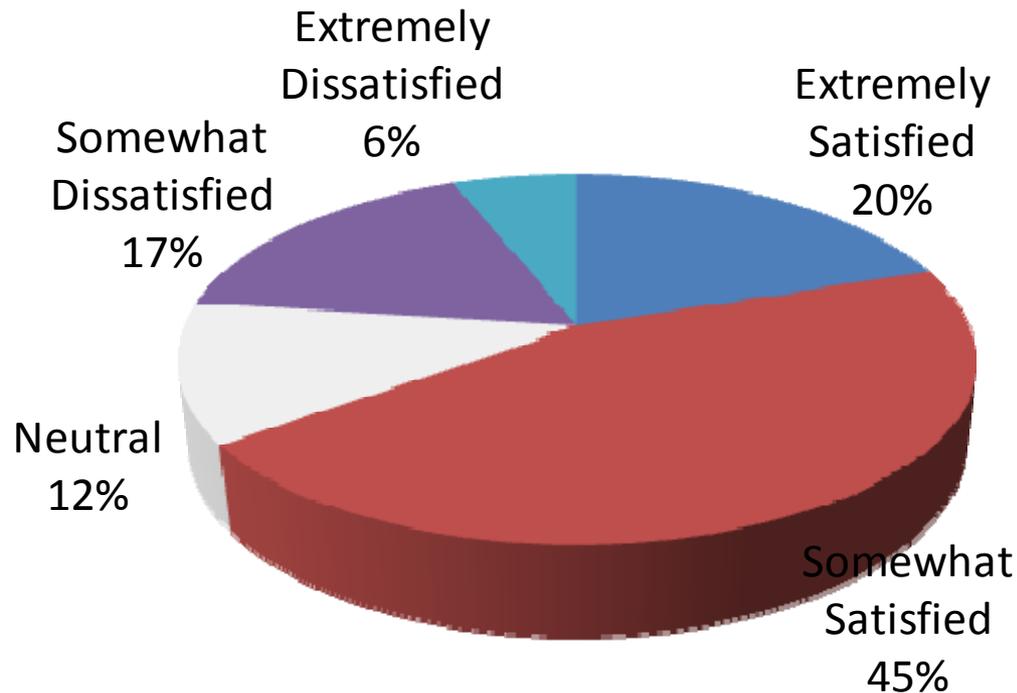


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Attitudes toward WSF

Quality of Service

Q32: Overall, how satisfied are you with Washington State Ferries?



Mean = 3.58

(Based on a 5-point scale where "1" means "extremely dissatisfied" and "5" means "extremely satisfied")

Change from 2002

	2002	2008	Percentage Change
Extremely Satisfied	26%	20%	(6%)
Somewhat Satisfied	48	45	(3%)
Neutral	11	12	1%
Somewhat Dissatisfied	11	17	6%
Extremely Dissatisfied	3	6	3%

Q32: Overall, how satisfied are you with Washington State Ferries?

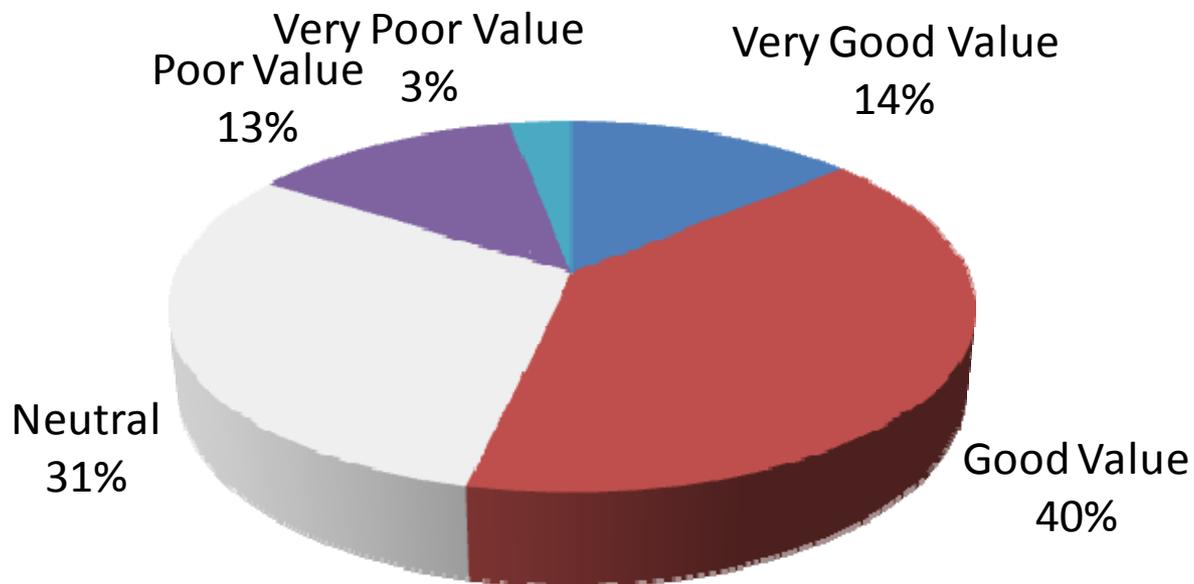
Quality of Service by Route

	SEA/ BAIN	SEA/ BRE	EDM/ KIN	FAU/ VAS	FAU/ SOU	PTD/ TAH	MUK/ CLI	KEY/ PTT	ANA/ SAN
Extremely Satisfied	23%	14%	23%	7%	13%	10%	23%	21	23
Somewhat Satisfied	49	42	45	28	51	28	47	42	47
Neutral	9	12	14	14	12	15	11	15	13
Somewhat Dissatisfied	15	22	14	34	18	33	14	16	13
Extremely Dissatisfied	4	10	4	17	6	14	4	6	5
Mean	3.72	3.29	3.69	2.75	3.46	2.88	3.71	3.56	3.67

Q32: Overall, how satisfied are you with Washington State Ferries? Mean based on a 5-point scale where "1" means "extremely dissatisfied" and "5" means "extremely satisfied."

Value of Service

Q33: Which of the following best describes the value of riding WSF?



Mean = 3.49

(Based on a 5-point scale where "1" means "a very poor value" and "5" means "a very good value")

Percents do not sum to 100% due to rounding

Change from 2002

	2002	2008	Percentage Change
Very Good Value	11%	14%	3%
Good Value	37	40	2%
Neutral	32	31	(1%)
Poor Value	14	13	(1%)
Very Poor Value	5	3	(2%)

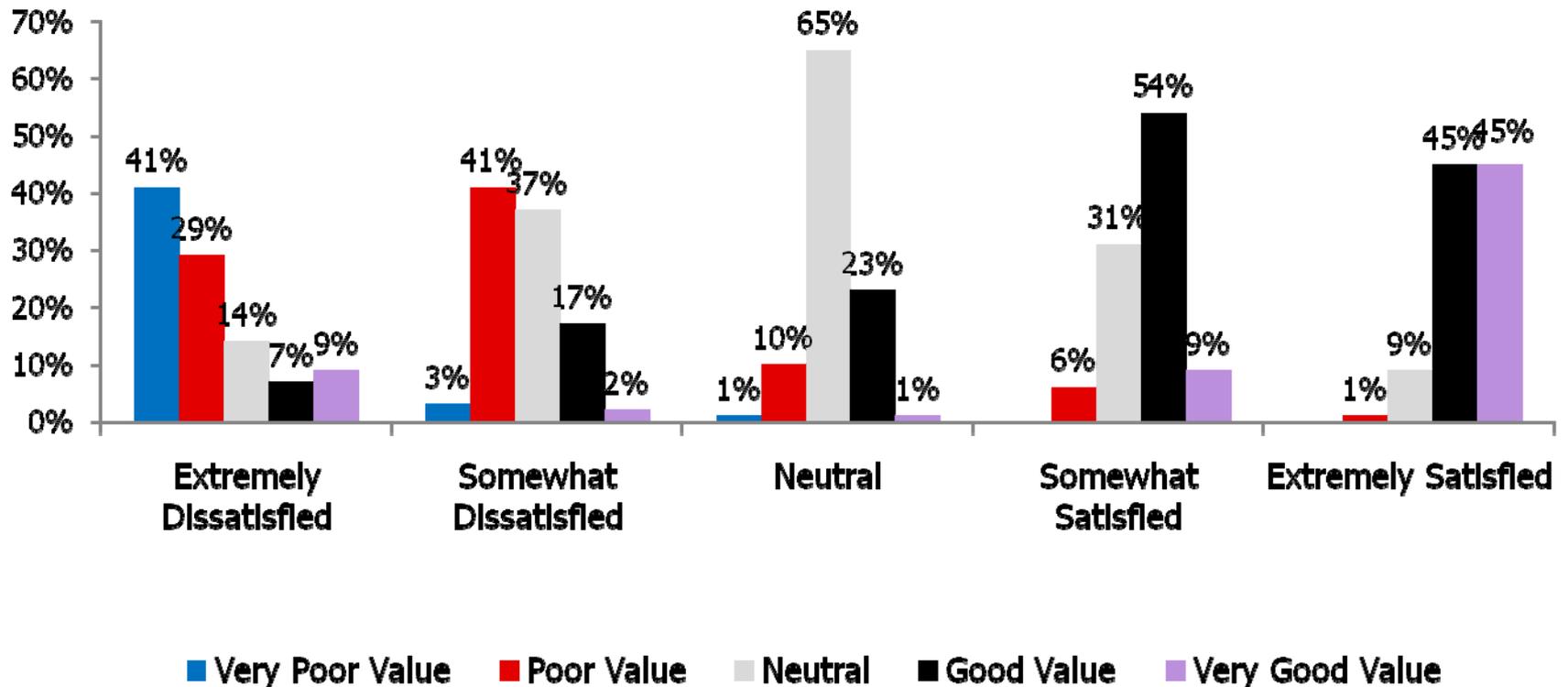
Q33: Which of the following best describes the value of riding WSF?

Value of Service by Route

	SEA/ BAIN	SEA/ BRE	EDM/ KIN	FAU/ VAS	FAU/ SOU	PTD/ TAH	MUK/ CLI	KEY/ PTT	ANA/ SAN
Very Good Value	14%	13%	14%	4%	10%	4%	19%	21%	14%
Good Value	42	37	37	20	46	32	41	49	42
Neutral	31	30	33	34	31	33	28	22	32
Poor Value	12	14	13	32	11	18	10	6	10
Very Poor Value	2	6	2	10	2	12	2	2	1
Mean	3.54	3.36	3.48	2.76	3.51	2.99	3.64	3.81	3.58

Q33: Which of the following best describes the value of riding WSF? Mean based on a 5-point scale where "1" means a "very poor value" and "5" means a "very good value."

Relationship Between Service Quality and Perceived Value

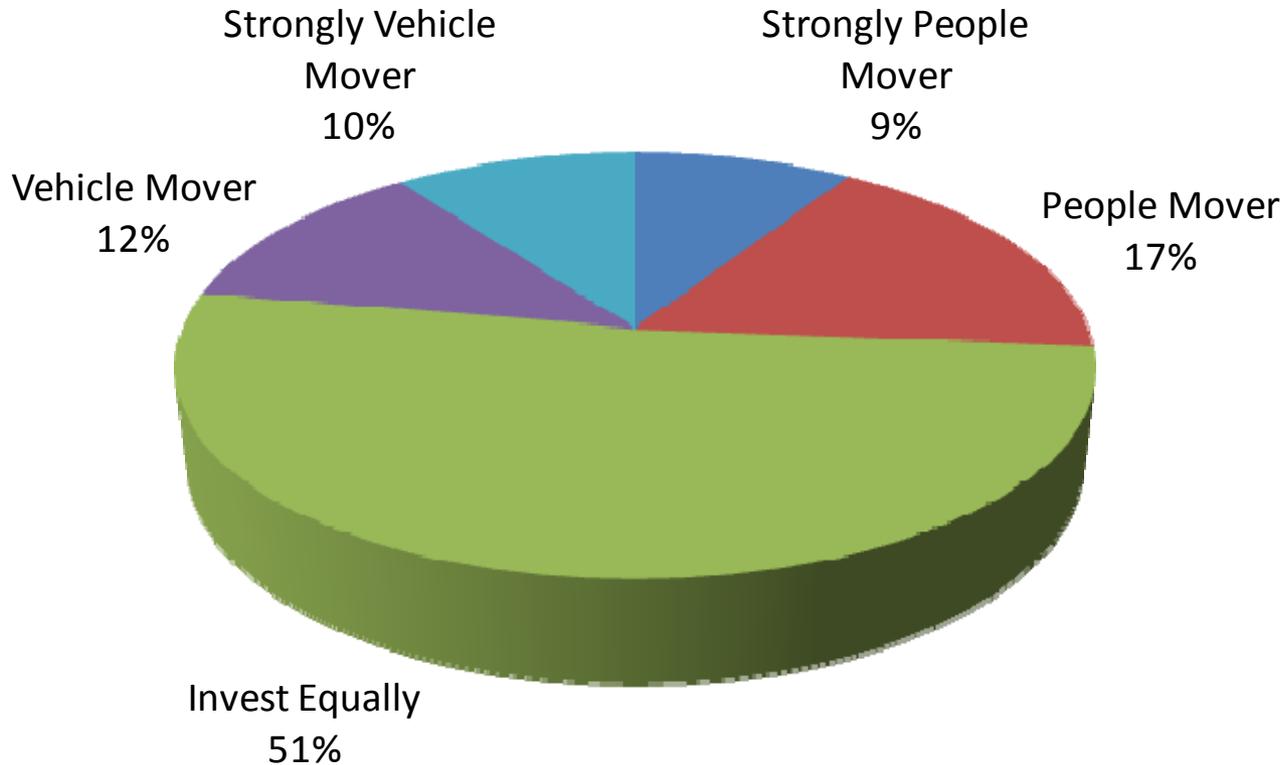


Q32: Overall, how satisfied are you with Washington State Ferries?

Q33: Which of the following best describes the value of riding WSF?

System Focus

% Feel Investment Should Focus On



Q15: *Should WSF focus its improvements on becoming a people-mover or a vehicle-mover system or should they continue to invest equally?*

Percents do not sum to 100% due to rounding



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Key Findings



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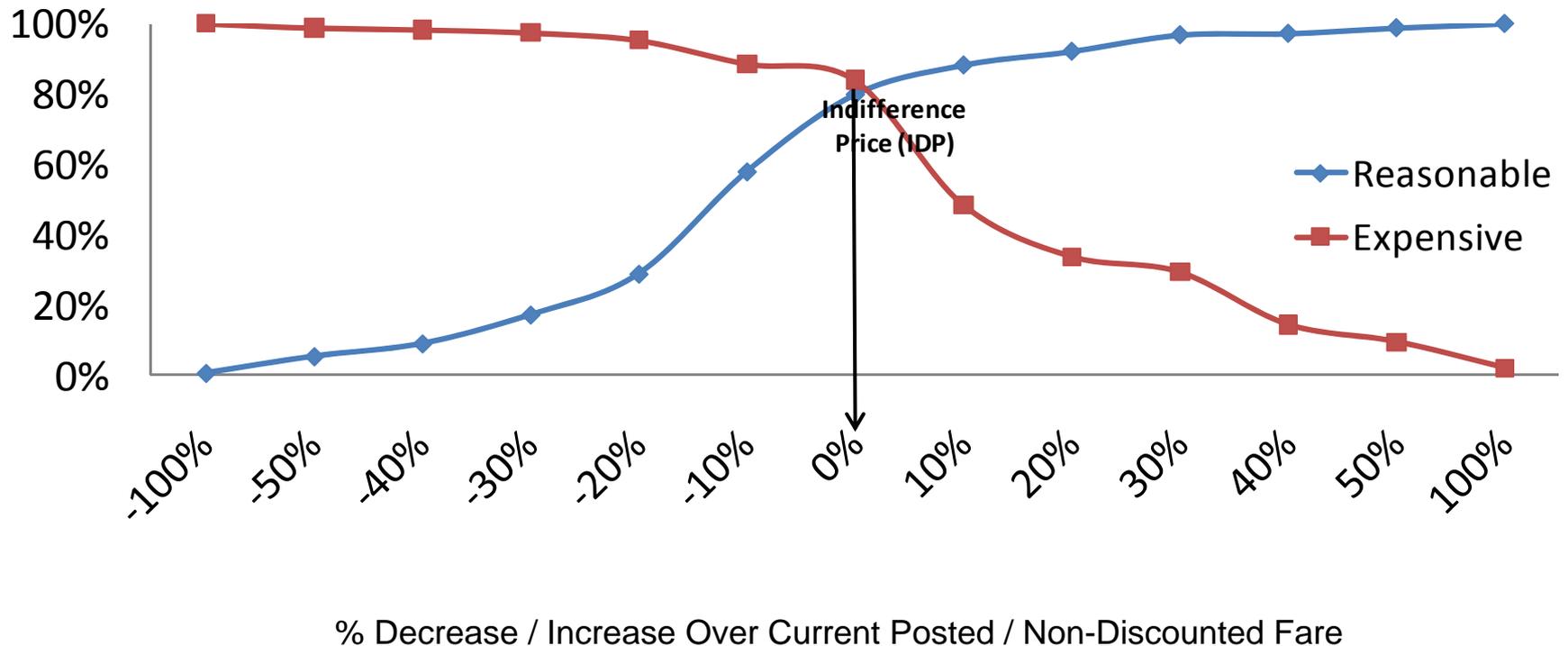
Fares and Fare Policies

Model

- Use of Von Westendorp model to measure price sensitivity
 - Uses four questions:
 - Compared to your route's posted (non-discounted) fare, what do you think is a FAIR and REASONABLE ticket price for this route?
 - What ticket price would you say is HIGH but the average passenger like you WOULD CONTINUE to make the same number of trips?
 - What ticket price would you say is SO HIGH or SO UNREASONABLE that the average passenger like you would MAKE FEWER TRIPS?
 - What ticket price is SO LOW that you would question whether the system could maintain current levels and quality of service?
 - Plots of these measures yield three critical measures
 - Indifference Price – represents price that customers feel is neither too low or high
 - Optimal Price – represents the price where resistance against the price is low
 - Range of Acceptable Prices – pricing should occur within this price range

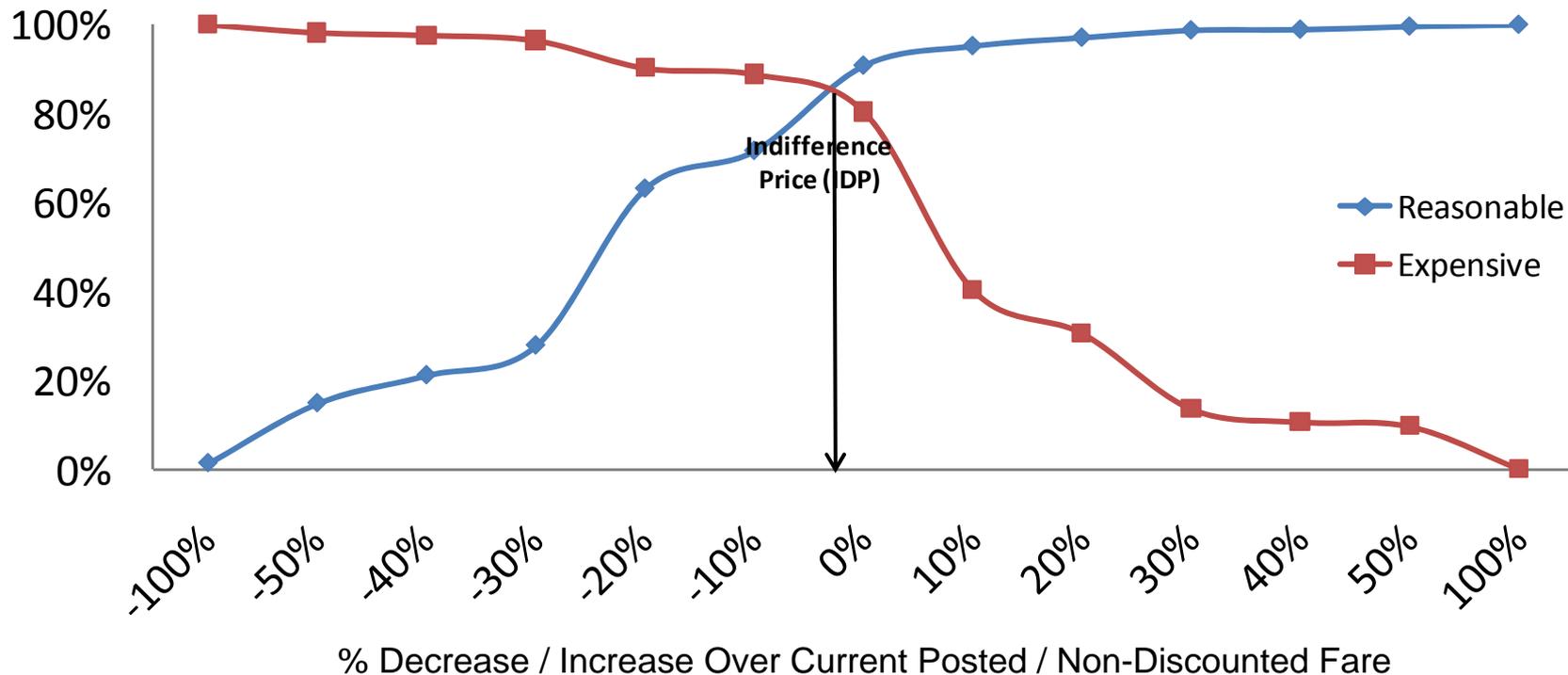
Indifference Price – Vehicle

- The Indifference Price is that price which customers would consider neither cheap nor expensive. The Indifference Price for the Vehicle Fares is the same as the current posted (non-discounted) fare.



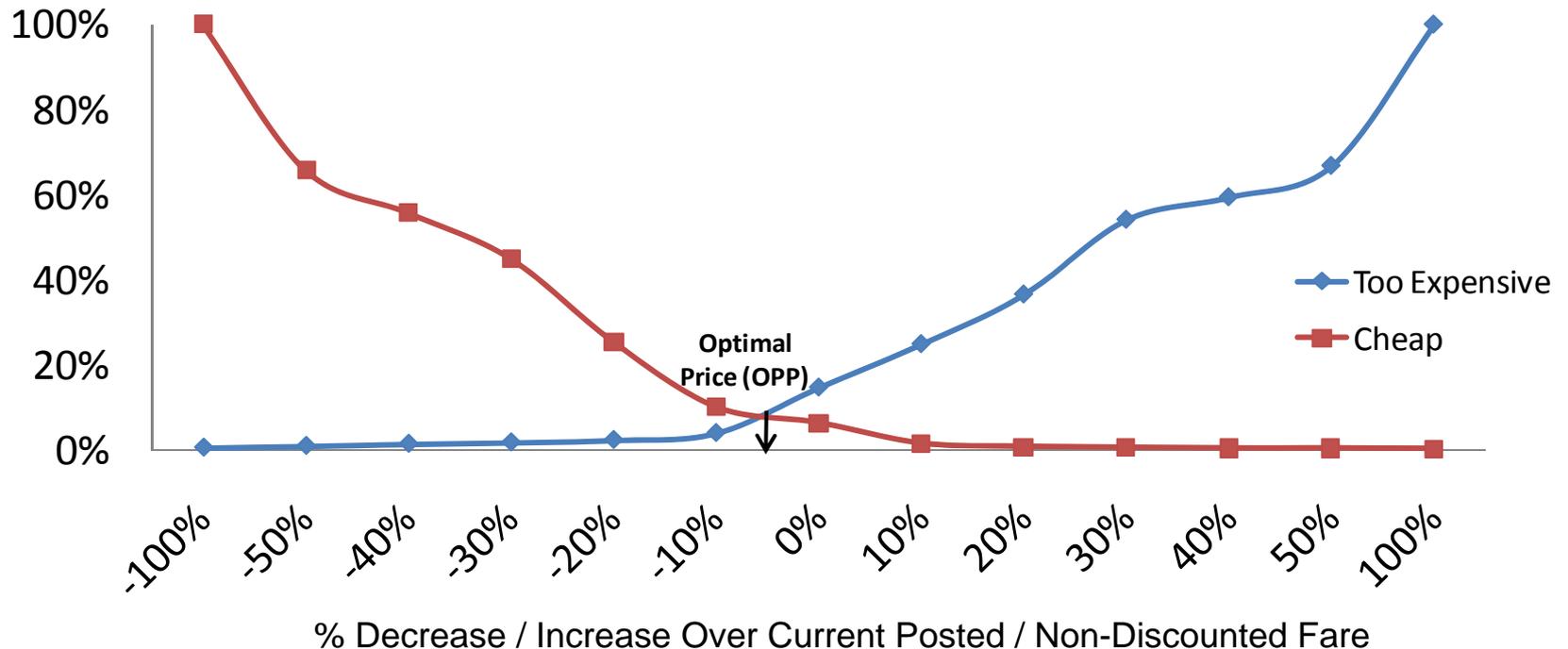
Indifference Price – Walk-On

- The Indifference Price is that price which customers would consider neither cheap nor expensive. The Indifference Price for the Walk-On Fares is approximately 2 to 3 percent less than the current walk-on fare.



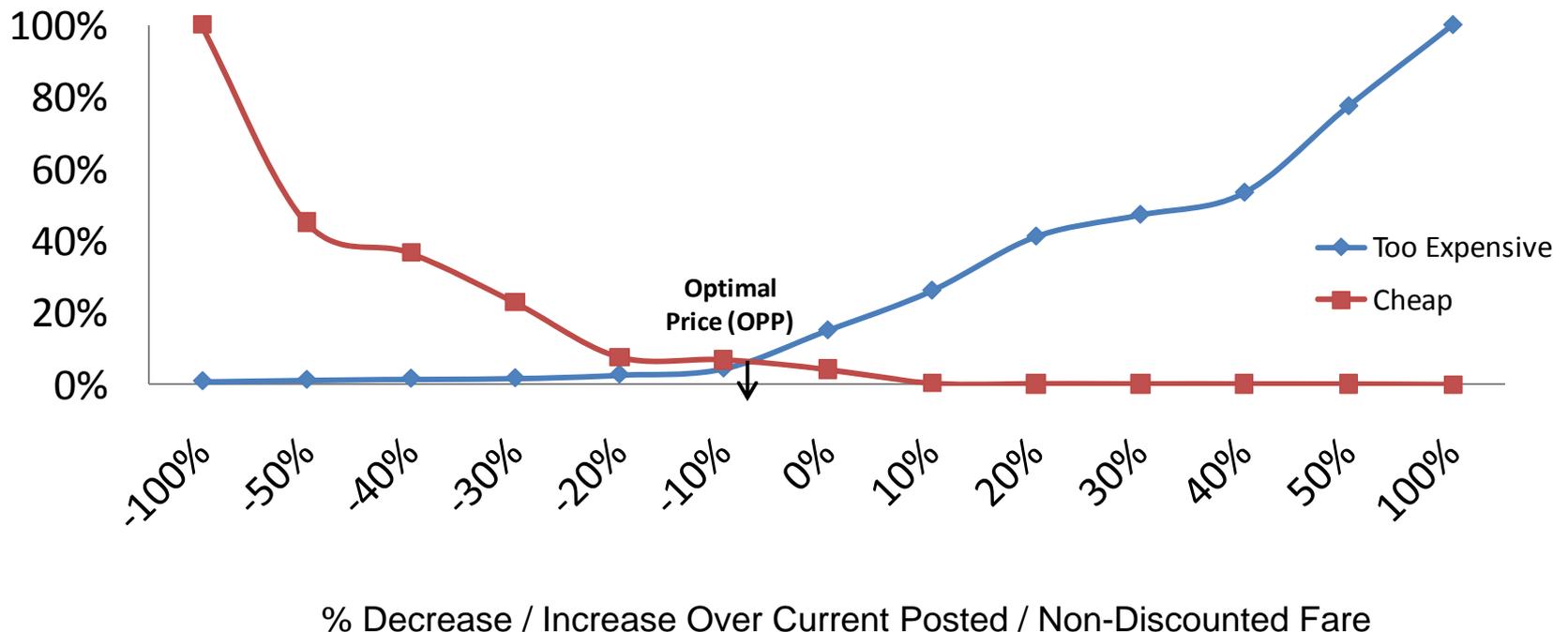
Optimal Price – Vehicle

- The Optimal Price is that price where resistance against price is low. The Optimal price for vehicle fares is 5% lower than the current posted (non-discounted) vehicle fare.
- The optimal price is lower than the indifference – this would suggest stress in price consciousness.



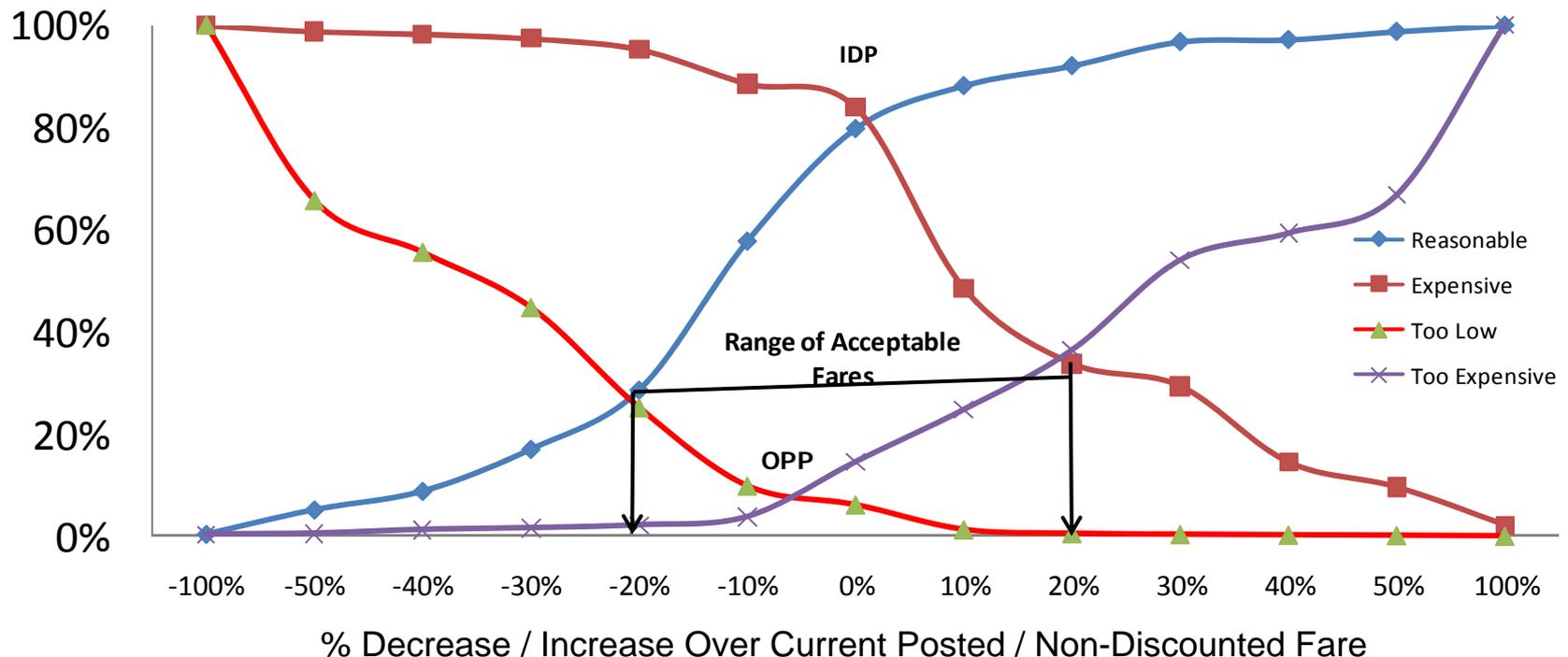
Optimal Price – Walk-On

- The Optimal Price is that price where resistance against price is low. The Optimal price for walk-on fares is 8% lower than the current posted (non-discounted) walk-on fare.
 - The optimal price is lower than the indifference – this would suggest stress in price consciousness
 - However, these prices are relatively close together suggesting little stress in price consciousness



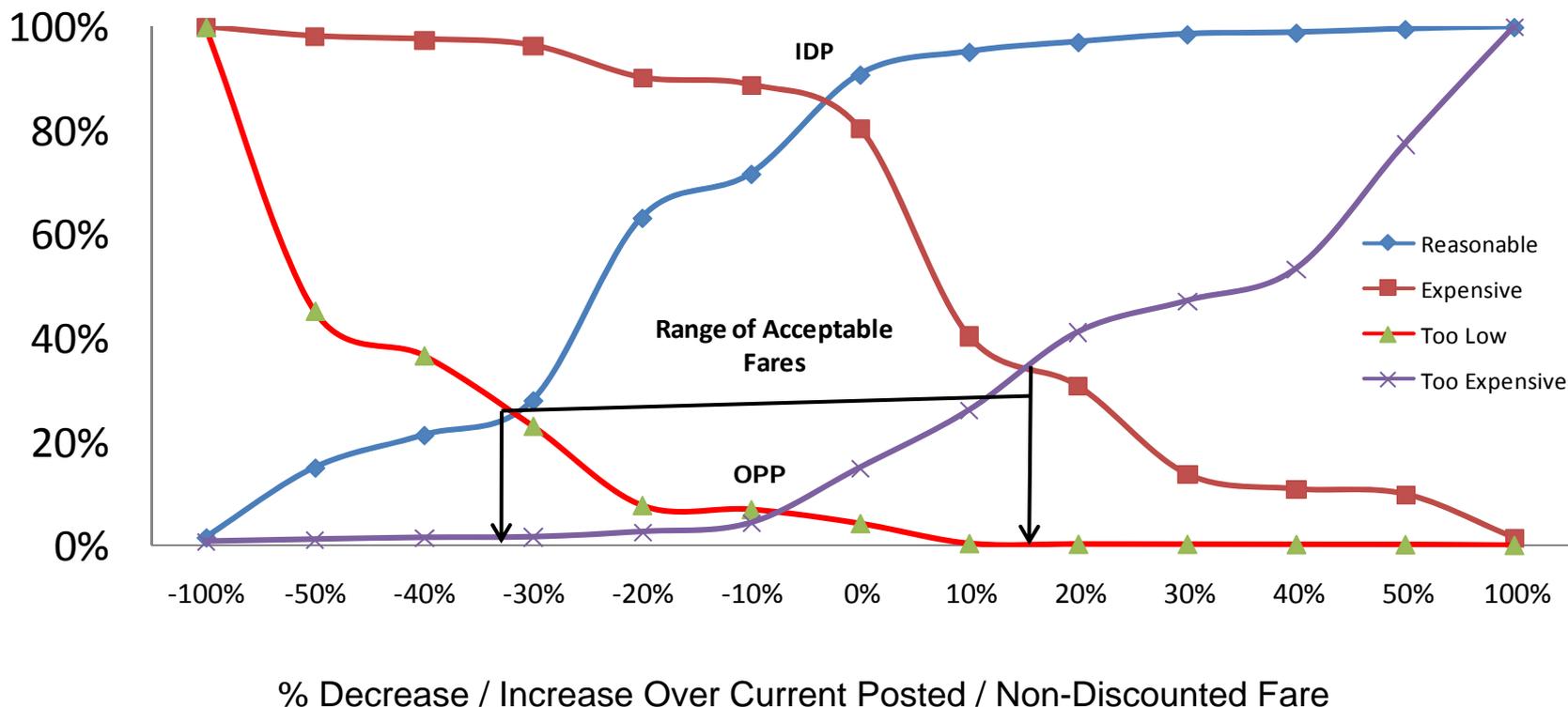
Fare Sensitivity Meter – Vehicle

- Clearly customers would like lower fares – as much as 20% lower
- However, it would be acceptable for the posted (non-discounted) vehicle to increase by as much as 20%



Fare Sensitivity Meter – Walk-On

- Walk-on customers indicate that the posted (non-discounted) walk-on fare could increase by as much as 15%



Fare Policies

	Mean	% Agree	% Disagree
Offer discount to vehicle passengers purchasing round trip tickets	4.10	76%	10%
Offer a stored value card	3.90	69	10
Change booth layout so 2 vehicles can pay at once	3.81	62	9
Use in-vehicle transponders	3.69	61	17
Larger vehicles pay more than smaller vehicles	3.10	48	37
Vehicles during off-peak hours should receive discount	2.99	43	38
On-board ticketing	2.93	37	36
Occasional riders should pay more than regular riders	2.53	32	53
Limit forms of payment for vehicles at toll booths	2.42	23	56
Vehicles during peak hours should pay higher fare	2.33	26	58
Eliminate ticket purchases at ticket counters for walk-ons	1.89	9	72
Eliminate ticket purchases at toll booths for vehicle passengers	1.86	11	75

Q21A to Q21L: Indicate the extent to which WSF should do each of the following. Mean based on a 5-point scale where "1" means "strongly disagree" and "5" means "strongly agree."



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Key Findings



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Proposed Operational Strategies

Improvements to Passenger Access

	Mean	% Agree	% Disagree
Offer discounts / incentives to walk-on / bicycle passengers	4.19	78%	8%
Provide dedicated lanes to safely drop off passengers	4.01	73	8
Provide / improve sidewalk connections to terminals	3.71	57	10
Provide / improve bicycle connections	3.70	58	11
Provide sheltered / secure bike parking at terminals	3.70	58	10
Provide covered / separated pedestrian walkways	3.69	59	12
Provide flex car rentals on destination side of terminal	3.62	56	14
Allow passengers to reserve / pay for parking on-line / by telephone	3.47	50	18
Provide secure / covered parking with covered walkways	3.37	47	22
Develop a bike sharing program at terminals	3.21	34	18

Q16A to Q16J: Indicate the extent to which WSF should implement this strategy to encourage more bicycle and walk-on traffic? Mean based on a 5-point scale where "1" means "strongly disagree" and "5" means "strongly agree."

Improvements to Encourage Use of Alternative Modes



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	Mean	% Agree	% Disagree
Coordinate transit and ferry schedules to leave adequate time	4.26	81%	5%
Provide new transit routes to serve the ferry with non or limited stop service	3.99	70	7
Provide more park-and-ride lots with good transit connections	3.96	70	7
Provide access for buses to drop off / pickup passengers closer to terminals	3.89	66	8
Create dedicated lanes for buses	3.75	60	10
Allow smaller vanpools	3.74	59	9
Provided dedicated vanpool / carpool staging areas / lanes	3.65	56	12
Give unregistered carpools the same benefits as formal / registered carpools	3.37	47	21

Q18A to Q18H: Indicate the extent to which WSF should implement this strategy to encourage more use of transit and carpools / vanpools? Mean based on a 5-point scale where "1" means "strongly disagree" and "5" means "strongly agree."

Improvements to Customer Information



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	Mean	% Agree	% Disagree
Use technologies such as variable message signs to alert drivers	4.08	77%	8%
Use e-mail alerts to provide accurate and timely announcements	3.77	62	13
Improve placement of web cams so riders can judge wait times	3.72	60	13

Q31A to Q31C: Indicate the extent to which WSF should do each of the following? Mean based on a 5-point scale where "1" means "strongly disagree" and "5" means "strongly agree."

Reactions to Vehicle Reservation System

	All	# of Vehicle Trips Monthly			
		< 7	7 to 24	25 to 44	45 +
If reservation customer does not arrive on time, their space is released and they forfeit their reservation fee	3.79	3.83	3.76	3.78	3.43
Customers with a reservation should pay a premium	3.24	3.30	3.16	3.24	2.70
Regular riders with a monthly pass should be given a priority	3.18	3.09	3.11	3.83	3.88
Only routes with high recreation / tourist travel should have a reservation system	3.05	3.04	3.09	3.10	2.87
A specific but limited amount of reserved space should be set aside on each boat for those making reservations	2.79	2.92	2.59	2.61	2.51

Q23A to Q23E: Indicate the extent to which WSF should do each of the following? Mean based on a 5-point scale where "1" means "strongly disagree" and "5" means "strongly agree."

Frequency of Using Reservation System

	All	# of Vehicle Trips Monthly			
		< 7	7 to 24	25 to 44	45 +
Every Time Drive on	8%	9%	6%	7%	16%
Frequently (once or twice a week)	5	3	8	11	6
Occasionally (once or twice a month)	16	15	18	17	13
Rarely (a few times a year)	28	32	25	18	14
Never	27	26	27	29	44
Only in an Emergency	13	13	13	16	6

Q24: If a reservation system was offered, how often would you pay a reasonable premium to reserve a guaranteed space on the ferry for your vehicle at a specific boarding time?

Willingness to Pay for Reservation

	# of Vehicle Trips Monthly				
	All	< 7	7 to 24	25 to 44	45 +
10% Premium	3.32	3.45	3.20	3.04	2.61
20% Premium	2.86	3.03	2.71	2.51	2.11
33% Premium	2.28	2.43	2.11	2.01	1.73
50% Premium	1.74	1.85	1.61	1.53	1.36
100% Premium	1.33	1.39	1.26	1.24	1.15

Q25A to Q25E: To what extent would you be willing to pay each of the following additional premiums over the [average non-discounted vehicle fare] for a guaranteed space on the ferry for your vehicle at a specific boarding time for your typical trip? Mean based on a 5-point scale where "1" means "not at all willing" and "5" means "very willing."

Willingness to Pay for Reservation

		Agree There Should be Premium				
	All	Strongly Agree	Somewhat Agree	Neutral	Somewhat Disagree	Strongly Disagree
10% Premium	3.32	3.51	3.96	3.09	3.54	2.58
20% Premium	2.86	3.11	3.48	2.73	2.99	2.01
33% Premium	2.28	2.55	2.71	2.19	2.25	1.59
50% Premium	1.74	1.95	1.93	1.75	1.67	1.29
100% Premium	1.33	1.40	1.35	1.46	1.23	1.14

Q25A to Q25E: To what extent would you be willing to pay each of the following additional premiums over the [average non-discounted vehicle fare] for a guaranteed space on the ferry for your vehicle at a specific boarding time for your typical trip? Mean based on a 5-point scale where "1" means "not at all willing" and "5" means "very willing."

Q23D: To what extent do you agree or disagree that customers with a vehicle reservation should pay a premium over the regular vehicle ticket price ?

Preferred Boarding Lanes

	# of Vehicle Trips Monthly				
	All	< 7	7 to 24	25 to 44	45 +
Regular riders using pre-paid tickets should be the only ones able to use preferred boarding lanes	3.12	2.93	3.19	3.87	3.95
Customers using preferred lane should be allowed faster access to dock holding area	3.12	3.05	3.05	3.58	3.77
Preferred vehicle lane should give vehicle passengers priority boarding	3.03	2.95	2.99	3.47	3.59
Customers using preferred vehicle lane should pay a premium	2.97	3.20	2.74	2.40	2.24
A specific but limited space should be set aside for those using the preferred lane	2.94	2.93	2.84	3.16	3.37

Q26A to Q26E: Indicate the extent to which WSF should do each of the following? Mean based on a 5-point scale where "1" means "strongly disagree" and "5" means "strongly agree."

Frequency of Using Preferred Lanes

	All	# of Vehicle Trips Monthly			
		< 7	7 to 24	25 to 44	45 +
Every Time Drive on	9%	7%	9%	13%	21%
Frequently (once or twice a week)	7	3	9	16	18
Occasionally (once or twice a month)	17	15	20	16	11
Rarely (a few times a year)	24	29	19	12	11
Never	30	30	29	28	33
Only in an Emergency	12	13	11	12	6

Q28: If a preferred vehicle lane was available to regular vehicle ferry users, how often would you pay a reasonable premium to use the lane when driving on the ferry?

Willingness to Pay for Preferred Lane

	# of Vehicle Trips Monthly				
	All	< 7	7 to 24	25 to 44	45 +
10% Premium	3.38	3.45	3.28	3.33	3.10
20% Premium	2.99	3.11	2.85	2.87	2.45
33% Premium	2.32	2.41	2.21	2.11	2.02
50% Premium	1.78	1.86	1.69	1.62	1.50
100% Premium	1.36	1.41	1.28	1.25	1.27

Q29A to Q29E: To what extent would you be willing to pay each of the following additional premiums over the [average non-discounted vehicle fare] to use a preferred vehicle lane for your typical trip? Mean based on a 5-point scale where "1" means "strongly disagree" and "5" means "strongly agree."

Willingness to Pay for Preferred Lane

		Agree There Should be Premium				
	All	Strongly Agree	Somewhat Agree	Neutral	Somewhat Disagree	Strongly Disagree
10% Premium	3.38	3.66	4.21	3.49	3.75	2.46
20% Premium	2.99	3.30	3.77	3.11	3.34	2.04
33% Premium	2.32	2.65	2.91	2.45	2.38	1.56
50% Premium	1.78	2.02	2.09	1.91	1.79	1.29
100% Premium	1.36	1.49	1.39	1.55	1.21	1.13

Q29A to Q29E: To what extent would you be willing to pay each of the following additional premiums over the [average non-discounted vehicle fare] to use a preferred vehicle lane for your typical trip? Mean based on a 5-point scale where "1" means "not at all willing" and "5" means "very willing."

Q26C: To what extent do you agree or disagree that customers using the Preferred Vehicle Lane should pay a premium over the regular fare for this route?

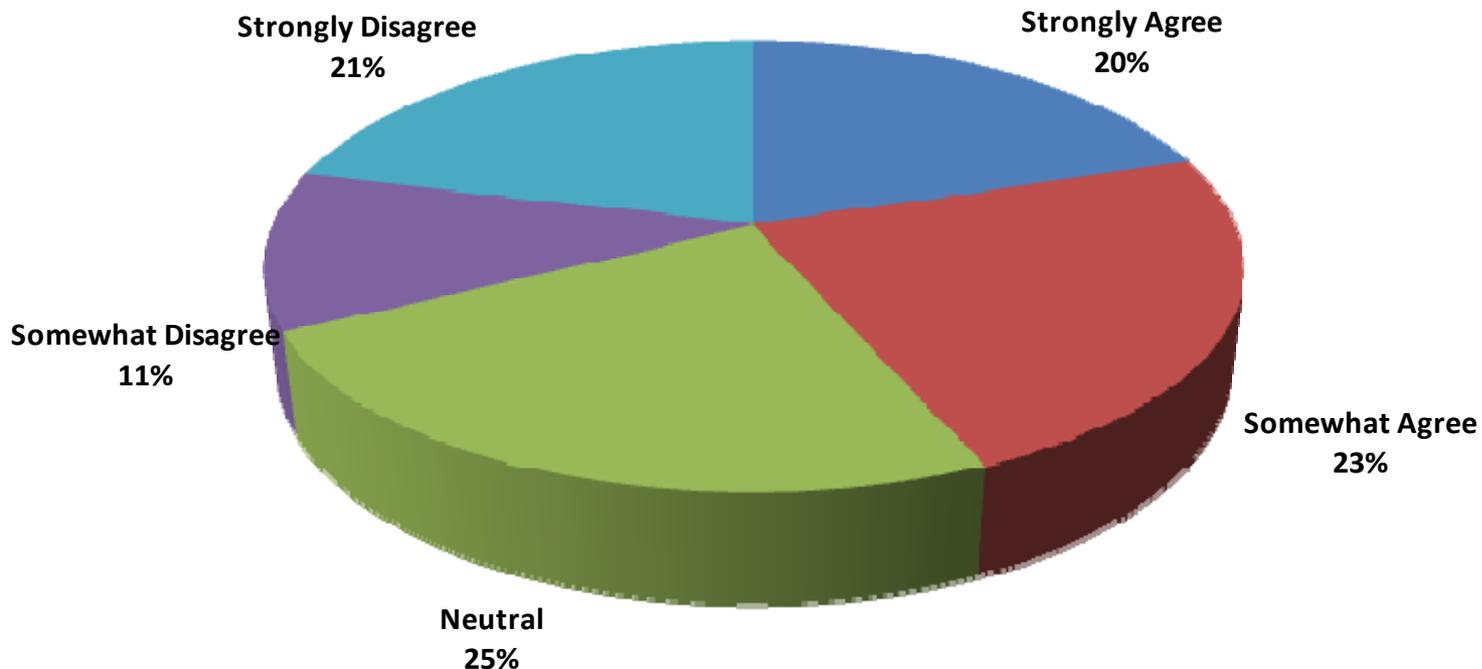
HOT Lanes

	All	# of Vehicle Trips Monthly			
		< 7	7 to 24	25 to 44	45 +
Strongly Agree	14%	16%	12%	5%	9%
Somewhat Agree	16	20	14	6	4
Neutral	14	17	10	13	5
Somewhat Disagree	10	11	10	10	6
Strongly Disagree	45	37	54	66	77
Mean	2.43	2.68	2.21	1.74	1.63

Q30: To what extent do you agree or disagree that WSF should institute a high occupancy toll (HOT) program? Mean based on a 5-point scale where "1" means "strongly disagree" and "5" means "strongly agree."

Smaller Vessels / More Sailings

Q30: To what extent do you agree or disagree that WSF should purchase smaller vessels that have less vehicle occupancy but can be turned around quicker thus offering an increased number of sailings during the say with more space on each boat devoted to transit, carpools / vanpools and smaller vehicles?



Mean = 3.10

(based on a 5-point scale where "1" means "strongly disagree" and "5" means "strongly agree")

Smaller Vessels / More Sailings

	SEA/ BAIN	SEA/ BRE	EDM/ KIN	FAU/ VAS	FAU/ SOU	PTD/ TAH	MUK/ CLI	KEY/ PTT	ANA/ SAN
Strongly Agree	23%	32%	16%	18%	27%	22%	12%	6%	17%
Somewhat Agree	25	25	24	25	21	21	18	22	21
Neutral	22	22	27	23	29	22	28	37	30
Somewhat Disagree	10	6	11	8	9	10	15	17	11
Strongly Disagree	19	16	22	25	14	25	26	18	21
Mean	3.23	3.53	3.02	3.04	3.36	3.03	2.75	2.83	3.03

Q30: To what extent do you agree or disagree that WSF should purchase smaller vessels that have less vehicle occupancy but can be turned around quicker thus offering an increased number of sailings during the say with more space on each boat devoted to transit, carpools / vanpools and smaller vehicles?

Smaller Vessels / More Sailings

	All	Vehicle Driver	Vehicle Passenger	Walk-On
Strongly Agree	20%	15%	20	27%
Somewhat Agree	23	22	21	25
Neutral	25	26	25	24
Somewhat Disagree	11	12	13	8
Strongly Disagree	21	25	21	15
Mean	3.10	2.90	3.06	3.40

Q30: To what extent do you agree or disagree that WSF should purchase smaller vessels that have less vehicle occupancy but can be turned around quicker thus offering an increased number of sailings during the say with more space on each boat devoted to transit, carpools / vanpools and smaller vehicles?



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Implications / Conclusions



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Implications

- WSF customers are long-time customers
 - With ingrained travel patterns / habits
 - Must be given a “real” reason to change behaviors
- Frequency of riding has remained relatively stable or increased
 - Research does not support some beliefs that cost and service quality have driven a significant number of customers off of the system

Implications (cont'd)

- Seattle / Bainbridge and Seattle / Bremerton have the highest percentage of strictly walk-on passengers
 - Single, primary destination (DT Seattle) lends itself to use of public transportation or walking
- While commute travel is a critical component of the system, a greater number of trips on the system are non-commute trips
 - May be more difficult to encourage non-commute travelers to use a different mode given need for vehicles to get to more far-flung destinations

Implications (cont'd)

- Infrequent riders – those taking fewer than 25 one-way trips monthly – drive a vehicle on the ferry the majority of the time
 - Again a real or perceived need for a vehicle to get to their destination drives their mode choice decision
- A significant number (61%) say they could have taken an earlier or later boat, including 60 percent of those driving a vehicle on the ferry during peak weekday travel periods
 - Additional analysis is being done to determine the extent to which motivating these riders to shift travel times could impact demand

Implications (cont'd)

- While WSF customers would like to see fares decreased, the research suggests that both walk-on and vehicle customers would support a fare increase of up to 15 to 20 percent, respectively, of the current non-discounted fares
 - It is likely however that this kind of increase would only be supported if current policies that discount fares for frequent customers are continued
- Consistent with the qualitative research, WSF customers are generally satisfied with the quality of service and value of service provided
 - This would suggest that WSF customers would support reasonable changes to the service and/or would support future fare increases if quality of service is maintained or improved

Implications (cont'd)

- WSF customers are most likely to support the following improvements for walk-on passengers
 - Offering discounts to incent walk-on / bicycle passengers
 - Improved walk-on passenger access
 - Better coordination of transit and ferry schedules
 - New transit routes with limited stop / direct service
 - More park-and-ride lots
- WSF customers suggest increased use of variable message signs to alert and better direct drivers

Implications (cont'd)

- There appears to be little demand for a reservation system
 - The majority of customers suggest they would use such a system rarely or never
 - The most frequent riders are the least likely to suggest they would use a reservation system
- Customers have mixed opinions whether a reservation system should be a premium service
 - They may be more supportive of a fixed reservation fee to pay for the operation of the service

Implications (cont'd)

- Reactions toward a preferred boarding lane are mixed
 - However, there is strong appeal among some frequent (25 plus trips monthly) riders
 - However, these same riders disagree that this should be a premium service
 - These riders might be willing to pay a 10% premium
 - A preferred lane may not have to offer priority boarding; it could simply provide faster, more convenient access to the waiting areas for customers with pre-paid tickets

Implications (cont'd)

- Reactions to a HOT lane are generally negative, particularly among frequent riders
 - This may be a function of lack of understanding of how this kind of system would work
 - Or this could be a real response to the system itself
- Customers generally support a strategy of smaller vessels sailing more frequently; this is notable on some routes (e.g., Seattle / Bremerton) which also has the highest percentage of walk-on passengers
 - Could be a targeted rather than an across-the-system strategy



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Next Steps



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Additional Research

- On-Board Survey
 - 2nd wave to be completed in July 2008
 - Purpose: To develop a profile of summer riders, including regular and recreational customers
 - Shorter, more targeted questionnaire
- Freight Customers
 - Have identified 50 plus freight customers
 - Will be asked to participate in on-line forum to provide detailed descriptions of travel behavior, decision-making, and service considerations

Additional Research (cont'd)

- Strategy Testing Research
 - Finalizing design to test customer response to:
 - Strategies to encourage shift from vehicle to walk-on
 - Congestion pricing to encourage mode shift from vehicle to walk-on and/or to off-peak travel periods
 - An across-the-board fare increase
- General Market Area Survey
 - RDD household survey of primary counties served by WSF
 - Will provide reliable estimate of percent of population who currently uses the system and the extent to which use has decreased / stopped